



iProCHILL 4 DIN SERIES (v.1.0)

INDEX

1.	IMPORTANT RECOMMENDATIONS	3
PRO	DDUCT DISPOSAL (WEEE)	4
2.	INTRODUCTION	5
3.	GENERAL SPECIFICATIONS	5
PRO	DCESSING ENVIRONMENT	5
	Fields of application Hardware architecture	
4.	USER INTERFACE	6
4.1	ICONS AND LEDS	6
4.2	PERSONALISING THE VISOGRAPH AND LED DISPLAY KEYBOARDS	7
4.3	PARAMETERS DISPLAYED ON THE VISOGRAPH KEYBOARD	7
4.4	KEYBOARD DISPLAY PARAMETERS FOR LED DISPLAY	9
4.5	DISPLAY SCREEN FOR THE DEVICE IN STD-BY	11
4.6	BOTTOM SCREEN LED	13
5.	DISPLAY OF CONTROLLED VALUES	13
5.1	HOW TO VIEW THE VALUES WITHIN A CIRCUIT	13
5.2	HOW TO VIEW THE VALUES FOR CIRCUIT 1 OR CIRCUIT 2	13
6.	OTHER SCREEN DISPLAYS	14
6.1	HOW TO DISPLAY THE SET POINT	14
6.2	HOW TO CHANGE THE SET POINT	15
6.3	HOW THE VIEW THE REAL OPERATING SET POINT WITH EITHER ENERGY SAVING OR D	
	ACTIVATED	15
6.4	DISPLAY SCREEN OF DISABLED COMPRESSORS	15
6.5 6.6		15 16
0.0	FIRST INSTALLATION 6.6.1 Tool with Clock On Board (Optional)	
	6.6.2 How to Regulate the Clock	
7	IPS408D: TABLE OF PARAMETERS	17
8	ANALOG / DIGITAL INPUT/OUTPUT CONFIGURATIONS	44
8.1	CONFIGURATION OF ANALOG INPUTS	44
8.2	CONFIGURATION OF DIGITAL INPUTS	45
8.3	CONFIGURATION OF DIGITAL OUTPUTS	46
8.4	CONFIGURATION OF PROPORTIONAL OUTPUTS	48
8.5	ADDITIONAL OUTPUTS	48

1. IMPORTANT RECOMMENDATIONS

- > The symbol alerts the user of non-insulated "dangerous voltage" within the product area that is sufficiently high to constitute a risk of electric shock to persons.
- > The symbol alerts the user of important operating and maintenance (assistance) instructions found in the documentation attached to the device.
- Dixell Srl cannot accept any liability for damages caused by modems that are not supported. Dixell Srl reserves the right to modify this manual without prior notice. The documentation can be downloaded from www.dixell.com even prior to purchase.
- Dixell Srl reserves the right to change the composition of its products, even without notice, ensuring the same and unchanged functionality.
- This manual forms part of the product and must always be kept near the device for easy and quick reference. The device cannot be used as a safety device. Verify the limits of application before using the device.
- Verify that the power supply voltage is correct before connecting the device. Do not expose it to water or humidity: use the controller only within the operating limits, avoiding sudden changes in temperature and high atmospheric humidity in order to prevent condensation from forming. Recommendation: disconnect all the electric connections before performing any maintenance. Insert the probe where it cannot be reached by the End User. The device must not be opened. Consider the maximum current that can be applied to each relay. Make sure that the wires for the probes, the loads and the electrical power supply are separated and sufficiently distant from each other, without crossing or intertwining with each other. In the case of applications in industrial environments, it may be useful to use the main filters (our mod. FT1) in parallel to the inductive loads.
- The customer shall bear full responsibility and risk for product configuration in order to achieve the results pertaining to installation and/or final equipment/system. Upon the customer's request and following a specific agreement, Dixell s.r.l. may be present during the start-up of the final machine/application, as a consultant, however, under no circumstances can the company be held responsible for the correct operation of the final equipment/system.
- \triangleright Since Dixell products form part verv high level technology. of а of а gualification/configuration/programming/commissioning stage is required to use them as best as possible. Otherwise, these products may malfunction and Dixell cannot be held responsible. The product must not be used in any way that differs from that stipulated in the documentation.
- The device must always be inserted inside an electrical panel that can only be accessed by authorised personnel. For safety purposes, the keyboard must be the only part that can be reached.
- The device must never be hand-held while being used.

- > It is good practice to bear the following in mind for all Dixell products:
 - Prevent the electronic circuits from getting wet as contact made with water, humidity or any other type of liquid can damage them. Comply with the temperature and humidity limits specified in the manual in order to store the product correctly.
 - The device must not be installed in particularly hot environments as high temperatures can damage it (electronic circuits and/or plastic components forming part of the casing). Comply with the temperature and humidity limits specified in the manual in order to store the product correctly.
 - Under no circumstances is the device to be opened the user does not require the internal components. Please contact qualified service personnel for any assistance.
 - Prevent the device from being dropped, knocked or shaken as either can cause irreparable damage.
 - o Do not clean the device with corrosive chemical products, solvents or aggressive detergents.
 - The device must not be used in applications that differ from that specified in the following material.



Separate the power of the device from the rest of the electrical devices connected inside the electrical panel. The secondary of the transformer must never be connected to the earth.

PRODUCT DISPOSAL (WEEE)

With reference to Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 and to the relative national legislation, please note that:

- There lies the obligation not to dispose of electrical and electronic waste as municipal waste but to separate the waste.
- Public or private collection points must be used to dispose of the goods in accordance with local laws. Furthermore, at the end of the product's life, it is also possible to return this to the retailer when a new purchase is made.
- This equipment may contain hazardous substances. Improper use or incorrect disposal can have adverse effects on human health and the environment.
- The symbol shown on the product or the package indicates that the product has been placed on the market after 13 August 2005 and must be disposed of as separated waste.
- Should the product be disposed of incorrectly, sanctions may be applied as stipulated in applicable local regulations regarding waste disposal.

2. INTRODUCTION

iPRO is the range of programmable controllers manufactured by Dixell.

The range consists of programmable controllers, I/O expansions, drivers for electronic valves and graphical interfaces adapted to cover any type of application in the air-conditioning sector, cooling sector and any relative area. As the system is one of the most technologically advanced, it is flexible and can be customised for it to be adapted to the user's particular requirements.

3. GENERAL SPECIFICATIONS

The Dixell programmable controllers are all powered at 24Vac/dc and use a high speed performance 32-bit ARM9 (200 MHz) microprocessor. The models differ in size (10 DIN or 4 DIN) and number of inputs and outputs (analog and digital).

One of the features that distinguishes the iPRO controllers is the vast range of connection options with external devices, Dixell as well as other brands. CANBus, RS485 Master and Slave, and an Ethernet and USB port provide maximum flexibility of integration with the outside world. MODBUS RTU protocol, one of the most popular in the world, is used for serial communication.

Up to 80 MB of flash memory are entirely available to the user, according to the model. All the inputs and outputs are fully configurable.

PROCESSING ENVIRONMENT

All Dixell programmable controllers use the following software as a processing environment:

- > ISaGRAF® to process the iPRO application.
- > VISOPROG to process the LCD graphic interface application (VISOGRAPH)

ISaGRAF® software is used worldwide and allows those with no programming experience to build applications ranging from the simplest to the more sophisticated. The vast range of the most popular programming languages (Structured Text, Function Block Diagram, Ladder Diagram, Instruction List, Sequential Function Chart, Flow Chart, FBD IEC 61499) provides all programmers with access to the processing environment. Thanks also to the extensive libraries of blocks already developed by Dixell, the processing and debug times are reduced.

The SIMULATION (verification of the application without using the controller) and DEBUG options (verification of the actual application within the controller), allow the user to block and force the value of the variables to speed up the testing times.

Fields of application

The possibility of all-round configuration allows the Dixell iPRO programmable controller to be used for any type of application. The same applications can be downloaded in the various models available (obviously adapting the number of inputs and outputs).

The hardware has already been used for the following applications:

- Chillers and heat pumps
- Air treatment units
- > Air-conditioners
- Roof-tops
- Cooling systems
- Energy saving management in systems
- Climatic chamber control
- Cold rooms and seasoner cabinets

Hardware architecture

The iPRO programmable controller is structured as follows:

- 32-bit microprocessor used to run the application
- Removable connectors (Molex) or bayonet connectors (Phoenix)

- The programme and parameters are stored in a permanent flash memory. No data is lost in case of power failure.
- Internal web server with the Dixell website as default with the option of downloading a customised website for reading and writing variables with synoptic creation (via HTML).
- Ethernet port.
- USB port.
- Connection to the dedicated remote LCD display.
- CANBus.
- RS485 Master.
- RS485 Slave.

The remote LCD display has the following features:

- 240x96 pixel LCD graphic display.
- 32-bit processor.
- Multilingual in ASCII or UNICODE version.
- 8 fully programmable keys.
- Panel or wall mounted.

The LED display (only for the IPS versions) has the following features:

- Configurable digits and icons
- 6 fully programmable keys

4. USER INTERFACE

4.1 ICONS AND LEDS

°C -°F	On when the screens display temperature or pressure
BAR-PSI	On in programming if the screens display temperature or pressure set points/differentials
٩	On during programming if the lower screen displays the working hours of the loads or the time. Flashing in functions menu if the remaining time to the beginning of defrost is displayed.
Λ	Flashing on if alarms not identified by specific icons are present
Vset	On if an automatic Set Point change function is active (Dynamic set point, Energy Saving)
menu	On during menu navigation
	On if the heaters (antifreeze/support) are on
Flow!	Flashing on if the digital input of the flow is active when the pump is on; with the pump off it says that the flow contact is closed
$\mathbf{\overline{v}}$	On if at least one of the water pumps is on
5	On if at least one fan is on
1 2	On if the relative compressor is on; flashing if the compressor is switched on with a timer
$\overline{\nabla}$	On if the auxiliary output is active

**	On if the machine is on and represents the Heat or Cool mode of operation based on the logic set in the CF31 parameter
Cir1 Cira	Cir1 on if in view values for circuit 1 Cir2 on if in view values for circuit 2
**	The icon is flashing on when counting the interval between defrosting sessions; the icon is steady on during the defrosting phase

4.2 PERSONALISING THE VISOGRAPH AND LED DISPLAY KEYBOARDS

By suitably configuring the parameters contained in the dP family (display) the manufacturer has the possibility of personalising the information that he/she deems necessary to display on the main screen.

4.3 PARAMETERS DISPLAYED ON THE VISOGRAPH KEYBOARD

VISOGRAPH



	Displays					
Parameter	Description	min	max	um	Resolution	
	VISOGRAPH					
dP 1	Allows you to personalise how an analog input is viewed on the first line of the 1st Visograph keyboard 0 = no display (the row remains empty)	0	36			
dP 2	Allows you to personalise how an analog input is viewed on the second line of the 1st Visograph keyboard 0 = no display (the row remains empty)	0	36			
dP 3	Allows you to personalise how an analog input is viewed on the third line of the 1st Visograph keyboard 0 = no display (the row remains empty)	0	36			
dP 4	Allows you to personalise how an analog input is viewed on the fourth line of the 1st Visograph keyboard 0 = no display (the row remains empty)	0	36			

List of all 36 possible probes that can be configured:

0. 1. 2. 3. 4. 5. 6.	 Compressor 1 PTC supply temperature probe Compressor 2 PTC supply temperature probe Compressor 3 PTC supply temperature probe Compressor 4 PTC supply temperature probe Compressor 5 PTC supply temperature probe 	
		Evaporator
	7. Evaporator common input NTC temperature probe	
8. 0	 Evaporator output 1 NTC temperature probe Evaporator output 2 NTC temperature probe 	
	10. Evaporator common output NTC temperature probe	
10.		Condenser
11.	1. Condenser hot water common input NTC temp. probe	
	2. Circuit 1 Condenser hot water input NTC temp. probe	
	Circuit 2 Condenser hot water input NTC temp. probe	
	Circuit 1 Condenser hot water output NTC temp. probe	
	15. Circuit 2 Condenser hot water output NTC temp. probe	
16.	16. Condenser hot water common output NTC temp. probe	and include and automolain
17	I7. System water input NTC temperature probe (free cooling)	cooling and external air
	 By Stern water input NTC temperature probe (nee cooling) External air / condenser water (free cooling) temperature NTC temperature probe 	2
	 External air / condenser water (nee cooling) temperature (rec cooling) temperature procession (rec cooling) temperature (rec cooling) t	
		rost and auxiliary probes
20.	20. Circuit 1 combined defrost NTC temperature probe	
	21. Circuit 2 combined defrost NTC temperature probe	
	22. Auxiliary output 1 NTC temperature probe	
23.	23. Auxiliary output 2 NTC temperature probe	
~ 4		Domestic water
	24. Domestic water temperature regulation NTC temperature probe (num. 1)	
	 Domestic water temperature safety NTC temperature probe (num. 2) Supply temperature NTC temperature probe 	
	27. Solar panel temperature NTC temperature probe	
21		ation probes/transducers
28.	28. Circuit 1 condensation probe (NTC temperature)	
	29. Circuit 2 condensation probe (NTC temperature)	
	30. Circuit 1 condensation probe (pressure 4÷20 mA / ratiometric 0÷ 5Volt)	
31.	 Circuit 2 condensation probe (pressure 4÷20 mA / ratiometric 0÷ 5Volt) 	
~~		Evaporation transducers
	32. Circuit 1 condensation pressure probe (pressure 4:20 mA / ratiometric 0: 5Volt)	
33.	33. Circuit 2 condensation pressure probe (pressure 4÷20 mA / ratiometric 0÷ 5Volt)	rs and dynamic set point
3⁄1	34. Auxiliary output 1 pressure probe (pressure 4÷20 mA / ratiometric 0÷ 5Volt)	s and dynamic set politi
	35. Auxiliary output 2 pressure probe (pressure 4÷20 mA / ratiometric 0÷ 5Volt)	

4.4 KEYBOARD DISPLAY PARAMETERS FOR LED DISPLAY





	min	max	um	Resolution
od Displa				
eu Dispid	ıy			
re e ture	0	19		
	Led Displa	e 0 ture it 1	ure e ture it 1	ure e ture it 1

Dp10	Bottom led display with unit on			
	0 = No Display 1 = Evaporator input temperature 2 = Output temperature evaporator 1 3 = Output temperature evaporator 2 4 = Evaporator common output temperature 5 = Condenser common input temperature 6 = Condenser input temperature 1 7 = Condenser output temperature 2 8 = Condenser output temperature 2 10 = Condenser common output temperature 11 = External air temperature 12 = Remote terminal temperature 13 = Combined defrost temperature circuit 1 14 = Combined defrost temperature circuit 2 15 = Condensation temperature circuit 2 17 = Set point 18 = Hysteresis 19 = Machine status 20 = Condensation pressure circuit 1 21 = Condensation pressure circuit 2 22 = Evaporation pressure circuit 2 23 = Evaporation pressure circuit 2 24 = RTC	0	24	
Dp11	Led display screen with unit in stand-by 0 = Stby above, nothing below	0	2	
	1 = Defined by parameters dP9 and dP10 2 = OFF above, nothing below			

EXAMPLES OF PERSONALISED TOP SCREEN DISPLAY

Parameter dP09=01: as the default for circuit 1 and circuit 2 which display the temperature value of the probe configured as the evaporator water INPUT NTC temperature probe (see probes configuration). Parameter dP09=02: as the default for circuit 1 that displays the temperature value of the probe configured as evaporator 1 output NTC temperature probe (see probes configuration), circuit 2 displays the temperature value of the probe configured as evaporator 2 output NTC temperature probe (see probes configuration)

EXAMPLES OF PERSONALISED BOTTOM SCREEN DISPLAY

Parameter dP10=03: as the default for circuit 1 and circuit 2 which display the temperature value of the probe configured as the evaporator water OUTPUT NTC temperature probe (see probes configuration)

Parameter dP10=8: as the default for circuit 1 that displays the temperature value of the probe configured as condenser 1 output temperature probe (see probes configuration), circuit 2 displays the temperature value of the probe configured as condenser 2 NTC temperature probe (see probes configuration)



4.5 DISPLAY SCREEN FOR THE DEVICE IN STD-BY

Parameter dP11: Display in STD-BY 0= displays the "STD-BY" label 1= displays the values defined by par. dP9 and dP10 2= displays the "OFF" label

dP11=0



dP11=1

The screen displays the values defined by par. dP9 and dP10.



dP11=2



4.6 BOTTOM SCREEN LED



CLOCK LED

When the time is displayed leds 1 / 2 flash

FUNCTION MENU LEDS

In functions menu leds 1 / 2 flash when the remaining time to the beginning of defrost in circuit 1 / 2 is displayed

5. DISPLAY OF CONTROLLED VALUES

In normal function circuit 1 is always displayed as the default. The displayed circuit is marked by the icon **Cir1** (circuit 1) or **Cir2** (circuit 2).

5.1 HOW TO VIEW THE VALUES WITHIN A CIRCUIT

From the home page it is possible to view the values of all of the selected circuits.

Each selected value has a corresponding label identifying the temperature or pressure value displayed on the screens. (see top, bottom display screen tables)

5.2 HOW TO VIEW THE VALUES FOR CIRCUIT 1 OR CIRCUIT 2

By pressing the UP or DOWN keys on the home page it is possible to view the values of a circuit;

Example:

Fig.1 Cir1 icon on: the top screen displays the evaporator output temperature for circuit 1, the bottom screen displays the pressure relative to circuit 1.



Fig.2 Cir2 icon on: the top screen displays the low pressure relative to circuit 2 (3.6 bar). Fig.2

	1 42 43 	44 45 Z	46 47	48 49	50 51 • •
S Vaet IProsm	D D S Cir2 NLL Cir2	9	L \>	-" <u>C</u> "	dixall
Preserver and a second		8 7 8 14 15 16	20 2 26 2	لنائد الدند الدند الت	

6. OTHER SCREEN DISPLAYS

6.1 HOW TO DISPLAY THE SET POINT

From the home page press the **SET** key, and the bottom screen will display **SetC** (set chiller) and by pressing a second time it will display **SetH** (set heat pump if configured). With the unit on only the set point relative to the state of operation will be displayed. To exit the set point Menu press the SET key.

1592032000 iProCHILL_4DIN GB r.1.0 20.01.2012

6.2 HOW TO CHANGE THE SET POINT

- 1) Inside the SET point menu, press the **SET** key for at least **3** sec;
- 2) To change the value act on the **UP** or **DOWN** keys
- To memorise the new set point press the SET key or wait for the time out to exit programming.

6.3 HOW THE VIEW THE REAL OPERATING SET POINT WITH EITHER ENERGY SAVING OR DYNAMIC SET ACTIVATED

Activating set energy saving and dynamic set point is signalled by the **Vset**icon; it is possible to view them only if the machine is on.

With the unit in chiller mode: if the SET key is pressed once the bottom screen displays SEtC (set chiller) and the top screen displays the set value. If you press the **DOWN** key with either energy saving or dynamic set point activated, the "SEtS" label will be displayed in the bottom screen (real operating set).

With the unit in heating pump mode: if the SET key is pressed once the bottom screen displays SEtC (set chiller) and the top screen displays the set value. If you press the **DOWN** key with either energy saving or dynamic set point activated, the "SEtS" label will be displayed in the bottom screen (real operating set).

CAUTION

The **SEtS** label appears only if energy saving or dynamic set point are activated.

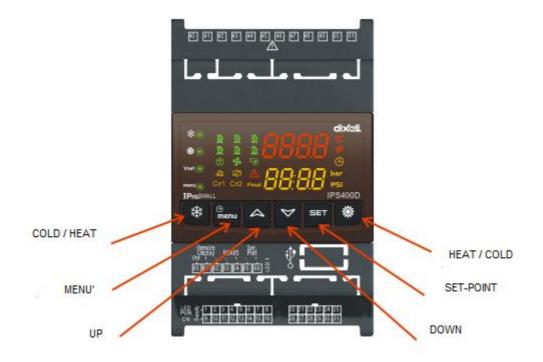
6.4 DISPLAY SCREEN OF DISABLED COMPRESSORS

If one of the compressors is in the OFF position (see procedure) a flashing label alternating with the value currently being displayed will appear on the bottom screen:

compressor 1 disabled: label c1ds

compressor 2 disabled: label c2ds

6.5 **KEY FUNCTIONS**



KEY	ACTION	FUNCTION
	Press and release with default display	It shows the set point in the chiller (SetC label) and/or in the heat pump (SetH label)
	Press and release in the SetS menu	With the unit in chiller or heat pump mode, if the energy saving or dynamic set point function is enabled, it shows the real operating set (SetS label); the Vset icon is on.
SET	From the SET POINT Menu hold it down for 3 seconds.	Change chiller / heat pump set point (only chiller if the unit is in this mode, only heat pump if the unit is in this mode, chiller and heat pump wit the unit in std- by)
	Press and release in programming	Allows access to change the value of the parameter; it confirms the value of the parameter.
	Press and release in the ALrM menu	It allows you to reset the alarm
	Press and release	This allows you to view the temperature / pressures in the top / bottom screen.
	Press and release in parameters programming	This allows you to scroll through the groups and parameters; it increases the value of the parameter as it is being changed.
	Press and release	This allows you to view the temperature / pressures in the top / bottom screen.
\bigtriangledown	Press and release in programming	This allows you to scroll through the groups and parameters; it decreases the value of the parameter as it is being changed.
*	Press and release	This allows you to turn the machine on / off (in chiller / hp based on how the tool is programmed)
*	Press and release	This allows you to turn the machine on / off (in chiller / hp based on how the tool is programmed)
	Press and release	This allows you to access the functions menu
œ	Press for 3 seconds and release	This allows you to set the time.
menu	Press and release in programming	This allows you to exit the display of parameter families or parameter changing

Combined FUNCTION of the KEYS

KEY	ACTION	FUNCTION
SET +	Press for 3 seconds and release	Entry in programming
SET _ A	Press for 5 seconds	Manual defrost (if in heat pump mode and conditions allow it)

6.6 FIRST INSTALLATION

6.6.1 Tool with Clock On Board (Optional)

If the message "**rtC**" appears in the bottom screen alternating with the temperature / pressure when the tool is powered **it means it is necessary to adjust the clock.**

If the probes designed to control the unit are not connected or are broken, the relative alarm will appear in the two screens. It is nevertheless possible to proceed with regulating the clock or programming.

CAUTION

The clock is optional. If you require the use of an instrument with an on-board clock, this must be specified in the purchase order

6.6.2 How to Regulate the Clock

- 1. Press the **Menu** button for a number of seconds until the word "**Hour**" appears in the bottom screen, and the memorised time in the top screen.
- 2. Press the **SET** key: the hour starts to flash.

- 3. Set the hour with the down and UP keys. Confirm the hour by pressing the **SET** key; the controller will display the following setting.
- 4. Repeat operations 2. 3. and 4. on the other clock parameters:
- **Min**: minutes (0÷60)
- UdAy: day of the week (Sun = Sunday, Mon = Monday, tuE = Tuesday, UEd = Wednesday, tHu = Thursday, Fri = Friday, SAt = Saturday)
- **dAy:** day of the month (0÷31)
- MntH: month(1÷12)
- yEAr: year (2000÷2099)

7 IPS408D: TABLE OF PARAMETERS

SUB - MENU SELECTION

Label	Meaning
CF	Display the basic configuration parameters of the machine
ST	Display the temperature control parameters
DP	View the parameters of the display
SP	Display the set up parameters
Sd	Display the dynamic set point parameters
ES	Display the energy saving and automatic timed ON/OFF parameters
AH	Display the auxiliary heating parameters
СО	Display the compressor parameters
SL	Display the stepless compressor parameters
ΡΑ	This displays the parameters for the evaporator water pumps condenser / supply fan
Pd	This displays the pump down function parameters
Un	This displays the unloading function parameters
FA	This displays the condensation fan parameters
Ar	This displays the anti-freeze heater parameters
dF	This displays the defrost parameters
rC	This displays the recovery function parameters
FS	This displays the domestic hot water function parameters
FC	This displays the free cooling function parameters
US	This displays auxiliary output parameters
AL	This displays the alarm parameters
Et	This displays the driver parameters for the control of the electronic thermostatic valves

	Configuration				
Parameter	Description	min	max	um	Resolution
	Unit		•	•	
CF 1	Defines the type of unit to be controlled				
	0 = Chiller air / air	0	2		
	1 = Chiller air / water	°,	_		
CF 2	2 = Chiller water / water Selection of unit working mode				
	1 = chiller only				
	2 = heat pump only	1	3		
	3 = chiller with heat pump				
CF 3	Enable compressor operation				
	0 = chiller and heat pump	0	2		
	1 = chiller only	Ũ	-		
05.4	2 = heat pump only				
CF 4	Motor-condensing unit $0 = no$				
	1 = yes	0	1		
	Temperature control, dynamic set point and energy saving functions are	0			
	automatically disabled when $CF04 = 1$				
	Circuits/compressors		•	1	1
CF 5	Number of compressors in circuit 1	1	3 (1 if		
05.0			CF9≠0)		
CF 6	Number of compressors in circuit 2	0	3 (1 if CF10≠0)		
CF 7					
CF 8					
CF 9	Number of distribution controls in circuit 1				
	0 = none - 1 step per compressor				
	1 = 1 - 2 steps per compressor	0	3		
	2 = 2 - 3 steps per compressor				
	3 = 3 – 4 steps per compressor				
CF 10	Number of distribution controls in circuit 2				
	0 = none – 1 step per compressor	0	_		
	1 = 1 - 2 steps per compressor 2 = 2 - 3 steps per compressor	0	3		
	3 = 3 - 4 steps per compressor				
CF 11					
CF 12					
	Temperature control		1	I	L.
	i emperature control				
Parameter		min	max	um	Resolution
Parameter St 1	Description			um °C	Resolution tenth
	Description Chiller set point	min ST02	max ST03		
	Description	ST02	ST03	°C °F	tenth whole
St 1	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point	ST02 -50.0		°C °F °C	tenth whole Tenths
St 1 St 2	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode	ST02	ST03	°C °F	tenth whole
St 1	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode Maximum chiller set point	ST02 -50.0 -58	ST03 ST03	°C °F °C	tenth whole Tenths whole
St 1 St 2	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller set point	ST02 -50.0	ST03	°C °F °C °F	tenth whole Tenths
St 1 St 2 St 3	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller mode	ST02 -50.0 -58 ST02	ST03 ST03 110 230	°C °F °F °F °C °F	tenth whole Tenths whole Tenths whole
St 1 St 2	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller mode Maximum chiller set point The defines the maximum limit that can be used for the working set point in chiller mode Heat pump set point	ST02 -50.0 -58	ST03 ST03 110	°C °F °C °F °C	tenth whole Tenths whole Tenths whole tenth
St 1 St 2 St 3 St 4	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller mode	ST02 -50.0 -58 ST02 ST05	ST03 ST03 110 230	°C °F °F °C °F °C °F	tenth whole Tenths whole Tenths whole tenth whole
St 1 St 2 St 3	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller mode Heat pump set point This allows you to set the working set point in h.p. mode	ST02 -50.0 -58 ST02 ST05 -50.0	ST03 ST03 110 230	°C °F °F °F °F °C °F °C	tenth whole Tenths whole Tenths whole tenth whole Tenths
St 1 St 2 St 3 St 4	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller mode Heat pump set point This allows you to set the working set point in h.p. mode Heat pump minimum set point	ST02 -50.0 -58 ST02 ST05	ST03 ST03 110 230 ST06	°C °F °F °C °F °C °F	tenth whole Tenths whole Tenths whole tenth whole
St 1 St 2 St 3 St 4	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller mode Meaning the maximum limit that can be used for the working set point in chiller mode Heat pump set point This allows you to set the working set point in h.p. mode Heat pump minimum set point This defines the minimum limit that can be used for the working set point in heat pump mode	ST02 -50.0 -58 ST02 ST05 -50.0 -58	ST03 ST03 110 230 ST06	°С °F °F °С °F °С °F °С °F	tenth whole Tenths whole Tenths whole tenth whole Tenths whole
St 1 St 2 St 3 St 4 St 5	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller mode Heat pump set point This allows you to set the working set point in h.p. mode Heat pump minimum set point This defines the minimum limit that can be used for the working set point in heat pump mode Heat pump maximum set point This defines the maximum limit that can be used for the working set point in heat pump mode Heat pump maximum set point	ST02 -50.0 -58 ST02 ST05 -50.0	ST03 ST03 110 230 ST06 ST06 110	°C °F °C °F °C °F °C °F °C °F °C °F	tenth whole Tenths whole Tenths whole tenth whole Tenths whole Tenths
St 1 St 2 St 3 St 4 St 5 St 6	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller mode Heat pump set point This allows you to set the working set point in h.p. mode Heat pump minimum set point This defines the minimum limit that can be used for the working set point in heat pump mode Heat pump maximum set point This defines the maximum limit that can be used for the working set point in heat pump mode	ST02 -50.0 -58 ST02 ST05 -50.0 -58 ST05	ST03 ST03 110 230 ST06 ST06 110 230	°С °F °Г °Г °Г °Г °Г °Г °С °Г	tenth whole Tenths whole Tenths whole Tenths whole Tenths whole
St 1 St 2 St 3 St 4 St 5	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller mode Heat pump set point This allows you to set the working set point in h.p. mode Heat pump minimum set point This defines the minimum limit that can be used for the working set point in heat pump mode Heat pump maximum set point This defines the maximum limit that can be used for the working set point in heat pump mode Heat pump maximum set point	ST02 -50.0 -58 ST02 ST05 -50.0 -58 ST05 0.1	ST03 ST03 110 230 ST06 ST06 110 230	°C °F °F °F °C °F °C °F °C °F °C °F °C	tenth whole Tenths whole Tenths whole Tenths whole Tenths whole Tenths
St 1 St 2 St 3 St 4 St 5 St 6 St 7	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller mode Heat pump set point This allows you to set the working set point in h.p. mode Heat pump minimum set point This defines the minimum limit that can be used for the working set point in heat pump mode Heat pump mode Heat pump mode Heat pump mode Intervention band regulation steps in chiller mode	ST02 -50.0 -58 ST02 ST05 -50.0 -58 ST05 0.1 1	ST03 ST03 110 230 ST06 ST06 110 230 25.0 45	°С °F °С °F °С °F °С °F °С °F °С °Г °С °Г	tenth whole Tenths whole Tenths whole Tenths whole Tenths whole Tenths whole
St 1 St 2 St 3 St 4 St 5 St 6	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller mode Heat pump set point This allows you to set the working set point in h.p. mode Heat pump minimum set point This defines the minimum limit that can be used for the working set point in heat pump mode Heat pump maximum set point This defines the maximum limit that can be used for the working set point in heat pump mode	ST02 -50.0 -58 ST02 ST05 -50.0 -58 ST05 0.1 1 0.1	ST03 ST03 110 230 ST06 ST06 110 230 25.0 45 25.0	°C °F °C	tenth whole Tenths whole Tenths whole Tenths whole Tenths whole Tenths whole Tenths
St 1 St 2 St 3 St 4 St 5 St 6 St 7 St 8	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller mode Heat pump set point This allows you to set the working set point in h.p. mode Heat pump minimum set point This defines the minimum limit that can be used for the working set point in heat pump mode Heat pump maximum set point This defines the maximum limit that can be used for the working set point in heat pump mode Heat pump maximum set point This defines the maximum limit that can be used for the working set point in heat pump mode Intervention band regulation steps in chiller mode Intervention band regulation steps in heat pump mode	ST02 -50.0 -58 ST02 ST05 -50.0 -58 ST05 0.1 1	ST03 ST03 110 230 ST06 ST06 110 230 25.0 45	°С °F °С °F °С °F °С °F °С °F °С °Г °С °Г	tenth whole Tenths whole Tenths whole Tenths whole Tenths whole Tenths whole
St 1 St 2 St 3 St 4 St 5 St 6 St 7	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller mode Heat pump set point This allows you to set the working set point in h.p. mode Heat pump minimum set point This defines the minimum limit that can be used for the working set point in heat pump mode Heat pump mode Heat pump mode Heat pump mode Intervention band regulation steps in chiller mode	ST02 -50.0 -58 ST02 ST05 -50.0 -58 ST05 0.1 1 0.1	ST03 ST03 110 230 ST06 ST06 110 230 25.0 45 25.0	°C °F °C	tenth whole Tenths whole Tenths whole Tenths whole Tenths whole Tenths whole Tenths
St 1 St 2 St 3 St 4 St 5 St 6 St 7 St 8	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller mode Heat pump set point This allows you to set the working set point in h.p. mode Heat pump minimum set point This defines the minimum limit that can be used for the working set point in heat pump mode Heat pump maximum set point This defines the maximum limit that can be used for the working set point in heat pump mode Heat pump maximum set point This defines the maximum limit that can be used for the working set point in heat pump mode Intervention band regulation steps in chiller mode Intervention band regulation steps in heat pump mode Defines the temperature control probe of the machine in chiller mode	ST02 -50.0 -58 ST02 ST05 -50.0 -58 ST05 0.1 1 0.1 1 1	ST03 ST03 110 230 ST06 ST06 110 230 25.0 45 25.0 45	°C °F °C	tenth whole Tenths whole Tenths whole Tenths whole Tenths whole Tenths whole Tenths
St 1 St 2 St 3 St 4 St 5 St 6 St 7 St 8	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller mode Heat pump set point This allows you to set the working set point in h.p. mode Heat pump minimum set point This defines the minimum limit that can be used for the working set point in heat pump mode Heat pump maximum set point This defines the maximum limit that can be used for the working set point in heat pump mode Intervention band regulation steps in chiller mode Intervention band regulation steps in heat pump mode Defines the temperature control probe of the machine in chiller mode 0= Evaporator input NTC temperature probe 1= Evaporator 1 output NTC temperature probe 2= Evaporator 2 output NTC temperature probe	ST02 -50.0 -58 ST02 ST05 -50.0 -58 ST05 0.1 1 0.1	ST03 ST03 110 230 ST06 ST06 110 230 25.0 45 25.0	°C °F °C	tenth whole Tenths whole Tenths whole Tenths whole Tenths whole Tenths whole Tenths
St 1 St 2 St 3 St 4 St 5 St 6 St 7 St 8	Description Chiller set point This allows you to set the working set point in chiller mode Minimum chiller set This defines the minimum limit that can be used for the working set point in chiller mode Maximum chiller set point This defines the maximum limit that can be used for the working set point in chiller mode Heat pump set point This allows you to set the working set point in h.p. mode Heat pump minimum set point This defines the minimum limit that can be used for the working set point in heat pump mode Heat pump mode Heat pump mode Heat pump mode Intervention band regulation steps in chiller mode Intervention band regulation steps in heat pump mode Defines the temperature control probe of the machine in chiller mode 0= Evaporator input NTC temperature probe 1= Evaporator 1 output NTC temperature probe	ST02 -50.0 -58 ST02 ST05 -50.0 -58 ST05 0.1 1 0.1 1 1	ST03 ST03 110 230 ST06 ST06 110 230 25.0 45 25.0 45	°C °F °C	tenth whole Tenths whole Tenths whole Tenths whole Tenths whole Tenths whole Tenths

