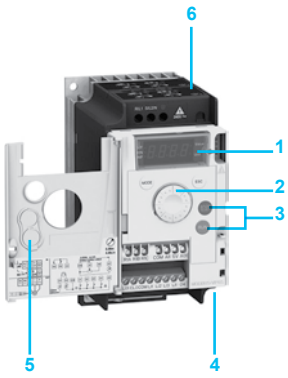
Drive with heatsink ATV12H075M2

Drive on base plate ATV12P075M2



ATV12H075M2 with door on front panel open

Multi-Loader configuration tool

Remote terminal with cover closed

Remote terminal with cover open: RUN, FWD/REV and STOP buttons accessible

An optimum solution

The Altivar® 12 range of variable speed drives extends across a range of motor power ratings from 0.18 kW to 4 kW on three types of power supply: Two standard versions are available:
Drive with heatsink for normal environments and fan-cooled enclosure:
- 100 to 120 V single-phase, 0.18 kW to 0.75 kW (**ATV12H●●●F1**)
- 200 to 240 V single-phase, 0.18 kW to 2.2 kW (**ATV12H●●●M2**)
- 200 to 240 V three-phase, 0.18 kW to 4 kW (**ATV12H●●●M3**)

Drive on a base plate for mounting on the machine frame; the frame surface area should allow heat to dissipate:
- 100 to 120 V single-phase, 0.18 kW to 0.37 kW (**ATV12H018F1, P037F1**)
- 200 to 240 V single-phase, 0.18 kW to 0.75 kW (**ATV12H018M2, P●●●M2**)
- 200 to 240 V three-phase, 0.18 kW to 4 kW (**ATV12H018M3, P●●●M3**)

***Note**: The Altivar 12 drive output voltage is 200 to 240 V three-phase, regardless of the type of drive line supply.*

The Altivar 12 drive utilizes standard Modbus communication protocol, and can be accessed via the RJ45 connector located on the underside of the drive **4**.

The entire range conforms to international standards IEC/EN 61800-5-1 and IEC/EN 61800-3, is UL, CSA, C-Tick, NOM, GOST certified and has been developed to meet the requirements of directives regarding the protection of the environment (RoHS, WEEE) as well as those of European Directives to obtain the CE mark.

Electromagnetic compatibility (EMC)

The integration of a level C1 EMC filter in ATV12●●●●M2 drives and the handling of EMC simplify installation and make it very inexpensive to bring the device into conformity to obtain the CE mark.
This EMC filter can be disconnected via an internal switch **6**.

ATV12●●●●F1 and ATV12●●●●M3 drives are designed without an EMC filter. Filters are available as an option and can be installed by the customer to reduce the level of emissions (see page 16).

External accessories and options

External accessories and options can be used with Altivar 12 drives:
EMC conformity kits, plates for direct mounting on 35 mm DIN rails, etc.
Braking units combined with a braking resistor, motor chokes, additional EMC input filters, etc.

Dialog and configuration tools

Human/Machine Interface (HMI)

The 4-digit display **1** can be used to display states and faults, access parameters and modify them via the navigation button **2**.
The RUN and STOP buttons **3** can be made accessible on the front panel by removing the blanking plate **5** from the door; they must be configured in order to be active.

Simple Loader and Multi-Loader configuration tools

The Simple Loader tool enables one powered-up drive's configuration to be duplicated on another powered-up drive.
The Multi-Loader tool enables configurations from a PC or drive to be copied and duplicated on another drive; the drives do not need to be powered up.

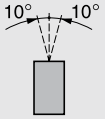
SoMove™ setup software

The SoMove setup software can be used with the Altivar 12 drive for configuration, adjustment, debugging (using the Oscilloscope function) and maintenance, just as it can for all other Schneider Electric variable speed drives and starters. It can also be used to customize the integrated display terminal menus. It can be used with a direct connection or a Bluetooth® wireless connection.

Remote display terminal

The Altivar 12 drive can be connected to a remote display terminal, available as an option. This terminal can be mounted on an enclosure door with IP 54 or IP 65 degree of protection. The maximum operating temperature is 50°C. It provides access to the same functions as the Human/Machine Interface.

