COMPETITOR LIST					
Anna Daniel Daniel Daniel Daniel Vanada anno anielization					
Area	Brand name	Drive Family	Year of commercialization		
	SIEMENS	440	2001		
	ABB	ACS 800	2002		
pe	LENZE	9300 (version AC)	1996		
Europe	YASKAWA	F7	2002		
Εn	Control Techniques	Unidrive SP	2002		
	Danfoss	VLT 5000	1998		
	VACON	NXP/S	2002		
æ	Mitsubishi	A500	2000		
Asia	Fuji	G11S	1997		
4	Yaskawa	G7	2002		
us	Yaskawa	G7	2002		
Ď	Allen Bradley	PowerFlex 700	2000		

AIVI	1 compared to ATV58	
ITEM	ATV71	ATV58
Picture	BORD STATE OF THE	
Drive sizing		
Constant Torque (CT	.,	Yes, High Torque, overtorque 170
, , , , , , , , , , , , , , , , , , , ,	Yes	%
Variable Torque (VT)	No	Yes, Standard Torque, overtorque 120 %
Input		120 %
Input	a by using 2 pb drive L dereti	Yes
Single phase 200V ra	s by using 3 ph drive + derati	0,37 to 2,2kW
Power range	0,37 to 37kW	up to 5,5 kW by using a 3 phase
		drive + derating
Number of ratings		7
e range with tolerance		200 V -10% to 240 V +10%
	50 Hz ±20% or 60 Hz ±20%	50 Hz ±5% or 60 Hz ±5%
Three phase 200V rar	Yes	Yes
Power range	0,37 to 75kW	1,5 to 30 kW (HT)
Number of ratings	17	6, 5 and 5
e range with tolerance	200V -15% to 240V +10%	200 V -10% to 240 V +10% and 208 V -10% to 240 V +10%
equency and tolerance	50 Hz ±20% or 60 Hz ±20%	50 Hz ±5% or 60 Hz ±5%
Three phase 400V rar		Yes
Power range	0,75 to 630kW	0,75 to 55kW
Number of ratings	29	16
	380V-15% to 480V + 10%	380 V - 10% to 500 V +10%
	50 Hz ±20% or 60 Hz ±20%	50 Hz ±5% or 60 Hz ±5%
Three phase 600V rar	No	No
Power range		-
Number of ratings		-
ge range with tolerance		-
equency and tolerance		-
Three phase 690V rar	No	No
Power range		1
Number of ratings		-
e range with tolerance		-
equency and tolerance		-
Ungrounded supply	exion and reconnexion of Y ca	pacitors
EMC		
HF EMC complian	ce as standard	- Complies with the EN 61800-3 and EN55011 level A - Complies with level B with EMC filters
Conducted emission		
Standard and level	EN61800-3 C2 (II < 16A) EN61800-3 C3 (II>16A)	- EN 55011 class A - EN 55022 class A or B with optio
	EN61800-3 C3 (II>16A) 10 m up to 15kW	- EN 55022 class A or B with optio 5m up to 15kW
ded motor cable length	EN61800-3 C3 (II>16A)	- EN 55022 class A or B with optio
ded motor cable length	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW	- EN 55022 class A or B with optio 5m up to 15kW
ded motor cable length ded motor cable length Switching frequency	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW  4kHz	- EN 55022 class A or B with optio  5m up to 15kW 25m to 55kW
ded motor cable length ded motor cable length Switching frequency	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW	- EN 55022 class A or B with optio  5m up to 15kW 25m to 55kW
ded motor cable length ded motor cable length Switching frequency	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW  4kHz	- EN 55022 class A or B with optio  5m up to 15kW 25m to 55kW  All ratings (except from 11 to
ded motor cable length ded motor cable length Switching frequency ower range integration	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW  4kHz s (except from 11 to 75kW 20	- EN 55022 class A or B with optio  5m up to 15kW 25m to 55kW  All ratings (except from 11 to 30kW 200V class)
ded motor cable length ded motor cable length Switching frequency ower range integration Shielding connexion	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW  4kHz s (except from 11 to 75kW 20	- EN 55022 class A or B with optio  5m up to 15kW 25m to 55kW  All ratings (except from 11 to 30kW 200V class)
ded motor cable length ded motor cable length Switching frequency ower range integration Shielding connexion Radiated emission Standard and level Power range	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW  4kHz s (except from 11 to 75kW 20  On EMC plate  EN55011 Class A  All the ratings	- EN 55022 class A or B with optio  5m up to 15kW 25m to 55kW  All ratings (except from 11 to 30kW 200V class)  On EMC plate
ded motor cable length ded motor cable length Switching frequency ower range integration Shielding connexion Radiated emission Standard and level	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW  4kHz s (except from 11 to 75kW 20  On EMC plate  EN55011 Class A All the ratings ce as standard	- EN 55022 class A or B with optio  5m up to 15kW 25m to 55kW  All ratings (except from 11 to 30kW 200V class) On EMC plate  EN55011 Class A
ded motor cable length ded motor cable length Switching frequency ower range integration Shielding connexion Radiated emission Standard and level Power range LF EMC complian Inductance (AC or DC)	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW  4kHz s (except from 11 to 75kW 20  On EMC plate  EN55011 Class A  All the ratings  ce as standard  DC inductance integrated from 18,5kW to 75kW 400  Class  DC inductance integrated	- EN 55022 class A or B with optio  5m up to 15kW 25m to 55kW  All ratings (except from 11 to 30kW 200V class) On EMC plate  EN55011 Class A All the ratings  DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11
ded motor cable length ded motor cable length Switching frequency ower range integration Shielding connexion Radiated emission Standard and level Power range LF EMC complian Inductance (AC or DC)	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW  4kHz s (except from 11 to 75kW 20  On EMC plate  EN55011 Class A  All the ratings  ce as standard  DC inductance integrated from 18,5kW to 75kW 400  Class	- EN 55022 class A or B with optio  5m up to 15kW 25m to 55kW  All ratings (except from 11 to 30kW 200V class) On EMC plate  EN55011 Class A All the ratings  DC inductance integrated from 18,5kW to 75kW 400 Class
ded motor cable length ded motor cable length Switching frequency ower range integration Shielding connexion Radiated emission Standard and level Power range LF EMC complian Inductance (AC or DC)	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW  4kHz s (except from 11 to 75kW 20  On EMC plate  EN55011 Class A  All the ratings  ce as standard  DC inductance integrated from 18,5kW to 75kW 400  Class  DC inductance integrated	- EN 55022 class A or B with optio  5m up to 15kW 25m to 55kW  All ratings (except from 11 to 30kW 200V class) On EMC plate  EN55011 Class A All the ratings  DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11
ded motor cable length ded motor cable length Switching frequency ower range integration Shielding connexion Radiated emission Standard and level Power range LF EMC complian Inductance (AC or DC) ower range integration Standard	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW  4kHz s (except from 11 to 75kW 20  On EMC plate  EN55011 Class A  All the ratings  ce as standard  DC inductance integrated from 18,5kW to 75kW 400  Class  DC inductance integrated	- EN 55022 class A or B with optio  5m up to 15kW 25m to 55kW  All ratings (except from 11 to 30kW 200V class) On EMC plate  EN55011 Class A All the ratings  DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11
ded motor cable length ded motor cable length Switching frequency ower range integration Shielding connexion Radiated emission Standard and level Power range LF EMC complian Inductance (AC or DC) ower range integration Standard % THD	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW  4kHz s (except from 11 to 75kW 20  On EMC plate  EN55011 Class A  All the ratings  ce as standard  DC inductance integrated from 18,5kW to 75kW 400  Class  DC inductance integrated	- EN 55022 class A or B with optio  5m up to 15kW 25m to 55kW  All ratings (except from 11 to 30kW 200V class) On EMC plate  EN55011 Class A All the ratings  DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11
ded motor cable length ded motor cable length Switching frequency ower range integration Shielding connexion Radiated emission Standard and level Power range LF EMC complian Inductance (AC or DC) ower range integration Standard % THD Immunity	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW  4kHz s (except from 11 to 75kW 20  On EMC plate  EN55011 Class A All the ratings  ce as standard  DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class	- EN 55022 class A or B with optio  5m up to 15kW 25m to 55kW  All ratings (except from 11 to 30kW 200V class)  On EMC plate  EN55011 Class A  All the ratings  DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 30kW 200V class
ded motor cable length ded motor cable length Switching frequency ower range integration Shielding connexion Radiated emission Standard and level Power range LF EMC complian Inductance (AC or DC) ower range integration Standard % THD	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW  4kHz s (except from 11 to 75kW 20  On EMC plate  EN55011 Class A  All the ratings  ce as standard  DC inductance integrated from 18,5kW to 75kW 400  Class  DC inductance integrated	- EN 55022 class A or B with optio  5m up to 15kW 25m to 55kW  All ratings (except from 11 to 30kW 200V class) On EMC plate  EN55011 Class A All the ratings  DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11
ded motor cable length ded motor cable length Switching frequency ower range integration Shielding connexion Radiated emission Standard and level Power range LF EMC complian Inductance (AC or DC) ower range integration Standard % THD Immunity Standard 1 + level	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW  4kHz  s (except from 11 to 75kW 20  On EMC plate  EN55011 Class A All the ratings  ce as standard  DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class	- EN 55022 class A or B with optio  5m up to 15kW 25m to 55kW  All ratings (except from 11 to 30kW 200V class) On EMC plate  EN55011 Class A All the ratings  DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 30kW 200V class
ded motor cable length ded motor cable length Switching frequency ower range integration Shielding connexion Radiated emission Standard and level Power range LF EMC complian Inductance (AC or DC) ower range integration Standard % THD Immunity Standard 1 + level Standard 3 + level Standard 4 + level	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW  4kHz  s (except from 11 to 75kW 20  On EMC plate  EN55011 Class A  All the ratings  ce as standard  DC inductance integrated from 18,5kW to 75kW 400  Class  DC inductance integrated from 11 to 45kW 200V class.  IEC 61000-4-2 level 3  IEC 61000-4-3 level 3  IEC 61000-4-4 level 4  IEC 61000-4-5 level 3	- EN 55022 class A or B with optio  5m up to 15kW 25m to 55kW  All ratings (except from 11 to 30kW 200V class) On EMC plate  EN55011 Class A All the ratings  DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 30kW 200V class  IEC 61000-4-2 level 3 IEC 61000-4-3 level 3 IEC 61000-4-5 level 4 IEC 61000-4-5 level 3
ded motor cable length Switching frequency ower range integration Shielding connexion Radiated emission Standard and level Power range LF EMC complian Inductance (AC or DC) ower range integration Standard % THD Immunity Standard 1 + level Standard 3 + level Standard 4 + level Standard 5 + level	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW  4kHz  s (except from 11 to 75kW 20  On EMC plate  EN55011 Class A All the ratings  ce as standard  DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class  IEC 61000-4-2 level 3 IEC 61000-4-3 level 3 IEC 61000-4-5 level 3 IEC 61000-4-5 level 3 IEC 61000-4-6 level 3	- EN 55022 class A or B with optio  5m up to 15kW 25m to 55kW  All ratings (except from 11 to 30kW 200V class)  On EMC plate  EN55011 Class A  All the ratings  DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 30kW 200V class  DC inductance integrated from 11 to 30kW 200V class  IEC 61000-4-2 level 3  IEC 61000-4-3 level 3  IEC 61000-4-5 level 3  IEC 61000-4-6 level 3
ded motor cable length ded motor cable length Switching frequency ower range integration Shielding connexion Radiated emission Standard and level Power range LF EMC complian Inductance (AC or DC) ower range integration Standard % THD Immunity Standard 1 + level Standard 3 + level Standard 4 + level	EN61800-3 C3 (II>16A)  10 m up to 15kW 50m up to 75kW  4kHz  s (except from 11 to 75kW 20  On EMC plate  EN55011 Class A  All the ratings  ce as standard  DC inductance integrated from 18,5kW to 75kW 400  Class  DC inductance integrated from 11 to 45kW 200V class.  IEC 61000-4-2 level 3  IEC 61000-4-3 level 3  IEC 61000-4-4 level 4  IEC 61000-4-5 level 3	- EN 55022 class A or B with optio  5m up to 15kW 25m to 55kW  All ratings (except from 11 to 30kW 200V class) On EMC plate  EN55011 Class A All the ratings  DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 30kW 200V class  IEC 61000-4-2 level 3 IEC 61000-4-3 level 3 IEC 61000-4-5 level 4 IEC 61000-4-5 level 3

Number of class (for		- With heatsink : 7 sizes
Number of size (fram	13 sizes	- On baseplate : 5 sizes
Brotostian Dogras	IP21 and IP41 on upper part (EN 50178 and 61800-5-1)	Unprotected drive : IP21 and IP41
Protection Degree	iP31 with gland box, Nema type 1 with conduit box	on upper part (conforming EN 50178)
IP + power range	type i with conduit box	IP55 for equipped drives
IP + power range		
IP + power range IP + power range		-
Temperature		<del>-</del>
·	-10 to +50°C	-10 to +50°C up to 5,5kW
ting ambiant temperature		'-10 ot +40°C for the other ratings
Storage temperature	-25 to 70°C	-25°C to +65°C 93% no condensing or dripping
Humidity	% non condensing without dr	water conforming to IEC 60068-2-
	1000m without derating.	Up to 1000m without derating
Operational altitudes	Possibile up to 3000m	(above this, derate the current by 1% per additionnal 100m)
Vibrations		170 por additionnal 100111)
Other		-
Automatic stop of far	Yes	No
Mounting Drive Shape	Compact	Compost
Drive Shape	Compact	Compact Yes, with or without derating
Side by side mountin	Yes without derating	depending on the range
	Yes, the power section is IP54	Yes, baseplate products
Operating position Others	Vertical -	Vertical -
Power connexion	on -	-
DC Bus connexion	Yes	No
	ne inductance or DC inductan	Line inductance only
Removable terminals	No	Yes, as an option
Bottom or Top/Bottor	Bottom	Bottom
Motor control	tual .	
AC motors motor cor U/F	trol Yes	Yes
SVC (open loop)	Yes	Yes
FVC (closed loop)	Yes	No
	422, Open collector or Push բ	-
Others	ENA	- N-
Synchronous or brus Open loop	Yes	No No
Closed loop	No	No
Performances		
Speed range		
Motor quadrant	1 : 100 open loop	1 : 100 open loop
Wotor quadrant	1 : 1000 closed loop	1 : 1000 closed loop
Generator quadrant	1 : 50 open loop 1 : 1000 closed loop	1 : 50 open loop 1 : 1000 closed loop
	From 170 to 2,2 Tn during	- 165% Cn for 60 sec
Overtorque	60s	- 180% Cn for 2 sec
Rated current philoso	from 200 to 240% during 2s 1,1 In motor (380V)	1,1 In motor (380V)
	In motor = 2 A	In motor = 2 A
0,75kW / 400V	In drive = 2,3 A	In drive = 2,3 A
4 kW / 400V	In motor = 8,5 A In drive = 10,5 A	In motor = 8,5 A In drive = 10,5 A
00 1347 / 4003 /	In motor = 40,5 A	In motor = 40,5 A
22 kW / 400V	In drive = 48 A	In drive = 48 A
Overcurrent capability	180% I motor during 60s 200% I motor during 2s	165% I motor 60s 180% I motor 2s
Type of control and a	•	100 /0 1 1110(0) 25
Speed control	Yes	Yes
Torque control	Yes	No
Torque rise time		
Sampling time of the loop		
1.		
Autotuning	Off lime and LO "	Off !
Autotuning On line / Off line	Off line and On line	Off line  Mesurement of the statoric resistor
On line / Off line	Off line and On line keypad, Logic input, at power	Mesurement of the statoric resisto value by injection of a DC current i the motor, and after that
On line / Off line		Mesurement of the statoric resisto value by injection of a DC current i the motor, and after that mesurement at 25 Hz
On line / Off line Ways of execution		Mesurement of the statoric resisto value by injection of a DC current i the motor, and after that
On line / Off line  Ways of execution  Values measured  Prefluxing  Braking	keypad, Logic input, at power Yes	Mesurement of the statoric resistor value by injection of a DC current in the motor, and after that mesurement at 25 Hz  Statoric resistor  Yes (ATV58F only)
On line / Off line  Ways of execution  Values measured  Prefluxing	keypad, Logic input, at power Yes Yes	Mesurement of the statoric resistor value by injection of a DC current the motor, and after that mesurement at 25 Hz  Statoric resistor  Yes (ATV58F only)  Yes
On line / Off line  Ways of execution  Values measured  Prefluxing  Braking	Yes  Yes  Without resistor 100% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option)	Mesurement of the statoric resistor value by injection of a DC current in the motor, and after that mesurement at 25 Hz  Statoric resistor  Yes (ATV58F only)  Yes  Without resistor 50% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option)
On line / Off line  Ways of execution  Values measured Prefluxing  Braking  Braking transistor  performance w/o resistor	Yes  Yes  Yes  Without resistor 100% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Until 170% Cn	Mesurement of the statoric resistor value by injection of a DC current the motor, and after that mesurement at 25 Hz  Statoric resistor Yes (ATV58F only)  Yes  Without resistor 50% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Up to 150% Cn
On line / Off line  Ways of execution  Values measured  Prefluxing  Braking  Braking transistor	Yes  Yes  Yes  Without resistor 100% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Until 170% Cn  0,1 to 1000Hz up to 37kHz up to 500Hz above	Mesurement of the statoric resistor value by injection of a DC current the motor, and after that mesurement at 25 Hz  Statoric resistor  Yes (ATV58F only)  Yes  Without resistor 50% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW  With resistor (as an option) Up to 150% Cn  0,1 to 500 Hz
On line / Off line  Ways of execution  Values measured Prefluxing  Braking Braking transistor  performance w/o resistor  Output frequency ran  Output frequency res	Yes  Yes  Yes  Without resistor 100% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Until 170% Cn 0,1 to 1000Hz up to 37kHz	Mesurement of the statoric resistor value by injection of a DC current the motor, and after that mesurement at 25 Hz  Statoric resistor Yes (ATV58F only)  Yes  Without resistor 50% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Up to 150% Cn
On line / Off line  Ways of execution  Values measured Prefluxing  Braking Braking transistor  performance w/o resistor  Output frequency ran	Yes  Yes  Yes  Without resistor 100% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Until 170% Cn  0,1 to 1000Hz up to 37kHz up to 500Hz above	Mesurement of the statoric resistor value by injection of a DC current the motor, and after that mesurement at 25 Hz  Statoric resistor  Yes (ATV58F only)  Yes  Without resistor 50% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Up to 150% Cn  0,1 to 500 Hz  0,1 Hz
On line / Off line  Ways of execution  Values measured Prefluxing  Braking Braking transistor  performance w/o resistor  Output frequency ran  Output frequency res	Yes  Yes  Yes  Without resistor 100% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Until 170% Cn  0,1 to 1000Hz up to 37kHz up to 500Hz above  0,1Hz	Mesurement of the statoric resistor value by injection of a DC current the motor, and after that mesurement at 25 Hz  Statoric resistor Yes (ATV58F only)  Yes  Without resistor 50% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Up to 150% Cn  0,1 to 500 Hz  0,1 Hz  Configurable: 0,5, 1, 2, 4, 8, 12, 1
On line / Off line  Ways of execution  Values measured Prefluxing  Braking Braking transistor  performance w/o resistor  Output frequency ran  Output frequency res  Switching frequency  range	Yes  Yes  Yes  Without resistor 100% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Until 170% Cn 0,1 to 1000Hz up to 37kHz up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz	Mesurement of the statoric resistor value by injection of a DC current the motor, and after that mesurement at 25 Hz  Statoric resistor  Yes (ATV58F only)  Yes  Without resistor 50% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Up to 150% Cn  0,1 to 500 Hz  0,1 Hz  Configurable: 0,5, 1, 2, 4, 8, 12, 1 kHz
On line / Off line  Ways of execution  Values measured Prefluxing  Braking Braking transistor  performance w/o resistor  Output frequency ran  Output frequency res  Switching frequency	Yes  Yes  Yes  Without resistor 100% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Until 170% Cn 0,1 to 1000Hz up to 37kHz up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz	Mesurement of the statoric resistor value by injection of a DC current the motor, and after that mesurement at 25 Hz  Statoric resistor  Yes (ATV58F only)  Yes  Without resistor 50% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Up to 150% Cn  0,1 to 500 Hz  0,1 Hz  Configurable: 0,5, 1, 2, 4, 8, 12, 1
On line / Off line  Ways of execution  Values measured Prefluxing  Braking Braking transistor  Performance w/o resistor  Output frequency ran  Output frequency res Switching frequency range  factory setting  Integrated output filte	Yes  Yes  Yes  Without resistor 100% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Until 170% Cn 0,1 to 1000Hz up to 37kHz up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above	Mesurement of the statoric resistor value by injection of a DC current in the motor, and after that mesurement at 25 Hz  Statoric resistor  Yes (ATV58F only)  Yes  Without resistor 50% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Up to 150% Cn  0,1 to 500 Hz  0,1 Hz  Configurable: 0,5, 1, 2, 4, 8, 12, 1 kHz 4 kHz up 30kW 2kHz above
On line / Off line  Ways of execution  Values measured Prefluxing  Braking Braking transistor  Performance w/o resistor  Output frequency ran  Output frequency res Switching frequency range factory setting  Integrated output filte dv/dt	Yes  Yes  Without resistor 100% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Until 170% Cn 0,1 to 1000Hz up to 37kHz up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above r as an option	Mesurement of the statoric resistor value by injection of a DC current the motor, and after that mesurement at 25 Hz  Statoric resistor  Yes (ATV58F only)  Yes  Without resistor 50% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Up to 150% Cn  0,1 to 500 Hz  0,1 Hz  Configurable: 0,5, 1, 2, 4, 8, 12, 1 kHz 4 kHz up 30kW 2kHz above  as an option
On line / Off line  Ways of execution  Values measured Prefluxing  Braking Braking transistor  Performance w/o resistor  Output frequency ran Output frequency res Switching frequency range factory setting Integrated output filte dv/dt or voltage surge limitation	Yes  Yes  Yes  Without resistor 100% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Until 170% Cn  0,1 to 1000Hz up to 37kHz up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  r  as an option Yes	Mesurement of the statoric resistor value by injection of a DC current the motor, and after that mesurement at 25 Hz  Statoric resistor  Yes (ATV58F only)  Yes  Without resistor 50% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Up to 150% Cn  0,1 to 500 Hz  0,1 Hz  Configurable: 0,5, 1, 2, 4, 8, 12, 1 kHz 4 kHz up 30kW 2kHz above  as an option no
On line / Off line  Ways of execution  Values measured Prefluxing  Braking Braking transistor  Performance w/o resistor  Output frequency ran  Output frequency res Switching frequency range factory setting  Integrated output filte dv/dt	Yes  Yes  Without resistor 100% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Until 170% Cn 0,1 to 1000Hz up to 37kHz up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above r as an option	Mesurement of the statoric resistor value by injection of a DC current in the motor, and after that mesurement at 25 Hz  Statoric resistor  Yes (ATV58F only)  Yes  Without resistor 50% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Up to 150% Cn  0,1 to 500 Hz  0,1 Hz  Configurable: 0,5, 1, 2, 4, 8, 12, 1 kHz 4 kHz up 30kW 2kHz above

Se	: - 1		
	eriai		
	alog	11 bits	10 bits, 1024 p
Diç	gital		
Modularity			
oard at the same t	time	3	1
Inputs / Outp		8	
On basic produ			Standard
Removable termir		Yes	Yes
		Screw terminlas, pitch 5,08	Screw terminlas, pitch 5,08
Sampling time	_	ms minimum, and 2,5ms ma	Al : 4 ms, AO : 2 ms, Ll : 2ms
Analog input		2	2
	1	)ifferential voltage input +/-10	Voltage input : 0 - 10 V, impedan
	'	merential voltage input +/-10	30 kΩ
	2	current or voltage input	Current input : 0 - 20 mA,
		3. 1.1	impedance 100 kΩ
	3		4 assignable logic inputs,
Logic inputs		6 assignable logic inputs	impedance 3,5 k $\Omega$
Logic outputs (op	en (	no	-
		assignable relays (NO/NC, No	2 relay logic outputs (fault relay a
Relays		assignable relays (NO/NO, NO	assignable relay)
Analog outputs		1	1
	1	gnable output (voltage or curr	Assignable Analog output 0 - 20
	2	. , , , , , , , , , , , , , , , , , , ,	mA, max load impedance 500W
Dedicated I/O		2	- No
	1	noval input (compliance with (	-
	2	PTC input on LI	-
	3		<u>-</u>
I / O Option 1		Lgic I/O card	Card with Analog input
Removable termir		Yes	Yes
	& pit	Screw terminlas, pitch 5,08	Screw terminlas, pitch 5,08
Sampling time		5ms	5 ms
Analog input		no	1 Differential input +/-10V
	1		-
_	2		-
Logio innete	3	4 accionable legis in the	- 211 aggiornali-
Logic inputs Logic outputs (op	nen i	4 assignable logic inputs ssignable open collector outp	2 LI, assignable 1 open collector LO, assignable
Relays	/GII (	1 assignable relay (NO/NC)	
Analog outputs		no	<del>-</del> 1
- 0	1		1 assignable AO, 0 - 20 mA
	2		
	3		
Dedicated I/O			Input ±10 V
			The AI can be used for speed
1			
	1	-10V supply	correction with a tachogenerator
	1	-10V supply	correction with a tachogenerator for feedback of the PI function, for
	1		correction with a tachogenerator for feedback of the PI function, for processing of PTC motor protections or for summing the
	2	-10V supply PTC input	correction with a tachogenerator for feedback of the PI function, for
		PTC input	correction with a tachogenerator for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI
I / O Option 2	3	PTC input  Extended I/O card	correction with a tachogenerator for feedback of the PI function, for processing of PTC motor protection of the PTC on AI  Card with encoder input
Removable termir	2 3 nals	PTC input  Extended I/O card  Yes	correction with a tachogenerato for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI  -  Card with encoder input  Yes
Removable termin Type of terminal &	2 3 nals	PTC input  Extended I/O card  Yes  minlas, pitch 3,81 except relay	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI
Removable termir Type of terminal 8 Sampling time	2 3 nals	PTC input  Extended I/O card  Yes	correction with a tachogenerato for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI  -  Card with encoder input  Yes
Removable termin Type of terminal &	2 3 nals	PTC input  Extended I/O card  Yes  minlas, pitch 3,81 except relay  5ms  2	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI
Removable termir Type of terminal 8 Sampling time	2 3 nals & pit	PTC input  Extended I/O card  Yes  minlas, pitch 3,81 except relay  5ms	correction with a tachogenerato for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI  Card with encoder input  Yes  Screw terminlas, pitch 5,08
Removable termir Type of terminal 8 Sampling time	2 3 nals & pit	PTC input  Extended I/O card  Yes  minlas, pitch 3,81 except relay  5ms  2 1 differential current input	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI
Removable termin Type of terminal & Sampling time Analog input  Logic inputs	2 3 nals \$ pit	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for feedback of the PI function, for feedback of the PTC motor protections or for summing the PTC on AI
Removable termin Type of terminal 8 Sampling time Analog input  Logic inputs Logic outputs (op	2 3 nals \$ pit	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp	correction with a tachogenerato for feedback of the PI function, for feedback of the PI function, for feedback of the PI function, for feedback of the PTC motor protections of for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays	2 3 nals \$ pit	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC)	correction with a tachogenerato for feedback of the PI function, for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protections of far summing the PTC on AI  Card with encoder input  Yes  Screw terminlas, pitch 5,08  5 ms  2 LI, assignable 1 open collector LO, assignable
Removable termin Type of terminal 8 Sampling time Analog input  Logic inputs Logic outputs (op	2 3 nals & pit	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2	correction with a tachogenerato for feedback of the PI function, for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays	2 3 nals & pit	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC)	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI  Card with encoder input  Yes  Screw terminlas, pitch 5,08  5 ms  2 LI, assignable 1 open collector LO, assignable
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays	2 3 nals & pit	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs	2 3 nals & pit	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays	2 3 nals & pit	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protection numbers or for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs	2 3 nals & pit	PTC input  Extended I/O card  Yes  minlas, pitch 3,81 except relay  5ms  2  1 differential current input  1 voltage / current input  4 assignable logic inputs  ssignable open collector outp  1 assignable relay (NO/NC)  2  nable voltage/current Analog	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs	2 3 nals & pit	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2	correction with a tachogenerator for feedback of the PI function, for processing of PTC motor protections of for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs	2 3 nals & pit	PTC input  Extended I/O card  Yes  minlas, pitch 3,81 except relay  5ms  2  1 differential current input  1 voltage / current input  4 assignable logic inputs  ssignable open collector outp  1 assignable relay (NO/NC)  2  nable voltage/current Analog	correction with a tachogenerator for feedback of the PI function, for processing of PTC motor protections of for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs	2 3 nals & pit	PTC input  Extended I/O card  Yes  minlas, pitch 3,81 except relay  5ms  2  1 differential current input  1 voltage / current input  4 assignable logic inputs  ssignable open collector outp  1 assignable relay (NO/NC)  2  nable voltage/current Analog	correction with a tachogenerator for feedback of the PI function, for processing of PTC motor protections of for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs	2 3 nals & pit	PTC input  Extended I/O card  Yes  minlas, pitch 3,81 except relay  5ms  2  1 differential current input  1 voltage / current input  4 assignable logic inputs  ssignable open collector outp  1 assignable relay (NO/NC)  2  nable voltage/current Analog	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs	2 3 nals & pit	PTC input  Extended I/O card  Yes  minlas, pitch 3,81 except relay  5ms  2  1 differential current input  1 voltage / current input  4 assignable logic inputs  ssignable open collector outp  1 assignable relay (NO/NC)  2  nable voltage/current Analog	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protections of for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs  Dedicated I/O	2 3 nals & pit	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2 nable voltage/current Analog of	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protection and the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs	2 3 nals & pit	PTC input  Extended I/O card  Yes  minlas, pitch 3,81 except relay  5ms  2  1 differential current input  1 voltage / current input  4 assignable logic inputs  ssignable open collector outp  1 assignable relay (NO/NC)  2  nable voltage/current Analog	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for for feedback of the PI function, for processing of PTC motor protection and the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs  Dedicated I/O	2 3 nals & pit	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2 nable voltage/current Analog of	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for for feedback of the PI function, for processing of PTC motor protection and the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs  Dedicated I/O	2 3 nals & pit	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2 nable voltage/current Analog PTC input  Controller inside card	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for for feedback of the PI function, for processing of PTC motor protections of for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs  Dedicated I/O	2 3 nals & pit 1 2 3 oen (	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2 nable voltage/current Analog of PTC input  Controller inside card  Yes	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for for feedback of the PI function, for processing of PTC motor protection and the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs  Dedicated I/O  I / O Option 3  Removable terminal & Sampling time Type of terminal & Sampling time  Removable terminal & Sampling time  Removable terminal & Sampling time  Removable terminal & Sampling time  Type of terminal & Sampling time  T	2 3 nals & pit 1 2 3 oen (	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2 nable voltage/current Analog of PTC input  Controller inside card  Yes	correction with a tachogenerator for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs  Dedicated I/O	2 3 nals & pit 1 2 3 oen (	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2 nable voltage/current Analog of PTC input  Controller inside card  Yes	correction with a tachogenerator for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs  Dedicated I/O  I / O Option 3  Removable terminal & Sampling time	2 3 nals & pit 1 2 3 oen (	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2 nable voltage/current Analog of PTC input  Controller inside card  Yes	correction with a tachogenerato for feedback of the PI function, for feedback of the PI function, for for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs  Dedicated I/O  I / O Option 3  Removable terminal & Sampling time	2 3 nals & pit	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2 nable voltage/current Analog of PTC input  Controller inside card  Yes	correction with a tachogenerato for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protection and the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs  Dedicated I/O  I / O Option 3  Removable terminal & Sampling time	2 3 nals \$ pit	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2 nable voltage/current Analog of PTC input  Controller inside card  Yes	correction with a tachogenerato for feedback of the PI function, for feedback of the PI function, for for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs  Dedicated I/O  I / O Option 3  Removable terminal & Sampling time	2 3 nals & pit	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2 nable voltage/current Analog of PTC input  Controller inside card  Yes	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs  Dedicated I/O  I / O Option 3  Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Removable terminal & Sampling time) Analog input	2 3 nals & pit 1 2 3 oen (	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2 nable voltage/current Analog of PTC input  PTC input  Controller inside card  Yes ch	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs  Dedicated I/O  I / O Option 3  Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays)	2 3 nals & pit 1 2 3 oen (	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2 nable voltage/current Analog of PTC input  PTC input  Controller inside card  Yes ch	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protections or for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs  Dedicated I/O  I / O Option 3  Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Removable terminal & Sampling time) Analog input	2 3 nals & pit	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2 nable voltage/current Analog of PTC input  PTC input  Controller inside card  Yes ch	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protection to the processing of PTC motor protection and the processing of PTC motor protection and the processing of PTC motor protection and the processing of PTC on AI  Card with encoder input  Yes  Screw terminlas, pitch 5,08  5 ms  -  2 LI, assignable  1 open collector LO, assignable  1 assignable AO, 0 - 20 mA  -  A+, A-, B+, B- logic inputs can be used for speed correction with an incremental encoder or with an inductive or photoelectric sensor  Controller inside card Customer specific card: - Pump switching card - Multimotor card - Multimotor card - Multiparameter card - Simple position idexer card  Yes  -  -  -  -  -  -  -  -  -  -  -  -  -
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs  Dedicated I/O  I / O Option 3  Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays)	2 3 nals & pit 1 2 3 open (	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2 nable voltage/current Analog of PTC input  PTC input  Controller inside card  Yes ch	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protection raches or for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs  Dedicated I/O  I / O Option 3  Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays)	2 3 3 nals & pit 1 2 3 3 3 2 2 3 3 2 2 3 3 2 2 2 3 3 2 2 2 3 3 2 2 2 3 3 2 2 2 3 3 2 2 2 2 3 3 2 2 2 2 3 3 2 2 2 2 3 3 2 2 2 2 3 3 2 2 2 2 2 3 3 2 2 2 2 2 3 3 2 2 2 2 2 2 3 3 2	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2 nable voltage/current Analog of PTC input  PTC input  Controller inside card  Yes ch	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protection raches or for summing the PTC on AI
Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays Analog outputs  Dedicated I/O  I / O Option 3  Removable terminal & Sampling time Analog input  Logic inputs Logic outputs (op Relays)	2 3 nals & pit 1 2 3 open (	PTC input  Extended I/O card Yes minlas, pitch 3,81 except relay 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs ssignable open collector outp 1 assignable relay (NO/NC) 2 nable voltage/current Analog of PTC input  PTC input  Controller inside card  Yes ch	correction with a tachogenerator for feedback of the PI function, for feedback of the PI function, for processing of PTC motor protection raches or for summing the PTC on AI

2		-
3		-
Others		
<u>Communication</u>	1	
Separated control su	Yes 24V dc as standard	Yes, as an optional kit voltage : 230 V
On the basic product	Yes	RS485 multidrop serial link with simplified Modbus protocol as part of the standard product Transmission speed 19200 bps, no
	is fully configurable with I/O so	parity Modbus protocol
Protocol available 3	Canopen fully configurable	- Can be connected to the
Communication optic		communication networks or buses via communication cards
Protocol available 1	Fipio PL7	Fipio
Protocol available 2	FIPIO with messaging	Modbus Plus
Protocol available 3	Modbus Plus	Uni-Telway, Modbus ASCII, Modbus RTU/Jbus
Protocol available 4	ay, Modbus ASCII, Modbus R	
Protocol available 5		AS-i
Protocol available 6	Profibus DP	Profibus DP
Protocol available 7	Ethernet	Ethernet
Protocol available 8	DeviceNet	CANopen
Protocol available 9		DeviceNet
Protocol available 10		METASYS N2
Protocol available 11 Protocol available 12		-
Gateway		2
Protocol available 1	AS-i	LonWorks : module incompatible
	A0-I	with the ATV58F drive
Protocol available 2		Profiibus DP
Protocol available 3 Protocol available 4		-
Protocol available 4 Protocol available 5		<u>-</u>
Protocol available 6		<u> </u>
Protocol available 7		-
Protocol available 8		-
Protocol available 9		-
Protocol available 10		
Protocol available 11		
Protocol available 12		-
Protocol available 13		-
Operator negati		
Operator panel		
Operator panel Dialogue 1		Standard
	Integrated	Standard Removable
Dialogue 1	_	
Dialogue 1 Integrated / removable Type of screen	4 Led digits	Removable 4 digit visible at 5m : display numeric values and codes, One line of 16 characters : display messages in plain text, 5 languages (english, french,
Dialogue 1 Integrated / removable Type of screen Language	4 Led digits	Removable 4 digit visible at 5m : display numeric values and codes, One line of 16 characters : display messages in plain text,
Dialogue 1 Integrated / removable Type of screen Language Number of keys	4 Led digits  code  4	Removable  4 digit visible at 5m : display numeric values and codes, One line of 16 characters : display messages in plain text,  5 languages (english, french, german, spanish, italian)
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys Number of Leds	4 Led digits  code  4 the diagnostic of the integrate	Removable  4 digit visible at 5m : display numeric values and codes, One line of 16 characters : display messages in plain text,  5 languages (english, french, german, spanish, italian)  7 2 Leds (power, Fault)
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys  Number of Leds  Keypad command	4 Led digits  code  4 the diagnostic of the integrate no	Removable  4 digit visible at 5m : display numeric values and codes, One line of 16 characters : display messages in plain text,  5 languages (english, french, german, spanish, italian)  7 2 Leds (power, Fault)
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys Number of Leds Keypad command Function keys  Others	4 Led digits  code  4 the diagnostic of the integrate  no  no	Removable  4 digit visible at 5m : display numeric values and codes, One line of 16 characters : display messages in plain text,  5 languages (english, french, german, spanish, italian)  7 2 Leds (power, Fault) Forward / reverse, stop / reset, run
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys Number of Leds Keypad command Function keys  Others	4 Led digits  code  4 the diagnostic of the integrate no no	Removable  4 digit visible at 5m : display numeric values and codes, One line of 16 characters : display messages in plain text,  5 languages (english, french, german, spanish, italian)  7  2 Leds (power, Fault)  Forward / reverse, stop / reset, run no  - Can be used to save and download configurations (4 storages files),  - A "remote terminal" option enables the tertminal to be used remotely (using a 3m cable) and to be mounted on the door of an enclosure with IP65 protection on
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys  Number of Leds  Keypad command  Function keys  Others  Dialogue 2 Integrated / removable	4 Led digits  code  4 the diagnostic of the integrate no no	Removable  4 digit visible at 5m : display numeric values and codes, One line of 16 characters : display messages in plain text,  5 languages (english, french, german, spanish, italian)  7  2 Leds (power, Fault)  Forward / reverse, stop / reset, run no  - Can be used to save and download configurations (4 storages files),  - A "remote terminal" option enables the tertminal to be used remotely (using a 3m cable) and to be mounted on the door of an enclosure with IP65 protection on
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys Number of Leds Keypad command Function keys  Others	code 4 the diagnostic of the integrate no no Removable Graphic display	Removable  4 digit visible at 5m : display numeric values and codes, One line of 16 characters : display messages in plain text,  5 languages (english, french, german, spanish, italian)  7  2 Leds (power, Fault)  Forward / reverse, stop / reset, run no  - Can be used to save and download configurations (4 storages files),  - A "remote terminal" option enables the tertminal to be used remotely (using a 3m cable) and to be mounted on the door of an enclosure with IP65 protection on
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys  Number of Leds  Keypad command  Function keys  Others  Dialogue 2 Integrated / removable	code  4 the diagnostic of the integrate no no  Removable Graphic display 6 languages (languages are flashable).	Removable  4 digit visible at 5m : display numeric values and codes, One line of 16 characters : display messages in plain text,  5 languages (english, french, german, spanish, italian)  7  2 Leds (power, Fault)  Forward / reverse, stop / reset, run no  - Can be used to save and download configurations (4 storages files),  - A "remote terminal" option enables the tertminal to be used remotely (using a 3m cable) and to be mounted on the door of an enclosure with IP65 protection on
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2 Integrated / removable Type of display	code 4 the diagnostic of the integrate no no Removable Graphic display 6 languages (languages are	Removable  4 digit visible at 5m : display numeric values and codes, One line of 16 characters : display messages in plain text,  5 languages (english, french, german, spanish, italian)  7  2 Leds (power, Fault)  Forward / reverse, stop / reset, run no  - Can be used to save and download configurations (4 storages files),  - A "remote terminal" option enables the tertminal to be used remotely (using a 3m cable) and to be mounted on the door of an enclosure with IP65 protection on
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2 Integrated / removable Type of display  Language	code  4 the diagnostic of the integrate no no  Removable Graphic display  6 languages (languages are flashable). Suitable for asian characters	Removable  4 digit visible at 5m : display numeric values and codes, One line of 16 characters : display messages in plain text,  5 languages (english, french, german, spanish, italian)  7  2 Leds (power, Fault)  Forward / reverse, stop / reset, run no  - Can be used to save and download configurations (4 storages files),  - A "remote terminal" option enables the tertminal to be used remotely (using a 3m cable) and to be mounted on the door of an enclosure with IP65 protection on
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2 Integrated / removable Type of display	code  4 the diagnostic of the integrate no no  Removable Graphic display 6 languages (languages are flashable).	Removable  4 digit visible at 5m: display numeric values and codes, One line of 16 characters: display messages in plain text,  5 languages (english, french, german, spanish, italian)  7 2 Leds (power, Fault)  Forward / reverse, stop / reset, run no  - Can be used to save and download configurations (4 storages files), - A "remote terminal" option enables the tertminal to be used remotely (using a 3m cable) and to be mounted on the door of an enclosure with IP65 protection on the front panel,
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2 Integrated / removable Type of display  Language  Number of keys Number of Leds Keypad command	code  4 the diagnostic of the integrate no no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes	Removable  4 digit visible at 5m: display numeric values and codes, One line of 16 characters: display messages in plain text,  5 languages (english, french, german, spanish, italian)  7 2 Leds (power, Fault)  Forward / reverse, stop / reset, run no  - Can be used to save and download configurations (4 storages files), - A "remote terminal" option enables the tertminal to be used remotely (using a 3m cable) and to be mounted on the door of an enclosure with IP65 protection on the front panel,
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2 Integrated / removable Type of display  Language  Number of keys Number of Leds	code 4 the diagnostic of the integrate no no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4	Removable  4 digit visible at 5m: display numeric values and codes, One line of 16 characters: display messages in plain text,  5 languages (english, french, german, spanish, italian)  7 2 Leds (power, Fault)  Forward / reverse, stop / reset, run no  - Can be used to save and download configurations (4 storages files), - A "remote terminal" option enables the tertminal to be used remotely (using a 3m cable) and to be mounted on the door of an enclosure with IP65 protection on the front panel,
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2 Integrated / removable Type of display  Language  Number of keys Number of keys Number of keys Number of Leds Keypad command Function keys  Others	Code  4 the diagnostic of the integrate no no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations	Removable  4 digit visible at 5m: display numeric values and codes, One line of 16 characters: display messages in plain text,  5 languages (english, french, german, spanish, italian)  7 2 Leds (power, Fault)  Forward / reverse, stop / reset, run no  - Can be used to save and download configurations (4 storages files), - A "remote terminal" option enables the tertminal to be used remotely (using a 3m cable) and to be mounted on the door of an enclosure with IP65 protection on the front panel,
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2 Integrated / removable Type of display  Language  Number of keys Number of Leds Keypad command Function keys  Others  Others	code  4 the diagnostic of the integrate no no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available	Removable  4 digit visible at 5m: display numeric values and codes, One line of 16 characters: display messages in plain text,  5 languages (english, french, german, spanish, italian)  7 2 Leds (power, Fault)  Forward / reverse, stop / reset, run no  - Can be used to save and download configurations (4 storages files), - A "remote terminal" option enables the tertminal to be used remotely (using a 3m cable) and to be mounted on the door of an enclosure with IP65 protection on the front panel,
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2 Integrated / removable Type of display  Language  Number of keys Number of Leds Keypad command Function keys  Others  Others  Others	code  4 the diagnostic of the integrate no no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available	Removable  4 digit visible at 5m: display numeric values and codes, One line of 16 characters: display messages in plain text,  5 languages (english, french, german, spanish, italian)  7 2 Leds (power, Fault)  Forward / reverse, stop / reset, run no  - Can be used to save and download configurations (4 storages files), - A "remote terminal" option enables the tertminal to be used remotely (using a 3m cable) and to be mounted on the door of an enclosure with IP65 protection on the front panel,
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2 Integrated / removable Type of display  Language  Number of keys Number of Leds Keypad command Function keys  Others  Others  Others  Dialogue 3 Integrated / removable Type of display	code  4 the diagnostic of the integrate no no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available	Removable  4 digit visible at 5m: display numeric values and codes, One line of 16 characters: display messages in plain text,  5 languages (english, french, german, spanish, italian)  7 2 Leds (power, Fault)  Forward / reverse, stop / reset, run no  - Can be used to save and download configurations (4 storages files), - A "remote terminal" option enables the tertminal to be used remotely (using a 3m cable) and to be mounted on the door of an enclosure with IP65 protection on the front panel,
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2 Integrated / removable Type of display  Language  Number of keys Number of Leds Keypad command Function keys  Others  Others  Dialogue 3 Integrated / removable Type of display  Language  Dialogue 3 Integrated / removable Type of display Language	code  4 the diagnostic of the integrate no no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available	Removable  4 digit visible at 5m: display numeric values and codes, One line of 16 characters: display messages in plain text,  5 languages (english, french, german, spanish, italian)  7 2 Leds (power, Fault)  Forward / reverse, stop / reset, run no  - Can be used to save and download configurations (4 storages files), - A "remote terminal" option enables the tertminal to be used remotely (using a 3m cable) and to be mounted on the door of an enclosure with IP65 protection on the front panel,
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2 Integrated / removable Type of display  Language  Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 3 Integrated / removable Type of display  Language Number of keys  Others	code  4 the diagnostic of the integrate no no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available	Removable  4 digit visible at 5m: display numeric values and codes, One line of 16 characters: display messages in plain text,  5 languages (english, french, german, spanish, italian)  7 2 Leds (power, Fault)  Forward / reverse, stop / reset, run no  - Can be used to save and download configurations (4 storages files), - A "remote terminal" option enables the tertminal to be used remotely (using a 3m cable) and to be mounted on the door of an enclosure with IP65 protection on the front panel,
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2 Integrated / removable Type of display  Language  Number of keys Number of Leds Keypad command Function keys  Others  Others  Dialogue 3 Integrated / removable Type of display  Language Number of keys Number of Leds Keypad command Function keys	code  4 the diagnostic of the integrate no no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available	Removable  4 digit visible at 5m: display numeric values and codes, One line of 16 characters: display messages in plain text,  5 languages (english, french, german, spanish, italian)  7 2 Leds (power, Fault)  Forward / reverse, stop / reset, run no  - Can be used to save and download configurations (4 storages files), - A "remote terminal" option enables the tertminal to be used remotely (using a 3m cable) and to be mounted on the door of an enclosure with IP65 protection on the front panel,
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2 Integrated / removable Type of display  Language  Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 3 Integrated / removable Type of display  Language Number of keys  Others	code  4 the diagnostic of the integrate no no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available	Removable  4 digit visible at 5m: display numeric values and codes, One line of 16 characters: display messages in plain text,  5 languages (english, french, german, spanish, italian)  7 2 Leds (power, Fault)  Forward / reverse, stop / reset, run no  - Can be used to save and download configurations (4 storages files), - A "remote terminal" option enables the tertminal to be used remotely (using a 3m cable) and to be mounted on the door of an enclosure with IP65 protection on the front panel,
Dialogue 1 Integrated / removable  Type of screen  Language  Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2 Integrated / removable Type of display  Language  Number of keys Number of Leds Keypad command Function keys  Others  Others  Dialogue 3 Integrated / removable Type of display Language Number of keys Number of keys Number of display Language Number of keys Number of Leds Keypad command	code  4 the diagnostic of the integrate no no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available	Removable  4 digit visible at 5m: display numeric values and codes, One line of 16 characters: display messages in plain text,  5 languages (english, french, german, spanish, italian)  7 2 Leds (power, Fault)  Forward / reverse, stop / reset, run no  - Can be used to save and download configurations (4 storages files), - A "remote terminal" option enables the tertminal to be used remotely (using a 3m cable) and to be mounted on the door of an enclosure with IP65 protection on the front panel,

Thermal protection	Yes, I²t motor thermal protection depending on the motor frequency.  Memorization when power off	Yes, I <sup>2</sup> t motor thermal protection depending on the motor frequency. Memorization when power off
Electronic / PTC	, dedicated input on option ca	Yes, with optional card
Short circuit between	V00	Yes
Ground fault	yes yes	Yes
Output phase loss	yes	Yes
Input phase loss	yes	Yes
Braking resistor prot	j	No No
Overload		Yes
Overvoltage	yes yes	Yes
Undervoltage	yes	Yes
Drive thermal protect		Yes
Locked motor protec		No No
Stall prevention	Yes	Yes
Others	163	Protection of the lost of 4 - 20 mA reference
Options and Ad	cessoiries	Micro cuts
Braking resistors	protected braking resistor Hoisting resistors	Protected Braking resistors,     Braking module     Unprotected braking resistors
Inductances (chokes	Line chokes	- Line chokes - Motor line chokes
Regenerative Units	Yes	No
		Yes, additionel radio interference
EMC filters	Additional footprint filters	suppression input filters
Output filters	Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables	Motor chokes or LR filters
Others	Control fan kit Canopen accessories keypad remote mounting kit	- Kit for removable power terminals,
Specific Produ	ct	
Product mounted ins	the power section is IP54 to be easily mounted in	- Kit for mounting in dust and damp proof enclosure (IP54) - Equipped in enclosure (IP55)
Water seeled delice		
Water cooled drive	no	No
Others		No Kit for mounting "air exchanger"
		110
Others <mark>List of marking</mark>		Kit for mounting "air exchanger"
Others		Kit for mounting "air exchanger"  CE, UL, CSA, DNV
Others List of marking Part number	CE, UL, CSA, DNV	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H: heatsink E: Enclosure
Others  List of marking  Part number  1st part	CE, UL, CSA, DNV  ATV71 : Model  Type	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink
Others  List of marking  Part number  1st part  2nd part	CE, UL, CSA, DNV  ATV71 : Model  Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type  H : heatsink  E : Enclosure  P : Baseplate
Others  List of marking  Part number  1st part  2nd part  3rd part	CE, UL, CSA, DNV  ATV71 : Model  Type H : heatsink  Power : 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15 : power  Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V
Others List of marking Part number 1st part 2nd part  3rd part  4th part  5th part	CE, UL, CSA, DNV  ATV71 : Model  Type H : heatsink  Power : 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15 : power  Voltage M3 : 208 / 240 V (3 input phase)	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V N4 : 380 / 500 V X : without filter Z : without filter and without operator display XZ : without filter and without operator display
Others List of marking Part number 1st part 2nd part  3rd part  4th part  5th part  6th part	CE, UL, CSA, DNV  ATV71: Model  Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without filter and without	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V N4 : 380 / 500 V X : without filter Z : without filter and without operator display XZ : without filter and without operator display
Others List of marking Part number 1st part 2nd part  3rd part  4th part  6th part  7th part 8th part	CE, UL, CSA, DNV  ATV71: Model  Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without filter and without	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V N4 : 380 / 500 V X : without filter Z : without filter and without operator display XZ : without filter and without operator display
Others List of marking Part number 1st part  2nd part  3rd part  4th part  5th part  6th part  7th part 8th part 9th part	CE, UL, CSA, DNV  ATV71: Model  Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without filter and without operator display XZ: without filter and without operator display	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V N4 : 380 / 500 V X : without filter Z : without filter and without operator display XZ : without filter and without operator display
Others List of marking Part number 1st part 2nd part  3rd part  4th part  6th part  7th part 8th part	CE, UL, CSA, DNV  ATV71: Model  Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without filter and without operator display XZ: without filter and without operator display	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  Voltage M2 : 208 / 240 V N4 : 380 / 500 V  X : without filter Z : without operator display XZ : without filter and without operator display
Others List of marking Part number 1st part  2nd part  3rd part  4th part  5th part  7th part 8th part 9th part Communication Message 1	CE, UL, CSA, DNV  ATV71: Model  Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without filter and without operator display XZ: without filter and without operator display	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V N4 : 380 / 500 V  X : without filter Z : without operator display XZ : without filter and without operator display
Others List of marking Part number 1st part  2nd part  3rd part  4th part  5th part  7th part 8th part 9th part Communication	CE, UL, CSA, DNV  ATV71: Model  Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without filter and without operator display XZ: without filter and without operator display	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V N4 : 380 / 500 V  X : without filter Z : without operator display XZ : without filter and without operator display
Others List of marking Part number 1st part  2nd part  3rd part  4th part  5th part  7th part 8th part 9th part Communication Message 1	CE, UL, CSA, DNV  ATV71: Model  Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without filter and without operator display XZ: without filter and without operator display	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V N4 : 380 / 500 V  X : without filter Z : without operator display XZ : without filter and without operator display
Others List of marking Part number 1st part 2nd part  3rd part  4th part  5th part  6th part  7th part 8th part 9th part Communication Message 1 Message 2 Message 3	CE, UL, CSA, DNV  ATV71: Model  Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without filter and without operator display XZ: without filter and without operator display	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V N4 : 380 / 500 V  X : without filter Z : without operator display XZ : without filter and without operator display
Others List of marking Part number 1st part  2nd part  3rd part  4th part  5th part  6th part  7th part 8th part 9th part Communication Message 1 Message 2 Message 3 Message 4	CE, UL, CSA, DNV  ATV71: Model  Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without filter and without operator display XZ: without filter and without operator display	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V N4 : 380 / 500 V  X : without filter Z : without operator display XZ : without filter and without operator display
Others List of marking Part number 1st part 2nd part  3rd part  4th part  5th part  6th part  7th part 8th part 9th part Communication Message 1 Message 2 Message 3	CE, UL, CSA, DNV  ATV71: Model  Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without filter and without operator display XZ: without filter and without operator display	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V N4 : 380 / 500 V  X : without filter Z : without operator display XZ : without filter and without operator display
Others List of marking Part number 1st part  2nd part  3rd part  4th part  5th part  6th part  7th part 8th part 9th part Communication Message 1 Message 2 Message 3 Message 4 Message 5	CE, UL, CSA, DNV  ATV71: Model  Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without filter and without operator display XZ: without filter and without operator display	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V N4 : 380 / 500 V X : without filter Z : without operator display XZ : without filter and without operator display
Communication Message 1 Message 4 Message 6 Message 6 Message 6 Message 6	CE, UL, CSA, DNV  ATV71: Model  Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without filter and without operator display XZ: without filter and without operator display	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V N4 : 380 / 500 V X : without filter Z : without operator display XZ : without filter and without operator display
Communication Message 1 Message 4 Message 6 Message 6 Message 6 Message 6	CE, UL, CSA, DNV  ATV71: Model  Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without filter and without operator display XZ: without filter and without operator display	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V N4 : 380 / 500 V  X : without filter Z : without operator display XZ : without filter and without operator display
Communication Message 1 Message 4 Message 6 Message 6 Message 6 Message 6	CE, UL, CSA, DNV  ATV71 : Model  Type H : heatsink  Power : 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15 : power  Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V  X : without filter Z : without operator display XZ : without filter and without operator display  Messages  Messages	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V N4 : 380 / 500 V  X : without filter Z : without operator display XZ : without filter and without operator display
Communication Message 2 Message 4 Message 7 Type of communicati	CE, UL, CSA, DNV  ATV71 : Model  Type H : heatsink  Power : 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15 : power  Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V  X : without filter Z : without operator display XZ : without filter and without operator display  NMessages  Messages	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V N4 : 380 / 500 V X : without filter Z : without operator display XZ : without filter and without operator display
Communication Message 1 Message 2 Message 4 Message 5 Message 6 Message 7 Type of communication List of marking Part number 1st part 2nd part 2nd part 4th part 4th part 6th part Communication Message 1 Message 2 Message 3 Message 4 Message 5	CE, UL, CSA, DNV  ATV71 : Model  Type H : heatsink  Power : 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15 : power  Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V  X : without filter Z : without operator display XZ : without filter and without operator display  NA Messages  Messages	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V N4 : 380 / 500 V  X : without filter Z : without operator display XZ : without filter and without operator display
Communication Message 2 Message 4 Message 7 Type of communicati	CE, UL, CSA, DNV  ATV71 : Model  Type H : heatsink  Power : 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15 : power  Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V  X : without filter Z : without operator display XZ : without filter and without operator display  NA Messages  Messages	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V N4 : 380 / 500 V X : without filter Z : without operator display XZ : without filter and without operator display
Communication Message 1 Message 2 Message 4 Message 5 Message 6 Message 7 Type of communication List of marking Part number 1st part 2nd part 2nd part 4th part 4th part 6th part Communication Message 1 Message 2 Message 3 Message 4 Message 5	CE, UL, CSA, DNV  ATV71 : Model  Type H : heatsink  Power : 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15 : power  Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V  X : without filter Z : without operator display XZ : without filter and without operator display  NA Messages  Messages	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  U09 : power (kVA)  Voltage M2 : 208 / 240 V N4 : 380 / 500 V X : without filter Z : without operator display XZ : without filter and without operator display
Communication Message 1 Message 2 Message 3 Message 4 Message 5 Message 7 Type of communication Environment, recycla	CE, UL, CSA, DNV  ATV71 : Model  Type H : heatsink  Power : 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15 : power  Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V  X : without filter Z : without operator display XZ : without filter and without operator display  NA : Messages  Messages  Messages	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  Voltage M2 : 208 / 240 V N4 : 380 / 500 V X : without filter Z : without operator display XZ : without filter and without operator display
Communication Message 1 Message 2 Message 3 Message 4 Message 5 Message 7 Type of communication Environment, recycla	CE, UL, CSA, DNV  ATV71: Model  Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without operator display XZ: without filter and without operator display  NMessages  Messages	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  Voltage M2 : 208 / 240 V N4 : 380 / 500 V X : without filter Z : without operator display XZ : without filter and without operator display
Communication Message 1 Message 2 Message 3 Message 4 Message 5 Message 7 Type of communication Environment, recycla	CE, UL, CSA, DNV  ATV71 : Model  Type H : heatsink  Power : 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15 : power  Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V  X : without filter Z : without operator display XZ : without filter and without operator display  NA : Messages  Messages  Messages	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  Voltage M2 : 208 / 240 V N4 : 380 / 500 V X : without filter Z : without operator display XZ : without filter and without operator display
Communication Message 1 Message 2 Message 3 Message 4 Message 5 Message 7 Type of communication Environment, recycla	CE, UL, CSA, DNV  ATV71 : Model  Type H : heatsink  Power : 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15 : power  Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V  X : without filter Z : without operator display XZ : without filter and without operator display  NA : Messages  Messages  Messages	Kit for mounting "air exchanger"  CE, UL, CSA, DNV  ATV58 H U09 M2 X Z  ATV 58 : Model  Type H : heatsink E : Enclosure P : Baseplate  Voltage M2 : 208 / 240 V N4 : 380 / 500 V X : without filter Z : without operator display XZ : without filter and without operator display