				1	
St 10	This defines the temperature control probe of the machine in heat pump				
	mode				
	0= Evaporator input NTC temperature probe				
	1= Evaporator 1 output NTC temperature probe				
	2= Evaporator 2 output NTC temperature probe				
	3= Evaporator common output NTC temperature probe				
	4= temperature probe remote terminal 1				
	5= condenser water common input NTC temperature probe	0	10		
	6=circuit 1 condenser water input NTC temperature probe	0	10		
	7=circuit 2 condenser water input NTC temperature probe				
	8=circuit 1 condenser water input NTC temperature probe				
	9=circuit 2 condenser water input NTC temperature probe				
	10=condenser water common output NTC temperature probe				
	CAUTION: if you require the same temperature control in chiller and h.p.				
	mode, set the same value in parameters St09 and St10				
St 11	Defines the type of temperature control				
	0 = Proportional				
	1 = Proportional weight	0	4		
	2 = Neutral zone	0	4		
	3 = Neutral zone weight				
	4 = PID				
St 12	Defines the temperature control logic	Γ	Γ		
	0 = machine temperature control	0	1		
	1 = temperature control on two separate circuits, circuit 1 and 2				
	Temperature control of circuit 2 if temperature control is enabled	on two se	parate ci	rcuits	
St 13	Chiller set point circuit 2	0744	0745	°C	tenth
	This allows you to set the working set point in chiller mode	ST14	ST15	°F	whole
St 14	Circuit 2 chiller minimum set point	50.0		•••	Tautha
	This defines the minimum limit that can be used to set the working set	-50.0	ST15	°C °F	Tenths
	point in chiller mode	-58		- F	whole
St 15	Circuit 2 chiller maximum set		44.0		T 4
	This defines the maximum limit that can be used to set the working set	ST14	110	°C	Tenths
	point in chiller mode	-	230	°F	whole
St 16	Circuit 2 heat pump set point		0710	°C	tenth
	This allows you to set the working set point in h.p. mode	ST17	ST18	°F	whole
St 17	Circuit 2 heat pump minimum set point		1		
	This defines the minimum limit that can be used to set the working set	-50.0	ST18	°C	Tenths
	point in heat pump mode	-58		°F	whole
St 18	Circuit 2 heat pump maximum set point	1			
	This defines the maximum limit that can be used to set the working set	ST17	110	°C	Tenths
	point in heat pump mode	-	230	°F	whole
St 19	Intervention band regulation steps of circuit 2 in chiller mode	0.1	25.0	°C	Tenths
		1	45	°F	whole
St 20	Intervention band regulation steps in circuit 2 heat pump	0.1	25.0	°C	Tenths
		1	45	°F	whole
St 21	This defines the probe for temperature control in chiller mode in circuit 2				
	0= Evaporator input NTC temperature probe				
	1= Evaporator 1 output NTC temperature probe	0	4		
	2= Evaporator 2 output NTC temperature probe				
	3= Evaporator common output NTC temperature probe				
	4= temperature probe remote terminal 1				
St 22	This defines the probe for temperature control in heat pump mode in				
	circuit 2				
	0= Evaporator input NTC temperature probe				
	1= Evaporator 1 output NTC temperature probe				
	2= Evaporator 2 output NTC temperature probe				
	3= Evaporator common output NTC temperature probe				
	4= temperature probe remote terminal 1	0	10		
	5= condenser water common input NTC temperature probe				
	6=circuit 1 condenser water input NTC temperature probe				
	7=circuit 2 condenser water input NTC temperature probe				
	8=circuit 1 condenser water input NTC temperature probe				
	9=circuit 2 condenser water input NTC temperature probe				
	10=condenser water common output NTC temperature probe				
	To-condenser water common output into temperature probe				
	PID regulation circuit 1				Tautha
St 23		- 25.0	25.0	°C	Tenths
St 23	PID regulation circuit 1	- 25.0 - 45	25.0 45	°C °F	whole
St 23 St 24	PID regulation circuit 1				
	PID regulation circuit 1 Circuit 1 band offset	- 45	45	°F	
St 24	PID regulation circuit 1 Circuit 1 band offset Circuit 1 integral sampling time Circuit 1 derived sampling time	- 45 0	45 250	°F Sec	
St 24 St 25	PID regulation circuit 1 Circuit 1 band offset Circuit 1 integral sampling time Circuit 1 derived sampling time PID regulation circuit 2	- 45 0 0	45 250 250	°F Sec Sec	whole
St 24	PID regulation circuit 1 Circuit 1 band offset Circuit 1 integral sampling time Circuit 1 derived sampling time	- 45 0	45 250	°F Sec	
St 24 St 25	PID regulation circuit 1 Circuit 1 band offset Circuit 1 integral sampling time Circuit 1 derived sampling time PID regulation circuit 2 Circuit 2 band offset	- 45 0 0 - 25.0	45 250 250 25.0	°F Sec Sec	whole Tenths
St 24 St 25 St 26	PID regulation circuit 1 Circuit 1 band offset Circuit 1 integral sampling time Circuit 1 derived sampling time PID regulation circuit 2	- 45 0 0 - 25.0 - 45	45 250 250 25.0 45	°F Sec Sec °C °F	whole Tenths

			a		· · ·
St 29	Activation offset with regulation of the neutral zone	0.0	25.0	°C °F	Tenths
St 30	Activation delay with regulation of the neutral zone	0	45 250	Sec	whole
St 30	Deactivation offset with regulation of the neutral zone	0.0	25.0	°C	Tenths
0101		0.0	45	°F	whole
St 32	Deactivation delay with regulation of the neutral zone	0	250	Sec	
	Displays				
Parameter	Description	min	max	um	Resolution
	Remote terminal 1				
dP 5	Allows you to personalise how an analog input is viewed on the first line				
	of the 1st Visograph keyboard	0	36		
	0 = no display (the row remains empty)				
dP 6	Allows you to personalise how an analog input is viewed on the second	0	20		
	line of the 1st Visograph keyboard 0 = no display (the row remains empty)	0	36		
dP 7	Allows you to personalise how an analog input is viewed on the third line				
ui i	of the 1st Visograph keyboard	0	36		
	0 = no display (the row remains empty)	_			
dP 8	Allows you to personalise how an analog input is viewed on the fourth				
	line of the 1st Visograph keyboard	0	36		
	0 = no display (the row remains empty)				
	Remote terminal 2				-
dP 9					+
dP 10 dP 11				-	
dP12					
UT 12	Led Display	1		1	1
dP 13	Top led display screen with unit on	1		1	
ui io	0 = No Display				
	1 = Evaporator input temperature				
	2 = Output temperature evaporator 1				
	3 = Output temperature evaporator 2				
	4 = Evaporator common output temperature				
	5 = Condenser common input temperature				
	6 = Condenser input temperature 1				
	7 = Condenser input temperature 2 8 = Condenser output temperature 1				
	9 = Condenser output temperature 2	0	19		
	10 = Condenser common output temperature	0	15		
	11 = External air temperature				
	12 = Remote terminal temperature				
	13 = Combined defrost temperature circuit 1				
	14 = Combined defrost temperature circuit 2				
	15 = Condensation temperature circuit 1				
	16 = Condensation temperature circuit 2				
	17 = Set point				
	18 = Hysteresis 19 = Machine status				
dP 14	Bottom led display screen with unit on	<u> </u>		+	
	0 = No Display				
	1 = Evaporator input temperature				
	2 = Output temperature evaporator 1				
	3 = Output temperature evaporator 2				
	4 = Evaporator common output temperature				
	5 = Condenser common input temperature				
	6 = Condenser input temperature 1				
	7 = Condenser input temperature 2				
	8 = Condenser output temperature 1 9 = Condenser output temperature 2				
	10 = Condenser common output temperature				
	11 = External air temperature	~	<u> </u>		
	12 = Remote terminal temperature	0	24		
	13 = Combined defrost temperature circuit 1				
	14 = Combined defrost temperature circuit 2				
	15 = Condensation temperature circuit 1				
	16 = Condensation temperature circuit 2				
	17 = Set point 18 - Hysteresis				
	18 = Hysteresis 19 = Machine status				
	20 = Condensation pressure circuit 1				
	21 = Condensation pressure circuit 2				
	22 = Evaporation pressure circuit 1				
	23 = Evaporation pressure circuit 2				
	24 = RTC				

dP 15	Led display screen with unit in stand-by				
	0 = Stby above, nothing below	_	_		
	1 = Defined by parameters dP9 and dP10	0	2		
	2 = OFF above, nothing below				
	Machine set up				
Parameter	Description	min	max	um	Resolution
	Analog inputs	1	1		
SP 1	Working in temperature or pressure from an analog input 0 = NTC temperature/pressure function – 4-20 mA:				
	The condensation temperature is controlled through the use of an NTC				
	probe, while a transducer with an input of 4-20 mA must be used to				
	control the evaporation pressure of the circuits and the pressure of the				
	pressure probe configured as an auxiliary output				
	1 = Pressurised operation with an input of 4-20 mA: A transducer with an input of 4-20 mA must be used to control the				
	condensation or evaporation pressures	0	3		
	2 = NTC temperature/pressure function – 0-5 V:		-		
	The condensation temperature is controlled through the use of an NTC				
	probe, while a ratiometric transducer with an input of 0÷5V must be used to control the evaporation pressure of the circuits and the pressure of the				
	pressure probe configured as an auxiliary output				
	3 = Pressurised operation with an input of 0-5 V:				
	A ratiometric transducer with an input of 0-5 V must be used to control				
	the condensation or evaporation pressures		I		
SP 2	Type of gas				
	Type of gas used to calculate the saturated temperatures 1=R22				
	2=R407c				
	3=R134a	1	6		
	4=R410a 5=R404a				
	6=R507c (not yet applicable)				
SP 3	Choice between absolute and relative pressure to calculate overheating:				
	0 = Relative	0	1		
	1 = Absolute				
SP 4	Remote terminal Configuration of remote terminal 1	1	1	1	
56 4	0 = absent				
	1 = on-board NTC probe	0	2		
	2 = without NTC probe on board				
SP 5 SP 6	Remote terminal 1 NTC probe offset	-12.0	12.0	°C	Tenths
3F 0		-12.0	21	°F	whole
SP 7					
	Operating logic				
SP 8	Operating logic				
		0	1		
	0 = chiller / h.p.	0	1		
		0	1		
SP 9	0 = 漆 chiller / 漆 h.p. 1 = 簗 chiller / 漆 h.p.	0	1		
SP 9	0 = * chiller / * h.p. 1 = chiller / * h.p. Chiller / heat pump mode selection Chiller / heat pump mode selection 0 = from the keyboard				
SP 9	0 = * chiller / * h.p. 1 = chiller / * h.p. Chiller / heat pump mode selection Chiller / heat pump mode selection 0 = from the keyboard 1 = from a digital input	0	2		
SP 9	0 = * chiller / * h.p. 1 = chiller / * h.p. Chiller / heat pump mode selection Chiller / heat pump mode selection 0 = from the keyboard 1 = from a digital input 2 = from an analog input				
	0 = * chiller / * h.p. 1 = chiller / * h.p. Chiller / heat pump mode selection Chiller / heat pump mode selection 0 = from the keyboard 1 = from a digital input 2 = from an analog input Automatic change over	0	2		Tenths
SP 9 SP 10	0 = * chiller / * h.p. 1 = chiller / * h.p. Chiller / heat pump mode selection Chiller / heat pump mode selection 0 = from the keyboard 1 = from a digital input 2 = from an analog input			°C °F	Tenths whole
	0 = * chiller / * h.p. 1 = chiller / * h.p. Chiller / heat pump mode selection Chiller / heat pump mode selection 0 = from the keyboard 1 = from a digital input 2 = from an analog input Automatic change over	0 -50.0 -58 0.1	2 110 230 25.0	°F °C	whole Tenths
SP 10	0 = * chiller / * h.p. 1 = chiller / * h.p. Chiller / heat pump mode selection Chiller / heat pump mode selection 0 = from the keyboard 1 = from a digital input 2 = from an analog input Automatic change over Automatic chiller / heat pump mode changeover setting Automatic chiller / heat pump mode changeover differential	0 -50.0 -58	2	°F	whole
SP 10 SP 11	0 = * chiller / * h.p. 1 = chiller / * h.p. Chiller / heat pump mode selection Chiller / heat pump mode selection 0 = from the keyboard 1 = from a digital input 2 = from an analog input Automatic change over Automatic chiller / heat pump mode changeover setting Automatic chiller / heat pump mode changeover differential Unit of measurement selection	0 -50.0 -58 0.1	2 110 230 25.0	°F °C	whole Tenths
SP 10 SP 11	0 = * chiller / * h.p. 1 = chiller / * h.p. Chiller / heat pump mode selection Chiller / heat pump mode selection 0 = from the keyboard 1 = from a digital input 2 = from an analog input Automatic change over Automatic chiller / heat pump mode changeover setting Automatic chiller / heat pump mode changeover setting Automatic chiller / heat pump mode changeover differential Unit of measurement selection Selection between °C or °F and between BAR or psi	0 -50.0 -58 0.1 1	2 110 230 25.0 45	°F °C	whole Tenths
SP 10 SP 11	0 = * chiller / * h.p. 1 = chiller / * h.p. Chiller / heat pump mode selection Chiller / heat pump mode selection 0 = from the keyboard 1 = from a digital input 2 = from an analog input Automatic change over Automatic chiller / heat pump mode changeover setting Automatic chiller / heat pump mode changeover differential Unit of measurement selection	0 -50.0 -58 0.1	2 110 230 25.0	°F °C	whole Tenths
SP 10 SP 11	0 = * chiller / * h.p. 1 = chiller / h.p. Chiller / heat pump mode selection 0 = from the keyboard 1 = from a digital input 2 = from an analog input Automatic change over Automatic chiller / heat pump mode changeover setting Automatic chiller / heat pump mode changeover differential Unit of measurement selection Selection between °C or °F and between BAR or psi 0 = °C / BAR	0 -50.0 -58 0.1 1	2 110 230 25.0 45	°F °C	whole Tenths
SP 10 SP 11 SP 12	0 = * chiller / * h.p. 1 = chiller / * h.p. Chiller / heat pump mode selection 0 = from the keyboard 1 = from a digital input 2 = from an analog input Automatic change over Automatic chiller / heat pump mode changeover setting Automatic chiller / heat pump mode changeover setting Automatic chiller / heat pump mode changeover differential Unit of measurement selection Selection between °C or °F and between BAR or psi 0 = °C / BAR 1 = °F / psi	0 -50.0 -58 0.1 1	2 110 230 25.0 45	°F °C	whole Tenths
SP 10 SP 11 SP 12 SP 13	0 = * chiller / * h.p. 1 = chiller / * h.p. Chiller / heat pump mode selection 0 = from the keyboard 1 = from a digital input 2 = from an analog input Automatic change over Automatic chiller / heat pump mode changeover setting Automatic chiller / heat pump mode changeover setting Automatic chiller / heat pump mode changeover differential Unit of measurement selection Selection between °C or °F and between BAR or psi 0 = °C / BAR 1 = °F / psi	0 -50.0 -58 0.1 1	2 110 230 25.0 45	°F °C	whole Tenths
SP 10 SP 11 SP 12 SP 13 SP 14	0 = * chiller / * h.p. 1 = chiller / h.p. Chiller / heat pump mode selection 0 = from the keyboard 1 = from a digital input 2 = from an analog input Automatic change over Automatic chiller / heat pump mode changeover setting Automatic chiller / heat pump mode changeover differential Unit of measurement selection Selection between °C or °F and between BAR or psi 0 = °C / BAR 1 = °F / psi Mains frequency selection Serial address	0 -50.0 -58 0.1 1	2 110 230 25.0 45	°F °C	whole Tenths
SP 10 SP 11 SP 12 SP 13 SP 14 SP 15	0 = * chiller / * h.p. 1 = chiller / h.p. Chiller / heat pump mode selection 0 = from the keyboard 1 = from a digital input 2 = from an analog input Automatic change over Automatic chiller / heat pump mode changeover setting Automatic chiller / heat pump mode changeover differential Unit of measurement selection Selection between °C or °F and between BAR or psi 0 = °C / BAR 1 = °F / psi Mains frequency selection Serial address Serial address Firmware release	0 -50.0 -58 0.1 1 0	2 110 230 25.0 45 1	°F °C	whole Tenths
SP 10	0 = * chiller / * h.p. 1 = chiller / h.p. Chiller / heat pump mode selection 0 = from the keyboard 1 = from a digital input 2 = from an analog input Automatic change over Automatic chiller / heat pump mode changeover setting Automatic chiller / heat pump mode changeover differential Unit of measurement selection Selection between °C or °F and between BAR or psi 0 = °C / BAR 1 = °F / psi Mains frequency selection Serial address Serial address Firmware release Eeprom map of parameters	0 -50.0 -58 0.1 1 0	2 110 230 25.0 45 1	°F °C	whole Tenths
SP 10 SP 11 SP 12 SP 13 SP 14 SP 15 SP 16	0 = the chiller / the h.p. 1 = the chiller / the h.p. Chiller / heat pump mode selection 0 = from the keyboard 1 = from a digital input 2 = from an analog input Automatic change over Automatic chiller / heat pump mode changeover setting Automatic chiller / heat pump mode changeover differential Unit of measurement selection Selection between °C or °F and between BAR or psi 0 = °C / BAR 1 = °F / psi Mains frequency selection Serial address Serial address Firmware release Eeprom map of parameters Password	0 -50.0 -58 0.1 1 0	2 110 230 25.0 45 1 1 247	°F °C	whole Tenths
SP 10 SP 11 SP 12 SP 13 SP 14 SP 15	0 = * chiller / * h.p. 1 = chiller / h.p. Chiller / heat pump mode selection 0 = from the keyboard 1 = from a digital input 2 = from an analog input Automatic change over Automatic chiller / heat pump mode changeover setting Automatic chiller / heat pump mode changeover differential Unit of measurement selection Selection between °C or °F and between BAR or psi 0 = °C / BAR 1 = °F / psi Mains frequency selection Serial address Serial address Firmware release Eeprom map of parameters	0 -50.0 -58 0.1 1 0	2 110 230 25.0 45 1	°F °C	whole Tenths

Parameters	Description	min	max	um	Resolution
Sd 1	Maximum increase in chiller mode dynamic set point				
	This determines the maximum variation of the working set point in chiller mode	-50.0 -58	110 230	°C °F	Tenths whole
Sd 2	Maximum increase in heat pump mode dynamic set point This determines the maximum variation in the working set point in heat pump mode	-50.0 -58	110 230	°C °F	Tenths whole
Sd 3	Dynamic set point in chiller mode for the external air temperature setting	-50.0 -58	110 230	°C °F	Tenths whole
Sd 4	Dynamic set point in heat pump mode for the external air temperature setting	-50.0 -58	110 230	°C °F	Tenths whole
Sd 5	External air temperature differential dynamic set point in chiller mode	-50.0 -58	110 230	°C °F	Tenths whole
Sd 6	Dynamic set point in heat pump mode for the external air temperature differential	-50.0 -58	110 230	°C °F	Tenths whole
	Energy saving				
Parameters	Description	min	max	um	Resolution
ES 1	Start of working time band 1 (0-24)	0	24.00	Hr	10 Min
ES 2	End of working time band 1 (0-24)	0	24.00	Hr	10 Min
ES 3	Start of working time band 2 (0-24)	0	24.00	Hr	10 Min
ES 4	End of working time band 2 (0-24)	0	24.00	Hr	10 Min
ES 5	Start of working time band 3 (0-24)	0	24.00	Hr	10 Min
ES 6	End of working time band 3 (0-24)	0	24.00	Hr	10 Min
ES 7	Monday energy saving time band	0	7		
ES 8	Tuesday energy saving time band	0	7		
ES 9	Wednesday energy saving time band	0	7	ļ	
ES 10	Thursday energy saving time band	0	7	<u> </u>	-
ES 11 ES 12	Friday energy saving time band	0	7		
ES 12 ES 13	Saturday energy saving time band	0	7		
ES 13 ES 14	Sunday energy saving time band Increase energy saving setting in chiller mode	-50.0	110	°C	Tenths
E3 14	Increase energy saving setting in chiller mode	-50.0	230	°F	whole
ES 15	Energy saving differential in chiller mode	0.1	25.0 45	°C °F	Tenths whole
ES 16	Increase energy saving set point in heat pump mode	-50.0 -58	110 230	°C °F	Tenths whole
ES 17	Increase energy saving differential in heat pump mode	0.1 1	25.0 45	°C °F	Tenths whole
ES 18	Monday mode with automatic ON / OFF	0	7		
ES 19	Tuesday mode with automatic ON / OFF	0	7		
ES 20	Wednesday mode with automatic ON / OFF	0	7		
ES 21	Thursday mode with automatic ON / OFF	0	7		
ES 22	Friday mode with automatic ON / OFF	0	7		
		0	7		
ES 23	Saturday mode with automatic ON / OFF				
ES 24	Sunday mode with automatic ON / OFF	0	7		
				Min	10 Min
ES 24	Sunday mode with automatic ON / OFF	0	7	Min	10 Min
ES 24	Sunday mode with automatic ON / OFF Maximum unit working time in OFF from RTC if forced ON via a key	0	7	Min um	10 Min Resolution
ES 24 ES 25	Sunday mode with automatic ON / OFF Maximum unit working time in OFF from RTC if forced ON via a key Auxiliary heating	0 0	7 250		
ES 24 ES 25 Parameters	Sunday mode with automatic ON / OFF Maximum unit working time in OFF from RTC if forced ON via a key Auxiliary heating Description Auxiliary heating function 0 = Disabled 1 = Integration	0 0	7 250		
ES 24 ES 25 Parameters AH 1	Sunday mode with automatic ON / OFF Maximum unit working time in OFF from RTC if forced ON via a key Auxiliary heating Description Auxiliary heating function 0 = Disabled 1 = Integration 2 = Replace	0 0 min 0	7 250 max 2	um	Resolution
ES 24 ES 25 Parameters	Sunday mode with automatic ON / OFF Maximum unit working time in OFF from RTC if forced ON via a key Auxiliary heating Description Auxiliary heating function 0 = Disabled 1 = Integration	0 0 min 0 -50.0	7 250 max 2 110	um °C	Tenths
ES 24 ES 25 Parameters AH 1	Sunday mode with automatic ON / OFF Maximum unit working time in OFF from RTC if forced ON via a key Auxiliary heating Description Auxiliary heating function 0 = Disabled 1 = Integration 2 = Replace External air set point auxiliary heating activation	0 0 min 0	7 250 max 2	um	Resolution
ES 24 ES 25 Parameters AH 1 AH 2	Sunday mode with automatic ON / OFF Maximum unit working time in OFF from RTC if forced ON via a key Auxiliary heating Description Auxiliary heating function 0 = Disabled 1 = Integration 2 = Replace	0 0 min 0 -50.0 -58	7 250 max 2 110 230	um °C °F	Resolution Tenths whole
ES 24 ES 25 Parameters AH 1 AH 2	Sunday mode with automatic ON / OFF Maximum unit working time in OFF from RTC if forced ON via a key Auxiliary heating Description Auxiliary heating function 0 = Disabled 1 = Integration 2 = Replace External air set point auxiliary heating activation	0 0 min 0 -50.0 -58 0.1	7 250 max 2 110 230 25.0	um °C °F °C	Resolution Tenths whole Tenths
ES 24 ES 25 Parameters AH 1 AH 2 AH 3	Sunday mode with automatic ON / OFF Maximum unit working time in OFF from RTC if forced ON via a key Auxiliary heating Description Auxiliary heating function 0 = Disabled 1 = Integration 2 = Replace External air set point auxiliary heating activation External air differential auxiliary heating deactivation	0 0 min 0 -50.0 -58 0.1 1	7 250 max 2 110 230 25.0 45	um °C °F °F °C °F	Resolution Tenths whole Tenths whole
ES 24 ES 25 Parameters AH 1 AH 2 AH 3 AH 4 AH 5	Sunday mode with automatic ON / OFF Maximum unit working time in OFF from RTC if forced ON via a key Auxiliary heating Description Auxiliary heating function 0 = Disabled 1 = Integration 2 = Replace External air set point auxiliary heating activation External air differential auxiliary heating deactivation Auxiliary heating activation delay time External air set point to deactivate the compressors if the integration mode is enabled	0 0 min 0 -50.0 -58 0.1 1 0	7 250 max 2 110 230 25.0 45 250	um °C °F °F °F	Resolution Tenths whole Tenths whole Min
ES 24 ES 25 Parameters AH 1 AH 2 AH 3 AH 4 AH 5 AH 6	Sunday mode with automatic ON / OFF Maximum unit working time in OFF from RTC if forced ON via a key Auxiliary heating Description Auxiliary heating function 0 = Disabled 1 = Integration 2 = Replace External air set point auxiliary heating activation External air differential auxiliary heating deactivation Auxiliary heating activation delay time External air set point to deactivate the compressors if the integration mode is enabled External air differential to re-activate the compressors if the integration mode is enabled	0 0 -50.0 -58 0.1 1 0 -50.0 -58 0.1 1	7 250 max 2 110 230 25.0 45 250 110 230 25.0 45	um °C °F °F °C °F	Resolution Tenths whole Tenths whole Min Tenths whole Tenths whole Tenths whole
ES 24 ES 25 Parameters AH 1 AH 2 AH 3 AH 4 AH 5 AH 6 AH 7	Sunday mode with automatic ON / OFF Maximum unit working time in OFF from RTC if forced ON via a key Auxiliary heating Description Auxiliary heating function 0 = Disabled 1 = Integration 2 = Replace External air set point auxiliary heating activation External air differential auxiliary heating deactivation Auxiliary heating activation delay time External air set point to deactivate the compressors if the integration mode is enabled External air differential to re-activate the compressors if the integration mode is enabled External air differential to re-activate the compressors if the integration mode is enabled	0 0 min 0 -50.0 -58 0.1 1 0 -50.0 -58 0.1	7 250 max 2 110 230 25.0 45 250 110 230 25.0	um °C °F °C °F °C °F °C	Resolution Tenths whole Tenths whole Min Tenths whole Tenths Tenths Tenths Tenths Tenths Tenths whole Tenths Tenths whole Tenths
ES 24 ES 25 Parameters AH 1 AH 2 AH 3 AH 4 AH 5 AH 6	Sunday mode with automatic ON / OFF Maximum unit working time in OFF from RTC if forced ON via a key Auxiliary heating Description Auxiliary heating function 0 = Disabled 1 = Integration 2 = Replace External air set point auxiliary heating activation Auxiliary heating activation delay time External air set point to deactivate the compressors if the integration mode is enabled External air differential to re-activate the compressors if the integration mode is enabled Compressor deactivation delay time if integration mode is active Temperature control set point selection 0 = uses the set point (ST04) and the differential (ST08) of the heating mode. 1 = uses the set point and differential for the ON/OFF and Modulating auxiliary heating functions 2 = adds the value of the setting in parameter AH09/AH11 to the working set point of the heating mode (ST04) and uses the differential set in	0 0 -50.0 -58 0.1 1 0 -50.0 -58 0.1 1	7 250 max 2 110 230 25.0 45 250 110 230 25.0 45	um °C °F °C °F °C °F °C	Resolution Tenths whole Tenths Whole Min Tenths whole Tenths whole
ES 24 ES 25 Parameters AH 1 AH 2 AH 3 AH 4 AH 5 AH 6 AH 7 AH 8	Sunday mode with automatic ON / OFF Maximum unit working time in OFF from RTC if forced ON via a key Auxiliary heating Description Auxiliary heating function 0 = Disabled 1 = Integration 2 = Replace External air set point auxiliary heating activation External air set point auxiliary heating deactivation Auxiliary heating activation delay time External air set point to deactivate the compressors if the integration mode is enabled External air differential to re-activate the compressors if the integration mode is enabled Compressor deactivation delay time if integration mode is active Temperature control set point selection 0 = uses the set point (ST04) and the differential (ST08) of the heating mode. 1 = uses the set point and differential for the ON/OFF and Modulating auxiliary heating functions 2 = adds the value of the setting in parameter AH09/AH11 to the working set point of the heating mode (ST04) and uses the differential set in AH10/AH12	0 0 -50.0 -58 0.1 1 0 -50.0 -58 0.1 1 0 0	7 250 max 2 110 230 25.0 45 250 110 230 25.0 45 250 25.0 45 250 25.0 45 250	um °C °F °C °F °C °F	Resolution Tenths whole Tenths Whole Min Tenths whole Tenths whole Tenths Whole Tenths Whole Min Tenths Whole Min
ES 24 ES 25 Parameters AH 1 AH 2 AH 3 AH 4 AH 5 AH 6 AH 7	Sunday mode with automatic ON / OFF Maximum unit working time in OFF from RTC if forced ON via a key Auxiliary heating Description Auxiliary heating function 0 = Disabled 1 = Integration 2 = Replace External air set point auxiliary heating activation Auxiliary heating activation delay time External air set point to deactivate the compressors if the integration mode is enabled External air differential to re-activate the compressors if the integration mode is enabled Compressor deactivation delay time if integration mode is active Temperature control set point selection 0 = uses the set point (ST04) and the differential (ST08) of the heating mode. 1 = uses the set point and differential for the ON/OFF and Modulating auxiliary heating functions 2 = adds the value of the setting in parameter AH09/AH11 to the working set point of the heating mode (ST04) and uses the differential set in	0 0 -50.0 -58 0.1 1 0 -50.0 -58 0.1 1 0 0 -50.0 -58 0.1 1 0 0	7 250 max 2 110 230 25.0 45 250 45 250 25.0 45 250 25.0 45 250 25.0 45 250	um °C °F °C °F °C °F °C	Resolution Tenths whole Tenths whole Min Tenths whole Tenths whole Tenths whole
ES 24 ES 25 Parameters AH 1 AH 2 AH 3 AH 4 AH 5 AH 6 AH 7 AH 8	Sunday mode with automatic ON / OFF Maximum unit working time in OFF from RTC if forced ON via a key Auxiliary heating Description Auxiliary heating function 0 = Disabled 1 = Integration 2 = Replace External air set point auxiliary heating activation External air set point auxiliary heating deactivation Auxiliary heating activation delay time External air set point to deactivate the compressors if the integration mode is enabled External air differential to re-activate the compressors if the integration mode is enabled Compressor deactivation delay time if integration mode is active Temperature control set point selection 0 = uses the set point (ST04) and the differential (ST08) of the heating mode. 1 = uses the set point and differential for the ON/OFF and Modulating auxiliary heating functions 2 = adds the value of the setting in parameter AH09/AH11 to the working set point of the heating mode (ST04) and uses the differential set in AH10/AH12	0 0 -50.0 -58 0.1 1 0 -50.0 -58 0.1 1 0 0	7 250 max 2 110 230 25.0 45 250 110 230 25.0 45 250 25.0 45 250 25.0 45 250	um °C °F °F °F °F °F	Resolution Tenths whole Tenths Min Tenths whole Min