Environmental specifications

Conformity to standards				Altivar® 12 drives have been developed to conform to the strictest international standards and the recommendations relating to electrical industrial control equipment (IEC, EN), in particular: IEC/EN 61800-5-1 (low voltage), IEC/EN 61800-3 (conducted and radiated EMC immunity and emissions).
	EMC immunity			IEC/EN 61800-3, Environments 1 and 2 (EMC requirements and specific test methods) IEC/EN 61000-4-2 level 3 (electrostatic discharge immunity test) IEC/EN 61000-4-3 level 3 (radiated, radio-frequency, electromagnetic field immunity test) IEC/EN 61000-4-4 level 4 (electrical fast transient/burst immunity test) IEC/EN 61000-4-5 level 3 (surge immunity test) IEC/EN 61000-4-6 level 3 (immunity to conducted disturbances, induced by radio-frequency fields) IEC/EN 61000-4-11 (voltage dips, short interruptions and voltage variations immunity tests)
	Conducted EMC emissions for drives	ATV12●●●●F1 ATV12H018M3 ATV12●037M3 to ●U22M3		With additional EMC filter: IEC/EN 61800-3, Environment 1 (public network) in restricted distribution: □ Category C1, from 4 to 12 kHz for a shielded motor cable length ⩽ 5 m (except ATV12●018M3 to ●075M3) □ Category C2, from 4 to 12 kHz for a shielded motor cable length ⩽ 20 m IEC/EN 61800-3, Environment 2 (industrial network): □ Category C3, from 4 to 12 kHz for a shielded motor cable length ⩽ 20 m
		ATV12●●●●M2		IEC/EN 61800-3, Environment 1 (public network) in restricted distribution: □ Category C1, at 2, 4, 8, 12 and 16 kHz for a shielded motor cable length ⩽ 5 m □ Category C2: ATV12H018M2 to ●075M2, from 2 to 12 kHz for a shielded motor cable length ⩽ 5 m and at 2, 4, 16 kHz for a shielded motor cable length ⩽ 10 m □ Category C2: ATV12HU15M2 to HU22M2, from 4 to 16 kHz for a shielded motor cable length ⩽ 5 m and at 2, 4, 8, 12 and 16 kHz for a shielded motor cable length ⩽ 10 m With additional EMC filter: IEC/EN 61800-3, Environment 1 (public network) in restricted distribution: □ Category C1, from 4 to 12 kHz for a shielded motor cable length ⩽ 20 m □ Category C2, from 4 to 12 kHz for a shielded motor cable length ⩽ 50 m IEC/EN 61800-3, Environment 2 (industrial network): □ Category C3, from 4 to 12 kHz for a shielded motor cable length ⩽ 50 m
	Radiated EMC emissions for drives	ATV12●●●●●●		IEC/EN 61800-3, Environment 1 (public network) in restricted distribution: □ Category C2, from 2 to 16 kHz for a shielded motor cable
CE marking				The drives are marked CE according to the European low voltage (2006/95/EC) and EMC (2004/108/EC) directives
Product certifications				UL, CSA, NOM, GOST and C-Tick
Degree of protection				IP 20
Vibration resistance		Drive not mounted on DIN rail		According to IEC/EN 60068-2-6: □ 1.5 mm peak from 3 to 13 Hz □ 1 gn from 13 to 200 Hz
Shock resistance				15 gn for 11 ms according to IEC/EN 60068-2-27
Maximum ambient pollution Definition of insulation				Degree 2 according to IEC/EN 61800-5-1
Environmental conditions Use				IEC 60721-3-3 classes 3C3 and 3S2
Relative humidity			**%**	5 to 95 non condensing, no dripping water, according to IEC 60068-2-3
Ambient air temperature around the device	Operation	ATV12H018F1, H037F1 ATV12H018M2 to H075M2 ATV12H018M3 to H075M3 ATV12P●●●●●	**°C**	- 10 to + 40 without de-rating *(1)* Up to + 60, with the protective blanking cover removed *(1)* and current de-rating of 2.2% per additional degree *(2)*
		ATV12H075F1 ATV12HU15M2, HU22M2 ATV12HU15M3 to HU40M3	**°C**	- 10 to + 50 without de-rating Up to + 60, with the protective blanking cover removed *(1)* and current de-rating of 2.2% per additional degree *(2)*
	Storage	ATV12●●●●●●	**°C**	- 25 to + 70
Maximum operating altitude		ATV12●●●●●●	**m**	1000 without de-rating
		ATV12●●●●F1 ATV12●●●●M2	**m**	Up to 2000 for single-phase networks and corner grounded distribution networks, with current de-rating of 1% per additional 100 m
		ATV12●●●●M3	**m**	Up to 3000 meters for three-phase networks, with current de-rating of 1% per additional 100 m
Operating position Maximum permanent angle in relation to the normal vertical mounting position				

(1) See the possible mounting types on page 21.
(2) See the de-rating curves in the User Manual, available on our website at "www.schneider-electric.us".