Logic Operation   Carried out with the Controller (PLC) Insid   Yes	PC, Pocket PC for PowerSuite, Magelis display unit with matrix screen  No  ≈ 50  ≈ 200  - Starting, dynamic braking and braking to a standstill, speed control Energy saving, PI regulator (flow rate, pressure, etc,,,) Brake sequence Speed loop with tachogenerator or pulse generator ±speed, S ramps, U ramps, preset JOG operation Catch on the fly, - Adaptation of current limiting according to speed ventilation applications Automatic limitation of low speed operating time, motor and drive protection, etc,  velling, and lift trement  - Alternate ramp switching Automatic adaptation of deceleration ramp.
Controller (PLC) Insid Software Card  Product Services  Flashable Yes  PC Software PowerSuite sotware  Scope Yes  Application Functions  Number of functions #150  Number of parameter #800  - PID regulation in the control in the con	No For sale: PowerSuite advanced dialogue solutions: PowerSuite software workshop for PC, Pocket PC for PowerSuite, Magelis display unit with matrix screen  No  ≈ 50 ≈ 200  - Starting, dynamic braking and braking to a standstill, speed control Energy saving, PI regulator (flow rate, pressure, etc,,,) Brake sequence Speed loop with tachogenerator or pulse generator ±speed, S ramps, U ramps, preset JOG operation Catch on the fly, - Adaptation of current limiting according to speed ventilation applications Automatic limitation of low speed operating time, motor and drive protection, etc,  velling, and lift trement  No  Alternate ramp switching Automatic adaptation of deceleration ramp
Software Card  Product Services Flashable Yes  PC Software PowerSuite sotware  Scope Yes  Application Functions Number of functions #150 Number of parameter #800  - PID regulation requirement of parameter #800  - PID regulation requirement of parameter #800  - PID regulation requirement of production in the production of parameter or some content or so	PowerSuite advanced dialogue solutions:  PowerSuite software workshop for PC, Pocket PC for PowerSuite, Magelis display unit with matrix screen  No  ≈ 50  ≈ 200  - Starting, dynamic braking and braking to a standstill, speed control Energy saving, PI regulator (flow rate, pressure, etc,,,) Brake sequence Speed loop with tachogenerator or pulse generator ±speed, S ramps, U ramps, preset JOG operation Catch on the fly, - Adaptation of current limiting according to speed ventilation applications Automatic limitation of low speed operating time, motor and drive protection, etc,  velling, and lift trement  - Alternate ramp switching Automatic adaptation of deceleration ramp
Product Services Flashable  PowerSuite sotware  PowerSuite sotware  Scope  Application Functions Number of functions Number of parameter  - PID regulation functions  - Start carrent and limitation functions  - Short rate - 16 preset specific for a view content for a view function for a view function func	For sale : PowerSuite advanced dialogue solutions : PowerSuite software workshop for PC, Pocket PC for PowerSuite, Magelis display unit with matrix screen  No  ≈ 50  ≈ 200  - Starting, dynamic braking and braking to a standstill, speed control Energy saving, PI regulator (flow rate, pressure, etc,,,) Brake sequence Speed loop with tachogenerator or pulse generator ±speed, S ramps, U ramps, preset JOG operation Catch on the fly, - Adaptation of current limiting according to speed ventilation applications Automatic limitation of low speed operating time, motor and drive protection, etc,  velling, and lift trement  - Alternate ramp switching Automatic adaptation of deceleration ramp
PC Software  PowerSuite sotware  Scope  Application Functions Number of functions Number of parameter  PID regulation Functions Number of parameter  PID regulation Functions  - PID regulation Functions  - PID regulation Functions  - Soft rate of the second of the seco	For sale : PowerSuite advanced dialogue solutions : PowerSuite software workshop for PC, Pocket PC for PowerSuite, Magelis display unit with matrix screen  No  ≈ 50  ≈ 200  - Starting, dynamic braking and braking to a standstill, speed control Energy saving, PI regulator (flow rate, pressure, etc,,,) Brake sequence Speed loop with tachogenerator or pulse generator ±speed, S ramps, U ramps, preset JOG operation Catch on the fly, - Adaptation of current limiting according to speed ventilation applications Automatic limitation of low speed operating time, motor and drive protection, etc,  velling, and lift trement  - Alternate ramp switching Automatic adaptation of deceleration ramp
PC Software  Scope  Application Functions Number of functions #150 Number of parameter #800  - PID regulation Functions Number of parameter #800  - PID regulation Functions #150 Number of parameter #800  - PID regulation Functions #150 - Summer of parameter #800  - In the present special for the present special for the parameter in the parameter function of the parameter in the	For sale : PowerSuite advanced dialogue solutions : PowerSuite software workshop for PC, Pocket PC for PowerSuite, Magelis display unit with matrix screen  No  ≈ 50  ≈ 200  - Starting, dynamic braking and braking to a standstill, speed control Energy saving, PI regulator (flow rate, pressure, etc,,,) Brake sequence Speed loop with tachogenerator or pulse generator ±speed, S ramps, U ramps, preset JOG operation Catch on the fly, - Adaptation of current limiting according to speed ventilation applications Automatic limitation of low speed operating time, motor and drive protection, etc,  velling, and lift trement  - Alternate ramp switching Automatic adaptation of deceleration ramp.
Scope  Application Functions Number of functions Number of parameter  - PID regulation functions  - PID regulation functions  - PID regulation functions  - S ram and solve for the second function for the second function	PowerSuite advanced dialogue solutions:  PowerSuite software workshop for PC, Pocket PC for PowerSuite, Magelis display unit with matrix screen  No  ≈ 50  ≈ 200  - Starting, dynamic braking and braking to a standstill, speed control.  - Energy saving, PI regulator (flow rate, pressure, etc,,,).  - Brake sequence.  - Speed loop with tachogenerator or pulse generator.  - ±speed, S ramps, U ramps, preset JOG operation.  - Catch on the fly,  - Adaptation of current limiting according to speed ventilation applications.  - Automatic limitation of low speed operating time, motor and drive protection, etc,  velling, and lift trement  - Alternate ramp switching.  - Automatic adaptation of deceleration ramp.
Application Functions Number of functions Number of parameter #800  - PID regulation - current and limitation - S ram - short rance - short ra	≈ 50  ≈ 200  - Starting, dynamic braking and braking to a standstill, speed control.  - Energy saving, PI regulator (flow rate, pressure, etc,,,).  - Brake sequence.  - Speed loop with tachogenerator or pulse generator.  - ±speed, S ramps, U ramps, preset JOG operation.  - Catch on the fly,  - Adaptation of current limiting according to speed ventilation applications.  - Automatic limitation of low speed operating time, motor and drive protection, etc,  velling, and lift trement
Number of functions #150  Number of parameter #800  - PID regulation - Current and limitation - S ram - short rates - 16 preset speed - 3 wire conducted by parameter - 16 preset speed - brake sequent - protection by parameter - protection by parameter - load shaded by the parameter - load shaded by the parameter - limit switches multipland - Power reading the parameter - limit switches parameter	according to speed ventilation applications.  - Automatic limitation of low speed operating time, motor and drive protection, etc,  - Alternate ramp switching Starting, dynamic braking and braking to a standstill, speed control Energy saving, PI regulator (flow rate, pressure, etc,,,,) Brake sequence Speed loop with tachogenerator or pulse generator ±speed, S ramps, U ramps, preset JOG operation Catch on the fly, - Adaptation of current limiting according to speed ventilation applications Automatic limitation of low speed operating time, motor and drive protection, etc,  - Alternate ramp switching Automatic adaptation of deceleration ramp.
- PID regulations  - PID regulation - S ram - current and limitation - S ram - short ram - 16 preset spending - 3 wire conduction by protection by protectio	according to speed ventilation applications.  - Automatic limitation of low speed operating time, motor and drive protection, etc,  - Alternate ramp switching Starting, dynamic braking and braking to a standstill, speed control Energy saving, PI regulator (flow rate, pressure, etc,,,,) Brake sequence Speed loop with tachogenerator or pulse generator ±speed, S ramps, U ramps, preset JOG operation Catch on the fly, - Adaptation of current limiting according to speed ventilation applications Automatic limitation of low speed operating time, motor and drive protection, etc,  - Alternate ramp switching Automatic adaptation of deceleration ramp.
- PID regulation - current and limitation - S ram - short radical - S ram - short radical - S ram - 16 preset speed - 3 wire conducted by protection by prot	- Starting, dynamic braking and braking to a standstill, speed control.  - Energy saving, PI regulator (flow rate, pressure, etc,,,).  - Brake sequence.  - Speed loop with tachogenerator or pulse generator.  - ±speed, S ramps, U ramps, preset JOG operation.  - Catch on the fly,  - Adaptation of current limiting according to speed ventilation applications.  - Automatic limitation of low speed operating time, motor and drive protection, etc,  velling, and lift trement
- current and limitation - S ram - short radical - S rake seq - protection by partical - short radical - short seq - protection by partical - short seq - load shad - Limit switches mand param - multi-mand - multi-mand - multi-mand - multi-mand - multi-mand - power redical - summing, different multiplying redical - summing, different - summing, different - fast catch - fastest controduction - traverse of - motor surge - customization of and param	braking to a standstill, speed control.  - Energy saving, PI regulator (flow rate, pressure, etc,,,,).  - Brake sequence.  - Speed loop with tachogenerator or pulse generator.  - ±speed, S ramps, U ramps, preset JOG operation.  - Catch on the fly,  - Adaptation of current limiting according to speed ventilation applications.  - Automatic limitation of low speed operating time, motor and drive protection, etc,  //elling, and lift prement
orientation a weight measu - high speed - brake feed - load shat - Limit switches multiplying reduction - fast catch - fastest control - traverse of and param - price Positioning	and lift urement  - Automatic adaptation of
<u> </u>	- Disabling reverse direction Save reference Brake sequence Motor switching Downstream contactor control Summing inputs Reference switching Speed feedback with tachogenerator Incremental speed feedback Incremental speed reference Automatic catching a spinning load with speed detection Automatic restart Maintening the speed following loss of the 4 - 20 mA reference Limiting low speed operation time Energy saving.
<u> </u>	
OSCI O MANIANI	
Simplified Yes	No
Complete Yes	User's manual (35 pages), Programming manual (61 pages)
Language 6 languages a	nd more English, french, italian, spanish, german,
Paper Yes	Yes
CD Yes	No
Web Site Telemecaniq Others	- Communication bus user's manual and dedicated manual Option and accessories dedicated manual
<b>Applications</b>	
Hoisting / crane Yes	
Horizontal handling Yes	Yes
Conveyor Yes	Yes
Packaging Yes	Yes Yes
Pumping Yes	Yes Yes Yes
Textile industry Yes	Yes Yes Yes Yes Yes
Fan no Lift Yes	Yes Yes Yes Yes Yes Yes
	Yes Yes Yes Yes Yes Yes Yes Yes Yes
Others  Compressor  Some low spee machines, unterpretation machine special mac	Yes Yes Yes Yes Yes Yes

ATV71	vs SIEMENS MICROMA	ASTER 440
ITEM	ATV71	SIEMENS MM440
		All informations following year 2002 documentation
Picture	AND W.  AND W.	
Drive sizing		
Constant Torque (CT) High torque (HT) Variable Torque (VT) Standard torque (VT)	Yes No	Yes Yes
Input	140	103
Single phase 200V range	Yes by using 3 ph drive + derating	
Power range	0,37 to 37kW	0,12 to 3 KW (constant torque)
Number of ratings Voltage range with tolerance		9 200 V to 240 V 1 AC ± 10 %
Mains frequency and tolerance		47 to 63 Hz
Three phase 200V range	Yes	0.10.15.111.10
Power range Number of ratings		0,12 - 45 kW (CT) 19
Voltage range with tolerance		200 V to 240 V 1 AC ± 10 %
Mains frequency and tolerance		47 to 63 Hz
Three phase 400V range Power range	0,75 to 630kW	0,37 to 200 KW (CT)
Number of ratings		24
Voltage range with tolerance	380V-15% to 480V + 10%	380 V to 480 V 3 AC ± 10 %
Mains frequency and tolerance		47 to 63 Hz
Three phase 600V range Power range	No	Yes 0,75 to 75 KW (CT)
Number of ratings		15
Voltage range with tolerance		500 V to 600 V 3 AC ± 10 %
Mains frequency and tolerance Three phase 690V range	No	47 to 63 Hz No
Power range		- -
Number of ratings		-
Voltage range with tolerance		-
Mains frequency and tolerance		- Removable "Y" capacitor for
Ungrounded supply	Disconnexion and reconnexion of Y capacitors	use on IT mains supplies.
EMC		
HF EMC compliance as standard		
Conducted emission	EN61800-3 C2 (II < 16A)	
Standard and level	EN61800-3 C2 (II < 16A) EN61800-3 C3 (II>16A)	EN 55 011, Class A, Group 1
Shielded motor cable length	10 m up to 15kW	Not given
Unshielded motor cable length	SUM up to 7 SKVV	Not given
Switching frequency	4kHz	=< 4kHz
		from 0,12 to 3kW 200V single phase
Power range integration	,	From 3 to 5,5kW 200V 3 phase from 2,2 to 75kW 400V
Shielding connexion Radiated emission	On EMC plate	Gland plate as an option up to frame D
Standard and level	EN55011 Class A	Emitted by the drive, 30 MHz to 1 GHz All devices : Limited availability 3) : limit complies with EN 55 011 Group 1, Class A
Power range	All the ratings	
LF EMC compliance as standard		
Inductance (AC or DC)	DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class	No
Power range integration		
Standard		
% THD		See table opposite
Immunity Standard 1 + level	IEC 61000-4-2 level 3	ESD immunity - EN 61 000-4-2 ESD through air discharge : Test level 3 : 8 kV ESD through contact discharge : Test level 3 : 6 kV
Standard 2 + level	IEC 61000-4-3 level 3	Electrical fields immunity - EN 61 000-4-3 Electrical field applied to unit : Test level 3, 26 MHz to 1 GHz : 10 V/m
Standard 3 + level	IEC 61000-4-4 level 4	Burst interference immunity - EN 61 000-4-4 Applied to all cable terminations : Test level 4 4 kV
Standard 4 + level	IEC 61000-4-5 level 3	Surge immunity - EN 61 000-4-5 Applied to mains cables : Test level 3 2 kV
Standard 5 + level	IEC 61000-4-6 level 3	Immunity to RFI emissions, conducted - EN 61 000-4-6 Applied to mains, motor and control cables Test level 4, 0.15 MHz to 80 MHz, 80 % AM (1 kHz) : 10 V

		Complies with the EU low voltage directive 73/23/EC
Low voltage directive	EN 50178	EN 60204 EN 50178
Others	IEC 61800-5-1	-
Physical environment		
Number of size (frame)	13 sizes	9 sizes
Protection Degree	IP21 and IP41 on upper part (EN 50178 and 61800-5-1) IP31 with gland box, Nema type 1 with conduit box	IP20 / NEMA 1, as standard
IP + power range	, , , , , , , , , , , , , , , , , , ,	- -
IP + power range		- -
IP + power range		-
IP + power range		-
Temperature		(without dorating)
Operating ambiant temperature	-10 to +50°C	(without derating) 0.12 kW to 75 kW : -10 °C to +50 °C (CT), -10 °C to +40 °C (VT) 90 kW to 200 kW : 0 °C to +40 °C
Storage temperature	-25 to 70°C	-40°C to +70°C
Humidity	95% non condensing without drop	95% RH – non-condensing
Operational altitudes	Possibile up to 3000m	0.12 kW to 75 kW : Up to 1000 m above sea level without derating 90 kW to 200 kW : Up to 2000 m above sea level without derating
Vibrations Other		<u>-</u>
Automatic stop of fan	Yes	- No
Mounting	100	110
Drive Shape	Compact	Compact
Side by side mounting	Yes without derating	Yes
Heat evacuation outside enclosure	Yes, the power section is IP54	-
Operating position	Vertical	Vertical
Others	-	Rail DIN mounting available for A size,
Power connexion		
DC Bus connexion	Yes	Yes
DC inductance connexion	Line inductance or DC inductance	No
Removable terminals	No	No
Bottom or Top/Bottom	Bottom	Bottom and Top / Bottom above 90 kW
Motor control		
AC motors motor control		
U/F	Yes	Quadratic V/f Multi-point V/f Programmable Linear V/f control with FCC Parabolic V/f control Linear V/f control with ECO mode V/f control for textile applications V/f control with FCC for textile applications V/f control with independent voltage setpoint
SVC (open loop)	Yes	Yes
FVC (closed loop)	Yes	Warning : Yes but no information
Type of encoder	RS422, Open collector or Push pull	Warning: no detailled informations The pulse encoder evaluation module permits direct connection of the most widely encountered digital pulse encoders to the inverter. They offer the following functions:  Zero speed at full load torque. Extremely accurate speed control. Increased dynamic response of speed and torque control.  This module can be used with HTL and TTL pulse encoders (High-voltage Transistor Logic, 24 V and transistor Logic, 5 V).
Others	ENA	Flux Current Control (FCC); Energy
Synchronous or brushless motors		Saving ; Torque Control.
Open loop	Yes	No
Closed loop		No No
Performances		
Speed range		
· •	1 : 100 open loop	
Motor quadrant	1 : 100 open loop 1 : 1000 closed loop	
Generator quadrant	1 : 50 open loop	
Generator quadrant	1 . 1000 closed loop	
Overtorque	From 170 to 2,2 Tn during 60s from 200 to 240% during 2s	165% during 60s 220% during 3s
Rated current philosophy	1,1 In motor (380V)	1,1 In motor
	In motor = 2 A	In motor = 2 A (Leroy Somer)
0,75kW / 400V	In drive = 2,3 A	In drive = 2,2 A
4 kW / 400V	In motor = 8,5 A In drive = 10,5 A	In motor = 8,5 A (Leroy Somer) In drive = 10,2 A
	In motor = 40.5 A	In drive = 10,2 A  In motor = 40,5 A (Leroy Somer)
22 kW / 400V  Overcurrent capability	In drive = 48 A	In drive =45 A  CT operation: - 0.12 kW to 75 kW: Overload current 1.5 x rated output current (i.e. 150 % overload capability) for 60s, cycle time 300 s, and 2 x rated output current (i.e. 200 % overload capability) for 3 s, cycle time 300 s 90 kW to 200 kW: Overload current 1.36 x rated output current (i.e. 136 % overload capability) for 57s, cycle time 300 s, and 1.6 x rated output current (i.e. 160 % overload capability) for 3 s, cycle time 300 s
Type of control and accuracy		

Speed control	Yes	Yes open loop
Torque control	Yes	Yes open loop
Torque rise time		
Sampling time of the loop		Yes
Autotuning		- motor data
Jane 3		- saturation curve
On line / Off line	Off line and On line	off line
Ways of execution	By keypad, Logic input, at power up	
		- statoir resistance
		- rotor resistance - stator leakage reactance
Values measured		- rotor leakage reactance
		- main reactance
		- magnetizing curve
Prefluxing	Yes	Yes (FCC)
Braking		DC Braking, Compound Braking, dynamic braking
Braking transistor	Yes	Integrated brake chopper up to 75 kW, above as an option
	Without resistor	
	100% Cn : 0,37 - 0,75 kW	
Braking performance w/o resistor		DC braking, Compound braking and Dynamic braking
	With resistor (as an option) Until 170% Cn	
	0,1 to 1000Hz up to 37kHz	
Output frequency range	up to 500Hz above	0 Hz to 650 Hz
Output frequency resolution	0,1Hz	
Switching frequency		
range	Settable from 0,5 to 16kHz	0.12 kW to 75 kW : 2 kHz to 16 kHz (in 2 kHz steps)
range		90 kW to 200 kW : 2 kHz to 8 kHz (in 2 kHz steps)
	4kHz up to 30kW	0.12 kW to 75 kW : 4 kHz (standard); 16 kHz (standard with 230 V inverters 0.12 kW to 5.5 kW)
factory setting	2,5kHz above	90 kW to 200 kW : 2 kHz (standard with VT mode); 4 kHz
		(standard with CT mode)
Integrated output filter		No
dv/dt	as an option	-
Motor voltage surge limitation	Yes	-
sinus	no	-
Others	no	-
Frequency setting resolution		
Serial		0.01 Hz Serial
Analog	11 bits	10 bit Analog, motor potentiometer 0.1 Hz (0.1% in PID
		mode)
Digital		0.01Hz
Modularity	0	,
Number of option board at the same time	3	1
Inputs / Outputs		
On basic product		Standard
Removable terminals	Yes	Screwless control terminals on detachable I/O board.
Type of terminal & pitch	Screw terminlas, pitch 5,08	colored, pitch 5,08
Sampling time	1ms minimum,and 2,5ms max	001010 a, p.1011 0,00
Analog input	2	2 differential , scalable can be used as LI
1	Differential voltage input +/-10V	0 to 10 V, 0 to 20 mA and -10 to +10 V
2	current or voltage input	0 - 10 V ; 0 - 20 mA
3		-
Logic inputs	6 assignable logic inputs	6 fully programmable isolated digital inputs switchable PNP/NPN
Logic outputs (open collector)	no	FINF/INFIN
	<u> </u>	3 configurable 30 V DC / 5 A (resistive), 250 V AC / 2 A
Relays	2 assignable relays (NO/NC, NC)	(inductive)
Analog outputs	1	2, programmable (0 / 4 mA to 20 mA)
1	Assignable output (voltage or current)	0 - 20 mA
2		4 - 20 mA
Dedicated I/O	2	1 PTC / VTV
1 2	Power removal input (compliance with 61800-5-2	PTC / KTY
3	-	-
I / O Option 1	Lgic I/O card	No
Removable terminals	Yes	-
Type of terminal & pitch	Screw terminlas, pitch 5,08	-
Sampling time	5ms	-
Analog input	no	-
Analog input		-
2		-
3		-
Logic inputs	4 assignable logic inputs	-
Logic outputs (open collector)	2 assignable open collector outputs	-
Relays	1 assignable relay (NO/NC)	_
Analog outputs	no	-
Analog outputs		-
2		-
3		
Dedicated I/O		-
Dedicated I/O	40V supply	
•	-10V supply	-
2	PTC input	-
3	F.41-11/01	- No
I / O Option 2	Extended I/O card	No
Removable terminals	Yes	-
Type of terminal & pitch	Screw terminlas, pitch 3,81 except relay that 5,08	-
Sampling time	5ms	-

Analog input	2	-
1	1 differential current input	-
2	1 voltage / current input	-
3		-
Logic inputs	4 assignable logic inputs	
Logic outputs (open collector)	2 assignable open collector outputs	-
Relays	1 assignable relay (NO/NC)	-
Analog outputs	2	-
1	2 assignable voltage/current Analog outputs	-
2		-
3		-
Dedicated I/O		-
1	PTC input	_
2		-
3		-
I / O Option 3	Controller inside card	No
Removable terminals	Yes	-
	103	
Type of terminal & pitch		-
Sampling time		-
Analog input		-
1		-
2		-
3		-
Logic inputs		-
Logic outputs (open collector)		-
Relays		<del>-</del>
Analog outputs		-
1		-
2		
		-
3		-
Dedicated I/O		-
1		-
2		-
3		-
Others		No
		INO
Communication		
Separated control supply	Yes 24V dc as standard	
On the basic product	Yes	RS485, optional RS232
		113403, Optional 113232
Protocol available 1	Modbus fully configurable with I/O scanner	-
Protocol available 2	Canopen fully configurable	-
Protocol available 3		<del>-</del>
Communication option card		2
Protocol available 1	Fipio PL7	Profibus Module
Protocol available 2	FIPIO with messaging	DeviceNet
		DeviceNet -
Protocol available 3	Modbus Plus	-
Protocol available 3 Protocol available 4	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus	-
Protocol available 3 Protocol available 4 Protocol available 5	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S	- - -
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP	- - - -
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 7	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet	- - - - -
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 8	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet	- - - -
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 7	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet	- - - - -
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 8	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet	- - - - - -
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 5 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 8	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet	- - - - - -
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 10	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet	- - - - - - -
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 11	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet	- - - - - - - - -
Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Gateway	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet	- - - - - - - - - - -
Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12  Gateway Protocol available 1	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 5 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Gateway Protocol available 1 Protocol available 1	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 5 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 12  Gateway  Protocol available 1 Protocol available 1 Protocol available 1 Protocol available 3	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 5 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 12 Gateway Protocol available 1 Protocol available 2 Protocol available 3 Protocol available 3 Protocol available 4	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i	
Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Gateway Protocol available 12 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 4 Protocol available 4 Protocol available 4	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i	
Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12  Gateway Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 6	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Protocol available 12 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 6	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i	
Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12  Gateway Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 6	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Protocol available 12 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 6	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12  Gateway Protocol available 1 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 8 Protocol available 8 Protocol available 8	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12  Gateway Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 8 Protocol available 8 Protocol available 9	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12  Gateway Protocol available 1 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 8 Protocol available 8 Protocol available 8	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12  Gateway Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 8 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 10	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12  Gateway Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 10 Protocol available 11	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12  Gateway Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 8 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 10	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12  Gateway Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 11	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12  Gateway Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 11 Protocol available 11 Protocol available 12 Protocol available 12	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12  Gateway Protocol available 2 Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 11 Protocol available 11 Protocol available 12 Protocol available 11 Protocol available 12 Protocol available 13 Operator panel Dialogue 1	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 12  Gateway Protocol available 1 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 10 Protocol available 11	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 12 Gateway Protocol available 2 Protocol available 3 Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 8 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 13 Operator panel Integrated / removable Type of screen	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i  Integrated 4 Led digits	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 12  Gateway Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 6 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 10 Protocol available 11 Protocol available 10 Protocol available 11 Protocol available 17	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i  Integrated 4 Led digits code	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12  Gateway Protocol available 12 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 8 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 10 Protocol available 10 Protocol available 10 Protocol available 11 Protocol available 17	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i  Integrated 4 Led digits code 4	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12  Gateway Protocol available 12 Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 11	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i  Integrated 4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12  Gateway Protocol available 12 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 8 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 10 Protocol available 10 Protocol available 10 Protocol available 11 Protocol available 17	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i  Integrated 4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Protocol available 12 Protocol available 12 Protocol available 12 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 11	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i  Integrated 4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12  Gateway Protocol available 12 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Protocol available 13 Protocol available 13 Protocol available 14 Protocol available 15 Protocol available 16 Protocol available 16 Protocol available 17 Protocol available 17 Protocol available 16 Protocol available 17 Protocol available 17 Protocol available 16 Protocol available 17 Protocol available 17 Protocol available 16 Protocol available 17 Protocol available 17 Protocol available 17 Protocol available 18 Protocol available 19 Protocol av	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i  Integrated 4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Protocol available 12 Protocol available 12 Protocol available 12 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 11	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i  Integrated 4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Gateway Protocol available 12 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 11 Protocol available 12 Protocol available 17 Protocol available 11 Protocol available 11 Protocol available 11 Protocol available 11 Protocol available 12 Protocol available 13 Operator panel Dialogue 1 Integrated / removable Type of screen Language Number of keys Number of keys Number of Leds Keypad command Function keys	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i  Integrated 4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 12  Gateway Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Protocol available 13 Protocol available 13 Protocol available 14 Protocol available 15 Protocol available 15 Protocol available 16 Protocol available 17 Protocol available 17 Protocol available 17 Protocol available 18 Protocol available 19 Protocol available 19 Protocol available 10 Protocol available 10 Protocol available 11	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i  Integrated 4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Protocol available 12 Protocol available 12 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Protocol available 13 Protocol available 14 Protocol available 15 Protocol available 15 Protocol available 16 Protocol available 17 Protocol available 19 Protocol available 10 Protocol available 2 Protocol available 2 Protocol available 2 Protocol available 3	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i  AS-i  Integrated 4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 12  Gateway Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Protocol available 13 Protocol available 13 Protocol available 14 Protocol available 15 Protocol available 16 Protocol available 17 Protocol available 17 Protocol available 17 Protocol available 18 Protocol available 19 Protocol available 19 Protocol available 19 Protocol available 10 Protocol available 10 Protocol available 11	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i  Integrated 4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12  Gateway Protocol available 12 Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Protocol available 13 Operator panel Dialogue 1 Integrated / removable Keypad command Function keys Others Dialogue 2 Integrated / removable Type of display	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i  AS-i  Integrated 4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable).	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Gateway Protocol available 12 Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Protocol available 13 Operator panel Dialogue 1 Integrated / removable Type of screen Language Number of Leds Keypad command Function keys Others Dialogue 2 Integrated / removable	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i  AS-i  Integrated 4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 12  Gateway Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 12 Protocol available 11 Protocol available 11 Protocol available 12 Protocol available 13 Protocol available 13 Protocol available 13 Protocol available 14 Protocol available 15 Protocol available 17 Protocol available 18 Protocol ava	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i  AS-i  Integrated 4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Gateway Protocol available 12 Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Protocol available 13 Operator panel Dialogue 1 Integrated / removable Type of screen Language Number of Leds Keypad command Function keys Others Dialogue 2 Integrated / removable	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i  AS-i  Integrated 4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key	
Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12  Gateway Protocol available 12 Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 11 Protocol available 11 Protocol available 12 Protocol available 11 Protocol available 11 Protocol available 12 Protocol available 13 Operator panel Dialogue 1 Integrated / removable Type of screen Language Number of keys Number of Leds Keypad command Function keys Others Dialogue 2 Integrated / removable Type of display Language	Modbus Plus Uni-Telway, Modbus ASCII, Modbus RTU/Jbus INTERBUS-S Profibus DP Ethernet DeviceNet  AS-i  AS-i  Integrated 4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for a shuttle + 1 key no	

Function key	4	Functions, Access parameters, Increase value, Decrease
1 dilction key.	navigation with a shuttle	value.
Other	could be used to save and restore 4 configurations	Doesn't have the capability to store parameter information
Dialogue 3		Optionnal (Advanced Operator Panel)
Integrated / removable		Removable
Type of displar  Language		LCD display 5 x 7 digits, clear text  Multilingual
Number of key		8 8
Number of Led		-
Keypad command	L Company of the Comp	Start, Stop, Jog, Change direction,
Function key	6	Functions, Access parameters, Increase value, Decrease
Other		value.  Upload / dowload of multiple parameter sets, Multidrop capability to drive up to 30 inverters.
Protections		capability to drive up to 30 inverters.
Thermal protection	Yes, I <sup>2</sup> t motor thermal protection depending on the motor frequency.  Memorization when power off	Yes, I <sup>2</sup> t motor thermal protection
Electronic / PTC		Yes, motor protection using PTC / KTY via digital input
he motor thermal state is saved when power is of	f	
Short circuit between phase	yes	Yes, short circuit protection
Ground fault	yes	Yes, earth fault prtection
Output phase loss	yes	
Input phase loss	yes	
Braking resistor protection	No	
Overload	yes	Yes
Overvoltage Undervoltage	yes yes	Yes Yes
Drive thermal protection	yes	Yes, inverter overtemperature protection
Locked motor protection	Yes	Yes
Stall prevention	Yes	Yes
Others		Parameter interlock using PIN number
Options and Accessoiries		
	protected braking resistor	Vee
Braking resistors	Hoisting resistors	Yes
Inductances (chokes)	Line chokes	Line commutating chokes
Regenerative Units	Yes	
EMC filters	Additional footprint filters	EMC filter class A / B 25m for drive w/o integrated filter EMC filter class B 25m for drive with integrated filter Low leakage current filter class B 5m for 200 V drive w/o integrated filter
Output filters	Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables	0.12 – 75 kW:  - without output choke: max. 50 m (shielded)  - with output choke: max. 200 m (shielded)  - without output choke: max. 100 m (unshielded)  - with output choke: max. 300 m (unshielded)  90 – 250 kW:  - without output choke: max. 100 m (shielded)  - with output choke: no informations for the moment
Others Specific Product	Control fan kit Canopen accessories keypad remote mounting kit	- Gland plate, - Basic operator panel, - Advanced operator panel, - PROFIBUS module, - DeviceNet module, - DeviceNet module, - Pulse encoder evaluation module - Assembly kits for mounting the operator panels in the control cabinet doors (IP 56), - PC to inverter connection kit, - PC to AOP connection kit, - BOP/AOP door mounting kit for single inverter control, - AOP door mounting kit for multiple inverter control, - "DriveMonitor" commissioning tool
Specific Floudct	the power section is IP54 to be easily mounted in	
Product mounted inside enclosures	enclosure with heat evacuation on the outside	-
Water cooled drive	no	-
Others		
List of marking	CE, UL, CSA, DNV	cUL, UL, CE, C-Tick
Part number		
1st part	ATV71 : Model	
2nd part	Type	
	H : heatsink  Power :  075 = 0,75kW	
3rd part	075 = 0,75kW U75 = 7,5kW D75 = 75kW	
4th part	15 : power	
5th part	Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V	
6th part	X : without filter Z : without operator display XZ : without filter and without operator display	
7th part		
8th part		
our part		
9th part		
·		
9th part		More performance
9th part  Communication Messages		More performance More power More functionnality

Message 4		More flexibility
Message 5		More precision
Message 6		More possibilities
Message 7		More applications
Type of communication		The communication is based on the fact that the product gives more possibilities than the other ones
Environment, recyclability		Yes, ISO 9001
Safety Compliance		
•	EN1800-5-1	
	Power removal EN1800-5-2 / EN 954-1 category 3	
	1 Owel Tellioval Elv1000-3-27 Elv 354-1 Category 5	
-		
Software Opening		
Logic Operation	no (could be carried out with the controller inside card)	
Controller (PLC) Inside	Yes	
Software Card		
Product Services		
	.,	
Flashable	Yes	
PC Software	PowerSuite sotware workshop	
Scope	Yes	
Application Functions		
Number of functions	#150	
	#800	- 600
Number of parameters	#000	≈ 600
Main functions	- PID regulator - current and torque limitation - S ramp - short ramp - 16 preset speeds + jog - 3 wire control - brake sequence - protection by passwords	Electro-mechanical brake control Ramp smoothing Start on the fly Skip frequencies Slip compensation Boost Pulse frequency selection Display a lot of parameters Calculation of motor parameters Last fault code Regenerative power limitation
List of advanced functions	- Brake sequence adapted to hoisting, travelling, orientation and lift weight measurement - high speed hoisting - brake feedback - load sharing -Limit switches management - non linear refence - multi-motor - multi parameters - Power removal - alarm group - limit switches positioning with low speed time optimization - summing, differentiating, multiplying reference - fast catch on fly - fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters	Autotuning of PID controller PID tranducer type
Price Positioning		
User's Manual		
Simplified	Yes	Getting started guide
Complete	Yes	Operating instructions
Language	6 languages and more	English, french, italian, spanish, german,
Paper	Yes	Yes
CD	Yes	Yes
Web Site	Telemecanique.com	www.siemens.de Informations difficult to find on the website
Others		Parameters list, reference manual, catalogue
Applications		
Hoisting / crane	Yes	Yes
	Yes Yes	Yes Yes
Horizontal handling	Yes Yes	Yes Yes
Conveyor	Yes	Yes
Packaging		
Pumping	Yes	Yes
Textile industry	Yes	Yes
Fan	no	Yes
Lift	Yes	Maybe but not in the documentation
Compressor	no	Yes
Others	some low speed process machines, unbalanced machine, special machine	- Controlling lift door operation - Exercise machine - Food and drink industry

ATV71 vs ABB ACS 800		
ITEM	ATV71	ACS 800
Picture	SEAT CONTINUES OF THE PARTY OF	
Drive sizing	Voo	Voo
Constant Torque (CT) High torque (HT) Variable Torque (VT) Standard torque (VT)	Yes No	Yes Yes
Input		1.30
Single phase 200V range	Yes by using 3 ph drive + derating	No
Power range	0,37 to 37kW	-
Number of ratings	9	-
Voltage range with tolerance Mains frequency and tolerance	200V -15% to 240V +10% 50 Hz ±20% or 60 Hz ±20%	<u>-</u>
Three phase 200V range	Yes	Yes
Power range	0,37 to 75kW	0,55 - 200 kW (High torque)
Number of ratings	17	25
Voltage range with tolerance	200V -15% to 240V +10% 50 Hz ±20% or 60 Hz ±20%	208 - 240 V ±10% 48 to 63 Hz
Mains frequency and tolerance Three phase 400V range	50 HZ ±20% OF 60 HZ ±20%	48 to 63 Hz Yes
Power range	0,75 to 630kW	1,1 - 355 kW or 1,5 to 450 kW (high torque)
Number of ratings	29	24 or 25
Voltage range with tolerance	380V-15% to 480V + 10%	380 - 415 V ±10% or 380 - 500V ±10%
Mains frequency and tolerance	50 Hz ±20% or 60 Hz ±20%	48 to 63 Hz
Three phase 600V range Power range	No	Yes (525 to 690V)
Number of ratings		5,5 to 75 kW (High torque) 11
Voltage range with tolerance		525 - 690 V ±10%
Mains frequency and tolerance		48 to 63 Hz
Three phase 690V range	No	Yes see 600V range
Power range		
Number of ratings  Voltage range with tolerance		
Mains frequency and tolerance		
Ungrounded supply	Disconnexion and reconnexion of Y capacitors	Order drive w/o EMC filter
EMC		
HF EMC compliance as standard		EN 61800-3 (1996) + Amendment A11 (2000) EMC product standard including specific test methods
Conducted emission		EN 61800-3, 2nd environment, unrestricted distribution EN 61800-3, 1st environment, restricted distribution
	EN61800-3 C2 (II < 16A)	EN 61800-3, 2nd environment, unrestricted distribution
Standard and level	EN61800-3 C3 (II>16A)	EN 61800-3, 1st environment, restricted distribution
Shielded motor cable length	SUM up to 75kW	With filter E202 the maximum is 100 m
Unshielded motor cable length	4kHz	
Switching frequency Power range integration	All ratings (except from 11 to 75kW 200V class)	All the ratings
Shielding connexion	On EMC plate	inside the drive
Radiated emission		
Standard and level	EN55011 Class A	
Power range	All the ratings	
LF EMC compliance as standard		
Inductance (AC or DC)	DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class	DC choke
Power range integration		All ratings
Standard		, dungo
% THD		50%
Immunity		
Standard 1 + level	IEC 61000-4-2 level 3	
Standard 2 + level	IEC 61000-4-3 level 3	
Standard 3 + level	IEC 61000-4-4 level 4	
Standard 4 + level	IEC 61000-4-5 level 3	
Standard 5 + level	IEC 61000-4-6 level 3	
Low voltage directive	EN 50178	The drive complies with the following standards. The compliance with the European Low Voltage Directive is verified according to standards EN 50178 (tests) and EN60204-1 (assessment).
Others	IEC 61800-5-1	
Physical environment		
Number of size (frame)	13 sizes	7 sizes IP21 or 7 sizes IP55
Protection Degree	IP21 and IP41 on upper part (EN 50178 and 61800-5- 1)	IP21 as standard, IP55 as option
	IP31 with gland box, Nema type 1 with conduit box	ii 21 do standard, ir oo as option

ID I newer renge		
IP + power range IP + power range		-
IP + power range		-
IP + power range		-
Temperature		
Operating ambiant temperature	-10 to +50°C	-15°C to +40°C, no frost allowed 40°C to 50°C at reduced current (1% / 1°C) WARNING: drive current are defined at 40°C
Storage temperature	-25 to 70°C	- 40 to +70°C
Humidity	95% non condensing without drop	5 to 95 %, no condensation allowed
Operational altitudes	1000m without derating. Possibile up to 3000m	Up to 1000m without derating, above derating depending on the range
Vibrations	·	Operation: Max. 1 mm (0.04 in.) (5 to 13.2 Hz), max. 7 m/s2 (23 ft/s2) (13.2 to 100 Hz) sinusoidal Storage: Max. 1 mm (0.04 in.) (5 to 13.2 Hz), max. 7 m/s2 (23 ft/s2) (13.2 to 100 Hz) sinusoidal Transportation: Max. 3.5 mm (0.14 in.) (2 to 9 Hz), max. 15
Other		Operation: not allowed Storage: Max. 100 m/s2 (330 ft./s2), 11 ms Transportation: Max. 100 m/s2 (330 ft./s2), 11 ms Contamination levels (IEC 60721-3-3) No conductive dust allowed. Operation: Boards without coating: Chemical gases: Class 3C1, Solid particles: Class 3S2 Boards with coating: Chemical gases: Class 3C2, Solid particles: Class 3S3 Boards without coating: Chemical gases: Class 1C2, Solid particles: Class 3S3 Boards without coating: Chemical gases: Class 1C2, Solid particles: Class 1S3 Transportation: Boards without coating: Chemical gases: Class 1C2, Solid particles: Class 1S3 Transportation: Boards without coating: Chemical gases: Class 2C2, Solid particles: Class 2S2 Boards with coating: Chemical gases: Class 2C2, Solid particles: Class 2S2 Free fall Operation: or allowed Storage: 250 mm (10 in.) for weight under 100 kg (220 lb) Transportation: 250 mm (10 in.) for weight under 100 kg (220 lb) Transportation: 250 mm (10 in.) for weight under 100 kg (220 lb) Atmospheric pressure Operation: 70 to 106 kPa 0.7 to 1.05 atmospheres Storage: 70 to 106 kPa 0.7 to 1.05 atmospheres
Automatic stop of fan	Yes	Transportation (CO to 400 kDo O C to 4 05 atmospheres
Mounting		
Drive Shape	Compact	Book format
Side by side mounting	Yes without derating	Yes
Heat evacuation outside enclosure	Yes, the power section is IP54	
Operating position	Vertical	Vertical (vertical and horizontal for the ACS800-02)
Others	-	-
Power connexion		
DC Bus connexion	Yes	Yes
DC inductance connexion	Line inductance or DC inductance	no
Pamayahla terminala	No	No, but large power terminals allowing the use of over sized or
Removable terminals	140	aluminium cable
Bottom or Top/Bottom	Bottom	Bottom (top with option)
Motor control		
AC motors motor control		
U/F	Yes	Yes
SVC (open loop)	Yes	Yes
FVC (closed loop)	Yes	Yes
Type of encoder	RS422, Open collector or Push pull	Pulse encoder
Others	ENA	DTC (ABB's direct torque control method of calculation)
Synchronous or brushless motors	.,	No
Open loop	Yes	-
Closed loop	No	-
Performances		
Speed range  Motor quadrant	1 : 100 open loop 1 : 1000 closed loop	Static accuracy:  - Open loop: 10% of motor slip  - Closed loop: 0,01% of nominal speed Dynamic accuracy:  - 0,3 to 0,4sec. with 100% torque step  - 0,1 to 0,2sec. With 100% torque step
Generator quadrant	1 : 50 open loop 1 : 1000 closed loop	
Overtorque	From 170 to 2,2 Tn during 60s from 200 to 240% during 2s	165% 60s at 40°C
Rated current philosophy	1,1 In motor (380V)	1,05 In motor
· · · ·	In motor = 2 A	·
0,75kW / 400V	In drive = 2,3 A	no equivalent
4 kW / 400V	In motor = 8,5 A In drive = 10,5 A In motor = 40,5 A	In motor = 8,5 A (Leroy Somer) In drive = 9,3 A In motor = 40,5 A (Leroy Somer)
22 kW / 400V	In drive = 48 A	In drive =49 A
Overcurrent capability	180% I motor during 60s	150% for 1 minute / 5 minutes at 40°C
	200% I motor during 2s	
Type of control and accuracy  Speed control	Yes	DTC (ABB's direct torque control)  Yes  Static accuracy:  - Open loop: 10% of motor slip - Closed loop: 0,01% of nominal speed
Torque control	Yes	Yes Non linearity : ± 4% with nominal torque ± 1% with nominal torque

		Torque step rise time :
Torque rise time		- Open loop : < 5 ms with nominal torque - Closed loop : < 5 ms with nominal torque
Sampling time of the loop Autotuning		Yes
On line / Off line	Off line and On line	tes
Ways of execution		A motor Identification Magnetisation is automatically done the first time the start command is given. During this first start-up, the motor is magnetised at zero speed for several seconds to allow the motor model to be created. This identification method is suitable for most applications. In demanding applications a separate Identification Run can be performed.
Values measured Prefluxing	Yes	
Braking	Tes	Optional braking resistor
Braking transistor	Yes	Depends on the part number but always built in
Braking performance w/o resistor	With resistor (as an option) Until 170% Cn	
Output frequency range	0,1 to 1000Hz up to 37kHz up to 500Hz above	0 to 300 Hz or 0 to 120 Hz with du/dt filters
Output frequency resolution	0,1Hz	0±300 Hz
,	0,1112	0±120 Hz with du/dt filters
Switching frequency range	Settable from 0,5 to 16kHz	
•	4kHz up to 30kW	
factory setting	2,5kHz above	
Integrated output filter		V
dv/dt	as an option	Yes, when applicable
Motor voltage surge limitation	Yes	
sinus Others	no no	Common mode filter, when applicable
Frequency setting resolution	iio	Common mode litter, when applicable
Serial		
Analog	11 bits	
Digital		
Modularity		
Number of option board at the same time	3	2
Inputs / Outputs		
On basic product		Standard I/O RMIO-01 board
Removable terminals	Yes	Yes
Type of terminal & pitch	Screw terminlas, pitch 5,08	5.08
Sampling time	1ms minimum,and 2,5ms max	3 AI : differencial, common mode voltage, galvanically isolated
Analog input	2	as a group
1	Differential voltage input +/-10V	±0 (2) - 10 V, resolution 12 bit
2	current or voltage input	0 (4) - 20 mA, resolution 12 bit
3		0 (4) - 20 mA, resolution 12 bit 7 LI : galvanically isolated as a group
Logic inputs	6 assignable logic inputs	- Input voltage 24 V
Logic outputs (open collector)	no	- Filtering (HW) time 1 ms
Relays	2 assignable relays (NO/NC, NC)	3 relay (logic) outputs : - Switchover contact - 24 V or 115/230 V AC - Max. 2 A
Analog outputs	1	- Max. 2 A 2 AO
	Assignable output (voltage or current)	0 (4) - 20 mA, resolution 10 bit
2		0 (4) - 20 mA, resolution 10 bit
Dedicated I/O	2 Power removal input (compliance with 61800-5-2	2 Reference voltage ouptut : ±10 V ±0,5 % max. 10 mA
	PTC input on LI	Auxiliary power output: +24 V ±10 % max. 250 mA
3	·	-
I / O Option 1	Lgic I/O card	Analog I/O Extension Module RAIO-01
Removable terminals	Yes	no
Type of terminal & pitch Sampling time	Screw terminlas, pitch 5,08 5ms	
Analog input	no	2 AI, galvanically isolated from 24 V supply and ground
1	iio	±0 (2) - 10 V, 0 (4) - 20 mA or ± 0 - 2 V, resolution 12 bits
2		±0 (2) - 10 V, 0 (4) - 20 mA or ± 0 - 2 V, resolution 12 bits
J orio inputo	A positive black in the	-
Logic inputs Logic outputs (open collector)	4 assignable logic inputs 2 assignable open collector outputs	-
Relays	1 assignable relay (NO/NC)	-
Analog outputs	no	2 AO, galvanically isolated from 24 V supply and ground
1		0 (4) - 20 mA, resolution 12 bit
2 3		0 (4) - 20 mA, resolution 12 bit
Dedicated I/O		-
1	-10V supply	-
2	PTC input	-
I / O Option 2	Extended I/O card	Digital I/O Extension Module RDIO-01
Removable terminals	Yes	no
Type of terminal & pitch	Screw terminlas, pitch 3,81 except relay that 5,08	
Sampling time	5ms	
Analog input	2	-
1	1 differential current input	-
2 3	1 voltage / current input	- -
Logic inputs	A appianable legis invests	3 LI, individually galvanically isolated
Logic inputs	4 assignable logic inputs	- Signal level 24 to 250 V or 115/230 V AC

h		T
Logic outputs (open collector)	2 assignable open collector outputs	2 relay (logic) outputs :
Relays	1 assignable relay (NO/NC)	- Switchover contact
Relays	assignable relay (NO/NC)	- 24 V or 115/230 V AC
Analog outputs	2	- Max. 2 A -
Analog outputs	2 assignable voltage/current Analog outputs	-
2		-
3	3	-
Dedicated I/O	P701	-
1	PTC input	-
3		-
I / O Option 3	Controller inside card	Pulse Encoder interface module RTAC-01
Removable terminals	Yes	
Type of terminal & pitch		
Sampling time		
Analog input		-
1		-
2		-
Logic inputs		-
Logic outputs (open collector)		-
Relays		-
Analog outputs		-
1		-
2		-
Dedicated I/O		1 incremental encoder input
		- Channels A, B and Z (zero pulse)
1		- Signal level and power supply for the encoder is 24 or 15 V
l		- Single ended or differential inputs - Maximum input frequency 200 kHz
		- Maximum input frequency 200 km2
3		-
Others		
Communication Communication		
	V 04)/ dtdd	
Separated control supply	Yes 24V dc as standard	yes
On the basic product  Protocol available 1	Yes  Modbus fully configurable with I/O scanner	_
Protocol available 1	Canopen fully configurable  Canopen fully configurable	-
Protocol available 2	Carioperi fully cornigurable	-
Communication option card		-
Protocol available 1	Fipio PL7	_
Protocol available 1	·	<u> </u>
Protocol available 3	ů ů	-
Protocol available 4		
Protocol available 5		_
Protocol available 6		
Protocol available 7	Ethernet	
Protocol available 8		
Protocol available 9		-
Protocol available 10		-
Protocol available 11		-
Protocol available 12		-
Gateway		9 integrated in the drive
Protocol available 1	AS-i	Profibus - DP
Protocol available 2		DeviceNet
Protocol available 3 Protocol available 4		CANopen ControlNet
Protocol available 4		Modbus Plus
Protocol available 6		LONWORKS
Protocol available 7		Modbus
Protocol available 8		Ethernet
Protocol available 9		Interbus-S
Protocol available 10		ABB CS 31
Protocol available 11		ABB AF 100
Protocol available 12		Johnson Controls N2
		Siemens Building Automation
Protocol available 13		Landis Division FLN
Operator panel		
Dialogue 1		Standard
Integrated / removable		removable
Type of screen	4 Led digits	Multilingual alphanumeric display (4 x 20) - plain text
		14 languages British English, American English, German, Italian, Spanish,
Language	code	Portuguese, Dutch, French, Danish, Finnish, Swedish, Czech,
Altonological (C)	4	Polish, Russian
Number of keys Number of Leds		16 0
Number of Leas		- local / remote
		- start / stop
Keypad command	no	- reset - motor rotation direction
		- motor rotation direction - reference
		- enter
		- parameter
Function keys	no	- drive - function - act
		- act
		- up
		- up - down
Others Dialogue 2		

Integrated / removable	Removable	-
Type of display	Graphic display	-
Language	6 languages (languages are flashable).	_
	Suitable for asian characters	-
Number of keys	use of a shuttle + 1 key	-
Number of Leds	no	-
Keypad command Function keys	Yes 4	-
Others	navigation with a shuttle could be used to save and restore 4 configurations	<u>-</u>
	remote mounting kit available  Multipoint connection	
Dialogue 3		No
Integrated / removable		-
Type of display		-
Language Number of keys		<u>-</u>
Number of Leds		<u> </u>
Keypad command		-
Function keys		-
Others		-
Protections		
Thermal protection	Yes, I <sup>2</sup> t motor thermal protection depending on the motor frequency. Memorization when power off	Yes
Electronic / PTC	Yes, dedicated input on option cards	
The motor thermal state is saved when power is off		
Short circuit between phase	yes	Yes
Ground fault	yes	Yes
Output phase loss	yes	Yes
Input phase loss	yes	Yes
Braking resistor protection	No	
Overload	yes	Yes
Overvoltage	yes	Yes
Undervoltage	yes	Yes Yes
Drive thermal protection  Locked motor protection	yes Yes	1 05
Stall prevention	Yes	Yes
Stall prevention	1 es	- Panel loss
Others		- Failer loss  - Adjustable power limit  - Control signal supervision  - External fault  - Critical frequencies lock out  - Current and torque limits  - Power limits
Options and Accessoiries		
Braking resistors	protected braking resistor	Yes, as an option
	Hoisting resistors	Yes, as standard harmonic filtering and drive protection choke
Inductances (chokes)	Line chokes	inside
Regenerative Units	Yes	V
EMC filters	Additional footprint filters  Motor chokes	Yes, as an option
Output filters	full performances filters sinus filters filters for EMC compliance with unshielded cables	Yes, as an option
Others	Control fan kit Canopen accessories keypad remote mounting kit	Accessories requiring enclosure extension for the ACS800-02:  - Fuse switch  - Contactor with emergency stop pushbutton  - 1 or 2 thermistor relays  - 3 Pt100 relays  - Cable top entry and exit  - Customer terminal block
Specific Product		
Product mounted inside enclosures	the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside	Cabinet built single drive ACS800-07 up to 2800 kW : IP21 protection class, IP22, 42, 54 or 54R enclosure classes
Water cooled drive	no	-
Others		- Single drive module ACS800-04 up to 500 kW : IP00 - 4 Quadrant drive ACS800-17 up to 1120 kW, air cooled regenerative drive
List of marking	CE, UL, CSA, DNV	CSA, UL, CE, C-tick
Part number		
1st part	ATV71 : Model	
2nd part	Type H:heatsink	
3rd part	Power : 075 = 0,75kW U75 = 7,5kW D75 = 75kW	
4th part	15 : power	
5th part	Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V	
6th part	X : without filter Z : without operator display XZ : without filter and without operator display	
7th part		
8th part		
9th part		
Communication Messages		A compact AC drive with everything inside :
Message 1		More power in less space EMC and harmonic filters Braking chopper and plug in options

Software Opening	EN1800-5-1 Power removal EN1800-5-2 / EN 954-1 category 3  to (could be carried out with the controller inside card) Yes  Yes  PowerSuite sotware workshop  Yes	An AC drive that can be programmed: Like an integrated PLC Without any extra hardware or software tools In minutes, on site, during start up An AC drive that can commissioned: Without manuals Without training Without losing time  Based on the easiness of use of the product The quality system has been certified according to: ISO 9001, ISO 9001 and The Ticklt Guide and ISO 14001  Yes Yes Yes  - DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2 - DriveWindow Light 2,1
Message 4  Message 5  Message 6  Message 7  Type of communication  Environment, recyclability  Safety Compliance  Software Opening  Logic Operation Controller (PLC) Inside Software Card  Product Services  Flashable  PC Software  Scope  Application Functions Number of functions	Power removal EN1800-5-2 / EN 954-1 category 3  no (could be carried out with the controller inside card) Yes  Yes  PowerSuite sotware workshop  Yes	Without manuals Without training Without losing time
Message 5 Message 6 Message 7 Type of communication Environment, recyclability  Safety Compliance  Software Opening Logic Operation Controller (PLC) Inside Software Card Product Services Flashable  PC Software  Scope Application Functions Number of functions	Power removal EN1800-5-2 / EN 954-1 category 3  no (could be carried out with the controller inside card) Yes  Yes  PowerSuite sotware workshop  Yes	- Based on the easiness of use of the product The quality system has been certified according to: ISO 9001, ISO 9001 and The Ticklt Guide and ISO 14001  Yes Yes Yes - DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2
Message 6 Message 7 Type of communication Environment, recyclability  Safety Compliance  Software Opening Logic Operation Controller (PLC) Inside Software Card Product Services Flashable  PC Software  Scope Application Functions Number of functions	Power removal EN1800-5-2 / EN 954-1 category 3  no (could be carried out with the controller inside card) Yes  Yes  PowerSuite sotware workshop  Yes	- Based on the easiness of use of the product The quality system has been certified according to: ISO 9001, ISO 9001 and The Ticklt Guide and ISO 14001  Yes Yes Yes - DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2
Message 6 Message 7 Type of communication Environment, recyclability  Safety Compliance  Software Opening Logic Operation Controller (PLC) Inside Software Card Product Services Flashable  PC Software  Scope Application Functions Number of functions	Power removal EN1800-5-2 / EN 954-1 category 3  no (could be carried out with the controller inside card) Yes  Yes  PowerSuite sotware workshop  Yes	Based on the easiness of use of the product The quality system has been certified according to: ISO 9001, ISO 9001 and The Ticklt Guide and ISO 14001  Yes Yes Yes  - DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2
Message 7 Type of communication Environment, recyclability  Safety Compliance  Software Opening Logic Operation Controller (PLC) Inside Software Card Product Services Flashable  PC Software  Scope Application Functions Number of functions	Power removal EN1800-5-2 / EN 954-1 category 3  no (could be carried out with the controller inside card) Yes  Yes  PowerSuite sotware workshop  Yes	Based on the easiness of use of the product The quality system has been certified according to: ISO 9001, ISO 9001 and The Ticklt Guide and ISO 14001  Yes Yes Yes  - DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2
Type of communication Environment, recyclability  Safety Compliance  Software Opening Logic Operation Controller (PLC) Inside Software Card Product Services Flashable  PC Software  Scope Application Functions Number of functions	Power removal EN1800-5-2 / EN 954-1 category 3  no (could be carried out with the controller inside card) Yes  Yes  PowerSuite sotware workshop  Yes	Based on the easiness of use of the product The quality system has been certified according to: ISO 9001, ISO 9001 and The Ticklt Guide and ISO 14001  Yes Yes Yes  - DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2
Software Opening Logic Operation Controller (PLC) Inside Software Card Product Services Flashable  PC Software  Scope Application Functions Number of functions	Power removal EN1800-5-2 / EN 954-1 category 3  no (could be carried out with the controller inside card) Yes  Yes  PowerSuite sotware workshop  Yes	The quality system has been certified according to: ISO 9001, ISO 9001 and The Ticklt Guide and ISO 14001  Yes  Yes  Yes  - DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2
Safety Compliance  Software Opening Logic Operation Controller (PLC) Inside Software Card Product Services Flashable  PC Software  Scope Application Functions Number of functions	Power removal EN1800-5-2 / EN 954-1 category 3  no (could be carried out with the controller inside card) Yes  Yes  PowerSuite sotware workshop  Yes	Yes Yes Yes  - DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2
Software Opening Logic Operation Controller (PLC) Inside Software Card Product Services Flashable  PC Software  Scope Application Functions Number of functions	Power removal EN1800-5-2 / EN 954-1 category 3  no (could be carried out with the controller inside card) Yes  Yes  PowerSuite sotware workshop  Yes	Yes Yes Yes  - DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2
Software Opening Logic Operation Controller (PLC) Inside Software Card Product Services Flashable  PC Software  Scope Application Functions Number of functions	Power removal EN1800-5-2 / EN 954-1 category 3  no (could be carried out with the controller inside card) Yes  Yes  PowerSuite sotware workshop  Yes	Yes  - DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2
Software Opening Logic Operation Controller (PLC) Inside Software Card Product Services Flashable  PC Software  Scope Application Functions Number of functions	Power removal EN1800-5-2 / EN 954-1 category 3  no (could be carried out with the controller inside card) Yes  Yes  PowerSuite sotware workshop  Yes	Yes  - DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2
Software Opening Logic Operation Controller (PLC) Inside Software Card Product Services Flashable  PC Software  Scope Application Functions Number of functions	Yes  PowerSuite sotware workshop  Yes	Yes  - DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2
Logic Operation Controller (PLC) Inside Software Card Product Services Flashable  PC Software  Scope Application Functions Number of functions	Yes  Yes  PowerSuite sotware workshop  Yes	Yes  - DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2
Logic Operation Controller (PLC) Inside Software Card Product Services Flashable  PC Software  Scope Application Functions Number of functions	Yes  Yes  PowerSuite sotware workshop  Yes	Yes  - DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2
Logic Operation Controller (PLC) Inside Software Card Product Services Flashable  PC Software  Scope Application Functions Number of functions	Yes  Yes  PowerSuite sotware workshop  Yes	Yes  - DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2
Logic Operation Controller (PLC) Inside Software Card Product Services Flashable  PC Software  Scope Application Functions Number of functions	Yes  Yes  PowerSuite sotware workshop  Yes	Yes  - DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2
Logic Operation Controller (PLC) Inside Software Card Product Services Flashable  PC Software  Scope Application Functions Number of functions	Yes  Yes  PowerSuite sotware workshop  Yes	Yes  - DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2
Controller (PLC) Inside Software Card  Product Services Flashable  PC Software  Scope  Application Functions Number of functions	Yes  Yes  PowerSuite sotware workshop  Yes	Yes  - DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2
Software Card  Product Services  Flashable  PC Software  Scope  Application Functions  Number of functions	Yes PowerSuite sotware workshop Yes	- DriveAP for Adaptative Programming - DriveOPC for Windows based monitoring - DriveSize for dimensioning motors and drives - DriveWindow 2
Product Services  Flashable  PC Software  Scope  Application Functions  Number of functions	PowerSuite sotware workshop Yes	DriveOPC for Windows based monitoring     DriveSize for dimensioning motors and drives     DriveWindow 2
Flashable  PC Software  Scope  Application Functions  Number of functions	PowerSuite sotware workshop Yes	DriveOPC for Windows based monitoring     DriveSize for dimensioning motors and drives     DriveWindow 2
PC Software  Scope  Application Functions  Number of functions	PowerSuite sotware workshop Yes	DriveOPC for Windows based monitoring     DriveSize for dimensioning motors and drives     DriveWindow 2
Scope Application Functions Number of functions	Yes	DriveOPC for Windows based monitoring     DriveSize for dimensioning motors and drives     DriveWindow 2
Application Functions Number of functions		
Application Functions Number of functions		
Application Functions Number of functions		
Number of functions		
Number of parameters	#150	
	#800	≈ 450
Main functions	- PID regulator - current and torque limitation - S ramp - short ramp - 16 preset speeds + jog - 3 wire control - brake sequence - protection by passwords	- Jog function
List of advanced functions	- Brake sequence adapted to hoisting, travelling, orientation and lift weight measurement - high speed hoisting - brake feedback - load sharing -Limit switches management - non linear refence - multi-motor - multi parameters - Power removal - alarm group - limit switches positioning with low speed time optimization - summing, differentiating, multiplying reference - fast catch on fly - fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters	- Wobbulation function - Shiftwise production calculation - Master, follower using several drives - Macro possibilities for PID, user, etc,,,
Price Positioning		
User's Manual		
Simplified	Yes	
Complete	Yes	Yes
Language	6 languages and more	English
Paper	Yes	Yes
CD	Yes	
Web Site	Telemecanique.com	www,abb,com
	i ciomecanique.com	- Catalogue
Others		- Catalogue related tools and accessories - Application guide - Firmware manual - Adaptative program
Applications		
Hoisting / crane	Yes	Yes
Horizontal handling	Yes	Yes
Conveyor	Yes	Yes
Packaging	Yes	Yes
Pumping	Yes	Yes
Textile industry	Yes	Yes
Fan	no	Yes
Lift	Yes	100
		.,
Compressor	no	Yes
Others	some low speed process machines, unbalanced machine, special machine	- Centrifuge control - Extruder control - Spinning control - Traverse control