-50.0 -58 0.1 1 0 AH13 0 0 0 min 0	110 230 25.0 45 AH14 100 1 1 1	С Г Г Г Г Г Г Г Г Г Г Г Г Г	Tenths whole Tenths whole
0.1 1 0 AH13 0 0 min	25.0 45 AH14 100 1	°C °F %	Tenths
1 0 AH13 0 0 min	45 AH14 100 1	°F %	
0 AH13 0 0 min	AH14 100 1 1	%	whole
AH13 0 0 min	100 1 1		
0 0 min	1	70	
0 0 min	1		
0 min	1		
min			
min			
min			
	max		
	max		
	max		_
0		um	Resolution
0		_	
	250	Sec	10 sec
<u> </u>			
0			
0	250	Sec	10 sec
	250	6	10
U	250	Sec	10 sec
	050	0	
-	250	Sec	
1			
1	250	Sec	
0	250	Sec	
	250	Sec	10 sec
1			
1	1	1	
0	3		
0	3		
0	3		
0	3		
0	3		
0	3		
0	3		
0	3		
0			
0	3 250	Sec	
0		Sec Sec	
0	250		
0	250		
0	250		
0	250 250		
0	250 250		
0	250 250	Sec	
0 0 0 0	250 250	Sec	0.1 sec
0 0 0 0	250 250 2	Sec	0.1 sec
0 0 0 0	250 250 2	Sec	0.1 sec
0 0 0 0	250 250 2	Sec	0.1 sec
	0 1 1 0 0	0 250 1 250 1 250 0 250 0 250 0 250	0 250 Sec 1 250 Sec 1 250 Sec 1 250 Sec 0 250 Sec 0 250 Sec 0 250 Sec

CO 63 CO 64 CO 65 CO 66 CO 67 CO 68 CO 69 CO 70 CO 70 CO 71 Parameters	Delay time in enabling Refcomp Inverter compressor relay based on temperature control request Delay in VI valves activation from compressor start-up Minimum activation time for VI valves Water pump Bescription	0 0 0 0	250 250 250 250	sec sec sec um	Resolution
CO 64 CO 65 CO 66 CO 67 CO 68 CO 69 CO 70	temperature control request Delay in VI valves activation from compressor start-up Minimum activation time for VI valves	0	250	sec	
CO 64 CO 65 CO 66 CO 67 CO 68 CO 69 CO 70	temperature control request Delay in VI valves activation from compressor start-up	0	250	sec	
CO 64 CO 65 CO 66 CO 67 CO 68 CO 69	temperature control request				
CO 64 CO 65 CO 66 CO 67 CO 68		0	250	sec	
CO 64 CO 65 CO 66 CO 67 CO 68					
CO 64 CO 65 CO 66 CO 67					
CO 64 CO 65					
CO 64	Image: Control of the second				
00.00					
CO 62					1
CO 61					
CO 60					
CO 59					
CO 58	Set compressor 6 hour meter (see chap. maintenance request function)	0	999	Hr	10 Hr
CO 56 CO 57	Set compressor 4 hour meter (see chap. maintenance request function) Set compressor 5 hour meter (see chap. maintenance request function)	0	999 999	Hr Hr	10 Hr 10 Hr
CO 55	Set compressor 3 hour meter (see chap. maintenance request function)	0	999	Hr	10 Hr
CO 54	Set compressor 2 hour meter (see chap. maintenance request function)	0	999	Hr	10 Hr
CO 53	Set compressor 1 hour meter (see chap. maintenance request function)	0	999	Hr	10 Hr
	Load maintenance				
	·····	1	45	°F	whole
CO 52	Differential deactivation of the liquid injection solenoid valve	-38	25.0	г °C	Tenths
CO 51	Activation set point of the liquid injection solenoid valve	-50 -58	150 302	°C °F	Tenths whole
CO 54	Compressor liquid injection function	50	450	°C	Taniha
CO 50	Normal power implementation interval	1	250	sec	
CO 49	Minimum value for output of digital analog scroll 0÷10V 6 circuit 2	CO48	100	%	
CO 48	Minimum value for output of digital analog scroll 0+10V 6 circuit 2	0	CO49	%	
CO 47	Minimum value for output of digital analog scroll 0÷10V 5 circuit 1	CO46	100	%	<u> </u>
CO 46	Minimum value for output of digital analog scroll 0÷10V 5 circuit 1	0	CO47	%	1
	compressor is forced depending on rotation 0 = function is disabled		-		
	which the modulating compressor is switched off and insertion of another	0	999	Hr	
CO 45	Maximum continuative operation time of modulating compressor after				
CO 44	Forced operation time at maximum speed	0	250	sec	10 sec
	0 = function is disabled	Ŭ	200	iviil I	
	operation percentage below CO42	0	250	Min	10 Min
CO 43	0 = function is disabled MAX continuative operation time of modulating compressor with				
	modulating compressor below which the CO43 time count starts	0	100	%	
CO 42	Determines the minimum continuative operation percentage of the	_	100	0/	
CO 41	Power implementation interval at peak	1	250	sec	
CO 40	Minimum value for output of digital analog scroll 0÷10V at peak	0	100	%	
	0 = function is disabled				
	control	0	250	sec	
CO 39	Compressor operation time at maximum speed requested by temperature				
	Compressor with modulating control				
CO 38					
		· ·			,
CO 30 CO 37	Max time with no resources being inserted with at least one resource active	0	999	Hr	10 Min
CO 36	Resource control in proportional/neutral zone Max time with no resources being inserted with at least one resource active	0	250	Min	10 Min
	1= Peaks Besource control in proportional/neutral zone	modo	L	L	
	0= Hours	0	1		
CO 18	Balance/saturation criteria				
	4 = Compressor weight				
	3 = Saturation				
	1 = FIFO 2 = Balance	0	4		
	0 = Fixed sequence				
CO 17	Selection criteria of circuits				
	4 = Compressor weight				
	3 = Saturation				
	2 = Balance	0	4		
	0 = Fixed sequence 1 = FIFO				
CO 16	Selection criteria of compressors in the circuit				
	Compressor rotation - balancing - temperature of	control			
	(see partialisation mode)	0	250	sec	
CO 15	Switch-on time with gas bypass valve / idle compressor start-up valve	0	250		

PA 1	Evaporator pump/supply fan operation mode 0 = The pump and/or the supply fan are absent or not controlled. 1 = Continuous mode: the pump/supply fan is activated when the machine is switched on (chiller/h.p. selection).	0	2		
	2 = Working on demand of the compressors: the water pump/supply fan are linked with the compressors being switched on and off.				
PA 2	Compressors ON delay from pump/supply fan start-up	0	250	Sec	10 Sec
PA 3	Evaporator water pump/supply fan OFF delay from when the compressors are shut off	0	250	Sec	10 Sec
PA 4	Pump Off Delay when the Unit is shut off	0	250	Sec	10 Sec
PA 5	Pump Activation and Rotation: 0 = Pump - No Rotation; 1 = Pump - Manual Rotation; 2 = Pumps - Start Rotation; 3 = Pumps - Rotation at Hours; 4 = Pumps - Rotation at Start and Hours	0	4		
PA 6	Pump Manual Inversion: 0= Pump 1 On; 1= Pump 2 On	0	1		
PA 7	No. of hours for forced evaporator pump rotation	0	999	Hr	10 Hr
PA 8	Simultaneous pump running time after forced rotation	0	250	Sec	
	Evaporator water pump operation with anti-freeze	-	200	000	
PA9	Determines the evaporator water pump/s anti-freeze operation when the				
	device is OFF or on Stand-by 0 = always OFF in remote OFF or Stand-by 1 = ON, parallel with the anti-freeze heaters 2 = on in remote OFF or Stand-by, depending on the temperature control request	0	2		
PA10	Temperature control probe for anti-freeze evaporator water pump/s operation 0 = disabled 1 = regulation on evaporator input 2 = regulation on evaporator output 1 3 = regulation on evaporator output 2 4 = regulation on evaporator output 1 / 2 5 = regulation on evaporator output 1 / 2 6 = regulation on exaporator output 2	0	6		
PA11	Evaporator water pump activation set point in anti-freeze mode on the	-50.0	110	°C	Tenths
	temperature control probe	-58	230	°F	whole
PA12	Evaporator water pump differential deactivation in anti-freeze mode on	0.1	25.0	°C	Tenths
	the temperature control probe	1	45	°F	whole
	Evaporator water pump maintenance reque	st	1	1	
PA 13	Set Pump/supply fan hour meter (see chap. maintenance request function)	0	999	Hr	10 Hr
PA 14	Set Evaporator 2 pump hour meter (see chap. maintenance request function)	0	999	Hr	10 Hr
PA 15	Hot start function of the supply fan air/air ur		440	**	Tautha
PATS	Hot start set point	-50.0 -58	110 230	℃ °F	Tenths whole
PA 16	Hot start differential	0.1	25.0	°C	Tenths
		1	45	°F	whole
	Condenser water pump control				
PA 17	Condenser pump operation mode 0 = Absent, the pump is not controlled. 1 = Continuous mode: the pump being switched on and off is linked with the unit being switched on and off. 2 = Working on demand of the compressors: pump switch-on and off is linked with the compressors being switched on and off.	0	2		
PA 18	Compressor ON delay from condenser pump start-up	0	250	Sec	10 Sec
PA 19	Condenser pump OFF delay from compressor shut off	0	250	Sec	10 Sec
PA 20	Pump Off Delay when the Unit is shut off	0	250	Sec	10 Sec
PA 21	Pump Activation and Rotation: 0 = Pump - No Rotation; 1 = Pump - Manual Rotation;	0	4		
	2 = Pumps - Start Rotation; 3 = Pumps - Rotation at Hours; 4 = Pumps - Rotation at Start and Hours				
PA 22	 3 = Pumps - Rotation at Hours; 4 = Pumps - Rotation at Start and Hours Pump Manual Inversion: 0 = Pump 1 On; 	0	1		
	 3 = Pumps - Rotation at Hours; 4 = Pumps - Rotation at Start and Hours Pump Manual Inversion: 0 = Pump 1 On; 1 = Pump 2 On 			Hr	10 Hr
PA 22 PA 23 PA 24	 3 = Pumps - Rotation at Hours; 4 = Pumps - Rotation at Start and Hours Pump Manual Inversion: 0 = Pump 1 On; 	0	1 999 250	Hr	10 Hr

Pd 1	Pump down mode				
Pd 1	Pump down mode 0= function disabled 1= shut off with pump down without pump down in start-up 2= shut off with pump down with pump down in start-up 3= shut off with pump down only in chiller mode without pump down in start-up	0	4		
Pd 2	4= shut off with pump down only in chiller mode with pump down in start- up Pump down pressure setting (see chap. ON/OFF operation with pump	0.0	50.0	Bar	Tenths
	down)	0	725	psi	whole
Pd 3	Pump down differential pressure (see chap. ON/OFF mode with pump down)	0.1 1	14.0 203	Bar Psi	Tenths whole
Pd 4	Max time in pump down at start up and at shutdown (see chap. ON/OFF mode with pump down)	0	250	Sec	
	Timed pump down		1		
Pd 5	Pump down time upon start-up Pd5 = 0 function disabled	0	250	Sec	
Pd 6	Pump down time when stopped Pd6 = 0 function disabled	0	250	Sec	
	Pump down alarm				
Pd 7	Maximum number of pump down alarm interventions per hour in shutdown which, when exceeded, the alarm is recorded and displayed on the screen with a code and the relay alarm + buzzer is activated Reset is always manual if Pd7 = 0 Reset is always automatic if Pd7 =60 Reset switches from automatic to manual if Pd7 falls between 1 and 59	0	60		
Pd 8	Maximum number of pump down alarm interventions per hour, when started-up Exceeding this limit, the alarm must be reset manually, it will be saved in the log and the alarm relay + buzzer will be activated	0	60		
	Reset is always manual if Pd8 = 0 Reset is always automatic if Pd8 =60 Reset switches from automatic to manual if Pd8 falls between 1 and 59 and based on the configuration of Par. Pd9				
Pd 9	Reset is always automatic if Pd8 =60 Reset switches from automatic to manual if Pd8 falls between 1 and 59	0	1		

Un 1	Comp. unloading function Set Point In chiller mode at evaporator water	-50.0	110	°C	Tenths
•	input high temperature	-58	230	°F	whole
Un 2	Compressor unloading relay differential at high temperature evaporator	0.1	25.0	°C	Tenths
	water input	1	45	°F	whole
Un 3	Compressor unloading function insertion delay time at high temperature evaporator water input	0	250	Sec	10 sec
Un 4	MAX time in compressor unloading mode at high temperature evaporator water input	0	250	Min	
Un 5	Analog input configuration for control of the unloading function of the evaporator high water temperature	1	29		
	Evaporator water low temperate unloading				
Un 6	Compressor unloading set point from the evaporator low water	-50.0	110	°C	Tenths
	temperature	-58	230	°F	whole
Un 7	Compressor unloading differential from the evaporator low water	0.1	25.0	°C	Tenths
	temperature	1	45	°F	whole
Un 8	Comp. unloading function insertion delay time At low temperature evaporator water input	0	250	Sec	10 sec
Un 9	MAX time in compressor unloading status due to the evaporator low water temperature	0	250	Min	
Un 10	Analog input configuration for control of the unloading function of the evaporator low water temperature	1	29		
	Chiller condensation unloading – heat pum	р			
Un 11	Comp. unloading Set Point Condensation temperature / pressure in	-50.0	110	°C	Tenths
	chiller / h.p. mode	-58	230	°F	whole
		0.0	50.0	Bar	Tenths
		0	725	Psi	whole
Un 12	Comp. unloading differential Condensation temperature / pressure in	0.1	25.0	°C	Tenths
	chiller / h.p. mode	1	45	°F	whole
		0.1	14.0	Bar	Tenths
		1	203	Psi	whole
	Evaporation unloading – heat pump		T	•	
Un 13	Compressor unloading Set Point evaporation pressure in h.p. mode	-1.0	50.0	Bar	Tenths
		-14	725	Psi	whole
Un 14	Compressor unloading differential evaporation pressure in h.p. mode	0.1 1	14.0 203	Bar Psi	Tenths whole
Un 15	Maximum time for compressor unloading at temp./press.	0	203	Min	WHOIC
Un 16	Choice of steps for circuit to insert in unloading mode 1 = 1 step	•	200		
	2= 2 steps	1	8		
	3= 3 steps				
Un 17	4= 4 steps Minimum working time with partialisation step ON after the unloading				
	function is activated (only for a compressor with partialisation controls)	0	250	Sec	

	Condensing fan				
Parameters	Description	min	max	um	Resolution
FA1	Fan regulation				
	0= not present				
	1= always on	0	4		
	2 = ON/OFF step insertion 3= ON/OFF continuous step insertion				
	4= proportional speed regulator				
FA2	Fan operation mode				
	0= depending on the compressor	0	1		
	1= independent from the compressor				
FA3	MAX speed fan peak time after ON (TRIAC) At every start-up the fan is				
	powered at maximum voltage for time FA03, irrespective of the condensation temperature/pressure. When this elapses, the fan	0	250	Sec	
	continues at the speed set by the regulator.				
FA4	Fan phase displacement analog output 5 (only if configured as PWM /	0	0	Micro	050 -
	phase cut)	0	8	Sec	250µs
FA5	Fan phase displacement analog output 6 (only if configured as PWM /	0	8	Micro	250µs
	phase cut)	0	Ū	Sec	200µ3
FA6	Single or separate condensation fan	0			
	0= unique condensation (1 / 2 / 3 / 4) 1= separate condensers	0	1		
FA7	Pre-fan in chiller mode before compressor ON. It allows you to set a start				
	up time for the fans at the maximum speed in chiller mode before the				
	compressor is switched on, in order to prepare for the sudden increase in	0	250	Sec	
	condensation temperature / pressure (that starting up the compressor				
	entails) and improving regulation. (only if FA01 = 4)				
	Chiller mode		T		T
FA8	Minimum operation speed of the fans in chiller mode. This allows				
	you to set a minimum value for proportional fan regulation in chiller	0	FA16	%	
	mode. It is expressed as a percentage of the maximum voltage allowed.				
FA9	Maximum operation speed of the fans in chiller mode. This allows				
	you to set a maximum value for proportional fan regulation in chiller	E 440	400	0/	
	mode. It is expressed as a percentage of the maximum voltage	FA16	100	%	
	allowed.				
FA10	Proportional regulation				
	Minimum fan speed Set temperature/pressure in chiller mode. This allows you to set the condensation temperature / pressure value in chiller that				
	corresponds to the minimum fan speed.	-50.0	110	°C	Tenths
	Step regulation	-58	230	°F	whole
	SET 1st STEP This allows you to set the condensation temperature	0.0	50.0	Bar	Tenths
	/ pressure value in chiller mode that corresponds to operation in ON	0	725	Psi	whole
	of the relay output, configured as the 1st condensation fan speed				
	step.				-
FA11	Proportional regulation				
	Set maximum fan speed temperature/pressure in chiller mode. This allows you to set the condensation temperature / pressure value in chiller				
	that corresponds to the maximum fan speed.	-50.0	110	°C	Tenths
	Step regulation	-58	230	°F	whole
	SET 2nd STEP This allows you to set the condensation temperature /	0.0 0	50.0	Bar	Tenths whole
	pressure value in chiller mode that corresponds to the operation in	0	725	Psi	whole
	ON of the relay output, configured as the 2nd condensation fan speed				
FA40	step.				
FA12	Proportional regulation Proportional band regulation of fans in chiller mode This allows you to set		1		
	a temperature / pressure differential that corresponds to a variation from	0.1	25.0	°C	Tenths
	minimum to maximum fan speed.	1	45	°F	whole
	Step regulation	0.1	14.0	Bar	Tenths
	With Par. FA01=2/3 becomes the differential on the step itself of circuit 1	1	203	Psi	whole
	in chiller (see fans regulation graph).				
FA13	Proportional regulation		07.5	~~	-
	Differential CUT- OFF in chiller. This allows you to set a temperature /	0.1	25.0	°C	Tenths
	pressure differential in chiller mode to shut off the fan.	1	45 14.0	°F Bar	whole Tenths
	Step regulation With Par. FA01=2/3 becomes the differential on the step itself of circuit 2	0.1 1	203	Bar Psi	whole
	in chiller (see fans regulation graph).		200		
FA14	Over ride CUT- OFF in chiller. This allows you to set a temperature /	0.1	25.0	°C	Tenths
	pressure differential in chiller mode, where the fan maintains minimum	1	45	°F	whole
	speed.	0.1	14.0	Bar	Tenths
		1	203	Psi	whole

FA15	CUT - OFF delay time. This allows you to set a delay time for the activation of the CUT - OFF function at fan start-up. If at compressor start-up the proportional regulator requests the fans to	0	250	Sec	
	be shut off and FA15 \neq 0, the fan will be forced at minimum speed for the set time. If FA15=0, the function is not enabled.				
FA16	Night function speed in chiller mode. This allows you to set a maximum value for proportional regulation of the fans in chiller mode. It is expressed as a percentage of the maximum voltage allowed.	FA8	FA9	%	
	Heat pump mode	I		I	
FA17	Minimum fan speed in heat pump mode. This allows you to set a				[
	minimum value for the proportional regulation of the fans in h.p. It is expressed as a percentage of the maximum voltage allowed.	0	FA24	%	
FA18	Maximum fan speed in heat pump mode. This allows you to set a maximum value for the proportional regulation of the fans in h.p. It is expressed as a percentage of the maximum voltage allowed.	FA24	100	%	
FA19	Proportional regulation				
	 Set temperature / pressure for maximum fan speed in h.p. mode. This allows you to set the condensation temperature / pressure value in h.p. mode that corresponds to minimum fan speed. Step regulation SET 1st STEP This allows you to set the condensation temperature / pressure value in heat pump mode that corresponds to the operation of the relay output in ON configured as the 1st condensation fan speed step. 	-50.0 -58 0.0 0	110 230 50.0 725	°C °F Bar Psi	Tenths whole Tenths whole
FA20	 Proportional regulation Set temperature / pressure for minimum fan speed in h.p. mode. This allows you to set the condensation temperature / pressure value in h.p. mode that corresponds to maximum fan speed. Step regulation SET 2nd STEP This allows you to set the condensation temperature / pressure value in heat pump mode that corresponds to the operation of the relay output in ON configured as the 2nd condensation fan speed step. 	-50.0 -58 0.0 0	110 230 50.0 725	°C °F Bar Psi	Tenths whole Tenths whole
FA21	Proportional regulation				
	Proportional band regulation of fans in heat pump mode This allows you	0.1	25.0	°C	Tenths
	to set a temperature / pressure differential that corresponds to a variation	1	45	°F	whole
	from minimum to maximum fan speed. Step regulation	0.1	14.0	Bar	Tenths
	With Par. FA01=2/3 becomes the differential on the step itself of circuit 1	1	203	Psi	whole
	in heat pump (see fans regulation graph).				
FA22	Proportional regulation Differential CUT- OFF in heat pump. This allows you to set a temperature	0.1	25.0	°C	Tenths
	/ pressure differential in h.p. mode to shut off the fan.	1	45	°F	whole
	Step regulation	0.1	14.0	Bar	Tenths
	With Par. FA01=2/3 becomes the differential on the step itself of circuit 2	1	203	Psi	whole
FA23	in heat pump mode (see fans regulation graph).	0.1	25.0	°C	Tenths
FAZJ	Over ride CUT- OFF in h.p. This allows you to set a temperature / pressure differential in h.p. mode, where the fan maintains minimum	1	25.0 45	°F	whole
	speed.	0.1	14.0	Bar	Tenths
		1	203	Psi	whole
FA24	Night function speed in h.p. This allows you to set a maximum value for the proportional regulation of the fans in h.p. It is expressed as a percentage of the maximum voltage allowed.	FA17	FA18	%	
	Condensation fan step 3 / 4 in chiller mode	e			
FA25	SET 3rd STEP This allows you to set the condensation temperature /	-50.0	110	°C	Tenths
	pressure value in chiller mode that corresponds to the operation in ON of	-58	230	°F	whole
	the relay output, configured as the 3rd condensation fan speed step.	0.0 0	50.0 725	Bar Psi	Tenths whole
FA26	SET 4th STEP This allows you to set the condensation temperature /	-50.0	110	°C	Tenths
	pressure value in chiller mode that corresponds to operation in ON of the	-58	230	°F	whole
	relay output, configured as the 4th condensation fan speed step.	0.0	50.0	Bar	Tenths
FA07		0	725	Psi	whole
FA27	With Par. FA01=2/3 becomes the differential on the step itself of circuit 7.62 cm chiller (see fans regulation graph).	0.1 1	25.0 45	°C °F	Tenths whole
		0.1	45 14.0	Bar	Tenths
		1	203	Psi	whole
FA28	With Par. FA01=2/3 becomes the differential on the step itself of circuit	0.1	25.0	°C	Tenths
	10.16 cm chiller (see fans regulation graph).	1	45	°F Bor	whole
		0.1 1	14.0 203	Bar Psi	Tenths whole
	Condensation fan step 3 / 4 in heat pump mo		200	1.01	MICIO
FA29	SET 3rd STEP This allows you to set the condensation temperature /	-50.0	110	°C	Tenths
-	pressure value in heat pump mode that corresponds to the operation of	-58	230	°F	whole
	the relay output in ON configured as the 3rd condensation fan speed	0.0	50.0	Bar	Tenths
	step.	0	725	Psi	whole