Drive specifications

Output frequency range	**Hz**	0.5 to 400
Configurable switching frequency	**kHz**	Nominal switching frequency: 4 kHz without de-rating in continuous operation Adjustable during operation from 2 to 16 kHz Above 4 kHz in continuous operation, apply de-rating to the nominal drive current of: 10% for 8 kHz 20% for 12 kHz 30% for 16 kHz Above 4 kHz, the drive will reduce the switching frequency automatically in the event of excessive temperature rise. See the de-rating curves in the User Manual, available on our website at "www.schneider-electric.us".
Speed range		1 to 20
Transient overtorque		150 to 170% of the nominal torque depending on the drive rating and the type of motor
Braking torque		Up to 70% of the nominal torque without resistor Up to 150% of the nominal motor torque with braking unit (optional) at high inertia
Maximum transient current		150% of the nominal drive current for 60 seconds
Motor control profiles		Standard profile (voltage/frequency ratio) Performance profile (sensorless flux vector control) Pump/fan profile (Kn^2 quadratic ratio)

Electrical power specifications

Power supply	Voltage	**V**	100 - 15% to 120 + 10% single-phase for ATV12●●●●F1 200 - 15% to 240 + 10% single-phase for ATV12●●●●M2 200 - 15% to 240 + 10% three-phase for ATV12●●●●M3
	Frequency	**Hz**	50 to 60 ± 5%
	Isc (short-circuit current)	**A**	⩽ 1000 (Isc at the connection point) for single-phase power supply ⩽ 5000 (Isc at the connection point) for three-phase power supply

Drive supply and output voltages			**Drive supply voltage**	**Drive output voltage for motor**
	ATV12●●●●F1	**V**	100 to 120 single-phase	200 to 240 three-phase
	ATV12●●●●M2	**V**	200 to 240 single-phase	
	ATV12●●●●M3	**V**	200 to 240 three-phase	

Maximum length of motor cable (including tap links)	Shielded cable	**m**	50
	Unshielded cable	**m**	100
Drive noise level	ATV12H018F1, H037F1 ATV12H018M2 to H075M2 ATV12H018M3 to H075M3 ATV12P●●●●●	**dBA**	0
	ATV12H075F1 ATV12HU15M2, HU22M2	**dBA**	45
	ATV12HU15M3 to HU40M3	**dBA**	50
Electrical isolation			Electrical isolation between power and control (inputs, outputs, power supplies)

Connection specifications
(drive terminals for the line supply, the motor output and the braking unit)

Drive terminals			**R/L1, S/L2/N, T/L3, U/T1, V/T2, W/T3, PA/+, PC/–**
Maximum wire size and tightening torque	ATV12H018F1, H037F1 ATV12H018M2 to H075M2 ATV12H018M3 to H075M3 ATV12P037F1 ATV12P037M2 to P075M2 ATV12P037M3, P075M3		3.5 mm^2 (12 AWG) 0.8 Nm
	ATV12H075F1 ATV12HU15M2, HU22M2 ATV12HU15M3 to HU40M3 ATV12PU15M3 to PU40M3		5.5 mm^2 (10 AWG) 1.2 Nm

Altivar® 12 variable speed drives

Drives with heatsink, drives on a base plate

ATV12H018M2

ATV12H075M2

ATV12HU40M3

ATV12PU22M3

ATV12HU15M2TQ (8)