ATV71 vs LENZE 9300		
ITEM	ATV71	9300
Drive sizing	CALLED TO THE PARTY OF THE PART	
	Vaa	Vaa
Constant Torque (CT) High torque (HT) Variable Torque (VT) Standard torque (VT)	Yes No	Yes Yes
	INU	Tes
Input	V 1	.,
Single phase 200V range Power range	Yes by using 3 ph drive + derating 0,37 to 37kW	No -
Number of ratings		- -
Voltage range with tolerance		<u>-</u>
Mains frequency and tolerance		-
Three phase 200V range	Yes	No
Power range		-
Number of ratings		-
Voltage range with tolerance		-
Mains frequency and tolerance		-
Three phase 400V range		Yes
Power range	0,75 to 630kW	0,37 to 400kW
Number of ratings		20
Voltage range with tolerance	380V-15% to 480V + 10%	380/480V -15% / +10%
Mains frequency and tolerance	50 Hz ±20% or 60 Hz ±20%	from 45 to 65 Hz
Three phase 600V range	No	No
Power range		-
Number of ratings		-
Voltage range with tolerance		-
Mains frequency and tolerance		-
Three phase 690V range	No	No
Power range		-
Number of ratings		-
Voltage range with tolerance		-
Mains frequency and tolerance		-
Ungrounded supply	Disconnexion and reconnexion of Y capacitors	
EMC		
HF EMC compliance as standard		
Conducted emission		As option
Standard and level	EN61800-3 C2 (II < 16A) EN61800-3 C3 (II>16A)	0,37 to 90 kW : optional (radio interference level A or B) 110 to 400 kW : Complies with EN 55011, class A with the use of an optionnal filter and with the use of a maximum shielded cable lenght of 50m
Shielded motor cable length	50m up to 75kW	100m without adding filter in the output side 200m with motor choke
Unshielded motor cable length		200m without adding filter in the output side 400m with motor choke
Switching frequency		
Power range integration	· · · ·	
Shielding connexion	On EMC plate	
Radiated emission		
Standard and level	EN55011 Class A	EN 55011 level A
Power range	All the ratings	
LF EMC compliance as standard		
Inductance (AC or DC)	DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class	DC choke integrated from 110kW
	3	
Power range integration	· ·	
Power range integration		
Power range integration Standard % THD		

mmunity		Operation with the EN 04000 O including A44
	IFC 04000 4.2 level 2	Complies with the EN 61800-3 including A11
Standard 1 + leve Standard 2 + leve		EN61000-4-2, degree 3 (8kV isolation, 6 kV contact) EN 61000-4-6, 150 kHz to 80 MHz, 10 mV/m 80% AM (1 kHz)
Standard 2 + leve		EN 61000-4-5, 150 kHz to 80 MHz, 10 mV/m 80% AM (1 kHz) EN 61000-4-3, degree 3 (80 MHz to 1 GHz, 10 mV/m 80% AM
Standard 6 × 16ve	IEC 61000-4-4 level 4	kHz)
Standard 4 + leve	IEC 61000-4-5 level 3	EN 61000-4-4, degree 3/4 (2 kV / 5kHz)
Standard 5 + leve	IEC 61000-4-6 level 3	EN 61000-4-5, degree 3 (1,2 / 50 μs, 1 kV ph-ph, 2 kV ph-PE)
Low voltage directive	EN 50178	50178
Others	IEC 61800-5-1	- Pollution degree : 2
Physical environment		
Number of size (frame)	13 sizes	9
Protection Degree	IP21 and IP41 on upper part (EN 50178 and 61800-5-	IP20, IP41 on the heat sink side for thermal separation
	1)	(punching)
	IP31 with gland box, Nema type 1 with conduit box	NEMA1 : protection against contact
IP + power range		
Temperature		
Operating ambiant temperature	-10 to +50°C	0 to 40 °C (up to 50°C without derating)
Storage temperature		-25 to +55 °C
Humidit	,	Class 3K3 according to EN 50178 (without condensing, relative
· Almare	95% non condensing without drop	humidity 85%)
Operational altitude		0 to 4000 m (up to 1000 without derating)
	Possibile up to 3000m	
Vibration	6	Germanischer Lloyd, general conditions
		Résistance aux chocs
Othe	r	EN 50178
- Cano		Pollution ambiante admissible Degré 2 selon VDE 0110, partie 2
Automatic stop of fan	Yes	50gio 2 301011 VDE 0 1 10, partic 2
<u> </u>	res	
Mounting		
Drive Shape	Compact	Book-shelf design
Side by side mounting	Yes without derating	Yes up to 90kW
Heat evacuation outside enclosure	Yes, the power section is IP54	Yes
Operating position	Vertical	Vertical
Others		Depending on the range : vertically on the control cabinet back
	-	panel with mains connections at the top : with enclosed fixing
		rails or fixing brackets
Power connexion		
DC Bus connexion	Yes	Yes
DC inductance connexion	Line inductance or DC inductance	no
Removable terminals	No	No
Bottom or Top/Bottom	Bottom	Bottom or top / bottom depending on the range
Motor control		
AC motors motor control		
U/I	Yes	Yes linear and quadratic
SVC (open loop	1.1	Yes
FVC (closed loop	/	Yes
Type of encode	/	TTL encoder
Other		resolver and Sincos on servo version
Synchronous or brushless motors	<del>-</del>	
,		Yes
Open loo	Vec	Yes
Open loo		Yes no
Closed loo		Yes
Closed loop Performances		Yes no
Closed loo		Yes no Servo version
Closed loop Performances	No No	Yes no Servo version  Speed
Closed loo Performances Speed range	No No	Yes no Servo version  Speed 1: 100 open loop
Closed loo Performances Speed range Motor quadran	1 : 100 open loop 1 : 1000 closed loop	Yes no Servo version  Speed 1:100 open loop 1:1000 with feedback
Closed loo Performances Speed range	1 : 100 open loop 1 : 1000 closed loop t 1 : 50 open loop	Yes no Servo version  Speed 1: 100 open loop
Closed loo Performances Speed range  Motor quadrant  Generator quadran	1 : 100 open loop 1 : 1000 closed loop t 1 : 50 open loop 1 : 1000 closed loop	Yes no Servo version  Speed 1:100 open loop 1:1000 with feedback Integrated braking chopper as an option
Closed loo Performances Speed range Motor quadran	1: 100 open loop 1: 1000 closed loop t 1: 50 open loop 1: 1000 closed loop From 170 to 2,2 Tn during 60s	Yes no Servo version  Speed 1:100 open loop 1:1000 with feedback
Closed loo Performances Speed range  Motor quadrant  Generator quadran	1 : 100 open loop 1 : 1000 closed loop t 1 : 50 open loop 1 : 1000 closed loop	Yes no Servo version  Speed 1:100 open loop 1:1000 with feedback Integrated braking chopper as an option
Closed loo Performances Speed range  Motor quadran  Generator quadrar  Overtorqui	1: 100 open loop 1: 1000 closed loop t 1: 50 open loop 1: 1000 closed loop 1: 1000 closed loop From 170 to 2,2 Tn during 60s from 200 to 240% during 2s 1,1 In motor (380V)	Yes no Servo version  Speed 1: 100 open loop 1: 1000 with feedback Integrated braking chopper as an option  1,8 x Cn for 60 sec
Closed loo Performances Speed range  Motor quadran  Generator quadran  Overtorqui	1: 100 open loop 1: 1000 closed loop t 1: 50 open loop 1: 1000 closed loop 1: 1000 closed loop From 170 to 2,2 Tn during 60s from 200 to 240% during 2s 1,1 In motor (380V)	Yes no Servo version  Speed 1: 100 open loop 1: 1000 with feedback Integrated braking chopper as an option  1,8 x Cn for 60 sec
Closed loo Performances Speed range  Motor quadran  Generator quadran  Overtorqui	1: 100 open loop 1: 1000 closed loop  t: 1: 50 open loop 1: 1000 closed loop  From 170 to 2,2 Tn during 60s from 200 to 240% during 2s  1,1 In motor (380V)  In motor = 2 A In drive = 2,3 A In motor = 8,5 A	Yes no Servo version  Speed 1: 100 open loop 1: 1000 with feedback Integrated braking chopper as an option  1,8 x Cn for 60 sec  In motor = 2 A In drive = 2,5 A up to 8 kHz
Closed loo Performances Speed range  Motor quadrant  Generator quadrant  Overtorque  Rated current philosophy  0,75kW / 4000	1: 100 open loop 1: 1000 closed loop  t	Yes no Servo version  Speed 1: 100 open loop 1: 1000 with feedback Integrated braking chopper as an option  1,8 x Cn for 60 sec  In motor = 2 A In drive = 2,5 A up to 8 kHz not found
Closed loo Performances Speed range  Motor quadrant  Generator quadrant  Overtorquit  Rated current philosophy  0,75kW / 4000	1: 100 open loop 1: 1000 closed loop  t: 1: 50 open loop 1: 1000 closed loop  From 170 to 2,2 Tn during 60s from 200 to 240% during 2s  1,1 In motor (380V) In motor = 2 A In drive = 2,3 A In motor = 8,5 A In drive = 10,5 A In motor = 40,5 A	Yes  no  Servo version  Speed  1: 100 open loop 1: 1000 with feedback  Integrated braking chopper as an option  1,8 x Cn for 60 sec  In motor = 2 A In drive = 2,5 A up to 8 kHz  not found  In motor = 40,5 A (Leroy Somer)
Closed loo Performances Speed range  Motor quadrant  Generator quadrant  Overtorque  Rated current philosophy  0,75kW / 400\(  4 kW / 400\(  22 kW / 400\(  )	1:100 open loop 1:1000 closed loop  1:50 open loop 1:1000 closed loop  1:1000 closed loop  From 170 to 2,2 Tn during 60s from 200 to 240% during 2s  1,1 In motor (380V)  In motor = 2 A In drive = 2,3 A In motor = 8,5 A In drive = 10,5 A In motor = 40,5 A In drive = 48 A	Yes  no  Servo version  Speed  1: 100 open loop 1: 1000 with feedback  Integrated braking chopper as an option  1,8 x Cn for 60 sec  In motor = 2 A In drive = 2,5 A up to 8 kHz  not found  In motor = 40,5 A (Leroy Somer) In drive = 47 A up to 8kHz
Closed loo Performances Speed range  Motor quadrant  Generator quadrant  Overtorque  Rated current philosophy  0,75kW / 4000	1:100 open loop 1:1000 closed loop  t	Yes  no  Servo version  Speed  1: 100 open loop 1: 1000 with feedback  Integrated braking chopper as an option  1,8 x Cn for 60 sec  In motor = 2 A In drive = 2,5 A up to 8 kHz  not found  In motor = 40,5 A (Leroy Somer)
Closed loo Performances Speed range  Motor quadran  Generator quadran  Overtorque  0,75kW / 400\  4 kW / 400\  22 kW / 400\  Overcurrent capabilit	1:100 open loop 1:1000 closed loop  1:50 open loop 1:1000 closed loop  1:1000 closed loop  From 170 to 2,2 Tn during 60s from 200 to 240% during 2s  1,1 In motor (380V)  In motor = 2 A In drive = 2,3 A In motor = 8,5 A In drive = 10,5 A In motor = 40,5 A In drive = 48 A	Yes  no  Servo version  Speed  1:100 open loop 1:1000 with feedback  Integrated braking chopper as an option  1,8 x Cn for 60 sec  In motor = 2 A In drive = 2,5 A up to 8 kHz  not found  In motor = 40,5 A (Leroy Somer) In drive = 47 A up to 8kHz
Closed loo Performances Speed range  Motor quadran  Generator quadran  Overtorque  Rated current philosophy  0,75kW / 400\ 22 kW / 400\  Overcurrent capabilit  Type of control and accuracy	1:100 open loop 1:1000 closed loop  1:50 open loop 1:1000 closed loop 1:1000 closed loop From 170 to 2,2 Tn during 60s from 200 to 240% during 2s  1,1 In motor (380V) In motor = 2 A In drive = 2,3 A In motor = 8,5 A In drive = 10,5 A In motor = 40,5 A In drive = 48 A Is0% I motor during 60s 200% I motor during 2s	Yes  no  Servo version  Speed  1:100 open loop 1:1000 with feedback  Integrated braking chopper as an option  1,8 x Cn for 60 sec  In motor = 2 A In drive = 2,5 A up to 8 kHz  not found  In motor = 40,5 A (Leroy Somer) In drive = 47 A up to 8kHz  1,5 In drive for 60 sec
Closed loo Performances Speed range  Motor quadran  Generator quadran  Overtorque  0,75kW / 400\  4 kW / 400\  22 kW / 400\  Overcurrent capabilit	1:100 open loop 1:1000 closed loop  1:50 open loop 1:1000 closed loop 1:1000 closed loop From 170 to 2,2 Tn during 60s from 200 to 240% during 2s  1,1 In motor (380V) In motor = 2 A In drive = 2,3 A In motor = 8,5 A In drive = 10,5 A In motor = 40,5 A In drive = 48 A Is0% I motor during 60s 200% I motor during 2s	Yes  no  Servo version  Speed  1: 100 open loop 1: 1000 with feedback Integrated braking chopper as an option  1,8 x Cn for 60 sec  In motor = 2 A In drive = 2,5 A up to 8 kHz  not found  In motor = 40,5 A (Leroy Somer) In drive = 47 A up to 8kHz  1,5 In drive for 60 sec
Closed loo Performances Speed range  Motor quadran  Generator quadran  Overtorqui  Rated current philosophy  0,75kW / 400\ 22 kW / 400\  Overcurrent capabilit  Type of control and accuracy  Speed control	1:100 open loop 1:1000 closed loop  1:50 open loop 1:1000 closed loop  1:1000 closed loop 1:1000 closed loop From 170 to 2,2 Tn during 60s from 200 to 240% during 2s  1,1 In motor (380V) In motor = 2 A In drive = 2,3 A In motor = 8,5 A In drive = 10,5 A In drive = 40,5 A In drive = 48 A  180% I motor during 60s 200% I motor during 2s	Yes  no  Servo version  Speed  1: 100 open loop 1: 1000 with feedback Integrated braking chopper as an option  1,8 x Cn for 60 sec  In motor = 2 A In drive = 2,5 A up to 8 kHz  not found  In motor = 40,5 A (Leroy Somer) In drive = 47 A up to 8kHz  1,5 In drive for 60 sec  Yes  1% nominal speed in open loop
Closed loo Performances Speed range  Motor quadran  Generator quadran  Overtorque  Rated current philosophy  0,75kW / 400\ 22 kW / 400\  Overcurrent capabilit  Type of control and accuracy	1: 100 open loop 1: 1000 closed loop  1: 50 open loop 1: 1000 closed loop  1: 1000 closed loop  From 170 to 2,2 Tn during 60s from 200 to 240% during 2s  1,1 In motor (380V)  In motor = 2 A In drive = 2,3 A In motor = 8,5 A In drive = 10,5 A In motor = 40,5 A In drive = 48 A  180% I motor during 60s 200% I motor during 2s	Yes  no  Servo version  Speed  1: 100 open loop 1: 1000 with feedback Integrated braking chopper as an option  1,8 x Cn for 60 sec  In motor = 2 A In drive = 2,5 A up to 8 kHz  not found  In motor = 40,5 A (Leroy Somer) In drive = 47 A up to 8kHz  1,5 In drive for 60 sec  Yes  Yes 1% nominal speed in open loop Yes
Closed loo Performances Speed range  Motor quadran  Generator quadran  Overtorqui  Rated current philosophy  0,75kW / 400\ 22 kW / 400\  Overcurrent capabilit  Type of control and accuracy  Speed control  Torque control	1: 100 open loop 1: 1000 closed loop  1: 50 open loop 1: 1000 closed loop  From 170 to 2,2 Tn during 60s from 200 to 240% during 2s  1,1 In motor (380V)  In motor = 2 A In drive = 2,3 A In motor = 8,5 A In drive = 10,5 A In motor = 40,5 A In drive = 48 A  180% I motor during 60s 200% I motor during 2s	Yes  no  Servo version  Speed  1: 100 open loop 1: 1000 with feedback Integrated braking chopper as an option  1,8 x Cn for 60 sec  In motor = 2 A In drive = 2,5 A up to 8 kHz  not found  In motor = 40,5 A (Leroy Somer) In drive = 47 A up to 8kHz  1,5 In drive for 60 sec  Yes  1% nominal speed in open loop
Closed loo Performances Speed range  Motor quadran  Generator quadran  Overtorqui  Rated current philosophy  0,75kW / 400\ 22 kW / 400\  Overcurrent capabilit  Type of control and accuracy  Speed control  Torque control	1:100 open loop 1:1000 closed loop  1:50 open loop 1:1000 closed loop  From 170 to 2,2 Tn during 60s from 200 to 240% during 2s  1,1 In motor (380V)  In motor = 2 A In drive = 2,3 A In motor = 8,5 A In drive = 10,5 A In motor = 40,5 A In drive = 48 A  180% I motor during 60s 200% I motor during 2s	Yes  no  Servo version  Speed  1: 100 open loop 1: 1000 with feedback Integrated braking chopper as an option  1,8 x Cn for 60 sec  In motor = 2 A In drive = 2,5 A up to 8 kHz  not found  In motor = 40,5 A (Leroy Somer) In drive = 47 A up to 8kHz  1,5 In drive for 60 sec  Yes  Yes 1% nominal speed in open loop Yes
Closed loo Performances Speed range  Motor quadran  Generator quadran  Overtorqui  Rated current philosophy  0,75kW / 400\ 22 kW / 400\  Overcurrent capabilit  Type of control and accuracy  Speed control  Torque control	1:100 open loop 1:1000 closed loop  1:50 open loop 1:1000 closed loop  From 170 to 2,2 Tn during 60s from 200 to 240% during 2s  1,1 In motor (380V)  In motor = 2 A In drive = 2,3 A In motor = 8,5 A In drive = 10,5 A In motor = 40,5 A In drive = 48 A  180% I motor during 60s 200% I motor during 2s	Yes  no  Servo version  Speed  1: 100 open loop  1: 1000 with feedback  Integrated braking chopper as an option  1,8 x Cn for 60 sec  In motor = 2 A In drive = 2,5 A up to 8 kHz  not found  In motor = 40,5 A (Leroy Somer) In drive = 47 A up to 8kHz  1,5 In drive for 60 sec  Yes  Yes  1% nominal speed in open loop Yes

Ways of execution	District and Louis insult at house up	T
Values measured	By keypad, Logic input, at power up	
	V	
Prefluxing	Yes	
Braking	V	
Braking transistor	Yes	Integrated as an option
Braking performance w/o resistor	Without resistor 100% Cn : 0,37 - 0,75 kW	CC braking
	30% Cn : 1,5 - 15 kW	
	With resistor (as an option)	
	Until 170% Cn	
Output frequency range	0,1 to 1000Hz up to 37kHz	0.37 to 90 kW : 600 Hz 110 to 400 kW : 300 Hz
Output frequency resolution	up to 500Hz above 0,1Hz	0,06 Hz
Switching frequency	0,1112	0,00112
range		0,37 to 90 kW : 2, 4 , 8 or 16 kHz (16 kHz with power reduction)
Tange	Settable from 0,5 to 16kHz	110 to 400 kW : 1, 2 or 4 kHz (4 kHz with power reduction)
		, , , , , , , , , , , , , , , , , , , ,
factory setting		
	2,5kHz above	
Integrated output filter		As an option
dv/dt	as an option	N.
Motor voltage surge limitation	Yes	No
sinus	no	
Others	no	
Frequency setting resolution		
Serial		
Analog		- Linearity = ± 0,15 Hz
	11 bits	- Temperature gradation = 0,1% (0 to 50°C) - Offset = ± 0%
Digital		± 0,005 Hz
<b>Modularity</b>		
Number of option board at the same time	3	0
Inputs / Outputs		
On basic product		Standard
Removable terminals	Yes	Yes
Type of terminal & pitch	Screw terminlas, pitch 5,08	Screw terminals and SUB-D plug (encoder)
Sampling time	1ms minimum, and 2,5ms max	1 ms
Analog input	2	2
1	Differential voltage input +/-10V	bipolar Analog input +/-10V (11 bits + sign)
2	current or voltage input	bipolar Analog input +/-20mA (11 bits + sign)
3		-
Logic inputs	6 assignable logic inputs	(6 LI are fully assignable) positive or negative logic
		+ 1 controller enable
Logic outputs (open collector)	no	4 LO (freely assignable)
Relays	2 assignable relays (NO/NC, NC)	2
Analog outputs	Assignable output (voltage or current)	bipolar Analog output 9bits + sign
2	Assignable output (voltage of current)	bipolal Arialog output soits i sign
Dedicated I/O	2	4 ((PTC +)
1	Power removal input (compliance with 61800-5-2	1 master frequency input (500 kHz)
2	PTC input on LI	1 incremental encoder input (500 kHz)
3		1 master frequency output (500 kHz)
I / O Option 1	Lgic I/O card	
Removable terminals	Yes	
Type of terminal & pitch	Screw terminlas, pitch 5,08	
Sampling time	5ms	
Analog input	no	
1		
2		
3		
Logic inputs	4 assignable logic inputs	
Logic outputs (open collector)	2 assignable open collector outputs	
- 0 (- p vo vo	1 assignable relay (NO/NC)	
Relays	. assignable relay (NO/NO)	
Relays Analog outputs		
Analog outputs	no	
Analog outputs		
Analog outputs  1 2		
Analog outputs  1 2 3		
Analog outputs  1 2 Dedicated I/O	no	
Analog outputs  1 2 3 Dedicated I/O 1	no -10V supply	
Analog outputs  1 2 3 Dedicated I/O 1 2	no	
Analog outputs  1 2 3 Dedicated I/O 1 2 3	-10V supply PTC input	
Analog outputs  1 2 3 Dedicated I/O 1 2 1/ O Option 2	-10V supply PTC input  Extended I/O card	
Analog outputs  1 2 3 Dedicated I/O 1 2 3	-10V supply PTC input	
Analog outputs  1 2 3 Dedicated I/O 1 2 1 / O Option 2 Removable terminals Type of terminal & pitch	-10V supply PTC input  Extended I/O card	
Analog outputs  1 2 3 Dedicated I/O  1 2 1 1 2 Removable terminals	-10V supply PTC input  Extended I/O card Yes	
Analog outputs  1 2 3 Dedicated I/O  1 2 1/ O Option 2 Removable terminals Type of terminal & pitch	-10V supply PTC input  Extended I/O card Yes  Screw terminlas, pitch 3,81 except relay that 5,08	
Analog outputs  1 2 3 Dedicated I/O  1 2 1 1 0 Option 2 Removable terminals Type of terminal & pitch Sampling time	-10V supply PTC input  Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms	
Analog outputs  1 2 3 Dedicated I/O  1 2 3 I / O Option 2 Removable terminals Type of terminal & pitch Sampling time Analog input	-10V supply PTC input  Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2	

3		
Logic inputs	4 assignable logic inputs	
Logic inputs Logic outputs (open collector)		
Relays	2 assignable open collector outputs	
•	1 assignable relay (NO/NC)	
Analog outputs	2	
1	2 assignable voltage/earterit / trialog outputs	
2		
3		
Dedicated I/O		
1	PTC input	
2		
3		
I / O Option 3	Controller inside card	
Removable terminals	Yes	
Type of terminal & pitch		
Sampling time		
Analog input		
1		
2		
3		
Logic inputs		
Logic outputs (open collector)		
Relays		
Analog outputs		
Arialog outputs		
2		
3		
Dedicated I/O		
2		
3		
Others		-
Communication		
Separated control supply	Yes 24V dc as standard	
On the basic product	Yes	
Protocol available 1	Modbus fully configurable with I/O scanner	System bus (following CANopen) integrated
Protocol available 2	Canopen fully configurable	-
Protocol available 3		-
Communication option card		Communication replce the dialog keypad
Protocol available 1	Fipio PL7	Profibus-DP
Protocol available 2		Interbus
Protocol available 3		Interbus - loop
Protocol available 4	Uni-Telway, Modbus ASCII, Modbus RTU/Jbus	DeviceNet
Protocol available 5		Lon
Protocol available 6 Protocol available 7	Ethernet	CANopen Optionnal RS485 / RS232 interface
Protocol available 8		Optionial R3463 / R3232 interface
	201.001.01	<u> </u>
Protocol available 9		<u>-</u>
Protocol available 10		
Protocol available 11		<del>-</del>
Protocol available 12		-
Gateway		-
Protocol available 1	AS-i	-
Protocol available 2		-
Protocol available 3		-
Protocol available 4		<del>-</del>
Protocol available 5		<del>-</del>
Protocol available 6		-
Protocol available 7		-
Protocol available 8		-
Protocol available 9		-
Protocol available 10		-
Protocol available 11		-
Protocol available 12		
Protocol available 13		-
Operator panel		
Dialogue 1		
Integrated / removable	Integrated	Removable
Type of screen	-	Plain text screen
Language	ü	
Number of keys		8
Number of Leds		0
Keypad command		•
Noypau command	IIU	

Function kova		
Function keys	no	
Others		
Dialogue 2		
Integrated / removable		
Type of display	Graphic display	
Language		
Niveshau of Irava	Suitable for asian characters	
Number of keys Number of Leds	use of a shuttle + 1 key	
	no	
Keypad command	Yes	
Function keys		
Others	navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection	
Dialogue 3	·	
Integrated / removable		
Type of display		
Language		
Number of keys		
Number of Leds		
Keypad command		
Function keys		
Others		
Protections		
Thermal protection	Yes, I <sup>2</sup> t motor thermal protection depending on the motor frequency.  Memorization when power off	Yes
Electronic / PTC	Yes, dedicated input on option cards	input for PTC or thermal contact, I²t monitoring
The motor thermal state is saved when power is off		
Short circuit between phase	yes	Yes
Ground fault	yes	Yes
Output phase loss	yes	Yes
Input phase loss Braking resistor protection	yes	Yes
	No	V
Overload	yes	Yes Yes
Overvoltage Undervoltage	yes yes	Yes Yes
Drive thermal protection	yes	Yes
Locked motor protection	Yes	100
Stall prevention	Yes	Yes
Others	100	
Options and Accessoiries		
Braking resistors	protected braking resistor	
Braking resistors	Hoisting resistors	
Inductances (chokes)	Line chokes	
Regenerative Units	Yes	Regenerative power supply module
EMC filters		0,37 to 90 kW : optional (radio interference level A or B)
	Additional footprint filters	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Output filters	Motor chokes full performances filters sinus filters	100m (shielded) without adding filter in the output side 200m (shielded)with motor choke 200m (unshieded) without adding filter in the output side
Othoro	filters for EMC compliance with unshielded cables	400m (unshielded) with motor choke
Others	Control fan kit Canopen accessories keypad remote mounting kit	The product can be with or w/o integrated class A filter and with or w/o chopper
Specific Product		
Product mounted inside enclosures	the power section is IP54 to be easily mounted in	
	enclosure with heat evacuation on the outside	
Water cooled drive	no with neat evacuation on the outside	
Others	IIU	
	05 001 5	OF 111 F00 111 F000
List of marking	CE, UL, CSA, DNV	CE, UL508, UL508C
Part number		EVF93xx - EVxxxx
1st part	ATV71 : Model	EVF : Frequency inverter (electronique product)
2nd part	Type H: heatsink	93 : Familly
3rd part	Power : 075 = 0,75kW U75 = 7,5kW D75 = 75kW	xx : Power range (exemple : 38 for 110 kW)
4th part	15 : power	E : Type of device ( exemple : E for IP00 product) V : Vector control inverter
5th part	Voltage M3: 208 / 240 V (3 input phase)	
6th part	N4 : 380 / 500 V  X : without filter Z : without operator display	<u>-</u>
	XZ : without filter and without operator display	<u>-</u>
17th part		
7th part 8th part		-

9th part		Vxxx : Version
Communication Messages		
Message 1		
Message 2		
Message 3		
Message 4		
Message 5		
Message 6		
Message 7		
Type of communication		
Environment, recyclability		DIN EN ISO 9001 : 2000 and DIN EN ISO 14001
Safety Compliance		
Safety Compliance	EN4000 5 4	
	EN1800-5-1	
	Power removal EN1800-5-2 / EN 954-1 category 3	
Software Opening		
Logic Operation	no (could be carried out with the controller inside card)	Yes, logic free programmable box
Controller (PLC) Inside	Yes	
Software Card		
Product Services		
	V	Yes
Flashable	Yes	
PC Software	PowerSuite sotware workshop	Global drive control
Scope	Yes	Yes
Application Functions		
Number of functions	#150	More than 100 function block are available for several kind of
Normalis and a financial state of the state	//nnn	applications
Number of parameters  Main functions	#800	- Speed / torque control
List of advanced functions	- PID regulator - current and torque limitation - S ramp - short ramp - 16 preset speeds + jog - 3 wire control - brake sequence - protection by passwords	- 2 PID controllers  - Automatic motor parameter identification (at standstill)  - S-shaped ramps  - Level inversion  - 3 skip frequencies  - 4 parameter sets  - Up to 15 fixed speeds per parameter set  - Password protection  - Flying restart circuit  - Slip compensation  - DC. braking  - Fault history store  - Motor phase failure monitoring  - Mains failure control  - Multi motor application
	-Limit switches management - non linear refence - multi-motor - multi parameters - Power removal - alarm group - limit switches positioning with low speed time optimization - summing, differentiating, multiplying reference	- Step control - Traversing control - Dancer control - Digital frequency connection - Catch on the fly - Configurable function block (logic, flip-flop, arithmetic, counter, etc,)
Price Positioning		
User's Manual		
Simplified	Yes	
Complete	Yes	Yes
Language	6 languages and more	English, french, german
Paper	Yes	Yes
CD	Yes	
Web Site	Telemecanique.com	www,lenze,de
Others		Catalog
Applications		
Hoisting / crane	Yes	
Horizontal handling	Yes	Yes
Conveyor	Yes	Yes
Packaging	Yes	
Pumping	Yes	Yes
Textile industry	Yes	Yes
Fan	no	Yes
Lift	Yes	
Compressor	no	Yes
Others	some low speed process machines, unbalanced machine, special machine	- Extruder - Spinning - Saw devices

A	TV71 vs YASKAWA	\ F7
ITEM	ATV71	F7
Picture	Control of the contro	Lyricond F7
Drive sizing		
Constant Torque (CT) High torque (HT) Variable Torque (VT) Standard torque (VT)	Yes No	Yes Yes w/o up ratring (switching frequency increase)
Input		
Single phase 200V range Power range	Yes by using 3 ph drive + derating 0,37 to 37kW	No -
Number of ratings	9	-
Voltage range with tolerance Mains frequency and tolerance	200V -15% to 240V +10% 50 Hz ±20% or 60 Hz ±20%	-
Three phase 200V range	Yes	Yes
Power range Number of ratings	0,37 to 75kW 17	0,4 to 110 kW 18
Voltage range with tolerance	200V -15% to 240V +10%	200 - 240 V +10% -15 %
Mains frequency and tolerance Three phase 400V range	50 Hz ±20% or 60 Hz ±20%	50/60 Hz ±5% Yes
Power range	0,75 to 630kW	0,4 to 300 kW
Number of ratings  Voltage range with tolerance	29 380V-15% to 480V + 10%	24 380 - 480 V +10% -15%
Mains frequency and tolerance	50 Hz ±20% or 60 Hz ±20%	50/60 Hz ±5%
Three phase 600V range	No	No
Power range Number of ratings		- -
Voltage range with tolerance		-
Mains frequency and tolerance Three phase 690V range	No	- No
Power range		-
Number of ratings  Voltage range with tolerance		-
Mains frequency and tolerance		-
Ungrounded supply	Disconnexion and reconnexion of Y capacitors	
HF EMC compliance as standard		
Conducted emission		No integrated EMC filter
Standard and level	EN61800-3 C2 (II < 16A)	EN61800-3: 1996, A11: 2000-01
0	EN61800-3 C3 (II>16A) 10 m up to 15kW	EN55011 : 2000-05
Shielded motor cable length	50m up to 75kW	
Unshielded motor cable length Switching frequency	4kHz	
Power range integration	All ratings (except from 11 to 75kW 200V class)	
Shielding connexion	On EMC plate	
Radiated emission	ENERGY OF A	
Standard and level Power range	EN55011 Class A  All the ratings	
LF EMC compliance as standard	·	
Inductance (AC or DC)	DC inductance integrated from 18,5kW to 75kW	
	400 Class DC inductance integrated from 11 to 45kW 200V class	DC inductance above 22 kW
Power range integration	DC inductance integrated from 11 to 45kW 200V	DC inductance above 22 kW
	DC inductance integrated from 11 to 45kW 200V	DC inductance above 22 kW
Power range integration Standard % THD	DC inductance integrated from 11 to 45kW 200V class	
Power range integration Standard % THD Immunity Standard 1 + level	DC inductance integrated from 11 to 45kW 200V class  IEC 61000-4-2 level 3	EN61000-4-2 : 1995-03
Power range integration Standard % THD Immunity Standard 1 + level Standard 2 + level Standard 3 + level	DC inductance integrated from 11 to 45kW 200V class  IEC 61000-4-2 level 3 IEC 61000-4-3 level 3 IEC 61000-4-4 level 4	EN61000-4-2 : 1995-03 EN61000-4-3 : 1997 EN61000-4-4 : 1995-03
Power range integration Standard % THD Immunity Standard 1 + level Standard 2 + level Standard 3 + level Standard 4 + level	DC inductance integrated from 11 to 45kW 200V class  IEC 61000-4-2 level 3 IEC 61000-4-3 level 3 IEC 61000-4-4 level 4 IEC 61000-4-5 level 3	EN61000-4-2 : 1995-03 EN61000-4-3 : 1997 EN61000-4-4 : 1995-03 EN61000-4-5 : 1995-03
Power range integration Standard % THD Immunity Standard 1 + level Standard 2 + level Standard 3 + level	DC inductance integrated from 11 to 45kW 200V class  IEC 61000-4-2 level 3 IEC 61000-4-3 level 3 IEC 61000-4-4 level 4	EN61000-4-2: 1995-03 EN61000-4-3: 1997 EN61000-4-3: 1995-03 EN61000-4-5: 1995-03 EN61000-4-6: 1996-97 EN50178: 1997-10, electronic equipement for use in power installations EN60201-1: 1997-12, machine safety and equipping with electrical devices EN61010: 1997-11, safety requirements for information technology equipment
Power range integration Standard % THD Immunity Standard 1 + level Standard 2 + level Standard 3 + level Standard 4 + level Standard 5 + level	DC inductance integrated from 11 to 45kW 200V class  IEC 61000-4-2 level 3 IEC 61000-4-3 level 3 IEC 61000-4-4 level 4 IEC 61000-4-5 level 3 IEC 61000-4-6 level 3	EN61000-4-2: 1995-03 EN61000-4-3: 1997 EN61000-4-4: 1995-03 EN61000-4-5: 1995-03 EN61000-4-6: 1996-97 EN50178: 1997-10, electronic equipement for use in power installations EN60201-1: 1997-12, machine safety and equipping with electrical devices EN61010: 1997-11, safety requirements for information
Power range integration Standard % THD Immunity Standard 1 + level Standard 2 + level Standard 3 + level Standard 4 + level Standard 5 + level  Control of the standard 5 + level Standard 5 + level Standard 5 + level	DC inductance integrated from 11 to 45kW 200V class  IEC 61000-4-2 level 3 IEC 61000-4-3 level 3 IEC 61000-4-4 level 4 IEC 61000-4-5 level 3 IEC 61000-4-6 level 3  EN 50178  IEC 61800-5-1	EN61000-4-2: 1995-03
Power range integration Standard % THD Immunity Standard 1 + level Standard 3 + level Standard 3 + level Standard 5 + level Standard 5 + level  Comparison of the standard 5 + level	DC inductance integrated from 11 to 45kW 200V class  IEC 61000-4-2 level 3 IEC 61000-4-3 level 3 IEC 61000-4-5 level 4 IEC 61000-4-5 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3	EN61000-4-2: 1995-03 EN61000-4-3: 1997 EN61000-4-5: 1995-03 EN61000-4-5: 1995-03 EN61000-4-6: 1996-07 EN50178: 1997-10, electronic equipement for use in power installations EN60201-1: 1997-12, machine safety and equipping with electrical devices EN61010: 1997-11, safety requirements for information technology equipment EN61000-4-11: 1994 CISPR 11: 1997 VDE0847 Part 4-28: 1997 VDE0847 Part 4-13: 1996 IEC 61000-2-1: 19994
Power range integration Standard % THD Immunity Standard 1 + level Standard 2 + level Standard 3 + level Standard 4 + level Standard 5 + level Contact of the standard 5 + level	DC inductance integrated from 11 to 45kW 200V class  IEC 61000-4-2 level 3 IEC 61000-4-3 level 3 IEC 61000-4-5 level 4 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3	EN61000-4-2:1995-03
Power range integration Standard % THD Immunity Standard 1 + level Standard 2 + level Standard 3 + level Standard 4 + level Standard 5 + level  Low voltage directive  Physical environment Number of size (frame)  Protection Degree  IP + power range IP + power range IP + power range	DC inductance integrated from 11 to 45kW 200V class  IEC 61000-4-2 level 3 IEC 61000-4-3 level 3 IEC 61000-4-5 level 4 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3	EN61000-4-2:1995-03
Power range integration Standard % THD Immunity Standard 1 + level Standard 2 + level Standard 3 + level Standard 3 + level Standard 5 + level Standard 5 + level  Country Standard 5 + level  IP + power range	DC inductance integrated from 11 to 45kW 200V class  IEC 61000-4-2 level 3 IEC 61000-4-3 level 3 IEC 61000-4-5 level 4 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3	EN61000-4-2: 1995-03
Power range integration Standard % THD Immunity Standard 1 + level Standard 2 + level Standard 3 + level Standard 3 + level Standard 5 + level Standard 5 + level  Country Standard 5 + level  IP + power range	DC inductance integrated from 11 to 45kW 200V class  IEC 61000-4-2 level 3 IEC 61000-4-3 level 3 IEC 61000-4-4 level 4 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-5-1 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3	EN61000-4-2 : 1995-03
Power range integration Standard % THD Immunity Standard 1 + level Standard 2 + level Standard 3 + level Standard 3 + level Standard 5 + level Standard 5 + level  Country Standard 5 + level  IP + power range	DC inductance integrated from 11 to 45kW 200V class  IEC 61000-4-2 level 3 IEC 61000-4-3 level 3 IEC 61000-4-5 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-5-1 IEC 61000-4-6 level 3  EN 50178  IEC 61800-5-1 IP21 and IP41 on upper part (EN 50178 and 61800-5-1) IP31 with gland box, Nema type 1 with conduit box  -10 to +50°C	EN61000-4-2: 1995-03
Power range integration Standard % THD Immunity Standard 1 + level Standard 2 + level Standard 3 + level Standard 4 + level Standard 5 + level Standard 5 + level  Country Standard 5 + level  In the standard 5 + level  In the standard 5 + level  In the standard 5 + level	DC inductance integrated from 11 to 45kW 200V class  IEC 61000-4-2 level 3 IEC 61000-4-3 level 3 IEC 61000-4-3 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61800-5-1  IP31 with gland box, Nema type 1 with conduit box  -10 to +50°C -25 to 70°C	EN61000-4-2: 1995-03
Power range integration Standard % THD Immunity Standard 1 + level Standard 3 + level Standard 3 + level Standard 5 + level Standard 5 + level Standard 5 + level  Cothers  Physical environment Number of size (frame) Protection Degree  IP + power range	DC inductance integrated from 11 to 45kW 200V class  IEC 61000-4-2 level 3 IEC 61000-4-3 level 3 IEC 61000-4-5 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-5-1 IEC 61000-4-6 level 3  EN 50178  IEC 61800-5-1 IP21 and IP41 on upper part (EN 50178 and 61800-5-1) IP31 with gland box, Nema type 1 with conduit box  -10 to +50°C	EN61000-4-2:1995-03

V(141		9,8m/s² (1g) from 10 to 20Hz
Vibrations Other		2m/s² (0,2g) from 20 to 50Hz
Automatic stop of fan	Yes	- Yes
Mounting		
Drive Shape	Compact	Compact with width reduction
Side by side mounting	Yes without derating	No
Heat evacuation outside enclosure Operating position	Yes, the power section is IP54  Vertical	Vertically so as not to reduce the cooling efficiency
Others	-	Vertically so as not to reduce the cooling emclency
Power connexion		
DC Bus connexion	Yes	Yes
DC inductance connexion Removable terminals	Line inductance or DC inductance No	Yes
Bottom or Top/Bottom	Bottom	Bottom
Motor control	Bottom	Bottom
AC motors motor control		
U/F	Yes	Yes w/ or w/o feedback
SVC (open loop)	Yes	Yes Yes
FVC (closed loop) Type of encoder	Yes RS422, Open collector or Push pull	RS422, Open collector or Push pull
Others	ENA	-
Synchronous or brushless motors		No
Open loop	Yes	
Closed loop	No	
Performances		
Speed range  Motor quadrant	1 : 100 open loop 1 : 1000 closed loop	Controlled speed range -1:40 V/f -1:50 V/f with PG -1:100 open loop -1:1000 closed loop
Generator quadrant	1 : 50 open loop	
•	1 : 1000 closed loop From 170 to 2,2 Tn during 60s	150% for 1 min heavy duty
Overtorque	from 170 to 2,2 1n during 60s from 200 to 240% during 2s	110% for 1 min normal duty
Rated current philosophy	1,1 In motor (380V)	NEC current 230V 2002
	In motor = 2 A	NEC current 460V 2002 In motor = 2 A (Leroy Somer)
0,75kW / 400V	In drive = 2,3 A	In drive = 2,1 A
4 kW / 400V	In motor = 8,5 A In drive = 10,5 A	In motor = 8,5 A (Leroy Somer) In drive = 8,7 A
22 kW / 400V	In motor = 40,5 A	In motor = 40,5 A (Leroy Somer)
22 kW / 400V	In drive = 48 A	In drive =45 A
Overcurrent capability	180% I motor during 60s	Current limit 150% for heavy duty
e voi cui i ci i cui cui cui cui cui cui cui	200% I motor during 2s	120% for normal duty
Type of control and accuracy		
Speed control	Yes	Yes Speed regulation - V/f : 2/3 % - V/f w/ PG : 0,02% - open loop : 0,2%
Torque control	Yes	- closed loop : 0,01% Yes +/-5%
Torque rise time	. 30	100 11 070
Sampling time of the loop		
Autotuning		Motor autotuning static and dynamic 3 autotuning functions
On line / Off line	Off line and On line	Off line or On line
Ways of execution	By keypad, Logic input, at power up	At stop, In rotation, At stop / in rotation
Values measured		
Prefluxing	Yes	no
Braking		DC injection braking, adjustable level High slip braking
		Dynamic braking
Braking transistor  Braking performance w/o resistor	Yes  Without resistor 100% Cn: 1,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Until 170% Cn	Integrated < 22 kW 125% Tn
Output frequency range	0,1 to 1000Hz up to 37kHz	
		0,01 to 150Hz heavy duty, 400 Hz normal duty
Output frequency resolution	up to 500Hz above 0,1Hz	0,01 to 150Hz heavy duty, 400 Hz normal duty 0,001 Hz
Switching frequency	up to 500Hz above 0,1Hz	0,001 Hz
Switching frequency range	up to 500Hz above 0,1Hz Settable from 0,5 to 16kHz	0,001 Hz 0,5 to 15kHz
Switching frequency range factory setting	up to 500Hz above 0,1Hz	0,001 Hz
Switching frequency range factory setting Integrated output filter	up to 500Hz above 0,1Hz 0,1Hz Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above	0,001 Hz 0,5 to 15kHz 2kHz max in Heavy duty
Switching frequency range factory setting Integrated output filter dv/dt	up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above as an option	0,001 Hz 0,5 to 15kHz 2kHz max in Heavy duty no
range factory setting Integrated output filter dv/dt Motor voltage surge limitation	up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes	0,001 Hz 0,5 to 15kHz 2kHz max in Heavy duty  no no
switching frequency range factory setting integrated output filter dv/dt Motor voltage surge limitation sinus	up to 500Hz above 0,1Hz Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above as an option Yes no	0,001 Hz 0,5 to 15kHz 2kHz max in Heavy duty  no no
range factory setting Integrated output filter dv/dt Motor voltage surge limitation	up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes	0,001 Hz 0,5 to 15kHz 2kHz max in Heavy duty  no no
Switching frequency range factory setting Integrated output filter dv/dt Motor voltage surge limitation sinus Others Frequency setting resolution Serial	up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no	0,001 Hz 0,5 to 15kHz 2kHz max in Heavy duty  no no no no
Switching frequency range factory setting integrated output filter  dv/dt  Motor voltage surge limitation sinus Others  Frequency setting resolution Serial Analog	up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no no	0,001 Hz  0,5 to 15kHz  2kHz max in Heavy duty  no no no no no 0 00 00 00 00 00 00 00 00 00 00 00 00
Switching frequency range factory setting integrated output filter  dv/dt  Motor voltage surge limitation sinus Others  Frequency setting resolution  Serial Analog Digital	up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no no	0,001 Hz 0,5 to 15kHz 2kHz max in Heavy duty  no no no no
Switching frequency range factory setting Integrated output filter  dv/dt Motor voltage surge limitation Sinus Others Frequency setting resolution Serial Analog Digital Modularity	up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no no	0,001 Hz  0,5 to 15kHz  2kHz max in Heavy duty  no no no no no 0 00 00 00 00 00 00 00 00 00 00 00 00
Switching frequency range factory setting integrated output filter  dv/dt  Motor voltage surge limitation sinus Others  Frequency setting resolution  Serial Analog Digital	up to 500Hz above 0,1Hz Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no no	0,001 Hz  0,5 to 15kHz  2kHz max in Heavy duty  no no no no no 0,03 at 60 Hz (11 bit with sign) 0,01 Hz
Switching frequency range factory setting integrated output filter  dv/dt  Motor voltage surge limitation sinus Others  Frequency setting resolution  Serial Analog Digital  Modularity Number of option board at the same time Inputs / Outputs On basic product	up to 500Hz above 0,1Hz Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no no	0,001 Hz  0,5 to 15kHz  2kHz max in Heavy duty  no no no no no 0,03 at 60 Hz (11 bit with sign) 0,01 Hz
Switching frequency range factory setting factory setting integrated output filter  dv/dt  Motor voltage surge limitation sinus Others Frequency setting resolution  Serial Analog Digital  Modularity Number of option board at the same time Inputs / Outputs On basic product Removable terminals	up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no no 11 bits  3	0,001 Hz  0,5 to 15kHz  2kHz max in Heavy duty  no no no no no 0,03 at 60 Hz (11 bit with sign) 0,01 Hz
Switching frequency range factory setting Integrated output filter  dv/dt Motor voltage surge limitation Serial Analog Digital Modularity Number of option board at the same time Inputs / Outputs On basic product Removable terminals Type of terminal & pitch	up to 500Hz above 0,1Hz Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no no 11 bits  3  Yes Screw terminlas, pitch 5,08	0,001 Hz  0,5 to 15kHz  2kHz max in Heavy duty  no no no no no 0,03 at 60 Hz (11 bit with sign) 0,01 Hz
Switching frequency range factory setting Integrated output filter  dv/dt  Motor voltage surge limitation Serial Analog Modularity Number of option board at the same time Inputs / Outputs On basic product Removable terminal & pitch Sampling time	up to 500Hz above 0,1Hz Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no 11 bits  3  Yes Screw terminlas, pitch 5,08 1ms minimum , and 2,5ms max	0,001 Hz  0,5 to 15kHz  2kHz max in Heavy duty  no no no no no no 2,03 at 60 Hz (11 bit with sign) 0,01 Hz  2  Standard
Switching frequency range factory setting Integrated output filter  dv/dt Motor voltage surge limitation Serial Analog Digital Modularity Number of option board at the same time Inputs / Outputs On basic product Removable terminals Type of terminal & pitch	up to 500Hz above 0,1Hz Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no no so	0,001 Hz  0,5 to 15kHz  2kHz max in Heavy duty  no no no no no no  0,03 at 60 Hz (11 bit with sign) 0,01 Hz  2  Standard
Switching frequency range factory setting Integrated output filter  dv/dt  Motor voltage surge limitation Serial Analog Modularity Number of option board at the same time Inputs / Outputs On basic product Removable terminal & pitch Sampling time	up to 500Hz above 0,1Hz Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no 11 bits  3  Yes Screw terminlas, pitch 5,08 1ms minimum , and 2,5ms max	0,001 Hz  0,5 to 15kHz  2kHz max in Heavy duty  no no no no no no 2,03 at 60 Hz (11 bit with sign) 0,01 Hz  2  Standard
Switching frequency range factory setting Integrated output filter  dv/dt  Motor voltage surge limitation Sinus Others Frequency setting resolution  Serial Analog Digital  Modularity Number of option board at the same time Inputs / Outputs On basic product Removable terminals Type of terminals Type of terminal & pitch Sampling time Analog input  1 2 3	up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no no 11 bits  3  Yes Screw terminlas, pitch 5,08 1ms minimum , and 2,5ms max 2 Differential voltage input +/-10V current or voltage input	0,001 Hz  0,5 to 15kHz  2kHz max in Heavy duty  no no no no no no  0,03 at 60 Hz (11 bit with sign) 0,01 Hz  2  Standard  2  -10 -+10 V (20 kΩ) 4 - 20 mA (250 kW)
Switching frequency range factory setting integrated output filter  dv/dt  Motor voltage surge limitation Sinus Others Frequency setting resolution  Serial Analog Digital  Modularity Number of option board at the same time Inputs / Outputs On basic product Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs	up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no no  11 bits  3  Yes Screw terminlas, pitch 5,08 1ms minimum , and 2,5ms max 2 Differential voltage input +/-10V current or voltage input 6 assignable logic inputs	0,001 Hz  0,5 to 15kHz  2kHz max in Heavy duty  no no no no no  0,03 at 60 Hz (11 bit with sign) 0,01 Hz  2  Standard  2  -10 - +10 V (20 kΩ)
Switching frequency range factory setting integrated output filter  dvidt  Motor voltage surge limitation Sinus Others  Frequency setting resolution  Serial Analog Digital  Modularity Number of option board at the same time Inputs / Outputs On basic product Removable terminals Type of terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector)	up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no no  11 bits  3  Yes Screw terminlas, pitch 5,08 1ms minimum , and 2,5ms max 2 Differential voltage input +/-10V current or voltage input 6 assignable logic inputs no	0,001 Hz  0,5 to 15kHz  2kHz max in Heavy duty  no no no no no no  0,03 at 60 Hz (11 bit with sign) 0,01 Hz  2  Standard  2  -10 - +10 V (20 kΩ) 4 - 20 mA (250 kW)  8 multifonction
Switching frequency range factory setting integrated output filter  dv/dt  Motor voltage surge limitation Sinus Others Frequency setting resolution  Serial Analog Digital  Modularity Number of option board at the same time Inputs / Outputs On basic product Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs	up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no no  11 bits  3  Yes Screw terminlas, pitch 5,08 1ms minimum , and 2,5ms max 2 Differential voltage input +/-10V current or voltage input 6 assignable logic inputs	0,001 Hz  0,5 to 15kHz  2kHz max in Heavy duty  no no no no no no  0,03 at 60 Hz (11 bit with sign) 0,01 Hz  2  Standard  2  -10 -+10 V (20 kΩ) 4 - 20 mA (250 kW)
Switching frequency range factory setting integrated output filter  dv/dt  Motor voltage surge limitation Sinus Others  Frequency setting resolution  Serial Analog Digital  Modularity Number of option board at the same time Inputs / Outputs On basic product Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector)  Relays	up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no no no  11 bits  3  Yes Screw terminlas, pitch 5,08 1ms minimum, and 2,5ms max 2 Differential voltage input +/-10V current or voltage input 6 assignable logic inputs no 2 assignable relays (NO/NC, NC)	0,001 Hz  0,5 to 15kHz  2kHz max in Heavy duty  no no no no no no  0,03 at 60 Hz (11 bit with sign) 0,01 Hz  2  Standard  2  -10 - +10 V (20 kΩ) 4 - 20 mA (250 kW)  8 multifonction  3 Programmable output form A Fault contacts form C 2
Switching frequency range factory setting integrated output filter  dv/dt  Motor voltage surge limitation Sinus Others  Frequency setting resolution  Serial Analog Digital  Modularity Number of option board at the same time Inputs / Outputs On basic product Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector)  Relays	up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no no  11 bits  3  Yes Screw terminlas, pitch 5,08 1ms minimum , and 2,5ms max 2 Differential voltage input +/-10V current or voltage input 6 assignable logic inputs no	0,001 Hz  0,5 to 15kHz  2kHz max in Heavy duty  no no no no no no  0,03 at 60 Hz (11 bit with sign) 0,01 Hz  2  Standard  2  -10 - +10 V (20 kΩ) 4 - 20 mA (250 kW)  8 multifonction  3 Programmable output form A Fault contacts form C 2 -10 - +10 V or 4 - 20 mA
Switching frequency range factory setting integrated output filter  dv/dt  Motor voltage surge limitation Sinus Others  Frequency setting resolution  Serial Analog Digital  Modularity Number of option board at the same time Inputs / Outputs On basic product Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 2 3 Analog outputs	up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no no 11 bits  3  Yes Screw terminlas, pitch 5,08 1ms minimum, and 2,5ms max 2 Differential voltage input +/-10V current or voltage input 6 assignable logic inputs no 2 assignable relays (NO/NC, NC) 1 Assignable output (voltage or current)	0,001 Hz  0,5 to 15kHz  2kHz max in Heavy duty  no no no no no no  0,03 at 60 Hz (11 bit with sign) 0,01 Hz  2  Standard  2  -10 - +10 V (20 kΩ) 4 - 20 mA (250 kW)  8 multifonction  3 Programmable output form A Fault contacts form C 2
Switching frequency range factory setting integrated output filter  dv/dt  Motor voltage surge limitation Sinus Others  Frequency setting resolution  Serial Analog Digital  Modularity Number of option board at the same time Inputs / Outputs On basic product Removable terminals Type of terminal & pitch Sampling time Analog Input  1 2 2 3 Logic inputs Logic outputs (open collector)  Relays	up to 500Hz above 0,1Hz  Settable from 0,5 to 16kHz 4kHz up to 30kW 2,5kHz above  as an option Yes no no no  11 bits  3  Yes Screw terminlas, pitch 5,08 1ms minimum, and 2,5ms max 2 Differential voltage input +/-10V current or voltage input 6 assignable logic inputs no 2 assignable relays (NO/NC, NC)	0,001 Hz  0,5 to 15kHz  2kHz max in Heavy duty  no no no no no no  0,03 at 60 Hz (11 bit with sign) 0,01 Hz  2  Standard  2  -10 - +10 V (20 KΩ) 4 - 20 mA (250 kW)  8 multifonction  3 Programmable output form A Fault contacts form C 2 -10 - +10 V or 4 - 20 mA

		-
I / O Option 1	Lgic I/O card	Analog monitor boards (3 models)
Removable terminals	Yes	(3 moders)
Type of terminal & pitch	Screw terminlas, pitch 5,08	-
Sampling time	5ms	-
Analog input	no	-
1		-
		-
3		-
Logic inputs	4 assignable logic inputs	-
Logic outputs (open collector) Relays	2 assignable open collector outputs 1 assignable relay (NO/NC)	<u>.</u>
Analog outputs	no	Depending on the model of the board
Analog outputs	110	2Analog output, 8 bit
		or
1		Analog output, 11 bit plus sign or
		2 Isolated analog output, 11 bit plus sign
2		-
Dedicated I/O		<u>-</u>
Dedicated I/O	-10V supply	-
	PTC input	-
3	3	-
L/O Ontion 3	Extended I/O card	Digital output boards
I / O Option 2		(2 models)
Removable terminals	Yes	-
Type of terminal & pitch	Screw terminlas, pitch 3,81 except relay that 5,08	-
Sampling time	5ms 2	-
Analog input		-
-	1 differential current input 1 voltage / current input	-
-	r voltage / current imput	-
Logic inputs	4 assignable logic inputs	-
Logic inputs Logic outputs (open collector)	2 assignable open collector outputs	6
Relays	1 assignable relay (NO/NC)	2 (NO contact)
Analog outputs	2	-
1	2 assignable voltage/current Analog outputs	-
2		-
		-
Dedicated I/O		-
1	PTC input	-
2		-
3	3	-
I / O Option 3	Controller inside card	Speed reference board (5 models)
Removable terminals	Yes	(5 moders)
Type of terminal & pitch	163	_
Sampling time		-
camping time		
Analog input		Analog input input resolution 14 bit or (2) Analog input input resolution 13 bit plus sign bit or (3) Isolated Analog input input resolution: 13 bit plus sign bit (14)
,		(1) to 10V (20 kΩ), 1 channel 4 to 20mA (250 Ω), 1 channel or (2) 0 to 10V (20 kΩ) 4 to 20mA (250 Ω), 3 channels or (3) 0 to 10V (20 kΩ) 4 to 20mA (250 Ω), 3 channels
		-
Logic inputs		(4) 8 bit digital input or (5) 16 bit digital input
Logic outputs (open collector)		
Relays		
Analog outputs		
1		
,	3	
Dedicated I/O		
1		
2		
3		
Others		PG Speed control boards (5 models) (1) Single open collector feedback (2) Single A/B open collector encoder feedback (3) Single line driver feedback (4) Single A/B/Z line driver encoder feedback (5) Dual A/B/Z line driver encoder feedback
Communication	V 00/ 1	
	Yes 24V dc as standard	
Separated control supply	.,	
Separated control supply On the basic product	Yes	
Separated control supply On the basic product Protocol available	Modbus fully configurable with I/O scanner	-
Separated control supply On the basic product  Protocol available 2  Protocol available 2	Modbus fully configurable with I/O scanner Canopen fully configurable	-
Separated control supply On the basic product  Protocol available 2  Protocol available 2  Protocol available 3	Modbus fully configurable with I/O scanner Canopen fully configurable	
Separated control supply On the basic product  Protocol available 2  Protocol available 2	Modbus fully configurable with I/O scanner Canopen fully configurable	-
Separated control supply On the basic product  Protocol available 2  Protocol available 3  Protocol available 3  Protocol available 3	Modbus fully configurable with I/O scanner Canopen fully configurable Fipio PL7 FiPIO with messaging	-