FA30	SET 4th STEP This allows you to set the condensation temperature /	-50.0	110	°C	Tenths
	pressure value in heat pump mode that corresponds to the operation of	-58	230	°F	whole
	the relay output in ON configured as the 4th condensation fan speed	0.0	50.0	Bar	Tenths
	step.	0	725	Psi	whole
FA31	With Par. FA01 = 2 / 3 becomes the differential on the step itself of circuit	0.1	25.0	°C	Tenths
	3 in heat pump mode (see fans regulation graph).	1	45	°F	whole
		0.1	14.0	Bar	Tenths
		1	203	Psi	whole
FA32	With Par. FA01 = 2 / 3 becomes the differential on the step itself of circuit	0.1	25.0	°C	Tenths
	10.16 cm heat pump mode (see fans regulation graph).	1	45	°F	whole
	······································	0.1	14.0	Bar	Tenths
		1	203	Psi	whole
	Operation in defrost (dF33 = 2)	· ·			
FA33	Minimum fan speed in defrost mode. This allows you to set a				
	minimum value for proportional regulation of the fans in defost mode. It is expressed as a percentage of the maximum voltage allowed.	0	FA40	%	
FA34	Maximum fan speed in defrost mode. This allows you to set a maximum value for proportional regulation of the fans in defrost mode. It is expressed as a percentage of the maximum voltage allowed.	FA40	100	%	
FA35	Proportional regulationSet maximum fan speed temperature/pressure in defrost mode. This allows you to set the condensation temperature / pressure value in defrost mode that corresponds to the minimum fan speed.Step regulationSET 1st STEP This allows you to set the condensation temperature / pressure value in defrost mode that corresponds to operation in ON of the relay output, configured as the 1st condensation fan speed	-50.0 -58 0.0 0	110 230 50.0 725	°C °F Bar Psi	Tenths whole Tenths whole
FA36	step. Proportional regulation Set minimum fan speed temperature/pressure in defrost mode. This allows you to set the condensation temperature / pressure value in defrost mode that corresponds to the maximum fan speed. Step regulation SET 2nd STEP This allows you to set the condensation temperature / pressure value in defrost mode that corresponds to operation in ON of the relay output, configured as the 2nd condensation fan speed step.	-50.0 -58 0.0 0	110 230 50.0 725	°C °F Bar Psi	Tenths whole Tenths whole
FA37	 Proportional regulation Proportional band regulation of fans in defrost. This allows you to set a temperature / pressure differential that corresponds to a variation from minimum to maximum fan speed. Step regulation With Par. FA01=2/3 becomes the differential on the step itself of circuit 1 in defrost mode (see fans regulation graph). 	0.1 1 0.1 1	25.0 45 14.0 203	°C °F Bar Psi	Tenths whole Tenths whole
FA38 FA39	Proportional regulation Differential CUT- OFF in defrost. This allows you to set a temperature / pressure differential in defrost mode to shut off the fan. Step regulation With Par. FA01=2/3 becomes the differential on the step itself of circuit 2 in defrost mode (see fans regulation graph). Over ride CUT- OFF in defrost. This allows you to set a temperature / pressure differential in defrost where the fan maintains minimum speed.	0.1 1 0.1 1 0.1 1	25.0 45 14.0 203 25.0 45	°C °F Bar Psi °C °F	Tenths whole Tenths whole Tenths whole
		0.1	14.0	Bar	Tenths
FA40	Night function speed in defrost mode. This allows you to set a maximum value for proportional regulation of the fans in defrost mode. It is expressed as a percentage of the maximum voltage allowed.	1 FA33	203 FA34	Psi %	whole
FA41	SET 3rd STEP This allows you to set the condensation temperature /	-50.0	110	°C	Tenths
	pressure value in defrost mode that corresponds to relay output operation	-58	230	°F	whole
	in ON configured as the 3rd condensation fan speed step.	0.0	50.0	Bar	Tenths
			725	Psi	whole
		0	120		
FA42		-50.0			Tenths
FA42	SET 4th STEP This allows you to set the condensation temperature /	-50.0	110	°C	Tenths whole
FA42	SET 4th STEP This allows you to set the condensation temperature / pressure value in defrost mode that corresponds to relay output operation	-50.0 -58	110 230	°C °F	whole
FA42	SET 4th STEP This allows you to set the condensation temperature /	-50.0 -58 0.0	110 230 50.0	°C °F Bar	whole Tenths
	SET 4th STEP This allows you to set the condensation temperature / pressure value in defrost mode that corresponds to relay output operation in ON configured as the 4th condensation fan speed step.	-50.0 -58 0.0 0	110 230 50.0 725	°C °F Bar Psi	whole Tenths whole
FA42 FA43	SET 4th STEP This allows you to set the condensation temperature / pressure value in defrost mode that corresponds to relay output operation in ON configured as the 4th condensation fan speed step. With Par. FA01=2/3 becomes the differential on the step itself of circuit	-50.0 -58 0.0 0 0.1	110 230 50.0 725 25.0	°C °F Bar Psi °C	whole Tenths whole Tenths
	SET 4th STEP This allows you to set the condensation temperature / pressure value in defrost mode that corresponds to relay output operation in ON configured as the 4th condensation fan speed step.	-50.0 -58 0.0 0 0.1 1	110 230 50.0 725 25.0 45	°C °F Bar Psi °C °F	whole Tenths whole Tenths whole
	SET 4th STEP This allows you to set the condensation temperature / pressure value in defrost mode that corresponds to relay output operation in ON configured as the 4th condensation fan speed step. With Par. FA01=2/3 becomes the differential on the step itself of circuit	-50.0 -58 0.0 0 0.1 1 0.1	110 230 50.0 725 25.0 45 14.0	°C °F Bar Psi °C °F Bar	whole Tenths whole Tenths whole Tenths
FA43	SET 4th STEP This allows you to set the condensation temperature / pressure value in defrost mode that corresponds to relay output operation in ON configured as the 4th condensation fan speed step. With Par. FA01=2/3 becomes the differential on the step itself of circuit 7.62 cm defrost mode (see fans regulation graph).	-50.0 -58 0.0 0 0.1 1	110 230 50.0 725 25.0 45	°C °F Bar Psi °C °F	whole Tenths whole Tenths whole
	SET 4th STEP This allows you to set the condensation temperature / pressure value in defrost mode that corresponds to relay output operation in ON configured as the 4th condensation fan speed step. With Par. FA01=2/3 becomes the differential on the step itself of circuit 7.62 cm defrost mode (see fans regulation graph). With Par. FA01=2/3 becomes the differential on the step itself of circuit 7.62 cm defrost mode (see fans regulation graph).	-50.0 -58 0.0 0 0.1 1 0.1 1 0.1	110 230 50.0 725 25.0 45 14.0 203 25.0	°C °F Bar Psi °C Psi Rar Psi	whole Tenths whole Tenths whole Tenths whole Tenths
FA43	SET 4th STEP This allows you to set the condensation temperature / pressure value in defrost mode that corresponds to relay output operation in ON configured as the 4th condensation fan speed step. With Par. FA01=2/3 becomes the differential on the step itself of circuit 7.62 cm defrost mode (see fans regulation graph).	-50.0 -58 0.0 0 0.1 1 0.1 1 0.1 1	110 230 50.0 725 25.0 45 14.0 203	°C °F Bar Psi °C °F Bar Psi	whole Tenths whole Tenths whole Tenths whole Tenths whole
FA43	SET 4th STEP This allows you to set the condensation temperature / pressure value in defrost mode that corresponds to relay output operation in ON configured as the 4th condensation fan speed step. With Par. FA01=2/3 becomes the differential on the step itself of circuit 7.62 cm defrost mode (see fans regulation graph). With Par. FA01=2/3 becomes the differential on the step itself of circuit 7.62 cm defrost mode (see fans regulation graph).	-50.0 -58 0.0 0 0.1 1 0.1 1 0.1	110 230 50.0 725 25.0 45 14.0 203 25.0	°C °F Bar Psi °C Psi Rar Psi	whole Tenths whole Tenths whole Tenths whole Tenths

	Anti-freeze heaters – support				
Parameters	Description	min	max	um	Resolution
Ar 1	Set point for anti-freeze/support heaters in chiller mode.	-50.0	110	°C	Tenths
	The temperature value below which the heaters start up.	-58	230	°F	whole
Ar 2	Anti-freeze/support heaters band regulation in chiller mode	0.1 1	25.0 45	°C °F	Tenths Whole
Ar 3	Set point for anti-freeze/support heaters in heat pump mode.	-50.0	110	°C	Tenths
	The temperature value below which the heaters start up.	-58	230	°F	whole
Ar 4	Anti-freeze/support heaters band regulation in heat pump mode	0.1	25.0	å Ö	Tenths
Ar 5	Anti-freeze/support heaters operation in defrosting mode	1	45	Г	whole
	0 = activated only from temperature control	0	1		
	1= activated from the temperature control and during the defrost cycle				
Ar 6	Anti-freeze/support heaters alarm temperature control probe in chiller mode				
	0 = disabled				
	1 = evaporator input	0	5		
	2 = evaporator output 1 3 = evaporator output 2	°,	Ŭ		
	4 = evaporator output 1 / 2				
	5 = evaporator output 1 / 2 and common output				
Ar 7	Anti-freeze/support heaters temperature control probe in heat pump				
	mode 0 = disabled				
	1 = evaporator input	~	-		
	2 = evaporator output 1	0	5		
	3 = evaporator output 2				
	4 = evaporator output 1/2 5 = evaporator output 1/2 and common output				
Ar 8	Condenser anti-freeze heaters temperature control probe				
	0 = disabled				
	1 = common condenser water input probe 2 = common condenser water input probe and condenser input 1				
	3 = common condenser water input probe and condenser input 1	0	7		
	4 = condenser water output probe 1		-		
	5 = condenser water output probe 2				
	6 = condenser output 1 / 2 7 = condenser output 1 / 2 and common output				
Ar 9	This determines the evaporator/condenser anti-freeze heaters function if				
	a probe that is set to control them malfunctions	0	1		
	0 = OFF if the probe malfunctions 1 = ON if the probe malfunctions	°,			
Ar 10	This determines the operation of the antifreeze heaters with the				
-	instrument on				
	0 = always OFF (chiller and h.p.)				
	1 = ON only in chiller mode, depending on the temperature control request	0	3		
	2 = ON only in h.p. mode, depending on the temperature control request				
	3 = ON in chiller and h.p. mode, depending on the temperature control				
Ar 11	request Determines the evaporator/condenser anti-freeze heaters operation				
	depending on the remote OFF stand-by mode	0	4		
	0 = Always OFF	0	1		
	1 = ON via temperature control				
Parameters	Description	min	max	um	Resolution
dF 1	Description Defrost mode:	11111	max	um	Resolution
	0 = defrost disabled				
	1 = temperature / pressure				
	2 = starts according to the value of parameter dF28 and ends according to the time	0	4		
	3 = starts according to the value of parameter dF28 and ends due to an				
	external contact				
	4 = with a condensation fan	50.0	440		Teed
dF 2	Start defrost temperature / pressure	-50.0 -58	110 230	°C °F	Tenths whole
		0.0	50.0	bar	Tenths
		0	725	psi	Whole
dF 3	Defrost ends by temperature/pressure	-50.0	110	ŝ	Tenths
		-58 0.0	230 50.0	°F bar	whole Tenths
		0.0	725	psi	Whole
dF 4	Minimum defrost duration	0	250	Sec	
dF 5	Maximum defrost duration	1	250	Min	
dF 6 dF 7	Defrost delay between two circuits Waiting time with compressor OFF before defrost (inversion of 4-way	0	250	Min	
	valve)	0	250	Sec	

dF 27 dF 27 dF 27 dF 27 dF 28 dF 29 dF 30 dF 30 dF 30 dF 30 dF 31 dF 30 dF 31 dF 30 dF 31 dF 30 dF 31 dF 30 dF 31 dF 30 dF 31 dF 32 dF 32 dF 32 dF 32 dF 33 dF 33 dF 30 dF 31 dF 30 dF 31 dF 30 dF 31 dF 30 dF 31 dF 32 dF 32 dF 32 dF 32 dF 32 dF 32 dF 33 dF		0.1 1 0.1 1	23.0 45 14.0 203 1	°F Bar Psi	Tenths whole
dF 27 dF 27 dF 27 dF 27 dF 28 dF 29 dF 30 dF 30 dF 30 dF 30 dF 31 dF 30 dF 31 dF 30 dF 31 dF 30 dF 31 dF 30 dF 31 dF 30 dF 31 dF 32 dF 32 dF 32 dF 32 dF 33 dF 33 dF 30 dF 31 dF 30 dF 31 dF 30 dF 31 dF 30 dF 31 dF 32 dF 32 dF 32 dF 32 dF 32 dF 32 dF 33 dF	Supply fan operation in defrosting mode n block in defrosting mode nabled ad Anti-freeze prevention in defrost rcuits that are not defrosting ON on is disabled on active with fan off	0.1 1 0.1 1 0.1 0	45 14.0 203	Bar	
dF 27 dF 27 dF 27 dF 27 dF 28 dF 30 dF 30 dF 30 dF 30 dF 31 dF 30 dF 31 dF 30 dF 30 dF 31 dF 30 dF	Supply fan operation in defrosting mode n block in defrosting mode nabled ad Anti-freeze prevention in defrost rcuits that are not defrosting ON on is disabled	0.1 1 0.1 1 0.1 0	45 14.0 203	Bar	
dF 27 dF 27 dF 27 dF 27 dF 28 dF 30 dF 30 dF 30 dF 30 dF 30 dF 30 dF 30 dF 31 dF 30 dF	Supply fan operation in defrosting mode n block in defrosting mode nabled ed Anti-freeze prevention in defrost rcuits that are not defrosting ON	0.1 1 0.1 1	45 14.0 203	Bar	
dF 27 dF 27 dF 27 dF 27 dF 27 dF 28 dF 30 dF	Supply fan operation in defrosting mode n block in defrosting mode nabled ed	0.1 1 0.1 1	45 14.0 203	Bar	
dF 27 dF 27 dF 27 dF 27 dF 27 dF 28 dF 29 dF 30 dF 30 dF 31 dF 32 dF 32 dF 30 dF 31 dF 32 dF 30 dF 31 dF 32 dF 30 dF 31 dF 32 dF 30 dF 31 dF 30 dF 31 dF 30 dF 31 dF 30 dF 31 dF 31 dF 32 dF 31 dF 32 dF 32 dF 32 dF 32 dF 32 dF 32 dF 32 dF 32 dF 32 dF 31 dF 32 dF	Supply fan operation in defrosting mode n block in defrosting mode nabled	0.1 1 0.1 1	45 14.0 203	Bar	
dF 27 dF 27 dF 27 dF 27 dF 27 dF 28 dF 29 dF 30 dF 31 dF 32 dF 30 dF	Supply fan operation in defrosting mode	0.1 1 0.1 1	45 14.0 203	Bar	
0= indepe 1= if both 2= if at lea dF 27 End defrom 0= indepe 1= if both 2= if at lea dF 28 Probe that 0= start ar 1= start temperatu 2= start v evaporatic 3= start ar dF 29 Minimum id dF 30 Set forced		0.1 1 0.1 1	45 14.0	Bar	
0= indepe 1= if both 2= if at lea dF 27 End defrom 0= indepe 1= if both 2= if at lea dF 28 Probe that 0= start ar 1= start temperatu 2= start v evaporatic 3= start ar dF 29 Minimum id dF 30 Set forced	trosting differential	0.1 1 0.1	45 14.0	Bar	
0= indepe 1= if both 2= if at lea dF 27 End defrom 0= indepe 1= if both 2= if at lea dF 28 Probe that 0= start ar 1= start temperatu 2= start v evaporatic 3= start ar dF 29 Minimum id dF 30 Set forced	trosting differential	0.1 1	45		Tand
dF 28 dF 27 dF 27 dF 27 dF 27 dF 28 dF 29 dF 29 dF 29 dF 30 dF 30 dE	etrosting differential		25.0		whole
dF 27 dF 27 dF 27 dF 27 dF 27 dF 28 dF			25.0	°C	Tenths
dF 27 dF 27 dF 27 dF 27 dF 27 dF 28 dF 29 Minimum in		0.0	725	psi	Whole
dF 27 dF 27 dF 27 dF 27 dF 27 dF 28 dF 29 Minimum in		-58 0.0	230 50.0	°F bar	whole Tenths
dF 27 dF 27 dF 27 dF 27 dF 27 dF 28 dF 29 Minimum in	defrost temperature/pressure	-50.0	110	°C °E	Tenths
dF 27 dF 27 dF 27 dF 27 dF 27 dF 28 dF	idle time before forced defrosting	0	250	sec	
dF 27 dF 27 dF 27 dF 27 dF 27 dF 28 dF 27 dF 28 dF	Forced defrost				
dF 27 End defroe 0= indepe 1= if both 2= if at lea 0= indepe 1= if both 2= if at lea 0= indepe 1= if both 2= if at lea 0= start at 1= start temperatu 2= start of	nd end by evaporation pressure				
dF 27 dF 27 dF 27 dF 27 dF 27 dF 28 dF	on pressure probe				
dF 27 End defrom 0= indepe 1= if both 2= if at lea 0= indepe 1= if both 2= if at lea dF 28 Probe that 0= start ar 1= start	with condensation temperature / pressure probe - end with	0	3		
dF 27 End defrom 0= indepe 1= if both 2= if at lea 0= indepe 1= if both 2= if at lea dF 28 Probe that 0= start ar	with evaporation pressure probe - end with condensation ire / pressure probe	0	3		
dF 27 End defroe 0= indepe 1= if both 2= if at lea 0= indepe 1= if both 2= if at lea dF 28 Probe that	nd end with condensation temperature / pressure probe				
dF 27 0= indepe 1= if both 2= if at lea 0= indepe 1= if both	t determines the onset of end defrost				
dF 27 0= indepe 1= if both 2= if at lea 0= indepe 1= if both	Begin end defrost from analog input				
dF 27 0= indepe 1= if both 2= if at lea 0= indeprovement 0= indepe	ast one has reached end defrost status				
dF 27 End defros	ndent have reached end defrost status	0	2		
0= indepe 1= if both 2= if at lea	st cycle in units with a number of circuits				
0= indepe	ast one has reached the defrost start request				ļ
	have reached the defrost start request	0	2		
	ost cycle in units with a number of circuits	_	_		1
	Defrost mode	1	1	1	T
		-58	230	°F	whole
dF 25 Set defros	st activation with condensation fans	-50.0	110	°C	Tenths
	Defrost with condensation fans	•			
		0.0	725	psi	Whole
		-58 0.0	230 50.0	°⊢ bar	Tenths
dF 24 Set tempe	erature/pressure that forces the fan ON in defrosting mode	-50.0 -58	110 230	°C °F	Tenths whole
	d in defrost / drip	50.0	440	•0	Tantha
	efrost enabled		<u> </u>		1
0= disable	ed	0	2		1
	ctivation during defrosting/dripping				1
	lelay between two steps / compressors in defrost mode	1	250	Sec	1
dF 21					1
dF 20	u .	+	<u> </u>	+	
0= disable		0	1		1
	N activates all steps in defrost mode in circuit 2				
1= enable		Ũ			
0= disable	N activates all steps in defrost mode in circuit 1	0	1		
dF 17 dF 18 Forcing O	N activator all stops in defrest mode in circuit 1				
dF 16					
		-58	230	°F	whole
dF 15 Set end cy	ycle temperature for combined defrost cycle circuit 2	-50.0	110	°C	Tenths
Gereild Cy		-58	230	°F	whole
	ycle temperature for combined defrost cycle circuit 1	-50.0	110	°C	Tenths
dF 12 dF 13					
	of parameter dF09 elapses	-58	230	°F	whole
dF 11 Set start	temperature for combined defrost cycle circuit 2 after the	-50.0	110	°C	Tenths
	of parameter dF09 elapses	-58	230	°F	whole
	temperature for combined defrost cycle circuit 1 after the	-50.0	110	°C	Tenths
v	me with compressor OFF after defrost (inversion of 4-way valve) terval in the same circuit	0	250 99	Sec Min	

rC 1	Recovery function				
	0 = disabled				
	1 = separate hydraulic circuits	0	3		
	2 = hydraulic circuits in parallel				
-0.0	3 = total recovery gas side		-	-	
rC 2	Choice of priority for recovery mode (rC1 = 3) 0= priority to user side	0	1		
	1= priority to recovery side	0	1		
rC 3	Forced step deactivation time	0	250	Sec	
rC 4	Forced step deactivation time after rotation of recovery valve	0	250	Sec	
rC 5	Minimum operation time in recovery mode	0	250	Min	
rC 6	Minimum delay between recovery end and next recovery	0	250	Min	
rC 7	Set recovery function disabling	-50.0	110	ہ تا ع	Tenths whole
		-58 0.0	230 50.0	Bar	Tenths
		0.0	725	Psi	whole
rC 8	Recovery function enabling differential	0.1	25.0	°C	Tenths
		1	45	°F	whole
		0.1	14.0	Bar	Tenths
rC 9	Maximum dischling time for resource by condensation	1	203	Psi	whole
10.9	Maximum disabling time for recovery by condensation temp./press.	0	250	Min	
rC 10	Condensation ventilation operation in recovery mode				
	0 = enabled	0	1		
	1 = not enabled	50.0			T 4
rC 11	Set recovery minimum. This defines the minimum limit that can be used to set the working set point in chiller mode.	-50.0 -58	rC12	°C °F	Tenths whole
rC 12	Set recovery maximum. This defines the maximum limit that can be used		110	°C	Tenths
1012	to set the working set point in chiller mode.	rC11	230	°F	whole
rC 13	Recovery set point. This allows you to set the working set point in chiller	-014		°C/°F	Whole/tenth
	with recovery mode.	rC11	rC12	-C/-F	S
rC 14	Recovery differential. This allows you to set the working differential in	0.1	25.0	°C	Tenths
rC 15	chiller with recovery mode. This defines the temperature control probe of the machine in Recovery	1	45	°F	whole
10 15					
	mode: 0 = condenser water common input NTC temperature probe				
	node: 0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe	0	5		
	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water input NTC temperature probe	0	5		
	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water input NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe	0	5		
	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water input NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe	0	5		
	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water input NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe	0	5		
Parameters	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water input NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function	-		um	Resolution
Parameters FS 1	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water input NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description	0 min	5 max	um	Resolution
Parameters FS 1	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water input NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function	min	max	um	Resolution
	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water input NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return	-		um	Resolution
FS 1	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water output NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return	min	max	um	Resolution
	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water output NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities	min 0	max 2	um	Resolution
FS 1	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water output NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water	min	max	um	Resolution
FS 1 FS 2	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water input NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water 1 = heating / cooling	min 0	max 2 1		
FS 1	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water output NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water	min 0	max 2	um °C °F	Resolution tenth whole
FS 1 FS 2	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water input NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water 1 = heating / cooling Domestic water set point. This defines the working set point for the	min 0	max 2 1 FS06 25.0	°C °F °C	tenth
FS 1 FS 2 FS 3 FS 4	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water output NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water 1 = heating / cooling Domestic water regulation steps intervention band	min 0 0 FS05 0.1 1	max 2 1 FS06	°C °F °C °F	tenth whole tenth whole
FS 1 FS 2 FS 3	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water output NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water 1 = heating / cooling Domestic water set point. This defines the working set point for the production of domestic water. Domestic water regulation steps intervention band Minimum domestic water set point value. This defines the minimum limit	min 0 0 FS05 0.1 1 -50.0	max 2 1 FS06 25.0	°C °F °C °F °C	tenth whole tenth whole tenth
FS 1 FS 2 FS 3 FS 4 FS 5	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water output NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water 1 = heating / cooling Domestic water set point. This defines the working set point for the production of domestic water. Domestic water regulation steps intervention band Minimum domestic water set point value. This defines the minimum limit that can be used to set the domestic water set point.	min 0 0 FS05 0.1 1 -50.0 -58	max 2 1 FS06 25.0 45	°C °F °C °F °C °F	tenth whole tenth whole
FS 1 FS 2 FS 3 FS 4	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water output NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water 1 = heating / cooling Domestic water set point. This defines the working set point for the production of domestic water. Domestic water regulation steps intervention band Minimum domestic water set point value. This defines the minimum limit	min 0 0 FS05 0.1 1 -50.0	max 2 1 FS06 25.0 45 FS06	°C °F °C °F °C	tenth whole tenth whole tenth whole
FS 1 FS 2 FS 3 FS 4 FS 5	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 3 = circuit 2 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water 1 = heating / cooling Domestic water set point. This defines the working set point for the production of domestic water. Domestic water regulation steps intervention band Minimum domestic water set point value. This defines the minimum limit that can be used to set the domestic water set point. Activation of the steps to reach the domestic water set point.	min 0 FS05 0.1 1 -50.0 -58 FS05	max 2 1 FS06 25.0 45 FS06 110 230	°C °F °C °F °C °F °C	tenth whole tenth whole tenth whole tenth
FS 1 FS 2 FS 3 FS 4 FS 5 FS 6	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water output NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water 1 = heating / cooling Domestic water set point. This defines the working set point for the production of domestic water. Domestic water regulation steps intervention band Minimum domestic water set point value. This defines the minimum limit that can be used to set the domestic water set point. Activation of the steps to reach the domestic water set point. Activation of the steps to reach the domestic water set point. 0 = activates all the compressors	min 0 0 FS05 0.1 1 -50.0 -58	max 2 1 FS06 25.0 45 FS06 110	°C °F °C °F °C °F °C	tenth whole tenth whole tenth whole tenth
FS 1 FS 2 FS 3 FS 4 FS 5 FS 6 FS 7	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water output NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water 1 = heating / cooling Domestic water set point. This defines the working set point for the production of domestic water. Domestic water regulation steps intervention band Minimum domestic water set point value. This defines the minimum limit that can be used to set the domestic water set point. Maximum domestic water set point value. This defines the maximum limit that can be used to set the domestic water set point. Activation of the steps to reach the domestic water set point. 0 = activates all the compressors 1 = activates the compressors and heaters	min 0 FS05 0.1 1 -50.0 -58 FS05	max 2 1 FS06 25.0 45 FS06 110 230	°C °F °C °F °C °F °C	tenth whole tenth whole tenth whole tenth
FS 1 FS 2 FS 3 FS 4 FS 5 FS 6	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water output NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water 1 = heating / cooling Domestic water set point. This defines the working set point for the production of domestic water. Domestic water regulation steps intervention band Minimum domestic water set point value. This defines the minimum limit that can be used to set the domestic water set point. Maximum domestic water set point value. This defines the maximum limit that can be used to set the domestic water set point. Activation of the steps to reach the domestic water set point. Activation of the steps to reach the domestic water set point. Activation of the steps to reach the domestic water set point. 0 = activates all the compressors 1 = activates the compressors and heaters Connection of the domestic water temperature control heaters	min 0 FS05 0.1 1 -50.0 -58 FS05 0	max 2 1 FS06 25.0 45 FS06 110 230 1	°C °F °C °F °C °F °C	tenth whole tenth whole tenth whole tenth
FS 1 FS 2 FS 3 FS 4 FS 5 FS 6 FS 7	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 3 = circuit 2 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water 1 = heating / cooling Domestic water regulation steps intervention band Minimum domestic water set point value. This defines the minimum limit that can be used to set the domestic water set point. Maximum domestic water set point value. This defines the maximum limit that can be used to set the domestic water set point. Activation of the steps to reach the domestic water set point. Activation of the steps to reach the domestic water set point. 0 = activates all the compressors 1 = activates the compressors and heaters Connection of the domestic water temperature control heaters 0 = no	min 0 FS05 0.1 1 -50.0 -58 FS05	max 2 1 FS06 25.0 45 FS06 110 230	°C °F °C °F °C °F °C	tenth whole tenth whole tenth whole tenth
FS 1 FS 2 FS 3 FS 4 FS 5 FS 6 FS 7	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 2 = circuit 2 condenser water output NTC temperature probe 3 = circuit 1 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water 1 = heating / cooling Domestic water set point. This defines the working set point for the production of domestic water. Domestic water regulation steps intervention band Minimum domestic water set point value. This defines the minimum limit that can be used to set the domestic water set point. Maximum domestic water set point value. This defines the maximum limit that can be used to set the domestic water set point. Activation of the steps to reach the domestic water set point. Activation of the steps to reach the domestic water set point. Activation of the steps to reach the domestic water set point. 0 = activates all the compressors 1 = activates the compressors and heaters Connection of the domestic water temperature control heaters	min 0 FS05 0.1 1 -50.0 -58 FS05 0	max 2 1 FS06 25.0 45 FS06 110 230 1	°C °F °C °F °C °F °C	tenth whole tenth whole tenth whole tenth
FS 1 FS 2 FS 3 FS 4 FS 5 FS 6 FS 7 FS 8 FS 8 FS 9 FS 10	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 3 = circuit 2 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water 1 = heating / cooling Domestic water regulation steps intervention band Minimum domestic water set point value. This defines the minimum limit that can be used to set the domestic water set point. Activation of the steps to reach the domestic water set point. Activation of the steps to reach the domestic water set point. 0 = activates all the compressors 1 = activates the compressors and heaters Connection of the domestic water temperature control heaters 0 = no 1 = yes	min 0 5805 0.1 1 -50.0 -58 FS05 0 0	max 2 1 FS06 25.0 45 FS06 110 230 1 1	°C °F °C °F °C °F °C °F	tenth whole tenth whole tenth whole tenth
FS 1 FS 2 FS 3 FS 4 FS 5 FS 6 FS 7 FS 8 FS 8 FS 9	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 3 = circuit 2 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe 5 = condenser water common output NTC temperature probe Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water 1 = heating / cooling Domestic water regulation steps intervention band Minimum domestic water set point. This defines the working set point for the production of domestic water set point value. This defines the minimum limit that can be used to set the domestic water set point. Activation of the steps to reach the domestic water set point. Activation of the steps to reach the domestic water set point. Activation of the steps to reach the domestic water set point 0 = activates all the compressors 1 = activates the compressors and heaters Connection of the domestic water temperature control heaters 0 = no 1 = yes Time to activate maximum power/heaters insertion	min 0 0 FS05 0.1 1 -50.0 -58 FS05 0 0 0 0	max 2 1 FS06 25.0 45 FS06 110 230 1 1 230	°C °F °C °F °C °F °C °F	tenth whole tenth whole tenth whole tenth
FS 1 FS 2 FS 3 FS 4 FS 5 FS 6 FS 7 FS 8 FS 8 FS 9 FS 10 FS 11	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 3 = circuit 2 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water set point. This defines the working set point for the production of domestic water. Domestic water regulation steps intervention band Minimum domestic water set point value. This defines the minimum limit that can be used to set the domestic water set point. Activation of the steps to reach the domestic water set point. Activation of the domestic water set point value. This defines the maximum limit that can be used to set the domestic water set point. Activation of the steps to reach the domestic water set point. 0 = activates all the compressors 1 = activates the compressors and heaters Connection of the domestic water temperature control heaters 0 = n0 1 = yes Time to activate maximum power/heaters insertion Delay in activating outputs for domestic water production Anti legionella	min 0 0 FS05 0.1 1 -50.0 -58 FS05 0 0 0 0 0	max 2 1 FS06 25.0 45 FS06 110 230 1 1 250 999	°C °F °C °F °C °F °C °F	tenth whole tenth whole tenth whole tenth
FS 1 FS 2 FS 3 FS 4 FS 5 FS 6 FS 7 FS 8 FS 8 FS 9 FS 10	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 3 = circuit 2 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production return 2 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water production with dedicated return Operation priorities 0 = domestic water 1 = heating / cooling Domestic water regulation steps intervention band Minimum domestic water set point. This defines the working set point for the production of domestic water set point value. This defines the minimum limit that can be used to set the domestic water set point. Activation of the steps to reach the domestic water set point. Activation of the domestic water set point. Activation of the domestic water set point. Activation of the domestic water set point. Activates all the compressors 1 = activates the compressors and heaters Connection of the domestic water temperature control heaters 0 = no 1 = yes Time to activate maximum power/heaters insertion Delay in activating outputs for domestic water production Anti legionella Type of Anti-legionella activation	min 0 0 FS05 0.1 1 -50.0 -58 FS05 0 0 0 0 0 0 0	max 2 1 FS06 25.0 45 FS06 110 230 1 250 999 999	°C °F °C °F °C °F °C °F	tenth whole tenth whole tenth whole tenth
FS 1 FS 2 FS 3 FS 4 FS 5 FS 6 FS 7 FS 8 FS 8 FS 9 FS 10 FS 11	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 3 = circuit 2 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water 1 = heating / cooling Domestic water regulation steps intervention band Minimum domestic water set point. This defines the working set point for the production of domestic water. Domestic water regulation steps intervention band Minimum domestic water set point value. This defines the minimum limit that can be used to set the domestic water set point. Activation of the steps to reach the domestic water set point. Activation of the domestic water set point. Activation of the domestic water set point. Maximum domestic water set point value. This defines the maximum limit that can be used to set the domestic water set point. Activation of the steps to reach the domestic water set point. Activation of the domestic water set point. Activates all the compressors 1 = activates all the compressors and heaters Connection of the domestic water temperature control heaters 0 = no 1 = yes Time to activate maximum power/heaters insertion Delay in activating outputs for domestic water production Delay in cycle inversion during domestic water production Delay in cycle inversion during domestic water production 0 = atimed Type of Anti-legionella activation 0 = timed	min 0 0 FS05 0.1 1 -50.0 -58 FS05 0 0 0 0 0	max 2 1 FS06 25.0 45 FS06 110 230 1 1 250 999	°C °F °C °F °C °F °C °F	tenth whole tenth whole tenth whole tenth
FS 1 FS 2 FS 3 FS 4 FS 5 FS 6 FS 7 FS 8 FS 9 FS 10 FS 11 FS 11 FS 12	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 3 = circuit 2 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production or turn 2 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water production with dedicated return Operation priorities 0 = domestic water set point. This defines the working set point for the production of domestic water. Domestic water regulation steps intervention band Minimum domestic water set point value. This defines the minimum limit that can be used to set the domestic water set point. Activation of the steps to reach the domestic water set point. Activates all the compressors 1 = activates all the compressors 1 = activates all the compressors 1 = activates the compressors and heaters Connection of the domestic water temperature control heaters 0 = no 1 = yes Time to activate maximum power/heaters insertion Delay in activating outputs for domestic water production Delay in cycle inversion during domestic water production 0 = limed 1 = time band	min 0 0 FS05 0.1 1 -50.0 -58 FS05 0 0 0 0 0 0 0	max 2 1 FS06 25.0 45 FS06 110 230 1 250 999 999	°C °F °C °F °C °F °C °F	tenth whole tenth whole tenth whole tenth
FS 1 FS 2 FS 3 FS 4 FS 5 FS 6 FS 7 FS 8 FS 8 FS 9 FS 10 FS 11	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 3 = circuit 2 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production 0 = disabled 1 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water set point. This defines the working set point for the production of domestic water. Domestic water regulation steps intervention band Minimum domestic water set point value. This defines the minimum limit that can be used to set the domestic water set point. Activation of the steps to reach the domestic water set point. Activation of the steps to reach the domestic water set point 0 = activates all the compressors 1 = activates the compressors 1 = activates the compressors 1 = activates the compressors and heaters Connection of the domestic water temperature control heaters 0 = no 1 = yes Time to activate maximum power/heaters insertion Delay in activating outputs for domestic water production Delay in cycle inversion during domestic water production 0 = timed 1 = time band Delay time between two Anti-legionella production cycles.	min 0 0 FS05 0.1 1 -50.0 -58 FS05 0 0 0 0 0 0 0	max 2 1 FS06 25.0 45 FS06 110 230 1 250 999 999	°C °F °C °F °C °F °C °F	tenth whole tenth whole tenth whole tenth
FS 1 FS 2 FS 3 FS 4 FS 5 FS 6 FS 7 FS 8 FS 9 FS 10 FS 11 FS 11 FS 12	0 = condenser water common input NTC temperature probe 1 = circuit 1 condenser water input NTC temperature probe 3 = circuit 2 condenser water output NTC temperature probe 4 = circuit 2 condenser water output NTC temperature probe 5 = condenser water common output NTC temperature probe Domestic hot water production Function Description Activation of domestic hot water production or turn 2 = domestic water production with common return 2 = domestic water production with dedicated return Operation priorities 0 = domestic water production with dedicated return Operation priorities 0 = domestic water set point. This defines the working set point for the production of domestic water. Domestic water regulation steps intervention band Minimum domestic water set point value. This defines the minimum limit that can be used to set the domestic water set point. Activation of the steps to reach the domestic water set point. Activates all the compressors 1 = activates all the compressors 1 = activates all the compressors 1 = activates the compressors and heaters Connection of the domestic water temperature control heaters 0 = no 1 = yes Time to activate maximum power/heaters insertion Delay in activating outputs for domestic water production Delay in cycle inversion during domestic water production 0 = limed 1 = time band	min 0 0 FS05 0.1 1 -50.0 -58 FS05 0 0 0 0 0 0 0 0 0	max 2 1 FS06 25.0 45 FS06 110 230 1 250 999 999 999 1	°C °F °C °F °C °F °F	tenth whole tenth whole tenth whole tenth