Drives with heatsink

Motor		Line supply				Altivar 12				
Power indicated on rating plate *(1)*		Max. line current *(3)*		Apparent power	Max. prospective line Isc	Maximum continuous output current (In) *(1)*	Maximum transient current for 60 s	Dissipated power at maximum output current (In) *(1)*	Reference	Weight *(2)*
		at U1	at U2	at U2		at U2				
kW	*HP*	A	A	kVA	kA	A	A	W		kg
Single-phase supply voltage: 100 to 120 V 50/60 Hz *(4)*										
0.18	*0.25*	6	5	0.6	1	1.4	2.1	18	**ATV12H018F1** *(5)*	0.700
0.37	*0.5*	11.4	9.3	1.1	1	2.4	3.6	29	**ATV12H037F1**	0.800
0.75	*1*	18.9	15.7	1.9	1	4.2	6.3	48	**ATV12H075F1**	1.300
Single-phase supply voltage: 200 to 240 V 50/60 Hz *(4) (6)*										
0.18	*0.25*	3.4	2.8	0.7	1	1.4	2.1	18	**ATV12H018M2** *(5) (7)*	0.700
0.37	*0.55*	5.9	4.9	1.2	1	2.4	3.6	27	**ATV12H037M2** *(7)*	0.700
0.55	*0.75*	8	6.7	1.6	1	3.5	5.3	34	**ATV12H055M2** *(7)*	0.800
0.75	*1*	10.2	8.5	2	1	4.2	6.3	44	**ATV12H075M2** *(7)*	0.800
1.5	*2*	17.8	14.9	3.6	1	7.5	11.2	72	**ATV12HU15M2** *(8)*	1.400
2.2	*3*	24	20.2	4.8	1	10	15	93	**ATV12HU22M2** *(8)*	1.400
Three-phase supply voltage: 200 to 240 V 50/60 Hz *(4)*										
0.18	*0.25*	2	1.7	0.7	5	1.4	2.1	16	**ATV12H018M3** *(5)*	0.700
0.37	*0.55*	3.6	3	1.2	5	2.4	3.6	24	**ATV12H037M3**	0.800
0.75	*1*	6.3	5.3	2.2	5	4.2	6.3	41	**ATV12H075M3**	0.800
1.5	*2*	11.1	9.3	3.9	5	7.5	11.2	73	**ATV12HU15M3**	1.200
2.2	*3*	14.9	12.5	5	5	10	15	85	**ATV12HU22M3**	1.200
3	–	19	15.9	6.6	5	12.2	18.3	94	**ATV12HU30M3**	2.000
4	*5*	23.8	19.9	8.3	5	16.7	25	128	**ATV12HU40M3**	2.000

Drives on a base plate

Single-phase supply voltage: 100 to 120 V 50/60 Hz *(4)*										
0.18	*0.25*	6	5	0.6	1	1.4	2.1	18	**ATV12H018F1** *(5)*	0.700
–	–	11.4	9.3	1.1	1	2.4	3.6	29	**ATV12P037F1** *(9)*	0.700
Single-phase supply voltage: 200 to 240 V 50/60 Hz *(4) (6)*										
0.18	*0.25*	3.4	2.8	0.7	1	1.4	2.1	18	**ATV12H018M2** *(5) (7)*	0.700
–	–	5.9	4.9	1.2	1	2.4	3.6	27	**ATV12P037M2** *(9)*	0.700
–	–	8	6.7	1.6	1	3.5	5.3	34	**ATV12P055M2** *(9)*	0.700
–	–	10.2	8.5	2	1	4.2	6.3	44	**ATV12P075M2** *(9)*	0.700
Three-phase supply voltage: 200 to 240 V 50/60 Hz *(4)*										
0.18	*0.25*	2	1.7	0.7	5	1.4	2.1	16	**ATV12H018M3** *(5)*	0.700
–	–	3.6	3	1.2	5	2.4	3.6	24	**ATV12P037M3** *(9)*	0.700
–	–	6.3	5.3	2.2	5	4.2	6.3	41	**ATV12P075M3** *(9)*	0.700
–	–	11.1	9.3	3.9	5	7.5	11.2	73	**ATV12PU15M3** *(9)*	1.000
–	–	14.9	12.5	5	5	10	15	85	**ATV12PU22M3** *(9)*	1.000
–	–	19	15.9	6.6	5	12.2	18.3	94	**ATV12PU30M3** *(9)*	1.600
–	–	23.8	19.9	8.3	5	16.7	25	128	**ATV12PU40M3** *(9)*	1.600

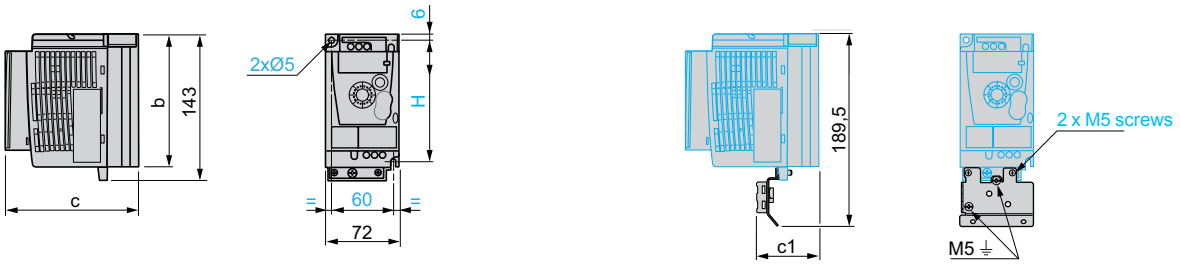
(1) These values are given for a nominal switching frequency of 4 kHz, for use in continuous operation.
If operation above 4 kHz needs to be continuous, the nominal drive current should be derated by 10% for 8 kHz, 20% for 12 kHz and 30% for 16 kHz.
The switching frequency can be set between 2 and 16 kHz for all ratings.
Above 4 kHz, the drive will reduce the switching frequency automatically in the event of an excessive temperature rise.
See the de-rating curves in the User Manual, available on our website at "www.schneider-electric.us".
(2) Weight of product without packaging.
(3) Typical value for the indicated motor power and for the maximum prospective line Isc.
(4) Min. (U1) and max. (U2) nominal supply voltage: 100 (U1) to 120 V (U2), 200 (U1) to 240 V (U2).
(5) Due to the poor heat dissipation, the ATV12H018●● drive is only supplied as a base plate version.
(6) Drive supplied with category C1 integrated EMC filter. This filter can be disconnected.
*(7) Available in lots of 14: add **TQ** at the end of the reference. For example, ATV12H018M2 becomes **ATV12H018M2TQ.***
*(8) Available in lots of 7: add **TQ** at the end of the reference. ATV12HU22M2 becomes **ATV12HU22M2TQ.***
(9) To size the ATV12P●●●●● drive correctly, see the specific manual for the Altivar®12 base plate version, available on our website at "www.schneider-electric.us".