Protocol available 4	Uni-Telway, Modbus ASCII, Modbus RTU/Jbus	CANopen
Protocol available 4	INTERBUS-S	
Protocol available 6	Profibus DP	-
Protocol available 7	Ethernet	-
Protocol available 8	DeviceNet	-
Protocol available 9		-
Protocol available 10 Protocol available 11		-
Protocol available 11		<u> </u>
Gateway		
Protocol available 1	AS-i	-
Protocol available 2		-
Protocol available 3		-
Protocol available 4		-
Protocol available 5		-
Protocol available 6 Protocol available 7		-
Protocol available 8		<u> </u>
Protocol available 9		-
Protocol available 10		-
Protocol available 11		
Protocol available 12		<u>-</u>
Protocol available 13		-
Operator panel		Chandard
Dialogue 1 Integrated / removable	Integrated	Standard removable
Type of screen	4 Led digits	LED
Language	code	
Number of keys	4	11
Number of Leds	5 Leds for the diagnostic of the integrated fieldbus	12 Voc
Keypad command	no no	Yes
Function keys Others	no	no
Dialogue 2		Optional
Integrated / removable	Removable	removable
Type of display	Graphic display	LCD (16c x 5 l, backlit)
Language	6 languages (languages are flashable). Suitable for asian characters	7
Number of keys	use of a shuttle + 1 key	11
Number of Leds	no	7
		Jog
Keypad command	Yes	Run Stop
		Forward / Reverse
		Menu
		ESC Data / Enter
Function keys	4	Reset
		Up Down
		Local / Remote
	navigation with a shuttle	
Others	could be used to save and restore 4 configurations remote mounting kit available	- Copy function
	Multipoint connection	
Dialogue 3		-
Integrated / removable		-
Integrated / removable Type of display		-
Integrated / removable Type of display Language		-
Integrated / removable Type of display Language Number of keys		- - -
Integrated / removable Type of display Language Number of keys Number of Leds		-
Integrated / removable Type of display Language Number of keys Number of Leds Keypad command		- - - -
Integrated / removable Type of display Language Number of keys Number of Leds		- - - -
Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys		- - - - -
Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others  Protections	Yes, I <sup>2</sup> t motor thermal protection depending on the	- - - - - - -
Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others	Yes, I <sup>2</sup> t motor thermal protection depending on the motor frequency.	- - - - -
Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others  Protections	Yes, I <sup>2</sup> t motor thermal protection depending on the	- - - - - - -
Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others  Protections Thermal protection	Yes, I²t motor thermal protection depending on the motor frequency.  Memorization when power off  Yes, dedicated input on option cards	- - - - - - - - Yes
Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase	Yes, I <sup>2</sup> t motor thermal protection depending on the motor frequency.  Memorization when power off  Yes, dedicated input on option cards  yes	
Integrated / removable Type of display Language Number of keys Number of keys Number of Leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault	Yes, I <sup>2</sup> t motor thermal protection depending on the motor frequency.  Memorization when power off  Yes, dedicated input on option cards  yes  yes	
Integrated / removable Type of display Language Number of keys Number of keys Number of Leds Keypad command Function keys Others  Protections Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss	Yes, I²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards  yes yes yes	
Integrated / removable Type of display Language Number of keys Number of levs Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault	Yes, I <sup>2</sup> t motor thermal protection depending on the motor frequency.  Memorization when power off  Yes, dedicated input on option cards  yes  yes	
Integrated / removable Type of display Language Number of keys Number of keys Number of leds Keypad command Function keys Others  Protections Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Braking resistor protection Overload	Yes, I²t motor thermal protection depending on the motor frequency.  Memorization when power off  Yes, dedicated input on option cards  yes  yes  yes  yes  yes	
Integrated / removable Type of display Language Number of keys Number of keys Number of Leds Keypad command Function keys Others  Protections Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Input phase loss Braking resistor protection Overload Overvoltage	Yes, I²t motor thermal protection depending on the motor frequency.  Memorization when power off  Yes, dedicated input on option cards  yes  yes  yes  yes  yes  yes  yes  y	
Integrated / removable Type of display Language Number of keys Number of keys Number of leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Braking resistor protection  Overload Overvoltage Undervoltage	Yes, I <sup>2</sup> t motor thermal protection depending on the motor frequency.  Memorization when power off  Yes, dedicated input on option cards  yes  yes  yes  yes  yes  yes  yes  y	
Integrated / removable Type of display Language Number of keys Number of keys Number of Leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Braking resistor protection  Overload Overvoltage Undervoltage Drive thermal protection	Yes, I²t motor thermal protection depending on the motor frequency.  Memorization when power off  Yes, dedicated input on option cards  yes  yes  yes  yes  yes  No  yes  yes  yes  yes  yes  No  yes  yes	
Integrated / removable Type of display Language Number of keys Number of keys Number of leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Braking resistor protection  Overload Overvoltage Undervoltage	Yes, I <sup>2</sup> t motor thermal protection depending on the motor frequency.  Memorization when power off  Yes, dedicated input on option cards  yes  yes  yes  yes  yes  yes  yes  y	
Integrated / removable Type of display Language Number of keys Number of keys Number of leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Braking resistor protection Overload Overvoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection	Yes, I²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards  yes yes yes yes No yes yes yes yes yes yes Yes Yes Yes	
Integrated / removable Type of display Language Number of keys Number of keys Number of Leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Braking resistor protection Overload Overvoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention	Yes, I²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards  yes yes yes yes No yes yes yes yes yes yes Yes Yes Yes	
Integrated / removable Type of display Language Number of keys Number of keys Number of leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Braking resistor protection Overload Overvoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection	Yes, I²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards  yes yes yes yes No yes yes yes yes yes yes Yes Yes Yes	
Integrated / removable Type of display Language Number of keys Number of keys Number of keys Reypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Braking resistor protection Overload Overvoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Stall prevention Others	Yes, I²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards  yes yes yes yes No yes yes yes yes yes yes Yes Yes Yes	
Integrated / removable Type of display Language Number of keys Number of keys Number of Leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Braking resistor protection Overload Overvoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention	Yes, I²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards  yes	Yes  Yes  Yes on Analog input  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye
Integrated / removable Type of display Language Number of keys Number of keys Number of keys Reypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Braking resistor protection Overload Overvoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Stall prevention Others	Yes, I²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards  yes yes yes yes No yes yes yes yes yes yes Yes Yes Yes	
Integrated / removable Type of display Language Number of keys Number of keys Number of Leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Braking resistor protection Overload Overvoltage Undervoltage Undervoltage Undervoltage Undervoltage Trive thermal protection Stall prevention Others  Options and Accessoiries Braking resistors Inductances (chokes)	Yes, I²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards  yes The String resistor Hoisting resistor Line chokes	
Integrated / removable Type of display Language Number of keys Number of keys Number of Leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Braking resistor protection  Overload Overvoltage Drive thermal protection Locked motor protection Stall prevention  Others  Options and Accessoiries Braking resistors  Inductances (chokes) Regenerative Units	Yes, I²t motor thermal protection depending on the motor frequency.  Memorization when power off  Yes, dedicated input on option cards  yes Y	Yes  Yes  Yes on Analog input  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye
Integrated / removable Type of display Language Number of keys Number of keys Number of Leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Braking resistor protection Overload Overvoltage Undervoltage Undervoltage Undervoltage Undervoltage Trive thermal protection Stall prevention Others  Options and Accessoiries Braking resistors Inductances (chokes)	Yes, I²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards  yes  Tes Additional footprint filters	
Integrated / removable Type of display Language Number of keys Number of keys Number of leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Braking resistor protection Overload Overvoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection  Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters	Yes, I²t motor thermal protection depending on the motor frequency.  Memorization when power off  Yes, dedicated input on option cards  yes Additional footprint filters Motor chokes full performances filters	Yes  Yes on Analog input  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye
Integrated / removable Type of display Language Number of keys Number of keys Number of Leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Braking resistor protection  Overload Overvoltage Drive thermal protection Locked motor protection Stall prevention  Others  Options and Accessoiries Braking resistors  Inductances (chokes) Regenerative Units	Yes, I²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards  yes Additional footprint filters Motor chokes full performances filters sinus filters	Yes  Yes  Yes on Analog input  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye
Integrated / removable Type of display Language Number of keys Number of keys Number of leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Braking resistor protection Overload Overvoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection  Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters	Yes, I²t motor thermal protection depending on the motor frequency.  Memorization when power off  Yes, dedicated input on option cards  yes Additional footprint filters Motor chokes full performances filters	
Integrated / removable Type of display Language Number of keys Number of keys Number of leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Braking resistor protection Overload Overvoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention  Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters  Output filters	Yes, I²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards  yes Y	
Integrated / removable Type of display Language Number of keys Number of keys Number of leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Braking resistor protection Overload Overvoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection  Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters	Yes, IPt motor thermal protection depending on the motor frequency.  Memorization when power off  Yes, dedicated input on option cards  yes Additional footprint filters Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories	
Integrated / removable Type of display Language Number of keys Number of keys Number of leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Braking resistor protection Overload Overvoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention  Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters  Output filters	Yes, I²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards  yes Y	
Integrated / removable Type of display Language Number of keys Number of levels Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Braking resistor protection Overload Overvoltage Undervoltage Undervoltage Undervoltage Undervoltage Stript protection Coked motor protection Stall prevention  Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters  Others	Yes, IPt motor thermal protection depending on the motor frequency.  Memorization when power off  Yes, dedicated input on option cards  yes Additional footprint filters Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories	
Integrated / removable Type of display Language Number of keys Number of keys Number of leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Input phase loss Input phase loss Draking resistor protection Overload Overvoltage Drive thermal protection Locked motor protection Stall prevention  Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters  Others  Specific Product	Yes, I²t motor thermal protection depending on the motor frequency.  Memorization when power off Yes, dedicated input on option cards  yes yes yes yes yes yes yes yes yes y	
Integrated / removable Type of display Language Number of keys Number of levels Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Braking resistor protection Overload Overvoltage Undervoltage Undervoltage Undervoltage Undervoltage Stript protection Coked motor protection Stall prevention  Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters  Others	Yes, I²t motor thermal protection depending on the motor frequency.  Memorization when power off Yes, dedicated input on option cards  yes yes yes yes yes No yes Additional footprint filters Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure	
Integrated / removable Type of display Language Number of keys Number of keys Number of leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Input phase loss Input phase loss Draking resistor protection Overload Overvoltage Drive thermal protection Locked motor protection Stall prevention  Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters  Others  Specific Product	Yes, I²t motor thermal protection depending on the motor frequency.  Memorization when power off Yes, dedicated input on option cards  yes yes yes yes yes yes yes yes yes y	
Integrated / removable Type of display Language Number of keys Number of leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Braking resistor protection Overload Overvoltage Drive thermal protection Locked motor protection Stall prevention  Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters  Output filters  Others  Specific Product  Product mounted inside enclosures	Yes, I²t motor thermal protection depending on the motor frequency.  Memorization when power off  Yes, dedicated input on option cards  yes Y	

Part number  Ist part  AIVT1 Model  AIVT2 Model  CRIR F 7 AC date of Yearthy  Dro part  Proper  Proper	List of marking	CE III COA DANA	III AIII OF 11-4-4
September   AIVT   1,000cs   CIBR   17 AC and FT femily   Debt part   Figure	List of marking	CE, UL, CSA, DNV	UL, cUL, CE listed
Indepart  In 1986 Profest Prof			
and part  11. Inequative  OF STAND 1755 - 7,540  OF STAND 1755 - 7,5	1st part		CIMR - F7 : AC drive F7 familly
The part   CP   CP   CP   CP   CP   CP   CP   C	2nd part	Type	U : Specification, UL specification
and part  OTS = 0.75 MW DTS = 75 WW DTS =			
## 1975 - 198W ## 15, power ##	3rd part	075 = 0,75kW	
## spend	Sid part		
Sin part  No. 200 Year (Street (Street) (Street (Street)	44h mark		
Striper   M. 206 F40 V Characy chases   Closer details (200)   Close	4th part		
this part  2. Vestimonal filter and without operated display 2. Vestimonal filter and without operated display 3. Vestimonal filter and without operated display 4. Vestimonal filter and without operated display 5. Vestimonal filter and without operated display 6. Vestimonal filter and without operated display 6. Vestimonal filter and filter a	5th part		
this part  7. without filter and without operator display 18. part		N4 : 380 / 500 V	1 (nema type 1 ip20)
The part			
Till part	6th part	Z : without operator display	-
## part	7th part	AZ : Without filter and without operator display	_
Message 1 Message 2 Message 3 Message 3 Message 4 Message 3 Message 4 Message 3 Message 4 Message 6 Message 6 Message 7 Message 7 Message 7 Message 8 Message 7 Message 8 Message 8 Message 8 Message 9 Message 1 Messag			
Message 1 Message 2 Message 3 Message 3 Message 4 Message 3 Message 4 Message 5 Message 4 Message 5 Message 5 Message 5 Message 5 Message 5 Message 6 Message 7 Message 8 Message 8 Message 8 Message 9 Messag	9th part		
Message 1 Message 2 Message 3 Message 3 Message 4 Message 3 Message 4 Message 5 Message 4 Message 5 Message 5 Message 5 Message 5 Message 5 Message 6 Message 7 Message 8 Message 8 Message 8 Message 9 Messag	Communication Messages		
Message 2 Message 4 Message 5 Message 6 Message 6 Message 6 Message 7 Message 7 Message 7 Message 8 Message 8 Message 8 Message 9 Message 1 Messag			High level performance
Message 3 Message 5 Message 6 Message 7 Message 7 Message 8 Message 7 Message 8 Message 7 Message 8 Message 7 Message 8 Message 8 Message 7 Message 8 Message 8 Message 8 Message 8 Message 7 Message 8 Message 7 Message 8 Message 8 Message 8 Message 8 Message 7 Message 8 Message 8 Message 8 Message 8 Message 7 Message 8 Message 8 Message 7 Message 8 Message 8 Message 8 Message 8 Message 7 Message 8 Messag			
Message 4 Message 5 Message 6 Message 7 Message 7 Message 7 Message 7 Message 8 Message 7 Message 8 Message 7 Message 8 Message 8 Message 7 Message 7 Message 8 Message 7 Message 8 Message 8 Message 7 Message 8 Message 7 Message 8 Message 8 Message 7 Message 8 Message 9 Messag			
Message 5 Message 7 Message 7 Message 7 Message 7 Message 8 Message 7 Message 8 Message 8 Message 7 Message 7 Message 7 Message 7 Message 7 Message 8 Message 8 Message 7 Message 8 Message 8 Message 7 Message 8 Message 8 Message 8 Message 7 Message 8 Messag			· · · · · · · · · · · · · · · · · · ·
Message 1  Message 7  Type of communication  Foreivornment, report programming on or off line  Message 7  Power removal EN1800-5-1  Power removal EN1800-5-2 FEN 804-1 category 3  Software Opening Logic Operation  Opening Logic Operation  Opening Logic Operation  Opening Logic Operation  Ves  Product Services  Product	-		
Message 7   Type of communication			
Type of communication Provincement, recyclability Safety Compliance  EN1809-5-1 Power removal EN1800-5-2 / EN 80541 category 3  Software Opening Logic Operation Logic Operation Logic Operation No Controller (PLC) Inside Yes Ino Software CRd Product Services Flashable Yes Power Sulte software workshop Power Sulte software workshop Power Inside Sulter	-		
Safety Compliance			-
Software Opening Logic Operation Octrotroller (PLC) Inside Software CQ pening Logic Operation Octrotroller (PLC) Inside Software CQ pening Logic Operation Octrotroller (PLC) Inside Ves Indicate Software CQ pening Product Services Flashable Yes Power Software CQ pening Octroller (PLC) Inside Yes Indicate Software CQ pening Product Services Produ			
EN1800-5-1   Power removal EN1800-5-2 / EN 804-1 categopy 3			
Power removal EN1800-5-2 / EN 5541 category 3	Safety Compliance		
Software Opening Logic Operation Or (could be carried out with the controller inside card Octortuler (PLC) linide Software Card Product Services Flashable Yes On Product Services Flashable Yes On Product Services Flashable Yes On PowerSuite software workshop Soppe Application Functions Wumber of parameters Octored of the PC uploaddownload, trending, graphing, ho charge software. Soppe Application Functions Wumber of parameters  ### 150 ### 15		EN1800-5-1	
Logic Operation on count be carried out with the controller inside card on controller (PLC) inside		Power removal EN1800-5-2 / EN 954-1 category 3	
Logic Operation on count be carried out with the controller inside card on controller (PLC) inside			
Logic Operation on count be carried out with the controller inside card on controller (PLC) inside			
Logic Operation on count be carried out with the controller inside card on controller (PLC) inside			
Logic Operation on count be carried out with the controller inside card on controller (PLC) inside	Software Opening		
Controller (PLC) Inside Strivare Card Product Services Flashabible PC Software POwerSuite solvaire workshop Power Suite solvaire workshop			
Software Card Product Services Plashable Yes PowerSute solvare workshop Repairing Ro charge solvare Ro PowerSute solvare workshop PowerSute solvare workshop PowerSute solvare workshop PowerSute solvare workshop Preserved PowerSute solvare workshop PowerSute solvare workshop Preserved PowerSute Solvare Workshop PowerSute Solvare Workshop PowerSute Solvare PowerSute Solv			
Product Services Plasabable PC Software PowerSuite software workshop PowerSuite software workshop PowerSuite software workshop Roscope PowerSuite software workshop Roscope PowerSuite software workshop President Presi		Yes	
Proce Positioning User's Manual  Price Positioning User's Manual			no
PowerSuite solware workshop  PowerSuite solware workshop  Application Functions  Number of functions  Number of parameters  Piss  Pi	Product Services		
PowerSuite solware workshop  Yes  Yes  Yes  Yes  Application Functions  Number of functions  Main functions   Service sequence  - Protection by passwords  - State sequence - protection by passwords  - Adjustable accellacon	Flashable	Yes	
Scope   Yes   Yes   Yes			
Application Functions Number of functions Number of functions  ##150	PC Software	PowerSuite sotware workshop	graphing.
Application Functions Number of functions  ##150  **Windber of parameters  ##150  **Courted and parameters  **Adjustable accel/discoel : 0.1 to 6000 sec - Multispend settings : 17 available - Speed research - PTC thermistor control - Speed research - PTC thermistor control - Multispend settings : 17 available - Speed research - PTC thermistor control - Speed resea	0	V	
Number of parameters  #800  - PID regulator - current and torque limitation - S ramp - short ramp - 16 preset speeds + 10g - 9 were control - protection by passwords  - Brake sequence adapted to hosting travelling orientation and lift weight measurement - brake fleedback - load sharing - Linit switches management - non limes refence - grown removal - alarm group - laimt switches positioning with low speed time optimization - summing, office float on in fly - fleets controld short on the removal - alarm group - last carb on in fly - fleets controld short on the removal - cast carb on in fly - fleets controld short on the removal - stat carb on in fly - fleets controld short on the removal - stat carb on in fly - fleets controld short on the removal on the remova		Yes	Yes
Number of parameters  - PID regulator - Current and forque limitation - S ramp - short ramp - 10 preset speeds + log - 2 wire control - briefly speed flooking - profession by passwords  - Brake sequence adapted to hoisting, travelling, orientation and lift weight measurement - Inigh speed hoisting - Limit switches management - no linear referece - multi-motor - multi-parameters - Power removal - limit switches positioning with low speed time optimization - summing, differentiating, multiplying reference - fast catch on fly - fastest controlled stop - motor surge limitation - customization of the menus and parameters - response to the customization of the men			
- PID regulator - courret and torque limitation - S ramp - short ramp - 16 preset speeds + 100 - 16 preset speeds + 100 - brake sequence - protection by passwords  - Brake sequence adapted to holsting, traveiling, orientation and lift with speed holsting - have feedback - load sharing - Limit switches management - non linear referice - multill parameters - Power removal - alarm group - limit switches positioning with iow speed time opinization - summing, official on in fy - fastes controled short - summing, official on in fy - fastes controled short - summing and parameters - power centrol - summing official on in fy - fast catch on if fy - fast catch on if fy - fast catch on the fact controled short - remove any parameters - power temoval - alarm group - traverse control - ocusionization of the menus and parameters  Price Positioning  User's Manual  Simplified  Yes  Yes  Yes  Complete  Yes  Yes  Yes  Yes  Others  Applications  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Y			
- current and torque limitation - S ramp - S ramp - short ramp - 16 preset speeds - 10g - brake sequence - protection by passwords  - Brake sequence adapted to hoisting, travelling, orientation and lift weight measurement - brake sequence - protection by passwords  - Brake sequence adapted to hoisting, travelling, orientation and lift weight measurement - brake feedback - load sharing - Limit switches management - non linear refence - multi-motor - lair group - limit switches positioning with low speed time optimization - summing, differentisting, multiplying reference - fast catch on fly - laravene control - motor surge limitation - customization of the menus and parameters  Price Positioning User's Manual Simplified - Yes - Complete - Yes - Yes - Yes - O - Yes - Yes - Yes - O - Yes - S - O - Yes - S - O - Yes - S - O - Yes - O - Yes - O - O - S - O - O - O - O - O - O - O - O - O - O	Number of parameters		472
Amain functions  - S ramp - short ramp - 16 preset speeds +1 gg - 3 wire control - 2 wire control - 3 wire control - 3 wire control - 2 wire control - 3 wire control - 4 wire sequence adapted to hoising, travelling, orientation and lift weight measurement - high speed hoisting - brake feetback - 4 wire wire wire wire wire wire wire wire			
Main functions  - short ramp - 16 preset speeds + jog - 3 wire control - 5 were sequence adapted to holisting, travelling, orientation and lift weight measurement - 16 high passwords - 10 weight measurement - 16 high passwords - 16 weight measur			
- 16 preset speeds + jog - 3 wire control - brake sequence - protection by passwords  - Brake sequence adapted to hoisting reveiling operation and lift weight measurement - ling speed hoisting - brake feedback - load sharing - Limit switches management - non linear refence - multi-motor - multi parameters - Power removal - limit switches positioning with low speed time optimization - summing, differentiating, multiplying reference - fast catch on fly - fastest controlled stop - traverse control - under surge limitation - customization of the menus and parameters  Price Positioning  User's Manual  Simplified - Yes - Y			
- brake sequence - protection by passwords  - Brake sequence adapted to hoisting, travelling, orientation and lift weight measurement - high speed debuds discovered and the season of t	Main functions	- 16 preset speeds + jog	
- Protection by passwords  - Brake sequence adapted to holsting, travelling, orientation and lift weight measurement - Injin speed holsting - brake feetback - Limit switches management - Inno linear refence - multi-motor - multi-motor - multi-motor - multi-parameters - Power removal - alarm group - limit switches positioning with low speed time optimization - summing, differentiating, multiplying reference - fast catch on ify - laverse control - motor surge limitation - customization of the menus and parameters  - Price Positioning - User's Manual - Simplified - Yes - Y		- 3 wire control	-
- Brake sequence adapted to hoisting, travelling, orientation and lift weight measurement - high speed hoisting - brake feedback - load sharing lumit switches management - non linear reference - multi parameters - Power removal - alarm group - limit switches positioning with low speed time optimization - summing, differentiating, multiplying reference - fast catch on fly - fastest controlled stop - traverse controll - motor surge limitation - customization of the menus and parameters  - Price Positioning  User's Manual  Simplified Yes Yes Yes - Yes			
hoisting, travelling, orientation and lift weight measurement - high speed hoisting - brake feedback - load sharing - Limit switches management - non linear referce - multi-more - multi-more - multi-more - laim group - limit switches positioning with low speed time optimization - surming, differentiating, multiplying reference - fast catch on fly - fastest controlled stop - traverse control - customization of the menus and parameters  Price Positioning User's Manual Simplified - Yes - Ye		- protection by passwords	
weight measurement - high speed holisting - brake feedback - load sharing - limit switches management - non linear referce - multi-motor - motor surge illimitation - customization of the menus and parameters  Price Positioning  User's Manual  Simplified  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Y			
- high speed holsting - brake feedback - load sharing - Limit switches management - non linear refence - multi-motor - multi parameters - Power removal - alarm group - limit switches positioning with low speed time optimization - summing, differentiating, multiphying reference - fast catch on fly - traverse control - motor surge limitation - customization of the menus and parameters  Price Positioning User's Manual Simplified Yes - Yes - Yes - Language - 6 languages and more - Yes		hoisting, travelling, orientation and lift	
- "Drake feedback" - Load sharing - Limit switches management - multi-motor - multi-motor - multi-motor - multi-motor - multi-motor - limit switches positioning with low speed time optimization - summing, differentiating, multiplying reference - fast catch on fly - fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Price Positioning User's Manual  Simplified Yes Complete Yes Yes Language 6 languages and more Fenglish Paper Yes Yes Yes CD Yes Yes Yes Telemecanique.com Www.yaskawa.co.jp and www.drives.com Others  Pres Yes Yes Yes Yes Yes Yes Yes Yes Yes Y			
- load sharing - l-limit switches management - non linear refence - multi-motor - multi parameters - Power removal - alarm group - limit switches positioning with low speed time optimization - summing, differentiating, multiplying reference - fast catch on fly - fast eact not fly - fast eact not fly - traverse controi - motor surge limitation - customization of the menus and parameters  Price Positioning User's Manual Simplified Yes Complete Yes Yes Language 6 languages and more English Paper Yes CD Yes Yes Yes CD Yes Yes Yes Web Site Telemecanique.com www.yaskawa.co.jp and www.drives.com Others  Applications Holisting / crane Horizontal handling Yes Yes Yes Pes Perse P			
- non linear refence - multi-motor - multi-motor - multi parameters - Power removal - alarm group - limit switches positioning with low speed time optimization - summing, differentiating, multiplying reference - fast catch on fly - fastes control - motor surge limitation - customization of the menus and parameters  Price Positioning User's Manual Simplified - Yes - Yes - Yes - Language - 6 languages and more - English - Paper - Yes - Web Site - Telemecanique.com - www.yaskawa.co.jp and www.drives.com - Others - Option card manual - Option card manual - Price Positioning - Yes			
List of advanced functions  - multi-motor - multi parameters - Power removal - alarm group - limit switches positioning with low speed time optimization - summing, differentiating, multiplying reference - fast catch on fly - fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Price Positioning User's Manual  Simplified Yes Complete Yes Yes Language 6 languages and more English Paper Yes Yes Yes CD Yes Web Site Telemecanique.com www.yaskawa.co.jp and www.drives.com Others  Pres Yes Yes Yes Yes Yes Web Jite Telemecanique.com - Option card manual  Applications Horizontal handling Yes		-Limit switches management	
List of advanced functions  - multi parameters - Power removal - alarm group - limit switches positioning with low speed time optimization - summing, differentiating, multiplying reference - fast catch on fly - fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Price Positioning  User's Manual  Simplified - Yes - Yes - Complete - Yes - Yes - Yes - Yes - Language - 6 languages and more - English - Paper - Yes - Yes - Yes - Yes - Yes - Yes - Web Site - Telemecanique.com - www.yaskawa.co.jp and www.drives.com  Others - Option card manual  Applications - Horizontal handling - Yes - Y			
List of advanced functions  - Power removal - alarm group - limit switches positioning with low speed time optimization - summing, differentiating, multiplying reference - fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Price Positioning  User's Manual  Simplified  Yes  Complete  Yes  Yes  Language  6 languages and more  English  Paper  Yes  Yes  Yes  Yes  Web Site  Telemecanique.com  www.yaskawa.co.jp and www.drives.com  Others  Pes  Yes  Yes  Yes  Yes  Yes  Yes  Ye			
- alarm group - limit switches positioning with low speed time optimization - summing, differentiating, multiplying reference - fast catch on fly - traverse control - customization of the menus and parameters  Price Positioning  User's Manual  Simplified Yes - Y	List of advanced functions		- Energy saving
low speed time optimization - summing, differentiating, multiplying reference - fast catch on fly - fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Price Positioning  User's Manual  Simplified Yes Complete Yes Yes Language 6 languages and more Paper Yes CD Yes Yes Yes CD Yes Yes Yes Web Site Telemecanique.com www.yaskawa.co.jp and www.drives.com Others  Telemecanique.com Yes Yes Conveyor Yes Yes Yes Conveyor Yes Yes Yes Yes Conveyor Yes Yes Yes Yes Yes Yes Conveyor Yes		- alarm group	g
- summing, differentiating, multiplying reference - fast catch on fly - fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Price Positioning  User's Manual Simplified Yes Complete Yes Language Glanguages and more English Paper Yes Yes CD Yes Yes Yes CD Yes Yes Yes CD Yes Yes Others Telemecanique.com Www.yaskawa.co.jp and www.drives.com Others - Option card manual  Applications Horizontal handling Yes Yes Yes Yes Conveyor Yes Yes Yes Yes Yes Testile industry Yes Yes Yes Packaging Yes Yes Yes Fan No Yes - Wes Yes - Wes Fan No Yes - Wood working machines - Medical appliances - Food processing - Transportation systems		<ul> <li>limit switches positioning with</li> </ul>	
- fast cath on fly - fast each o		low speed time optimization	
- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Price Positioning User's Manual Simplified Yes Complete Yes Language Faper Yes Complete Yes Complete Yes Complete Yes Complete Yes Complete Yes Yes Complete Yes Complete Yes Complete Yes Yes Complete Yes Complete Yes Yes Yes Complete Yes Yes Yes Web Site Yes Yes Yes Web Site Yes Yes Web Jordan and Applications Working / crane Horizontal handling Yes Yes Yes Packaging Yes Yes Yes Packaging Yes Yes Yes Pumping Yes Yes Yes Yes Yes Pumping Yes		- fast catch on fly	
Price Positioning User's Manual Simplified Ves Complete Paper Pres CD Ves Ves CD Ves CD Ves Ves CD Ves Ves CD Ves CD Ves Ves Ves Ves Ves Ves Ves Ves COthers Ves Ves Ves Ves Ves Ves Ves Ves Ves Ve		- fastest controlled stop	
Price Positioning User's Manual Simplified Yes Complete Yes Yes Language Apaper Yes Yes Yes CD Yes Yes Yes CD Yes Yes Yes CD Yes Yes Yes Yes CD Yes Yes Yes Wab Site Telemecanique.com Www.yaskawa.co.jp and www.drives.com Others Yes Wes Applications Hoisting / crane Horizontal handling Yes			
Price Positioning User's Manual Simplified Yes Complete Yes Fan Paper Yes Yes Yes CD Yes Yes Yes CD Yes Yes Yes CD Yes Yes Yes CD Yes Web Site Telemecanique.com Www.yaskawa.co.jp and www.drives.com Others Yes Yes Wes Applications Hoisting / crane Yes Horizontal handling Yes Yes Packaging Yes	1		
User's Manual Simplified Yes Complete Yes Ares Language 6 languags and more Yes Yes CD Yes Yes CD Yes Yes CD Yes Yes Web Site Telemecanique.com Www.yaskawa.co.jp and www.drives.com Others Applications Hoisting / crane Horizontal handling Yes Yes Yes Yes Yes Yes Applications Hoisting / crane Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye		sustainization of the menus and parameters	
User's Manual Simplified Yes Complete Yes Ares Language 6 languags and more Yes Yes CD Yes Yes CD Yes Yes CD Yes Yes Web Site Telemecanique.com Www.yaskawa.co.jp and www.drives.com Others Applications Hoisting / crane Horizontal handling Yes Yes Yes Yes Yes Yes Applications Hoisting / crane Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	Duine Braitie		
Simplified			
Complete         Yes         Yes           Language         6 languages and more         English           Paper         Yes         Yes           CD         Yes         Yes           Web Site         Telemecanique.com         www.yaskawa.co.jp and www.drives.com           Others         Option card manual           Applications         Yes         Option card manual           Hoisting / crane         Yes         Yes           Horizontal handling         Yes         Yes           Conveyor         Yes         Yes           Packaging         Yes         Yes           Pumping         Yes         Yes           Extitle industry         Yes         Yes           Fan         no         Yes           Lift         Yes         - Wood working machines           Compressor         no         Yes           Others         Some low speed process machines, unbalanced machine, special machine, special machine         - Food processing - Food processing - Transportation systems	User's Manual		
Complete         Yes         Yes           Language         6 languages and more         English           Paper         Yes         Yes           CD         Yes         Yes           Web Site         Telemecanique.com         www.yaskawa.co.jp and www.drives.com           Others         Option card manual           Applications         Yes         Option card manual           Hoisting / crane         Yes         Yes           Horizontal handling         Yes         Yes           Conveyor         Yes         Yes           Packaging         Yes         Yes           Pumping         Yes         Yes           Extitle industry         Yes         Yes           Fan         no         Yes           Lift         Yes         - Wood working machines           Compressor         no         Yes           Others         Some low speed process machines, unbalanced machine, special machine, special machine         - Food processing - Food processing - Transportation systems	Simplified	Yes	
Language         6 languages and more         English           Paper         Yes         Yes           CD         Yes         Yes           Web Site         Telemecanique.com         www.yaskawa.co.jp and www.drives.com           Others         - Option card manual           Applications         - Option card manual           Hoisting / crane         Yes           Horizontal handling         Yes           Conveyor         Yes           Packaging         Yes           Packaging         Yes           Pumping         Yes           Textile industry         Yes           Fan         no           Lift         Yes           Compressor         no           Some low speed process machines, unbalanced machine, special machine, special machine         - Wood working machines - Medical appliances - Food processing - Food processing - Transportation systems	Complete	Yes	Yes
Paper         Yes         Yes           CD         Yes         Yes           Web Site         Telemecanique.com         www.yaskawa.co.jp and www.drives.com           Others         - Option card manual           Applications         - Option card manual           Hoisting / crane         Yes           Horizontal handling         Yes           Conveyor         Yes           Packaging         Yes           Pumping         Yes           Textile industry         Yes           Fan         no           Lift         Yes           Compressor         no           Some low speed process machines, unbalanced machine, special machine         - Wood working machines - Medical appliances - Food processing - Food processing - Transportation systems	•	6 languages and more	English
CD         Yes         Yes           Web Site         Telemecanique.com         www.yaskawa.co.jp and www.drives.com           Others         Option card manual           Applications         Poption card manual           Horizontal handling         Yes           Conveyor         Yes           Packaging         Yes           Pumping         Yes           Pumping         Yes           Fan         no           Lift         Yes           Compressor         no           Some low speed process machines, unbalanced machine, special machine         - Wood working machines - Medical appliances - Food processing - Food processing - Transportation systems			
Web Site         Telemecanique.com         www.yaskawa.co.jp and www.drives.com           Others         - Option card manual           Applications         - Option card manual           Hoisting / crane         Yes           Horizontal handling         Yes           Conveyor         Yes           Packaging         Yes           Pumping         Yes           Textile industry         Yes           Fan         no           Lift         Yes           Compressor         no           Yes           - Wood working machines           - Medical appliances           - Food processing           - Food processing           - Food processing           - Transportation systems	CD		
Others         - Option card manual           Applications         - Option card manual           Hoisting / crane         Yes           Horizontal handling         Yes         Yes           Conveyor         Yes         Yes           Packaging         Yes         Yes           Pumping         Yes         Yes           Extitle industry         Yes         Yes           Fan         no         Yes           Lift         Yes           Compressor         no         Yes           Others         Some low speed process machines, unbalanced machine, special machine, special machine         - Wood working machines - Medical appliances - Food processing - Food processing - Food processing - Transportation systems	Web Site		
Applications	Others	. 5.0QuQuQu	
Holsting / crane			p
Horizontal handling		Voc	
Conveyor         Yes         Yes           Packaging         Yes         Yes           Pumping         Yes         Yes           Textile industry         Yes         Yes           Fan         no         Yes           Lift         Yes         Yes           Compressor         no         Yes           some low speed process machines, unbalanced machine, special machine, special machine, special machine         - Food processing - Transportation systems			Von
Packaging         Yes         Yes           Pumping         Yes         Yes           Textile industry         Yes         Yes           Fan         no         Yes           Lift         Yes         Yes           Compressor         no         Yes           Some low speed process machines, unbalanced machine, special machine, special machine         - Wood working machines - Medical appliances - Food processing - Food processing - Transportation systems			
Pumping         Yes         Yes           Textile industry         Yes         Yes           Fan         no         Yes           Lift         Yes         Yes           Compressor         no         Yes           Some low speed process machines, unbalanced machine, special machine, special machine         - Wood working machines - Medical appliances - Food processing - Food processing - Transportation systems			
Textile industry         Yes         Yes           Fan         no         Yes           Lift         Yes			
Fan no Yes  Lift Yes  Compressor no Yes  some low speed process machines, unbalanced machine, special machine pspecial machine processing - Transportation systems			
Lift Yes  Compressor no Yes  some low speed process machines, unbalanced machine, special machine Fransportation systems  Some low speed process machines, unbalanced machine, Food processing Fransportation systems		Yes	169
Compressor no Yes  some low speed process machines, unbalanced machine, special machine specia			
Some low speed process machines, unbalanced machine, special machine appliances  - Wood working machines - Medical appliances - Food processing - Transportation systems	Fan	no	
Others some low speed process machines, unbalanced machine, - Food processing - Food processing - Transportation systems	Fan Lift	no Yes	Yes
Others machine, - Food processing special machine - Transportation systems	Fan Lift	no Yes	Yes Yes
	Fan Lift	no Yes no	Yes  Yes - Wood working machines
- Printing	Fan Lift	no Yes no some low speed process machines, unbalanced machine,	Yes  Yes  - Wood working machines  - Medical appliances  - Food processing
	Fan Lift Compressor	no Yes no some low speed process machines, unbalanced machine,	Yes  - Wood working machines - Medical appliances - Food processing - Transportation systems

ATV71 vs UNIDRIVE SP		
ITEM	ATV71 V3 OTVIDIT	SP
Picture	AITT	
	Section 1997	
Drive sizing Constant Torque (CT) High torque (HT)	Yes	Yes
Variable Torque (VT) Standard torque (VT)	No	Yes
Input		
Single phase 200V range Power range	Yes by using 3 ph drive + derating 0,37 to 37kW	No -
Number of ratings Voltage range with tolerance	9 200V -15% to 240V +10%	-
Mains frequency and tolerance	50 Hz ±20% or 60 Hz ±20%	-
Three phase 200V range Power range	Yes	Yes Heavy duty : 0,75 to 11 kW
	0,37 to 75kW	Normal duty: 1,75 to 11 kW
Number of ratings Voltage range with tolerance	17 200V -15% to 240V +10%	9 200 - 240 V ±10%
Mains frequency and tolerance	50 Hz ±20% or 60 Hz ±20%	48 - 65 Hz
Three phase 400V range Power range	0.751, 0001111	Yes Heavy duty : 0,75 to 22 kW
	0,75 to 630kW 29	Normal duty: 1,1 to 30 kW
Number of ratings  Voltage range with tolerance	29 380V-15% to 480V + 10%	12 380 - 480 V ±10%
Mains frequency and tolerance Three phase 600V range	50 Hz ±20% or 60 Hz ±20% No	48 - 65 Hz Yes
Power range	NU	Heavy duty : 2,2 to 15 kW
Number of ratings		Normal duty : 3 to 18,5 kW
Voltage range with tolerance		500 - 575 V ±10%
Mains frequency and tolerance Three phase 690V range	No	48 - 65 Hz
Power range		-
Number of ratings  Voltage range with tolerance		-
Mains frequency and tolerance		-
Ungrounded supply  EMC	Disconnexion and reconnexion of Y capacitors	EMC filter must be removed
HF EMC compliance as standard		
Conducted emission Standard and level	EN61800-3 C2 (II < 16A)	Yes EN61800-3
	EN61800-3 C3 (II>16A)	
Shielded motor cable length	10 m up to 15kW 50m up to 75kW	up to 10m with additional ferrite ring on the ouput
Unshielded motor cable length		0111
Switching frequency Power range integration	4kHz All ratings (except from 11 to 75kW 200V class)	3kHz On the 3 existing size
Shielding connexion	On EMC plate	•
Radiated emission		EN61000-6-4: EMC. Generic standard. Emission standard for industrial environment.  EN50081-2: EMC. Generic emission standard. Industrial environment.
Standard and level	EN55011 Class A	
Power range  LF EMC compliance as standard	All the ratings	
Inductance (AC or DC)	DC inductance integrated from 18,5kW to 75kW 400	no
	Class DC inductance integrated from 11 to 45kW 200V class	
Power range integration		
Standard % THD		
Standard		EN61000-6-2 : EMC. Generic standards. Immunity standars for industrial environment. EN50082-2 : EMC.Generic immunity standard. Industrial environment.
Standard % THD	IEC 61000-4-2 level 3	industrial environment.
Standard % THD Immunity  Standard 1 + level Standard 2 + level	IEC 61000-4-3 level 3	industrial environment.
Standard % THD Immunity  Standard 1 + level Standard 2 + level Standard 3 + level	IEC 61000-4-3 level 3 IEC 61000-4-4 level 4	industrial environment.
Standard % THD Immunity  Standard 1 + level Standard 2 + level	IEC 61000-4-3 level 3	industrial environment. EN50082-2 : EMC.Generic immunity standard. Industrial environment.
Standard % THD Immunity  Standard 1 + level Standard 2 + level Standard 3 + level Standard 4 + level	IEC 61000-4-3 level 3 IEC 61000-4-4 level 4 IEC 61000-4-5 level 3	industrial environment.
Standard 9% THD Immunity  Standard 1 + level Standard 2 + level Standard 3 + level Standard 4 + level Standard 5 + level Low voltage directive  Others	IEC 61000-4-3 level 3 IEC 61000-4-4 level 4 IEC 61000-4-5 level 3 IEC 61000-4-6 level 3	industrial environment.  EN50082-2 : EMC.Generic immunity standard. Industrial environment.  Complieswith the low voltage directive 73/23/EEC
Standard 9% THD  Immunity  Standard 1 + level Standard 2 + level Standard 3 + level Standard 4 + level Standard 5 + level Low voltage directive  Others  Physical environment	IEC 61000-4-3 level 3 IEC 61000-4-4 level 4 IEC 61000-4-5 level 3 IEC 61000-4-6 level 3 EN 50178 IEC 61800-5-1	industrial environment.  EN50082-2 : EMC.Generic immunity standard. Industrial environment.  Complies with the low voltage directive 73/23/EEC EN50178 : Electronic equipment for use in power installations
Standard 9% THD Immunity  Standard 1 + level Standard 2 + level Standard 3 + level Standard 4 + level Standard 5 + level Low voltage directive  Others	IEC 61000-4-3 level 3 IEC 61000-4-4 level 4 IEC 61000-4-5 level 3 IEC 61000-4-6 level 3 EN 50178 IEC 61800-5-1  13 sizes IP21 and IP41 on upper part (EN 50178 and 61800-5-1)	industrial environment.  EN50082-2 : EMC.Generic immunity standard. Industrial environment.  Complieswith the low voltage directive 73/23/EEC
Standard 9% THD  Immunity  Standard 1 + level Standard 2 + level Standard 3 + level Standard 4 + level Standard 5 + level Low voltage directive  Others  Physical environment Number of size (frame) Protection Degree	IEC 61000-4-3 level 3 IEC 61000-4-4 level 4 IEC 61000-4-5 level 3 IEC 61000-4-6 level 3 EN 50178 IEC 61800-5-1	industrial environment.  EN50082-2 : EMC.Generic immunity standard. Industrial environment.  Complies with the low voltage directive 73/23/EEC EN50178 : Electronic equipment for use in power installations  3
Standard % THD Immunity  Standard 1 + level Standard 2 + level Standard 3 + level Standard 3 + level Standard 5 + level Low voltage directive  Others Physical environment Number of size (frame) Protection Degree  IP + power range IP + power range	IEC 61000-4-3 level 3 IEC 61000-4-4 level 4 IEC 61000-4-5 level 3 IEC 61000-4-6 level 3 EN 50178 IEC 61800-5-1  13 sizes IP21 and IP41 on upper part (EN 50178 and 61800-5-1)	industrial environment.  EN50082-2 : EMC.Generic immunity standard. Industrial environment.  Complieswith the low voltage directive 73/23/EEC EN50178 : Electronic equipment for use in power installations  3 IP20 and Nema type 1
Standard % THD Immunity  Standard 1 + level Standard 2 + level Standard 3 + level Standard 4 + level Standard 5 + level Low voltage directive  Others  Physical environment Number of size (frame) Protection Degree	IEC 61000-4-3 level 3 IEC 61000-4-4 level 4 IEC 61000-4-5 level 3 IEC 61000-4-6 level 3 EN 50178 IEC 61800-5-1  13 sizes IP21 and IP41 on upper part (EN 50178 and 61800-5-1)	industrial environment.  EN50082-2 : EMC.Generic immunity standard. Industrial environment.  Complies with the low voltage directive 73/23/EEC EN50178 : Electronic equipment for use in power installations  3 IP20 and Nema type 1
Standard % THD Immunity  Standard 1 + level Standard 2 + level Standard 3 + level Standard 3 + level Standard 4 + level Standard 5 + level Low voltage directive  Others Physical environment Number of size (frame) Protection Degree  IP + power range	IEC 61000-4-3 level 3 IEC 61000-4-4 level 4 IEC 61000-4-5 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 EN 50178 IEC 61800-5-1  13 sizes IP21 and IP41 on upper part (EN 50178 and 61800-5-1) IP31 with gland box, Nema type 1 with conduit box	industrial environment.  EN50082-2 : EMC.Generic immunity standard. Industrial environment.  Complies with the low voltage directive 73/23/EEC EN50178 : Electronic equipment for use in power installations  3 IP20 and Nema type 1
Standard 9% THD  Immunity  Standard 1 + level Standard 2 + level Standard 3 + level Standard 4 + level Standard 5 + level Low voltage directive  Others  Physical environment Number of size (frame)  Protection Degree  IP + power range	IEC 61000-4-3 level 3 IEC 61000-4-4 level 4 IEC 61000-4-5 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 EN 50178 IEC 61800-5-1  13 sizes IP21 and IP41 on upper part (EN 50178 and 61800-5-1) IP31 with gland box, Nema type 1 with conduit box	industrial environment.  EN50082-2 : EMC.Generic immunity standard. Industrial environment.  Complieswith the low voltage directive 73/23/EEC EN50178 : Electronic equipment for use in power installations  3 IP20 and Nema type 1
Standard   % THD Immunity  Standard 1 + level Standard 2 + level Standard 3 + level Standard 3 + level Standard 4 + level Standard 5 + level Low voltage directive  Others  Physical environment Number of size (frame) Protection Degree  IP + power range	IEC 61000-4-3 level 3 IEC 61000-4-4 level 4 IEC 61000-4-5 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-5-1 IS sizes IP21 and IP41 on upper part (EN 50178 and 61800-5-1) IP31 with gland box, Nema type 1 with conduit box  -10 to +50°C -25 to 70°C	industrial environment.  EN50082-2 : EMC.Generic immunity standard. Industrial environment.  Complies with the low voltage directive 73/23/EEC EN50178 : Electronic equipment for use in power installations  3 IP20 and Nema type 1 15 to +40°C, up to 50°C with derating (at 3kHz max for the rated power)
Standard 1 + level Standard 1 + level Standard 2 + level Standard 3 + level Standard 3 + level Standard 4 + level Standard 5 + level Low voltage directive  Others  Physical environment Number of size (frame) Protection Degree  IP + power range	IEC 61000-4-3 level 3 IEC 61000-4-4 level 4 IEC 61000-4-5 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-5-1 IEC 61800-5-1  13 sizes IP21 and IP41 on upper part (EN 50178 and 61800-5-1) IP31 with gland box, Nema type 1 with conduit box  -10 to +50°C -25 to 70°C 95% non condensing without drop 1000m without derating.	industrial environment.  EN50082-2 : EMC.Generic immunity standard. Industrial environment.  Complieswith the low voltage directive 73/23/EEC EN50178 : Electronic equipment for use in power installations  3 IP20 and Nema type 1
Standard 1 + level Standard 1 + level Standard 2 + level Standard 3 + level Standard 3 + level Standard 4 + level Standard 5 + level Low voltage directive  Others  Physical environment Number of size (frame) Protection Degree  IP + power range	IEC 61000-4-3 level 3 IEC 61000-4-4 level 4 IEC 61000-4-5 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61800-5-1  13 sizes IP21 and IP41 on upper part (EN 50178 and 61800-5-1) IP31 with gland box, Nema type 1 with conduit box  -10 to +50°C -25 to 70°C 95% non condensing without drop	industrial environment.  EN50082-2 : EMC.Generic immunity standard. Industrial environment.  Complies with the low voltage directive 73/23/EEC EN50178 : Electronic equipment for use in power installations  3 IP20 and Nema type 1

<b>.</b>		
Automatic stop of fan	Yes	No, but the heatsink fan on Unidrive SP size 1 and 2 is a dual speed fan and on size 3 it is a variable speed fan. The drive controls the speed at which the fan runs based on the temperature of the heatsink and the drive's thermal model system. The Unidrive SP size 3 is also fitted with single speed fan to ventilate the capacitor bank.
Mounting		
Drive Shape	Compact	Pook shano
Side by side mounting	Yes without derating	Book shape Yes, only for size 1
Heat evacuation outside enclosure	Yes, the power section is IP54	Yes. Warning: existing fans must be replaced by IP54 fans
Operating position	Vertical	Vertical
Others Power connexion	-	The product can be either surface or trough panel mounted using the apporpriate brackets.
DC Bus connexion	Yes	Yes at the top of the product
DC inductance connexion	Line inductance or DC inductance	Too at the top of the product
Removable terminals	No	Yes
Bottom or Top/Bottom	Bottom	Top / Bottom
Motor control		
AC motors motor control		
U/F	Yes	Yes (fixed mode or quadratic mode)
SVC (open loop) FVC (closed loop)	Yes Yes	Yes Yes
Type of encoder	tes	- Quadrature incremental encoder with or without marker
	RS422, Open collector or Push pull	pulse.  - Incremental encoder with frequency pulses and direction, with or without marker pulse.  - Incremental encoder with forward pulses and reverse pulses, with or without marker pulse.  - Quadrature incremental encoder with commutation signals, with or without marker pulse.  Incremental encoder with frequency pulses and direction with commutation signals, with or without marker pulse.  Incremental encoder with forward pulses and reverse pulses with commutation signals, with or without marker pulse.  - SinCos encoder without serial communications.  - Absolute SinCos encoder with HiperFace serial communications protocol (Stegmann).  - Absolute EndAt serial communications encoder (Heidenhain).  - Absolute SinCos encoder with EnDat serial communications protocol (Heidenhain).  - Absolute SinCos encoder with Sincos encoder.  - Absolute SinCos encoder with Sis.
Others	ENA	Servo, regen
Synchronous or brushless motors		Yes
Open loop	Yes	Yes
Closed loop	No	Yes
Performances		
Speed range		
Motor quadrant	1 : 100 open loop	1 : 50 open loop
	1 : 1000 closed loop	1 : 1000 closed loop
Generator quadrant	1 : 50 open loop 1 : 1000 closed loop	
Overtorque	From 170 to 2,2 Tn during 60s	170% during 8s
Overtorque	from 200 to 240% during 2s	200% during 5s
Rated current philosophy	1,1 In motor (380V)	
0,75kW / 400V	In motor = 2 A	In motor = 2 A
	In drive = 2,3 A	In drive = 2,1 A
4 kW / 400V	In motor = 8,5 A In drive = 10,5 A	In motor = 8,5 A In drive = 9,5 A
22 kW / 400V		In motor = 40.5 A
	In drive = 48 A	In drive = 46 A
Overcurrent capability  Type of control and accuracy	180% I motor during 60s 200% I motor during 2s	Normal duty overload with motor rated current = drive rated current - Closed loop from cold : 110% for 215s - Closed loop from cold : 110% for 215s - Open loop from mold : 110% for 215s - Open loop from 100% : 110% for 5s - Open loop from 100% : 110% for 5s Heavy duty overload with motor rated current = drive rated current - Closed loop from cold : 175% for 40s - Closed loop from 100% : 150% for 60s - Open loop from 100% : 150% for 60s - Open loop from 100% : 150% for 8s Heavy duty overload with a typical 4 pole motor - Closed loop from cold : 200% for 28s - Closed loop from 100% : 200% for 3s - Open loop from 100% : 175% for 40s - Open loop from 100% : 175% for 5s
Speed control and accuracy	Yes	Yes
Torque control	Yes	Yes
Torque rise time		
Sampling time of the loop		250µs on the speed loop
		83µs on the torque loop
Autotuning	05"	
On line / Off line	Off line and On line	Both on line and off line
Ways of execution	By keypad, Logic input, at power up	Set Pr 0.40 = 1 for a stationary autotune or set Pr 0.40 = 2 for a rotating autotune.  Close the Drive Enable signal (terminal 31). The drive will display 'rdy'.  Close the un signal (terminal 26 or 27).  The lower display will flash 'Auto' and 'tunE' alternatively, while the drive is performing the autotune.  Wait for the drive to display 'rdy' and for the motor to come to a standstill.
Values measured		A stationary autotune can be used when the motor is loaded and it is not possible to remove the load from the motor shaft. A stationary autotune does not measure the power factor of the motor so the value on the motor nameplate must be entered. A rotating autotune should only be used if the motor is unloaded or the load is uncoupled
Prefluxing	Yes	
Braking		
Braking transistor	Yes	Yes
Braking performance w/o resistor	Without resistor 100% Cn : 0,37 - 0,75 kW 30% Cn : 1,5 - 15 kW With resistor (as an option) Until 170% Cn	2 kHz vesse leer AMADUNA . " " 1 COO"
Output frequency range	0,1 to 1000Hz up to 37kHz up to 500Hz above	3 kHz : open loop (WARNING : limited at 250Hz when switching frequency is 3kHz)
Output fraguages receives	'	1,2 kHz closed loop
Output frequency resolution	0,1Hz	
Switching frequency	Sottable from 0.5 to 46kl !-	un to 16 bld depending on the server
range	Settable from 0,5 to 16kHz	up to 16 kHz depending on the range

factory setting	4kHz up to 30kW	
	2,5kHz above	
Integrated output filter	as an option	No
Motor voltage surge limitation		
sinus	no	
Others	no	
Frequency setting resolution		
Seria Analog	11 bits	
Digita	11 010	
Modularity		
Number of option board at the same time	3	3 modules and 1 Smartcard
Inputs / Outputs		
On basic product Removable terminals	Yes	Standard Yes
Type of terminal & pitch	Screw terminlas, pitch 5,08	Screw terminals, 2,5 mm and 3 mm (relay)
Sampling time	1ms minimum, and 2,5ms max 2	4ms at standard
Analog input	Differential voltage input +/-10V	1 high precision (16 bits plus sign) differential
2	current or voltage input	2 general purpose 0 (4) - 20 mA (10 bit plus sign)
Logic inputs	6 assignable logic inputs	6 (250µs of sampling time if LI assigned to limit switches)
Logic outputs (open collector)	no	3
Relays	2 assignable relays (NO/NC, NC)	2 (NO) 2
Analog outputs	Assignable output (voltage or current)	2 x (10 bit plus sign)
2		-
Dedicated I/O	2 Power removal input (compliance with 61800-5-2	Drive enable (secure disable function) : compliance with 61900 5.2
	Power removal input (compliance with 61800-5-2  PTC input on LI	Drive enable (secure disable function) : compliance with 61800-5-2
3		
I / O Option 1 Removable terminals	Lgic I/O card Yes	Extended I/O interface (Yellow colored) Yes
Type of terminal & pitch	Yes Screw terminlas, pitch 5,08	Yes Screw terminals, 3,86
Sampling time	5ms	
Analog input	no	<b>2</b> 2 x voltage
		2 x voltage -
Logic inputs	4 appignable logic is suf-	- 2
Logic inputs Logic outputs (open collector)	4 assignable logic inputs 2 assignable open collector outputs	3 3 I/O
Relays	1 assignable relay (NO/NC)	2
Analog outputs	no	1 1 x voltage
		i x voltage -
Dedicated I/O		-
Dedicated I/O	-10V supply	-
2	PTC input	-
I/O Ontion 2	Extended I/O card	-
I / O Option 2 Removable terminals	Yes	-
Type of terminal & pitch	Screw terminlas, pitch 3,81 except relay that 5,08	-
Sampling time Analog input	5ms 2	- -
1	1 differential current input	-
2	1 voltage / current input	-
Logic inputs	4 assignable logic inputs	-
Logic outputs (open collector) Relays	2 assignable open collector outputs 1 assignable relay (NO/NC)	-
Analog outputs	2	-
1	2 assignable voltage/current Analog outputs	-
2		-
Dedicated I/O		-
	PTC input	-
		-
I / O Option 3	Controller inside card	-
Removable terminals Type of terminal & pitch	Yes	- -
Sampling time		-
Analog input		<u>-</u>
		-
3		-
Logic inputs Logic outputs (open collector)		-
Relays		-
Relays		- -
Relays Analog outputs		- - - -
Relays		- - - -
Relays Analog outputs		- - - - - - -
Relays Analog outputs  Dedicated I/O		- - - - - - - - - -
Relays Analog outputs		- - - - - - -
Relays Analog outputs  Dedicated I/O  Others  Communication		
Relays Analog outputs  Dedicated I/O  Others  Communication Separated control supply	Yes 24V dc as standard	
Relays Analog outputs  Dedicated I/O  Others  Communication Separated control supply On the basic product	Yes	
Relays Analog outputs  Dedicated I/O  Others  Communication Separated control supply On the basic product  Protocol available 1  Protocol available 2		
Relays Analog outputs  Dedicated I/O  Cothers  Communication Separated control supply On the basic product  Protocol available Protocol available Protocol available Protocol available	Yes Modbus fully configurable with I/O scanner	
Relays Analog outputs  Dedicated I/O  Others  Communication Separated control supply On the basic product  Protocol available 2  Protocol available 3  Communication option card	Yes Modbus fully configurable with I/O scanner Canopen fully configurable	
Relays Analog outputs  Dedicated I/O  Cothers  Communication Separated control supply On the basic product  Protocol available Protocol available 2 Protocol available 3 Communication option card  Protocol available 3	Yes Modbus fully configurable with I/O scanner Canopen fully configurable Fipio PL7	
Relays Analog outputs  Dedicated I/O  Others  Communication Separated control supply On the basic product  Protocol available 2 Protocol available 3 Protocol available 3 Communication option card	Yes Modbus fully configurable with I/O scanner Canopen fully configurable Fipio PL7	
Relays Analog outputs  Dedicated I/O  Others  Communication Separated control supply On the basic product  Protocol available 2  Protocol available 3  Protocol available 4  Protocol available 5  Protocol available 6	Yes  Modbus fully configurable with I/O scanner  Canopen fully configurable  Fipio PL7  FIPIO with messaging  Modbus Plus  Uni-Telway, Modbus ASCII, Modbus RTU/Jbus	
Relays Analog outputs  Dedicated I/O  Cthers  Communication Separated control supply On the basic product  Protocol available Protocol Prot	Yes  Modbus fully configurable with I/O scanner  Canopen fully configurable  Fipio PL7  FIPIO with messaging  Modbus Plus  Uni-Telway, Modbus ASCII, Modbus RTU/Jbus  INTERBUS-S	
Relays Analog outputs  Dedicated I/O  Others  Communication Separated control supply On the basic product  Protocol available 2  Protocol available 3  Protocol available 4  Protocol available 5  Protocol available 6	Yes  Modbus fully configurable with I/O scanner  Canopen fully configurable  Fipio PL7  FIPIO with messaging  Modbus Plus  Uni-Telway, Modbus ASCII, Modbus RTU/Jbus  INTERBUS-S	