FS 38New overheating band-58230°FwholeFS 38New overheating band0.125.0°CtenthFS 39Charge modulation button valve ON time1250secFS 40Charge modulation button valve OFF time1250secFS 40Charge modulation button valve OFF time1250secFS 41Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled - during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active - during FS26 time ventilation is forced to operate at night function speed02FS 42Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves-50.0110°CFS 43Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves0725PsiwholeFS 44Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled 1 = function is enabled01°CtenthFS 45Evaporator water output set point to prevent anti-freeze-50.0110°CtenthFS 46Band to prevent anti-freeze-50.0110°CtenthFS 47External air set point to prevent anti-freeze-50.0110°Ctenth								
The set of the state of the Auti regurdes set point. -39 -10 -10 -10 -10 -10 -10 whole of the state set of the Auti regurdes set point. -28 -10 -10 whole of the state set of the Auti regurdes set point. -28 -10 -10 whole of the state set of the Auti regurdes set point. -28 -10 -10 whole of the state set of the Auti regurdes set point. -28 -10	FS 16			FS16				
that can be used to set the Arill legionelia set point. PR10 230 PF Whole FS 12 Anit-legionelia 0.00 24.00 Hr 10 min Degisted of 153 under the second particle of the second partit the second particle of the second particle of the seco	FO 10		-58					
F5 17 Arti-legonella activation time 0.000 24.000 Hir 10 min F1 18 Over deviation Anti-legonella mode 0 7 1 <td< td=""><td></td><td></td><td>FS15</td><td></td><td></td><td></td></td<>			FS15					
FS 18 Day of activation Anti-legionella production 0 7 r FS 19 Time in anti-legionella production 0 250 min min FS 20 Maximum ide time in Anti-legionella mode 0.1 25.0 °C whether FS 21 Heaters OFF band in Anti-legionella mode 0.1 25.0 °C whether FS 22 Water set point for solar panel integration. This allows you to set the form probability of the solar panels 1 45.0 °C whether FS 23 Intervention band for solar panel water. This defines the minimum limit. 56.0 °SC 1 °C whether FS 24 Minimum set point for solar panel water. This defines the maximum limit. 56.0 °SC 1 °C Tern the the solar panels FS 25 Maximum set point for solar panel water. This defines the maximum limit. FS24 230 °C °C Tern the the solar panels	ES 17		0.00					
In-disabled, 1-2-Staturday 0 1 1 F8 10 This in anti-legional production 0 250 min F8 20 Maximum did time in Anti-legionella mode 0.1 25.0 min F8 21 Heaters OFF band in Anti-legionella mode 0.1 25.0 min F8 22 Water set point for solar panel integration. 15 allows you to set the working set point for solar panel water. This defines the minimum limit. 10 46 -c whole F8 24 Maximum set point for solar panel water. This defines the minimum limit. 50.0 FS2.5 -C Tenths that can be used to set the solar panel set point. 58.0 -C Tenths that can be used to set the solar panel water. This defines the maximum limit. 58.2 50.0 FS2.5 Statum set point for solar panel water. This defines the maximum limit. 58.2 59.0 sec -continuous operation the pump gent for more to water point. 0 250 sec -continuous operation the pump gent for more to water point or solar panel water. 0 250 sec -continuous operation: the pump gent for more to water point or solar panel water. 0 250 sec -continuous operation: the pump gent for						10 11111		
F5 10 Time in anti-legionelia production 0 250 min text F5 20 Maximum ide time in Anti-legionelia mode 0.1 25.0 "C white F5 21 Heaters OFF band in Anti-legionelia mode 0.1 25.0 "C text F5 24 Maximum ide time in Anti-legionelia mode 0.1 25.0 "C text F5 24 Maximum ide time in Anti-legionelia mode 0.1 25.0 "C text F5 24 Minimum set point for solar panel water. This defines the minimum limit 60.0 25.6 FF whole F5 24 Maximum set point for solar panel water. This defines the maximum limit FS.4 10.0 "C whole F5 25 Delaky in domestic water pump operation mode: 0 250 sec "F whole F5 26 Dolaky in domestic water pump peration mode: 0 250 sec text text F5 28 Dolaky in domestic water pump peration mode: 0 250 sec text F5 29 Dolaky in domestic water production			0	7				
FS 20 Maximum idle time in Anti-legionella mode 0 250 min FS 21 Heaters OFF band in Anti-legionella mode 0.1 25.0 "C tenth FS 22 Water set point for solar panel integration. This allows you to set the working set point for solar panel integration. 0.1 25.0 "C tenth FS 23 Intervention band for solar panel integration. 0.1 25.0 "C tenth FS 24 Minimum set point for solar panel integration. 0.1 25.0 "C tenth FS 25 Intervention band for solar panel water. This defines the maximum limit 50.0 FS 25.7 "C tenth FS 26 Minimum set point for solar panel water. This defines the maximum limit 50.0 FS 25.2 "C Tenths FS 26 Delay in domestic water pump set set point. Domestic water pump partial set point. Domestic water pump partial metal set point. 0 25.0 sec = FS 26 Domestic water pump operation mode: a request for domestic water production for probe number 2 0 1 25.0 "C tenth FS 26 Domestic water probe set point 2 to	FS 19		0	250	min			
Solar panels Solar panels F8 22 Water set point for solar panel integration. This allows you to set the winding set point for solar panel integration. FS 24 FS 25.0 "C" term winding set point for solar panel integration. 0.1 25.0 "C" Term winding set point for solar panel water. This defines the minimum limit static cable used to solar panel water. This defines the maximum limit that cable used to set the solar panel water. This defines the maximum limit from that cable used to solar panel water. This defines the maximum limit from the domestic water pump 58 75 4 Term this that cable used to solar panel water. This defines the maximum limit from the domestic water pump 52.0 "C" Term this that cable used to solar panel water. This defines the maximum limit from the domestic water pump 0 2.50 sec FS 26 Delay in domestic water output inverted pulsit inverted pulsit inverted and FSZ7 are ignored 0 2.50 sec 56.0 FS 28 Domestic water production 1 = continuum. Interruption time during domestic water production 1 = continuum. State production the pump is linked to unit start up; delays FS26 and FSZ are ignored 0 110 "C" term which that cable used to bane during domestic water production 0.1 2.00 "F" which that cable used to bane that cable used to bane that cable used to bane that cable uset point 2.0 term that cable used t		Maximum idle time in Anti-legionella mode	0					
Solar panels FS22 Viter set point for solar panel integration. This allows you to set the working set point for solar panel integration. FS24 FS25 "C tenth whole FS 24 Intervention band for solar panel integration. 0.1 25.0 "C Tenths FS 24 Minimum set point for solar panel water. This defines the minimum limit that can be used to set the solar panel water. This defines the maximum limit that can be used to set the solar panel water. This defines the maximum limit that can be used to set the solar panel water. This defines the maximum limit that can be used to set the solar panel water. This defines the maximum limit that can be used to set the solar panel water. This defines the maximum limit that can be used to set the solar panel water. This defines the maximum limit that can be used to set the solar panel water. This defines the maximum limit that can be used to set the solar panel water. This defines the maximum limit that can be used to set the solar panel water. This defines the maximum limit that can be used to set the solar panel water. This defines the maximum limit that can be used to set the solar panel water. This defines the maximum limit that can be used to set the solar panel water. This defines the maximum limit that can be used to set the solar panel water. This defines the maximum limit that can be used to set the solar panel water. This defines the maximum limit that can be used to set the solar panel water. This defines the maximum limit that can be used to set the solar panel water. This defines the maximum limit that can be used to set the solar panel water. This defines the maximum limit the solar panel water. This defines the maximum limit that the solar panel water panel water panel water. Thi	FS 21	Heaters OFF band in Anti-legionella mode	0.1			tenth		
F5 22 Water set point for solar panel integration. This allows you to set the whole FS 24 FS 26 "C term whole F5 24 Intervention band for solar panel integration. 0.1 25.0 "C Terms whole F5 24 Minimum set point for solar panel integration. 0.1 25.0 "C Terms whole F5 25 Maximum set point for solar panel water. This defines the minimum limit that can be used to set the solar panel set point. 58 "F Terms whole F5 25 Delay in domestic water output investion from when the domestic water pump is activated 0 250 sec - F5 26 Delay in domestic water pump shut off from when the domestic water pump is activated 0 250 sec - F5 27 Delay in domestic water pump operation mode: o a operation on demand: the pump goes ON only when there is a and FS27 are ignored 0 1 - - - - - - - - - 0 1 - - - - - - - - - - - - - - -		Solar papals	1	45	°F	whole		
working set point for the solar panels. P320 PS20 PS20 PS2 whole F8 23 Intervention band for solar panel integration. 0.1 25.0 "C Tenths F8 24 Minimum set point for solar panel water. This defines the maximum limit 50.0 "FS25 "Kommunition" FS26 "C Tenths F8 25 Miximum set point for solar panel set point. FS26 "C Tenths F8 26 Delay in domestic water output inversion from when the domestic water 0 250 sec F8 27 Delay in domestic water output inversion from when the domestic water 0 250 sec F8 27 Delay in domestic water pump operation mode: 0 1 - - F8 28 Domestic water pump operation mode: 0 1 0 1 - F8 29 Domestic water pump operation mode: 0 0 10 - - F8 20 Domestic water probe differential 2 to interrupt domestic water production -50.0 110 -C tenth F8 31 Domestic water p	ES 22				<u>ەر</u>	tenth		
F5 23 Intervention band for solar panel integration. 0.1 25.0 FC Tenchs F5 24 Minimum set point for solar panel water. This defines the minimum limit 5.0.0 FS.25 *C Tenchs F5 25 Maximum set point for solar panel water. This defines the maximum limit 5.0.0 FS.24 110 *C Tenchs F5 25 Delay in domestic water output inversion from when the domestic water 0 2.50 sec sec F5 26 Delay in domestic water pump shut off from when the domestic water 0 2.50 sec sec sec F5 28 Densetic water pump operation mode: 0 2.50 sec sec 0 1 1 sec 0 1 sec 1 sec sec sec sec 1 sec 1 sec 1 sec sec 1 sec sec <td< td=""><td>FJ 22</td><td></td><td>FS24</td><td>FS25</td><td></td><td></td></td<>	F J 22		FS24	FS25				
Fig 24 Minimum set point for solar panel water. This defines the minimum limit that can be used to set the solar panel set point. Fig 25 Minimum set point for solar panel water. This defines the maximum limit that can be used to set the solar panel set point. Fig 24 Fig 24 Whole Denestic water pump Denestic water pump Denestic water pump Denestic water pump Denestic water pump point of from when the domestic water output is inverted 0 250 sec Fig 26 Denestic water production 1	FS 23		0.1	25.0				
that can be used to set the solar panel set point. -68 Fock yrp whole FS 25 Maximum set point for solar panel water. This defines the maximum limit that can be used to set the solar panel set point.			1	45				
That can be used to set the solar panel set point. 38 37 7 Winde FS 25 Minimum set point for solar panel set point. 38 110 *C Tenths FS 26 Delay in domestic water pump Comestic water pump 0 250 sec FS 27 Delay in domestic water pump solut off from when the domestic water 0 250 sec FS 27 Delay in domestic water pump operation mode: 0 250 sec	FS 24	Minimum set point for solar panel water. This defines the minimum limit	-50.0	E\$25		Tenths		
that can be used to set the solar panel set point. FS24 230 °F whole Domestic water purp Domestic water purp 250 sec Sec Sec			-58	1 323				
Domestic water pump Sec Domestic water pump is activated 0 250 sec Sec Sec Domestic water pump shut off from when the domestic water output is inverted 0 250 sec Sec Sec 2 output is inverted 0 250 sec Sec Sec Interruption from probe number 2 FS 29 Minimum interruption time during domestic water production -50.0 10 2 Sec Enterruption from probe number 2 FS 29 Minimum interruption time during domestic water production -50.0 10 2 2 2 2 2 2 2 2 2 2 2 2 <th 2"2"2"2<="" colspan="2" td=""><td>FS 25</td><td></td><td>FS24</td><td></td><td></td><td></td></th>	<td>FS 25</td> <td></td> <td>FS24</td> <td></td> <td></td> <td></td>		FS 25		FS24			
FS 26 Delay in domestic water output inversion from when the domestic water output is inverted 0 250 sec FS 27 Delay in domestic water pump shut off from when the domestic water output is inverted 0 250 sec FS 28 Domestic water pump operation mode: a continuous operation: the pump is linked to unit start up; delays FS26 0 1 1 I = continuous operation: the pump is linked to unit start up; delays FS26 0 250 sec FS 29 Minimum interruption time during domestic water production -50.0 110 *C tenth FS 30 Domestic water probe set point 2 to interrupt domestic water production -50.0 110 *C tenth FS 31 Domestic water probe set point 2 to interrupt domestic water production -50.0 110 *C tenth FS 32 Overheating set point to activate the charge modulating valve -50.0 110 *C tenth FS 33 Overheating band for the charge modulating valve -50.0 110 *C tenth FS 34 Maximum operation time of the charge modulating valve 1 45 *F whole FS 34 Maximum operation time of the charge modulation butto				230	۴F	whole		
pump is activated 0 2.00 sec FS 27 Delay in domestic water pump shut off from when the domestic water output is inverted 0 2.50 sec 0 - operation on demand: the pump goes ON only when there is a request for domestic water production in the pump is linked to unit start up; delays FS26 and FS27 are ignored 0 1 1 Interruption from probe number 2 FS 29 Minimum interruption domestic water production by probe 2 0 1 1 5 Start of the pump is linked to unit start up; delays FS26 and minimum time between two interruptions 56.0 110 °C tenth FS 30 Domestic water probe set point 2 to interrupt domestic water production 5.0 2.0 ?C tenth FS 32 Overheating set point to activate the charge modulating valve -5.0.0 110 °C tenth FS 33 Overheating band for the charge modulating valve -5.8 2.30 °F whole FS 34 Maximum operation time of the charge modulating valve -58 2.30 °F whole				1	r	1		
FS 27 Delay in domestic water pump operation mode: 0 250 sec FS 28 Domestic water pump operation mode: 0 1 1 1 e operation on demach the pump goes ON only when there is a request for domestic water production 0 1 1 i = continuous operation: the pump is linked to unit start up; delays FS26 0 250 sec FS 29 Minimum interruption time during domestic water production by probe 2 0 250 sec FS 30 Domestic water probe set point 2 to interrupt domestic water production -50.0 110 °C tenth FS 31 Domestic water probe set point 2 to interrupt domestic water production 1 450 °C tenth FS 32 Overheating set point to activate the charge modulating valve -50.0 110 °C tenth FS 33 Overheating band for the charge modulation button valve 1 450 °F whole FS 34 Maximum operation time of the charge modulation button valve 1 250 sec 10 sec FS 34 Maximum operation time of the charge modulation button valve 1 250 °C tenth	FS 26		0	250	sec			
output is inverted0200secFS 28Domestic water promo operation mode: 0 = operation on demand: the pump goes ON only when there is a request for domestic water production 1 = continuous operation: the pump is linked to unit start up; delays FS2601FS 29Minimum interruption time during domestic water production by probe 2 and minimum time between two interruptions FS 300110*CFS 30Domestic water probe set point 2 to interrupt domestic water production FS 31-568230*FwholeFS 32Overheating set point to activate the charge modulating valve-50.0110*CtenthFS 33Overheating set point to activate the charge modulating valve-56.0110*CtenthFS 34Maximum operation time of the charge modulating valve-56.0110*CtenthFS 34Maximum operation time of the charge modulating valve-50.0110*CtenthFS 34Maximum operation time of the charge modulating valve-58.230*FwholeFS 34Maximum operation time of the charge modulation button valve125.0*CtenthFS 34Maximum operating set point-50.0110*CtenthFS 34Maximum operating time of the charge modulation button valve125.0*CtenthFS 34Maximum operating time of the charge modulation button valve125.0*CtenthFS 34Maximum operating time of the charge modulation button valve125.0*C<	FS 27		^	050				
FS 28 Domestic water pump operation mode: a operation of demact the pump goes ON only when there is a request for domestic water production 1 = continuous operation: the pump is linked to unit start up; delays FS26 0 1 Interruption from probe number 2 FS 29 Minimum interruption time during domestic water production by probe 2 0 250 sec FS 30 Domestic water probe set point 2 to interrupt domestic water production 58 -50.0 110 °C tenth FS 31 Domestic water probe differential 2 to interrupt domestic water production 58 -50.0 110 °C tenth FS 32 Overheating set point to activate the charge modulating valve -50.0 110 °C tenth FS 33 Overheating set point to activate the charge modulation valve 1 45 °F whole FS 34 Maximum operation time of the charge modulation button valve 1 45 °F whole FS 33 Overheating set point change activation setting and band of the charge 58 230 °F whole FS 34 Maximum operation time of the charge modulation valve 1 45 °F whol		output is inverted	0	250	sec			
request for domestic water production and FS27 are ignoredInterruption time duning domestic water production by probe 2 and minimum time between two interruptions011FS 29Minimum interruption time during domestic water production by probe 2 and minimum time between two interruptions0250secFS 30Domestic water probe set prote 2 bornestic water production0.1125.0"Ctenth -58FS 31Domestic water probe differential 2 to interrupt domestic water production0.1126.0"CtenthFS 32Overheating set point to activate the charge modulating valve-58230"FwholeFS 33Overheating set point to activate the charge modulating valve-58230"FwholeFS 34Maximum operation time of the charge modulation button valve145"FwholeFS 35Water set point to change activation setting and band of the charge modulating valve-58230"CtenthFS 36Water band to change activation setting and band of the charge modulating valve-58230"CtenthFS 38New overheating set point-500110"CtenthFS 39Charge modulation button valve ON time fS 38-250"CtenthFS 40Charge modulation button valve ON time of the domestic water propressure threshold to by-pass the ON time of the domestic water output set point-500110"CFS 42Low condensing temperature/pressure treshold to by-pass the ON time of the domestic wate	FS 28	Domestic water pump operation mode:						
Image: set of the pump is linked to unit start up; delays FS26 Image: set of the pump is linked to unit start up; delays FS26 Image: set of the pump is linked to unit start up; delays FS26 Image: set of the pump is linked to unit start up; delays FS26 FS 29 Minimum interruption time during domestic water production by probe 2 0 250 sec FS 30 Domestic water probe set point 2 to interrupt domestic water production -50 110 °C tenth FS 31 Domestic water probe differential 2 to interrupt domestic water production 0.1 25.0 °C tenth FS 32 Overheating set point to cativate the charge modulating valve -50.0 110 °C tenth FS 33 Overheating band for the charge modulation button valve 1 45 °F whole FS 34 Maximum operation time of the charge modulation button valve 1 25.0 °C tenth FS 35 Water set point to change activation setting and band of the charge 50.0 110 °C tenth FS 36 Water set point Charge modulation button valve 1 25.0 °E whole FS 37 New overheating set point Charge modulation button valve <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td></t<>								
Interruption from probe number 2 FS 29 Minimum interruption time during domestic water production by probe 2 0 250 sec FS 30 Domestic water probe set point 2 to interrupt domestic water production -50.0 110 "C tenth FS 31 Domestic water probe differential 2 to interrupt domestic water production -50.0 110 "C tenth FS 32 Overheating set point to activate the charge modulating valve -50.0 110 "C tenth FS 33 Overheating band for the charge modulating valve -50.0 110 "C tenth FS 34 Maximum operation time of the charge modulation button valve 1 250 sec FS 34 Maximum operation time of the charge modulation button valve 1 250 sec FS 34 Maximum operation time of the charge modulation button valve 1 250 <th colspan<="" td=""><td></td><td></td><td>0</td><td>1</td><td></td><td></td></th>	<td></td> <td></td> <td>0</td> <td>1</td> <td></td> <td></td>			0	1			
Interruption from probe number 2 FS 29 Minimum interruption time during domestic water production by probe 2 0 250 sec FS 30 Domestic water probe set point 2 to interrupt domestic water production -50.0 110 *C tenth FS 31 Domestic water probe differential 2 to interrupt domestic water production 0.1 25.0 *C tenth FS 32 Overheating set point to activate the charge modulating valve -50.0 110 *C tenth FS 33 Overheating set point to activate the charge modulation button valve -56 230 *F whole FS 34 Maximum operation time of the charge modulation button valve 1 45 *F whole FS 35 Water set point to change activation setting and band of the charge -50.0 10 *C tenth modulating valve -58.0 0.1 25.0 *C tenth FS 36 Water band to change activation setting and band of the charge -5.0.0 10 *C tenth FS 36 New overheating set point -5.0.0 10 <								
FS 29 Minimum interruption time during domestic water production by probe 2 and minimum time between two interruptions 0 250 sec FS 30 Domestic water probe set point 2 to interrupt domestic water production 1 -50.0 110 "C tenth FS 31 Domestic water probe set point 2 to interrupt domestic water production 1 45 "F whole FS 32 Overheating set point to activate the charge modulating valve -58 -50.0 110 "C tenth FS 33 Overheating band for the charge modulating valve -58 -50.0 110 "C tenth FS 34 Maximum operation time of the charge modulation button valve FS 35 1 45 "F whole FS 34 Maximum operation time of the charge modulation button valve FS 36 1 25.0 "C tenth modulating valve -58 23.0 "F whole -58 23.0 "F whole FS 37 Water band to change activation setting and band of the charge modulating valve 0.1 25.0 "C tenth FS 38 New overheating set point -58 23.0 "F whole FS 39 Charge modulation								
and minimum time between two interruptions 0 200 Set FS 30 Domestic water probe set point 2 to interrupt domestic water production -5.0.0 110 °C tenth FS 31 Domestic water probe differential 2 to interrupt domestic water production 1 4.5 °F whole FS 32 Overheating set point to activate the charge modulating valve -5.0.0 110 °C tenth FS 33 Overheating band for the charge modulating valve -5.8 23.0 °F whole FS 34 Maximum operation time of the charge modulation button valve 1 4.5 °F whole FS 35 Water set point to change activation setting and band of the charge -5.0.0 110 °C tenth modulating valve -5.8 23.0 °F whole rF whole FS 35 Water set point change activation setting and band of the charge 1.0 °C tenth modulating valve -5.8 2.3.0 °F whole FS 36 Water set point -5.0.0 110	FO 00			1	1	F		
F5 30 Domestic water probe set point 2 to interrupt domestic water production -5.0 110 *°C tenth F5 31 Domestic water probe differential 2 to interrupt domestic water production 0.1 25.0 *°C tenth F5 32 Overheating set point to activate the charge modulating valve -5.0.0 110 *°C tenth F5 33 Overheating band for the charge modulating valve -5.0.0 1 25.0 *°C tenth F5 34 Maximum operation time of the charge modulation button valve 1 25.0 *°C tenth F5 35 Water set point to change activation setting and band of the charge -5.0.0 110 *°C tenth F5 36 Water band to change activation setting and band of the charge 0.1 25.0 *°C tenth F5 37 New overheating band -5.8 23.0 *°F whole F5 39 Charge modulation button valve ON time -5.8 23.0 *°C tenth F5 40 Charge modulation button valve ON time -5.8 2.30 *°F whole	FS 29		0	250	sec			
FS 31Domestic water probe differential 2 to interrupt domestic water production-58230°FwholeCharge modulationFS 32Overheating set point to activate the charge modulating valve-50.0110°CtenthFS 33Overheating band for the charge modulating valve-50.0110°CtenthFS 33Overheating band for the charge modulation button valve1145°FwholeFS 34Maximum operation time of the charge modulation button valve1125.0°Ctenthmodulating valve-50.0110°CtenthFS 35Water set point to change activation setting and band of the charge-50.0110°Ctenthmodulating valve-50.0110°CtenthFS 37New overheating set point-50.0110°CtenthFS 38New overheating set point-50.0110°CtenthFS 38New overheating band0.125.0°CtenthFS 39Charge modulation button valve OFF time1250secFFwholeFS 41Forced activation of the condensation fans during activation of the domestic water function02230°Fwhole1250secFSFS 42Low overheating temperature/pressure-50.0 </td <td>ES 30</td> <td></td> <td>-50.0</td> <td>110</td> <td>۰C</td> <td>tenth</td>	ES 30		-50.0	110	۰C	tenth		
FS 31 Domestic water probe differential 2 to interrupt domestic water production 0.1 25.0 °C tenth Charge modulation FS 32 Overheating set point to activate the charge modulating valve -50.0 110 °C tenth FS 32 Overheating band for the charge modulating valve -58.1 25.0 °C tenth FS 33 Overheating band for the charge modulation button valve 1 45 °F whole FS 34 Maximum operation time of the charge modulation button valve 1 250 °C tenth FS 35 Water set point to change activation setting and band of the charge 0.11 25.0 °C tenth modulating valve -58.2 23.0 °F whole FS 36 Water band to change activation setting and band of the charge 0.1 25.0 °C tenth modulating valve -58.8 23.0 °F whole whole tenth FS 37 New overheating band 0.1 25.0 °C tenth FS 40 Charge modulation button valve ON time -58.8 23.0	F3 30	Domestic water probe set point 2 to interrupt domestic water production						
Charge modulationThe constraint of the charge modulating valve145°FwholeFS 32Overheating set point to activate the charge modulating valve550110°CtenthFS 33Overheating band for the charge modulating valve500110°CtenthFS 33Overheating band for the charge modulation button valve1250sec10 secFS 34Maximum operation time of the charge modulation button valve1250sec10 secFS 35Water set point to change activation setting and band of the charge0.125.0°Ctenthmodulating valve-58230°FwholeFS 36Water set point-58230°FwholeFS 37New overheating set point-58230°CtenthFS 38New overheating band0.125.0°CtenthFS 39Charge modulation button valve ON time1250secFS 41Forced activation of the condensation fans during activation of the domestic water function 0 = function si disabled-58230°Fwhole1250sec-58230°FwholeFS 41Forced activation of the condensity temperature/pressure according to the condensing temperature/pressure according to the condensing temperatu	FS 31	Domestic water probe differential 2 to interrupt domestic water production						
FS 32 Overheating set point to activate the charge modulating valve -50.0 110 °C tenth FS 33 Overheating band for the charge modulating valve 0.1 25.0 °C tenth FS 34 Maximum operation time of the charge modulation button valve 1 45 °F whole FS 35 Water set point to change activation setting and band of the charge -50.0 110 °C tenth modulating valve FS 36 Water band to change activation setting and band of the charge -50.0 110 °C tenth FS 37 New overheating set point -50.0 110 °C tenth modulating valve °F whole FS 38 New overheating band 0.1 25.0 °C tenth 1 45 °F whole FS 39 Charge modulation button valve ON time 1 250 sec Sec FS 40 Charge modulation button valve OFF time 1 250 sec FS 41 Forced activation of the condensing temperature/pressure 2 sucritical set 2 sucritical set 0 2 2 sucritical set 0					-			
FS 32 Overheating set point to activate the charge modulating valve -50.0 110 °C tenth FS 33 Overheating band for the charge modulating valve 0.1 25.0 °C tenth FS 34 Maximum operation time of the charge modulation button valve 1 45 °F whole FS 34 Maximum operation time of the charge modulation button valve 1 25.0 °C tenth FS 35 Water set point to change activation setting and band of the charge -50.0 110 °C tenth modulating valve FS 36 Water band to change activation setting and band of the charge -50.0 110 °C tenth FS 37 New overheating set point -50.0 110 °C tenth modulating valve °F whole FS 38 New overheating band 0.1 25.0 °C tenth 1 45 °F whole FS 40 Charge modulation button valve ON time 1 250 sec Sec FS 40 Sec Sec FS 41 Forced activation of the condensing temperature/pressure 2 secording to the condensing temperature/pressur		Charge modulation						
FS 33Overheating band for the charge modulating valve-58 0.1230 25.0°F °C vholewholeFS 34Maximum operation time of the charge modulation button valve145 45.0°FwholeFS 35Water set point to change activation setting and band of the charge modulating valve1250sec 5810 secFS 36Water band to change activation setting and band of the charge modulating valve0.125.0°FwholeFS 37New overheating set point-56.0110°C °CtenthFS 38New overheating band0.125.0°CtenthFS 39Charge modulation button valve ON time of enuction is disabled0.125.0°C °CtenthFS 41Forced activation of the condensing temperature/pressure 2 = function is disabled-58.230°F °FwholeFS 42Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the comutation of the valves072.5Psi wholeFS 43Low evaporation pressure threshold to by-pass the ON time of the domestic water pump before the comutation of the valves072.5Psi wholeFS 44Evaporation pressure threshold to by-pass the domestic water pump before the comutation of the o = function is disabled011ON time before switching the domestic water valves072.5Psi wholewholeFS 43Low evaporation pressure threshold to by-pass the donu with a single-circuit machine 0 = functi	FS 32		-50.0	110	°C	tenth		
FS 34Maximum operation time of the charge modulation button valve145°FwholeFS 35Water set point to change activation setting and band of the charge modulating valve-56.0110°CtenthFS 36Water band to change activation setting and band of the charge modulating valve0.125.0°CtenthFS 37New overheating set point-56.0110°CtenthFS 38New overheating set point-56.0110°CtenthFS 39Charge modulation button valve ON time-56.0110°CtenthFS 39Charge modulation button valve ON time1250secsecFS 41Forced activation of the condensation fans during activation of the domestic water function02secsecFS 42Low condensing temperature/pressure according to the condensing temperature/pressure 2 = function astive – during FS26 time, the values-50.0110°CtenthFS 43Low evaporation pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves-50.0110°CtenthFS 44Evaporator anti-freezeLow evaporation gressure threshold to bypass the domestic water pump 0725PsiwholeFS 45Evaporator anti-freeze-50.0110°Ctenth6Harding the domestic water production with a single-circuit machine 0-58230°FwholeFS 44Evaporator anti-freeze-50.0110 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
FS 34 Maximum operation time of the charge modulation button valve 1 250 sec 10 sec FS 35 Water set point to change activation setting and band of the charge -50.0 110 °C tenth modulating valve -58 230 °F whole FS 36 Water band to change activation setting and band of the charge 0.1 25.0 °C tenth modulating valve -58 230 °F whole 1 45 °F whole FS 37 New overheating band -58 230 °F whole 1 45 °F whole FS 38 New overheating band 0.1 25.0 °C tenth -58 230 °F whole FS 40 Charge modulation button valve ON time 1 25.0 sec FS 40 Forced activation of the condensation fans during activation of the domestic water function 0 2 sec FS 41 Forced activation of the condensing temperature/pressure 2 tenth -50.0 110 °C tenth 1 1 function asidisabled uscording to the condensi	FS 33	Overheating band for the charge modulating valve	0.1	25.0	°C	tenth		
FS 35 Water set point to change activation setting and band of the charge modulating valve -50.0 110 °C tenth FS 36 Water band to change activation setting and band of the charge modulating valve 0.1 25.0 °C tenth FS 37 New overheating set point -50.0 110 °C tenth FS 37 New overheating set point -50.0 110 °C tenth FS 38 New overheating band 0.1 25.0 °C tenth FS 39 Charge modulation button valve ON time 1 45 °F whole FS 40 Charge modulation button valve OFF time 1 250 sec FS 41 Forced activation of the condensation fans during activation of the domestic water function 0 2 according to the condensing temperature/pressure 2 110 °C tenth FS 42 Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves -50.0 110 °C tenth FS 43 Low evaporation pressure threshold to bypass the domestic water pump 0.0 50.0 Bar tenth 0 725 <td< td=""><td></td><td></td><td></td><td></td><td>°F</td><td></td></td<>					°F			
modulating valve-58230°FwholeFS 36Water band to change activation setting and band of the charge modulating valve0.125.0°CtenthFS 37New overheating set point-50.0110°CtenthFS 38New overheating band0.125.0°CtenthFS 39Charge modulation button valve ON time145°FwholeFS 40Charge modulation button valve OFF time125.0secFSFS 41Forced activation of the condensation fans during activation of the domestic water function according to the condensing temperature/pressure 2 = function active - during fFS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active - during FS26 time ventilation is forced to operate at night function speed02tenthFS 42Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves-50.0110°CtenthFS 43Low evaporation pressure threshold to bypass the domestic water pump 0 nz250725PsiwholeFS 44Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled01°CtenthFS 45Evaporator anti-freeze-50.0110°Ctenth-584230°FwholeFS 44Evaporator anti-freeze-50.0110°Ctenth-584230°FwholeFS								
FS 36 Water band to change activation setting and band of the charge modulating valve 0.1 25.0 °C tenth FS 37 New overheating set point -50.0 110 °C tenth FS 38 New overheating band 0.1 25.0 °C tenth FS 38 New overheating band 0.1 25.0 °C tenth FS 39 Charge modulation button valve ON time 1 45 °F whole FS 40 Charge modulation button valve OFF time 1 250 sec sec FS 41 Forced activation of the condensation fans during activation of the domestic water function 0 1 250 sec FS 42 Low condensing temperature/pressure 2 function active - during FS26 time ventilation is forced to operate at night function speed -58.0 230 °F whole FS 43 Low evaporation pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves 0 725 Psi whole FS 43 Low evaporation pressure threshold to bypass the domestic water pump 0.0 50.0 Bar tenth ON time before switching the domestic water	FS 35							
modulating valve145°FwholeFS 37New overheating set point-50.0110°CtenthFS 38New overheating band0.125.0°CtenthFS 39Charge modulation button valve ON time125.0°CtenthFS 40Charge modulation button valve OFF time125.0sec·FS 41Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function active - during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active - during FS26 time ventilation is forced to operate at night function speedtenthFS 42Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves-55.0110°CtenthFS 43Low evaporation pressure threshold to bypass the domestic water pump 0 n 7250.050.0BartenthON time before switching the domestic water valves0725PsiwholeFS 44Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled 1 = function is enabledFS 45Evaporator water output set point to prevent anti-freeze-50.0110°CtenthFS 46Band to prevent anti-freeze-50.0110°CtenthFS 47External air set point to prevent anti-freeze-50.0110°Ctenth	FC 26							
FS 37 New overheating set point -50.0 110 °C tenth FS 38 New overheating band 0.1 25.0 °C tenth FS 39 Charge modulation button valve ON time 1 45 °F whole FS 40 Charge modulation button valve OFF time 1 25.0 sec sec FS 40 Charge modulation button valve OFF time 1 250 sec sec FS 41 Forced activation of the condensation fans during activation of the domestic water function 0 -function is disabled 1 25.0 sec 1 1 function anabled -during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 0 2 2 110 °C tenth FS 42 Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves -50.0 110 °C tenth 0 725 Psi whole single-circuit machine 0 725 Psi whole FS 43 Low evaporation pressure threshold to bypass the domestic water pump 0.0 50.0 Bar	F3 30							
FS 38New overheating band-58230°FwholeFS 39Charge modulation button valve ON time145°FwholeFS 39Charge modulation button valve OFF time1250secFS 40Charge modulation button valve OFF time1250secFS 41Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled – during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active – during FS26 time ventilation is forced to operate at night function speed02FS 42Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves-58230°FFS 43Low evaporation pressure threshold to bypass the domestic water pump 0 N time before switching the domestic water valves0725PsiFS 44Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled01°CFS 45Evaporator water output set point to prevent anti-freeze 								
FS 38 New overheating band 0.1 25.0 °C tenth FS 39 Charge modulation button valve ON time 1 25.0 sec F FS 40 Charge modulation button valve OFF time 1 25.0 sec F FS 41 Forced activation of the condensation fans during activation of the domestic water function 0 2 sec F FS 41 Forced activation of the condensing temperature/pressure 0 2 2 sec F fs 41 1 = function enabled – during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 0 2 2 110 °C tenth fs 42 Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves -50.0 110 °C tenth fs 43 Low evaporation pressure threshold to bypass the domestic water pump 0.0 50.0 Bar tenth ON time before switching the domestic water valves 0 725 Psi whole FS 44 Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled 0 1 1	ES 37	New overheating set point	-50.0	110	°C			
FS 39Charge modulation button valve ON time1250secFS 40Charge modulation button valve OFF time1250secFS 41Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled - during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active - during FS26 time ventilation is forced to operate at night function speed02FS 42Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves-50.0110 -58°CtenthFS 43Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves0725PsiwholeFS 44Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled010°CtenthFS 45Evaporator water output set point to prevent anti-freeze-50.0110°CtenthFS 46Band to prevent anti-freeze-50.0110°CtenthFS 47External air set point to prevent anti-freeze-50.0110°CtenthFS 47External air set point to prevent anti-freeze-50.0110°Ctenth	FS 37	New overneating set point			-	tenth		
FS 40 Charge modulation button valve OFF time 1 250 sec FS 41 Forced activation of the condensation fans during activation of the domestic water function on 0 = function is disabled 1 250 sec 1 = function is disabled 1 = function active - during FS26 time, the ventilation modulates according to the condensing temperature/pressure 0 2 2 2 = function active - during FS26 time ventilation is forced to operate at night function speed -50.0 110 °C tenth FS 42 Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves -58 230 °F whole FS 43 Low evaporation pressure threshold to bypass the domestic water pump 0.0 50.0 Bar tenth ON time before switching the domestic water valves 0 725 Psi whole FS 44 Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 1 °C tenth 0 = function is disabled 1 = function is disabled 0 1 1 etcet FS 45 Evaporator anti-freeze -50.0 110 °C			-58	230	°F	tenth whole		
FS 41 Forced activation of the condensation fans during activation of the domestic water function 0 1 0 2 0 = function is disabled 1 = function enabled – during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 0 2 2 function active – during FS26 time ventilation is forced to operate at night function speed 0 110 °C tenth FS 42 Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves -50.0 50.0 Bar tenth 0 725 Psi whole FS 43 Low evaporation pressure threshold to bypass the domestic water pump 0.0 50.0 Bar tenth 0 725 Psi whole 0 725 Psi whole FS 43 Low evaporation pressure threshold to bypass the domestic water pump 0.0 50.0 Bar tenth 0 725 Psi whole 0 725 Psi whole FS 43 Low evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 1 0 1 0 = function is disabled <	FS 38		-58 0.1	230 25.0	°F °C	tenth whole tenth		
domestic water function 0 = function is disabled 1 = function enabled - during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active - during FS26 time ventilation is forced to operate at night function speed02FS 42Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves-50.0110 -58°C 230 °Ftenth wholeFS 43Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves0.050.0Bar 725tenth wholeFS 44Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled01°C tenthFS 45Evaporator water output set point to prevent anti-freeze-50.0110 -58°C 230 	FS 38 FS 39	New overheating band Charge modulation button valve ON time	-58 0.1 1 1	230 25.0 45 250	°F °C °F	tenth whole tenth		
0 = function is disabled 1 = function enabled - during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active - during FS26 time ventilation is forced to operate at night function speed02FS 42Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves-50.0110 -58°C 230 *Ftenth wholeFS 43Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves0.050.0Bar 725tenth wholeFS 44Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled 1 = function is enabled01°C ctenth wholeFS 45Evaporator water output set point to prevent anti-freeze-50.0110 -58°C c tenth wholeFS 46Band to prevent anti-freeze0.125.0°C c tenth wholeFS 47External air set point to prevent anti-freeze-50.0110 -50.0°C tenth whole	FS 38 FS 39 FS 40	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time	-58 0.1 1 1	230 25.0 45 250	°F °C °F sec	tenth whole tenth		
1 = function enabled - during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active - during FS26 time ventilation is forced to operate at night function speed02FS 42Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves-50.0 -58 0,0110 -58 230 0,0°C wholeFS 43Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves0.0 050.0 725Bar PsitenthFS 44Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled 1 = function is enabled0110 - °C - C°C tenthFS 45Evaporator water output set point to prevent anti-freeze-50.0 -58 -50.0110 -72 -75°C -75 wholeFS 46Band to prevent anti-freeze-50.0 -75 -75 -75110 -75 -75 -75 -75 -75°C -75 -75 -75 -75 -75FS 47External air set point to prevent anti-freeze-50.0 		New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the	-58 0.1 1 1	230 25.0 45 250	°F °C °F sec	tenth whole tenth		
according to the condensing temperature/pressure 2 = function active - during FS26 time ventilation is forced to operate at night function speed	FS 38 FS 39 FS 40	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the domestic water function	-58 0.1 1 1	230 25.0 45 250	°F °C °F sec	tenth whole tenth		
2 = function active - during FS26 time ventilation is forced to operate at night function speedFS 42Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves-50.0110 -58°C 230 0tenthFS 43Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves0.050.0Bar 725tenthFS 43Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves0725PsiwholeFS 44Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled 1 = function is enabled01°CtenthFS 45Evaporator water output set point to prevent anti-freeze-50.0110°CtenthFS 46Band to prevent anti-freeze0.125.0°CtenthFS 47External air set point to prevent anti-freeze-50.0110°Ctenth	FS 38 FS 39 FS 40	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled	-58 0.1 1 1	230 25.0 45 250 250	°F °C °F sec	tenth whole tenth		
night function speed	FS 38 FS 39 FS 40	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled – during the FS26 time, the ventilation modulates	-58 0.1 1 1	230 25.0 45 250 250	°F °C °F sec	tenth whole tenth		
FS 42Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves-50.0110 -58°C 230 0.0tenth whole tenth wholeFS 43Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves0.050.0Bar Psitenth wholeFS 44Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled 1 = function is enabled01°Ctenth wholeFS 45Evaporator water output set point to prevent anti-freeze-50.0110 -58°Ctenth wholeFS 46Band to prevent anti-freeze0.125.0 -50.0°Ctenth wholeFS 47External air set point to prevent anti-freeze-50.0110 -50.0°Ctenth whole	FS 38 FS 39 FS 40	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled – during the FS26 time, the ventilation modulates according to the condensing temperature/pressure	-58 0.1 1 1	230 25.0 45 250 250	°F °C °F sec	tenth whole tenth		
of the domestic water pump before the commutation of the valves-58 0.0 0.0 725230 Bar Psi°F whole tenth wholeFS 43Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves0.0 050.0 725Bar Psitenth wholeFS 44Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled 1 = function is enabled011FS 45Evaporator water output set point to prevent anti-freeze-50.0 -58110 -230°C ·Ftenth wholeFS 46Band to prevent anti-freeze0.1 -5825.0 -50.0°C -50.0tenth wholeFS 47External air set point to prevent anti-freeze-50.0 -50.0110 - °C -50.0°C - tenth whole	FS 38 FS 39 FS 40	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled – during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active – during FS26 time ventilation is forced to operate at	-58 0.1 1 1	230 25.0 45 250 250	°F °C °F sec	tenth whole tenth		
FS 43Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves0.0 050.0 725Bar Psitenth wholeFS 44Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled 1 = function is enabled01111FS 45Evaporator water output set point to prevent anti-freeze FS 46-50.0110 -58°C 230tenth wholeFS 46Band to prevent anti-freeze FS 470.125.0 FS 46°F whole	FS 38 FS 39 FS 40 FS 41	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled – during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active – during FS26 time ventilation is forced to operate at night function speed	-58 0.1 1 1 1 0	230 25.0 45 250 250 2	°F °C °F sec sec	tenth whole tenth whole		
FS 43 Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves 0.0 50.0 Bar Psi tenth whole FS 44 Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled 1 = function is enabled 0 1 1 1 FS 45 Evaporator water output set point to prevent anti-freeze -50.0 110 °C tenth whole FS 46 Band to prevent anti-freeze 0.1 25.0 °C tenth whole FS 47 External air set point to prevent anti-freeze -50.0 110 °C tenth whole	FS 38 FS 39 FS 40 FS 41	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled – during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active – during FS26 time ventilation is forced to operate at night function speed Low condensing temperature/pressure threshold to by-pass the ON time	-58 0.1 1 1 0 -50.0	230 25.0 45 250 250 2 2 2 110 230	°F °C °F sec sec	tenth whole tenth whole		
ON time before switching the domestic water valves0725PsiwholeFS 44Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled 1 = function is enabled0111FS 45Evaporator water output set point to prevent anti-freeze-50.0 -58110 -230°C °Ftenth wholeFS 46Band to prevent anti-freeze0.1 125.0 *F°C wholetenth wholeFS 47External air set point to prevent anti-freeze-50.0 110110 °C°C tenth whole	FS 38 FS 39 FS 40 FS 41	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled – during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active – during FS26 time ventilation is forced to operate at night function speed Low condensing temperature/pressure threshold to by-pass the ON time	-58 0.1 1 1 0 -50.0 -58 0.0	230 25.0 45 250 250 2 2 2 110 230 50.0	°F °C °F sec sec °C °F Bar	tenth whole tenth whole tenth whole tenth		
FS 44 Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 1 0 1 0 = function is disabled 1 = function is enabled 0 1 0 1 1 FS 45 Evaporator water output set point to prevent anti-freeze -50.0 110 °C tenth FS 46 Band to prevent anti-freeze 0.1 25.0 °C tenth FS 47 External air set point to prevent anti-freeze -50.0 110 °C tenth	FS 38 FS 39 FS 40 FS 41 FS 41	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled – during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active – during FS26 time ventilation is forced to operate at night function speed Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves	-58 0.1 1 1 0 -50.0 -58 0.0 0	230 25.0 45 250 250 2 2 2 110 230 50.0 725	°F °C °F sec sec °F Bar Psi	tenth whole tenth whole tenth whole tenth whole		
a single-circuit machine 0 = function is disabled 1 = function is enabled 0 1 1 FS 45 Evaporator water output set point to prevent anti-freeze -50.0 110 -58 °C 230 tenth whole FS 46 Band to prevent anti-freeze 0.1 25.0 1 °C er tenth whole FS 47 External air set point to prevent anti-freeze -50.0 110 °C er tenth	FS 38 FS 39 FS 40 FS 41 FS 41	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled – during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active – during FS26 time ventilation is forced to operate at night function speed Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves Low evaporation pressure threshold to bypass the domestic water pump	-58 0.1 1 1 0 -50.0 -58 0.0 0 0	230 25.0 45 250 250 2 2 2 110 230 50.0 725 50.0	°F °C °F sec sec °C °F Bar Psi Bar	tenth whole tenth whole tenth whole tenth whole tenth		
0 = function is disabled 0 1 1 1 = function is enabled 1 = function is enabled 1 1 FS 45 Evaporator water output set point to prevent anti-freeze -50.0 110 °C tenth FS 46 Band to prevent anti-freeze 0.1 25.0 °C tenth FS 47 External air set point to prevent anti-freeze -50.0 110 °C tenth	FS 38 FS 39 FS 40 FS 41 FS 42 FS 42	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled – during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active – during FS26 time ventilation is forced to operate at night function speed Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves	-58 0.1 1 1 0 -50.0 -58 0.0 0 0	230 25.0 45 250 250 2 2 2 110 230 50.0 725 50.0	°F °C °F sec sec °C °F Bar Psi Bar	tenth whole tenth whole tenth whole tenth whole tenth		
1 = function is enabled	FS 38 FS 39 FS 40 FS 41 FS 42 FS 42	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled – during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active – during FS26 time ventilation is forced to operate at night function speed Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves Evaporator anti-freeze prevention during domestic water production with	-58 0.1 1 1 0 -50.0 -58 0.0 0 0	230 25.0 45 250 250 2 2 2 110 230 50.0 725 50.0	°F °C °F sec sec °C °F Bar Psi Bar	tenth whole tenth whole tenth whole tenth whole tenth		
FS 45Evaporator water output set point to prevent anti-freeze-50.0110°Ctenth-58230°FwholeFS 46Band to prevent anti-freeze0.125.0°Ctenth145°Fwhole145°FFS 47External air set point to prevent anti-freeze-50.0110°Ctenth	FS 38 FS 39 FS 40 FS 41 FS 42 FS 42	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled – during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active – during FS26 time ventilation is forced to operate at night function speed Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves Evaporator anti-freeze prevention during domestic water production with a single-circuit machine	-58 0.1 1 1 0 -50.0 -58 0.0 0 0 0.0 0 0	230 25.0 45 250 250 2 2 2 110 230 50.0 725 50.0 725	°F °C °F sec sec °C °F Bar Psi Bar	tenth whole tenth whole tenth whole tenth whole tenth		
-58 230 °F whole FS 46 Band to prevent anti-freeze 0.1 25.0 °C tenth 1 45 °F whole FS 47 External air set point to prevent anti-freeze -50.0 110 °C tenth	FS 38 FS 39 FS 40 FS 41 FS 42 FS 42	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled – during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active – during FS26 time ventilation is forced to operate at night function speed Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled	-58 0.1 1 1 0 -50.0 -58 0.0 0 0 0.0 0 0	230 25.0 45 250 250 2 2 2 110 230 50.0 725 50.0 725	°F °C °F sec sec °C °F Bar Psi Bar	tenth whole tenth whole tenth whole tenth whole tenth		
FS 46 Band to prevent anti-freeze 0.1 25.0 °C tenth 1 45 °F whole FS 47 External air set point to prevent anti-freeze -50.0 110 °C tenth	FS 38 FS 39 FS 40 FS 41 FS 41 FS 42 FS 42 FS 43 FS 44	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled – during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active – during FS26 time ventilation is forced to operate at night function speed Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled 1 = function is enabled	-58 0.1 1 1 0 -50.0 -58 0.0 0 0 0 0 0 0	230 25.0 45 250 250 2 2 2 110 230 50.0 725 50.0 725 1	°F °C °F sec sec °F Bar Psi Bar Psi	tenth whole tenth whole tenth whole tenth whole tenth whole		
FS 47 External air set point to prevent anti-freeze 1 45 °F whole	FS 38 FS 39 FS 40 FS 41 FS 41 FS 42 FS 42 FS 43 FS 44	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled – during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active – during FS26 time ventilation is forced to operate at night function speed Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled 1 = function is enabled	-58 0.1 1 1 0 -50.0 -58 0.0 0 0 0 0 0 0 0 -50.0	230 25.0 45 250 250 2 2 110 230 50.0 725 50.0 725 1 1	°F °C °F sec sec °F Bar Psi Bar Psi	tenth whole tenth whole tenth whole tenth whole tenth whole		
	FS 38 FS 39 FS 40 FS 41 FS 41 FS 42 FS 43 FS 44 FS 45	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled – during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active – during FS26 time ventilation is forced to operate at night function speed Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled 1 = function is enabled	-58 0.1 1 1 0 -50.0 -58 0.0 0 0 0 0 0 0 0 -50.0 -58	230 25.0 45 250 250 2 2 110 230 50.0 725 50.0 725 1 1 110 230	°F °C °F sec sec °F Bar Psi Bar Psi °C °F	tenth whole tenth whole tenth whole tenth whole tenth whole tenth whole		
-58 230 °F whole	FS 38 FS 39 FS 40 FS 41 FS 41 FS 42 FS 43 FS 44 FS 45 FS 45 FS 46	New overheating band Charge modulation button valve ON time Charge modulation button valve OFF time Forced activation of the condensation fans during activation of the domestic water function 0 = function is disabled 1 = function enabled – during the FS26 time, the ventilation modulates according to the condensing temperature/pressure 2 = function active – during FS26 time ventilation is forced to operate at night function speed Low condensing temperature/pressure threshold to by-pass the ON time of the domestic water pump before the commutation of the valves Low evaporation pressure threshold to bypass the domestic water pump ON time before switching the domestic water valves Evaporator anti-freeze prevention during domestic water production with a single-circuit machine 0 = function is disabled 1 = function is enabled Evaporator water output set point to prevent anti-freeze Band to prevent anti-freeze	-58 0.1 1 1 0 -50.0 -58 0.0 0 0 0 0 -58 0.0 0 0 -58 0.1 1	230 25.0 45 250 250 2 2 2 110 230 50.0 725 50.0 725 1 1 110 230 25.0	°F Sec Sec °F Bar Psi Bar Psi Bar Psi	tenth whole tenth whole tenth whole tenth whole tenth whole tenth whole tenth		