Altivar® 12 variable speed drives
Drives with heatsinks

Drives with heatsinks *(1)*

ATV12H018F1, H037F1, ATV12H018M2 to H075M2, ATV12H018M3 to H075M3

Drive with EMC conformity kit VW3A9523 (available as an option)

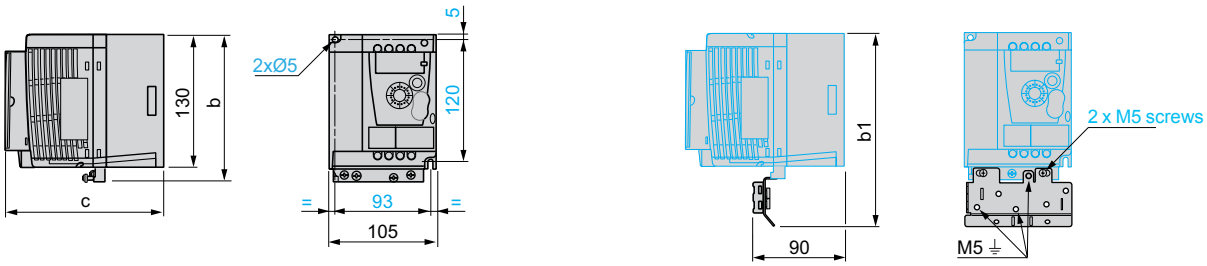


ATV12	b	c	c1	H
H018F1 *(1)*, **H018M2** *(1)*, **H018M3** *(1)*	142	102.2	34	131
H037F1, H037M2, H037M3	130	121.2	53	120
H055M2, **H075M2, H075M3**	130	131.2	63	120

(1) Due to the poor heat dissipation, ATV12H018●● drives are only available as a base plate version. They can either be mounted conventionally (drive on heatsink) or on the machine frame (drive on base plate).

ATV12H075F1, ATV12HU15M2, HU22M2, ATV12HU15M3, HU22M3

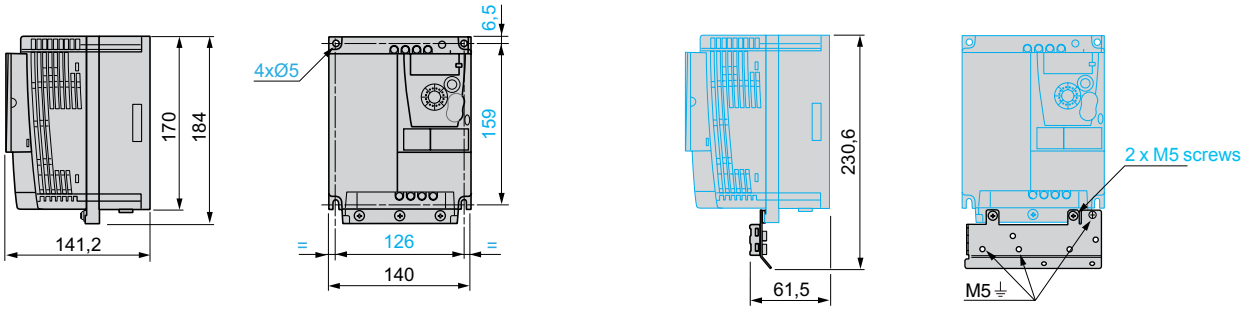
Drive with EMC conformity kit VW3A9524 (available as an option)