Drotocol ovoiloble 0		
Protocol available 9 Protocol available 10		-
Protocol available 10		-
Protocol available 12		-
Gateway		-
Protocol available 1 Protocol available 2	AS-i	<u>-</u>
Protocol available 3		<u> </u>
Protocol available 4		-
Protocol available 5		-
Protocol available 6		-
Protocol available 7		<u>-</u>
Protocol available 8 Protocol available 9		-
Protocol available 10		_
		<u> </u>
Protocol available 11		
Protocol available 12		-
Protocol available 13		-
Operator panel		
Dialogue 1		Optional
Integrated / removable	Integrated	Removable
Type of screen Language	4 Led digits code	2 rows of 7 segments display
Number of keys	4	8
Number of Leds	5 Leds for the diagnostic of the integrated fieldbus	-
Keypad command	no	Forward / reverse, stop / reset, run
Function keys	no	Mode, up down, left, right
Dialogue 2		- Optional
Integrated / removable	Removable	Removable
Type of display	Graphic display	Plain text, backlit display
Language	6 languages (languages are flashable).	English
Number of keys	Suitable for asian characters use of a shuttle + 1 key	8
Number of keys Number of Leds	use of a shuttle + 1 key no	-
Keypad command	Yes	Forward / reverse, stop / reset, run
Function keys	4	Mode, up down, left, right
Others	navigation with a shuttle	In line help
	could be used to save and restore 4 configurations remote mounting kit available	
	Multipoint connection	
Dialogue 3		-
Integrated / removable Type of display		-
Language		-
Number of keys		-
Number of Leds		-
Keypad command		-
Function keys Others		<u>-</u>
Protections		-
Thermal protection	Yes, I <sup>2</sup> t motor thermal protection depending on the motor	l²t
Thermal protection	frequency.	1.0
FI : (PTO	Memorization when power off	V
Electronic / PTC	Yes, dedicated input on option cards	Yes on an Analog input
Short circuit between phase		Yes
Ground fault	yes yes	Yes
Output phase loss	yes	Yes
Input phase loss	yes	Yes
Braking resistor protection	No	Yes
Praking resistor protection		
Overload	yes	Yes
Overload Overvoltage	yes yes	Yes
Overload Overvoltage Undervoltage	·	Yes Yes
Overload Overvoltage Undervoltage Drive thermal protection	yes yes yes	Yes
Overload Overvoltage Undervoltage Drive thermal protection Locked motor protection	yes yes yes Yes	Yes Yes
Overload Overvoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention	yes yes yes	Yes Yes Yes
Overload Overvoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others	yes yes yes Yes	Yes Yes
Overload Overvoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others Options and Accessoiries	yes yes yes Yes Yes	Yes Yes Yes
Overload Overvoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others	yes yes yes Yes Yes Yes	Yes Yes Yes
Overload Overvoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others Options and Accessoiries	yes yes yes Yes Yes	Yes Yes Yes Yes   Internal braking resistor as an option (size 1 and 2 only), mounted on
Overload Overvoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units	yes yes yes Yes Yes  Yes  Tes  Protected braking resistor Hoisting resistors Line chokes Yes	Yes Yes Yes Yes   Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option
Overload Overvoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters	yes yes yes Yes Yes Yes  Protected braking resistor Hoisting resistors Line chokes Yes  Additional footprint filters	Yes Yes Yes Yes  Yes  Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option  Yes, as an option
Overload Overvoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units	yes yes yes yes Yes Yes  Yes  Additional footprint filters Motor chokes	Yes Yes Yes Yes   Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option
Overload Overvoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters	yes yes yes yes Yes Yes Yes  Protected braking resistor Hoisting resistors Line chokes Yes  Additional footprint filters Motor chokes full performances filters sinus filters	Yes Yes Yes Yes  Yes  Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option  Yes, as an option
Overload Overvoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters	yes yes yes yes Yes Yes Yes  Thes Yes  Protected braking resistor Hoisting resistors Line chokes Yes  Additional footprint filters Motor chokes full performances filters	Yes Yes Yes Yes  Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option  Yes, as an option Yes, as an option
Overload Overvoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters	yes yes yes yes Yes Yes Yes  Additional footprint filters Motor chokes full performances filters sinus filters filters for EMC compiliance with unshielded cables  Control fan kit	Yes Yes Yes Yes   Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option  Yes, as an option  Yes, as an option
Overload Overvoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters	yes yes yes yes Yes Yes Yes  Yes  Thesion resistor Hoisting resist	Yes Yes Yes Yes  Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option  Yes, as an option Yes, as an option
Overload Overvoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters	yes yes yes yes Yes Yes Yes  Additional footprint filters Motor chokes full performances filters sinus filters filters for EMC compiliance with unshielded cables  Control fan kit	Yes Yes Yes Yes Yes   Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option  Yes, as an option  Yes, as an option  Keypad Solutions module
Overload Overvoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters Others  Specific Product	yes yes yes yes Yes Yes Yes  Yes  Thesion resistor Hoisting resist	Yes Yes Yes Yes Yes  The service of
Overload Overvoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters Others	yes yes yes yes Yes Yes Yes  Ares  Protected braking resistor Hoisting resistors Line chokes Yes  Additional footprint filters  Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in	Yes Yes Yes Yes Yes   Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option  Yes, as an option  Yes, as an option  Keypad Solutions module
Overload Overvoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters Others  Specific Product	yes yes yes Yes Yes Yes Yes  Thoisting resistor Hoisting resistors Line chokes Yes  Additional footprint filters  Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure	Yes Yes Yes Yes
Overload Overvoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters Others  Specific Product	yes yes yes yes Yes Yes Yes  Ares  Protected braking resistor Hoisting resistors Line chokes Yes  Additional footprint filters  Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in	Yes Yes Yes Yes  Yes  Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option  Yes, as an option  Yes, as an option  - Keypad - Solutions module - CT comms cable
Overload Overvoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters Others  Specific Product Product mounted inside enclosures Water cooled drive Others	yes yes yes Yes Yes Yes Yes  Additional footprint filters Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside no	Yes Yes Yes Yes  Yes  Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option  Yes, as an option  Yes, as an option  - Keypad - Solutions module - CT comms cable
Overload Overvoltage Undervoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters Others  Specific Product Product mounted inside enclosures Water cooled drive	yes yes yes Yes Yes Yes Yes  Thostory resistor Hoisting resistor Hoisting resistor Hoisting resistors Line chokes Yes Additional footprint filters Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside	Yes Yes Yes Yes  Yes  Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option  Yes, as an option  Yes, as an option  - Keypad - Solutions module - CT comms cable
Overload Overvoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters Others  Specific Product Product mounted inside enclosures Water cooled drive Others	yes yes yes Yes Yes Yes Yes  Additional footprint filters Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside no	Yes Yes Yes Yes  Yes  Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option  Yes, as an option  Yes, as an option  - Keypad - Solutions module - CT comms cable
Overload Overvoltage Undervoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters  Others  Specific Product Product mounted inside enclosures Water cooled drive Others List of marking Part number 1st part	yes yes yes Yes Yes Yes Yes Yes  Additional footprint filters  Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside  no  CE, UL, CSA, DNV	Yes Yes Yes Yes Yes
Overload Overvoltage Undervoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters  Others  Specific Product Product mounted inside enclosures Water cooled drive Others List of marking Part number	yes yes yes Yes Yes Yes Yes  Ares  Protected braking resistor Hoisting resistors Line chokes Yes  Additional footprint filters  Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside no  CE, UL, CSA, DNV  ATV71: Model Type	Yes Yes Yes Yes Yes  Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option Yes, as an option Yes, as an option - Keypad - Solutions module - CT comms cable - CT comms cable - CE, C Tick, UL, cUL SP 1 2 04
Overload Overvoltage Undervoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters  Others  Specific Product Product mounted inside enclosures Water cooled drive Others List of marking Part number 1st part 2nd part	yes yes yes Yes Yes Yes Yes  Additional footprint filters Motor chokes full performances filters sinus filters filters for EMC compiliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside no  CE, UL, CSA, DNV  ATV71: Model Type H: heatsink	Yes Yes Yes Yes Yes Yes  Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option Yes, as an option
Overload Overvoltage Undervoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters  Others  Specific Product Product mounted inside enclosures Water cooled drive Others List of marking Part number 1st part	yes yes yes Yes Yes Yes Yes  Ares  Protected braking resistor Hoisting resistors Line chokes Yes  Additional footprint filters  Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside no  CE, UL, CSA, DNV  ATV71: Model Type	Yes Yes Yes Yes Yes
Overload Overvoltage Undervoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Locked motor protection Stall prevention Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters  Others  Specific Product Product mounted inside enclosures Water cooled drive Others List of marking Part number 1st part 2nd part	yes yes yes Yes Yes Yes Yes Yes  Additional footprint filters Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside no  CE, UL, CSA, DNV  ATV71 : Model Type H : heatsink Power : 075 = 0,75kW U75 = 7,5kW	Yes Yes Yes Yes Yes Yes  Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option Yes, as an option
Overload Overvoltage Undervoltage Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters Others  Specific Product Product mounted inside enclosures Water cooled drive Others List of marking Part number 1st part 2nd part	yes  Additional footprint filters  Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside  no  CE, UL, CSA, DNV  ATV71: Model Type H: heatsink Power: 075 = 0,75kW U75 = 7,5kW U75 = 7,5kW D75 = 75kW	Yes Yes Yes Yes Yes
Overload Overvoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Stall prevention Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters Others  Specific Product Product mounted inside enclosures Water cooled drive Others List of marking Part number 1st part 2nd part 4th part	yes yes yes yes Yes Yes Yes Yes Yes  Ares Additional footprint filters Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside no  CE, UL, CSA, DNV  ATV71 : Model Type H : heatsink Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15 : power	Yes Yes Yes Yes Yes  Yes  Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option  Yes, as an option
Overload Overvoltage Undervoltage Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters Others  Specific Product Product mounted inside enclosures Water cooled drive Others List of marking Part number 1st part 2nd part	yes yes yes yes Yes Yes Yes Yes Yes  Ares Additional footprint filters Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside no  CE, UL, CSA, DNV  ATV71: Model Type H: heatsink Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power Voltage M3: 208 / 240 V (3 input phase)	Yes Yes Yes Yes Yes
Overload Overvoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Stall prevention Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters Others  Specific Product Product mounted inside enclosures Water cooled drive Others List of marking Part number 1st part 2nd part 4th part 5th part	yes  Ares Additional footprint filters Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside  no  CE, UL, CSA, DNV  ATV71 : Model Type H : heatsink Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15 : power Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V	Yes Yes Yes Yes Yes  Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option  Yes, as an option  Yes, as an option
Overload Overvoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Stall prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters Others  Specific Product Product mounted inside enclosures Water cooled drive Others List of marking Part number 1st part 2nd part 4th part	yes yes yes Yes Yes Yes Yes Yes  Additional footprint filters Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside no  CE, UL, CSA, DNV  ATV71: Model Type H: heatsink Power: 075 = 075kW U75 = 7,5kW D75 = 7,5kW D75 = 7,5kW D75 = 7,5kW D75 = 7,5kW T5: power Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V X: without filter	Yes Yes Yes Yes Yes
Overload Overvoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Stall prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters Others  Specific Product Product mounted inside enclosures Water cooled drive Others List of marking Part number 1st part 2nd part 4th part 5th part	yes  Ares Additional footprint filters Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside  no  CE, UL, CSA, DNV  ATV71 : Model Type H : heatsink Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15 : power Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V	Yes Yes Yes Yes Yes  Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option  Yes, as an option
Overload Overvoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Stall prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters Others  Specific Product Product mounted inside enclosures Water cooled drive Others List of marking Part number 1st part 2nd part 4th part 5th part	yes  Are Additional footprint filters Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside no  CE, UL, CSA, DNV  ATV71 : Model Type H : heatsink Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15 : power Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V X : without filter Z : without operator display	Yes Yes Yes Yes Yes  Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option  Yes, as an option
Overload Overvoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Undervoltage Drive thermal protection Stall prevention Others  Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters Others  Specific Product Product mounted inside enclosures Water cooled drive Others List of marking Part number 1st part 2nd part 3rd part 4th part 5th part 6th part 7th part 8th part	yes  Are Additional footprint filters Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside no  CE, UL, CSA, DNV  ATV71 : Model Type H : heatsink Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15 : power Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V X : without filter Z : without operator display	Yes Yes Yes Yes Yes  Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option Yes, as an option Yes, as an option  - Keypad - Solutions module - CT comms cable  - CE, C Tick, UL, cUL SP 1 2 04 SP: Unidrive SP model 1: Size (1, 2, 3) 2: voltage  04: indicates sub-rating within frame size
Overload Overvoltage Undervoltage Optive thermal protection Stall prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Regenerative Units EMC filters Output filters Others  Specific Product Product mounted inside enclosures Water cooled drive Others List of marking Part number 1st part 2nd part 3rd part 4th part 5th part 6th part 6th part	yes  Are Additional footprint filters Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad remote mounting kit  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside no  CE, UL, CSA, DNV  ATV71 : Model Type H : heatsink Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15 : power Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V X : without filter Z : without operator display	Yes Yes Yes Yes Yes  Internal braking resistor as an option (size 1 and 2 only), mounted on the heatsink Yes, as an option Yes, as an option

Communication Messages		
Message 1		The benchmark
Message 2		The solution platform
Message 3		One AC drive - open loop, closed loop, servo or regen
Message 4		Simplicity
Message 5		Flexibility
Message 6		Connectivity
Message 7		Soft logic
Type of communication		The communication is based on the performances of the product
Environment, recyclability		EMS is certified to the internal standard ISO 14001 There's a website dedicated to the EMS and environment prevention www.greendrives.com
Safety Compliance		
	EN1800-5-1	
	Power removal EN1800-5-2 / EN 954-1 category 3	
Software Opening		
Software Opening		
Logic Operation	no (could be carried out with the controller inside card)	
Controller (PLC) Inside	Yes	Yes option card
Software Card		
Product Services		
Flashable	Yes	Yes, as an option
PC Software	PowerSuite sotware workshop	Yes, the latest version is released with the product
Scope	Yes	
Application Functions		
Number of functions	#150	
Number of functions Number of parameters	#150	
The state of parameters		21 menus with a lot of parameters for each menu - Basic parameters (menu 0): 50 parameters - Speed reference (menu 1): 51 parameters - Ramps (menu 2): 38 parameters
	#800	- Speed sensing threshold (menu 3): depending on application 50 for closed loop or servo  - Current control (menu 4): 26 parameters  - Motor control (menu 5): 35 parameters  - Sequencer and clock (menu 6): 45 parameters  - Sequencer and clock (menu 6): 45 parameters  - Analog I/O (menu 7): 35 parameters  - Digital I/O (menu 8): 39 parameters  - Programmable logic and motorised pot (menu 9): 33 parameters  - Drive status and trip information (menu 10): 51  - Programmable threshold, variable selector and brake control function (menu 12): 50 parameters  - Position control (menu 13): 23 parameters  - User PID controller (menu 14): 22 parameters  - Slot solution module menu (menu 15, 16, 17): depending on application  - User application menu (menu 18, 19,20): 50 parameters
		- Second motor map (menu 21) : 30 parameters
Main functions	- PID regulator - current and torque limitation - S ramp - short ramp - 16 preset speeds + jog - 3 wire control - brake sequence - protection by passwords	- Inertia compensation torque
List of advanced functions	- Brake sequence adapted to hoisting, travelling, orientation and lift weight measurement - high speed hoisting - brake feedback - load sharing -Limit switches management - non linear refence - multi-motor - multi parameters - Power removal - alarm group - limit switches positioning with low speed time optimization - summing, differentiating, multiplying reference - fast catch on fly - fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters	- Multimotor function (Open loop) - Servo - Regen - Catch a spinning motor - Force cooling fan to run at full speed
Price Positioning		
User's Manual		
Simplified	Yes	Unidrive SP User Guide
Complete	Yes	Unidrive SP Advanced User Guide
Language	6 languages and more	Unidrive SP User Guide : french, english, german, italian, spanish
	* *	Unidrive SP Advanced User Guide : only english
Paper	Yes	Yes
CD Wah Sita	Yes Tolomoconique com	Yes
Web Site Others	Telemecanique.com	WWW.controltechniques.com
Outers		All solutions module documentation is available in english only  Lot of documentation can be downloaded on the website
Applications		and the website
Applications	V	Vaa
Hoisting / crane	Yes	Yes
Horizontal handling	Yes	Yes
Conveyor	Yes	Yes
Packaging	Yes	Yes
Pumping	Yes	Yes
Textile industry	Yes	Yes
Fan	no	Yes
Lift	Yes	Yes
Compressor	no	Yes
Others	some low speed process machines, unbalanced	- Applications card for dedicated or predefined customer applications
	machine,	Applications out a for acadeated of predefined customer applications
Ī	special machine	

ATV71 vs DANFOSS VLT5000		
ITEM	ATV71	VLT5000
Picture	And the second s	
Drive sizing	V.	V
Constant Torque (CT) High torque (HT) Variable Torque (VT) Standard torque (VT)	Yes No	Yes Yes
Input	110	100
Single phase 200V range	Yes by using 3 ph drive + derating	No
Power range	0,37 to 37kW	-
Number of ratings  Voltage range with tolerance		- -
Voltage range with tolerance Mains frequency and tolerance		<del>-</del>
Three phase 200V range	Yes	Yes
Power range	·	0,75 - 37 kW (High torque)
Number of ratings		14
Voltage range with tolerance Mains frequency and tolerance		200 - 240 V ±10% 48 - 62 Hz
Three phase 400V range	00 FIZ 120 /0 01 00 FIZ 120 /0	Yes
Power range	·	0,75 - 160 kW (High torque)
Number of ratings		25
Voltage range with tolerance Mains frequency and tolerance		380 - 500 V ±10% 48 - 62 Hz
Three phase 600V range	No	46 - 62 FIZ Yes
Power range		0,75 - 160 kW (High torque)
Number of ratings		21
Voltage range with tolerance		550 - 600 V ±10%
Mains frequency and tolerance Three phase 690V range	No	48 - 62 Hz No
Power range		- -
Number of ratings		-
Voltage range with tolerance		-
Mains frequency and tolerance	Disconnexion and reconnexion of Y capacitors	Yes, with a RFI switch (the filter must be disconnected)
Ungrounded supply EMC	ызсоннелон ани тесоппехіон огу capacitors	165, WILL A IN 1 SWILCH (LITE HILLS THUSE DE DISCONNECTED)
HF EMC compliance as standard		
Conducted emission		
Standard and leve		EN 55011
Objection of the control of the cont	EN61800-3 C3 (II>16A)	450 m lovel A /50m lovel B 00m (Charlet L)
Shielded motor cable length	10 m up to 15kW 50m up to 75kW	150 m level A (50m level B, 20m if bookstyle)
Unshielded motor cable length		300 m
Switching frequency	4kHz	3kHz
Power range integration		
Shielding connexion	On EMC plate	
Radiated emission	5,	ENERGY4 1
Standard and leve		EN55011 level A
LF EMC compliance as standard	All the ratings	
	DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class	DC choke
Power range integration		All the range
Standard		
% THE		
Immunity		
Standard 1 + leve	120 01000 1210101	
Standard 2 + leve		
Standard 3 + leve		
Standard 4 + leve Standard 5 + leve		
Low voltage directive	EN 50178	EN 50178
Others	IEC 61800-5-1	
Physical environment		
Number of size (frame)	13 sizes	Several shapes Bookstyle : 2 sizes Compact : 5 sizes Other sizes for IP00 or IP54
Protection Degree	IP21 and IP41 on upper part (EN 50178 and 61800- 5-1) IP31 with gland box, Nema type 1 with conduit box	IP20 as standard
		IDOO
IP + power range		IP00
IP + power range		IP00 IP54

Temperature		
Temperature  Operating ambiant temperature		0 to 45°C IP20
Operating ambiant temperature	-10 to +50°C	0 to 40°C IP54 0 to 40°C IP54 -10°C with reduced performance
Storage temperature	-25 to 70°C	Storage : -25 to +65°C Transport : -25 to +70°C
Humidity	95% non condensing without drop	Max relative humidity : 93% (IEC 68-2-3) for storage/transport 95% non condensing (IEC 721-3-3, class 3K3) for operation
Operational altitudes	1000m without derating. Possibile up to 3000m	1000 m, above 1000 m derating is necessary,
Vibrations		The VLT 5000 Series is tested to the following standards:  • IEC 68-2-6; Vibration (sinusoidal)  • IEC 68-2-34; Random vibration broad-band – general requirements  • IEC 68-2-35; Random vibration broad-band – high reproducibility  • IEC 68-2-36; Random vibration broad-band – medium reproducibility  VLT 5000 Series drives comply with requirements that correspond to conditions when the unit is mounted on the walls and floors of production premises, as well as in panels bolted to walls or floors.
Other		- M:
Automatic stop of fan	Yes	No
Mounting Dailer Share	Compact	Pooketyle Compact
Drive Shape Side by side mounting	Yes without derating	Bookstyle, Compact  Yes, for all sizes and all shape, since the units do not require any cooling air on the sides
Heat evacuation outside enclosure	Yes, the power section is IP54	cooming an off the sides
Operating position	Vertical	Vertically
Others	-	
Power connexion		
DC Bus connexion	Yes	Yes
DC inductance connexion	Line inductance or DC inductance	No
Removable terminals Bottom or Top/Bottom	No Bottom	Yes with keyed terminal to feet one way  Bottom
·	DULUIII	DULUIII
Motor control  AC motors motor control		
AC motors motor control  U/F	Yes	
SVC (open loop)	Yes	Yes
FVC (closed loop)	Yes	Yes
Type of encoder	RS422, Open collector or Push pull	
Others	ENA	N:
Synchronous or brushless motors	V-	No No
Open loop Closed loop	Yes	No No
· ·	No	IVU
Performances Speed range		
Motor quadrant	1 : 100 open loop 1 : 1000 closed loop	1:100 of synchro speed for open loop 1:1000 of synchro speed for closed loop
Generator quadrant	1 : 1000 closed loop 1 : 1000 closed loop 1 : 1000 closed loop	1. 1000 of Synthing speed for Glosed loop
Overtorque	From 170 to 2,2 Tn during 60s from 200 to 240% during 2s	170% during 60s
Rated current philosophy	1,1 In motor (380V)	
0,75kW / 400V	In motor = 2 A In drive = 2,3 A	In motor = 2 A In drive = 2,2 A
4 kW / 400V	In drive = 2,3 A In motor = 8,5 A	In drive = 2,2 A In motor = 8,5 A
	In drive = 10,5 A	In drive = 10 A
22 kW / 400V	In motor = 40,5 A In drive = 48 A	In motor = 40,5 A In drive = 44 A
Overcurrent capability	In drive = 48 A 180% I motor during 60s	150% for 1mn
, ,	200% I motor during 2s	180% for 0.5 s
Type of control and accuracy		
Speed control	Yes	Yes open loop <1500 rpm max error ±7,5 rpm > 1500 rpm max error of 0,5% of actual speed closed loop <1500 rpm max error ±1,5 rpm > 1500 rpm max error of 0,1% of actual speed
Torque control	Yes	Yes open loop 0 - 150 rpm max error ±20% of rated torque 150 - 1500 rpm max error ±10% of rated torque >1500 rpm max error ±20% of rated torque speed feedback max error ±5% of rated torque
Torque rise time		
Sampling time of the loop		
Autotuning On line / Off line	0# 8== == 10 . 8	Yes
On line / Off line Ways of execution	Off line and On line	Off line
Values measured	By keypad, Logic input, at power up	Rs (Xs should be calculated externally)
Prefluxing	Yes	( to should be suitated externally)
Braking		
Braking performance w/o resistor	Yes Without resistor 100% Cn : 0,37 - 0,75 kW 30% Cn : 1,5 - 15 kW With resistor (as an option)	Yes
Output frequency range	Until 170% Cn  0,1 to 1000Hz up to 37kHz	0 - 132 Hz or 0 - 1000 Hz
	up to 500Hz above	
Output frequency resolution	0,1Hz	±0,003 Hz for 0 - 1000 Hz
Switching frequency	Cottoble feet 0.5 to 1011	3 - 5 kHz
range	Settable from 0,5 to 16kHz	3 - 3 KMZ

factory setting	4kHz up to 30kW	depends on unit output
lactory setting	2,5kHz above	
Integrated output filter		optional LC filter module
dv/dt	11111111111	Yes
Motor voltage surge limitation		
sinus Others	no	
Frequency setting resolution	no	
Serial		
Analog		
Digital		
Modularity		
Number of option board at the same time	3	1
Inputs / Outputs		
On basic product		
Removable terminals	Yes	Yes
Type of terminal & pitch	Screw terminlas, pitch 5,08	cage pitch 5,08
Sampling time	1ms minimum , and 2,5ms max	DI : 3 ms, AI : 3 ms
Analog input	2 Differential voltage input ±/ 10V	3 (10bits +sign)
2	Differential voltage input +/-10V current or voltage input	2 x 0 - 10 V 1 x 0 (4) - 20 mA
3		
Logic inputs	6 assignable logic inputs	8 programmable
Logic outputs (open collector)	no	2
Relays	2 assignable relays (NO/NC, NC)	2 relay output
Analog outputs	1	2 (8 bits)
1 2	Assignable output (voltage or current)	0 (4) - 20 mA
Dedicated I/O	2	<del>-</del>
1	Power removal input (compliance with 61800-5-2	-
2	PTC input on LI	-
3	·	-
I / O Option 1	Lgic I/O card	Relay card
Removable terminals	Yes	Yes
Type of terminal & pitch	Screw terminlas, pitch 5,08	Screw
Sampling time	5ms	-
Analog input	no	-
1		-
2		-
3		<del>-</del>
Logic inputs	4 assignable logic inputs	-
Logic outputs (open collector)	2 assignable open collector outputs	-
Relays	1 assignable relay (NO/NC)	The 4 Relay Option adds four Form C relays
Analog outputs	no	
1		
2		
Dedicated I/O		
Dedicated I/O	-10V supply	
2	PTC input	
3	·	
I / O Option 2	Extended I/O card	
Removable terminals	Yes	
Type of terminal & pitch	Screw terminlas, pitch 3,81 except relay that 5,08	
Sampling time	5ms	
Analog input	2	
1	1 differential current input	
2	1 voltage / current input	
3		
Logic inputs	4 assignable logic inputs	
Logic outputs (open collector)	2 assignable open collector outputs	
Relays	1 assignable relay (NO/NC)	
Analog outputs	2	
1	2 assignable voltage/current Analog outputs	
2		
Dedicated I/O		
4	DTC input	
2	PTC input	
3		
I / O Option 3		SYNCPOS motion controller
	Controller inside card	synchronizing controller
Domessable terminals	V	Positioning controller
Removable terminals	Yes	
Type of terminal & pitch Sampling time		
Analog input		
2		
2		
Logic inputs		
Logic inputs Logic outputs (open collector)		
Relays		
Analog outputs		
1		
1 2		

3		
Dedicated I/O		
1		
2		
3		
011		
Others		
Communication		
Separated control supply	Yes 24V dc as standard	Yes
On the basic product	Yes	
Protocol available 1	1.7	RS485
	Modbus fully configurable with I/O scanner	K0400
Protocol available 2	Canopen fully configurable	-
Protocol available 3		-
Communication option card		
Protocol available 1	Fipio PL7	Profibus
Protocol available 2	FIPIO with messaging	DeviceNet
Protocol available 3		LonWorks
Protocol available 4		Modbus Plus
Protocol available 5	INTERBUS-S	Modbus RTU
Protocol available 6	Profibus DP	-
Protocol available 7	Ethernet	-
Protocol available 8		-
Protocol available 9	1 11 11	
Protocol available 9		
		•
Protocol available 11		-
Protocol available 12		-
Gateway		-
Protocol available 1	AS-i	-
Protocol available 2	7.0.	-
Protocol available 3		-
Protocol available 4		-
Protocol available 5		-
Protocol available 6		-
Protocol available 7		-
Protocol available 8		
		•
Protocol available 9		-
Protocol available 10		-
Protocol available 11		-
Protocol available 12		-
Protocol available 13		-
Operator penal		
Operator panel		Observational
Dialogue 1	late costs d	Standard
Integrated / removable	Integrated	Removable
Type of screen	4 Led digits	LCD display : 4 lines
Type of screen Language	4 Led digits code	LCD display : 4 lines English, german, french, danish, spanish, italian
Type of screen Language Number of keys	4 Led digits code 4	LCD display : 4 lines English, german, french, danish, spanish, italian 14
Type of screen Language Number of keys Number of Leds	4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus	LCD display : 4 lines English, german, french, danish, spanish, italian 14 3 : alarm, warning, on
Type of screen Language Number of keys Number of Leds Keypad command	4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no	LCD display : 4 lines English, german, french, danish, spanish, italian 14 3 : alarm, warning, on stop / reset, jog, forward / reverse, start
Type of screen Language Number of keys Number of Leds	4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no	LCD display : 4 lines English, german, french, danish, spanish, italian  14 3 : alarm, warning, on stop / reset, jog, forward / reverse, start up, down, right, left, cancel, ok, menu, quick menu, display status,
Type of screen Language Number of keys Number of Leds Keypad command Function keys	4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no	LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,
Type of screen Language Number of keys Number of Leds Keypad command Function keys Others	4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no	LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability
Type of screen Language Number of keys Number of Leds Keypad command Function keys	4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no	LCD display : 4 lines English, german, french, danish, spanish, italian  14 3 : alarm, warning, on stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability LCP 2 The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also
Type of screen Language Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2	4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no	LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data, Copying parameter capability LCP 2 The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.
Type of screen Language Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2	4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable	LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability LCP 2 The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also
Type of screen Language Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2	4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable	LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data, Copying parameter capability LCP 2 The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.
Type of screen Language Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2	4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable).	LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data, Copying parameter capability LCP 2 The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable
Type of screen Language Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display	4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display	LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines
Type of screen Language Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language  Number of keys	4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key	LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on stop / reset, jog, forward / reverse, start up, down, right, left, cancel, ok, menu, quick menu, display status, change data, Copying parameter capability LCP 2 The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable LCD display: 4 lines English, german, french, danish, spanish, italian
Type of screen Language Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language  Number of keys Number of Leds	4 Led digits  code 4 5 Leds for the diagnostic of the integrated fieldbus no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no	LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data, Copying parameter capability LCP 2 The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language  Number of keys Number of Leds Keypad command	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes	LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start
Type of screen Language Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language  Number of keys Number of Leds	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes	LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status,
Type of screen Language Number of keys Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4	LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,
Type of screen Language Number of keys Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available	LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status,
Type of screen Language Number of keys Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations	LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability
Type of screen Language Number of keys Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others  Others	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection	LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,
Type of screen Language Number of keys Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others  Others	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection	LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others  Others  Integrated / removable Type of display Language  Number of Leds Keypad command Function keys Others  Dialogue 3  Integrated / removable Type of display	A Led digits code 4 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection	LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of keys Number of Leds Keypad command Function keys Others  Others  Integrated / removable Type of display Language Integrated / removable Type of display Language  Dialogue 3  Integrated / removable Type of display Language	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4  navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection	LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on stop / reset, jog, forward / reverse, start up, down, right, left, cancel, ok, menu, quick menu, display status, change data, Copying parameter capability LCP 2 The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on stop / reset, jog, forward / reverse, start up, down, right, left, cancel, ok, menu, quick menu, display status, change data, Copying parameter capability
Type of screen Language Number of keys Number of keys Number of keys Reypad command Function keys Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others  Others  Number of Leds Others  Number of Leds Others  Others  Others  Others  Dialogue 3  Integrated / removable Type of display Language Number of keys	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection	LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability
Type of screen Language Number of keys Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others  Others  Dialogue 3  Integrated / removable Type of display Language Number of Leds Keypad command Function keys Others	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection	LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on stop / reset, jog, forward / reverse, start up, down, right, left, cancel, ok, menu, quick menu, display status, change data, Copying parameter capability LCP 2 The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on stop / reset, jog, forward / reverse, start up, down, right, left, cancel, ok, menu, quick menu, display status, change data, Copying parameter capability
Type of screen Language Number of keys Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of Leds Keypad command Function keys Others  Others  Dialogue 3  Integrated / removable Type of display Language  Others  Others  Dialogue 3  Integrated / removable Type of display Language Number of Leds Keypad command Function keys  Dialogue 3	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection	LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Number of keys Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection	LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on stop / reset, jog, forward / reverse, start up, down, right, left, cancel, ok, menu, quick menu, display status, change data, Copying parameter capability LCP 2 The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on stop / reset, jog, forward / reverse, start up, down, right, left, cancel, ok, menu, quick menu, display status, change data, Copying parameter capability
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Aumber of keys Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection	LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Number of keys Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection	LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on stop / reset, jog, forward / reverse, start up, down, right, left, cancel, ok, menu, quick menu, display status, change data, Copying parameter capability LCP 2 The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on stop / reset, jog, forward / reverse, start up, down, right, left, cancel, ok, menu, quick menu, display status, change data, Copying parameter capability
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys  Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Aumber of keys Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection	LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on stop / reset, jog, forward / reverse, start up, down, right, left, cancel, ok, menu, quick menu, display status, change data, Copying parameter capability LCP 2 The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable LCD display: 4 lines English, german, french, danish, spanish, italian  14 3: alarm, warning, on stop / reset, jog, forward / reverse, start up, down, right, left, cancel, ok, menu, quick menu, display status, change data, Copying parameter capability
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys  Others  Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others	4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection  Yes, I²t motor thermal protection depending on the motor frequency.	LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  -
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys  Others  Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection  Yes, I²t motor thermal protection depending on the	LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  -
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys  Others  Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others	A Led digits code 4 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection  Yes, l²t motor thermal protection depending on the motor frequency. Memorization when power off	LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  -
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Reypad command Function keys Others  Number of keys Keypad command Function keys Others  Number of keys Number of Leds Keypad command Function keys Others  Protections Thermal protection	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection  Yes, l²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards	LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others  Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Others  Protections Thermal protection  Electronic / PTC The motor thermal state is saved when power is off	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection  Yes, l²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards	LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  -  -  -  -  -  -  -  -  -  -  -  -  -
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others  Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Aumber of keys Function keys  Others  Type of display Language Number of keys Number of keys Number of keys Number of keys Number of Leds Keypad command Function keys Others  Protections Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection  Yes, l²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards	LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on  stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  -  -  -  -  -  -  -  -  -  -  -  -  -
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of keys Number of Leds Keypad command Function keys Others  Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Number of keys Others  Protections Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection  Yes, l²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards  yes yes	LCD display: 4 lines English, german, french, danish, spanish, italian  14  3: alarm, warning, on stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others  Others  Dialogue 3  Integrated / removable Type of display Language Number of Leds Keypad command Function keys Others  Dialogue 3  Integrated / removable Type of display Language Number of Leds Keypad command Function keys Others  Protections Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection  Yes, l²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards  yes yes yes	LCD display: 4 lines English, german, french, danish, spanish, italian  14  3: alarm, warning, on stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of keys Number of Leds Keypad command Function keys  Others  Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Number of keys Number of keys Others  Type of display Language Number of keys Number of Leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4  navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection  Yes, l²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards  yes yes yes yes	LCD display: 4 lines English, german, french, danish, spanish, italian  14  3: alarm, warning, on stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of Leds Keypad command Function keys Others  Others  Dialogue 3  Integrated / removable Type of display Language Number of Leds Keypad command Function keys Others  Dialogue 3  Integrated / removable Type of display Language Number of Leds Keypad command Function keys Others  Protections Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection  Yes, l²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards  yes yes yes	LCD display: 4 lines English, german, french, danish, spanish, italian  14  3: alarm, warning, on stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of keys Number of Leds Keypad command Function keys  Others  Others  Dialogue 3  Integrated / removable Type of display Language Number of keys Number of keys Number of keys Others  Type of display Language Number of keys Number of Leds Keypad command Function keys Others  Protections  Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss	A Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4 navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection  Yes, l²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards  yes yes yes yes	LCD display: 4 lines English, german, french, danish, spanish, italian  14  3: alarm, warning, on stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability  LCP 2  The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable  LCD display: 4 lines  English, german, french, danish, spanish, italian  14  3: alarm, warning, on stop / reset, jog, forward / reverse, start  up, down, right, left, cancel, ok, menu, quick menu, display status, change data,  Copying parameter capability
Type of screen Language Number of keys Number of keys Reypad command Function keys  Others  Dialogue 2  Integrated / removable Type of display Language Number of keys Number of keys Number of Leds Keypad command Function keys Others  Others  Dialogue 3  Integrated / removable Type of display Language Number of Leds Keypad command Function keys Others  Type of display Language Number of keys Number of keys Number of keys Others  Protections Thermal protection  Electronic / PTC The motor thermal state is saved when power is off Short circuit between phase Ground fault Output phase loss Input phase loss Input phase loss Input phase loss Input phase loss Braking resistor protection	4 Led digits code 4 5 Leds for the diagnostic of the integrated fieldbus no no  Removable Graphic display 6 languages (languages are flashable). Suitable for asian characters use of a shuttle + 1 key no Yes 4  navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection  Yes, l²t motor thermal protection depending on the motor frequency. Memorization when power off Yes, dedicated input on option cards  yes yes yes yes yes No	LCD display: 4 lines English, german, french, danish, spanish, italian  14  3: alarm, warning, on stop / reset, jog, forward / reverse, start up, down, right, left, cancel, ok, menu, quick menu, display status, change data, Copying parameter capability LCP 2 The optional LCP-2 Keypad/Display provides all the features and performance benefits of the VLT 5000 Series LCP, and is also interchangeable with the VLT 2800 Series drives.  Removable LCD display: 4 lines English, german, french, danish, spanish, italian  14  3: alarm, warning, on stop / reset, jog, forward / reverse, start up, down, right, left, cancel, ok, menu, quick menu, display status, change data, Copying parameter capability

Indicatence (choises)  Lever transes  Additionate to content to the content to th	hr. a		V.,
Excised more protection  Yes  Different  Positions and Accessor(less  Accessor(less)  Control of less kit  Control of less ki		· · · · · · · · · · · · · · · · · · ·	
Ball prevention Options and Accessories Protection services Protec		yes	Yes
Contains and Accessories  Broiling resistors  Mindistances (clobws)  Live 2006s  Magazines to Units  Magazines (clobws)  Respectate Units  Respectate Unit	Locked motor protection	Yes	
Contains and Accessories  Broiling resistors  Mindistances (clobws)  Live 2006s  Magazines to Units  Magazines (clobws)  Respectate Units  Respectate Unit	Stall prevention	Yes	
Options and Accessoring There is a protected behing relation The protected policy of the protected pol		103	
Examing resistors  Miscatineses (choises)  Descriptions of the complete of the			-
Indicatence (choises)  Lever transes  Additionate to content to the content to th	Options and Accessoiries		
Moderates (bothes)  1. For Proteins  1.	Braking resistors	protected braking resistor	Yes
Machanistic (Probability   Vest	' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '		
Regenerate Unite   Yea	Inductances (chokes)		Yes
END Citiers  Output filters  Mayor crokes  Miles for END completes with unabrided coables  Control in list	` '		100
Motor ordinals   Motor ordinals   Yes			
The for EVC compilers and burnteded cables  Control to EVC compilers and burnteded cables  Postular many and the service and the s	EMC filters	Additional footprint filters	Yes
The for EVC compilers and burnteded cables  Control to EVC compilers and burnteded cables  Postular many and the service and the s	Output filters	Motor chokes	Yes
Biters for EDC completions with unabridided codes   Postcoming controller			
Material Content on an improved cables   Paulianing curitorial Content on a Content on an improved cand and Specific Product   Paulianing curitorial Content on an improved record monatory and Specific Product   Paulianing curitorial Content on an improved record monatory and Specific Product   Paulianing curitorial Content on an improved record monatory and specific Product   Paulianing curitorial Content on an improved record on an improved record on a paulianing curitorial Content on a paulianing curitoria Content on a paulianing c			
Control to International Control International Contr			
Campain accessories	Others	·	- Positioning controller
Sepecific Product	Callors		
Specific Product			- SyncPos control card
Specific Product   Product mounted inside enclosures		keypad remote mounting kit	
### Production is IPPS to be easily manufact in enclosure with head velocation or the outside for the countries of the	0 10 0		1.0.0, 1.0.0
### APUT 1: Model ### APUT 1:	Specific Product		
With read evaluation on the cultistics   New York	Product mounted inside enclosures	the power section is IP54 to be easily mounted in	
Mart		enclosure	
APU program, suspitable prockaged unit		with heat evacuation on the outside	
APU program, suspitable prockaged unit	Water cooled drive	no	
List of marking		IIV	ADI I program, adaptable postered well
VLT 5008 - P - T2 - B20 - ST - R0 - DL - F00 - A00 - Cl			
VLT 5008 - P - T2 - B20 - ST - R0 - DL - F00 - A00 - Cl	List of marking	CE, UL, CSA, DNV	UL, cUL and CE listed
No.			•
Soot 1   HP   Soot 3   HP   Soot 4   HP   Soot 4   HP   Soot 4   HP   Soot 4   HP   Soot 5   HP	Part number		VL1 5000 - F - 12 - B20 - 51 - KU - DL - F00 - A00 - C0
Soot 1   HP   Soot 3   HP   Soot 4   HP   Soot 4   HP   Soot 4   HP   Soot 4   HP   Soot 5   HP			
Soot 1   HP   Soot 3   HP   Soot 4   HP   Soot 4   HP   Soot 4   HP   Soot 4   HP   Soot 5   HP	1st part		VLT 5006 P : Model
S002 14 PP   S003 4 PP   S003 3 PP   S00	1		
September   Sept			
Solid State			
South   Sout			
### State			
Solid 7.5 HP   Solid 10 HP   Solid 20 HP			
Solid Section   Solid Sectio			
## ATV71 : Model ## S022 20 HP S120 150 HP S120 HP S120 150 HP S120 HP S12			
Sociation   Soci			
### ATV71 : Model  AT			
### ATV71: Model  ### S032 30 HP \$032 20 HP \$032 25 HP \$1510 100 HP \$152 125 HP \$1510 100 HP \$520 250 HP \$5300 300 HP \$5300 300 HP \$5300 300 HP \$5300 300 HP \$540 430 HP \$540 430 HP \$550 600 VAC (VIT 5001-5052) \$75 3 × 380 - 5000 VAC (VIT 5001-550) \$76 part  ###################################			
ATV71 : Model			5027 25 HP
ATV71 : Model			5032 30 HP
ATV71: Model    SOB2 80 HP   SOR7 37 5 HP   S100 100 HP   S100 300 HP			5042 40 HP
2nd part			5052 50 HP
Single   S		ATV71 : Model	5062 60 HP
Single   S			
Strict   S			
Stop			
S200 200 HP   S200 200 HP   S300 300 HP   S300 500 HP   S300 FS 50			
S250 250 HP   S300 300 HP   S300 350 HP			
2nd part			
T2 : AC Line Supply			5450 450 HP
Type			5500 500 HP
Type			
Type	2nd part		T2 : AC Line Supply
## Peatsink   T5 3 x 380 - 500 VAC (VLT 5001-5500)   T6 3 x 580 - 500 VAC (VLT 5001-5500)   T6 3 x 580 - 500 VAC (VLT 5001-5500)   T6 3 x 580 - 500 VAC (VLT 5001-5500)   T6 3 x 580 - 500 VAC (VLT 5001-5500)   T6 3 x 580 - 500 VAC (VLT 5001-5500)   T6 3 x 580 - 500 VAC (VLT 5001-5500)   T6 3 x 580 - 500 VAC (VLT 5001-5500)   T6 3 x 580 - 500 VAC (VLT 5001-5500)   T6 5001 - 5001   T6 5001 - 5002   T6 5002   T6 5001 - 5002   T6 50		Type	
T6 3 x 550 - 600 VAC (VLT 5001-5250)			
B20   Enclosure   B20   B20		TT. Heatsink	
Power: 075 = 0,75kW U75 = 7,5kW U75 = 7,			,
Power: 075 = 0,75kW	gra part		
Power   075 = 0,75kW   U75 = 7,5kW   U75 =	1		
15		Dower:	
U75 = 7.5kW   D75 = 75kW   D75 = 5001-5020;			
## D75 = 75kW    D75 = 75kW   Compact NEMA 1 (all units)   C54 Compact NEMA 12 (lp 54)(T2: 5001-5002; T5: 5001-5500)			
CN1 Compact NEMA 1 (all units) C54 Compact NEMA 1 (pr 54)(T2: 5001-5502) T5: 5001-5500) 4th part  15: power  ST: Hardware ST Standard SB Standard with brake (T2 and T5 only) EB Extended with trake EX Extended DX Extended with fuse/disconnect  Sth part  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V R0 Without Filter R1 With integral 1 A filter R3 With integral 1 And 1B filter R3 With integral 1 And 1B filter R3 With integral 1 And 1B filter DD Without LCP (not an option with IP 54) DL With LCP Th part  The part  F10: Fieldbus Options Card F00 No options F10 Porfolius DPI/MS F20 Modbus Plus F30 DeviceNet F40 LonWorks Firee Topology Process F41 LonWorks 78 KBPS F42 LonWorks 1.25 MBPS  8th part  A00: Application Option Card A00 No option A10 With synchronizing/position option A11 With synchronizing/position option A12 With synchronizing option A12 With sposition option A14 With synchronizing option A12 With position option A10 I relay card option			C20 Compact Protected Chassis (IP 20)(T2: 5001-5027; T5 & T6:
## CS4 Compact NEMA 12 (IP 54)(T2: 5001-5052; T5: 5001-5050) ## Part  ## ST: Hardware ST Standard SB Standard with brake(T2 and T5 only) EB Extended with brake EX Extended DX Extended with fuse/disconnect  ## R0: RFI Filter (T2 and T5 only) RO Without Filter R1 With integral 14 filter R3 with integral 15 po Without CP (not an option with IP 54) DU With LCP  ## Profits OPTIONS F10 Profits OPTIONS F11 DeviceNet F40 LonWorks Free Topology Process F41 LonWorks F78 RBPS F42 LonWorks 1.25 MBPS  ## A00: Application Option Card A00 No option A10 With synchronizing option A11 With synchronizing option A12 With position option A10 Tedy acrd option		D/3 = /3KVV	
## Add			
ST Standard SB Standard with brake (T2 and T5 only) EB Extended with brake EX Extended DX Extended with fuse/disconnect  Toltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  Sth part  X: without filter Pi With integral 1A filter Pi With integral 1A filter Pi Without Filter Pi Without Filter Pi With integral 1A filter Pi Without Filter Pi Without CP (not an option with IP 54) DL With LCP  Th part  Fine Fieldbus Options Card Fine No options Fine Proficious DP/FMS Fine Profici	1		C54 Compact NEMA 12 (IP 54)(T2: 5001-5052; T5: 5001-5500)
ST Standard SB Standard with brake (T2 and T5 only) EB Extended with brake EX Extended DX Extended with fuse/disconnect  Toltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  Sth part  X: without filter Pi With integral 1A filter Pi With integral 1A filter Pi Without Filter Pi Without Filter Pi With integral 1A filter Pi Without Filter Pi Without CP (not an option with IP 54) DL With LCP  Th part  Fine Fieldbus Options Card Fine No options Fine Proficious DP/FMS Fine Profici	4th part		ST - Hardwarn
SB Standard with brake (TZ and T5 only) EB Extended DX Extended DX Extended DX Extended with fuse/disconnect  TO oltage M3 : 208 / 240 V (3 input phase) M4 : 380 / 500 V  TX : without filter X : without filter Z : without operator display XZ : without filter and without operator display Th part  Th part  SB Standard with brake (TZ and T5 only) EB Extended DX Extended DX Extended with fuse/disconnect  R0 : RFI Filter (T2 and T5 only) R0 Without Filter R1 With integral 1A filter R1 With integral 1A and 1B filter DL : Control Unit (LCP) DO Without LCP (not an option with IP 54) DL With LCP Th part  F00 : Fieldbus Options Card F00 No options F10 Profibus DPIFMS F20 Modbus Plus F30 DeviceNet F40 LonWorks 78 KBPS F41 LonWorks 78 KBPS F42 LonWorks 1.25 MBPS  8th part  A00 : Application Option Card A00 No option A10 With synchronizing/position option A11 With synchronizing option A12 With position option A12 With position option A10 relay card option	ran part		
EB Extended with brake EX Extended DX Exte			
Sth part   Voltage		15 : power	
Sth part  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  Rth integral 1A filter Rth with integral 1A fil			
Sth part  Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V  R1 With integral 1A filter R3 With integral 1A and 1B filter R3 With integral 1A and 1B filter R1 With integral 1A and 1B filter R3 With integral 1A and 1B filter D1 : Control Unit (LCP) D0 Without LCP (not an option with IP 54) D1 With LCP  Th part  F00 : Fieldbus Options Card F00 No options F10 Profibus DP/FMS F20 Modbus Plus F30 DeviceNet F40 LonWorks 78 KBPS F41 LonWorks 78 KBPS F42 LonWorks 1.25 MBPS  Sth part  A00 : Application Option Card A00 No option A10 With synchronizing/position option A11 With synchronizing option A12 With position option A30 1 relay card option			
Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V  R1 With integral 1A filter R1 With integral 1A and 1B filter R2 With integral 1A and 1B filter R3 With integral 1A and 1B filter DL : Control Unit (LCP) DO Without LCP (not an option with IP 54) DL With LCP  The part  F00 : Fieldbus Options Card F00 No options F10 Profibus DP/FMS F20 Modous Plus F30 DeviceNet F40 LonWorks Free Topology Process F41 LonWorks 78 KBPS F42 LonWorks 1.25 MBPS  8th part  A00 : Application Option Card A00 No option A11 With synchronizing/position option A11 With synchronizing option A12 With position option A30 1 relay card option			
Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V  R1 With integral 1A filter R1 With integral 1A and 1B filter R2 With integral 1A and 1B filter R3 With integral 1A and 1B filter DL : Control Unit (LCP) DO Without LCP (not an option with IP 54) DL With LCP  The part  F00 : Fieldbus Options Card F00 No options F10 Profibus DP/FMS F20 Modous Plus F30 DeviceNet F40 LonWorks Free Topology Process F41 LonWorks 78 KBPS F42 LonWorks 1.25 MBPS  8th part  A00 : Application Option Card A00 No option A11 With synchronizing/position option A11 With synchronizing option A12 With position option A30 1 relay card option	5th part		
M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V  R1 With integral 1A filter R3 With integral 1A and 1B filter R3 With integral 1A filter R3 With integral 1A and 1B filter DL : Control Unit (LCP) DO Without LCP (not an option with IP 54) DL With LCP  Th part  F00 : Fieldbus Options Card F00 No options F10 Profibus DP/FMS F20 Modbus Plus F30 DeviceNet F40 LonWorks Free Topology Process F41 LonWorks 78 KBPS F42 LonWorks 1.25 MBPS  8th part  A00 : Application Option Card A00 No option A10 With synchronizing option A11 With synchronizing option A12 With position option A30 1 relay card option			
R1 With integral 1A filter R3 With integral 1A filter R3 With integral 1A filter R3 With integral 1A filter DL : Control Unit (LCP) DO Without LCP (not an option with IP 54) DL With LCP  Tth part  F00 : Fieldbus Options Card F00 No options F10 Profibus DP/FMS F20 Modbus Plus F30 DeviceNet F40 LonWorks Free Topology Process F41 LonWorks 78 KBPS F42 LonWorks 1.25 MBPS  8th part  A00 : Application Option Card A00 No option A10 With synchronizing/position option A11 With synchronizing option A12 With position A12 With position A30 1 relay card option A30 1 relay card option A30 1 relay card option			R0 Without Filter
R3 With integral 1A and 1B filter  X: without filter Z: without operator display XZ: without filter and without operator display  7th part  F00: Fieldbus Options Card F00 No options F10 Profibus DP/FMS F20 Modbus Plus F30 DeviceNet F40 LonWorks Free Topology Process F41 LonWorks 78 KBPS F42 LonWorks 1.25 MBPS  8th part  A00: Application Option Card A00 No option A10 With synchronizing/position option A11 With synchronizing option A12 With position option A30 I relay card option			R1 With integral 1A filter
Sth part  X : without filter Z : without operator display XZ : without filter and without operator display  The part  F00 : Fieldbus Options Card F00 No options F10 Profibus DP/FMS F20 Modbus Plus F30 DeviceNet F40 LonWorks Free Topology Process F41 LonWorks Free Topology Process F42 LonWorks 1.25 MBPS  Sth part  A00 : Application Option Card A00 No option A10 With synchronizing/position option A11 With synchronizing option A12 With position option A30 I relay card option		555 / 555 7	R3 With integral 1A and 1B filter
The part Service of the part o	6th nort		
Z: without operator display XZ: without filter and without operator display  7th part  F00: Fieldbus Options Card F00 No options F10 Profibus DP/FMS F20 Modbus Plus F30 DeviceNet F40 LonWorks Free Topology Process F41 LonWorks 78 KBPS F42 LonWorks 1.25 MBPS  8th part  A00: Application Option Card A00 No option A10 With synchronizing/position option A11 With synchronizing option A12 With position option A30 I relay card option	our part	X : without filter	
XZ : without filter and without operator display   DL With LCP			
7th part  F00 : Fieldbus Options Card F00 No options F10 Profibus DP/FMS F20 Modbus Plus F30 DeviceNet F40 LonWorks Free Topology Process F41 LonWorks 78 KBPS F42 LonWorks 1.25 MBPS  8th part  A00 : Application Option Card A00 No option A10 With synchronizing/position option A11 With synchronizing option A12 With position option A30 I relay card option			
## F00 No options ## F10 Profibus DP/FMS ## F20 Modbus Plus ## F30 DeviceNet ## F40 LonWorks Free Topology Process ## F41 LonWorks 78 KBPS ## F42 LonWorks 1.25 MBPS  ## A00 : Application Option Card ## A00 No option ## A00 No option ## A10 With synchronizing/position option ## A11 With synchronizing option ## A12 With position option ## A30 I relay card option ## A30 I relay card option			
## F00 No options ## F10 Profibus DP/FMS ## F20 Modbus Plus ## F30 DeviceNet ## F40 LonWorks Free Topology Process ## F41 LonWorks 78 KBPS ## F42 LonWorks 1.25 MBPS  ## A00 : Application Option Card ## A00 No option ## A00 No option ## A10 With synchronizing/position option ## A11 With synchronizing option ## A12 With position option ## A30 I relay card option ## A30 I relay card option	7th part		F00 : Fieldbus Options Card
F20 Modbus Plus F30 DeviceNet F30 DeviceNet F40 LonWorks Free Topology Process F41 LonWorks 78 KBPS F42 LonWorks 1.25 MBPS   8th part  A00 : Application Option Card A00 No option A10 With synchronizing/position option A11 With synchronizing option A12 With position option A30 I relay card option			F00 No options
### F30 DeviceNet F40 LonWorks Free Topology Process F41 LonWorks 78 KBPS F42 LonWorks 1.25 MBPS  #### 840 : Application Option Card A00 No option A10 With synchronizing/position option A11 With synchronizing option A12 With position option A30 I relay card option			
F40 LonWorks Free Topology Process F41 LonWorks 78 KBPS F42 LonWorks 1.25 MBPS  8th part  A00 : Application Option Card A00 No option A10 With synchronizing/position option A11 With synchronizing option A12 With position option A30 I relay card option A30 I relay card option			
F40 LonWorks Free Topology Process F41 LonWorks 78 KBPS F42 LonWorks 1.25 MBPS  8th part  A00 : Application Option Card A00 No option A10 With synchronizing/position option A11 With synchronizing option A12 With position option A30 I relay card option A30 I relay card option			F30 DeviceNet
F41 LonWorks 78 KBPS F42 LonWorks 1.25 MBPS  8th part  A00 : Application Option Card A00 No option A10 With synchronizing/position option A11 With synchronizing option A12 With position option A30 I relay card option A30 I relay card option			
8th part  A00 : Application Option Card A00 No option A10 With synchronizing/position option A11 With synchronizing option A12 With position option A30 I relay card option			
8th part  A00 : Application Option Card A00 No option A10 With synchronizing/position option A11 With synchronizing option A12 With position option A12 With position option A30 1 relay card option	1		
A00 No option A10 With synchronizing/position option A11 With synchronizing option A12 With position option A12 With position option A30 1 relay card option	1		LOTITORIO T.LO MIDI O
A00 No option A10 With synchronizing/position option A11 With synchronizing option A12 With position option A12 With position option A30 1 relay card option			
A00 No option A10 With synchronizing/position option A11 With synchronizing option A12 With position option A12 With position option A30 1 relay card option	8th part		
A10 With synchronizing/position option A11 With synchronizing option A12 With position option A12 Hith position option A30 1 relay card option	l ·		A00 No option
A11 With synchronizing option A12 With position option A30 1 relay card option			
A12 With position option A30 1 relay card option	1		
A30 1 relay card option	1		
			A30 T relay card option A31 4 relay card option
A31 4 relay card option			AST 4 Telay Card Option

Oth part		
9th part		C0 : Conformal Coating
		C0 No conformal coating
		C1 With conformal coating (see page D 10 for description)
Communication Messages		
Message 1		Optimum motion control for industrial applications
Message 2		Speed Synchronising - Stretching with the maximum accuracy
Message 3		Positioning on the fly - for smooth and flexible cutting
Message 4		Index positionning - Simpler solution with greater output
Message 5		Position synchronising - for packaging without dropouts
Message 6		Programmable controller - replacing the functions of the PLC
Message 7		A drive for every application
Type of communication		Trainte for every approacion
Environment, recyclability		
Safety Compliance		
Survey Compilation	EN4000 E 4	
	EN1800-5-1	
	Power removal EN1800-5-2 / EN 954-1 category 3	
Software Opening		
Logic Operation	no (could be carried out with the controller inside card)	
Controller (PLC) Inside	Yes	Yes
Software Card		
Product Services		
Flashable	Yes	
PC Software	PowerSuite sotware workshop	
Scope	Yes	
Application Functions		
Number of functions	#150	
Number of parameters	#800	250
Main functions	DID sulata-	
I unictions	- PID regulator	
	- current and torque limitation	
	- S ramp	
	- short ramp	
	- 16 preset speeds + jog - 3 wire control	
	- brake sequence	
	- protection by passwords	
List of advanced functions	- brake feedback	<ul> <li>Speed synchronising with the SyncPos Motion Controller</li> </ul>
	- load sharing	<ul> <li>Positioning on the fly</li> </ul>
	-Limit switches management	- Index positioning
	- non linear refence	- Position synchronising
	- multi-motor	- Programmable controller
	- multi parameters	- Inverse Regulation
	- Power removal	- Anti Windup
	- alarm group	- Lowpass Filter
	- limit switches positioning with	- Start-up Conditions
	low speed time optimization	- Differentiator Gain Limit
	- summing, differentiating, multiplying reference	- Multiple motor
	- fast catch on fly	
	- fast catch on fly - fastest controlled stop	
Price Positioning		
Price Positioning		
Price Positioning User's Manual		
User's Manual	- fastest controlled stop	Yes. quick setup
User's Manual Simplified	- fastest controlled stop  Yes	Yes, quick setup Yes, operating instruction
User's Manual Simplified Complete	- fastest controlled stop  Yes  Yes	Yes, operating instruction
User's Manual Simplified Complete Language	- fastest controlled stop  Yes  Yes  G languages and more	Yes, operating instruction A lot of language are available on the website
User's Manual Simplified Complete Language Paper	- fastest controlled stop  Yes  Yes  Yes 6 languages and more Yes	Yes, operating instruction
User's Manual Simplified Complete Language Paper CD	- fastest controlled stop  Yes  Yes  Yes  6 languages and more  Yes  Yes	Yes, operating instruction A lot of language are available on the website Yes
User's Manual Simplified Complete Language Paper	- fastest controlled stop  Yes  Yes  Yes 6 languages and more Yes	Yes, operating instruction A lot of language are available on the website
User's Manual Simplified Complete Language Paper CD	- fastest controlled stop  Yes  Yes  Yes  6 languages and more  Yes  Yes	Yes, operating instruction A lot of language are available on the website Yes  www,danfoss,com
User's Manual Simplified Complete Language Paper CD Web Site	- fastest controlled stop  Yes  Yes  Yes  6 languages and more  Yes  Yes	Yes, operating instruction A lot of language are available on the website Yes  www,danfoss,com Lot of documentation available on the website
User's Manual Simplified Complete Language Paper CD Web Site	- fastest controlled stop  Yes  Yes  Yes  6 languages and more  Yes  Yes	Yes, operating instruction A lot of language are available on the website Yes  www,danfoss,com Lot of documentation available on the website - Communication modules
User's Manual Simplified Complete Language Paper CD Web Site	- fastest controlled stop  Yes  Yes  Yes  6 languages and more  Yes  Yes	Yes, operating instruction A lot of language are available on the website Yes  www,danfoss,com Lot of documentation available on the website - Communication modules - Application modules
User's Manual Simplified Complete Language Paper CD Web Site	- fastest controlled stop  Yes  Yes  Yes  6 languages and more  Yes  Yes	Yes, operating instruction  A lot of language are available on the website  Yes  www,danfoss,com  Lot of documentation available on the website  - Communication modules  - Application modules  - Instruction for VLT 5000
User's Manual Simplified Complete Language Paper CD Web Site Others	- fastest controlled stop  Yes  Yes  Yes  6 languages and more  Yes  Yes	Yes, operating instruction A lot of language are available on the website Yes  www,danfoss,com Lot of documentation available on the website - Communication modules - Application modules
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications	- fastest controlled stop  Yes  Yes  Yes  6 languages and more  Yes  Yes	Yes, operating instruction  A lot of language are available on the website  Yes  www,danfoss,com  Lot of documentation available on the website  - Communication modules  - Application modules  - Instruction for VLT 5000
User's Manual Simplified Complete Language Paper CD Web Site Others	- fastest controlled stop  Yes  Yes  Yes  6 languages and more  Yes  Yes	Yes, operating instruction  A lot of language are available on the website  Yes  www,danfoss,com  Lot of documentation available on the website  - Communication modules  - Application modules  - Instruction for VLT 5000
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane	- fastest controlled stop  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com	Yes, operating instruction  A lot of language are available on the website  Yes  www,danfoss,com  Lot of documentation available on the website  - Communication modules  - Application modules  - Instruction for VLT 5000  - Miscellaneous documentation  Yes
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane Horizontal handling	- fastest controlled stop  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes	Yes, operating instruction  A lot of language are available on the website  Yes  www,danfoss,com  Lot of documentation available on the website  - Communication modules  - Application modules  - Instruction for VLT 5000  - Miscellaneous documentation  Yes  Yes
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane	- fastest controlled stop  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com	Yes, operating instruction  A lot of language are available on the website  Yes  www,danfoss,com  Lot of documentation available on the website  - Communication modules  - Application modules  - Instruction for VLT 5000  - Miscellaneous documentation  Yes  Yes  Yes  Yes
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane Horizontal handling	- fastest controlled stop  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes	Yes, operating instruction  A lot of language are available on the website  Yes  www,danfoss,com  Lot of documentation available on the website  - Communication modules  - Application modules  - Instruction for VLT 5000  - Miscellaneous documentation  Yes  Yes
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane Horizontal handling Conveyor Packaging	- fastest controlled stop  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes	Yes, operating instruction  A lot of language are available on the website  Yes  www,danfoss,com  Lot of documentation available on the website  - Communication modules  - Application modules  - Instruction for VLT 5000  - Miscellaneous documentation  Yes  Yes  Yes  Yes  Yes
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping	- fastest controlled stop  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	Yes, operating instruction  A lot of language are available on the website  Yes  www,danfoss,com  Lot of documentation available on the website  - Communication modules  - Application modules  - Instruction for VLT 5000  - Miscellaneous documentation  Yes  Yes  Yes  Yes  Yes  Yes  Yes
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry	- fastest controlled stop  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes	Yes, operating instruction  A lot of language are available on the website  Yes  www,danfoss,com  Lot of documentation available on the website  - Communication modules  - Application modules  - Instruction for VLT 5000  - Miscellaneous documentation  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping	- fastest controlled stop  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	Yes, operating instruction  A lot of language are available on the website  Yes  www,danfoss,com  Lot of documentation available on the website  - Communication modules  - Application modules  - Instruction for VLT 5000  - Miscellaneous documentation  Yes  Yes  Yes  Yes  Yes  Yes  Yes
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry Fan	- fastest controlled stop  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	Yes, operating instruction  A lot of language are available on the website  Yes  www,danfoss,com  Lot of documentation available on the website  - Communication modules  - Application modules  - Instruction for VLT 5000  - Miscellaneous documentation  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry Fan Lift	- fastest controlled stop  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	Yes, operating instruction  A lot of language are available on the website Yes  www,danfoss,com  Lot of documentation available on the website - Communication modules - Application modules - Instruction for VLT 5000 - Miscellaneous documentation  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry Fan Lift Compressor	- fastest controlled stop  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	Yes, operating instruction  A lot of language are available on the website Yes  www,danfoss,com  Lot of documentation available on the website - Communication modules - Application modules - Instruction for VLT 5000 - Miscellaneous documentation  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry Fan Lift	- fastest controlled stop  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	Yes, operating instruction  A lot of language are available on the website Yes  www,danfoss,com  Lot of documentation available on the website - Communication modules - Application modules - Instruction for VLT 5000 - Miscellaneous documentation  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry Fan Lift Compressor	- fastest controlled stop  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	Yes, operating instruction  A lot of language are available on the website Yes  www,danfoss,com  Lot of documentation available on the website - Communication modules - Application modules - Instruction for VLT 5000 - Miscellaneous documentation  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry Fan Lift Compressor	- fastest controlled stop  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	Yes, operating instruction  A lot of language are available on the website  Yes  www,danfoss,com  Lot of documentation available on the website  - Communication modules  - Application modules  - Instruction for VLT 5000  - Miscellaneous documentation  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry Fan Lift Compressor	- fastest controlled stop  Yes Yes G languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	Yes, operating instruction  A lot of language are available on the website  Yes  www,danfoss,com  Lot of documentation available on the website  - Communication modules  - Application modules  - Instruction for VLT 5000  - Miscellaneous documentation  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry Fan Lift Compressor	- fastest controlled stop  Yes Yes Yes G languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	Yes, operating instruction  A lot of language are available on the website Yes  www,danfoss,com  Lot of documentation available on the website - Communication modules - Application modules - Instruction for VLT 5000 - Miscellaneous documentation  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry Fan Lift Compressor	- fastest controlled stop  Yes Yes G languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	Yes, operating instruction  A lot of language are available on the website Yes  www,danfoss,com  Lot of documentation available on the website - Communication modules - Application modules - Instruction for VLT 5000 - Miscellaneous documentation  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry Fan Lift Compressor	- fastest controlled stop  Yes Yes Yes G languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	Yes, operating instruction  A lot of language are available on the website  Yes  www,danfoss,com  Lot of documentation available on the website  - Communication modules  - Application modules  - Instruction for VLT 5000  - Miscellaneous documentation  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye
User's Manual Simplified Complete Language Paper CD Web Site Others  Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry Fan Lift Compressor	- fastest controlled stop  Yes Yes Yes G languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	Yes, operating instruction A lot of language are available on the website Yes  www.danfoss.com  Lot of documentation available on the website - Communication modules - Application modules - Instruction for VLT 5000 - Miscellaneous documentation  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye

AT	V71 vs VACON NXP a	and NXS
ITEM	ATV71	NXP and NXS
Picture	STATE OF THE PARTY	
Drive sizing		
Constant Torque (CT) High torque (HT)	Yes	Yes
Variable Torque (VT) Standard torque (VT)	No	Yes
Input		
Single phase 200V range	Yes by using 3 ph drive + derating	No
Power range	0,37 to 37kW	-
Number of ratings Voltage range with tolerance	9 200V -15% to 240V +10%	
Voltage range with tolerance  Mains frequency and tolerance	200V -15% to 240V +10% 50 Hz ±20% or 60 Hz ±20%	<u>-</u>
Three phase 200V range	Yes	- No
Power range	0,37 to 75kW	-
Number of ratings	17	-
Voltage range with tolerance	200V -15% to 240V +10%	<u>-</u>
Mains frequency and tolerance	50 Hz ±20% or 60 Hz ±20%	- V
Three phase 400V range Power range		Yes 0,75 to 250kW 380/440V (HT)
Power range	0,75 to 630kW	1,1 to 315kW 480/500V (HT)
Number of ratings	29	23
Voltage range with tolerance	380V-15% to 480V + 10%	380 - 440 V (+15% - 10%) and 480 - 500 V (+15% - 10%)
Mains frequency and tolerance	50 Hz ±20% or 60 Hz ±20%	45 - 66 Hz
Three phase 600V range	No	Yes
Power range Number of ratings		
5		
Voltage range with tolerance		AF CC U.
Three phase 690V range	No	45 - 66 Hz Yes
Power range	140	100
Number of ratings		
Voltage range with tolerance		
Mains frequency and tolerance		45 - 66 Hz
Ungrounded supply	Disconnexion and reconnexion of Y capacitors	
EMC		
HF EMC compliance as standard		Yes
Conducted emission		
Standard and level	EN61800-3 C2 (II < 16A) EN61800-3 C3 (II>16A)	EN 61800-3 2nd environment EN55011 class A
Shielded motor cable length	10 m up to 15kW 50m up to 75kW	
Unshielded motor cable length		
Switching frequency		
Power range integration	All ratings (except from 11 to 75kW 200V class)	
Shielding connexion	On EMC plate	
Radiated emission	_	
Standard and level	EN55011 Class A	
Power range	All the ratings	
LF EMC compliance as standard Inductance (AC or DC)	DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class	AC inductance as standard
Power range integration	DO inductance integrated from 11 to 45kW 200V class	All the range
Standard		, iii uio iaiigo
% THD		
Immunity		Fulfil all EMC immunity requirements
Standard 1 + level	IEC 61000-4-2 level 3	
Standard 2 + level	IEC 61000-4-3 level 3	
Standard 3 + level	IEC 61000-4-4 level 4	
Standard 4 + level	IEC 61000-4-5 level 3	
Standard 5 + level	IEC 61000-4-6 level 3	
Low voltage directive	EN 50178	
Others	IEC 61800-5-1	
Physical environment		
Number of size (frame)	13 sizes	7

Protection Degree	IP21 and IP41 on upper part (EN 50178 and 61800-5-1) IP31 with gland box, Nema type 1 with conduit box	
IP + power range		IP20
IP + power range		IP21
IP + power range		IP54 as an optional kit
IP + power range Temperature		-
Operating ambiant temperature		-10 to +40°C : VT
Operating ambiant temperature	-10 to +50°C	-10 to +50°C : HT
Storage temperature	-25 to 70°C	-40 to + 70°C
Humidity	95% non condensing without drop	up to 95% non condensing
Operational altitudes	1000m without derating. Possibile up to 3000m	1000 m, above 1% derating each 100 m above 3000 m contact Vacon
	r ossibile up to sociali	Vibration EN50178/ EN60068-2-6
Vibrations		5 to 200 Hz Displacement amplitude 1 mm (peak) at 315.8 Hz Max acceleration amplitude 1 G at 15.8150 Hz
Other		Air quality: - chemical vapours: IEC 721-3-3, unit in operation, class 3C2 - mechanical particles: IEC 721-3-3, unit in operation, class 3S2 Shock EN50178, EN 60068-2-27 UPS Drop Test (for applicable UPS weights) Storage and shipping: max 15 G, 11 ms (in package)
Automatic stop of fan	Yes	
Mounting		
Drive Shape	Compact	Book
Side by side mounting	Yes without derating	Yes
Heat evacuation outside enclosure	Yes, the power section is IP54	no (IP54 as option)
Operating position Others	Vertical -	Vertical -
		•
Power connexion	v	D-#
DC Bus connexion	Yes	Bottom
DC inductance connexion	Line inductance or DC inductance	No Voc
Removable terminals	No Detters	Yes
Bottom or Top/Bottom	Bottom	Bottom
Motor control		
AC motors motor control		
U/F	Yes	Yes
SVC (open loop) FVC (closed loop)	Yes Yes	Yes Yes, only for NXP
Type of encoder	RS422, Open collector or Push pull	5, 15 or 24V encoder RS422
Others	ENA	5, 15 01 24 V GILOUGI 110422
Synchronous or brushless motors	ENA	
Open loop	Yes	No
Closed loop		No No
	No	INO
Performances		
Speed range Motor quadrant	1 : 100 open loop	
Wiotor quadrant	1 : 1000 closed loop	
Generator quadrant		
	1 : 1000 closed loop	
Overtorque	From 170 to 2,2 Tn during 60s from 200 to 240% during 2s	170% I motor during 60s 220% during 2s
Rated current philosophy	1,1 In motor (380V)	220% duffig 25
0,75kW / 400V		In motor = 2 A
0,75KW 7 400V	In drive = 2,3 A	In drive = 2,2 A
4 kW / 400V	In motor = 8,5 A	In motor = 8,5 A
	In drive = 10,5 A	In drive = 9 A
22 kW / 400V	In motor = 40,5 A In drive = 48 A	In motor = 40,5 A In drive = 46 A
Overcurrent capability		170% I motor during 60s
	200% I motor during 2s	220% during 2s
Type of control and accuracy		
Speed control	Yes	Yes <0,5% open loop <0,01% closed loop
Torque control	Yes	Torque accuracy < 3% (NXP)
·	res	, , , ,
Torque rise time		10ms open loop
Sampling time of the loop		
· · · · ·		
Autotuning	Off line and On line	
Autotuning On line / Off line	Off line and On line	
Autotuning On line / Off line Ways of execution	Off line and On line By keypad, Logic input, at power up	
Autotuning  On line / Off line  Ways of execution  Values measured	By keypad, Logic input, at power up	
Autotuning  On line / Off line  Ways of execution  Values measured  Prefluxing		
Autotuning  On line / Off line  Ways of execution  Values measured	By keypad, Logic input, at power up	standard up to 22kW + braking internal resistor, internal on request up to 132kW
Autotuning  On line / Off line  Ways of execution  Values measured  Prefluxing  Braking  Braking	By keypad, Logic input, at power up  Yes  Yes	up to 132kW External krake chopper up to 250kW
Autotuning  On line / Off line  Ways of execution  Values measured  Prefluxing  Braking	By keypad, Logic input, at power up  Yes  Yes	up to 132kW
Autotuning  On line / Off line Ways of execution Values measured Prefluxing  Braking  Braking transistor	Yes  Yes  Without resistor 100% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option)	up to 132kW External krake chopper up to 250kW
Autotuning  On line / Off line Ways of execution Values measured Prefluxing Braking  Braking  Braking transistor  Braking performance w/o resistor	Yes  Yes  Without resistor 100% Cn: 0,37 - 0,75 kW 30% Cn: 1,5 - 15 kW With resistor (as an option) Until 170% Cn	up to 132kW External krake chopper up to 250kW 30% Tn

Switching frequency		
range		1 - 16 kHz
Tange	Settable from 0,5 to 16kHz	1 - 10 kHz > NX0072
factory setting	4kHz up to 30kW	10kHz
	2,5kHz above	
Integrated output filter		No, optional external
dv/dt	as an option	Yes (option)
Motor voltage surge limitation	Yes	-
sinus	no	Yes (option)
Others	no	-
Frequency setting resolution		
Serial		
Analog	11 bits	10 bit ±1% (depending on the E/S board)
Digital		0,01Hz
Modularity		
Number of option board at the same time	3	5 (2 cards are delivered as standard) the other cards add a few I/O
Inputs / Outputs		
On basic product		Standard
Removable terminals	Yes	
Type of terminal & pitch	Screw terminlas, pitch 5,08	
Sampling time	1ms minimum, and 2,5ms max	
Analog input	2	
1	Differential voltage input +/-10V	Analog input current
2	Soronida voidago input 17-10V	0(4)20mA, Ři = 250 Ω differential Analog input voltage
	current or voltage input	0+10V, Ri = 200kΩ, (–10V+10V joystick control) Resolution 0.1%, accuracy ±1%
3		
Logic inputs	6 assignable logic inputs	6 Positive or pegative logic: 18 24 V/dc
Logic outputs (open collector)	no	Positive or negative logic; 1824 Vdc 1 x Open collector output, 50mA/48V
Relays	TIO	2 programmable change over relay outputs
Relays	2 assignable relays (NO/NC, NC)	Max. switching voltage 125Vdc/250Vac  Max. switching current 6A/24Vdc, 0.4A/250 Vac  Max. continuous current 2 A rms
Analog outputs	1	1
1	Assignable output (voltage or current)	0(4)20mA; RL max 500Ω, Resolution 10 bit, Accur. ±2%
2	7 toolgrapio output (voltage of our citt)	o(1)2011/1, The max cools, Necolation to bit, Necal. 2270
Dedicated I/O	2	
1		Output reference voltage
'	Power removal input (compliance with 61800-5-2	+10 V, +3 %, max. load 10 mA
2	PTC input on LI	
3	у росс	
I / O Option 1	Lgic I/O card	
Removable terminals	Yes	
Type of terminal & pitch	Screw terminlas, pitch 5,08	
Sampling time	5ms	
Analog input	no	
1		
2		
3		
Logic inputs	4 assignable logic inputs	
Logic outputs (open collector)	2 assignable open collector outputs	
Relays	1 assignable relay (NO/NC)	
Analog outputs	no	
1	TIO	
2		
3		
Dedicated I/O		
I		
1	-10V supply	
1 2	-10V supply PTC input	
2	-10V supply PTC input	
3	PTC input	
I / O Option 2	PTC input  Extended I/O card	
I / O Option 2 Removable terminals	PTC input  Extended I/O card  Yes	
I / O Option 2 Removable terminals Type of terminal & pitch	PTC input  Extended I/O card  Yes  Screw terminlas, pitch 3,81 except relay that 5,08	
I / O Option 2 Removable terminals Type of terminal & pitch Sampling time	PTC input  Extended I/O card  Yes  Screw terminlas, pitch 3,81 except relay that 5,08  5ms	
I / O Option 2 Removable terminals Type of terminal & pitch	PTC input  Extended I/O card  Yes  Screw terminlas, pitch 3,81 except relay that 5,08  5ms  2	
I / O Option 2 Removable terminals Type of terminal & pitch Sampling time	PTC input  Extended I/O card  Yes  Screw terminlas, pitch 3,81 except relay that 5,08  5ms  2  1 differential current input	
I / O Option 2 Removable terminals Type of terminal & pitch Sampling time	PTC input  Extended I/O card  Yes  Screw terminlas, pitch 3,81 except relay that 5,08  5ms  2	
I / O Option 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3	PTC input  Extended I/O card  Yes  Screw terminlas, pitch 3,81 except relay that 5,08  5ms  2  1 differential current input  1 voltage / current input	
I / O Option 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 Logic inputs	PTC input  Extended I/O card  Yes  Screw terminlas, pitch 3,81 except relay that 5,08  5ms  2  1 differential current input  1 voltage / current input  4 assignable logic inputs	
I / O Option 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector)	Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs 2 assignable open collector outputs	
I / O Option 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays	Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC)	
I / O Option 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector)	Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) 2	
I / O Option 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays	Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC)	
I / O Option 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays	Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) 2	
I / O Option 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 3 4 3 5 6 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 8 7 8	Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) 2	
I / O Option 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays	Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) 2 2 assignable voltage/current Analog outputs	
I / O Option 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O	Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) 2	
I / O Option 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 3 4 3 5 6 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) 2 2 assignable voltage/current Analog outputs	

I / O Option 3	Controller inside card	
Removable terminals	Yes	
Type of terminal & pitch		
Sampling time		
Analog input		
1		
2		
3		
Logic inputs		
Logic outputs (open collector)		
Relays		
Analog outputs		
1		
2		
3		
Dedicated I/O		
1		
2		
3		
Others		For further details about I/O boards see the I/O boards advanced manual
Communication		Illaliuai
Communication Separated control supply	Voc 241/ de se standerd	Yes
On the basic product	Yes 24V dc as standard Yes	Yes No
Protocol available 1	Yes  Modbus fully configurable with I/O scanner	INU
Protocol available 1	Canopen fully configurable	
Protocol available 3	Canopen rully configurable	
Communication option card		
Protocol available 1	Fipio PL7	Modbus
Protocol available 2	FIPIO with messaging	Profibus DP
Protocol available 3	Modbus Plus	Lonworks
Protocol available 4	Uni-Telway, Modbus ASCII, Modbus RTU/Jbus	Canopen
Protocol available 5	INTERBUS-S	DeviceNet
Protocol available 6	Profibus DP	
Protocol available 7	Ethernet	
Protocol available 8	DeviceNet	
Protocol available 9		
Protocol available 10		
Protocol available 11		
Protocol available 12		
Gateway		
Protocol available 1	AS-i	
Protocol available 2		
Protocol available 3		
Protocol available 4		
Protocol available 5		
Protocol available 6		
Protocol available 7		
Protocol available 8		
Protocol available 9		
Protocol available 10		
Protocol available 11		
Protocol available 12		
Protocol available 13		
Operator panel		
Dialogue 1		Standard
Integrated / removable	Integrated	Yes, remote control available
Type of screen	4 Led digits	Plain text
Language	code	English, Deutsch, Suomi, Svenska, Italiano
Number of keys	4	9
Number of Leds	5 Leds for the diagnostic of the integrated fieldbus	
Keypad command	no	Start
Function keys		Stop Arrow (up, down, left, right)
Function keys		Arrow (up, down, left, right) Select
	no	Reset
2"		Enter
Others		
Dialogue 2	Damayahla	-
Integrated / removable Type of display		-
l ype of display  Language	Graphic display 6 languages (languages are flashable).	<u> </u>
Language	Suitable for asian characters	
Number of keys	use of a shuttle + 1 key	-
Number of Leds	no	-
Keypad command	Yes	-
Function keys	4	-
Others	navigation with a shuttle	-
	could be used to save and restore 4 configurations remote mounting kit available	
İ	Multipoint connection	
	Wattpoint Connection	

<b>-</b>		
Dialogue 3		-
Integrated / removable		-
Type of display		-
Language		-
Number of keys		-
Number of Leds		-
Keypad command		-
Function keys Others		-
		-
Protections		
Thermal protection	Yes, I <sup>2</sup> t motor thermal protection depending on the motor frequency.	
	Memorization when power off	
Electronic / PTC	Yes, dedicated input on option cards	
The motor thermal state is saved when power is off		
Short circuit between phase	yes	
Ground fault	yes	Yes
Output phase loss	yes	Yes
Input phase loss	yes	Yes
Braking resistor protection	No	
Overload	yes	Yes
Overvoltage	yes	Yes
Undervoltage	yes	Yes
Drive thermal protection	yes	Yes
Locked motor protection	Yes	Yes
Stall prevention	Yes	Yes
Others		Underload protection
Options and Accessoiries		
Braking resistors	protected braking resistor	Yes, as an option
Inductances (chokes)	Hoisting resistors Line chokes	Yes, as an option
Regenerative Units	Line chokes Yes	T es, as an option
EMC filters	Additional footprint filters	Yes, integrated RFI filter and optionnal externe RFI filter
Output filters	Motor chokes	Yes
output mioro	full performances filters	
	sinus filters	
Othors	filters for EMC compliance with unshielded cables	Yes, as an option
Others	Control fan kit Canopen accessories	res, as an option
	keypad remote mounting kit	
Specific Product		
Product mounted inside enclosures	the power section is IP54 to be easily mounted in enclosure	
	with heat evacuation on the outside	
	man noat ovacation on the outera	
Water cooled drive		Yes, liquid cooled drive from 7,5 kW to 3 MW (400 - 500 V and 690
Water cooled drive	no	V)
Others		V) mounted on IP54 or higher enclosure -
Others List of marking	no	mounted on IP54 or higher enclosure  - CE, UL, cUL, (CSA)FI, GOST R
Others List of marking Part number	no	mounted on IP54 or higher enclosure
Others List of marking	no CE, UL, CSA, DNV	V) mounted on IP54 or higher enclosure  CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SSS A1 A2 00 00 00  NXS : Product range  NXS
Others List of marking Part number	no	v) mounted on IP54 or higher enclosure  - CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SS A1 A2 00 00 00  NXS : Product range  NXS  NXS  NXL
Others List of marking Part number 1st part	no CE, UL, CSA, DNV ATV71 : Model	wounted on IP54 or higher enclosure
Others List of marking Part number	no  CE, UL, CSA, DNV  ATV71 : Model  Type	wounted on IP54 or higher enclosure  CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SS A1 A2 00 00 00  NXS : Product range  NXS  NXL  NXP  0022 : Output current
Others List of marking Part number 1st part	no CE, UL, CSA, DNV ATV71 : Model	wounted on IP54 or higher enclosure
Others List of marking Part number 1st part 2nd part	no  CE, UL, CSA, DNV  ATV71 : Model  Type H : heatsink Power : 075 = 0,75kW	V) mounted on IP54 or higher enclosure
Others List of marking Part number 1st part 2nd part	Type H: heatsink Power: 075 = 0,75kW U75 = 7,5kW	V) mounted on IP54 or higher enclosure  - CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SS A1 A2 00 00 00  NXS: Product range NXS NXL NXP  0022: Output current 0022: 22 A  5: voltrage 2: 200 - 240 V 5: 380 - 500 V
Others  List of marking  Part number  1st part  2nd part  3rd part	no  CE, UL, CSA, DNV  ATV71 : Model  Type H : heatsink Power : 075 = 0,75kW	V) mounted on IP54 or higher enclosure  - CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SSS A1 A2 00 00 00  NXS: Product range NXS NXL NXP  0022: Output current 0022: 22 A  5: voltage 2: 200 - 240 V 5: 380 - 500 V 6: 525 - 690 V
Others List of marking Part number 1st part 2nd part	Type H: heatsink Power: 075 = 0,75kW U75 = 7,5kW	V) mounted on IP54 or higher enclosure  - CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SS A1 A2 00 00 00  NXS: Product range NXS NXL NXP  0022: Output current 0022: 22 A  5: voltrage 2: 200 - 240 V 5: 380 - 500 V
Others List of marking Part number 1st part 2nd part 3rd part 4th part	Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW	V) mounted on IP54 or higher enclosure  CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SS A1 A2 00 00 00  NXS : Product range NXS NXL NXP  0022 : Output current 0022 : 22 A  5 : voltage 2 : 200 - 240 V 5 : 380 - 500 V 6 : 525 - 690 V  A : Operator panel A : standard, B : no panel
Others  List of marking  Part number  1st part  2nd part  3rd part	Type H: heatsink Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power  Voltage	V) mounted on IP54 or higher enclosure  - CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SS A1 A2 00 00 00  NXS: Product range NXS NXL NXP  0022: Output current 0022: 22 A  5: voltage 2: 200 - 240 V 5: 380 - 500 V 6: 525 - 690 V A: Operator panel A: standard, B: no panel 2: protection degree
Others List of marking Part number 1st part 2nd part 3rd part 4th part	Type H: heatsink Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW T5 : power  Voltage M3: 208 / 240 V (3 input phase)	V) mounted on IP54 or higher enclosure  - CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SS A1 A2 00 00 00  NXS: Product range NXS NXL NXP  0022: Output current 0022: 22 A  5: voltage 2: 200 - 240 V 5: 380 - 500 V 6: 525 - 690 V  A: Operator panel A: standard, B: no panel 2: protection degree 1: IP20
Others List of marking Part number 1st part 2nd part 3rd part 4th part	Type H: heatsink Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power  Voltage	V) mounted on IP54 or higher enclosure  - CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SS A1 A2 00 00 00  NXS: Product range NXS NXL NXP  0022: Output current 0022: 22 A  5: voltage 2: 200 - 240 V 5: 380 - 500 V 6: 525 - 690 V A: Operator panel A: standard, B: no panel 2: protection degree
Others List of marking Part number 1st part 2nd part 3rd part 4th part	Type H: heatsink Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V	V) mounted on IP54 or higher enclosure  - CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SS A1 A2 00 00 00  NXS: Product range NXS NXL NXP  0022: Output current 0022: 22 A  5: voltage 2: 200 - 240 V 5: 380 - 500 V 6: 525 - 690 V  A: Operator panel A: standard, B: no panel  2: protection degree 1: IP20 2: IP21 / NEMA1 5: IP54 / NEMA12  H: EMC
Others List of marking Part number 1st part 2nd part 3rd part 4th part 5th part	Type H: heatsink Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW T5 : power  Voltage M3: 208 / 240 V (3 input phase)	V)
Others List of marking Part number 1st part 2nd part 3rd part 4th part 5th part	Type H: heatsink Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW T5 : power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter	V) mounted on IP54 or higher enclosure  - CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SS A1 A2 00 00 00  NXS: Product range NXS NXL NXP  0022: Output current 0022: 22 A  5: voltage 2: 200 - 240 V 5: 380 - 500 V 6: 525 - 690 V  A: Operator panel A: standard, B: no panel  2: protection degree 1: IP20 2: IP21 / NEMA1 5: IP54 / NEMA12  H: EMC
Others List of marking Part number 1st part 2nd part 3rd part 4th part 5th part	Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without operator display	V)   mounted on IP54 or higher enclosure   -
Others List of marking Part number 1st part 2nd part 3rd part 4th part 5th part	Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without operator display	V)
Others List of marking Part number 1st part 2nd part 3rd part 4th part 5th part	Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without operator display	V)
Others List of marking Part number 1st part 2nd part 3rd part 4th part 5th part	Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without operator display	V)
Others List of marking Part number 1st part 2nd part 3rd part 4th part 5th part	Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without operator display	V)
Others List of marking Part number 1st part 2nd part 3rd part 4th part 5th part	Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without operator display	wounted on IP54 or higher enclosure  CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SSS A1 A2 00 00 00  NXS: Product range NXS NXL NXP  0022: Output current 0022: 22 A  5: voltage 2: 200 - 240 V 5: 380 - 500 V 6: 525 - 690 V  A: Operator panel A: standard, B: no panel  2: protection degree 1: IP20 2: IP21 / NEMA1 5: IP54 / NEMA12  H: EMC  H: complies with EN61800-3, 1st env. limited and 2nd env. T: complies with EN61800-3 for ungrounded supply N: no EMC attenuation  1: Chopper 0: no chopper 1: integrated chopper 2: integrated chopper 2: integrated chopper and braking resistor
Others List of marking Part number 1st part 2nd part 3rd part 4th part 5th part 6th part	Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without operator display	wounted on IP54 or higher enclosure  CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SS A1 A2 00 00 00  NXS: Product range NXS NXL NXP  0022: Output current 0022: 22 A  5: voltage 2: 200 - 240 V 5: 380 - 500 V 6: 525 - 690 V  A: Operator panel A: standard, B: no panel  2: protection degree 1: IP20 2: IP21 / NEMA1 5: IP54 / NEMA12  H: EMC  H: complies with EN61800-3, 1st env. limited and 2nd env. T: complies with EN61800-3 for ungrounded supply N: no EMC attenuation  1: Chopper 0: no chopper 1: integrated chopper 2: integrated chopper 2: integrated chopper 2: integrated chopper and braking resistor
Others List of marking Part number 1st part 2nd part 3rd part 4th part 5th part 6th part	Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without operator display	wounted on IP54 or higher enclosure  CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SSS A1 A2 00 00 00  NXS: Product range NXS NXL NXP  0022: Output current 0022: 22 A  5: voltage 2: 200 - 240 V 5: 380 - 500 V 6: 525 - 690 V  A: Operator panel A: standard, B: no panel  2: protection degree 1: IP20 2: IP21 / NEMA1 5: IP54 / NEMA12  H: EMC  H: complies with EN61800-3, 1st env. limited and 2nd env. T: complies with EN61800-3 for ungrounded supply N: no EMC attenuation  1: Chopper 0: no chopper 1: integrated chopper 2: integrated chopper 2: integrated chopper and braking resistor
Others List of marking Part number 1st part 2nd part 3rd part 4th part 5th part 6th part	Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without operator display	mounted on IP54 or higher enclosure  CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SS A1 A2 00 00 00  NXS: Product range NXS NXL NXP  0022: Output current 0022: 22 A  5: voltage 2: 200 - 240 V 5: 380 - 500 V 6: 525 - 690 V  A: Operator panel A: standard, B: no panel  2: protection degree 1: IP20 2: IP21 / NEMA1 5: IP54 / NEMA12  H: EMC  H: complies with EN61800-3, 1st env. limited and 2nd env. T: complies with EN61800-3 for ungrounded supply N: no EMC attenuation  1: Chopper 0: no chopper 1: integrated chopper 2: integrated chopper 2: integrated chopper and braking resistor
Others List of marking Part number 1st part  2nd part 3rd part  4th part  5th part  7th part  8th part	Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without operator display	wounted on IP54 or higher enclosure  CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SSS A1 A2 00 00 00  NXS: Product range NXS NXL NXP  0022: Output current 0022: 22 A  5: voltage 2: 200 - 240 V 5: 380 - 500 V 6: 525 - 690 V  A: Operator panel A: standard, B: no panel  2: protection degree 1: IP20 2: IP21 / NEMA1 5: IP54 / NEMA12  H: EMC  H: complies with EN61800-3, 1st env. limited and 2nd env. T: complies with EN61800-3 for ungrounded supply N: no EMC attenuation  1: Chopper 0: no chopper 1: integrated chopper 2: integrated chopper 2: integrated chopper and braking resistor  SSS: Hardware modifications power unit S = standard, T = flange mounting card varnishing S = standard, V = varnished cards  Factory installed option cards for NXS/NXP (slots A, B, C, D and E)
Others List of marking Part number 1st part  2nd part 3rd part  4th part  5th part  7th part  8th part	Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without operator display	mounted on IP54 or higher enclosure  CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SS A1 A2 00 00 00  NXS: Product range NXS NXL NXP  0022: Output current 0022: 22 A  5: voltage 2: 200 - 240 V 5: 380 - 500 V 6: 525 - 690 V  A: Operator panel A: standard, B: no panel  2: protection degree 1: IP20 2: IP21 / NEMA1 5: IP54 / NEMA12  H: EMC  H: complies with EN61800-3, 1st env. limited and 2nd env. T: complies with EN61800-3 for ungrounded supply N: no EMC attenuation  1: Chopper 0: no chopper 1: integrated chopper 2: integrated chopper 2: integrated chopper and braking resistor  SSS: Hardware modifications power unit S = standard, T = flange mounting card varnishing S = standard, V = varnished cards  Factory installed option cards for NXS/NXP (slots A, B, C, D and E) A1 = basic I/O card OPTA1 (slot A)
Others List of marking Part number 1st part  2nd part 3rd part  4th part  5th part  7th part  8th part	Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without operator display	wounted on IP54 or higher enclosure  CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SSS A1 A2 00 00 00  NXS: Product range NXS NXL NXP  0022: Output current 0022: 22 A  5: voltage 2: 200 - 240 V 5: 380 - 500 V 6: 525 - 690 V  A: Operator panel A: standard, B: no panel  2: protection degree 1: IP20 2: IP21 / NEMA1 5: IP54 / NEMA12  H: EMC  H: complies with EN61800-3, 1st env. limited and 2nd env. T: complies with EN61800-3 for ungrounded supply N: no EMC attenuation  1: Chopper 0: no chopper 1: integrated chopper 2: integrated chopper 2: integrated chopper and braking resistor  SSS: Hardware modifications power unit S = standard, T = flange mounting card varnishing S = standard, V = varnished cards  Factory installed option cards for NXS/NXP (slots A, B, C, D and E) A1 = basic I/O card OPTA1 (slot A) A2 = basic output relay card OPTA2 (slot B) 00 = no card (slot C)
Others List of marking Part number 1st part  2nd part 3rd part  4th part  5th part  7th part  8th part	Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without operator display	mounted on IP54 or higher enclosure  CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SSS A1 A2 00 00 00  NXS: Product range     NXS     NXL     NXP  0022: Output current     0022: 22 A      5: voltage     2: 200 - 240 V     5: 380 - 500 V     6: 525 - 690 V  A: Operator panel     A: standard,     B: no panel  2: protection degree     1: IP20     2: IP21 / NEMA1     5: IP54 / NEMA12  H: EMC  H: complies with EN61800-3, 1st env. limited and 2nd env.     T: complies with EN61800-3 for ungrounded supply     N: no EMC attenuation  1: Chopper     0: no chopper     1: integrated chopper     2: integrated chopper     2: integrated chopper     2: integrated chopper and braking resistor  SSS: Hardware modifications     power unit S = standard, T = flange mounting card varnishing S = standard, V = varnished cards  Factory installed option cards for NXS/NXP     (slots A, B, C, D and E)     A1 = basic I/O card OPTA1 (slot A)     A2 = basic output relay card OPTA2 (slot B)     00 = no card (slot C)     00 = no card (slot C)     00 = no card (slot D)
Others List of marking Part number 1st part  2nd part 3rd part  4th part  5th part  7th part  8th part	Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without operator display	wounted on IP54 or higher enclosure  CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SSS A1 A2 00 00 00  NXS: Product range NXS NXL NXP  0022: Output current 0022: 22 A  5: voltage 2: 200 - 240 V 5: 380 - 500 V 6: 525 - 690 V  A: Operator panel A: standard, B: no panel  2: protection degree 1: IP20 2: IP21 / NEMA1 5: IP54 / NEMA12  H: EMC  H: complies with EN61800-3, 1st env. limited and 2nd env. T: complies with EN61800-3 for ungrounded supply N: no EMC attenuation  1: Chopper 0: no chopper 1: integrated chopper 2: integrated chopper 2: integrated chopper and braking resistor  SSS: Hardware modifications power unit S = standard, T = flange mounting card varnishing S = standard, V = varnished cards  Factory installed option cards for NXS/NXP (slots A, B, C, D and E) A1 = basic I/O card OPTA1 (slot A) A2 = basic output relay card OPTA2 (slot B) 00 = no card (slot C)
Others  List of marking  Part number  1st part  2nd part  3rd part  4th part  5th part  7th part  8th part  9th part	Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without operator display	mounted on IP54 or higher enclosure  CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SSS A1 A2 00 00 00  NXS: Product range     NXS     NXL     NXP  0022: Output current     0022: 22 A      5: voltage     2: 200 - 240 V     5: 380 - 500 V     6: 525 - 690 V  A: Operator panel     A: standard,     B: no panel  2: protection degree     1: IP20     2: IP21 / NEMA1     5: IP54 / NEMA12  H: EMC  H: complies with EN61800-3, 1st env. limited and 2nd env.     T: complies with EN61800-3 for ungrounded supply     N: no EMC attenuation  1: Chopper     0: no chopper     1: integrated chopper     2: integrated chopper     2: integrated chopper     2: integrated chopper and braking resistor  SSS: Hardware modifications     power unit S = standard, T = flange mounting card varnishing S = standard, V = varnished cards  Factory installed option cards for NXS/NXP     (slots A, B, C, D and E)     A1 = basic I/O card OPTA1 (slot A)     A2 = basic output relay card OPTA2 (slot B)     00 = no card (slot C)     00 = no card (slot C)     00 = no card (slot D)
Others  List of marking  Part number  1st part  2nd part  3rd part  4th part  5th part  7th part  8th part	Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  X: without filter Z: without operator display	mounted on IP54 or higher enclosure  CE, UL, cUL, (CSA)FI, GOST R  NXS 0022 5 A 2 H 1 SSS A1 A2 00 00 00  NXS: Product range     NXS     NXL     NXP  0022: Output current     0022: 22 A      5: voltage     2: 200 - 240 V     5: 380 - 500 V     6: 525 - 690 V  A: Operator panel     A: standard,     B: no panel  2: protection degree     1: IP20     2: IP21 / NEMA1     5: IP54 / NEMA12  H: EMC  H: complies with EN61800-3, 1st env. limited and 2nd env.     T: complies with EN61800-3 for ungrounded supply     N: no EMC attenuation  1: Chopper     0: no chopper     1: integrated chopper     2: integrated chopper     2: integrated chopper     2: integrated chopper and braking resistor  SSS: Hardware modifications     power unit S = standard, T = flange mounting card varnishing S = standard, V = varnished cards  Factory installed option cards for NXS/NXP     (slots A, B, C, D and E)     A1 = basic I/O card OPTA1 (slot A)     A2 = basic output relay card OPTA2 (slot B)     00 = no card (slot C)     00 = no card (slot C)     00 = no card (slot D)

Message 1		The drive for the new century
Message 2		·
Message 3		
Message 4		
Message 5		
Message 6		
Message 7		
Type of communication		
Environment, recyclability		
Safety Compliance		ENERGIA ENGOCA A OF THE THE EL COOT D. 150 04000 5
1st standard	EN1800-5-1	EN50178, EN60204-1, CE, UL, cUL, FI, GOST R, IEC 61800-5 (see unit nameplate for more detailed approvals)
2nd standard	Power removal EN1800-5-2 / EN 954-1 category 3	Complies with EN60204-1 (1996)
3rd standard		Complies with EN60950 (3rd edition 2000, as relevant)
4th standard		Complies with EN50178 (1997)
5th standard		-
Software Opening		
Logic Operation	no (could be carried out with the controller inside card)	
Controller (PLC) Inside	Yes	Yes
Software Card		
Product Services		
Flashable	Yes	
PC Software	PowerSuite sotware workshop	NC Drive, NC Load, NC 1131-3
Scope	Yes	Yes
Application Functions		
Number of functions	#150	
Number of parameters	#800	
Main functions	- PID regulator	
List of advanced functions	- current and torque limitation - S ramp - short ramp - 16 preset speeds + jog - 3 wire control - brake sequence - protection by passwords	
	- Brake sequence adapted to hoisting, travelling, orientation and lift weight measurement - high speed hoisting - brake feedback - load sharing -Limit switches management - non linear refence - multi-motor - multi parameters - Power removal - alarm group - limit switches positioning with low speed time optimization - summing, differentiating, multiplying reference - fast catch on fly - fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters	
Price Positioning		
User's Manual		
Simplified	Yes	Ų,
Complete	Yes	Yes
Language	6 languages and more	More than 20 languages for the complete technical documentation
Paper CD	Yes	
Web Site	Yes	WWW.VOCCD CCT
	Telemecanique.com	www.vacon.com
Others		A great number of manual dedicated for the options
Applications		
Hoisting / crane	Yes	Yes
Horizontal handling	Yes	Yes
Conveyor	Yes	Yes
Packaging	Yes	Yes
Pumping	Yes	Yes
Textile industry	Yes	Yes
Fan	no	Yes
Lift	Yes	Yes
Compressor	no	Yes
Others	some low speed process machines, unbalanced machine, special machine	- Marine solutions

ATV71 vs MITSUBISHI A500		
ITEM	ATV71	MITSUBISHI A500
I I CIVI	AIV/I	WITSUBISHI ASSU
Picture	CENTRAL CONTROL OF THE PROPERTY OF THE PROPERT	A STATE OF THE STA
Drive sizing		24
Constant Torque (CT) High torque (HT)	Yes	Yes
Variable Torque (VT) Standard torque (VT)	No	Yes (switching frequency = 1kHz)
Input		
Single phase 200V range	Yes by using 3 ph drive + derating	No
Power range	0,37 to 37kW	-
Number of ratings	9	<del>-</del>
Voltage range with tolerance	200V -15% to 240V +10%	-
Mains frequency and tolerance	50 Hz ±20% or 60 Hz ±20%	-
Three phase 200V range	Yes	Yes
Power range	0,37 to 75kW	0,4 to 90 kW
Number of ratings	17	17
Voltage range with tolerance	200V -15% to 240V +10% 50 Hz ±20% or 60 Hz ±20%	170 - 242 V (50 Hz) or 170 - 264 V (60 Hz) 50 - 60 Hz ±5%
Mains frequency and tolerance Three phase 400V range	50 HZ ±20% 01 60 HZ ±20%	
Power range	0,75 to 630kW	Yes 0,4 - 450kW
Number of ratings	0,75 to 650kVV 29	0,4 - 450kVV 20
Voltage range with tolerance	380V-15% to 480V + 10%	380 - 480 V (-15% +10%)
Mains frequency and tolerance	50 Hz ±20% or 60 Hz ±20%	50/60 Hz ±5%
Three phase 600V range	No	Yes
Power range	NO	0,75 to 900kW
Number of ratings		-
Voltage range with tolerance		<u>-</u>
Mains frequency and tolerance		-
Three phase 690V range	No	-
Power range		-
Number of ratings		-
Voltage range with tolerance		-
Mains frequency and tolerance		-
Ungrounded supply	Disconnexion and reconnexion of Y capacitors	
EMC		
HF EMC compliance as standard		No
Conducted emission		External filters as option
Standard and level	EN61800-3 C2 (II < 16A)	
	EN61800-3 C3 (II>16A)	
Shielded motor cable length		
11 1111 1 1 1 1 1	50m up to 75kW	
Unshielded motor cable length Switching frequency		
Power range integration	All ratings (except from 11 to 75kW 200V class)	
Shielding connexion	On EMC plate	
Radiated emission		
Standard and level		
Power range	All the ratings	
LF EMC compliance as standard		
Inductance (AC or DC)	DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class	No (DC choke as option)
Power range integration		
Standard		
% THD		
Immunity		
Standard 1 + level	IEC 61000-4-2 level 3	
Standard 2 + level		
	IEC 61000-4-3 level 3	
Standard 3 + level	IEC 61000-4-3 level 3 IEC 61000-4-4 level 4	
	IEC 61000-4-3 level 3 IEC 61000-4-4 level 4	

Low voltage directive	EN 50178	EN 500178 when correctly installed
Others	IEC 61800-5-1	
Physical environment		
Number of size (frame)	13 sizes	6
Protection Degree	IP21 and IP41 on upper part (EN 50178 and 61800-	Ü
	5-1)	
	IP31 with gland box, Nema type 1 with conduit box	IP20 up to 22 kW above IP00 up to 55 kW
IP + power range		IP40 option
IP + power range		-
IP + power range		-
IP + power range		-
Temperature  Operating ambiant temperature	-10 to +50°C	-10 to + 50°C (up to 40°C if VT)
Storage temperature		-20 to +65°C
Humidity		90% RH non condensing
Operational altitudes		1000 m after that derate by 3% for every extra 500 m up
	Possibile up to 3000m	to 2500 m
Vibrations		2G from 10 to 55Hz
Other		Indoors (free from corrosive gas, flammable gas, oli mist,
		dust and dirt)
Automatic stop of fan	Yes	Yes
Mounting		
Drive Shape	Compact	Compact
Side by side mounting	Yes without derating	no
Heat evacuation outside enclosure	Yes, the power section is IP54	
Operating position	Vertical	Vertical
Others	-	-
Power connexion		
DC Bus connexion	Yes	Yes
DC inductance connexion	Line inductance or DC inductance	yes
Removable terminals	No	no
Bottom or Top/Bottom	Bottom	Bottom
Motor control	200011	Bottom
AC motors motor control		
U/F	Vaa	V
SVC (open loop)		Yes Yes
FVC (closed loop)		Yes (closed loop speed as an option)
Type of encoder		Encoder feedback card PLG
Type of chedder	RS422, Open collector or Push pull	RS422 5V
Others	ENA	-
Synchronous or brushless motors		
Open loop	Yes	no
Closed loop	**	no
'	NO	110
Performances		
Speed range		
Motor quadrant		1 : 120 open loop
Generator quadrant	1 : 1000 closed loop	1 : 1000 closed loop
Generator quadrant	1 : 50 open loop 1 : 1000 closed loop	
Overtorque		
Svertorque	from 200 to 240% during 2s	170% during 60s
Rated current philosophy	1,1 In motor (380V)	
0,75kW / 400V		In motor = 2 A
	In drive = 2,3 A	In drive = 2,5 A
4 kW / 400V		In motor = 8,5 A
	In drive = 10,5 A	In drive = 9 A
22 kW / 400V	In motor = 40,5 A In drive = 48 A	In motor = 40,5 A
Overcurrent capability		In drive = 43 A
Очетсителі саравінцу	180% I motor during 60s	Constant torque : 150% for 60 sec
	200% I motor during 2s	200% for 0,5 sec
Type of control and accuracy		
Speed control		Driving mode
	Yes	Speed variation :
		0,02% with encoder
Torque control		No
Torque rise time		
Sampling time of the loop		
Autotuning		Yes
On line / Off line	Off line and On line	On line or offline during offline autotuning the tuning status monitor has priority
Ways of execution	By keypad, Logic input, at power up	priority
Values measured		
Prefluxing	Yes	
Braking		
Braking transistor	Yes	

Brooking proformance with resistors   William Justice   William Ju			
Soft Cort 15 - 16 km   Willing Feebler (in a hoppon)   100% 56 (55-24)   Indigenery rearge   0.1 to 1000kt at to 37ktz   0.2 km   100% 56 (55-24)   Indigenery resperance with oriental module   0.1 to 1000kt at to 37ktz   0.2 km   0.4 km   0.5 km   0.4 km   0.5 k	Braking performance w/o resistor		
With translate (or an egitors)			
Units 179% Co.   https://exequency.narge		With resistor (as an option)	100% 5s (ED=2%)
Output frequency reage Output frequency reage Output frequency readers of the provision of		Until 170% Cn	
Up to 90-Hz above	Output frequency range	0,1 to 1000Hz up to 37kHz	
Sertiching frequency  Gardoy setting  Active years  Analog  Modularity  Number of option board at the same thre  Type of permised a pitch  Analog input  Cogle inputs  Logic outputs (Cogle inputs  Logic outputs (Cogle inputs  Logic outputs (Cogle inputs  Logic outputs  Prover removal input compliance in the Searge of the Searge of Cogle inputs  Logic outputs  Prover removal input compliance in the Searge of Cogle inputs  Logic outputs  Prover removal input compliance in the Searge of Cogle inputs  Logic outputs  Prover removal input compliance in the Searge of Cogle inputs  Logic outputs  Prover removal input compliance in the Searge of Cogle inputs  Logic outputs  Prover removal input compliance in the Searge of Cogle inputs  Logic outputs (Cogle inputs  Logic outputs  Prover removal input (compliance with of 6000-502  Prover removal input (compli		up to 500Hz above	0,2 - 400 Hz
factory setting factory setting (factory setting factory setting factory setting (factory setting factory sett		0,1Hz	
Integrated output filter			
Capital coupur filter	· ·		0,7 - 14,5 kHz (up to 55kW)
Integrated output filter  Motor voltage surge limitation  Frequency setting resolution  Modularity  Modularity  Frequency setting resolution  Modularity  Frequency setting resolution  Fr	factory setting		
Motor votage surge limitation  Wes  Chens Chens Chens Prequency setting resolution  Setta Anatog This Digits  Modularity Number of option board at the same time 3 3 3  Inputs Forgue of Chens Removable terminals Type of Terminal a ptch Sore terminals Type of Terminal a ptch Sore terminals Sore terminals Type of Terminal a ptch Sore terminals Sore ter	Integrated output filter	Z,3KHZ ADOVE	
Motor vortage surgit limitation  Prescuency setting resolution  Arratog  Frequency setting resolution  Arratog  Deptal  Arratog  Deptal  Number of option board at the same stine  Arratog inputs / Outputs  On basic product  Modularity  Number of option board at the same stine  3 3 3  Inputs / Outputs  On basic product  Standard  Removable terminals  Yes  Tomptal fortunal Aprich  Survey terminals, pitch 5.68  ring terminal Aprich  Survey terminals, pitch 5.68  ring terminal Aprich  Arratog input  Officeratial voltage input 4-10V  4-10V  Arratog input  Oggic inputs  Logic outputs open collectory  Relays  Arratog outputs open collectory  Arratog outputs  I Power removal limit forceptainnee with 61800.5.2  Force inputs  I Option 1  Power removal limit forceptainnee with 61800.5.2  I Power removal limit forceptainnee with 61800.5.2  I Power removal limit forceptainnee with 61800.5.2  I Option 1  Power removal limit forceptainnee with 61800.5.2  I Power removal limit forceptainnee with 61800.5.2  Force terminals  Yes  To Option 2  Extended I/O Card  Relays  A assignable legic inputs  Logic outputs open collectory  2 assignable legic inputs  Logic outputs open collectory  3 4 assignable logic inputs  Logic inputs  Logic inputs  I O Option 2  Extended I/O Card  Extended I/O Card  Extended I/O Card  Power removal application and put and p		as an antion	no
Sinus no Others no Frequency setting resolution Frequency setting resolution  Analog 11 bits 0,015 bit 2 Digital Modularity Number of option board at the same time 3 3 3 Inputs / Outputs On Dassic product Removable terminals Frequency setting spent object board at the same time 3 3 3 Inputs / Outputs On Dassic product Removable terminals Frequency setting spent object board at the same time 3 3 3 Inputs / Outputs On Dassic product Removable terminals Frequency setting time 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		·	
Open			
Frequency setting resolution  Analog  Analog  Digital  Analog  Number of option board at the same time  ime time time time time time ti			
Serial		no	
Modularity	Frequency setting resolution		
Modularity			
Number of option board at the same time   3   3   3   3   3   3   3   3   3	<u> </u>	11 bits	·
Number of option board at the same time   3			0,01 Hz
Inputs   Outputs   Standard   Yes   Standard   Yes   terminal card is removable terminals   Yes   terminal card is removable   Yes   terminal   Yes   terminal   Yes   Terminal   Yes   Terminal   Yes   Ye			
On basic product         Standard           Removable terminals         Yes         terminal as removable           Type of terminal & pitch         Screw terminals, pitch 5,08         nrighterminal           Sampling time         1 ms minimum, and 2,5ms max         3 (12bits)           Analog input         2         3 (12bits)           Logic inputs         1         Differental voltage input +10V         9-10V           Logic inputs         6 assignable logic inputs         12 (6 programable)           Logic cutputs (open collector)         6 assignable logic inputs         12 (6 programable)           Logic cutputs (open collector)         1         2 control of the programable           Logic cutputs (open collector)         1         2 control of the programable           Logic cutputs (open collector)         1         2 control of the programable           Logic cutputs (open collector)         1         2 control of the programable           Logic cutputs (open collector)         1         2 control of the programable           Logic cutputs (open collector)         2 control of the programable         1           Logic cutputs (open collector)         2 control of the programable         1           Logic cutputs (open collector)         2 control of the programable of the programable of the programable of the programable	Number of option board at the same time	3	3
On basic product         Standard           Removable terminals         Yes         terminal as removable           Type of terminal & gitch         Screw terminals, pitch 5,08         ring terminal           Sampling time         1 ms minimum, and 2,5ms max         3 (12bits)           Analog input         2         3 (12bits)           Logic input         1 Different valuage input ±10V         ±10V           Logic inputs         6 assignable logic inputs         1 (2 (6 programmable)           Logic untrust (open collector)         nn         5           Relays         2 assignable relays (NONC, NC)         1 relay NO, NC           Analog outputs         1         2 (2 no. 1	Inputs / Outputs		
Removable terminals   Yes   terminal and ard is removable   Type of terminal as pitch   Serve terminals, pitch 5.08   ring terminal			Standard
Type of terminal & pitch   Screw terminals, pitch 6.08   ring terminal   Sampling time   1		Yes	
Sampling time			
Analog input	•		
Differential voltage input +-10V		2	3 (12bits)
Cogin inputs	1	Differential voltage input +/-10V	
Cogic inputs	2		
Logic outputs (open collector)   no			
Relays		6 assignable logic inputs	12 (6 programmable)
Analog outputs 1		110	·
Assignable output (voltage or current)			
Dedicated I/O	Analog outputs	•	
Dedicated I/O	1	Assignable output (voltage or current)	
1   Power removal input (compliance with 61800-5-2	2		
1	Dedicated I/O		
1	1		
Removable terminals         Yes           Type of terminal & pitch         Screw terminals, pitch 5,08           Sampling time         5ms           Analog input         no           2         -           Logic limputs         -           Logic outputs (open collector)         2 assignable logic inputs           Logic outputs (open collector)         2 assignable open collector outputs           Relays         1 assignable relay (NO/NC)         3 relays           Analog outputs         no         -           2         -         -           3         -         -           2         -         -           2         -         -           2         -         -           2         -         -           3         -         -           2         PTC input         -           -         -         -           1 / O Option 2         Extended I/O card         Extended Expansion Analog output (2AO) or or Digital output (7LO)           Removable terminals         Yes         -           Type of terminal & pitch         Screw terminlas, pitch 3,81 except relay that 5,08           Sampling time         5ms      <	2	PTC Input on LI	
Removable terminals         Yes           Type of terminal & pitch         Screw terminals, pitch 5,08           Sampling time         5ms           Analog input         no           2         -           Logic limputs         -           Logic outputs (open collector)         2 assignable logic inputs           Logic outputs (open collector)         2 assignable open collector outputs           Relays         1 assignable relay (NO/NC)         3 relays           Analog outputs         no         -           2         -         -           3         -         -           2         -         -           2         -         -           2         -         -           2         -         -           3         -         -           2         PTC input         -           -         -         -           1 / O Option 2         Extended I/O card         Extended Expansion Analog output (2AO) or or Digital output (7LO)           Removable terminals         Yes         -           Type of terminal & pitch         Screw terminlas, pitch 3,81 except relay that 5,08           Sampling time         5ms      <	1 / O Ontion 1	Laio I/O card	Delay aprel
Type of terminal & pitch  Sampling time  Analog input  1			kelay card
Sampling time         5ms           Analog input         no         -           2         -         -           Logic inputs         4 assignable logic inputs         -           Logic outputs (open collector)         2 assignable open collector outputs         -           Relays         1 assignable relay (NO/NC)         3 relays           Analog outputs         no         -           1         -         -           2         -         -           3         -         -           Dedicated I/O         1         -10V supply         -           2         PTC input         -           3         -         -           4         Extended I/O card         Extended Expansion Analog output (2AO) or Digital output (7LO)           8         Ferminals         Yes         Picture and Expansion Analog output (2AO) or Digital output (7LO)           9         Ferminals         Yes         Picture and Expansion Analog output (2AO) or Digital output (7LO)           9         Ferminals         Yes         Picture and Expansion Analog output (2AO) or Digital output (7LO)           1         1 differential current input         -         -           2         1 voltage / current input <td></td> <td>7.7</td> <td></td>		7.7	
Analog input			
1			
Logic outputs (open collector)   2 assignable open collector outputs	Analog input	no	
Logic outputs (open collector)   2 assignable open collector outputs	1		<u>-</u>
Logic outputs (open collector)   2 assignable open collector outputs	2		-
Logic outputs (open collector)   2 assignable open collector outputs	3		-
Relays	Logic inputs	4 assignable logic inputs	<u>-</u>
Relays	Logic outputs (open collector)	2 assignable open collector outputs	-
Analog outputs			3 relays
1	-		-
Dedicated I/O	1		_
Dedicated I/O	2		
Dedicated I/O	3		
1	Dedicated I/O		-
PTC input   -	Journal of the state of the sta	40\/ a	
I / O Option 2  Extended I/O card  Extended I/O card  Expansion Analog output (2AO) or Digital output (7LO)  Removable terminals  Type of terminal & pitch  Screw terminlas, pitch 3,81 except relay that 5,08  Sampling time  Analog input  2  -  1 1 differential current input  -  2 1 voltage / current input  -  3 Logic inputs  Logic outputs (open collector)  2 assignable logic inputs  Relays  1 assignable relay (NO/NC)  -  2 other cards  Expansion Analog output (2AO) or Digital output (7LO)  A contract the current input	1		<del>-</del>
Extended I/O card  Expansion Analog output (2AO) or Digital output (7LO)  Removable terminals  Yes  Type of terminal & pitch  Screw terminals, pitch 3,81 except relay that 5,08  Sampling time  5ms  Analog input  2  -  1 1 differential current input  -  2 1 voltage / current input  -  3 1 voltage / current input  -  Logic inputs  Logic outputs (open collector)  Relays  1 assignable relay (NO/NC)  -  Expansion Analog output (2AO) or Digital output (7LO)  Expansion Analog output (2AO) or Digital output (7LO)  Analog output 5,08  Expansion Analog output (2AO) or Digital output (7LO)	2	PTC input	-
Extended I/O card  Expansion Analog output (2AO) or Digital output (7LO)  Removable terminals  Yes  Type of terminal & pitch  Screw terminals, pitch 3,81 except relay that 5,08  Sampling time  5ms  Analog input  2  -  1 1 differential current input  -  2 1 voltage / current input  -  3 1 voltage / current input  -  Logic inputs  Logic outputs (open collector)  Relays  1 assignable relay (NO/NC)  -  Expansion Analog output (2AO) or Digital output (7LO)  Expansion Analog output (2AO) or Digital output (7LO)  Analog output 5,08  Expansion Analog output (2AO) or Digital output (7LO)	3		
Removable terminals Type of terminal & pitch Screw terminals, pitch 3,81 except relay that 5,08 Sampling time Sms Analog input 2 - 1 1 differential current input - 2 1 voltage / current input - 3 - Logic inputs 4 assignable logic inputs Logic outputs (open collector) Relays 1 assignable relay (NO/NC) - Or Digital output (7LO)  Or Digital output (7LO)  A subject output 5,08  Screw terminals, pitch 3,81 except relay that 5,08  Screw terminals, pitch 3,81 except relay that 5,08  Sampling time  5 ms  - 1 voltage / current input - 2 assignable logic inputs - 1 assignable open collector outputs	I / O Option 2		
Removable terminals  Type of terminal & pitch  Screw terminals, pitch 3,81 except relay that 5,08  Sampling time  5ms  Analog input  2		Extended I/O card	
Removable terminals  Type of terminal & pitch  Screw terminals, pitch 3,81 except relay that 5,08  Sampling time  5ms  Analog input  2  1 1 differential current input  2 1 voltage / current input			<del>-</del>
Type of terminal & pitch  Screw terminlas, pitch 3,81 except relay that 5,08  Sampling time  5ms  Analog input  2  1 1 differential current input  2 1 voltage / current input  - 3  Logic inputs  4 assignable logic inputs  Logic outputs (open collector)  2 assignable relay (NO/NC)  -	Removable terminals	Yes	J (. 20)
Sampling time         5ms           Analog input         2         -           1         1 differential current input         -           2         1 voltage / current input         -           3         -           Logic inputs         4 assignable logic inputs         -           Logic outputs (open collector)         2 assignable open collector outputs           Relays         1 assignable relay (NO/NC)         -			
Analog input         2         -           1         1 differential current input         -           2         1 voltage / current input         -           3         -           Logic inputs         4 assignable logic inputs         -           Logic outputs (open collector)         2 assignable open collector outputs           Relays         1 assignable relay (NO/NC)         -			
1         1 differential current input         -           2         1 voltage / current input         -           3         -           Logic inputs         4 assignable logic inputs         -           Logic outputs (open collector)         2 assignable open collector outputs           Relays         1 assignable relay (NO/NC)         -			
2 1 voltage / current input - 3 - Logic inputs 4 assignable logic inputs - Logic outputs (open collector) 2 assignable open collector outputs Relays 1 assignable relay (NO/NC) -	- manog mput	_	
3 - Logic inputs 4 assignable logic inputs - Logic outputs (open collector) 2 assignable open collector outputs  Relays 1 assignable relay (NO/NC) -	1		
Logic outputs (open collector)     2 assignable open collector outputs       Relays     1 assignable relay (NO/NC)	2	i voitage / current input	-
Logic outputs (open collector)     2 assignable open collector outputs       Relays     1 assignable relay (NO/NC)	3		-
Relays 1 assignable relay (NO/NC) -			-
Analog outputs 2	In I	1 assignable relay (NO/NC)	-
		r designable relay (real tel	

2 assignable voltage/current Analog outputs   -	ulse In
PTC input	ulse In
PTC input	ulse In
PTC input	ulse In
2	ulse In
1 / O Option 3	ulse In
I / O Option 3 Removable terminals Type of terminal & pitch Sampling time Analog input	ulse In
Removable terminals         Yes           Type of terminal & pitch	uise iri
Type of terminal & pitch  Sampling time  Analog input  1 2 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs 1 2 Analog outputs 1 C C C C C C C C C C C C C C C C C C	
Sampling time       -         Analog input       -         1       -         2       -         3       -         Logic inputs       -         Logic outputs (open collector)       -         Relays       -         Analog outputs       -         2       -         3       -         Dedicated I/O       -         2       -         3       -         Cothers       -	
Analog input	
1	
Logic outputs (open collector)	
Relays Analog outputs  1	
Analog outputs  1	
1	
2 - 3	
3	
1 - 2 - 3 - Cothers	
1 - 2 - 3 - Cothers	
2	
Communication	
Separated control supply  Yes 24V dc as standard  Yes same as mair	ns
On the basic product Yes	
Protocol available 1 Modbus fully configurable with I/O scanner RS-485 Multi-drop serial communication    RS-485 M	tion standard
Protocol available 2 Canopen fully configurable -	
Protocol available 3 -	
Communication option card	
Protocol available 1 Fipio PL7 Profibus-DP	
Protocol available 2 FIPIO with messaging DeviceNet	
Protocol available 3 Modbus Plus Cclink	
Protocol available 4 Uni-Telway, Modbus ASCII, Modbus RTU/Jbus Melsec Net/mini	
Protocol available 5 INTERBUS-S Modbus Plus Protocol available 6 Profibus DP CANopen	
Protocol available 6 Profibus DP CANopen Protocol available 7 Ethernet -	
Protocol available 8 DeviceNet -	
Protocol available 9 -	
Protocol available 10 -	
Protocol available 11 -	
Protocol available 12 -	
Gateway Protocol available 1 AS-i -	
Protocol available 1 AS-I - Protocol available 2 -	
Protocol available 3 -	
Protocol available 4 -	
Protocol available 5 -	
Protocol available 6 -	
Protocol available 7 -	
Protocol available 8 -	
Protocol available 9	
Protocol available 10	
Protocol available 11	
Protocol available 12	
Protocol available 13	
Operator panel	
Operator parier	
Dialogue 1 Standard	
Integrated / removable Integrated Removable	
Type of screen 4 Led digits 7 digits display	
Language code Number of keys 4 7	
Number of keys 4 / / Number of Leds 5 Leds for the diagnostic of the integrated fieldbus 8 + 2 on the produ	ıct
Keypad command no Reverse, forward, stop	
Function keys no Mode, set, up, dow	
Others Copy function, remote contr	
Dialogue 2 Optional	
Integrated / removable Removable Removable Removable	

Type of diapley	Cranhia dianlass	LCD backlit display
Type of display	Graphic display	
Language	6 languages (languages are flashable). Suitable for asian characters	8 languages : japanese, english, german, french, spanish, italian, swedish, finnish
Number of keys	use of a shuttle + 1 key	24 (numerical keypad)
Number of Leds	,	, ,,,
	no Van	2 ont the product
Keypad command	Yes 4	Reverse, forward, stop/reset
Function keys	·	Help, set, shift, escape, read, write,
Others	navigation with a shuttle could be used to save and restore 4 configurations	
	remote mounting kit available  Multipoint connection	Copy function, remote control available
Dialogue 3	Multipoliti connection	-
Integrated / removable		<u> </u>
Type of display		
Language		<u>-</u>
Number of keys		<u>-</u>
Number of Leds		-
Keypad command		<u>-</u>
Function keys		-
		-
Others		-
Protections		
Thermal protection	Yes, I <sup>2</sup> t motor thermal protection depending on the motor frequency. Memorization when power off	
Electronic / PTC	Yes, dedicated input on option cards	
The motor thermal state is saved when power is off		
Short circuit between phase	yes	Yes
Ground fault	yes	Yes
Output phase loss	yes	Yes
Input phase loss	yes	100
Braking resistor protection		
	No	
Overload	yes	V
Overvoltage	yes	Yes
Undervoltage	yes	Yes
Drive thermal protection	yes	
Locked motor protection	Yes	· ·
Stall prevention	Yes	Yes
Others		
Options and Accessoiries		
Braking resistors	protected braking resistor	
	Hoisting resistors	Yes
Inductances (chokes)	Line chokes	Yes
Regenerative Units	Yes	Yes, line regenerative braking units as an option
EMC filters	Additional footprint filters	Yes
Output filters	Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables	Yes
Others	Control fan kit Canopen accessories keypad remote mounting kit	
Specific Product		
Product mounted inside enclosures	the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside	
Water cooled drive	no	-
Others		<u>-</u>
List of marking	CE, UL, CSA, DNV	CE, UL, cUL
	, , , , , , , , , , , , , , , , , , , ,	
Part number		FR - A520 - 3,7K
1st part	ATV71 : Model	FR - A5 : Familly name
2nd part	Type H:heatsink	<b>20 : voltage</b> 20 : 200 V class 40 : 400 V class
3rd part	Power : 075 = 0,75kW U75 = 7,5kW D75 = 75kW	<b>3,7K : range</b> from 0.4 kW to 280 kW
4th part		HOIH O, T KVV LO ZOU KVV
	15 : power	-
5th part	Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V	_
6th part	X : without filter Z : without operator display XZ : without filter and without operator display	-
7th part	and the second second	
8th part		-
-		-
9th part		-
Communication Messages		
Message 1		Advanced Intelligent control
Message 2		