		1			
FS 48	Do not turn the valves in production of domestic water only with dedicated return 0=function not active 1=function active	0	1		
FS 49	Evaporator water pump shut off during production of domestic water only in dedicated return mode 0=function not active	0	1		
FS 50	1=function active Overlapping time between evaporator water pump and domestic water pump in dedicated return mode, during the transition to domestic water only with FS49=1	0	250	Sec	
FS 51	Waiting time before switching inversion valves from chiller to h.p.	0	250	Sec	
FS 52	Waiting time before switching inversion valves from h.p. to chiller	0	250	Sec	
FS 53	Minimum operation time in chiller mode before switching to domestic water production (only with dedicated return)	0	250	Sec	10 sec
FS 54	Minimum chiller demand threshold (power steps) before starting in chiller + domestic water mode	1	16		
FS 55	Minimum heat pump demand threshold (power steps) before stopping the domestic water production (with heat pump priority)	1	16		
FS 56	Power modulation if the user side and domestic water side are demanded simultaneously 0 = temperature control meets domestic water demand 1 = activation of max number of steps between domestic water and user side 2 = activation of 100% of available power (only h.p.; in chiller mode it behaves as FS56=1) Free cooling	0	2		
Parameters	Description	min	max	um	Resolution
FC 1	Activation of free cooling 0 = disabled 1 = enabled fan control with condensing priority 2 = enabled fan control with free cooling priority 3 = enabled with external free cooling ventilation	0	4		
FC 2	4 = enabled for water-water units Free cooling mode input/output differential	0.1	25.0 45	°C °F	Tenths whole
FC 3	Free cooling input/output delay	0	250	Sec	10 Sec
FC 4	Damper closing/3-way water valve differential/free cooling ON/OFF relay	0.1	25.0	°C	Tenths
	with temperature control being satisfied	1	45	°F	whole
FC 5	Band regulation steps/ventilation modulating output in free cooling mode	0.1 1	25.0 45	°C °F	Tenths whole
FC 6	Fan regulation operation in free cooling 0 = 100% on demand 1 = with step/proportional regulation	0	1		
FC 7	Anti-freeze prevention setting with unit in free cooling mode	-50.0 -58	110 230	°C °F	Tenths whole
FC 8	Free cooling anti-freeze alarm prevention differential	0.1	25.0 45	°C °F	Tenths whole
FC 9	Minimum operation speed of the fans in free cooling mode	0	100	%	
FC 10	Maximum operation speed of the fans in free cooling mode	0	100	%	
FC 11	Peak time at maximum speed after switch-on 0 = function is disabled	0	250	sec	
	Split coil control				1
FC 12	1st split coil step set point circuit 1 – 2	-50.0	110	°C	Tenths
		-58	230	°F	whole
		0.0 0	50.0 725	Bar Psi	Tenths whole
FC 13	1st split coil step differential circuit 1 – 2	0.1	25.0	°C	Tenths
		1 0.1	45 14.0	°F Bar	whole Tenths
FC 14	2nd split coil step set point circuit 1 – 2	1 -50.0	203 110	Psi °C	whole Tenths
. • ! •		-58 0.0	230 50.0	°F Bar	whole Tenths
		0.0	50.0 725	Psi	whole
FC 15	2nd split coil step differential circuit 1 – 2	0.1	25.0	°C	Tenths
		1	45	°F	whole
		0.1	14.0	Bar	Tenths whole
		1	203	Psi	WHOIC
FC 16	Delay time for valve exchange 1st and 2nd split coil step	1 0	203 250	Sec	WHOIC
	Water-water unit				Whole
FC 16 FC 17					tenth