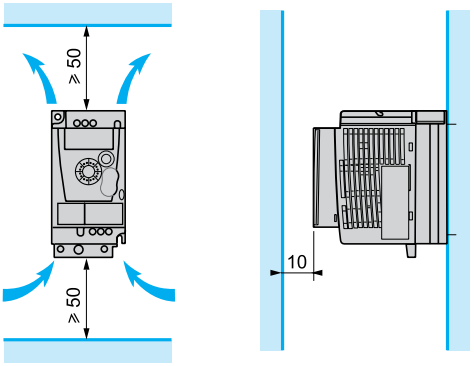
ATV12	b	b1	c
H075F1, **HU15M2**, **HU22M2**	142	188.2	156.2
HU15M3, **HU22M3**	143	189.3	131.2

ATV12HU30M3, HU40M3

Drive with EMC conformity kit VW3A9525 (available as an option)

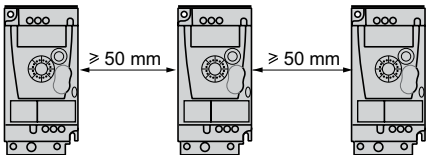
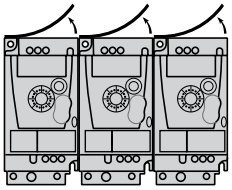
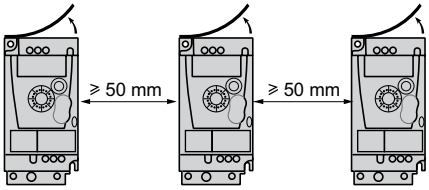


Mounting recommendations



Install the unit vertically, at ± 10°.
Avoid placing it close to heating elements.
Leave sufficient free space to ensure that the air required for cooling purposes can circulate, by natural convection or by ventilation, from the bottom to the top of the unit.

Operating temperature according to the mounting type

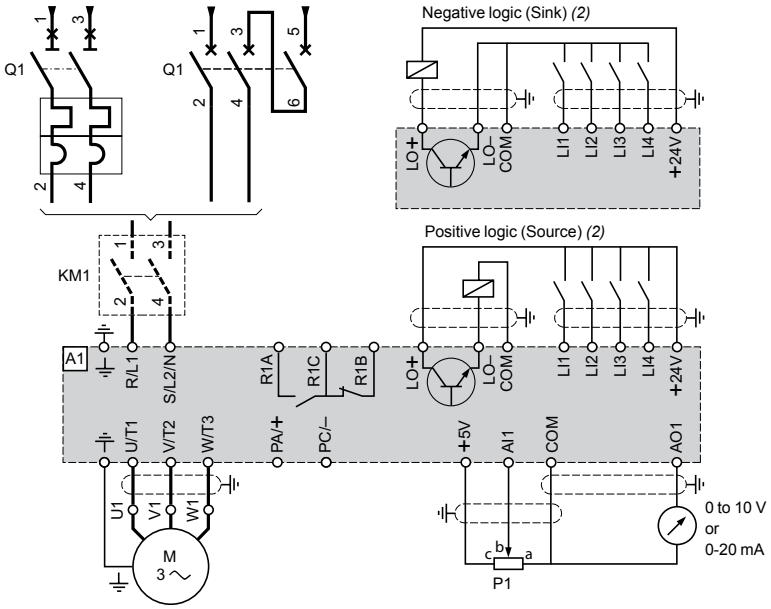
Mounting type	Drives with natural convection **ATV12H018F1, H037F1** **ATV12H018M2 to H075M2** **ATV12H018M3 to H075M3** **Ambient air temperature** *(1)*	Drives with fan **ATV12H075F1** **ATV12HU15M2, HU22M2** **ATV12HU15M3 to HU40M3** **Ambient air temperature** *(1)*
Type A mounting 	-10 to +40°C Up to +50°C with current de-rating of 2% per additional degree above 40°C	-10 to +50°C
Type B mounting *(2)* 	-10 to +40°C *(3)* Up to +60°C with current de-rating of 2% per additional degree above 40°C	-10 to +50°C Up to +60°C with current de-rating of 2% per additional degree above 50°C
Type C mounting *(2)* 	-10 to +40°C Up to + 60°C with current de-rating of 2% per additional degree above 40°C -10 to +50°C on metal plate	-10 to +50°C Up to +60°C with current de-rating of 2% per additional degree above 50°C

(1) Value given for a switching frequency of 4 kHz, for use in continuous operation. If operation above 4 kHz needs to be continuous, the nominal drive current should be derated by 10% for 8 kHz, 20% for 12 kHz and 30% for 16 kHz.
Above 4 kHz, the drive will reduce the switching frequency automatically in the event of an excessive temperature rise.
See the de-rating curves in the User Manual, available on our website at "www.schneider-electric.us".
(2) Remove the protective cover from the top of the drive.
(3) Maximum value depending on the drive rating and operating conditions; see the de-rating curves in the User Manual, available on our website at "www.schneider-electric.us".