Manager 2		
Message 3		
Message 4		
Message 5		
Message 6		
Message 7		
Type of communication		product
Environment, recyclability		product
Safety Compliance		
	EN1800-5-1	
	Power removal EN1800-5-2 / EN 954-1 category 3	
	1 Ower removal Envious-3-27 Envisa-1 category 3	
0.5		
Software Opening		
Logic Operation	no (could be carried out with the controller inside card)	
Controller (PLC) Inside	Yes	
	103	
Software Card		
Product Services		
Flashable	Yes	
PC Software	PowerSuite sotware workshop	
Scope	Yes	
Application Functions		
Number of functions	#150	
Number of parameters	#800	214
Main functions		211
man functions	- PID regulator	
	- current and torque limitation	
	- S ramp	
	- short ramp	
	- 16 preset speeds + jog	
	- 3 wire control	
	- brake sequence	
	- protection by passwords	
List of advanced functions	Droke assumes adented to	
	- Brake sequence adapted to	
	hoisting, travelling, orientation and lift	
	weight measurement	
	- high speed hoisting	
	- brake feedback	
	- load sharing	
	-Limit switches management	
	- non linear refence	
	- multi-motor	
	- multi parameters	
	- Power removal	
	- alarm group	
	<ul> <li>limit switches positioning with</li> </ul>	
	low speed time optimization	
	- summing, differentiating, multiplying reference	
	- fast catch on fly	
	lact catch on my	
	- fastest controlled stop	
	- fastest controlled stop - traverse control	
	<ul> <li>fastest controlled stop</li> <li>traverse control</li> <li>motor surge limitation</li> </ul>	
	- fastest controlled stop - traverse control	
	<ul> <li>fastest controlled stop</li> <li>traverse control</li> <li>motor surge limitation</li> </ul>	
	<ul> <li>fastest controlled stop</li> <li>traverse control</li> <li>motor surge limitation</li> </ul>	
Price Positioning	<ul> <li>fastest controlled stop</li> <li>traverse control</li> <li>motor surge limitation</li> </ul>	
	<ul> <li>fastest controlled stop</li> <li>traverse control</li> <li>motor surge limitation</li> </ul>	
User's Manual	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters	
User's Manual Simplified	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes	
User's Manual	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes	Yes
User's Manual Simplified	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes	Yes French, english, spanish
User's Manual Simplified Complete Language	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes	
User's Manual Simplified Complete Language Paper	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes G languages and more Yes	
User's Manual Simplified Complete Language Paper CD	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes 6 languages and more Yes Yes	French, english, spanish
User's Manual Simplified Complete Language Paper CD Web Site	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes G languages and more Yes	French, english, spanish www.meau.com
User's Manual Simplified Complete Language Paper CD Web Site Others	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes 6 languages and more Yes Yes	French, english, spanish
User's Manual Simplified Complete Language Paper CD Web Site Others	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes 6 languages and more Yes Yes	French, english, spanish www.meau.com
User's Manual Simplified Complete Language Paper CD Web Site Others Applications	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com	French, english, spanish  www.meau.com  Option manual
User's Manual Simplified Complete Language Paper CD Web Site Others Applications Hoisting / crane	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes	French, english, spanish  www.meau.com Option manual  Yes
User's Manual Simplified Complete Language Paper CD Web Site Others Applications Hoisting / crane Horizontal handling	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes	French, english, spanish  www.meau.com Option manual  Yes Yes
User's Manual Simplified Complete Language Paper CD Web Site Others Applications Hoisting / crane Horizontal handling Conveyor	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes	French, english, spanish  www.meau.com Option manual  Yes Yes Yes Yes
User's Manual Simplified Complete Language Paper CD Web Site Others Applications Hoisting / crane Horizontal handling	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes	French, english, spanish  www.meau.com Option manual  Yes Yes
User's Manual Simplified Complete Language Paper CD Web Site Others Applications Hoisting / crane Horizontal handling Conveyor Packaging	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	French, english, spanish  www.meau.com Option manual  Yes Yes Yes Yes
User's Manual Simplified Complete Language Paper CD Web Site Others Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	French, english, spanish  www.meau.com Option manual  Yes Yes Yes Yes Yes Yes Yes
User's Manual Simplified Complete Language Paper CD Web Site Others Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	French, english, spanish  www.meau.com Option manual  Yes Yes Yes Yes Yes Yes Yes Yes Yes
User's Manual Simplified Complete Language Paper CD Web Site Others Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry Fan	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	French, english, spanish  www.meau.com Option manual  Yes Yes Yes Yes Yes Yes Yes
User's Manual Simplified Complete Language Paper CD Web Site Others Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	French, english, spanish  www.meau.com Option manual  Yes Yes Yes Yes Yes Yes Yes Yes Yes
User's Manual Simplified Complete Language Paper CD Web Site Others Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry Fan Lift	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	French, english, spanish  www.meau.com Option manual  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
User's Manual Simplified Complete Language Paper CD Web Site Others Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry Fan Lift Compressor	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	French, english, spanish  www.meau.com Option manual  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
User's Manual Simplified Complete Language Paper CD Web Site Others Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry Fan Lift	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes 6 languages and more Yes Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	French, english, spanish  www.meau.com Option manual  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
User's Manual Simplified Complete Language Paper CD Web Site Others Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry Fan Lift Compressor	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes 6 languages and more Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	French, english, spanish  www.meau.com Option manual  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
User's Manual Simplified Complete Language Paper CD Web Site Others Applications Hoisting / crane Horizontal handling Conveyor Packaging Pumping Textile industry Fan Lift Compressor	- fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters  Yes Yes Yes 6 languages and more Yes Yes Yes Telemecanique.com  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	French, english, spanish  www.meau.com Option manual  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye

ATV71 vs FUJI G11S		
ITEM	ATV71	G11S
Picture	SAME AND	FRENIC BOOOP11
Drive sizing	V	HT and VT
Constant Torque (CT) High torque (HT) Variable Torque (VT) Standard torque (VT)	Yes No	Yes Yes (7,5 kW or larger)
Input		roo (r,o ker or langer)
Single phase 200V range	Yes by using 3 ph drive + derating	No
Power range	0,37 to 37kW	-
Number of ratings	9 200V -15% to 240V +10%	-
Voltage range with tolerance Mains frequency and tolerance	200V -15% to 240V +10% 50 Hz ±20% or 60 Hz ±20%	
Three phase 200V range	90 HZ ±20% 01 60 HZ ±20% Yes	Yes
Power range		0,2 to 90 kW
Number of ratings	17	
Voltage range with tolerance	200V -15% to 240V +10%	200 - 230 V +10% -15%
Mains frequency and tolerance	50 Hz ±20% or 60 Hz ±20%	50 - 60 Hz ±5% Yes
Three phase 400V range Power range	0,75 to 630kW	0,4 - 400 kW
Number of ratings	29	25 CT
		20 VT
Voltage range with tolerance	380V-15% to 480V + 10%	380 - 480 V +10% -15%
Mains frequency and tolerance Three phase 600V range	50 Hz ±20% or 60 Hz ±20% No	50 - 60 Hz ±5% No
Power range	INO	
Number of ratings		-
Voltage range with tolerance		-
Mains frequency and tolerance		-
Three phase 690V range	No	No
Power range Number of ratings		<u> </u>
Voltage range with tolerance		<u> </u>
Mains frequency and tolerance		-
Ungrounded supply	Disconnexion and reconnexion of Y capacitors	
EMC		
HF EMC compliance as standard		No
Conducted emission		EMC as external option
Standard and level	EN61800-3 C2 (II < 16A)	EN 61800-3
Chialded mater askis to colo	EN61800-3 C3 (II>16A)	
Shielded motor cable length	10 m up to 15kW 50m up to 75kW	
Unshielded motor cable length		
Switching frequency	4kHz	
Power range integration	All ratings (except from 11 to 75kW 200V class)	
Shielding connexion	On EMC plate	
Radiated emission		
Standard and level	EN55011 Class A	
Power range	All the ratings	
LF EMC compliance as standard  Inductance (AC or DC)	DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class	No (DC choke as option)
Power range integration		
Standard		
% THD		
Immunity		The inverter meet EN61800-3 as standard
Standard 1 + level	IEC 61000-4-2 level 3 IEC 61000-4-3 level 3	
Standard 2 + level Standard 3 + level		
Standard 4 + level	IEC 61000-4-4 level 4	
Standard 5 + level	IEC 61000-4-6 level 3	
Low voltage directive	EN 50178	Complies with low voltage directive EN-50178
Others	IEC 61800-5-1	
Physical environment		
Number of size (frame)	13 sizes	

Protection Degree	IP21 and IP41 on upper part (EN 50178 and 61800-5-1) IP31 with gland box, Nema type 1 with conduit box	Standard : IP 40 up to 0,75 kW natural cooling Standard : IP 40 1,5 to 22 kW fan cooling Standard : IP00 30 kW or more fan cooling
IP + power range	DOX	IP 20 optional for 30 kW or higher
IP + power range		Water proof model IP65 for 7,5 kW or smaller as separate series
IP + power range		Water proof model IP54 for 11 to 22 kW as separate series
IP + power range		-
Temperature		
Operating ambiant temperature	-10 to +50°C	-10 °C to +50°C (without performances reductions)
Storage temperature	-25 to 70°C	-25°C to + 65°C
Humidity	95% non condensing without drop	5 to 95% non condensing
Operational altitudes	1000m without derating. Possibile up to 3000m	1000 m ( 1% derating each 100 m up to 3000 m)
Vibrations	. 500.000 up to 5000	3mm peak from 2-9 Hz, 9.8 m/s2 from 9-20 Hz, 2m/s2 from 20-55 Hz, 1 m/s2 from 55-200 Hz,
Other		V
Automatic stop of fan	Yes	Yes
Mounting		
Drive Shape	Compact	Compact with width reduction on small ratings
Side by side mounting	Yes without derating	Yes, up to 22 kW
Heat evacuation outside enclosure	Yes, the power section is IP54	
Operating position	Vertical	
Others	-	Uniform height (260 mm) of the product up to 7,5 kW
Power connexion		
DC Bus connexion	Yes	Yes
DC inductance connexion	Line inductance or DC inductance	Yes
Removable terminals	No	no
Bottom or Top/Bottom		Bottom
	Bottom	DOLLOTT
Motor control		
AC motors motor control		
U/F	Yes	Yes
SVC (open loop)	Yes	Yes
FVC (closed loop)	Yes	Yes
Type of encoder	RS422, Open collector or Push pull	RS422, open collector
Others	ENA	
Synchronous or brushless motors		
Open loop	Yes	no
Closed loop	No	no
Performances	110	
Speed range		
Motor quadrant	1 : 100 open loop	Open loop 1 : 120
Generator quadrant	1 : 1000 closed loop 1 : 50 open loop	closed loop 1:1200
Generator quadrant	1 : 50 open loop 1 : 1000 closed loop	
Overtorque	From 170 to 2.2 Tn during 60s	160% during 60s
Overtorque	from 200 to 240% during 2s	100 % during 003
Rated current philosophy	1,1 In motor (380V)	
0,75kW / 400V	In motor = 2 A	In motor = 2 A
·	In drive = 2,3 A	In drive = 2,5 A
4 kW / 400V	In motor = 8,5 A	In motor = 8,5 A
	In drive = 10,5 A	In drive = 9 A
22 kW / 400V	In motor = 40,5 A	In motor = 40,5 A
	In drive = 48 A	In drive = 45 A
Overcurrent capability	180% I motor during 60s 200% I motor during 2s	150% of rated current for 1 min 180% of rated current for 0,5 s above 30 kW 200% of rated current for 0,5 s up to 30 kW
Type of control and accuracy		
Speed control	Yes	Speed control accuracy = ±0,02% Speed control response = 40 Hz
		(22 kW or smaller)
Torque control	Yes	Yes
Torque rise time		
Sampling time of the loop		
Autotuning		Yes
On line / Off line	Off line and On line	Both offline and online
Ways of execution	2 mio dila 01. mio	Offline :
Trays of exceedibility	By keypad, Logic input, at power up	Selectable with or without motor rotating Online: Dynamically compensates regulator for changes in motor temperature
Values measured		-
Prefluxing	Yes	-
Braking		
Braking transistor	Yes	Integrated up to 7,5kW (AWG ED=3% ) external braking unit as option
Braking performance w/o resistor	Without resistor 100% Cn : 0,37 - 0,75 kW 30% Cn : 1,5 - 15 kW With resistor (as an option) Until 170% Cn	20% max

Output frequency range	0,1 to 1000Hz up to 37kHz up to 500Hz above	0,1 - 400 Hz
Output frequency resolution	0,1Hz	0,01Hz
Switching frequency	·	
range	Settable from 0,5 to 16kHz	High torque 0,75 - 15 kHz up to 55 kW 0,75 - 10 kHz above than 75 kW
factory setting	4kHz up to 30kW 2,5kHz above	High torque 15 kHz up to 55 kW 10 kHz above than 75 kW
Integrated output filter		No
dv/dt		
Motor voltage surge limitation	Yes	
sinus	no	
Others Frequency setting resolution	no	
Serial		Link setting: 1/20000 of maximum frequency
Analog	11 bits	1/3000 of max frequency
Digital		0,01 Hz for frequency up to 99,9 Hz
BA calculation		0,1 Hz for frequency > 100 Hz
Modularity  Number of option board at the same time	3	2
Inputs / Outputs	3	2
On basic product		Standard
Removable terminals	Yes	- Claritain L
Type of terminal & pitch	Screw terminlas, pitch 5,08	
Sampling time	1ms minimum , and 2,5ms max	
Analog input	2	3
1	Differential voltage input +/-10V	± 10 V
2	current or voltage input	4 - 20 mA
3		0 - 10 V
Logic inputs	6 assignable logic inputs	11 ( 9 programmable)
Logic outputs (open collector)	no	4 transistors output
Relays Analog outputs	2 assignable relays (NO/NC, NC)	1 relay output 1
Analog outputs	Assignable output (voltage or current)	-
2		-
Dedicated I/O	2	1 pulse
1	Power removal input (compliance with 61800-5-2	PTC could be conected to an AI (I)
2	,	-
3		- Deleventurational
I / O Option 1	Lgic I/O card	- Relay output card
I / O Option 1 Removable terminals	Lgic I/O card Yes	Relay output card
I / O Option 1 Removable terminals Type of terminal & pitch	Lgic I/O card Yes Screw terminlas, pitch 5,08	Relay output card
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms	Relay output card
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time	Lgic I/O card Yes Screw terminlas, pitch 5,08	- -
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no	- - - -
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no	- - - - -
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no 4 assignable logic inputs	- - - - - -
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no 4 assignable logic inputs 2 assignable open collector outputs	- - - - - - - - - -
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 Logic inputs Logic outputs (open collector) Relays	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC)	- - - - - - - -
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 Logic inputs Logic outputs (open collector) Relays Analog outputs	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no 4 assignable logic inputs 2 assignable open collector outputs	- - - - - - - - - - 4 relays
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no	- - - - - - - - - -
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 Logic inputs Logic outputs (open collector) Relays Analog outputs	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs 1 2 2 3 2 3 4 2 4 2 4 2 4 2 2 4 2 4 2 4 2	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no 4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no -10V supply PTC input	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O  1 2 3 3 Dedicated I/O	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply PTC input	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O 1 1 2 3 I / O Option 2	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply PTC input  Extended I/O card	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O 1 2 3 I / O Option 2 Removable terminals	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply PTC input  Extended I/O card Yes	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O  1 2 3 I / O Option 2 Removable terminals Type of terminal & pitch	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply PTC input  Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O 1 2 3 I / O Option 2 Removable terminals Type of terminal & pitch Sampling time	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply PTC input  Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O  1 2 3 I / O Option 2 Removable terminals Type of terminal & pitch	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply PTC input  Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O 1 2 3 I / O Option 2 Removable terminals Type of terminal & pitch Sampling time	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply PTC input  Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 I / O Option 2 Removable terminals Type of terminal & pitch Sampling time Analog input	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply PTC input  Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O 1 1 2 Removable terminals Type of terminal & pitch Sampling time Analog input	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply PTC input  Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O  1 1 2 3 I / O Option 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector)	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply PTC input  Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs 2 assignable open collector outputs	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O  1 1 2 3 I / O Option 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs  1 2 3 Logic inputs Logic outputs (open collector) Relays	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply PTC input  Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input 1 voltage / current input	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O  1 1 2 3 I / O Option 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector)	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply PTC input  Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) 2	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O  1 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs 1 2 3 Logic outputs 1 2 3 Logic outputs (open collector) Relays Analog outputs 1 2 3 Logic outputs (open collector) Relays Analog outputs (open collector) Relays Analog outputs	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply PTC input  Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) 2 2 assignable voltage/current Analog outputs	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O  1 1 2 3 I / O Option 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs  1 2 3 Logic inputs Logic outputs (open collector) Relays	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply PTC input  Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) 2 2 assignable voltage/current Analog outputs	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O  1 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs  1 2 3 Logic outputs 3 Logic outputs 3 Logic outputs 4 3 Logic outputs 5 Logic outputs 6 3 Logic outputs 7 Relays Analog outputs 1 2 3 Logic outputs 1 2 3 Logic outputs (open collector) Relays Analog outputs 1 2 3 Logic outputs 1 2 3 3 Logic outputs 1 3 2 3 3 Logic outputs 1 3 2 3 3 Logic outputs 1 3 3 Logic outputs 3 3 Logic outputs 3 3 Logic outputs 4 3 3 Logic outputs 4 3 3 Logic outputs 4 3 3 Logic outputs 5 3 3 Logic outputs 6 3 3 Logic outputs 7 3 3 Logic outputs 8 3 3 Logic outputs 9 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply PTC input  Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) 2 2 assignable voltage/current Analog outputs	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O  1 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs  Logic outputs (open collector) Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply PTC input  Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) 2 2 assignable voltage/current Analog outputs	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O  1 1 2 3 I / O Option 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs  Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply PTC input  Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) 2 2 assignable voltage/current Analog outputs PTC input	
I / O Option 1 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs Logic outputs (open collector) Relays Analog outputs  1 2 3 Dedicated I/O  1 2 Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic inputs  Logic outputs (open collector)  Removable terminals Type of terminal & pitch Sampling time Analog input  1 2 3 Logic outputs (open collector) Relays Analog outputs  1 2 3 3 Analog outputs  1 2 3 3 Analog outputs  1 2 3 3 Analog outputs	Lgic I/O card Yes Screw terminlas, pitch 5,08 5ms no  4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) no  -10V supply PTC input  Extended I/O card Yes Screw terminlas, pitch 3,81 except relay that 5,08 5ms 2 1 differential current input 1 voltage / current input 4 assignable logic inputs 2 assignable open collector outputs 1 assignable relay (NO/NC) 2 2 assignable voltage/current Analog outputs  PTC input	

I / O Option 3	Controller inside card	Synchronization card
Removable terminals	Yes	-
Type of terminal & pitch	163	-
		-
Sampling time		-
Analog input		-
2		-
3		-
	3	-
Logic inputs Logic outputs (open collector)		-
		-
Relays		-
Analog outputs		-
1		-
2	2	-
3	3	-
Dedicated I/O		-
1		_
		-
		-
3	3	-
Others		PG feedback card (2 models)
		Synchronised operation card
		T-link interface card
Communication		
Separated control supply	Yes 24V dc as standard	Yes same as mains
On the basic product	Yes	Standard
Protocol available 1		RS485 RTU standard
Protocol available	Modbus fully configurable with I/O scanner	RS485 RTO standard RS232C intreface as an option
Protocol available 2	Canopen fully configurable	-
	Tamepan tam) Tamingan tan	
Protocol available 3		-
Communication option card		Optional
Protocol available 1		DeviceNet
Protocol available 2	ů ů	Interbus S
Protocol available 3		Modbus Plus
Protocol available 4		Genius Interface
Protocol available 5	INTERBUS-S	Profibus DP
Protocol available 6	Profibus DP	CANopen
Protocol available 7	' Ethernet	-
Protocol available 8	DeviceNet	-
Protocol available 9		-
Protocol available 10		-
Protocol available 11		-
Protocol available 12		-
Gateway		-
Protocol available 1	AS-i	-
Protocol available 2		-
Protocol available 3		-
Protocol available 4		
Protocol available 5		-
Protocol available 6		-
Protocol available 7		-
Protocol available 8	3	-
Protocol available 9		-
Posta and associated to At		-
Protocol available 10		
Protocol available 11		-
Protocol available 12		-
Protocol available 13		-
Operator panel		
Dialogue 1		Standard
Integrated / removable		Removable
Type of screer	4 Led digits	Backlit LCD display + LED display (4 digits)
Language	code	6 languages : English, French, German, Italian, Spanish,
		Japanese
Number of keys		9
Number of Leds	Leds for the diagnostic of the integrated fieldbus	1 + 4 digit LED of the screen
Keypad command		Forward
	no	Reverse
		Stop
Function keys		Program Up
		Down
	no	Shift
		Reset
		Function/Data
		Smart keypad to copy parameters from one driver to
Others		
Others		another
Dialogue 2		another -
	Removable	
Dialogue 2		-
Dialogue 2  Integrated / removable	Graphic display	-

Number of Labb	Number of keys	use of a shuttle + 1 key	<del>-</del>
Foreign Control exp  Protections  Find the state of the state of the state and restore d could be used to state and restore and rest	-		-
Function two and adultion could be used to save and restore 4 coul		·	-
Cities rough of the shalled rough of the same restors 4 and restors 4 rough of severe and restors and restors 4 rough of severe and restors and restor	7.		_
Dialogue 3 Integrated i removable  Integrated constant of the second of the		•	<u> </u>
Dalogue 3  Integrated i removable indignations remove mounting of available indignated connections  Type of display  Number of keys  Number of keys  Number of Leds  Keysad command  Function keys  Others  Protections  Thermal protection  Function keys  Others  Protections  Thermal protection in the mail protection departing on Memorial state is saved when power is off Short circuit between phase is saved when power is off Short circuit between phase is saved when power is off Short circuit between phase is saved when power is off Short circuit between phase is saved when power is off Short circuit between phase is saved when power is off Short circuit between phase is saved when power is off Short circuit between phase is saved when power is off Short circuit between phase is saved when power is off Short circuit between phase is yes in y	Oulers		-
Distinguis 3 Integrated / removable			
Dialogue 3 Type of displays  Type of displays  Number of keysy  Number of Lodg  Number of Lodg  Number of Lodg  Furton Keys  Others  Protections  Thermal protection  Furton Keys  Furton K		remote mounting kit available	
Integrated i removable Type of display Language Number of logs Num		Multipoint connection	
Type of display  Language  Number of keys  Number of Leds  Koypad command  Fuction keys  Others  Protections  Thermal protection  Electronic / Piction flows  Thermal protection  Electronic / Piction flows  Thermal protection  Electronic / Piction  Electronic / Piction  The motor flowcomy  Memorization when power of the motor flowcomy  Memorization when	Dialogue 3		-
Language	Integrated / removable		-
Number of Legs Number of Legs Repaid command Function Reys Offers  Protections Thermal protection  Wes, I'm motor thermal protection depending on the motor frequency. Memoritation when power of the service of the motor frequency. Memoritation when power of the service of the motor frequency. Memoritation when power of the service of the motor frequency. Memoritation when power of the service of the motor frequency. Memoritation when power of the service of the motor frequency. Memoritation when power of t	Type of display		-
Number of Lode  Keyand command  Function keys  Others	Language		-
Function level  Protections  Thermal protection  The molor thermal state is saved when power is off the molor thermal state is saved when power off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal protection.  No. Yes  Origing phase loss  yes  Origing phase loss  Yes  Origing phase loss  Yes  Origing phase loss  Yes  Overcurate  Origing phase loss  Yes  Overcurate  Origing phase loss  Yes  Yes  Origing phase loss  Yes  Yes  Origing phase loss  Yes  Yes  Origing phase loss  Yes  Origing phase  White product  The post origing phase loss  Yes  Origing phase loss  Yes  Origing phase  Yes  Yes  Origing phase  Yes  Origing phase  Yes  Origing phase  Yes  Yes  Origing	Number of keys		-
Function level  Protections  Thermal protection  The molor thermal state is saved when power is off the molor thermal state is saved when power off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal state is saved when power is off the molor thermal protection.  No. Yes  Origing phase loss  yes  Origing phase loss  Yes  Origing phase loss  Yes  Origing phase loss  Yes  Overcurate  Origing phase loss  Yes  Overcurate  Origing phase loss  Yes  Yes  Origing phase loss  Yes  Yes  Origing phase loss  Yes  Yes  Origing phase loss  Yes  Origing phase  White product  The post origing phase loss  Yes  Origing phase loss  Yes  Origing phase  Yes  Yes  Origing phase  Yes  Origing phase  Yes  Origing phase  Yes  Yes  Origing			-
Protections Thermal protection power of the protection of the protection power of the protection p	Keypad command		-
Protections Thermal protection  Ves. Pt motor thermal protection the month of tengancy. Memorization when power off The motor thermal state is saved when power is off Short circuit between phase  Yes, dedicated input on option cards  Yes, dedicated input on option cards  Yes  Yes  Ground fault  Yes  Yes  Yes  Ground fault  Yes  Yes  Yes  Yes  Overload  Yes  Press  Press  Yes  Yes  Overload  Yes  Yes  Overload  Yes  Yes  Yes  Overload  Yes  Yes  Yes  Overload  Others  Overload  Others  Overload  Others  Options and Accessoiries  Braking resistors  Inductances (chokes)  Line chokes  Yes, Dynamic braking  Inductances (chokes)  Line chokes  Yes, PyMought little  Yes, PyMoug			_
Protections Thermal protection Thermal state is saved when power is off The motor thermal state is saved when power is off The motor thermal state is saved when power is off The motor thermal state is saved when power is off Thermal protection Thermal state is saved when power is off Thermal protection Thermal Thermal Protection Thermal Therma			
Thermal protection  Yes, I Pt motor thermal protection depending on the motor (proguency, Memotration when power off  The motor thermal state is saved when power is off Short circuit between phase  Yes, Gedicated input on option cards  Yes  Yes  Yes  Ground fault  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye			-
the motor frequency,  Biochamic 7PTC Yes, dedicated input on option cards  The motor thermal state is saved when power is off  Short circuit between phase yes Yes  Ground fault yes Yes  Output phase loss Yes  Fresh phase loss Yes  Fresh protection  No Yes  Fresh protection  No Yes  Fresh protection  No Yes  Fresh protection  No Yes  Overcotage  Yes  Overcotage  Yes  Overcotage  Yes  Overcotage  Yes  Overcotage  Others  Others  Options and Accessoiries  Braking resistor  Fresh protected braking resistor  Hobitoling resistors  Fresh protected braking resistor  Hobitoling resistors  Protected braking resistor  Protected braking resistor  Options and Accessoiries  Protected braking resistor  Protected braking resistor  Options and Accessoiries  Protected braking resistor  Protected braking resistor  Protected braking resistor  Options and Accessoiries  Protected braking resistor  Protected braking resistor  Protected braking resistor  Protected braking resistor  Options and Accessoiries  Protected braking resistor  Protected braking resistor  Protected braking resistor  Options and Accessoiries  Protected braking resistor  Protected bra			
Electronic / PTC   Ves, dedicated input on option cards   Yes	Thermal protection	the motor frequency.	Yes
The motor thermal state is saved when power is off Short circuit between phase Ground fault United Thermal state is saved when power is off Short circuit between phase Ground fault United Thermal State is saved when power is off Ground fault United Thermal State is saved when power is off Ground fault United Thermal State is saved when power is off Ground fault United Thermal State is saved when power is off Ground fault United Thermal State is saved when power is off Ground fault United Thermal State is saved when power is off Ground fault United Thermal State is saved when power is off Ground Thermal State is saved when power is off Ground Thermal State is saved when power is off Ground Thermal State is saved when power is off Ground Thermal State is saved when power is off Ground Thermal State is saved when power is off Ground Thermal State is saved when power is off Ground Thermal State is saved when power is off Ground Thermal State is saved when power is off Ground Thermal State is saved when power is off Ground Thermal State is saved when power is off Ground Thermal State is saved when power is off Ground Thermal State is off	Electronic / PTC		Yes
Short circuit between phase		- 11, 11 11 to a mpat on opnor our do	
Ground fault  Ves  Yes  Notuput phase loss  yes  Yes  Yes  Input phase loss  yes  Yes  Yes  Overload  Overload  Yes  Undervoltage  Ves  Yes  Undervoltage  Yes  Yes  Undervoltage  Yes  Yes  Ves  Ves  Ves  Ves  Ves  Ve		VAS	Ves
Output phase loss   yes   Yes   Yes   Parking resistor protection   No   Yes		·	
Input phase loss Raking resistor protection No Yes Overload Yes Yes Undervoltage Yes Yes Undervoltage Yes Yes Undervoltage Yes Undervoltage Yes Yes Options and Accessories Options and Accessories Braking resistors Fraking resistors Fraki			
Braking resistor protection  No Overload  Yes Overoltage Ves Ves Ves Overoltage Ves Ves Overoltag	· ·		
Overvoltage		·	
Overottage			
Undervoltage Ves Ves Ves Ves Ves Ves Ves Ves Ves Ve		·	
Drive thermal protection   Yes		·	
Locked motor protection Yes Ves Others Others Others Options and Accessoiries Braking resistors Inductances (chokes) Feed of the season of the		·	
Stall prevention Others Others Others Others Others Options and Accessoiries Braking resistors Additional floorprint filters Output filters Output filters Output filters Output filters Others		, ,	1 62
Options and Accessoiries  Braking resistors  Braking resistors  Protected braking resistor  Inductances (chokes)  Regenerative Units  EMC filters  Additional footprint filters  Additional footprint filters  Additional footprint filters  Fres  Additional footprint filters  Fres  Additional footprint filters  Additional footprint filters  Additional footprint filters  Fres  Additional footprint filters  Additional footprint filters  Fres  Fres  Fres  Fres  Bugglat lachometer  Keypad extension cable  Canopen accessories at Reypad extension cable  Canopen accessories at Reypad extension cable  Specific Product  Product  Product  Water cooled drive  In power section is IPS4 to be easily mounted in enclosure  with heat evacuation on the outside  Water cooled drive  In power section in IPS4 to be easily mounted in enclosure  Water acoled drive  In power section is IPS4 to be easily mounted in enclosure  Water acoled drive  In power section is IPS4 to be easily mounted in enclosure  Water acoled drive  In power section is IPS4 to be easily mounted in enclosure  Water acoled drive  UL, cult, TÜV (up to 22 kW), CE  FRN 5,5 G 11 S - 4 EN  FRN 5,5 G 11 S - 4 EN  FRN 5,5 G 11 S - 4 EN  FRN 5,5 S Nominal applied motor (kW)  Oz 2: 0.2 kW  Oz 2: 0.2 kW  Oz 2: 0.2 kW  Oz 3: 0.	-		Von
Options and Accessoiries  Braking resistors  Inductances (chokes)  Additional footprint filters  Yes  Pres  Output filters  Additional footprint filters  Additional footprint filters  Yes  Pres  Output filters  Additional footprint filters  Yes  Pres  Output filters  Additional footprint filters  Additional footprint filters  Fus  Additional footprint filters  Yes  Pres  Output filters  Additional footprint filters  Yes  Pres  Yes  Pres  Yes  Pres  Yes, PWM output filter  Digital tachometer  Keypad extension cable  Expanded extension cable  Expanded extension cable  Advise cooled drive  Others  Digital tachometer  Expanded extension cable  Advise cooled drive  Others  Digital tachometer  Expanded extension cable  Expanded extension cable  Advise cooled drive  Others  Digital tachometer  Expanded extension cable  Expanded extension cable  Expanded extension cable  UL,CUL, TÜV (up to 22 kW), CE  Part number  Expanded extension cable  Advise proof product  List of marking  CE, UL, CSA, DNV  UL,CUL, TÜV (up to 22 kW), CE  Part number  Expanded extension  FRN 5,5 G 11 S - 4 EN  Expanded extension cable  FRN 5,5 G 11 S - 4 EN  Expanded extension cable  Advise proof product  List of marking  CE, UL, CSA, DNV  UL,CUL, TÜV (up to 22 kW), CE  Part number  Expanded extension cable  FRN 5,5 G 11 S - 4 EN  Expanded extension cable  Advise proof product  List of marking  FRN 5,5 G 11 S - 4 EN  Expanded extension cable  Expanded extension cable  Advise proof product  UL,CUL, TÜV (up to 22 kW), CE  FRN 5,5 G 11 S - 4 EN  Expanded extension cable  Expanded extension cable  Advise proof product  List of marking  Expanded extension cable  Canoparation and extension cable  Expanded extension cable  Advise proof product  List of marking  Expanded extension cable  Exp	•	res	
CPU enror Blown out fuse   Blown out f	Others		
Detions and Accessoiries Braking resistors Inductances (chokes) Inductances (chokes) Inductances (chokes) Regenerative Units Pes Hoffilters Additional footprint filters Output filters Output filters Others Others Others  Control fan kit Canopen accessories keypad remote mounting kit  Specific Product Water cooled drive Others  CE, UL, CSA, DNV UL, CUL, TÜV (up to 22 kW), CE Part number Ist part Ist part ATV71: Model FRN: Series name  Type H: neatsink Type Type Type Type Type Type Type Type			
Descriptions and Accessoiries   Braking resistors   Protected br			
Braking resistors   protected braking resistor   Yes, Dynamic braking   Inductances (chokes)   Line chokes   Yes, AC lines reactors   Regenerative Units   Yes   Yes   EMC filters   Additional footprint filters   Yes   Output filters   Additional footprint filters   Yes   Output filters   Additional footprint filters   Inductances filters   Yes   Yes, PWM output filter   Inductances filters   Yes   Yes, PWM output filter   Inductances filters   Yes   Inductances   Yes, PWM output filter   Inductances   Yes   Yes   Inductances   Yes   Indu			Memory error
Braking resistors   protected braking resistor   Yes, Dynamic braking   Inductances (chokes)   Line chokes   Yes, AC lines reactors   Regenerative Units   Yes   Yes   EMC filters   Additional footprint filters   Yes   Output filters   Additional footprint filters   Ituli performances filters   Sinus filters   Others   Control fan kit   Canopen accessories   keypad extension cable   Expecific Product   Others   Control fan kit   Canopen accessories   keypad extension cable   Expecific Product   Others   Control fan kit   Canopen accessories   keypad extension cable   Expecific Product   Others   Digital tachometer   Keypad extension cable   Expecific Product   Others   Other section is IP54 to be easily mounted in   enclosure   with heat evacuation on the outside   Others   Other   Others   Other   Others   Other   UL,CUL, TÜV (up to 22 kW), CE   FRN 5,5 G 11 5 - 4 EN   FRN 15 G 11 5 - 4 EN   FRN 15 F G 11 5 - 4 EN   FRN 15 F G 11 5 - 4 EN   FRN 15 F G 11 5 - 4 EN   FRN 15 F G Manappiled motor (kW)   O 2 - 0,2 kW   O 4 - 0,2 kW   O 5 - 0,75 kW   O 5 - 0,75 kW   O 6 - 0,75 kW   O 75 - 75 kW   O	Options and Accessoiries		
Holsting resistors   Line chokes   Yes, AC lines reactors		protected braking resistor	Yes, Dynamic braking
Regenerative Units  EMC filters  Additional foloprint filters  Output filters  Output filters  Output filters  Additional foloprint filters  Fres, PWM output filter  Motor chokes full performances filters sins filters for EMC compliance with unshielded cables  Others  Control fan kit Canopen accessories keypad extension cable  Reypad extension cable  Specific Product  Product mounted inside enclosures  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside  Water cooled drive  Others  CE, UL, CSA, DNV  UL, CUL, TÜV (up to 22 kW), CE  Part number  ATV71: Model  FRN 5,5 G 11 S - 4 EN  1st part  ATV71: Model  FRN 5,5 G 11 S - 4 EN  FRN 5,5 (Nominal applied motor (kW) 0,2: 0,2 kW 0,4: 0,4 kW 0,75: 0,75 kW 0,4: 0,4 kW 0,75: 0,75 kW 0,75: 0,	-	Hoisting resistors	
EMC filters Output filters  Motor chokes filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad extension cable Keypad ex	Inductances (chokes)	Line chokes	Yes, AC lines reactors
Output filters    Motor chokes full performances filters sinus filters filters for EMC compliance with unshielded cables   Control fan kit Canopen accessories keypad extension cable			
tuli performances filters sinus filters sinus filters filters for EMC compliance with unshielded cables  Control fan kit Canopen accessories keypad extension cable keypad remote mounting kit  Specific Product  Product mounted inside enclosures  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside  Water cooled drive  no  Others  Ce, UL, CSA, DNV  UL, cUL, TÜV (up to 22 kW), CE  Part number  Series name  ATV71 : Model  FRN 5,5 G 11 S - 4 EN  1st part  ATV71 : Model  FRN 5,5 G 11 S - 4 EN  1st part  ATV71 : Model  FRN 5,5 G 14 S - 4 EN  1st part  ATV71 : Model  FRN 5,5 G 14 S - 4 EN  1st part  ATV71 : Model  FRN 5,5 G 11 S - 4 EN  1st part  ATV71 : Model  FRN 5,5 G 11 S - 4 EN  1st part  ATV71 : Model  FRN 5,5 G 11 S - 4 EN  FRN 5		Additional footprint filters	
Specific Product  Caples  Control fan kit Canopen accessories Reypad extension cable  Specific Product  Product mounted inside enclosures  Water cooled drive  Others  CE, UL, CSA, DNV  UL, CUL, TÜV (up to 22 kW), CE Part number  Ist part  ATV71: Model  Type H: heatsink Type Type Type Type Type Type Type Type	Output filters		Yes, PWM output filter
Control fan kit   Canopen accessories   Canopen accessories   Keypad extension cable			
Cables Control fan kit Canopen accessories Reypad extension cable  Specific Product Product Product mounted inside enclosures the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside  Water cooled drive  Others  CE, UL, CSA, DNV  UL, CUL, TÜV (up to 22 kW), CE Part number  Ist part  ATV71: Model  FRN: Series name  ATV71: Model  FRN: Series name  ATV71: Model  FRN: Series name  7 ype H: heatsink  Type H: heatsink  Power: O75 = 0,75kW U75 = 7,5kW U75 = 7,5k			
Canopen accessories keypad extension cable  Specific Product  Product mounted inside enclosures  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside  Water cooled drive  Others  CE, UL, CSA, DNV  UL, CUL, TÜV (up to 22 kW), CE  Part number  SFR 5,5 G 11 S - 4 EN  1st part  ATV71: Model  FRN : Series name  1st part  ATV71: Model  FRN : Series name  5,5: Nominal applied motor (kW) 0,2: 0,2 kW 0,4: 0,4 kW 0,75: 0,75 kW 10  400: 400 kW  3rd part  Power: 075 = 0,75kW U75 = 7,5kW U75 = 0,75kW U75 = 7,5kW U75 = 7,5k			
Canopen accessories keypad extension cable  Specific Product  Product mounted inside enclosures  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside  Water cooled drive  no  Others  CE, UL, CSA, DNV  UL, CUL, TÜV (up to 22 kW), CE  Part number  SFR 5,5 G 11 S - 4 EN  1st part  ATV71: Model  FRN : Series name  5,5: Nominal applied motor (kW) 0,2: 0,2 kW 0,4: 0,4 kW 17pe H: heatsink  Type H: heatsink  Power: 075 = 0,75kW 075 = 0,75kW 075 = 0,75kW 075 = 7,5kW 075 = 7,5kW 075 = 7,5kW 075 = 7,5kW 075 = 0,75kW 075 = 0,75	Others	Control fan kit	Digital tachometer
Specific Product Product mounted inside enclosures  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside  Nater cooled drive  Others  CE, UL, CSA, DNV  UL,CUL, TÜV (up to 22 kW), CE Part number  Ist part  ATV71: Model  FRN: 5,5 G 11 S - 4 EN  1st part  ATV71: Model  FRN: Series name  2nd part  Type H: heatsink  Type H: heatsink  Power: 0,4: 0,4 kW 0,75: 0,75 kW to 400: 400 kW  3rd part  Power: 0,75 = 0,75kW U75 = 7,5kW D75 = 75kW D75 = 75kW  4th part  S: Protective structure S: standared  M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  Type M3: 20 without filter and without operator display XZ: without filter and without operator display XZ: without filter and without operator display Th part  Text Version EN: EN  Product  UL,cUL, TÜV (up to 22 kW), CE  FRN: Series A EN  TRN: Series name  5,5: Nominal applied motor (kW) 0,2: 0,2 kW 0,4: 0,4 kW 0,75: 0,75 kW 0,6: 0,2 kW 0,75: 0,75 kW		Canopen accessories	
Product mounted inside enclosures  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside  no  Others  CE, UL, CSA, DNV  UL, CUL, TÜV (up to 22 kW), CE  Part number  1st part  ATV71: Model FRN: Series name  2nd part  Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW D75 = 75kW  4th part  1st part  Power: 1st part  ATV71: Model Type H: heatsink  Power: 05 = 0,75kW U75 = 7,5kW D75 = 75kW		keypad remote mounting kit	
Product mounted inside enclosures  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside  no  Others  CE, UL, CSA, DNV  UL, CUL, TÜV (up to 22 kW), CE  Part number  1st part  ATV71: Model FRN: Series name  2nd part  Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW D75 = 75kW  4th part  1st part  Power: 1st part  ATV71: Model Type H: heatsink  Power: 05 = 0,75kW U75 = 7,5kW D75 = 75kW	Specific Product		
Mater cooled drive		the power section is IP54 to be easily mounted in	
Water cooled drive		enclosure	
Dithers   Water proof product		with heat evacuation on the outside	
List of marking		no	-
Part number   St part   ATV71 : Model   FRN 5,5 G 11 S - 4 EN	Others		· · · · · · · · · · · · · · · · · · ·
Part number   St part   ATV71 : Model   FRN 5,5 G 11 S - 4 EN	List of marking	CE, UL, CSA, DNV	UL,cUL, TÜV (up to 22 kW), CE
Section   Sect			
Type		AT\/71 · Model	·
Type		ATV/T. MOUEL	
Type	Ena part		
H :   neatsink		Туре	0,4 : 0,4 kW
A00 : 400 kW			
Power :     G : Application range			
11	Out wort		
D75 = 75kW	oru part	075 = 0,75kW	
11 : 11 Series   11 : 11 Series			
5th part         Voltage M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V         S : Protective structure S : Standared           6th part         X : without filter Z : without operator display XZ : without operator display XZ : without filter and without operator display         4 : Input power source 4 : 3 ph 400 V           7th part         EN : Version EN : EN	4th part	15 : power	
N4:380 / 500 V  6th part  X: without filter Z: without operator display XZ: without filter and without operator display  7th part  Ref.: Version EN:EN	5th part	Voltage M3 : 208 / 240 V (3 input phase)	S : Protective structure
Z: without operator display XZ: without filter and without operator display  7th part  EN: Version EN: EN		N4 : 380 / 500 V	O . Stallualeu
XZ : without filter and without operator display  7th part  EN : Version EN : EN	6th part	X : without filter	
7th part EN: Version EN: EN		Z: without operator display	4 : 3 pn 400 V
EN: EN	7th part	. without filter and without operator display	FN · Version
	rai part		
8th part -	8th part		-

bu		
9th part		<u>-</u>
Communication Messages		
Message 1		
Message 2		
Message 3		
Message 4		
Message 5		
Message 6		
Message 7		
Type of communication		
Environment, recyclability		
Safety Compliance		
	EN1800-5-1	
	Power removal EN1800-5-2 / EN 954-1 category 3	
	,	
Software Opening		
Logic Operation	(could be carried out with the controller inside car	d)
Controller (PLC) Inside	Yes	u)
Software Card	res	
Product Services		
Flashable	Yes	
PC Software	PowerSuite sotware workshop  Yes	
Scope Application Functions	1 62	
Application Functions Number of functions	#450	
	#150 #800	
Number of parameters  Main functions	#800	Slip compensation
main functions	- PID regulator - current and torque limitation - S ramp - short ramp - 16 preset speeds + jog - 3 wire control - brake sequence - protection by passwords	Torque limit control Switch from line to inverter Restart after instantaneous power failure 3 jump frequencies Bias frequency Pattern operation PID control
Price Positioning	- Brake sequence adapted to hoisting, travelling, orientation and lift weight measurement - high speed hoisting - brake feedback - load sharing -Limit switches management - non linear refence - multi-motor - multi parameters - Power removal - alarm group - limit switches positioning with low speed time optimization - summing, differentiating, multiplying reference - fast catch on fly - fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters	Automatic energy saving operation
User's Manual		
Simplified	Yes	
Complete	Yes Yes	Yes
<u> </u>		
Language	6 languages and more	English, japanese, german
Paper	Yes	
CD	Yes	
Web Site	Telemecanique.com	www.fujielectric.com
Others Applications		G11S can be used for almost all industrial plant and equipment area
Hoisting / crane	Yes	Yes
Horizontal handling	Yes	Yes
Conveyor	Yes	Yes
Packaging	Yes	Yes
Pumping	Yes	Yes
Textile industry	Yes	Yes
Fan	no	Yes
Lift	Yes	Yes
Compressor	no	Yes
Others	some low speed process machines, unbalanced machine, special machine	- Food processing machines - Wood working machines - Extruder

ATV71 vs YASKAWA G7		
ITEM	ATV71	G7
Picture	And the street of the street o	G7
Drive sizing Constant Torque (CT) High torque (HT)	Voo	YES
Variable Torque (VT) Standard torque (VT)	Yes No	No
Input	140	140
Single phase 200V range	Yes by using 3 ph drive + derating	No
Power range		-
Number of ratings	9	-
Voltage range with tolerance		-
Mains frequency and tolerance	50 Hz ±20% or 60 Hz ±20%	- V
Three phase 200V range Power range	Yes 0,37 to 75kW	Yes 0,4 - 110 kW
Number of ratings		0,4 - 110 KVV
Voltage range with tolerance		200 - 240 V +10% -15%
Mains frequency and tolerance		50/60Hz +/-5%
Three phase 400V range		Yes
Power range		0,4 - 300 kW
Number of ratings  Voltage range with tolerance		23 380 - 480 V +10% -15%
Mains frequency and tolerance		50/60Hz +/-5%
Three phase 600V range	No	-
Power range		-
Number of ratings		-
Voltage range with tolerance Mains frequency and tolerance		-
Three phase 690V range	No	-
Power range		-
Number of ratings		-
Voltage range with tolerance		-
Mains frequency and tolerance		-
Ungrounded supply	Disconnexion and reconnexion of Y capacitors	-
EMC		
HF EMC compliance as standard		
Conducted emission		EMC filter as an option
Standard and level	EN61800-3 C2 (II < 16A) EN61800-3 C3 (II>16A)	
Shielded motor cable length		
	50m up to 75kW	
Unshielded motor cable length		
Switching frequency		
Power range integration		
Shielding connexion	On EMC plate	
Radiated emission	ENITEDATION :	
Standard and level		
Power range	All the ratings	
LF EMC compliance as standard Inductance (AC or DC)	Class DC inductance integrated from 11 to 45kW 200V class	DC choke integrated above 15kW 12 pulse bridge integrated above 18.5kW
Power range integration		
Standard		
% THD		
Immunity	IFO 04000 4 0 by 10	
Standard 1 + level Standard 2 + level		
Standard 2 + level Standard 3 + level		
Standard 4 + level	IEC 61000-4-5 level 3	
Standard 5 + level	IEC 61000-4-6 level 3	
Low voltage directive	EN 50178	
Others	IEC 61800-5-1	

1	13 sizes IP21 and IP41 on upper part (EN 50178 and 61800-5-1) IP31 with gland box, Nema type 1 with conduit box  -10 to +50°C  -25 to 70°C  95% non condensing without drop 1000m without derating. Possibile up to 3000m  Yes	IP20 up to 15kW IP00 above 15kW  -10 to 40°C (IP20) -10 to 45°C (IP00) -20 to 60°C  up to 1000m (higher on request)  9.8m/s² from 10 to 20Hz / 1.96m/s² from 20 to 50Hz  ?
IP + power range Operating ambiant temperature Storage temperature Humidity Operational altitudes Vibrations Other Automatic stop of fan	1) IP31 with gland box, Nema type 1 with conduit box  -10 to +50°C  -25 to 70°C  95% non condensing without drop  1000m without derating. Possibile up to 3000m  Yes	IP00 above 15kW  -10 to 40°C (IP20) -10 to 45°C (IP00) -20 to 60°C  up to 1000m (higher on request)  9.8m/s² from 10 to 20Hz / 1.96m/s² from 20 to 50Hz
IP + power range Operating ambiant temperature Storage temperature Humidity Operational altitudes Vibrations Other Automatic stop of fan	-10 to +50°C  -25 to 70°C  95% non condensing without drop 1000m without derating. Possibile up to 3000m  Yes	IP00 above 15kW  -10 to 40°C (IP20) -10 to 45°C (IP00) -20 to 60°C  up to 1000m (higher on request)  9.8m/s² from 10 to 20Hz / 1.96m/s² from 20 to 50Hz
IP + power range Operating ambiant temperature Storage temperature Humidity Operational altitudes Vibrations Other Automatic stop of fan	-10 to +50°C  -25 to 70°C  95% non condensing without drop 1000m without derating. Possibile up to 3000m  Yes	IP00 above 15kW  -10 to 40°C (IP20) -10 to 45°C (IP00) -20 to 60°C  up to 1000m (higher on request)  9.8m/s² from 10 to 20Hz / 1.96m/s² from 20 to 50Hz
IP + power range IP + power range IP + power range IP + power range Temperature Operating ambiant temperature Storage temperature Humidity Operational altitudes Vibrations Other Automatic stop of fan	-25 to 70°C 95% non condensing without drop 1000m without derating. Possibile up to 3000m  Yes	IP00 above 15kW  -10 to 40°C (IP20) -10 to 45°C (IP00) -20 to 60°C  up to 1000m (higher on request)  9.8m/s² from 10 to 20Hz / 1.96m/s² from 20 to 50Hz
IP + power range IP + power range IP + power range Temperature Operating ambiant temperature Storage temperature Humidity Operational altitudes Vibrations Other Automatic stop of fan	-25 to 70°C 95% non condensing without drop 1000m without derating. Possibile up to 3000m  Yes	-10 to 40°C (IP20) -10 to 45°C (IP00) -20 to 60°C  up to 1000m (higher on request)  9.8m/s² from 10 to 20Hz / 1.96m/s² from 20 to 50Hz
IP + power range  Temperature  Operating ambiant temperature  Storage temperature  Humidity Operational altitudes  Vibrations Other  Automatic stop of fan	-25 to 70°C 95% non condensing without drop 1000m without derating. Possibile up to 3000m  Yes	-10 to 45°C (IP00) -20 to 60°C  up to 1000m (higher on request)  9.8m/s² from 10 to 20Hz / 1.96m/s² from 20 to 50Hz
Temperature Operating ambiant temperature Storage temperature Humidity Operational altitudes Vibrations Other Automatic stop of fan	-25 to 70°C 95% non condensing without drop 1000m without derating. Possibile up to 3000m  Yes	-10 to 45°C (IP00) -20 to 60°C  up to 1000m (higher on request)  9.8m/s² from 10 to 20Hz / 1.96m/s² from 20 to 50Hz
Operating ambiant temperature Storage temperature Humidity Operational altitudes Vibrations Other Automatic stop of fan	-25 to 70°C 95% non condensing without drop 1000m without derating. Possibile up to 3000m  Yes	-10 to 45°C (IP00) -20 to 60°C  up to 1000m (higher on request)  9.8m/s² from 10 to 20Hz / 1.96m/s² from 20 to 50Hz
Storage temperature  Humidity Operational altitudes  Vibrations Other  Automatic stop of fan	-25 to 70°C 95% non condensing without drop 1000m without derating. Possibile up to 3000m  Yes	-10 to 45°C (IP00) -20 to 60°C  up to 1000m (higher on request)  9.8m/s² from 10 to 20Hz / 1.96m/s² from 20 to 50Hz
Humidity Operational altitudes  Vibrations Other  Automatic stop of fan	95% non condensing without drop 1000m without derating. Possibile up to 3000m  Yes	up to 1000m (higher on request) 9.8m/s² from 10 to 20Hz / 1.96m/s² from 20 to 50Hz
Operational altitudes  Vibrations  Other  Automatic stop of fan	1000m without derating. Possibile up to 3000m  Yes	9.8m/s² from 10 to 20Hz / 1.96m/s² from 20 to 50Hz
Vibrations Other Automatic stop of fan	Possibile up to 3000m  Yes	9.8m/s² from 10 to 20Hz / 1.96m/s² from 20 to 50Hz
Other Automatic stop of fan	Yes	
Other Automatic stop of fan		
		?
Mounting		
	_	
Drive Shape	Compact	compact
Side by side mounting	Yes without derating	no
Heat evacuation outside enclosure	Yes, the power section is IP54	Yes (flange mounting)
Operating position	Vertical	vertical
Others	-	
Power connexion		
DC Bus connexion	Yes	Yes
DC inductance connexion Removable terminals	Line inductance or DC inductance No	Yes  Removable terminal card
Bottom or Top/Bottom	No Bottom	Bottom
·	Bottom	Bollom
Motor control		
AC motors motor control  U/F	Yes	Yes, with or without PG
SVC (open loop)	Yes	Yes
FVC (closed loop)	Yes	Yes
Type of encoder	RS422, Open collector or Push pull	RS422 or open collector
Others	ENA	-
Synchronous or brushless motors		
Open loop	Yes	no
Closed loop	No	no
Performances		
Speed range		
Motor quadrant	1 : 100 open loop	1 : 200 open loop
Generator quadrant	1 : 1000 closed loop 1 : 50 open loop	1 : 1000 closed loop
Generator quadrant	1 : 1000 closed loop	
Overtorque	From 170 to 2,2 Tn during 60s	
	from 200 to 240% during 2s	
Rated current philosophy 0,75kW / 400V	1,1 In motor (380V)	In motor = 2 A
0,75kW 7400V	In drive = 2,3 A	In drive = 3,4 A
4 kW / 400V	In motor = 8,5 A	In motor = 8,5 A
	In drive = 10,5 A	In drive = 9 A
22 kW / 400V	In motor = 40,5 A In drive = 48 A	In motor = 40,5 A In drive = 52 A
Overcurrent capability		150% during 60s
	180% I motor during 60s 200% I motor during 2s	180% during 14s
Turn of control and	_557515.51 during 25	200% during0,5s
Type of control and accuracy		Voc
Speed control	Yes	Yes response = 10Hz open loop & 40Hz closed loop
Torque control	V	Yes
	Yes	response = 20Hz open loop & 200Hz closed loop
Torque rise time		
Sampling time of the loop		
Autotuning On line / Off line	Off line and On Pro-	Yes
On line / Oπ line  Ways of execution	Off line and On line	Both 3 types of autotuning
ways of execution	By keypad, Logic input, at power up	- Rotating autotuning with unleaded motor - Stationary autotuning Line to line resistance mesurement
Values measured		
Prefluxing	Yes	
Braking		
Braking transistor	Yes	integrated for P<18.5kW
Braking performance w/o resistor	Without resistor 100% Cn : 0,37 - 0,75 kW 30% Cn : 1,5 - 15 kW With resistor (as an option) Until 170% Cn	

Output frequency range	0,1 to 1000Hz up to 37kHz up to 500Hz above	0,01 to 400Hz
Output frequency resolution	0,1Hz	0,001Hz
Switching frequency	-,	
range	Settable from 0,5 to 16kHz	2 to 15kHz
factory setting		8kHz up to 110kW
Intermeted autout Eller	2,5kHz above	2 kHz from 132kW
Integrated output filter  dv/d	on on ontion	
Motor voltage surge limitation		Yes (12 transistor inverter)
sinus		res (12 transistor inverter)
Others		
Frequency setting resolution	no no	
Seria		
analog		0.01Hz
Digita		0.03Hz /60Hz
Modularity		
Number of option board at the same time	3	2
Inputs / Outputs		
On basic product		
Removable terminals	Yes	Removable terminal card
Type of terminal & pitch	Screw terminlas, pitch 5,08	Mix ring and cage terminals
Sampling time	1ms minimum, and 2,5ms max	
analog input	2	3 (11 bits + sign)
	Differential voltage input +/-10V	2 x +/-10V
	current or voltage input	1 x 4- 20mA
	3	
Logic inputs	6 assignable logic inputs	12 (10 assignable)
Logic outputs (open collector)	no	4
Relays	2 assignable relays (NO/NC, NC)	2 (1 assignable)
analog outputs	1	2
	Assignable output (voltage or current)	2 x +/-10V
Desile and HO		
Dedicated I/O	2	Dulgo train input
,	Power removal input (compliance with 61800-5-2 PTC input on LI	Pulse train input pulse train output
	B TO INPUT ON ET	PTC on AI
I / O Option 1	Lgic I/O card	
Removable terminals	Yes	
Type of terminal & pitch	Screw terminlas, pitch 5,08	
Sampling time	5ms	
analog input	no	
,		
2		
3	'	
Logic inputs	4 assignable logic inputs	
Logic outputs (open collector)	2 assignable open collector outputs	
Relays	1 assignable relay (NO/NC)	
analog outputs	no	
3	3	
Dedicated I/O		
	-10V supply	
	PTC input	
	3	
I / O Option 2	Extended I/O card	
Removable terminals	Yes	
Type of terminal & pitch	Screw terminlas, pitch 3,81 except relay that 5,08	
Sampling time	5ms	
analog input	2	
	1 differential current input	
	1 voltage / current input	
Logic inputs	4 assignable logic inputs	
Logic outputs (open collector)	2 assignable open collector outputs	
Relays	1 assignable relay (NO/NC)	
analog outputs	2	
,	2 assignable voltage/current analog outputs	
Dedicated I/O		
Dedicated I/O		
,		
l .	PTC input	
	PTC input	
I / O Option 3	PTC input  Controller inside card	