50.40		50.0	110		
FC 18	FC condenser water set point temperature to activate free cooling	-50.0 -58	110 230	°C °F	tenth whole
FC 19	Delay in free cooling activation The FC condenser water temperature must be below the FC18 set point	0	250	sec	WHOIC
FC 20	for FC19 seconds before the effective activation of free cooling Switching delay for ON/OFF free cooling valves	0	250	600	
FC 20 FC 21	Free cooling set point	-50.0	110	sec °C	tenth
		-58	230	°F	whole
FC 22	Free cooling differential	0.1	25.0	°C	tenth
		1	45	°F	whole
FC 23 FC 24	Delay in outfeed from free cooling Delay in activation of anti-freeze prevention in free cooling	0	250 250	sec	
FC 24 FC 25	Free cooling valve set point in chiller mode	-50.0	110	sec °C	tenth
	· · · · · · · · · · · · · · · · · · ·	-58	230	°F	whole
FC 26	Free cooling valve differential in chiller mode	0.1	25.0	°C	tenth
FC 27	Minimum regulation percentage for free cooling valve	1	45 FC28	°F %	whole
FC 28	Maximum regulation percentage for free cooling valve	FC27	0	%	
FC 29	Maintaining minimum valve opening	1021	Ű	70	
	0 = no	0	1		
	1 = yes				
	Auxiliary outputs				
Parameters	Description	min	max	um	Resolution
110.4	Auxiliary relay 1	1	1	1	
US 1	Auxiliary relay 1 operation (see auxiliary relay operation and diagrams) 0 = not enabled				
	1= always enabled with direct action	0	4		
	2= enabled with direct action only with unit ON	0	4		
	3= always enabled with inverse action				
US 2	4= enabled with inverse action only with unit ON Analog input configuration for control of the auxiliary relay 1	1	36		
US 3	Set point of auxiliary relay 1 (see auxiliary relay operation and diagrams)	-50.0	110	°C	Tenths
000		-58	230	°F	whole
		0.0	50.0	Bar	Tenths
		0	725 20.0	Psi	whole Tenths
US 4	Auxiliary relay differential 1 (see auxiliary relay operation and diagrams)	4.0	20.0	mA °C	Tenths
		1	45	°F	whole
		0.1	14.0	Bar	Tenths
		1	203	Psi	whole
	Auxiliary relay 2	0.1	16.0	mA	Tenths
US 5	Auxiliary relay 2 operation (see auxiliary relay operation and diagrams)	1	1	1	
	0 = not enabled				
	1= always enabled with direct action	0	4		
	2= enabled with direct action only with unit ON 3= always enabled with inverse action	-	-		
	4= enabled with inverse action only with unit ON				
US 6	Analog input configuration for control of the auxiliary relay 2	1	36		
US 7	Set point of auxiliary relay 2 (see auxiliary relay operation and diagrams)	-50.0	110	°C	Tenths
		-58	230	°F	whole
		0.0 0	50.0 725	Bar Psi	Tenths whole
		4.0	20.0	mA	Tenths
					Tenths
US 8	Auxiliary relay differential 2 (see auxiliary relay operation and diagrams)	0.1	25.0	°C	
US 8	Auxiliary relay differential 2 (see auxiliary relay operation and diagrams)	1	45	°F	whole
US 8	Auxiliary relay differential 2 (see auxiliary relay operation and diagrams)	1 0.1	45 14.0	°F Bar	whole Tenths
US 8	Auxiliary relay differential 2 (see auxiliary relay operation and diagrams)	1 0.1 1	45 14.0 203	°F	whole Tenths whole
US 8	Auxiliary relay differential 2 (see auxiliary relay operation and diagrams) Auxiliary relay differential 2 (see auxiliary relay operation and diagrams) Auxiliary relay 3	1 0.1	45 14.0	°F Bar Psi	whole Tenths
US 8 US 9	Auxiliary relay 3 Auxiliary relay 3 operation (see auxiliary relay operation and diagrams)	1 0.1 1	45 14.0 203	°F Bar Psi	whole Tenths whole
	Auxiliary relay 3 Auxiliary relay 3 operation (see auxiliary relay operation and diagrams) 0 = not enabled	1 0.1 1	45 14.0 203	°F Bar Psi	whole Tenths whole
	Auxiliary relay 3 Auxiliary relay 3 operation (see auxiliary relay operation and diagrams) 0 = not enabled 1= always enabled with direct action	1 0.1 1	45 14.0 203	°F Bar Psi	whole Tenths whole
	Auxiliary relay 3 Auxiliary relay 3 operation (see auxiliary relay operation and diagrams) 0 = not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON	1 0.1 1 0.1	45 14.0 203 16.0	°F Bar Psi	whole Tenths whole
	Auxiliary relay 3 Auxiliary relay 3 operation (see auxiliary relay operation and diagrams) 0 = not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action	1 0.1 1 0.1	45 14.0 203 16.0	°F Bar Psi	whole Tenths whole
US 9 US 10	Auxiliary relay 3 Auxiliary relay 3 operation (see auxiliary relay operation and diagrams) 0 = not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON Analog input configuration for control of the auxiliary relay 3	1 0.1 1 0.1	45 14.0 203 16.0	°F Bar Psi	whole Tenths whole
US 9	Auxiliary relay 3 Auxiliary relay 3 operation (see auxiliary relay operation and diagrams) 0 = not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON	1 0.1 1 0.1 0 0	45 14.0 203 16.0 4 4 <u>36</u> 110	°F Bar Psi mA	whole Tenths whole Tenths
US 9 US 10	Auxiliary relay 3 Auxiliary relay 3 operation (see auxiliary relay operation and diagrams) 0 = not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON Analog input configuration for control of the auxiliary relay 3	1 0.1 1 0.1 0 1 -50.0 -58	45 14.0 203 16.0 4 4 36 110 230	°F Bar Psi mA	whole Tenths whole Tenths
US 9 US 10	Auxiliary relay 3 Auxiliary relay 3 operation (see auxiliary relay operation and diagrams) 0 = not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON Analog input configuration for control of the auxiliary relay 3	1 0.1 1 0.1 0 0	45 14.0 203 16.0 4 4 <u>36</u> 110	°F Bar Psi mA	whole Tenths whole Tenths

US 12					
	Auxiliary relay differential 3 (see auxiliary relay operation and diagrams)	0.1	25.0	°C	Tenths
		1	45	°F	whole
		0.1	14.0	Bar	Tenths
		1	203	Psi	whole
		0.1	16.0	mA	Tenths
	Auxiliary relay 4	1	1	1	
US 13	Auxiliary relay 4 operation (see auxiliary relay operation and diagrams)				
	0 = not enabled				
	1= always enabled with direct action	0	4		
	2= enabled with direct action only with unit ON				
	3= always enabled with inverse action 4= enabled with inverse action only with unit ON				
US 14	Analog input configuration for control of the auxiliary relay 4	1	36		
US 15	Set point of auxiliary relay 4 (see auxiliary relay operation and diagrams)	-50.0	110	°C	Tenths
03 15	Set point of auxiliary relay 4 (see auxiliary relay operation and diagrams)	-50.0	230	°F	whole
		0.0	50.0	Bar	Tenths
		0.0	725	Psi	whole
		4.0	20.0	mA	Tenths
US 16	Auxiliary relay differential 4 (see auxiliary relay operation and diagrams)	0.1	25.0	°C	Tenths
0010		1	45	°F	whole
		0.1	14.0	Bar	Tenths
		1	203	Psi	whole
		0.1	16.0	mA	Tenths
	0÷10V proportional auxiliary output 1				. on the
US 17	Proportional auxiliary output 1 operation (see auxiliary output operation				
0017	and diagrams)				
	0= not enabled				
	1= always enabled with direct action	0	4		
	2= enabled with direct action only with unit ON	Ũ			
	3= always enabled with inverse action				
	4= enabled with inverse action only with unit ON				
US 18	Analog input configuration for control of the auxiliary output 1	1	36		
US 19	Set point for auxiliary 1 (see auxiliary output operation and diagrams)	-50.0	110	°C	Tenths
	••••••••••••••••••••••••••••••••••••••	-58	230	°F	whole
		0.0	50.0	Bar	Tenths
		0	725	Psi	whole
		4.0	20.0	mA	Tenths
US 20	Differential for auxiliary 1 (see auxiliary output operation and diagrams)	0.1	25.0	°C	Tenths
		1	45	°F	whole
		0.1	14.0	Bar	Tenths
		1	203	Psi	whole
		0.1	16.0	mA	Tenths
US 21	Minimum value for 0 ÷10V analog output 1	0	US22	%	
US 22	Maximum value for 0 ÷10V analog output 1	US21	100	%	
US 23	Maintaining minimum value of analog output 1				
	0 = no	0	1		
	1 = yes				
	1 = yes 0÷10V proportional auxiliary output 2				
US 24		[
US 24	0÷10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams)				
US 24	0÷10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled				
US 24	0÷10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action	0	4		
US 24	0÷10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON	0			
US 24	0÷10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action	0			
	0÷10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON		4		
US 25	0÷10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON Analog input configuration for control of the auxiliary output 2	1	4		
	0÷10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON	1 -50.0	4 36 110	ç	Tenths
US 25	0÷10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON Analog input configuration for control of the auxiliary output 2	1 -50.0 -58	4 36 110 230	°F	whole
US 25	0÷10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON Analog input configuration for control of the auxiliary output 2	1 -50.0 -58 0.0	4 36 110 230 50.0	°F Bar	whole Tenths
US 25	0÷10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON Analog input configuration for control of the auxiliary output 2	1 -50.0 -58 0.0 0	4 36 110 230 50.0 725	°F Bar Psi	whole Tenths whole
US 25 US 26	0÷10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON Analog input configuration for control of the auxiliary output 2 Set point for auxiliary 2 (see auxiliary output operation and diagrams)	1 -50.0 -58 0.0 0 4.0	4 36 110 230 50.0 725 20.0	°F Bar Psi mA	whole Tenths whole Tenths
US 25	0÷10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON Analog input configuration for control of the auxiliary output 2	1 -50.0 -58 0.0 0 4.0 0.1	4 36 110 230 50.0 725 20.0 25.0	°F Bar Psi mA °C	whole Tenths whole Tenths Tenths
US 25 US 26	0÷10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON Analog input configuration for control of the auxiliary output 2 Set point for auxiliary 2 (see auxiliary output operation and diagrams)	1 -50.0 -58 0.0 0 4.0 0.1 1	4 36 110 230 50.0 725 20.0 25.0 45	°F Bar Psi mA ℃ °F	whole Tenths whole Tenths Tenths whole
US 25 US 26	0÷10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON Analog input configuration for control of the auxiliary output 2 Set point for auxiliary 2 (see auxiliary output operation and diagrams)	1 -50.0 -58 0.0 0 4.0 0.1 1 0.1	4 36 110 230 50.0 725 20.0 25.0 45 14.0	°F Bar Psi mA ℃ °F Bar	whole Tenths whole <u>Tenths</u> Tenths whole Tenths
US 25 US 26	0÷10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON Analog input configuration for control of the auxiliary output 2 Set point for auxiliary 2 (see auxiliary output operation and diagrams)	1 -50.0 -58 0.0 0 4.0 0.1 1 0.1 1	4 36 110 230 50.0 725 20.0 25.0 45 14.0 203	°F Bar Psi mA ℃ °F Bar Psi	whole Tenths whole Tenths Tenths whole Tenths whole
US 25 US 26 US 27	0+10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON Analog input configuration for control of the auxiliary output 2 Set point for auxiliary 2 (see auxiliary output operation and diagrams) Differential for auxiliary 2 (see auxiliary output operation and diagrams) Differential for auxiliary 2 (see auxiliary output operation and diagrams)	1 -50.0 -58 0.0 0 4.0 0.1 1 0.1 1 0.1	4 36 110 230 50.0 725 20.0 25.0 45 14.0 203 16.0	°F Bar Psi mA ℃ Sar Psi mA	whole Tenths whole <u>Tenths</u> Tenths whole Tenths
US 25 US 26 US 27 US 28	0÷10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON Analog input configuration for control of the auxiliary output 2 Set point for auxiliary 2 (see auxiliary output operation and diagrams) Differential for auxiliary 2 (see auxiliary output operation and diagrams) Minimum value for 0 ÷10V analog output 2	1 -50.0 -58 0.0 0 4.0 0.1 1 0.1 1 0.1 0	4 36 110 230 50.0 725 20.0 25.0 45 14.0 203 16.0 US29	°F Bar Psi mA ℃ F Bar Psi mA %	whole Tenths whole Tenths Tenths whole Tenths whole
US 25 US 26 US 27 US 27 US 28 US 29	0+10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON Analog input configuration for control of the auxiliary output 2 Set point for auxiliary 2 (see auxiliary output operation and diagrams) Differential for auxiliary 2 (see auxiliary output operation and diagrams) Minimum value for 0 ÷10V analog output 2 Maximum value for 0 ÷10V analog output 2 Maximum value for 0 ÷10V analog output 2	1 -50.0 -58 0.0 0 4.0 0.1 1 0.1 1 0.1	4 36 110 230 50.0 725 20.0 25.0 45 14.0 203 16.0	°F Bar Psi mA ℃ Sar Psi mA	whole Tenths whole Tenths Tenths whole Tenths whole
US 25 US 26 US 27 US 28	0+10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON Analog input configuration for control of the auxiliary output 2 Set point for auxiliary 2 (see auxiliary output operation and diagrams) Differential for auxiliary 2 (see auxiliary output operation and diagrams) Minimum value for 0 ÷10V analog output 2 Maximum value for 0 ÷10V analog output 2 Maintaining minimum value of analog output 2	1 -50.0 -58 0.0 0 4.0 0.1 1 0.1 1 0.1 0 US28	4 36 110 230 50.0 725 20.0 25.0 45 14.0 203 16.0 US29 100	°F Bar Psi mA ℃ F Bar Psi mA %	whole Tenths whole Tenths Tenths whole Tenths whole
US 25 US 26 US 27 US 27 US 28 US 29	0+10V proportional auxiliary output 2 Proportional auxiliary output 2 operation (see auxiliary output operation and diagrams) 0= not enabled 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 4= enabled with inverse action only with unit ON Analog input configuration for control of the auxiliary output 2 Set point for auxiliary 2 (see auxiliary output operation and diagrams) Differential for auxiliary 2 (see auxiliary output operation and diagrams) Minimum value for 0 ÷10V analog output 2 Maximum value for 0 ÷10V analog output 2 Maximum value for 0 ÷10V analog output 2	1 -50.0 -58 0.0 0 4.0 0.1 1 0.1 1 0.1 0	4 36 110 230 50.0 725 20.0 25.0 45 14.0 203 16.0 US29	°F Bar Psi mA ℃ F Bar Psi mA %	whole Tenths whole Tenths Tenths whole Tenths whole

US 31	Proportional auxiliary output 3 operation (see auxiliary output operation and diagrams) 0= not enabled				
	 1= always enabled with direct action 2= enabled with direct action only with unit ON 3= always enabled with inverse action 	0	4		
	4= enabled with inverse action only with unit ON				
US 32	Analog input configuration for control of the auxiliary output 3	1	36		
US 33	Set point for auxiliary 3 (see auxiliary output operation and diagrams)	-50.0	110	°C	Tenths
		-58	230	°F	whole
		0.0	50.0	Bar	Tenths
		0 4.0	725 20.0	Psi mA	whole Tenths
US 34	Differential for auxiliary 3 (see auxiliary output operation and diagrams)	0.1	20.0	°C	Tenths
03 34	Differential for auxiliary 5 (see auxiliary output operation and diagrams)	1	45	°F	whole
		0.1	14.0	Bar	Tenths
		1	203	Psi	whole
		0.1	16.0	mA	Tenths
US 35	Minimum value for 0 ÷10V analog output 3	0	US36	%	
US 36	Maximum value for 0 ÷10V analog output 3	US35	100	%	
US 37	Maintaining minimum value of analog output 3				
	0 = no	0	1		
	1 = yes				
	0÷10V proportional auxiliary output 4				
US 38	Proportional auxiliary output 4 operation (see auxiliary output operation				
	and diagrams)				
	0= not enabled				
	1= always enabled with direct action	0	4		
	2= enabled with direct action only with unit ON				
	3= always enabled with inverse action				
	4= enabled with inverse action only with unit ON				
US 39 US 40	Analog input configuration for control of the auxiliary output 4	1	36	**	Tautha
05 40	Set point for auxiliary 4 (see auxiliary output operation and diagrams)	-50.0	110 230	°C °F	Tenths whole
		-58 0.0	230 50.0	Bar	Tenths
		0.0	725	Psi	whole
		4.0	20.0	mA	Tenths
US 41	Differential for auxiliary 4 (see auxiliary output operation and diagrams)	0.1	25.0	°C	Tenths
		1	45	°F	whole
				Bar	Tenths
		0.1	14.0	Dai	renuns
		0.1 1	14.0 203	Psi	whole
US 42	Minimum value for 0 ÷10V analog output 4	1	203	Psi mA %	whole
US 43	Maximum value for 0 ÷10V analog output 4	1 0.1	203 16.0	Psi mA	whole
	Maximum value for 0 ÷10V analog output 4 Maintaining minimum value of analog output 4	1 0.1 US42	203 16.0 US43 100	Psi mA %	whole
US 43	Maximum value for 0 ÷10V analog output 4 Maintaining minimum value of analog output 4 0 = no	1 0.1 0	203 16.0 US43	Psi mA %	whole
US 43	Maximum value for 0 ÷10V analog output 4 Maintaining minimum value of analog output 4 0 = no 1 = yes	1 0.1 US42	203 16.0 US43 100	Psi mA %	whole
US 43 US 44	Maximum value for 0 ÷10V analog output 4 Maintaining minimum value of analog output 4 0 = no 1 = yes Alarms	1 0.1 US42 0	203 16.0 US43 100 1	Psi mA %	whole Tenths
US 43	Maximum value for 0 ÷10V analog output 4 Maintaining minimum value of analog output 4 0 = no 1 = yes Alarms Description	1 0.1 US42	203 16.0 US43 100	Psi mA %	whole
US 43 US 44 Parameters	Maximum value for 0 ÷10V analog output 4 Maintaining minimum value of analog output 4 0 = no 1 = yes Alarms Description Low pressure alarm	1 0.1 US42 0	203 16.0 US43 100 1	Psi mA %	whole Tenths
US 43 US 44	Maximum value for 0 ÷10V analog output 4 Maintaining minimum value of analog output 4 0 = no 1 = yes Alarms Description	1 0.1 US42 0	203 16.0 US43 100 1	Psi mA %	whole Tenths
US 43 US 44 Parameters	Maximum value for 0 ÷10V analog output 4 Maintaining minimum value of analog output 4 0 = no 0 = no 1 = yes Alarms Description Low pressure alarm Bypass time for low pressure alarm from digital / analog input from the start-up of the first compressor of the circuit and from the shut off of the last compressor of the circuit This defines low pressure alarm operation with pump-down enabled:	1 0.1 US42 0 min	203 16.0 US43 100 1 max	Psi mA % w	whole Tenths
US 43 US 44 Parameters AL 1	Maximum value for 0 ÷10V analog output 4 Maintaining minimum value of analog output 4 0 = no 1 = yes Alarms Description Every ressure alarm Bypass time for low pressure alarm from digital / analog input from the start-up of the first compressor of the circuit and from the shut off of the last compressor of the circuit This defines low pressure alarm operation with pump-down enabled: 0 = the low pressure alarm is independent from pump-down 1 = the low pressure alarm is inhibited during compressor shutdown in pump down and when the compressor is stopped. When restarted, if ID is active, the solenoid valve opens but the compressor does not start up until the low pressure switch is deactivated. If the pressure switch is not deactivated within the	1 0.1 US42 0 min	203 16.0 US43 100 1 max	Psi mA % w	whole Tenths
US 43 US 44 Parameters AL 1 AL 2	Maximum value for 0 ÷10V analog output 4 Maintaining minimum value of analog output 4 0 = no 1 = yes Alarms Description Low pressure alarm Bypass time for low pressure alarm from digital / analog input from the start-up of the first compressor of the circuit and from the shut off of the last compressor of the circuit This defines low pressure alarm operation with pump-down enabled: 0 = the low pressure alarm is independent from pump-down 1 = the low pressure alarm is inhibited during compressor shutdown in pump down and when the compressor is stopped. When restarted, if ID is active, the solenoid valve opens but the compressor does not start up until the low pressure switch is deactivated. If the pressure alarm is inhibited during compressor shutdown in pump down, when the compressor is stopped. 2 2 = the low pressure alarm is inhibited during compressor shutdown in pump down, when the compressor is stopped and for AL01 time when the compressor is stopped and for AL01 time when the compressor is stopped and for AL01 time	1 0.1 0 US42 0 min 0	203 16.0 US43 100 1 max 250 2	Psi mA % w	whole Tenths Resolution
US 43 US 44 Parameters AL 1	Maximum value for 0 ÷10V analog output 4 Maintaining minimum value of analog output 4 0 = no 1 = yes Alarms Description Bypass time for low pressure alarm from digital / analog input from the start-up of the first compressor of the circuit and from the shut off of the last compressor of the circuit This defines low pressure alarm operation with pump-down enabled: 0 = the low pressure alarm is independent from pump-down 1 = the low pressure alarm is inhibited during compressor shutdown in pump down and when the compressor is stopped. When restarted, if ID is active, the solenoid valve opens but the compressor does not start up until the low pressure switch is not deactivated within the AL01 time, the low pressure alarm is inhibited during compressor shutdown in pump down, when the compressor is stopped and for AL01 time	1 0.1 0 US42 0 min 0 0	203 16.0 US43 100 1 max 250 2 2 110 230 50.0	Psi mA % wm um sec	whole Tenths Resolution
US 43 US 44 Parameters AL 1 AL 2 AL 3	Maximum value for 0 ÷10V analog output 4 Maintaining minimum value of analog output 4 0 = no 1 = yes Alarms Description Low pressure alarm Bypass time for low pressure alarm from digital / analog input from the start-up of the first compressor of the circuit and from the shut off of the last compressor of the circuit This defines low pressure alarm operation with pump-down enabled: 0 = the low pressure alarm is independent from pump-down 1 = the low pressure alarm is inhibited during compressor shutdown in pump down and when the compressor is stopped. When restarted, if ID is active, the solenoid valve opens but the compressor does not start up until the low pressure switch is deactivated. If the pressure alarm is triggered. 2 = the low pressure alarm is inhibited during compressor shutdown in pump down, when the compressor is stopped and for AL01 time when the compressor restarts Low pressure alarm set point from analog input	1 0.1 0 0 min 0 0	203 16.0 US43 100 1 max 250 2 2 110 230 50.0 725	Psi mA % w um sec	whole Tenths Resolution
US 43 US 44 Parameters AL 1 AL 2	Maximum value for 0 ÷10V analog output 4 Maintaining minimum value of analog output 4 0 = no 1 = yes Alarms Description Low pressure alarm Bypass time for low pressure alarm from digital / analog input from the start-up of the first compressor of the circuit and from the shut off of the last compressor of the circuit This defines low pressure alarm operation with pump-down enabled: 0 = the low pressure alarm is independent from pump-down 1 = the low pressure alarm is inhibited during compressor shutdown in pump down and when the compressor is stopped. When restarted, if ID is active, the solenoid valve opens but the compressor does not start up until the low pressure switch is deactivated. If the pressure alarm is inhibited during compressor shutdown in pump down, when the compressor is stopped. 2 2 = the low pressure alarm is inhibited during compressor shutdown in pump down, when the compressor is stopped and for AL01 time when the compressor is stopped and for AL01 time when the compressor is stopped and for AL01 time	1 0.1 0 0 min 0 0 -50.0 -58 -1.0 -14 0.1	203 16.0 US43 100 1 max 250 2 2 110 230 50.0 725 25.0	Psi mA % w um sec °F bar psi °C	whole Tenths Resolution
US 43 US 44 Parameters AL 1 AL 2 AL 3	Maximum value for 0 ÷10V analog output 4 Maintaining minimum value of analog output 4 0 = no 1 = yes Alarms Description Low pressure alarm Bypass time for low pressure alarm from digital / analog input from the start-up of the first compressor of the circuit and from the shut off of the last compressor of the circuit This defines low pressure alarm operation with pump-down enabled: 0 = the low pressure alarm is independent from pump-down 1 = the low pressure alarm is inhibited during compressor shutdown in pump down and when the compressor is stopped. When restarted, if ID is active, the solenoid valve opens but the compressor does not start up until the low pressure switch is deactivated. If the pressure alarm is triggered. 2 = the low pressure alarm is inhibited during compressor shutdown in pump down, when the compressor is stopped and for AL01 time when the compressor restarts Low pressure alarm set point from analog input	1 0.1 0 0 min 0 0	203 16.0 US43 100 1 max 250 2 2 110 230 50.0 725	Psi mA % w um sec	whole Tenths Resolution

		-	1	1	1
AL 5	Maximum number of interventions per hour of the low pressure alarm				
	from a digital/analog input	0	~~~		
	Reset is always manual if $AL05 = 0$ Reset is always automatic if $AL05 = 60$	0	60		
	Reset switches from automatic to manual if AL05 falls between 1 and 59				
AL 6	Low temperature / pressure alarm in defrost mode				
	0 = not enabled	0	1		
	1= enabled	0			
AL 7	Low temperature / pressure alarm delay in defrost mode	0	250	sec	
AL 8	Low temperature / pressure alarm with the unit in remote OFF or stand-				
	by mode	•			
	0 = alarm detection disabled	0	1		
	1 = alarm detection enabled				
	High temperature/pressure alarm				
AL 9	High condensing pressure/temperature alarm set point from analog input	-50.0	110	°C	tenth
		-58	230	°F	whole
		0.0	50.0	bar	tenth
		0	725	psi	whole
AL 10	High condensing pressure/temperature differential from analog input	0.1	25.0	°C	tenth
		1	45	°F	whole
		0.1	14.0	bar	tenth
		1	203	psi	whole
AL 11	Maximum number of high condensing pressure/temperature alarm				
	interventions per hour from a digital/analog input	0	60		
	Reset is always manual if $AL11 = 0$	0	60		
	Reset is always automatic if AL11 = 60 Reset switches from automatic to manual if AL11 falls between 1 and 59				
	Coll alarm				
AL 12		0	250		
AL 12 AL 13	Low pressure / oil level alarm delay from a digital input Low pressure / oil level alarm input duration from digital input in normal	0	250	sec	
AL 13	working conditions	0	250	sec	
AL 14	Maximum number of interventions per hour for low oil pressure / level				
AL 14	alarm				
	Reset is always manual if AL14 = 0				
	Reset is always automatic if $AL14 = 60$	0	60		
	The reset switches from automatic to manual if AL14 falls between 1 and				
	59				
	Compressor oil alarm management				
AL 15	Oil pressure switch/float alarm with compressor OFF		[
	0 = alarm detection disabled	0	1		
	1 = alarm detection enabled				
	Evaporator flow switch alarm operation				
AL 16	Evaporator flow switch/thermal overload supply fan alarm by-pass by	0	250		
	activating the evaporator pump/supply fan	0	250	sec	
AL 17	Maximum time in evaporator flow switch alarm before switching to	0	250	sec	
	manual mode and blocking the evaporator water pump, if moving	0	230	Sec	
AL 18	Duration of active evaporator flow switch / thermal overload supply fan	0	250	sec	
	input	0	230	Sec	
AL 19	Evaporator flow switch / thermal overload supply fan input not active	0	250	sec	
	duration	Ũ	200	000	
AL 20	Evaporator flow switch alarm operating logic	_			
	0 = polarity control enabled	0	1		
	1 = polarity control disabled				
AL 64	Condenser flow switch alarm operation		1	1	
AL 21	Condenser flow switch operation				
	0 = disabled	~	_		
	1 = chiller only enabled	0	3		
	2 = heat pump only enabled 3 = enabled in both chiller and heat pump				
AL 22	3 = enabled in both chiller and heat pump Condenser flow switch alarm delay from when condenser pump is				
AL 22	activated	0	250	sec	
AL 23	Maximum time in condenser flow switch alarm before switching to manual			-	
71L 2J	mode and blocking the condenser water pump, if moving	0	250	sec	
AL 24	Active condenser flow switch input duration	0	250	sec	
AL 25	Non-active condenser flow switch input duration	0	250	sec	
AL 26	Condenser flow switch alarm operating logic	~			
	0 = polarity control enabled	0	1		
	1 = polarity control disabled	-			
	Compressor thermal overload alarm				
AL 27	Compressor thermal overload alarm delay at start-up	0	250	sec	
AL 28	Maximum number of compressor thermal overload alarm interventions	~			
	per hour				
	Reset is always manual with password if AL28 = 0	0			
	Reset is always manual if $AL28 = 60$	0	60		
	The reset switches from manual to manual with password if AL28 falls				
	between 1 and 59				<u> </u>
-		-			

AL 29	Compressor thermal overload alarm function 0 = blocks the individual compressor 1 = blocks the circuit	0	1		
AL 30	1 = blocks the circuit Compressor thermal overload alarm with compressor OFF 0 = alarm detection disabled 1 = alarm detection enabled	0	1		
AL 31	Compressor thermal overload alarm reset password value (see procedures)	0	999		
	Anti-freeze alarm in chiller mode				
AL 32	Anti-freeze minimum set point limit in chiller mode	-50.0 -58	AL33	°C °F	Tenths whole
AL 33	Anti-freeze maximum set point limit in chiller mode	AL32	110 230	°C °F	Tenths whole
AL 34	Anti-freeze alarm set point in chiller. This allows you to set a temperature value below which the anti-freeze, low ambient air temperature (air/air unit), low output air temperature (air/air unit) alarm is activated.	AL32	AL33	°C °F	Tenths whole
AL 35	Anti-freeze alarm differential in chiller, low ambient air temperature, low output air temperature.	0.1 1	25.0 45	°C °F	tenth whole
AL 36	This allows you to set a differential that determines the alarm to be reset Anti-freeze alarm delay, low ambient air temperature, low output air				whole
	temperature in chiller mode. This allows you to set a time during which the temperature must remain below the AL34 set point so as to activate the anti-freeze alarm.	0	250	sec	
AL 37	Maximum number of interventions per hour of the anti-freeze, low output air temperature in chiller mode alarm. Reset is always manual if AL37 = 0 Reset is always automatic if AL37 = 60 Reset switches from automatic to manual if AL37 falls between 1 and 59	0	60		
AL 38	Anti-freeze alarm operation in chiller mode 0 = it shuts off ONLY the compressors when the temperature measured by the anti-freeze adjustment probe drops below AL34 set point and indicates the anti-freeze alarm with a label but does not trigger the buzzer nor the alarm relay 1 = it switches off the compressors when the temperature measured by the anti-freeze adjustment probe drops below the AL34 set point and indicates the anti-freeze alarm with a label + buzzer + alarm relay	0	1		
	Anti-freeze alarm in heat pump mode		I		
AL 39	Anti-freeze minimum set point limit in heat pump mode	-50.0		°C	Tenths
AL 40	Anti-freeze maximum set point limit in heat pump mode	-58	AL40 110	°F °C	whole Tenths
-		AL39	230	°F	whole
AL 41	Anti-freeze alarm setting in heat pump mode This allows you to set a temperature value below which the anti-freeze, low ambient air temperature (air/air unit), low output air temperature (air/air unit) alarm is activated.	AL39	AL40	°C/°F	Whole/tenth s
AL 42	Anti-freeze alarm differential in heat pump, low ambient air temperature, low output air temperature.	0.1 1	25.0 45	°C °F	Tenths whole
AL 43	 This allows you to set a differential that determines the alarm to be reset. Anti-freeze alarm delay (low outfeed air temperature in air/air unit) from the start-up of the unit in heat pump mode <u>Caution:</u> if, in remote Stand-by/OFF mode, the unit presents an antifreeze alarm situation and the AL43 time is not zero, by selecting h.p. mode from the key or from the digital input, this resets the anti-freeze situation and allows the compressors to start up for AL43 time as the unit heats the water or the air. Once the AL43 delay lapses, if the anti-freeze regulation probe still detects a temperature of < AL41 set point for at least AL44 seconds, the unit is blocked and an anti-freeze alarm is triggered. 	0	250	sec	
AL 44	Anti-freeze alarm delay, low ambient air temperature, low output air temperature in heat pump mode. This allows you to set an amount of time during which the temperature must stay below the set point set by PAR. AL41 so that the anti-freeze alarm is triggered.	0	250	sec	
AL 45	Maximum number of interventions per hour for the anti-freeze, low output air temperature alarm in heat pump mode Reset is always manual if $AL45 = 0$ Reset is always automatic if $AL45 = 60$	0	60		
AL 46	Reset switches from automatic to manual if AL45 falls between 1 and 59 Anti-freeze alarm operation in heat pump mode 0 = it shuts off ONLY the compressors when the temperature measured by the anti-freeze adjustment probe drops below the AL41 set point and indicates the anti-freeze alarm with a label but does not trigger the buzzer and the alarm relay 1 = it shuts off the compressors when the temperature measured by the anti-freeze adjustment probe drops below the AL41 set point and indicates the anti-freeze alarm with a label + buzzer + alarm relay Selecting the probe to control the anti-freeze a	0 larm	1		