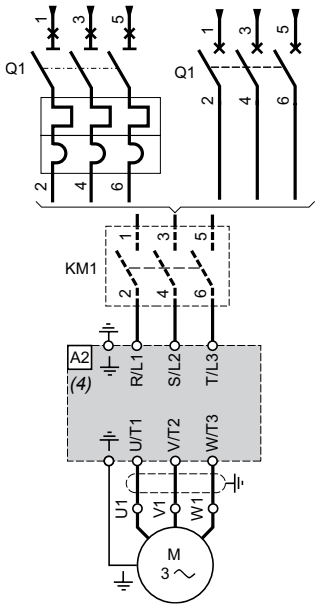
Altivar® 12 variable speed drives
Drives

Recommended connections

Typical connection for ATV12●●●●F1, ATV12●●●●M2
Single-phase power supply



Typical connection for ATV12●●●●M3
Three-phase power supply (power section) *(1)*



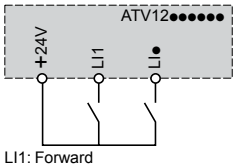
***Note**: Install interference suppressors on all inductive circuits near the drive or connected on the same circuit, such as relays, contactors, solenoid valves, fluorescent lighting, etc.*

Compatible components (for a complete list of references, please refer to the "Motor starter solutions - Control and protection components" and "Motor starters up to 150 A" catalogs or visit "www.schneider-electric.us")

Item no.	Description
A1	ATV12●●●●F1 or ATV12●●●●M2 drive (see page 14)
A2	ATV12●●●●M3 drive (see page 14)
KM1	Contactor (only if a control circuit is needed; see page 24)
P1	2.2 kΩ reference potentiometer, SZ1 RV1202. This can be replaced by a 10 kΩ potentiometer (maximum).
Q1	Circuit breaker (see page 24)

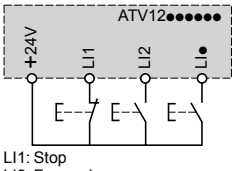
Examples of recommended connections for logic and analog I/O

2-wire control



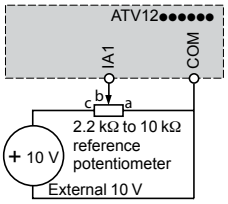
LI1: Forward
LI●: Reverse

3-wire control

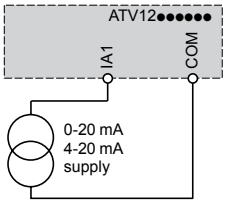


LI1: Stop
LI2: Forward
LI●: Reverse

Analog input configured for voltage

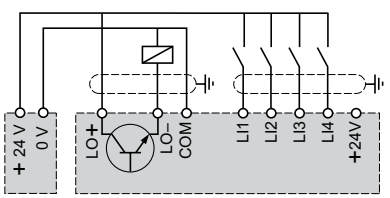


Analog input configured for current



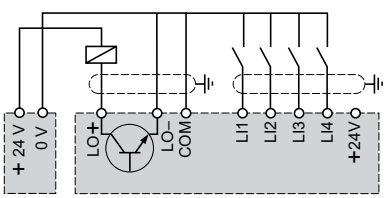
Examples of recommended connections for logic I/O powered by an external 24 V ⎓ supply *(5)*

Connected as positive logic (Source)



24 V ⎓ supply

Connected as negative logic (Sink)



24 V ⎓ supply

(1) *The control section is connected in exactly the same way as for the ATV12●●●●F1 and ATV12●●●●M2 drives.*
(2) *Connection as positive logic (Source) or negative logic (Sink) is configured via parameters; the factory-set configuration is positive logic (Source).*
(3) *Fault relay contacts for remote signalling of the drive status.*
(4) *The R/L1, S/L2/N and T/L3 terminals are connected at the top of the drive. The other terminals are connected on the underside of the drive.*
(5) *Please refer to the "Phaseo power supplies and transformers" catalog.*