Type of terminal & pitch         Management         Management           analog input         1	Removable terminals	Yes	
Sampling time    Continued   C		100	
Analog inputs  Logic imputs  Logic cutyputs (own collector)  Robits and Communication of the			
Action in protection of the control			
Logic computs (open collector)  Logic collector collector)  Logic collector)  Logic collector (open collector)  Logic	analog input		
Logic computs (open collector)  Logic collector collector)  Logic collector)  Logic collector (open collector)  Logic	1		
Assignments of the control of the co			
Logic outputs (open collectory)  Relayse analog outputs  1			
Relays analog outputs			
manding outputs    Communication   Communicati			
Decidated I/O			
Deficitated I/O  I I I I I I I I I I I I I I I I I I I	analog outputs		
Deficitated I/O  I I I I I I I I I I I I I I I I I I I	1		
Dedicated I/O  1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2		
Others  Communication Separated control supply Office a protect of available 1 Protect available 2 Protect available 3 Protect available 3 Protect available 4 Protect available 5 Protect available 5 Protect available 6 Protect available 6 Protect available 6 Protect available 7 Protect available 7 Protect available 7 Protect available 8 Protect available 8 Protect available 8 Protect available 9 Protect	3		
Separated control supply On the Date product Protocol available 1 Protocol available 2 Communication option card Protocol available 3 Communication option card Protocol available 3 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 5 Protocol available 6 Protocol available 7 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 7 Protocol available 8 Protocol available 8 Protocol available 9 Protocol availabl	Dedicated I/O		
Separated control supply On the Date product Protocol available 1 Protocol available 2 Communication option card Protocol available 3 Communication option card Protocol available 3 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 5 Protocol available 6 Protocol available 7 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 7 Protocol available 8 Protocol available 8 Protocol available 9 Protocol availabl	1		
Separated control supply On the Date product Protocol available 1 Protocol available 2 Communication option card Protocol available 3 Communication option card Protocol available 3 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 5 Protocol available 6 Protocol available 7 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 7 Protocol available 8 Protocol available 8 Protocol available 9 Protocol availabl	2		
Separated control supply On the Date product Protocol available 1 Protocol available 2 Communication option card Protocol available 3 Communication option card Protocol available 3 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 5 Protocol available 6 Protocol available 7 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 7 Protocol available 8 Protocol available 8 Protocol available 9 Protocol availabl	2		
Separated control supply On the Date product Protocol available 1 Protocol available 2 Communication option card Protocol available 3 Communication option card Protocol available 3 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 5 Protocol available 6 Protocol available 7 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 7 Protocol available 8 Protocol available 8 Protocol available 9 Protocol availabl	3		
Separated control supply Protocol available 1 Modobus fully configurable (Protocol available 2 Protocol available 3 Protocol available 3 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 5 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 10 Protoc	Others		
Separated control supply Protocol available 1 Modobus fully configurable (Protocol available 2 Protocol available 3 Protocol available 3 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 5 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 10 Protoc	Communication		
On the basic product Protocol available 1 Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 3 Protocol available 3 Protocol available 3 Protocol available 4 Protocol available 5 Protocol available 5 Protocol available 6 Protocol available 7 Protocol available 1 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 1 Protocol available 1 Protocol available 1 Protocol available 1 Protocol available 6 Protocol available 1 Protocol available 6 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 1 Protocol available 6 Protocol available 6 Protocol available 1 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 9 Protocol available 9 Protocol available 9 Protocol available 1 Protocol available 3 Protocol available 3 Protocol available 4 Protocol available 5 Protocol		Vac 24)/ da sa standard	No
Protocol available   Moothus fully configurable with IO scanner   Protocol available   Prot			INU
Protocol available 2			
Protocol available   Protoco			RS485 Memobus
Communication option card	Protocol available 2	Canopen fully configurable	
Protocol available 1	Protocol available 3		
Protocol available 1	Communication option card		
Protocol available 2	-	Finio PL7	Profibus-DP
Protocol available 1		FIPIO with messaging	
Protocol available 4			
Protocol available 6			
Protocol available 6			
Protocol available   Protoco			
Protocol available 8			
Protocol available 10			Devicenet
Protocol available 10 Protocol available 11 Protocol available 12  Gateway  Protocol available 1 Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 4 Protocol available 4 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 9 Protocol available 9 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 12 Protocol available 13 Protocol available 14 Protocol available 15 Protocol available 15 Protocol available 15 Protocol available 16 Protocol available 16 Protocol available 17 Protocol available 17 Protocol available 18 Protocol available 19 Protocol available 10 Protocol available 10 Protocol available 11 Protocol available 15 Protocol available 15 Protocol available 16 Protocol available 16 Protocol available 16 Protocol available 17 Protocol available 16 Protocol available 16 Protocol available 17 Protocol available 16 Protocol available 17 Protocol available 16 Proto			
Protocol available 12 Gateway Protocol available 2 Protocol available 2 Protocol available 3 Protocol available 3 Protocol available 5 Protocol available 6 Protocol available 6 Protocol available 7 Protocol available 7 Protocol available 7 Protocol available 10 Protocol available 11 Protocol available 10 Protocol available 10 Protocol available 10 Protocol available 11 Protocol available 10 Pr	Protocol available 9		
Protocol available 12	Protocol available 10		
Protocol available 1	Protocol available 11		
Protocol available 1	Protocol available 12		
Protocol available 1	Gateway		
Protocol available 2		AC:	
Protocol available 3		A5-I	
Protocol available 4 Protocol available 5 Protocol available 7 Protocol available 7 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Protocol available 13  Operator panel Dialogue 1 Integrated / removable Type of screen 4 Led digits LCD display Language code Removable Number of keys 4 11 Number of Leds 5 Leds for the diagnostic of the integrated fieldbus 6 Keypad command  Removable Function keys Function keys  Function keys  Others  Others  Oiladgue 2 Integrated / removable Run Gagneric Removable Reset Removable Reset Removable Reset Removable Reset Reset Reset Reset Removable Removab			
Protocol available 5 Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 12 Protocol available 13 Protocol available 14 Protocol available 15 Protocol available 15 Protocol available 16 Protocol available 17 Protocol available 18 Protocol available 19 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 10 Protocol available 11 Protocol available 10 Protocol available 11 Protocol available 10 Proto	Protocol available 3		
Protocol available 6 Protocol available 7 Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 12 Protocol available 12 Protocol available 12 Protocol available 12 Protocol available 13  Operator panel Dialogue 1 Integrated / removable Integrated fieldbus Integ	Protocol available 4		
Protocol available 7	Protocol available 5		
Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 12 Protocol available 13  Operator panel Dialogue 1  Type of screen A Led digits A Language A Code A Tanguages A Language A Code A Tanguages A Language A Code A Tanguages A Code A Code A Tanguages A Code A C	Protocol available 6		
Protocol available 8 Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 11 Protocol available 12 Protocol available 13  Operator panel Dialogue 1  Type of screen A Led digits A Language A Code A Tanguages A Language A Code A Tanguages A Language A Code A Tanguages A Code A Code A Tanguages A Code A C	Protocol available 7		
Protocol available 9 Protocol available 10 Protocol available 11 Protocol available 12 Protocol available 12 Protocol available 13 Protocol available 13  Operator panel Dialogue 1 Integrated / removable Int			
Protocol available 10 Protocol available 11 Protocol available 12 Protocol available 13  Operator panel Dialogue 1 Integrated / removable			
Protocol available 12 Protocol available 12 Protocol available 13  Operator panel Dialogue 1  Integrated / removable  Type of screen Language Language Code Type of Lods Stephacommand Respad command Function keys  Function keys  Dialogue 2  Integrated / removable  Removable  Removable  A Led digits LCD display LCD display  11  11  11  11  11  11  11  11  11			
Protocol available 12 Protocol available 13  Operator panel Dialogue 1 Integrated / removable Integrated fieldbus Integrated field	Protocol available 10		
Protocol available 12 Protocol available 13  Operator panel Dialogue 1 Integrated / removable Integrated fieldbus Integrated field	Protocol available 11		
Protocol available 13  Operator panel Dialogue 1  Integrated / removable Integrated / removable Type of screen Language  L			
Operator panel     Dialogue 1     Standard       Dialogue 1     Integrated / removable     Removable       Type of screen     4 Led digits     LCD display       Language     code     7 languages       Number of keys     4     11       Number of Leds     5 Leds for the diagnostic of the integrated fieldbus     6       Keypad command     Run Stop Forward/Reverse Jogg       Stop Forward/Reverse     Jog       Function keys     Local/Remote Menu Up Down Esc Enter/Data Reset       Dialogue 2     Removable       Integrated / removable     Removable       Type of display     Graphic display       Language     6 languages (languages are flashable). Suitable for asian characters			
Dialogue 1  Integrated / removable Integrated   Integrated   Removable Type of screen Language Code Tyne of Screen A Led digits Languages Number of keys Integrated fieldbus Steppad command Number of Leds Keypad command Newpad command Newpad command Newpad command No  Function keys  Function keys  Function keys  Others Dialogue 2  Integrated / removable Type of display Graphic display  Graphic display Standard Removable Removable Removable Removable Removable Removable Removable Removable Removable Suitable for asian characters	Protocol available 13		
Dialogue 1  Integrated / removable Integrated   Integrated   Removable Type of screen Language Code Tyne of Screen A Led digits Languages Number of keys Integrated fieldbus Steppad command Number of Leds Keypad command Newpad command Newpad command Newpad command No  Function keys  Function keys  Function keys  Others Dialogue 2  Integrated / removable Type of display Graphic display  Graphic display Standard Removable Removable Removable Removable Removable Removable Removable Removable Removable Suitable for asian characters	Operator panel		
Integrated / removable Type of screen Type of screen A Led digits CLCD display Code Type of screen Number of keys A 111  Number of keys S Leds for the diagnostic of the integrated fieldbus Keypad command New Stop Forward/Reverse Jog Function keys Function keys Type of display Integrated / removable Type of display Languages  A 2 111  Local/Remote Menu Up Down Esc Enter/Data Reset  Type of display Graphic display Graphic display Family Stop Forward/Reverse Jog Caraphic display Ferrican display Graphic display Graphic display Suitable for asian characters			Standard
Type of screen		Integrated	
Languagecode7 languagesNumber of keys411Number of Leds5 Leds for the diagnostic of the integrated fieldbus6Keypad command Keypad command Function keysnoRun Stop Forward/Reverse JogFunction keysLocal/Remote Menu Up Down Esc Enter/Data ResetDialogue 2EmovableIntegrated / removable Type of displayRemovable Graphic displayLanguage Suitable for asian characters6 languages are flashable). Suitable for asian characters			
Number of keys Number of Leds Number of Leds Number of Leds S Leds for the diagnostic of the integrated fieldbus Keypad command no Run Stop Forward/Reverse Jog Local/Remote Menu Up Down Esc Enter/Data Reset  Others  Dialogue 2 Integrated / removable Type of display Language 6 languages are flashable). Suitable for asian characters			
Number of Leds Keypad command Keypad command no Run Stop Forward/Reverse Jog Local/Remote Menu Up Down Esc Enter/Data Reset  Dialogue 2 Integrated / removable Type of display Language 6 languages (languages are flashable). Suitable for asian characters			
Keypad command no Run Stop Forward/Reverse Jog 9  Function keys	-		
Function keys  Function keys  no  No  Local/Remote Menu Up Down Esc Enter/Data Reset  Dialogue 2  Integrated / removable Type of display  Language  G languages (languages are flashable). Suitable for asian characters		t = tate to the anglitetic transfer include	
Function keys  Function keys  Ino  Ino  Ino  Ino  Ino  Ino  Integrated / removable	Keypad command		
Function keys Ino Ino Ino Integrated / removable Integrated / remova		no	Forward/Reverse
Function keys  no  no  Cothers  Dialogue 2  Integrated / removable  Type of display  Language  6 languages (languages are flashable). Suitable for asian characters  Local/Remote  Menu Up Down Esc Enter/Data Reset  Cothers  Annual Cothers  Benovable  Cothers  Annual Coth			
no Menu Up Down Esc Enter/Data Reset  Others Dialogue 2	Function kevs		-
no Bown Esc Enter/Data Reset  Others Dialogue 2			Menu
Cothers  Dialogue 2  Integrated / removable Type of display Language Language Suitable for asian characters  Esc Enter/Data Reset  Removable  Suitable for asian characters			Up
Others  Dialogue 2  Integrated / removable Type of display Language Language Suitable for asian characters  Enter/Data Reset  Removable  Suitable for asian characters		no	
Cothers  Dialogue 2  Integrated / removable  Type of display Language Language Suitable for asian characters  Reset  Removable			
Others  Dialogue 2  Integrated / removable  Type of display  Language  Caphic display  Language  6 languages (languages are flashable). Suitable for asian characters			
Dialogue 2  Integrated / removable Removable  Type of display Language Language Suitable for asian characters	Othora		
Integrated / removable  Type of display  Language  Caphic display  Language  6 languages (languages are flashable). Suitable for asian characters			
Type of display  Language 6 languages (languages are flashable). Suitable for asian characters		Demovable	
Language 6 languages (languages are flashable). Suitable for asian characters			
Suitable for asian characters			
	Language	Suitable for asian characters	
Trainibot of noyo use of a struction T. Rey	Number of keys		
	Number of keys	use of a structile + 1 key	

Reyeard commands	Number of Leds		
Chemo Chemo Chemo Chemo Chemo Could be used to sever and restore 4 configurations could be used to sever and restore 4 configurations could be used to sever and restore 4 configurations. Multipoint connection  Type of display Laguage Autries of keys Laguage Runner of keys Chemo Function of the county of display Function of the county of			
Others  Obligate 3  Dialogue 3  Integrated / memorable  Protections  Number of table  Function Reys  Negret continued  Function Reys  No Order  Function Reys  Function Reys  No N			
Could be used to Salve and reations 4 continguations removable.  Dialogue 3  Integrated / removable  Type of display  Language  Number of keys  Number of less  Repaid community  Frotections  Tyrothouse over the country of the count		·	
Integrated i removable Type of display Language Number of keyls Neglacomman Function keyls Others  Protections Thermal protection  Yes, I'll motor thormal protection depending on the Management of the Number of Keyls Management of the Number of Keyls Neglacomman of Number of Nu	Others	could be used to save and restore 4 configurations remote mounting kit available	
Lagrage Number of keys Number of keys Number of Lods Keypac command Fuction keys Official Thermal protection  Protections Thermal protection  Protections Thermal protection  Electronic PTC Yes, I's motor thermal protection depending on the Memoritation when power off Electronic PTC  Wes, Gedicated injust on option cards Short circuit between phase  yes yes yes yes yes yes yes yes yes	Dialogue 3		
Lagrage Number of keys Number of keys Number of Lods Keypac command Fuction keys Official Thermal protection  Protections Thermal protection  Protections Thermal protection  Electronic PTC Yes, I's motor thermal protection depending on the Memoritation when power off Electronic PTC  Wes, Gedicated injust on option cards Short circuit between phase  yes yes yes yes yes yes yes yes yes			
Number of Lobs Number of Lobs Number of Lobs Nomber	_		
Number of keys Number of Lode Keypad command Fuctor keys Fortice (1) Fraction (1) Fraction (2) Fortice (2) Froblem of the second			
Number of Leids  Keypa Command Function keys  Cheen  Cheen  Cheen  Thermal protection  Electrons / PTC  Yes, Pt motor thermal protection depending on the motor frequency.  Memorization where power off the motor frequency.  Memorization between phase  Yes, Pt motor thermal protection country  Yes, declarated input on option cards  Short circuit between phase  Yes, Pt motor frequency.  Memorization where power off the motor frequency.  Memorization where power off the motor frequency.  Memorization where power off the motor frequency.  Yes, Yes, Yes, Yes, Yes, Yes, Yes, Yes,			
Respect command   Function keye   Protections			
Protections Others Othe			
Protections Thermal protection  Ves, Pt motor finemal protection depending on the motor frequency. Memorization when power off  Electronic / PTC  Yes, desclared injust on option cards  Short circuit between phase  Yes  Yes  Yes  Yes  Yes  Yes  Yes			
Protections Thermal protection on the protection of the protection of the protection on the protection of the protec			
Thermal protection  Yes, I'll motor thermal protection depending on the motor frequency. Memoration when power off Yes, declorated injust on eption cards  Yes y			
Biochanic / PTC   Yes, dedicated injust on option cards	Protections		
Sond circuit between phase  Ground fault  Ves  Ground fault  Ves  Ground fault  Ves  Ves  Input phase loss  Input phase loss  Input phase loss  Ves  Input phase loss  Ves  Input phase loss  Ves  Ves  Ves  Ves  Ves  Ves  Ves	Thermal protection	motor frequency.	
Ground fault  yes  yes  yes  yes  input phase loss  yes  yes  yes  yes  yes  yes  yes	Electronic / PTC	Yes, dedicated input on option cards	
Ground fault  yes  yes  yes  yes  input phase loss  yes  yes  yes  yes  yes  yes  yes	Short aircuit hatware where		
Dutput phase loss   yes   ye	·		,
Input phase loss  yes  yes  Pakaing resistor protection  No  Overload  Yes  Yes  Yes  Yes  Undervoltage  Yes  Yes  Undervoltage  Yes  Yes  Yes  Undervoltage  Yes  Yes  Undervoltage  Yes  Yes  Undervoltage  Yes  Yes  Yes  Undervoltage  Yes  Yes  Undervoltage  Yes  Yes  Indevaluation  Others  Options and Accessoiries  Braking resistors  Fraking resistors  Fraking resistors  Fraking resistors  Fraking resistors  Fraking resistors  Hobiciancas (chokas)  Fraking resistors  Fraking resistors  Fraking resistors  Fraking resistors  Hobiciancas (chokas)  Fraking resistors  Fraking resistors  Fraking resistors  Hobiciancas (chokas)  Fraking resistors  Fraking resistors  Hobiciancas (chokas)  Hobiciancas (chokas)  Fraking resistors  Hobiciancas (chokas)  Hobiciancas (chokas)		,	
Braking resistor protection  No  Overolage  Yes  Yes  Yes  Overolage  Yes  Yes  Overolage  Yes  Yes  Drive thermal protection  Yes  Chicked motor protection  Yes  Stall provention  Others  Options and Accessoiries  Praking resistors  Inductances (chokes)  Regenerative Units  Yes  Chuffers  Output filters  Others  Others  Others  Canopen accessories  Regenerative Units  Canopen accessories  Regenerative Units  Canopen accessories  Regenerative Units  Canopen accessories  Regenerative Units  Canopen accessories  Repenerative units in P54 to be easily mounted in enclosure  with heat evacuation on the outside  Water cooled drive  Others  City of marking  City UL, CSA, DNV  City UL, CLL  Part number  Ist part  Type  Ist part  Type  Ist part  Prover:  Offs = 0,78kW  U75 = 7,8kW  U75 = 0,7kW  U7			
Overload yes		,	,
Overvoltage			
Undervoltage Prive thermal protection Locked motor protection Yes Stall provention Yes Options and Accessoiries Product greater of the state of the			
Drive thermal protection  yes  Locked motor protection  Yes  Stall prevention  Options and Accessoiries  Profice the protection  Options and Accessoiries  Profice the protection  Options and Accessoiries  Profice the profice the protection of the			·
Lacked motor protection Yes Stall prevention Others Options and Accessories Praking resistors Inductances (chokes)	-		-
Sali prevention Others Options and Accessoiries Braking resistors Inductances (chokes) Rraking resistors Inductances (chokes) Regenerative Units Pessor  Motor chokes Regnerative Units Regnerat			yes
Options and Accessoiries Praking resistors Inductances (chokes) Inductances (chokes) Inductances (chokes) Regenerative Units Profestions Inductances (chokes) Regenerative Units Regenerative Units Inductances (chokes) Regenerative Units Additional footprint filters Output filters Output filters Output filters Others Others Complainate with unshielded cables Control to fait, Canopien accessories keypad remote mounting kit Regenerative Units Regenerative Units Regenerative Units Regenerative Units Others Others  Control to fait, Canopien accessories Reynad remote mounting kit Regenerative Units Revenue mounting kit Report of the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside Water cooled drive On Others  User Cooled drive On Others  It is part ATV71: Model It is part I Type It heatsink			
Descriptions and Accessories   Protected briding resistor   Hoisting resistors   Hoisting r		Yes	
Braking resistors  Inductances (chokes)  Inductances (chokes)  EMC filters  Output filters  Output filters  Others  Common filters  Others  Specific Product  Product mounted inside enclosures  the power section is IP54 to be easily mounted in enclosure  with heat evacuation on the outside  Water cooled drive  Others			
Inductances (chokes) Regenerative Units Pes Regenerative Units Additional footprint filters Output filters Sinus filters Sinus filters Sinus filters Sinus filters Sinus filters Sinus filters Output fil			
Regenerative Units	Braking resistors		
EMC filters Output filters  Output filters  Motor chokes full performances filters sins filters filters for EMC compliance with unshielded cables  Others  Control fan kit Cannopen accessories keypad remote mounting kit  Specific Product Product mounted inside enclosures  Water cooled drive  The power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside  Water cooled drive  The power section is IP54 to be easily mounted in enclosure With heat evacuation on the outside  The part number  Ist of marking  CE, UL, CSA, DNV  CE, UL, CUL  Part number  Ist part  Type  Ist part  Type  I heatsink  Type  I heatsink  Type  The power: Type Jan 1  Type  Type Jan 1  Type Jan 2  Type Jan 2  Type Jan 2  Type Jan 2  Type Jan 3  Type Jan 3  Type Jan 4			
Motor chokes   full performances filters   filters for EMC compliance with unshielded cables			
filters for EMC compliance with unshielded cables  Others  Canoner accessories keypad remote mounting kit  Canopen accessories keypad remote mounting kit  Specific Product  Product mounted inside enclosures  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside  Water cooled drive  Others  List of marking  CE, UL, CSA, DNV  CE, UL, CUL  Part number  1st part  ATV71: Model 2nd part  Type H: heatblink  3rd part  Power: 075 = 0,75kW  U75 = 7,8kW  U75 = 7,8kW  4th part  15: power  Sth part  Notage M3: 2087 /240 V (3 input phase) N4: 380 /500 V  6th part  XZ: without filter and without operator display 7th part 8th part 9th part  Communication Messages  Message 1  The new VARISPEED G7 Three Level Control Inve encouragingly expensive new inverter to the work of Three level control Ingligh performance Problem solver  Three level control High performance Problem solver			
Canopen accessories keypad remote mounting kit  Specific Product  Product mounted inside enclosures  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside  Water cooled drive  no  Others  List of marking  CE, UL, CSA, DNV  CE, UL, CUL  Part number  1st part  ATV71: Model  Type  H: heatsink  3rd part  Power:  775 = 0.75kW  U56 = 7.5kW  U75 = 7.5kW  U75 = 7.5kW  4th part  Sth part  Voltage  M3: 2081 2240 ( 3 input phase)  N4: 380 / 500 V  XZ: without filter  Z: without operator display  XZ: without filter and without operator display  The part  Sth part  Communication Messages  Message 2  Message 3  Message 3  Global standard Three level control High performance Problems bolver	Output filters	full performances filters sinus filters	
Product mounted inside enclosures  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside  Water cooled drive  no  Others  List of marking  CE, UL, CSA, DNV  CE, UL, cUL  Part number  1st part 2nd part  Type H: heatslink 3rd part  Power: 075 = 0,75kW U75 = 7,5kW U75 = 7,5kW U75 = 7,5kW 4th part  1st part  Water and without operator display XZ: without filter and without operator display The part Bth part  Sth part  The new VARISPEED G7 Three Level Control Inve encouragingly expensive new inverter technology Message 2  Wassage 3  Message 3  Message 3  The new VARISPEED G7 Three Level Control Inve encouragingly expensive new inverter technology Carbon Solver  Global standard Three level control High performance Problem solver	Others	Canopen accessories	
Product mounted inside enclosures  the power section is IP54 to be easily mounted in enclosure with heat evacuation on the outside  Water cooled drive  no  Others  List of marking  CE, UL, CSA, DNV  CE, UL, cUL  Part number  1st part 2nd part  Type H: heatslink 3rd part  Power: 075 = 0,75kW U75 = 7,5kW U75 = 7,5kW U75 = 7,5kW 4th part  1st part  Water and without operator display XZ: without filter and without operator display The part Bth part  Sth part  The new VARISPEED G7 Three Level Control Inve encouragingly expensive new inverter technology Message 2  Wassage 3  Message 3  Message 3  The new VARISPEED G7 Three Level Control Inve encouragingly expensive new inverter technology Carbon Solver  Global standard Three level control High performance Problem solver	Specific Product		
Others  List of marking  CE, UL, CSA, DNV  CE, UL, CUL  Part number  1st part  Type 1st part  Type 1st heatsink  3rd part  Power: 075 = 0,75kW U75 = 7.5kW U75 = 7	•	enclosure	
List of marking  CE, UL, CSA, DNV  CE, UL, CUL  Part number  1st part  2nd part  Type H: heatsink  3rd part  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  4th part  Sth part  Woltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  6th part  X: without filter Z: without filter and without operator display XZ: without filter and without operator display Th part Sth part  Communication Messages  Message 1  Message 2  Message 3  CE, UL, CUL  CE, UL, CUL  CE, UL, CUL  CE, UL, CUL  ATV71: Model   Water cooled drive	no		
List of marking  CE, UL, CSA, DNV  CE, UL, CUL  Part number  1st part  2nd part  Type H: heatsink  3rd part  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  4th part  Sth part  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  6th part  X: without filter Z: without operator display XZ: without filter and without operator display 7th part 8th part 9th part  Communication Messages  Message 1  Message 3  Message 3  CE, UL, CUL  CE, UL, CUL  CE, UL, CUL  CE, UL, CUL  ATV71: Model  ATV71:	Others		
1st part 2nd part Type H: heatsink 3rd part Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW 4th part Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V 6th part Xz: without filter Z: without operator display XZ: without filter and without operator display XZ: without silter and without operator display Th part 8th part 9th part  Communication Messages Message 1 The new VARISPEED G7 Three Level Control Inve encouragingly expensive new inverter lechnology Message 2 Varispeed G7 the most expensive inverter in the wo Can you afford not to afford it? Global standard Three level control High performance Problem solver	List of marking	CE, UL, CSA, DNV	CE, UL, cUL
2nd part  Type H: heatsink  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  4th part  15: power  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  6th part  X: without filter Z: without operator display XZ: without filter X: without operator display XZ: without operator display XZ: without operator display XZ: without filter X: without filter X: without operator display XZ: without operator display XZ: without filter X: without operator display XZ: without operator display XZ: without operator display XZ: without filter X: without filter X: without operator display XZ: without operator display XZ: without operator display XZ: without filter X: witho			
H: heatsink  3rd part  Power: 075 = 0,75kW U75 = 7,5kW D75 = 75kW  4th part  15: power  5th part  Voltage M3: 208 / 240 V (3 input phase) N4: 380 / 500 V  6th part  X: without filter Z: without operator display XZ: without filter and without operator display  7th part  8th part  9th part  Communication Messages  Message 1  The new VARISPEED G7 Three Level Control Inve encouragingly expensive new inverter technology  Wessage 2  Varispeed G7 the most expensive inverter in the wo Can you afford not to afford it?  Message 3  Global standard Three level control High performance Problem solver			
## State of the part ## State	•	H: heatsink	
### Action of the part	3rd part	075 = 0,75kW U75 = 7,5kW	
Sth part  Voltage  M3 : 208 / 240 V (3 input phase)  N4 : 380 / 500 V  X : without filter  Z : without operator display  XZ : without operator display  XZ : without operator display  Th part  8th part  9th part  Communication Messages  Message 1  The new VARISPEED G7 Three Level Control Inve encouragingly expensive new inverter technology  Message 2  Varispeed G7 the most expensive inverter in the wo Can you afford not to afford it?  Message 3  Message 3  Global standard  Three level control High performance Problem solver	4th part		
Seth part  X: without filter Z: without operator display XZ: without operator display XZ: without filter and without operator display  7th part 8th part 9th part  Communication Messages Message 1  The new VARISPEED G7 Three Level Control Inverse encouragingly expensive new inverter technology  Message 2  Varispeed G7 the most expensive inverter in the work of the mos		Voltage M3 : 208 / 240 V (3 input phase)	
8th part 9th part  Communication Messages  Message 1  The new VARISPEED G7 Three Level Control Inveencouragingly expensive new inverter technology  Message 2  Varispeed G7 the most expensive inverter in the work can you afford not to afford it?  Message 3  Global standard Three level control High performance Problem solver		X : without filter Z : without operator display	
9th part  Communication Messages  Message 1  The new VARISPEED G7 Three Level Control Inveencouragingly expensive new inverter technology  Message 2  Varispeed G7 the most expensive inverter in the work Can you afford not to afford it?  Message 3  Global standard Three level control High performance Problem solver			
Communication Messages  Message 1  The new VARISPEED G7 Three Level Control Inveen couragingly expensive new inverter technology  Message 2  Varispeed G7 the most expensive inverter in the word can you afford not to afford it?  Message 3  Global standard Three level control High performance Problem solver			
Message 1  The new VARISPEED G7 Three Level Control Inveencouragingly expensive new inverter technology  Message 2  Varispeed G7 the most expensive inverter in the work can you afford not to afford it?  Message 3  Global standard Three level control High performance Problem solver			
Message 2  Varispeed G7 the most expensive inverter in the work Can you afford not to afford it?  Message 3  Global standard Three level control High performance Problem solver	Communication Messages		
Message 2  Varispeed G7 the most expensive inverter in the work Can you afford not to afford it?  Message 3  Global standard Three level control High performance Problem solver	Message 1		The new VARISPEED G7 Three Level Control Inverter
Message 3  Global standard Three level control High performance Problem solver	Message 2		Varispeed G7 the most expensive inverter in the world?
	Message 3		Global standard Three level control High performance
	Message 4		Problem solver

Message 5		
Message 6		
Message 7		
Type of communication		Very high performance inverter The Varispeed G7 is designed for very high performance applications.
Environment, recyclability		ISO 9000 plant
Safety Compliance		
Curety Compliance	EN1800-5-1	
	Power removal EN1800-5-2 / EN 954-1 category 3	
Software Opening		
		NI-
Logic Operation	no (could be carried out with the controller inside card)	No
Controller (PLC) Inside	Yes	Yes (CASE)
Software Card		
Product Services		
	Voc	
Flashable BC Settuare	Yes PowerSuite sotware workshop	
PC Software	'	
Scope	Yes	
Application Functions		
Number of functions	#150	
Number of parameters	#800	
Main functions	- PID regulator	
	- current and torque limitation	
	- S ramp	
	- short ramp	
	- 16 preset speeds + jog	
	- 3 wire control	
	- brake sequence	
	- protection by passwords	
List of advanced functions	- Brake sequence adapted to	Energy saving
	hoisting, travelling, orientation and lift	PID control for dancer control
	weight measurement	
	- high speed hoisting	
	- brake feedback	
	- load sharing	
	-Limit switches management	
	- non linear refence	
	- multi-motor - multi parameters	
	- Power removal	
	- alarm group	
	- limit switches positioning with	
	low speed time optimization	
	- summing, differentiating, multiplying reference	
	- fast catch on fly	
	- fastest controlled stop	
	- traverse control	
	- motor surge limitation	
	- customization of the menus and parameters	
Price Positioning		
User's Manual		
	.,	
Simplified	Yes	
Complete	Yes	
Language	6 languages and more	
Paper	Yes	
CD	Yes	
Web Site	Telemecanique.com	
Others	i elemecanique.com	
Applications		
Hoisting / crane	Yes	Yes, high speed elevators
Horizontal handling	Yes	Yes
Conveyor	Yes	Yes
Packaging	Yes	Yes
Pumping	Yes	Yes
Textile industry	Yes	
Fan	no	Yes
Lift	Yes	
Compressor	no	Yes
Others	110	Positionning
Others		Press and cutting machines
		Simple spindle drive
		Synchronisation
	come low enough recessions the last of	Positioning
	some low speed process machines, unbalanced	Paper production
	machine, special machine	Printing machines
	эрсыаі шаспіпе	All applications where long motor cables are required
		which is from 3-level-control

Constant Torque (CT) High torque (HT) Yes (Pse power section dimensionned for variable torque (VT) No Yes (power section dimensionned for variable torque) Input  Single phase 200V range Power	ATV71 vs ALLEN BRADLEY POWERFLEX 700		
Drive staining   ITEM	ATV71	POWERFLEX 700	
Drive staining   Picture			
Constant Torque (CT)	reture	AND THE PROPERTY OF THE PROPER	Power Ign :
Name	Drive sizing		
Single phase 209V range			
Single phase 200V range		No	Yes (power section dimensionned for variable torque)
Power range			
Number of ratings   9			No
Voltage range with loterance   200V +19% to 2400V +10%		· · · · · · · · · · · · · · · · · · ·	-
Mains frequency and tolerance   Yes   Ye		Ü	
Three phase 200V range			
Non-compage	. ,		
Number of ratings	•		
Mains frequency and tolerance   90 Hz 20% or 60 Hz 20%   Yes			
Three phase 400V range			
Power range		50 Hz ±20% or 60 Hz ±20%	
Number of ratings   29   19   19   19   19   19   19   10   10		2 == 1 2001111	
Voltage range with tolerance   \$389V.15% to 489V.+ 10%   \$5060 Hz			
Mains frequency and blevance   S0 Hz 820% or 80 Hz 20%   Yes		-	-
Three phase 690V range			
Number of ratings	` '		
Number of ratings			
Mains frequency and tolerance Power range Power range No N			
Three phase 690V range Power range Number of ratings Voltage range with tolerance Mains frequency and tolerance Mains frequency and tolerance Disconnexion and reconnexion of Y capacitors  EMC HF EMC compliance as standard Conducted emission Standard and level EN61800-3 C2 (II < 16A) EN61800-3 C3 (II < 16A) EN61800-3 C5 (II < 16A) EN61800-3 Adjustable Speed electrical PDS EMC  Unshielded motor cable length Switching frequency 4 KHz Power range integration Shelding connexion On EMC plate Power range integration Standard and level EN55011 Class A Power range  LF EMC compliance as standard Inductance (AC or DC) Class DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class  All the range  EN 61800-3 Second Environment, Restricted Distribution  Standard 1 + level EC 61000-4-2 level 3 EN 61800-3 Second Environment, Restricted Distribution  Standard 3 + level EC 61000-4-6 level 3 EN 60178 EN 60178 EN 60178 Electronic Equipment of machines,	Voltage range with tolerance		
Power range   Po			
Number of ratings  Votage range Mains frequency and tolerance MF EMC ompliance as standard Conducted emission  Standard and leve  EN61800-3 C2 (II < 16A) EN		No	
Voltage range with tolerance   Mains frequency and tolerance   Ungrounded supply   Disconnexion and reconnexion of Y capacitors   IT supply available by removing the jumpers			
Mains frequency and tolerance   Ungrounded supply   Disconnexion and reconnexion of Y capacitors   T supply available by removing the jumpers	·		-
Ungrounded supply  EMC  HF EMC compliance as standard Conducted emission  Standard and level  ENSIBOD-3 C2 (II = 16A) Shielded motor cable length Switching frequency All ratings (except from 11 to 75kW 200V class) Shielding connexion  Radiated emission  Standard and level Power range integration Standard and level Power range Inductance (AC or DC) Inductance (AC or DC) Class DC inductance integrated from 11 to 45kW 200V class DC i	·		-
HF EMC compliance as standard Conducted emission Standard and level EN1800-3 C2 (II < 18A) EN61800-3 C3 (II > 18A) EN61800-3 Adjustable Speed electrical PDS EN61800-3 C3 (II > 18A) EN61800-3 C3 (II			IT supply available by removing the jumpers
FEMC compliance as standard   Conducted emission   Standard and level   EN61800-3 C2 (II < 16A)   EN61800-3 C3 (II < 16A		Bioconnickion and reconnickion of 1 supuctors	The cappy are made by remaining the jumpore
Conducted emission  Standard and level EN61800-3 C2 (II < 16A) EN 61800-3 Adjustable Speed electrical PDS EN61800-3 C3 (IN 61A)  Shielded motor cable length 10 m up to 15kW 50m up to 75kW 30m  Unshielded motor cable length 50m up to 75kW 50m up to 75kW 30m  Power range integration All ratings (except from 11 to 75kW 200V class) All the range 51kielding connexion Radiated emission  Standard and level EN55011 Class A Power range Influence (AC or DC) DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class All the range DC inductance integrated from 11 to 45kW 200V class All the range EN 61km and 11 to 75kW 200V class All the range EN 61km and 11 to 45kW 200V class All the range EN 61km and 11			
Standard and level  ENS1800-3 C3 (II < 16A)  Shielded motor cable length  Unshielded motor cable length  Switching frequency  Power range integration  Shielding connexion  Shielding connexion  Standard and level  ENS5011 Class A  Power range  All ratings (except from 11 to 75kW 200V class)  All the range  ENS5011 Class A  Power range  All the ratings  LF EMC compliance as standard  Inductance (AC or DC)  Class  DC inductance integrated from 18,5kW to 75kW 400  Class  DC inductance integrated from 11 to 45kW 200V class  All the range  All the range  All the range  ENS5011 Class A  Power range integration  Standard  Inductance (AC or DC)  Standard and I level  ENS5011 Class A  DC inductance integrated from 18,5kW to 75kW 400  Class  DC inductance integrated from 11 to 45kW 200V class  All the range  All the range  All the range  EN 61800-3 Second Environment, Restricted Distribution  EN 61800-4-1 selevel 3  EN 61800-3 Second Environment, Restricted Distribution  EN 61800-3 Second Environment, Restricted Distribution  EN 61800-4-1 selevel 3  EN 61800-4-1 selevel 3  EN 61800-3 Second Environment, Restricted Distribution  EN 61800-4-1 selevel A  Standard 2 + level  EC 61000-4-2 level 3  EN 61800-3 Second Environment, Restricted Distribution  EN 61800-3 Second Environment of Distribution  EN 61800-4-1 selevel 3  EN 61800-3 Second Environment of Distribution  EN 618			EMC filter is intergrated
ENSTABOUGA CS   IN-16A    Shielded motor cable length   10 m up to 15kW   50m up to 75kW   30m		ENC4000 2 C2 (II + 4CA)	
Shielded motor cable length Unshielded motor cable length Switching frequency AkHz Power range integration Shielding connexion On EMC plate  EN55011 Class A Power range All the ratings  LF EMC compliance as standard  Inductance (AC or DC) DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class  Power range integration Standard Standard Standard Standard Standard Standard Standard 1 + level IEC 61000-4-2 level 3 Standard 2 + level Standard 3 + level IEC 61000-4-4 level 4 Standard 3 + level IEC 61000-4-4 level 4 Standard 4 + level IEC 61000-4-6 level 3 Low voltage directive  EN 50178  EN 60204-1 Safety of Machinery - Electrical Equipment of machines. EN 50178 Electron Equipment for use in power installations.  The physical environment Number of size (frame) Protection Degree  IP + power range  IP 21 and IP41 on upper part (EN 50178 and 61800-5-1) IP31 with gland box, Nema type 1 with conduit box  IP 1 power range	Standard and level		EN 01000-3 Aujustable Speed electrical FDS
S0m up to 75kW   S0m up to 75kW   S0m up to 75kW   Som	Shielded motor cable length	, ,	30m
Switching frequency Power range integration All ratings (except from 11 to 75kW 200V class)  All the range  Shielding connexion On EMC plate  Standard and level EN55011 Class A  Power range All the ratings  LF EMC compliance as standard Inductance (AC or DC) DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class  Power range integration Standard			
Power range integration   All ratings (except from 11 to 75kW 200V class)   All the range			
Shielding connexion Radiated emission Standard and level EN55011 Class A Power range All the ratings  LF EMC compliance as standard Inductance (AC or DC) Inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class DC inductance integrated from 11 to 45kW 200V class DC inductance integrated from 11 to 45kW 200V class DC inductance integrated from 11 to 45kW 200V class DC inductance integrated from 11 to 45kW 200V class DC inductance integrated from 12 to 45kW 200V class DC inductance integrated from 13 to 45kW 200V class DC inductance integrated from 12 to 45kW 200V class DC inductance integrated from 13 to 45kW 200V class DC inductance integrated from 18,5kW to 75kW 400 Cla	Switching frequency	4kHz	
Radiated emission  Standard and level EN55011 Class A Power range All the ratings  LF EMC compliance as standard Inductance (AC or DC) Inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class DC inductance integrated from 11 to 45kW 200V class DC inductance integrated from 11 to 45kW 200V class DC inductance integrated from 11 to 45kW 200V class All the range  EN 61800-3 Second Environment, Restricted Distribution  EN 61800-3 Second Environment, Restricted Distribution  EN 61800-4-2 level 3 EN 61800-3 Second Environment, Restricted Distribution  EN 61800-4-2 level 3 EN 61800-4-2 level 3 EN 61800-4-3 level 3 EN 61800-4-4 level 4 EN 61000-4-4-6 level 3 EN 60100-4-4-6 level 3 EN 60100-4-5 level 3 EN 60100-4-6 level 3 EN 60178 EN 60204-1 Safety of Machinery - Electrical Equipment of machines. EN50178 Electronic Equipment of machines. EN50178 Electronic Equipment of size (frame)  Physical environment  Number of size (frame)  Protection Degree  IP + power range  IP 21 and IP 41 on upper part (EN 50178 and 61800-5-1) IP 20  IP 21 with gland box, Nema type 1 with conduit box  IP + power range	Power range integration	All ratings (except from 11 to 75kW 200V class)	All the range
Standard and level Power range All the ratings  LF EMC compliance as standard Inductance (AC or DC) Inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class  Power range integration Standard	Shielding connexion	On EMC plate	
Power range   All the ratings			
LF EMC compliance as standard  Inductance (AC or DC) Inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class  Power range integration Standard Standard Standard Standard 1 + level IEC 61000-4-2 level 3 Standard 2 + level Standard 3 + level Standard 3 + level IEC 61000-4-3 level 3 Standard 4 + level Standard 5 + level Standard 5 + level IEC 61000-4-6 level 3 Standard 5 + level IEC 61000-4-6 level 3 Standard 5 + level IEC 61000-4-7 level 3 Standard 5 + level IEC 61000-4-8 level 3 Standard 5 + level IEC 61000-4-6 level 3 IEC 61000-4-6 level 4 IEC 61000-4-6 level 4 IEC 61000-4-6 level 4 IEC 61000-4-6 level 4 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 I	Standard and level	EN55011 Class A	
Inductance (AC or DC)  DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class  Power range integration Standard Standard Standard Standard Standard 1 + level IEC 61000-4-2 level 3 Standard 2 + level IEC 61000-4-3 level 4 Standard 3 + level IEC 61000-4-4 level 4 Standard 4 + level IEC 61000-4-5 level 3 Standard 5 + level IEC 61000-4-6 level 3 Standard 5 + level IEC 61000-4-6 level 3 Standard 5 + level IEC 61000-4-6 level 3 Standard 5 + level IEC 61000-4-7 level 3 Standard 5 + level IEC 61000-4-8 level 3 Standard 5 + level IEC 61000-4-8 level 3 Standard 5 + level IEC 61000-4-6 level 3 Standard 5 + level IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-5-1 IEC	Power range	All the ratings	
Inductance (AC or DC)  DC inductance integrated from 18,5kW to 75kW 400 Class DC inductance integrated from 11 to 45kW 200V class  Power range integration Standard Standard Standard Standard Standard 1 + level IEC 61000-4-2 level 3 Standard 2 + level IEC 61000-4-3 level 4 Standard 3 + level IEC 61000-4-4 level 4 Standard 4 + level IEC 61000-4-5 level 3 Standard 5 + level IEC 61000-4-6 level 3 Standard 5 + level IEC 61000-4-6 level 3 Standard 5 + level IEC 61000-4-6 level 3 Standard 5 + level IEC 61000-4-7 level 3 Standard 5 + level IEC 61000-4-8 level 3 Standard 5 + level IEC 61000-4-8 level 3 Standard 5 + level IEC 61000-4-6 level 3 Standard 5 + level IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-4-6 level 3 IEC 61000-5-1 IEC	LF EMC compliance as standard		
DC inductance integrated from 11 to 45kW 200V class			DC chokes
Power range integration Standard Standard  % THD Standard 1 + level Standard 2 + level Standard 3 + level Standard 3 + level Standard 4 + level Standard 4 + level Standard 5 + level 3 Standard 5 + level Standard 5 + level 3 Standard 5 + level Standard 5 + level 3 Standard 5 + level 4 Standard 5 + level 3 Standard 5 + level 3 Standard 5 + level 4 Standard 5 + level 4 Standard 5 + level 3 Standard 5 + level 4 S			
Standard   % THD   See reference manual	Power range integration	DO inductance integrated from 11 to 45kW 200V class	All the range
Minumity   Standard 1 + level			All the range
Immunity     Standard 1 + level     IEC 61000-4-2 level 3     EN 61800-3 Second Environment, Restricted Distribution       Standard 2 + level     IEC 61000-4-3 level 3     EN 61800-3 Second Environment, Restricted Distribution       Standard 2 + level     IEC 61000-4-3 level 3     IEC 61000-4-4 level 4       Standard 4 + level     IEC 61000-4-5 level 3     IEC 61000-4-6 level 3       Low voltage directive     IEC 61000-4-6 level 3     EN60204-1 Safety of Machinery - Electrical Equipment of machines. EN50178 Electronic Equipment for use in power installations.       Others     IEC 61800-5-1     EN50178 Electronic Equipment of size (frame)       Physical environment     13 sizes     7       Number of size (frame)     IP21 and IP41 on upper part (EN 50178 and 61800-5-1) IP31 with gland box, Nema type 1 with conduit box     IP20			can reference manual
Standard 1 + level			See reference manual
Standard 2 + level   IEC 61000-4-2 level 3   Distribution			EN 61800 2 Second Environment, Destricts d
Standard 2 + level   IEC 61000-4-3 level 3   Standard 3 + level   IEC 61000-4-4 level 4   Standard 4 + level   IEC 61000-4-5 level 3   Standard 5 + level   IEC 61000-4-6 level 3   Standard 5 + level 3   Standard 5	Standard 1 + level	IEC 61000-4-2 level 3	
Standard 3 + level   IEC 61000-4-4 level 4     Standard 4 + level   IEC 61000-4-5 level 3     Standard 5 + level   IEC 61000-4-6 level 3     Low voltage directive   EN 50178   EN60204-1 Safety of Machinery - Electrical Equipment of machines. EN50178 Electronic Equipment of machin	Standard 2 + level	IEC 61000-4-3 level 3	
Standard 4 + level   IEC 61000-4-5 level 3   Standard 5 + level   IEC 61000-4-6 level 3   Low voltage directive   EN 50178   EN60204-1 Safety of Machinery - Electrical Equipment of machines. EN50178 Electronic Equipment for use in power installations.  Others   IEC 61800-5-1   Physical environment   IEC 61800-5-1   Number of size (frame)   13 sizes   7   Protection Degree   IP21 and IP41 on upper part (EN 50178 and 61800-5-1)   IP20   IP + power range   IP20   IP31 with gland box, Nema type 1 with conduit box   IP + power range   IEC 61000-4-6 level 3   EN60204-1 Safety of Machinery - Electrical Equipment of machines.  EN50178 Electronic Equipment for use in power installations.  IP20   IP20   IP20   IP21   IP20   IP20   IP31			
EN 50178  EN 50178  EN 50178  EN 50178 Electronic Equipment of machines. EN 50178 Electronic Equipment for use in power installations.  Others  Physical environment Number of size (frame)  Protection Degree  IP + power range  IP + power range  EN 50178  EN 60204-1 Safety of Machinery - Electrical Equipment of machines. EN 50178 Electronic Equipment for use in power installations.  To set the set of machines - EN 50178 Electronic Equipment of machines. EN 50178 Electronic Equipment of use in power installations.  To set the set of machines - EN 50178 Electronic Equipment of machines. EN 50178 Electronic Equipment of machines - EN 50178 Electronic Equipment of machines. EN 50178 Electronic Equipment of mac			
EN 50178  EN 50178  EN 50178 Electronic Equipment for use in power installations.  Others  Physical environment  Number of size (frame)  Protection Degree  IP + power range  IP + power range  EN 50178  EN50178 Electronic Equipment for use in power installations.  Text of machines.  EN 50178  Stock of machines.  EN50178 Electronic Equipment for use in power installations.  Text of machines.  EN 50178  IEC 61800-5-1  13 sizes  7  IP20  IP20  IP21 and IP41 on upper part (EN 50178 and 61800-5-1)  IP31 with gland box, Nema type 1 with conduit box  IP + power range		IEC 61000-4-6 level 3	ENGOCOLA O COLO COLO COLO COLO COLO COLO CO
Others         IEC 61800-5-1           Physical environment         Image: Company of Size (frame)         Total Company of Size (frame)         7           Protection Degree         IP21 and IP41 on upper part (EN 50178 and 61800-5-1) IP31 with gland box, Nema type 1 with conduit box         IP20	Low voltage directive	EN 50178	of machines. EN50178 Electronic Equipment for use in power
Physical environment     Image: Company of Size (frame)     13 sizes     7       Protection Degree     IP21 and IP41 on upper part (EN 50178 and 61800-5-1) IP31 with gland box, Nema type 1 with conduit box     IP20	Othors	IEC 61900 5 1	-inotaliations
Number of size (frame)  13 sizes  7  Protection Degree  IP21 and IP41 on upper part (EN 50178 and 61800-5-1) IP31 with gland box, Nema type 1 with conduit box  IP + power range		IEC 01000-0-1	
Protection Degree IP21 and IP41 on upper part (EN 50178 and 61800-5-1) IP20 IP31 with gland box, Nema type 1 with conduit box IP + power range			
IP31 with gland box, Nema type 1 with conduit box IP + power range	` '		7
IP + power range	Protection Degree	IP21 and IP41 on upper part (EN 50178 and 61800-5-1)	IP20
	ID ± nower range	ii 31 with giand box, Nema type 1 with conduit box	
ii · power range			
	IF + power larige		

IP + power range		
IP + power range		
Temperature  Operating ambiant temperature		IP00 / IP20 : 0°C to +50°C
Operating ambiant temperature	-10 to +50°C	Type 1 : 0°C to +40°C
Storage temperature	-25 to 70°C	-40°C to +70°C
Humidity	95% non condensing without drop	5% to 95% non condensing
Operational altitudes	1000m without derating. Possibile up to 3000m	1000 m w/o derating
Vibrations	1 coolbile up to coccini	0.152 mm (0.006 in.) displacement, 1G peak
Other		
Automatic stop of fan	Yes	
Mounting		
Drive Shape	Compact	Book
Side by side mounting Heat evacuation outside enclosure	Yes without derating	Yes No
Operating position	Yes, the power section is IP54  Vertical	vertical
Others	-	VOITICAL
Power connexion		
DC Bus connexion	Yes	Yes, bottom
DC inductance connexion	Line inductance or DC inductance	No
Removable terminals	No	No
Bottom or Top/Bottom	Bottom	Bottom
Motor control		
AC motors motor control		
U/F	Yes	Yes
SVC (open loop) FVC (closed loop)	Yes Yes	Yes (Vector control mode)
Type of encoder	RS422, Open collector or Push pull	encoder card available 12 V or 5V encoder
Others	ENA	Elizabeth Elizab
Synchronous or brushless motors		
Open loop	Yes	No
Closed loop	No	No
Performances		
Speed range		
Motor quadrant	1 : 100 open loop	1 : 120 open loop 1 : 1000 closed loop
Generator quadrant	1 : 1000 closed loop 1 : 50 open loop	1 . 1000 dosed loop
·	1 : 1000 closed loop	
Overtorque		150% during 60s
Rated current philosophy	from 200 to 240% during 2s 1,1 In motor (380V)	200% during 3s
0,75kW / 400V	In motor = 2 A	In motor = 2 A
ŕ	In drive = 2,3 A	In drive = 3,5 A
4 kW / 400V	In motor = 8,5 A	In motor = 8,5 A
22 kW / 400V	In drive = 10,5 A In motor = 40,5 A	In drive = 11,5 A In motor = 40,5 A
22 KW / 400V	In motor = 40,5 A In drive = 48 A	In Motor = 40,5 A In drive = 56A
Overcurrent capability		CT % of Imot 400V
	200% I motor during dos	150% during 60s 200% during 3s
Type of control and accuracy		200 % duffing 35
Speed control		Yes
	Yes	0,1% base speed open loop (bandwidth = 8Hz)
Torque control		0,001% base speed closed loop (bandwidth 40Hz) Yes
Torque control	Yes	+/-10% open loop (bandwidth = 95Hz)
		+/-5% closed loop (bandwidth = 400Hz)
Torque rise time		
Sampling time of the loop		
Autotuning		If tuning is not desirable, the drive can be instructed to calculate the values for tuning directly based on entered
		motor data.
On line / Off line	Off line and On line	Both online and offline
Ways of execution	By keypad, Logic input, at power up	
Values measured		
Prefluxing	Yes	
Braking		Y C
Braking transistor	Yes	Yes (integrated on request)
Braking performance w/o resistor	Without resistor 100% Cn : 0,37 - 0,75 kW	
	30% Cn : 1,5 - 15 kW	
	With resistor (as an option)	
Output frequency range	Until 170% Cn 0,1 to 1000Hz up to 37kHz	0 - 400 Hz standard
Carpar nequency range	up to 500Hz above	0 - 400 Hz standard 0 - 420 Hz vector control
Output frequency resolution	0,1Hz	
Switching frequency		Optimized for 4 kHz 2 - 10 kHz
range	Settable from 0,5 to 16kHz	2 - 10 KHZ 2 - 10 KHZ
factory setting	4kHz up to 30kW	
, ,	2,5kHz above	
Integrated output filter		
dv/dt	as an option	
Motor voltage surge limitation	Yes	Yes
Sinus	no	
Others Frequency setting resolution	no	
Frequency setting resolution  Serial		
Serial	11 bits	
Digital	11 DRO	
Modularity		

Number of option board at the same time	l o	2 (anadar card + communication card)
Number of option board at the same time Inputs / Outputs	3	2 (encoder card + communication card)  Vector card is detailed below
On basic product		No card on the basic product the customers have to
On basic product		order the version of the card they want to use: 2 version available, standard or vector control. When vector control card, encoder interface available on
		request
Removable terminals	Yes	Yes
Type of terminal & pitch	Screw terminlas, pitch 5,08	Screw terminlas, pitch 5,08
Sampling time	1ms minimum, and 2,5ms max	
Analog input	2	2
1	Differential voltage input +/-10V	1 differentially isolated ±10 V (bi-polar) / 4-20 mA analog inputs, 11 bit plus sign, 10 V common mode noise rejection .
2	current or voltage input	1 differentially isolated ±10 V (bi-polar) / 4-20 mA analog inputs, 11 bit plus sign, 10 V common mode noise rejection .
3		- 0.4% (4.1% - 4.04) (4.0% 0.0% - 4.45) (4.0%
Logic inputs	6 assignable logic inputs	6 digital inputs 24 V AC/DC or 115 V AC Inputs are configurable as sink or source.
Logic outputs (open collector)	no	inpute and comigarable at sink of course.
Relays	2 assignable relays (NO/NC, NC)	2 relay output, form C (1 no - 1 nc)
Analog outputs	1	2
1		1 differentially isolated ±10 V (bi-polar) / 4- 20 mA, 11
	Assignable output (voltage or current)	bit plus sign.
2		-
Dedicated I/O	2	
1	Power removal input (compliance with 61800-5-2	
	PTC input on LI	
I / O Option 1	Lgic I/O card	
I / O Option 1 Removable terminals	Lgic I/O card Yes	
Type of terminal & pitch		
Sampling time	Screw terminlas, pitch 5,08	
Analog input	5ms	
Analog input	no	
2		
3		
Logic inputs		
Logic outputs (open collector)	4 assignable logic inputs 2 assignable open collector outputs	
Relays	1 assignable relay (NO/NC)	
analog outputs	no	
analog outputs	TIO .	
2		
3		
Dedicated I/O		
1	-10V supply	
2		
3		
I / O Option 2	Extended I/O card	
Removable terminals	Yes	
Type of terminal & pitch Sampling time	Screw terminlas, pitch 3,81 except relay that 5,08	
analog input	5ms 2	
analog input	2 1 differential current input	
2		
3	1 voltage / current input	
Logic inputs		
Logic outputs (open collector)	4 assignable logic inputs 2 assignable open collector outputs	
Relays	1 assignable relay (NO/NC)	
analog outputs	1 assignable relay (NO/NC)	
1	2 assignable voltage/current analog outputs	
2	2 accing itable voltage current analog outputs	
3		
Dedicated I/O		
1	PTC input	
2		
3		
I / O Option 3	Controller inside card	
Removable terminals	Yes	
Type of terminal & pitch		
Sampling time		
analog input		
1		
2		
Logic inputs		
Logic outputs (open collector)		
Relays		
analog outputs		
1		
2		
3		
Dedicated I/O		
1		
2		
3		
Others		-
L		

Communication		
Separated control supply	Yes 24V dc as standard	Yes 300Vdc
On the basic product	Yes	2 cards at the same time
Protocol available 1	Modbus fully configurable with I/O scanner	
Protocol available 2	Canopen fully configurable	
Protocol available 3	5	
Communication option card		The drive has the capability for either internally or externally mounted communications interface cards. Internal cards use drive power and can operate at higher speeds. External cards are separately powered and connected to the drive via a cable.
Protocol available 1	Fipio PL7	DeviceNet
Protocol available 2 Protocol available 3	FIPIO with messaging  Modbus Plus	ControlNet (specific Allen Bradley) Profibus
Protocol available 3	Uni-Telway, Modbus ASCII, Modbus RTU/Jbus	Interbus-S
Protocol available 5	INTERBUS-S	Remote I/O (Allen Bradley remote I/O)
Protocol available 6	Profibus DP	Ethernet / IP
Protocol available 7	Ethernet	RS-485
Protocol available 8	DeviceNet	Serial null modem
Protocol available 9	Devicervet	RS-232
Protocol available 10		-
Protocol available 11		_
Protocol available 12		-
Gateway		-
Protocol available 1	AS-i	-
Protocol available 1	AO-I	
Protocol available 2		
Protocol available 3 Protocol available 4		-
		-
Protocol available 5		-
Protocol available 6		-
Protocol available 7		-
Protocol available 8		-
Protocol available 9		-
Protocol available 10		-
Protocol available 11		-
Protocol available 12		-
		_
Protocol available 13		-
Operator panel		
Dialogue 1		Optional : 4 versions digital LCD full numeric Icd analog Icd prog only Icd
Integrated / removable	Integrated	Removable
Type of screen	4 Led digits	7 lines by 4 character backlit LCD display with graphic
Language	code	capability Including but not limited to English, Frecn, German, Italian, Spanish, Portuguese and Dutch.
Number of keys	4	. ,
Number of Leds	5 Leds for the diagnostic of the integrated fieldbus	
Keypad command	no	Start Stop Direction Jog Speed control
Function keys	no	alphanumerical keypad
Others		The LCD version is available in two styles: - IP20 / Type 1 drive mounted version that can also be used as a handheld terminal by connecting via a serparate cable, this version is available in digital (up / down keys) or analog (potentiometer) speed control IP66 / UL Type 4X, 12 remote mounted version for cabinet / panel mounting that is connected via cable. Digital speed control only.
Dialogue 2		-
Integrated / removable	Removable	-
Type of display	Graphic display	-
Language	6 languages (languages are flashable). Suitable for asian characters	
Number of keys	use of a shuttle + 1 key	-
Number of Leds	no	-
Keypad command	Yes	
Function keys	4	-
Others	navigation with a shuttle could be used to save and restore 4 configurations remote mounting kit available Multipoint connection	-
Dialogue 3		•
Integrated / removable		
Type of display		-
Language		-
Number of keys		-
Number of Leds		
Keypad command		
Function keys		
Others		no operator display as standard
Protections		

Thermal protection	Yes, I2t motor thermal protection depending on the motor	
· .	frequency.  Memorization when power off	
Electronic / PTC	Yes, dedicated input on option cards	
The motor thermal state is saved when power is off	. 55, 353.53.64 input on option dards	
Short circuit between phase	yes	Yes
Ground fault	yes	Yes
Output phase loss	yes	Yes
Input phase loss Braking resistor protection	yes	Yes
Overload	No yes	Yes
Overvoltage	yes	Yes
Undervoltage	yes	Yes
Drive thermal protection	yes	
Locked motor protection	Yes	
Stall prevention	Yes	
Others		Loss of reference
Options and Accessoiries		V
Braking resistors	protected braking resistor Hoisting resistors	Yes
Inductances (chokes)		DC bus inductances on all ratings (see on a 2001
	Line chokes	sample specifications maybe not available today)
Regenerative Units	Yes	V
EMC filters Output filters	Additional footprint filters  Motor chokes	Yes Yes
Output inters	full performances filters	103
	sinus filters	
Others	filters for EMC compliance with unshielded cables	
Others	Control fan kit Canopen accessories	
	keypad remote mounting kit	
Specific Product		
Product mounted inside enclosures	the power section is IP54 to be easily mounted in	Yes
	enclosure	
Water cooled drive	with heat evacuation on the outside	No
Water cooled drive	no	No
Others		- 0.Ti.l. IIIIII05
List of marking	CE, UL, CSA, DNV	C-Tick, UL, cUL, CE
Part number		20B D 2P1 A 3 A Y N A R A 0
1st part	ATV71 : Model	<b>20 B : Drive Code Type</b> 20B 700
2nd part		D : Voltage Rating
Ziid part		Code / Voltage / Ph. / Prechg.
		B / 240V AC / 3 / –
		C / 400V AC / 3 / – D / 480V AC / 3 / –
	Туре	E / 600V AC(3) / 3 / -
	H: heatsink	F / 690V AC / 3 / – H / 540V DC(4) / – / N
		J / 650V DC(4) / – / N
		P / 540V DC(4) / – / Y
		R / 650V DC(4) / – / Y
3rd part	Power :	2P1 : Rating
	075 = 0,75kW	
	U75 = 7,5kW	
4th part	D75 = 75kW	A : Enclosure
4tii part	15 : power	A : IP20
		N : open
5th part		3 : HIM
	Voltage	0 : blank cover 2 : digital LCD
	M3 : 208 / 240 V (3 input phase) N4 : 380 / 500 V	3 : Full numeric LCD
	N4 . 360 / 500 V	4 : Analog LCD
Other and	V	5 : prog only LCD
6th part	X : without filter Z : without operator display	A : Documentation A : user manual
	XZ : without filter and without operator display	N : no manual
7th part		Y: brake
		Y : Yes N : No
		N : Brake resistor
		Y : Yes N : No
8th part		A : emission
		A : ce filter and cm choke
011		B : ce filter alone
9th part		R : comm slot C : ControlNet
		D : DeviceNet
		E :Ethernet/IP
		R : RIO S : RS-485
		N : none
		A : I/O
		control / i/o volts
		A : standard 24 V DC/AC
		B : standard 115 V AC C : Vector 24 V DC/AC
		D : Vector 24 V DC/AC
		N : standard none
		0 : feedback
		0 : none
		1 : encoder 12 V

Communication Messages		
Message 1		
Message 2		
Message 3		
Message 4		
Message 5		
Message 6		
Message 7		
Type of communication		
Environment, recyclability		All Allen Bradley drive manufacturing locations are
Living in the special interpretation of the special interpretation		certified to the ISO-9001 Series of Quality standards as well as the ISO-14001 Environmental Standards.
Safety Compliance		Work do the 100 1 1001 Environmental etailida.
Safety Compliance		The drive is designed to meet the followin requirements:
	EN1800-5-1	NFPA 70: US National Electric Code. NEMA ICS 3,1: Safety standards for Construction and Guide for Selection, Installation and Operation of Adjustable Speed Drive Systems. NEMA 250: Enclosures for Electrical Equipment. UL 508C: Underwritter's Laboratory. CAN/CSA-C22 No, 14-M91: Canadian Standards Association. IEC 146: International Electrical Code.
	Power removal EN1800-5-2 / EN 954-1 category 3	
Software Opening		
Logic Operation	no (could be carried out with the controller inside card)	
Controller (PLC) Inside		Von de en euternel seties
, ,	Yes	Yes as an external option
Software Card		
Product Services		
Flashable	Yes	
PC Software	PowerSuite sotware workshop	
Scope	Yes	
Application Functions		
Number of functions	#150	
Number of parameters	#800	
Main functions	- PID regulator - current and torque limitation - S ramp - short ramp - 16 preset speeds + jog - 3 wire control - brake sequence - protection by passwords	
List of advanced functions	- Brake sequence adapted to hoisting, travelling, orientation and lift weight measurement - high speed hoisting - brake feedback - load sharing -Limit switches management - non linear refence - multi-motor - multi parameters - Power removal - alarm group - limit switches positioning with low speed time optimization - summing, differentiating, multiplying reference - fast catch on fly - fastest controlled stop - traverse control - motor surge limitation - customization of the menus and parameters	Auto economizer: automatically reduces the output voltage when the drive is operating in an idle mode (drive output current less than programmed motor FLA). The voltage is reduced to minimize flux current in a lightly loaded motor thus reducing kW usage. If the load increases, the drive will automatically return to normal operation.
Price Positioning		
User's Manual		
Simplified	Yes	Yes
Complete	Yes	Yes
Language	6 languages and more	English, french,
Paper	Yes	Yes
CD	Yes	
Web Site	Telemecanique.com	www,ab,com
Others		
Applications		
Hoisting / crane	Yes	
Horizontal handling	Yes	Yes
Conveyor	Yes	Yes
Packaging	Yes	Yes
Pumping	Yes	Yes
Textile industry	Yes	Yes
Fan	no	Yes
Lift	Yes	
Compressor	no	Yes
Others	some low speed process machines, unbalanced	Yes
	machine, special machine	