Selection guide

Standard drives - Low voltage

Simple machines

		⇨*Applications:* • Simple machines for industry (small handling applications, packaging, pumps, fans, etc.) • Simple consumer machines (access barriers, rotating advertising hoardings, medical beds, treadmills, dough mixers, etc.) • Other types of application: - Mobile machines and small appliances equipped with a power socket - Applications which traditionally use other solutions (2-speed DC motors, mechanical drives, etc.).	⇨ *Applications:* Simple industrial machines (material handling and packaging, textile machines, special machines, pumps and fans).	⇨ *Applications:* Simple industrial machines (material handling and packaging, textile machines, special machines, pumps and fans).
		Altivar 12  Variable speed drives for small machines with 240 V three-phase asynchronous motor	**Altivar 312**  Variable speed drives for three-phase asynchronous motors	**Altivar 31C IP55**  Variable speed drives for three-phase asynchronous motors for machines in harsh environments.
Description		• **Compact** • **Easy to set up** (Plug & Play) • **Reliable, cost-effective solution** for compact machines	• **Open:** large number of communication cards available as options • **User-friendly:** simplified interface • **Autotuning:** maximum performance	• **Rugged** even in the most hostile environments: - Installed as close as possible to the motor - Integrated functions for applications requiring IP55 degree of protection - Modbus and CANopen communication protocols • **Flexibility** to adapt to each machine: - Customisable depending on the model - Easy configuration
Technical information	Power range for 50…60 Hz supply	0.18...4 kW	0.18...15 kW	0.18...15 kW
	Voltage	Single-phase 100…240 V Three-phase 200…240 V	Single-phase 200…240 V Three-phase 200…600 V	Single-phase 200…240 V Three-phase 380…500 V
	Drive/Output frequency	0.5…400 Hz	0.5…500 Hz	0.5…500 Hz
	Motor type Asynchronous	Yes	Yes	Yes
	Motor type Synchronous	No	No	No
Communication	Integrated	Modbus	Modbus and CANopen	Modbus and CANopen
	As an option	–	CANopen Daisy chain, DeviceNet, Profibus DP, Modbus TCP, Fipio	DeviceNet, Ethernet TCP/IP, Fipio, Profibus DP
Standards and certifications		IEC/EN 61800-5-1, IEC/EN 61800-3 (environments 1 and 2, categories C1 to C3) CE, UL, CSA, C-Tick, GOST, NOM		IEC/EN 61800-5-1, IEC/EN 61800-3 (environments 1 and 2, categories C1 to C3) CE, UL, CSA, C-Tick, GOST
Intended use		Machines		

Other versions: **please consult our Customer Care Centre.**

Dimensions (in mm)	width x height x depth
1C1: 72 x 143 x 102.2	**2F3**: 105 x 143 x 131.2
1C2: 72 x 143 x 102.2	**3F3**: 140 x 184 x 141.2
1C3: 72 x 143 x 121.2	
2C1: 105 x 142 x 156.2	
2C2: 105 x 142 x 156.2	

Type of drive **Supply voltage**			**Single-phase** **120 V**	**Single-phase** **240 V**	**Three-phase** **240 V**
Degree of protection			**IP20**		
Drive	Output frequency		0.5… 400 Hz		
	Type of control	Asynchronous motor	U/F, sensorless flux vector control, quadratic Kn^2		
	Transient overtorque		150…170 of the nominal torque		
Speed range			1 to 20		
Functions	Number of functions		40		
	Number of preset speeds		8		
	Number of I/O	Analog inputs	1 configurable analog input		
		Logic inputs	4 assignable logic inputs		
		Analog outputs	1 configurable analog output		
		Relay outputs	1 protected relay logic output		
Dialogue			Integrated or remote display terminal, SoMove software workshop, or mobile phone via Bluetooth©		
Communication	Integrated		Modbus		
Cards (available as an option)					
Reduction of current harmonics					
EMC filter		Integrated		C1 EMC	
		As an option			
Motor power	kW/HP	0.18/0.25	**ATV12H018F1** (1) 1C1	**ATV12H018M2** (1) (2) 1C2	**ATV12H018M3** (1) 1C3
		0.37/0.5	**ATV12H037F1** 1C1	**ATV12H037M2** (2) 1C1	**ATV12H037M3** 1C3
		0.55/0.75	–	**ATV12H055M2** (2) 1C2	–
		0.75/1	**ATV12H075F1** 2C1	**ATV12H075M2** (2) 1C2	**ATV12H075M3** 1C3
		1.5/2	–	**ATV12HU15M2** (2) 2C2	**ATV12H015M3** 2F3
		2.2/3	–	**ATV12HU22M2** (2) 2C2	**ATV12H022M3** 2F3
		3/3	–	–	**ATV12H030M3** 3F3
		4/5	–	–	**ATV12H040M3** 3F3

(1) Because of the low heat dissipation, the ATV12H018.. is only supplied on a base plate

(2) Also exists as a multipack