	Anti-freeze temperature control probe alarm in chiller mode				
	0= disabled 1 = regulation on evaporator input				
	2 = regulation on evaporator output 1	0	5		
	3 = regulation on evaporator output 2	-	-		
	4 = regulation on evaporator output 1 / 2				
	5 = regulation on evaporator output 1 / 2 and common output				
AL 48	Anti-freeze temperature control probe alarm in heat pump mode 0= disabled				
	1 = regulation on evaporator input		_		
	2 = regulation on evaporator output 1	0	5		
	3 = regulation on evaporator output 2 4 = regulation on evaporator output 1 / 2				
	5 = regulation on evaporator output 1 / 2 and common output				
AL 49	Condenser anti-freeze temperature control probe alarm				
	0 = disabled				
	1 = regulation on common condenser input probe				
	2 = regulation on common condenser input probes and condensers 1 3 = regulation on common condenser input probes and condensers 2	0	7		
	4 = regulation output probes condensers 1	0	'		
	5 = regulation output probes condensers 2				
	6 = regulation on output probes condensers 1 / 2				
	7 = regulation on output probes condensers 1 / 2 and common output				
	Compressors high discharge temperature			T	
AL 50	Compressor high discharge temperature alarm setting	-50	150	°C	Whole/tenth
		-58	302	°F	s whole
AL 51	Compressor high discharge temperature alarm differential	0.1	25.0	°C	Tenths
		1	45	°F	whole
AL 52	Maximum number of interventions per hour high temperature supply				
	compr. alarm				
	Reset is always manual if $AL52 = 0$	0	60		
	Reset is always automatic if $AL52 = 60$ The reset switches from automatic to manual if $AL52$ falls between 1 and	-			
	59				
	Unit general block alarm				
AL 53	Maximum number of unit general block alarm interventions per hour				
	Reset is always manual if AL53 = 0	0	60		
	Reset is always automatic if AL53 = 60	0	60		
	Reset switches from automatic to manual if AL53 falls between 1 and 59				
AL 54	Delay time for general alarm block unit with digital input active	0	250	Sec	10
AL 55	Delay time for general alarm block unit with digital input not active	0	250	Sec	10 sec
AL 50	General block alarm / alert unit 2	r	-	T	1
AL 56	General alarm 2 operation 0 = only signals; it does not depend on AL57 (alarm relay and buzzer				
	activated); always resets automatically	0	1		
	1 = the alarm blocks the unit; alarm reset depends on the value of	-			
	parameter AL57				
AL 57	Maximum number of interventions per hour for generic block alarm unit 2				
AL 57	Reset is always manual if AL57 = 0	0	60		
AL 57	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60	0	60		
	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60 Reset switches from automatic to manual if AL57 falls between 1 and 59			Sec	10 sec
AL 57 AL 58 AL 59	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active	0	250	Sec	10 sec
AL 58	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input not active	0		Sec sec	10 sec 10 sec
AL 58	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input not	0	250		
AL 58	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 0 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input not active Evaporator input high water temperature ala Maximum number of system input high water temperature probe alarm	0	250		
AL 58 AL 59	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 0 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input not active Evaporator input high water temperature ala Maximum number of system input high water temperature probe alarm interventions per hour	0 0 rm	250 250		
AL 58 AL 59	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input not active Evaporator input high water temperature ala Maximum number of system input high water temperature probe alarm interventions per hour Reset is always manual if AL60 = 0	0	250		
AL 58 AL 59	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input not active Evaporator input high water temperature ala Maximum number of system input high water temperature probe alarm interventions per hour Reset is always manual if AL60 = 0 Reset is always automatic if AL60 = 60	0 0 rm	250 250		
AL 58 AL 59	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input not active Evaporator input high water temperature ala Maximum number of system input high water temperature probe alarm interventions per hour Reset is always manual if AL60 = 0	0 0 rm 0	250 250 60	sec	10 sec
AL 58 AL 59 AL 60 AL 61	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input not active Evaporator input high water temperature ala Maximum number of system input high water temperature probe alarm interventions per hour Reset is always manual if AL60 = 0 Reset is always automatic if AL60 = 60 Reset switches from automatic to manual if AL60 falls between 1 and 59 System input high water temperature probe alarm delay from compressor activation	0 0 rm 0 0	250 250 60 250	sec sec	
AL 58 AL 59 AL 60	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Reset is always manual if AL60 = 0 Reset is always automatic if AL60 = 60 Reset switches from automatic to manual if AL60 falls between 1 and 59 System input high water temperature probe alarm delay from compressor	0 0 rm 0 0 -50.0	250 250 60 250 110	sec sec °C	10 sec 10 sec tenth
AL 58 AL 59 AL 60 AL 61 AL 62	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input not active Evaporator input high water temperature ala Maximum number of system input high water temperature probe alarm interventions per hour Reset is always manual if AL60 = 0 Reset is always automatic if AL60 = 60 Reset switches from automatic to manual if AL60 falls between 1 and 59 System input high water temperature probe alarm delay from compressor activation System input high water temperature probe alarm set point	0 0 rm 0 -50.0 -58	250 250 60 250 110 230	sec sec °C °F	10 sec 10 sec tenth whole
AL 58 AL 59 AL 60 AL 61	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input not active Evaporator input high water temperature ala Maximum number of system input high water temperature probe alarm interventions per hour Reset is always manual if AL60 = 0 Reset is always automatic if AL60 = 60 Reset switches from automatic to manual if AL60 falls between 1 and 59 System input high water temperature probe alarm delay from compressor activation	0 0 rm 0 -50.0 -58 0.1	250 250 60 250 110 230 25.0	sec sec °C °F °C	10 sec 10 sec tenth whole tenth
AL 58 AL 59 AL 60 AL 61 AL 62 AL 63	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input not active Evaporator input high water temperature ala Maximum number of system input high water temperature probe alarm interventions per hour Reset is always manual if AL60 = 0 Reset is always automatic if AL60 = 60 Reset switches from automatic to manual if AL60 falls between 1 and 59 System input high water temperature probe alarm delay from compressor activation System input high water temperature probe alarm set point System input high water temperature probe alarm differential	0 0 rm 0 -50.0 -58	250 250 60 250 110 230	sec sec °C °F	10 sec 10 sec tenth whole
AL 58 AL 59 AL 60 AL 61 AL 62	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input not active Evaporator input high water temperature ala Maximum number of system input high water temperature probe alarm interventions per hour Reset is always manual if AL60 = 0 Reset is always automatic if AL60 = 60 Reset switches from automatic to manual if AL60 falls between 1 and 59 System input high water temperature probe alarm delay from compressor activation System input high water temperature probe alarm set point	0 0 rm 0 -50.0 -58 0.1	250 250 60 250 110 230 25.0	sec sec °C °F °C	10 sec 10 sec tenth whole tenth
AL 58 AL 59 AL 60 AL 61 AL 62 AL 63	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input not active Evaporator input high water temperature ala Maximum number of system input high water temperature probe alarm interventions per hour Reset is always manual if AL60 = 0 Reset is always automatic if AL60 = 60 Reset switches from automatic to manual if AL60 falls between 1 and 59 System input high water temperature probe alarm delay from compressor activation System input high water temperature probe alarm set point System input high water temperature probe alarm differential NTC / PTC analog input configuration to manage the system input water	0 0 rm 0 -50.0 -58 0.1 1	250 250 60 250 110 230 25.0 45	sec sec °C °F °C	10 sec 10 sec tenth whole tenth
AL 58 AL 59 AL 60 AL 61 AL 62 AL 63	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input not active Evaporator input high water temperature ala Maximum number of system input high water temperature probe alarm interventions per hour Reset is always manual if AL60 = 0 Reset is always automatic if AL60 = 60 Reset switches from automatic to manual if AL60 falls between 1 and 59 System input high water temperature probe alarm delay from compressor activation System input high water temperature probe alarm set point System input high water temperature probe alarm differential NTC / PTC analog input configuration to manage the system input water high temperature alarm	0 0 rm 0 -50.0 -58 0.1 1	250 250 60 250 110 230 25.0 45	sec sec °C °F °C	10 sec 10 sec tenth whole tenth
AL 58 AL 59 AL 60 AL 61 AL 62 AL 63	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Reset sixtoes from automatic to manual if AL60 = 0 Reset switches from automatic to manual if AL60 falls between 1 and 59 System input high water temperature probe alarm delay from compressor activation System input high water temperature probe alarm differential NTC / PTC analog input configuration to manage the system input wate	0 0 rm 0 -50.0 -58 0.1 1	250 250 60 250 110 230 25.0 45	sec sec °C °F °C	10 sec 10 sec tenth whole tenth
AL 58 AL 59 AL 60 AL 61 AL 62 AL 63 AL 63	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input not active Evaporator input high water temperature ala Maximum number of system input high water temperature probe alarm interventions per hour Reset is always manual if AL60 = 0 Reset is always automatic if AL60 = 60 Reset switches from automatic to manual if AL60 falls between 1 and 59 System input high water temperature probe alarm delay from compressor activation System input high water temperature probe alarm set point System input high water temperature probe alarm differential NTC / PTC analog input configuration to manage the system input water high temperature alarm 0 = function is disabled Alarm relay Activation of the alarm relay output in remote OFF or Stand-by mode 0 = alarm output enabled 0	0 0 rm 0 -50.0 -58 0.1 1 0	250 250 60 250 110 230 25.0 45	sec sec °C °F °C	10 sec 10 sec tenth whole tenth
AL 58 AL 59 AL 60 AL 61 AL 62 AL 63 AL 63	Reset is always manual if AL57 = 0 Reset is always automatic if AL57 = 60 Reset switches from automatic to manual if AL57 falls between 1 and 59 Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Delay time for general alarm block unit with digital input active Reset sixtoes from automatic to manual if AL60 = 0 Reset switches from automatic to manual if AL60 falls between 1 and 59 System input high water temperature probe alarm delay from compressor activation System input high water temperature probe alarm differential NTC / PTC analog input configuration to manage the system input wate	0 0 rm 0 -50.0 -58 0.1 1	250 250 60 250 110 230 25.0 45 29	sec sec °C °F °C	10 sec 10 sec tenth whole tenth

AL 66	Alarm log reset password value (see procedures)	0	999		
	Anti-freeze alarm in free cooling				
AL 67 AL 68	Delay of the anti-freeze alarm signal in free cooling Maximum number of interventions per hour for anti-freeze alarm in free	0	250	sec	
AL 00	cooling				
	Reset is always manual if AL68 = 0	0	60		
	Reset is always automatic if AL68 = 60				
	Reset switches from automatic to manual if AL68 falls between 1 and 59				
AL 69	Auxiliary heating alarms	1	T	T	
AL 09	The behaviour of the compressors in case of auxiliary heating alarms $0 =$ they follow their behaviour	_			
	1 = they turn back on again even if they were disabled by the auxiliary	0	1		
	heating function				
AL 70	Maximum number of interventions per hour for auxiliary heating thermal				
	overload alarm Reset is always manual if AL71 = 0	0	60		
	Reset is always automatic if $AL71 = 60$	Ŭ	00		
	Reset switches from automatic to manual if AL71 falls between 1 and 59				
AL 71	Maximum number of interventions per hour for auxiliary heating block				
	alarm Reset is always manual if AL72 = 0	0	60		
	Reset is always manual if $AL72 = 0$ Reset is always automatic if $AL72 = 60$	0	00		
	Reset switches from automatic to manual if AL72 falls between 1 and 59				
	Electronic Thermostatic Driver				
Parameters	Description	min	max	um	Resolution
Et1	Configuration of probes Pb1 and Pb2 connected to the driver				
	0 = NTC temperature	0	2		
	1 = PTC temperature 2 = PT1000 temperature				
Et2	Configuration of probes Pb3 and Pb4 connected to the driver				
	0 = NTC temperature				
	1 = PTC temperature	_	_		
	2 = PT1000 temperature	0	5		
	3 = pressure 4÷20mA 4 = pressure 0÷5V				
	5 = not present (low pressure defined transducers are used)				
Et3	Type of valve:				
	1 = Unipolar	1	2		
Et4	2 = Bipolar Selection of the bipolar valve body connected to the driver				
L 14	0 = Custom				
	1 = Alco EX4 - EX5 - EX6				
	2 = Alco EX7				
	3 = Alco EX8 4 = Carel E2V*				
	$5 = \text{Carel E2V}^*$ P	0	11		
	6 = Danfoss ETS - 25/50	Ũ			
	7 = Danfoss ETS – 100				
	8 = Danfoss ETS – 250/400 9 = Sporlan SEI 0.5 – 11				
	10 = Sporlan SEI 30				
	11 = Sporlan SEH 50/100/175				
Et5	Selection of the unipolar valve body connected to the driver	0	0		
Et6	0 = Custom Valve driving	+ Ť	Ť		
Elo	0 = drives both valves	0	1		
	1 = drives only valve 1				
Et7	Valve 1 output operation mode				
	0 = chiller	0	2		
	1 = heat pump 2 = chiller and heat pump				
Et8	Valve 2 output operation mode		1		
	0 = chiller	0	2		
	1 = heat pump	0	2		
Et9	2 = chiller and heat pump Selection of output circuit valve 1 driver 1		<u> </u>		
213	0 = Not present	_	_		
	1 = Circuit 1	0	2		
	2 = Circuit 2				
Et10	Selection of output circuit valve 2 driver 1				
	0 = Not present 1 = Circuit 1	0	2		
	1 = Circuit 1 2 = Circuit 2				
Et11	Selection of output circuit valve 1 driver 2				
	0 = Not present	0	2		
	1 = Circuit 1	Ŭ	2		
	2 = Circuit 2	1	1	1	

Et12	Selection of output circuit valve 2 driver 2			<u> </u>	
ELIZ	0 = Not present				
	1 = Circuit 1	0	2		
	2 = Circuit 2				
E+12					
Et13 Et14			<u> </u>		
Et15					
Et16	Number of additional store to achieve complete classics. Without a classics				
Et17	Number of additional steps to achieve complete closure. When a closing request is received, the valve starts from the current number of steps and moves to 0, then closes for the set number of steps	0	250		
Et18	Number of return steps in opening mode after the valve has been closed completely. These decompress any closing spring inside the valve or to prevent sealing the circuit	0	250		
Et19	Maximum number of adjusting steps of the valve	Et20	8000		
Et20	Minimum number of adjusting steps of the valve	0	Et19		
Et21	Maximum current value per phase of the stepper motor	0	100	mA	x10 mA
Et22	Current stand-by value	0	100	mA	x10 mA
Et23	Maximum number of steps per second of the valve	0	600	Hz	
Et24	Indicates the number of steps the valve has to move before compressor	0	000	112	
E124	start-up. 0 = function is disabled	0	Et19		
Et25	Sets valve manual operation mode				
2120	0= Automatic 1= Manual	0	1		
Et26	Absolute number of steps the valve has to move in manual mode	0	Et19	1	
Et27	Low pressure alarm activation delay (LOP)	0	250	Sec	
Et28	High pressure alarm activation delay (MOP)	0	250	Sec	
Et29	High overheating alarm activation delay	0	250	Sec	10 Sec
Et30	Low overheating alarm activation delay	0	250	Sec	10 Sec
2100	PID regulation in chiller mode	0	200	000	10 000
E404		0.0	50.0		t a with
Et31	PID proportional constant in chiller mode	0.0	50.0	°C	tenth
Et32	PID integral time in chiller mode	0	122 250	°F Sec	Whole
Et33	PID derivative constant in chiller mode	0	250	Sec	
Et34	Overheating regulation set point during chiller mode	0.0	25.0	°C	tenth
5.05		0	77	°F	Whole
Et35	Overheating regulation dead band in chiller mode	0.0	5.0	°C	tenth
E /00		0	41	°F	Whole
Et36	High overheating threshold. The alarm status is signalled after the high	Et34	80.0	°C	tenth
E(07	overheating alarm activation delay		176	°F	Whole
Et37	Low overheating threshold. In this case, an additional integral time is added to the normal regulation in order to speed up the return to the normal operating conditions	0.0 0	Et34	°C °F	tenth Whole
Et38	Additional integral time to prevent low overheating in chiller mode	0	250	Sec	
Et39	MOP protection activation threshold.	0	200	000	
2135	This sets the high pressure protection intervention threshold, above which an additional regulation is activated, similar to that of low	0.0 0	50.0 725	bar psi	tenth Whole
Et40	overheating mode. Pressure set point used during PI function in MOP	0.0	50.0	bar	tenth
L140	r ressure set point used during Fritunction in MOF	0.0	50.0 725	psi	Whole
Et41	Proportional part of the PI in MOP regulation	0.0	50.0	bar	tenth
		0.0	725	psi	whole
Et42	Integral time for MOP protection	0	250	Sec	
Et43	LOP protection activation threshold. This sets the low pressure protection intervention threshold, below which	0.0	50.0	bar	tenth
	an additional regulation is activated, similar to that of low overheating operation.	0	725	psi	Whole
Et44	Pressure set point used during operation in LOP of PI	0.0 0	50.0 725	bar psi	tenth Whole
Et45	Proportional part of the PI in LOP regulation	0.0 0	50.0 725	bar psi	tenth Whole
Et46	Integral time for LOP protection	0	250	Sec	
Et47	Waiting time for machine start up before MOP chiller alarm signal	0	250	Sec	
	PID regulation in Heat pump mode				
Et48	PID proportional constant in heat pump mode	0.0	50.0	°C	tenth
-		0	122	°F	Whole
Et49	PID integral time in heat pump mode	0	250	Sec	-
Et50	PID derivative constant in heat pump mode	0	250	Sec	
Et51	Overheating regulation set point in heat pump mode	0.0	25.0	°C	tenth
		0	77	°F	Whole

Et52	Overheating regulation dead band in heat pump mode	0.0	5.0	°C	tenth
		0	41	°F	Whole
Et53	High overheating threshold. The alarm status is signalled after the high	Et51	80.0	°C	tenth
	overheating alarm activation delay	EIDI	176	°F	Whole
Et54	Low overheating threshold. In this case, an additional integral time is	0.0		°C	tenth
	added to the normal regulation in order to speed up the return to the	0.0	Et51	°F	Whole
	normal operating conditions	0		°F	whole
Et55	Additional integral time to prevent low overheating in heat pump mode	0	250	Sec	
Et56	MOP protection activation threshold. Sets the high pressure protection	0.0	50.0	bar	tenth
	threshold, above which an additional regulation is activated, similar to				
	that of low overheating	0	725	psi	Whole
Et57	Pressure set point used during PI function in MOP	0.0	50.0	bar	tenth
		0	725	psi	Whole
Et58	Proportional part of the PI in MOP regulation	0.0	50.0	bar	tenth
		0	725	psi	whole
Et59	Integral time for MOP protection	0	250	Sec	
Et60	LOP protection activation threshold. This sets the low pressure protection	0.0	50.0	bar	tenth
	threshold, below which an additional regulation is activated, similar to that				
	of low overheating	0	725	psi	Whole
Et61	Pressure set point used during operation in LOP of PI	0.0	50.0	bar	tenth
		0	725	psi	Whole
Et62	Proportional part of the PI in LOP regulation	0.0	50.0	bar	tenth
	· · · · ·	0	725	psi	Whole
Et63	Integral time for LOP protection	0	250	Sec	
Et64	Waiting time for machine start up before MOP chiller alarm signal	0	250	Sec	

8 ANALOG / DIGITAL INPUT/OUTPUT CONFIGURATIONS

8.1 CONFIGURATION OF ANALOG INPUTS

0. Disabled

1. Compressor 1 PTC supply temperature probe

2. Compressor 2 PTC supply temperature probe

- 3. Compressor 3 PTC supply temperature probe
- 4. Compressor 4 PTC supply temperature probe
- 5. Compressor 5 PTC supply temperature probe
- 6. Compressor 6 PTC supply temperature probe
- 7. Evaporator common input NTC temperature probe
- 8. Evaporator output 1 NTC temperature probe
- 9. Evaporator output 2 NTC temperature probe
- 10. Evaporator common output NTC temperature probe
- 11. Condenser hot water common input NTC temp. probe
- 12. Circuit 1 Condenser hot water input NTC temp. probe
- 13. Circuit 2 Condenser hot water input NTC temp. probe
- 14. Circuit 1 Condenser hot water output NTC temp. probe
- 15. Circuit 2 Condenser hot water output NTC temp. probe
- 16. Condenser hot water common output NTC temp. probe
- 17. System water input NTC temperature probe (free cooling)
- 18. External air / condenser water (free cooling) temperature NTC temperature probe
- 19. External air temp / dynamic set point / auxiliary heating / change over NTC temperature probe

Combined defrost and auxiliary probes

Free cooling and external air

- 20. Circuit 1 combined defrost NTC temperature probe
- 21. Circuit 2 combined defrost NTC temperature probe
- 22. Auxiliary output 1 NTC temperature probe
- 23. Auxiliary output 2 NTC temperature probe
- 24. Domestic water temperature regulation NTC temperature probe (num. 1)
- 25. Domestic water temperature safety NTC temperature probe (num. 2)
- 26. Supply temperature NTC temperature probe
- 27. Solar panel temperature NTC temperature probe

Domestic water

Condensation probes/transducers

Evaporator

Condenser

- 28. Circuit 1 condensation probe (NTC temperature)
- 29. Circuit 2 condensation probe (NTC temperature)
- 30. Circuit 1 condensation probe (pressure 4+20 mA / ratiometric 0+ 5Volt)
- 31. Circuit 2 condensation probe (pressure 4:20 mA / ratiometric 0: 5Volt)

Evaporation transducers

- 32. Circuit 1 evaporation pressure probe (pressure 4:20 mA / ratiometric 0: 5Volt)
- 33. Circuit 2 evaporation pressure probe (pressure 4+20 mA / ratiometric 0+5Volt)

Auxiliary transducers and dynamic set point

- 34. Circuit 1 auxiliary output pressure probe (pressure 4:20 mA / ratiometric 0: 5Volt)
- 35. Circuit 2 auxiliary output pressure probe (pressure 4:20 mA / ratiometric 0: 5Volt)
- 36. Dynamic set point 4-20 mA probe

8.2 CONFIGURATION OF DIGITAL INPUTS

0. Disabled

- 1. Remote ON/OFF
- 2. Remote chiller / heat pump
- 3. Evaporator flow switch
- 4. Condenser flow switch hot side
- 5. Domestic water flow switch
- 6. Anti-freeze alarm circuit 1
- 7. Anti-freeze alarm circuit 2
- 8. High pressure pressure switch circuit 1
- 9. High pressure pressure switch circuit 2
- 10. Low pressure pressure switch circuit 1
- 11. Low pressure pressure switch circuit 2
- 12. High pressure compressor 1
- 13. High pressure compressor 2
- 14. High pressure compressor 3
- 15. High pressure compressor 4
- 16. High pressure compressor 5
- 17. High pressure compressor 6
- 18. Thermal overload compressor 1
- 19. Thermal overload compressor 2
- 20. Thermal overload compressor 3
- 21. Thermal overload compressor 4
- 22. Thermal overload compressor 5
- 23. Thermal overload compressor 6
- 24. Condensation fan thermal overload circuit 1
- 25. Condensation fan thermal overload circuit 2
- 26. Condensation fan thermal overload common 1 / 2
- 27. Thermal overload water pump 1 evaporator / thermal overload supply fan
- 28. Evaporator support water pump thermal overload
- 29. Thermal overload water pump 1 condenser
- 30. Condenser support water pump thermal overload
- 31. Request for recovery operation circuit 1
- 32. Request for recovery operation circuit 2
- 33. End defrost circuit 1
- 34. End defrost circuit 2
- 35. Energy Saving
- 36. Compressor 1 oil pressure switch/float
- 37. Compressor 2 oil pressure switch/float
- 38. Compressor 3 oil pressure switch/float
- 39. Compressor 4 oil pressure switch/float
- 40. Compressor 5 oil pressure switch/float
- 41. Compressor 6 oil pressure switch/float
- 42. Pump down pressure switch circuit 1
- 43. Pump down pressure switch circuit 2
- 44. Digital input general block alarm unit 1
- 45. Digital input general alarm alert / block unit 2
- 46. Digital input working in RTC automatic activation (time band)/manual (keyboard)
- 47. Digital input working with supply fan only
- 48. Digital input temperature control request (motor-condensing unit)

14. 1st step ON/OFF condensation fan circuit 2 15. 2nd step ON/OFF condensation fan circuit 2

49. Chiller request digital input (motor-condensing unit) 50. Heat pump request digital input (motor-condensing unit) 51. Digital input power step 1 request (motor-condensing unit) 52. Digital input power step 2 request (motor-condensing unit) 53. Digital input power step 3 request (motor-condensing unit) 54. Digital input power step 4 request (motor-condensing unit) 55. Digital input power step 5 request (motor-condensing unit) 56. Digital input power step 6 request (motor-condensing unit) 57. Digital input power step 7 request (motor-condensing unit) 58. Digital input power step 8 request (motor-condensing unit)

CONFIGURATION OF DIGITAL OUTPUTS

- 16. 3rd step ON/OFF condensation fan circuit 2 17. 4th step ON/OFF condensation fan circuit 2
- 18. Pump-down solenoid circuit 1
- 19. Pump-down solenoid circuit 2
- 20. Recovery valve circuit 1
- 21. Recovery valve circuit 2

59. Solar panel flow switch 60. Incorrect sequence of phases 61. Auxiliary heating thermal overload

62. Auxiliary heating block

2. Evaporator water pump/supply fan 3. Evaporator support water pump 4. Anti-freeze heaters circuit 1 5. Anti-freeze heaters circuit 2 6. Recovery condenser water pump

7. Recovery condenser support water pump

8. Chiller / heat pump inversion valve circuit 1 9. Chiller / heat pump inversion valve circuit 2

10. 1st step ON/OFF condensation fan circuit 1 11. 2nd step ON/OFF condensation fan circuit 1 12. 3rd step ON/OFF condensation fan circuit 1 13. 4th step ON/OFF condensation fan circuit 1

8.3

0. Disabled 1. Alarm

- 22. Free cooling ON/OFF valve / valve 1 free cooling water-water unit
- 23. Fan relay output ON/OFF valve / valve 2 free cooling water-water unit
- 24. 1st step split coil circuit 1
- 25. 2nd step split coil circuit 1
- 26. 1st step split coil circuit 2
- 27. 2nd step split coil circuit 2
- 28. Auxiliary output 1
- 29. Auxiliary output 2
- 30. Auxiliary output 3
- 31. Auxiliary output 4

Free cooling, split coils and auxiliary outputs

Intermittent valves and liquid injection

- 32. Intermittent valve for screw comp/increase valve for stepless compr. (compressor 1
- 33. Intermittent valve for screw comp/increase valve for stepless compr. (compressor 2)
- 34. Liquid injection solenoid valve compressor 1 35. Liquid injection solenoid valve compressor 2
- 36. ON/OFF valve 1 for domestic water production
- 37. ON/OFF valve 2 for domestic water production

Inversion valves

Condensation fan

Pump-down solenoids

Recovery

Domestic water

39. Heaters (second step) for domestic water production	
40. Heaters (third step) for domestic water production	
41. Solar panel pump	
42. Solar coil activation/deactivation ON/OFF valve	
43. Domestic water pump	•
	Compressor 1
Direct start-up: compressor relay 1	
PW start-up: coil relay 1 compressor 1	
Star / triangle start-up: relay line 1 compressor 1	
45. PW start-up: coil relay 2 compressor 1	
Star / triangle start-up: relay line 2 compressor 1	
46. Star centre relay star start up / triangle compressor 1	
47. Partialisation 1 compressor 1	
48. Partialisation 2 compressor 1	
49. Partialisation 3 compressor 1	
50. Gas bypass valve in compressor 1 start-up	Commune 1
	Compressor 2
51. Direct start-up: compressor relay 2	
PW start-up: coil relay 1 compressor 2	
Star / triangle start-up: relay line 1 compressor 2	
52. PW start-up: coil relay 2 compressor 2	
Star / triangle start-up: relay line 2 compressor 2	
53. Star centre relay star start up / triangle compressor 2	
54. Partialisation 1 compressor 2	
55. Partialisation 2 compressor 2	
56. Partialisation 3 compressor 2	
57. Gas bypass valve in compressor 2 start-up	
	Other Compressors
EQ. Direct start up, compressor relay 2	Other Compressors
58. Direct start-up: compressor relay 3	
59. Direct start-up: compressor relay 4	
60. Direct start-up: compressor relay 5	
61 Direct start up, compressor relay 6	
61. Direct start-up: compressor relay 6	
	Charge modulating valves
62. Circuit 1 charge modulating valve	Charge modulating valves
62. Circuit 1 charge modulating valve63. Circuit 2 charge modulating valve	Charge modulating valves Status relay
62. Circuit 1 charge modulating valve63. Circuit 2 charge modulating valve64. Operating unit	
62. Circuit 1 charge modulating valve63. Circuit 2 charge modulating valve	
62. Circuit 1 charge modulating valve63. Circuit 2 charge modulating valve64. Operating unit	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 73. APFL alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 73. APFL alarm 74. ALC1 alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 73. APFL alarm 74. ALC1 alarm 75. ALC2 alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 73. APFL alarm 74. ALC1 alarm 75. ALC2 alarm 76. C1tr alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 73. APFL alarm 74. ALC1 alarm 75. ALC2 alarm 76. C1tr alarm 77. C2tr alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 73. APFL alarm 74. ALC1 alarm 75. ALC2 alarm 76. C1tr alarm 77. C2tr alarm 78. C3tr alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 73. APFL alarm 74. ALC1 alarm 75. ALC2 alarm 76. C1tr alarm 77. C2tr alarm 78. C3tr alarm 79. C4tr alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 73. APFL alarm 74. ALC1 alarm 75. ALC2 alarm 76. C1tr alarm 77. C2tr alarm 78. C3tr alarm 79. C4tr alarm 80. C5tr alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 73. APFL alarm 74. ALC1 alarm 75. ALC2 alarm 76. C1tr alarm 77. C2tr alarm 78. C3tr alarm 79. C4tr alarm 80. C5tr alarm 81. C6tr alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 73. APFL alarm 74. ALC1 alarm 75. ALC2 alarm 76. C1tr alarm 77. C2tr alarm 78. C3tr alarm 79. C4tr alarm 80. C5tr alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 73. APFL alarm 74. ALC1 alarm 75. ALC2 alarm 76. C1tr alarm 77. C2tr alarm 78. C3tr alarm 79. C4tr alarm 80. C5tr alarm 81. C6tr alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 73. APFL alarm 74. ALC1 alarm 75. ALC2 alarm 76. C1tr alarm 77. C2tr alarm 78. C3tr alarm 79. C4tr alarm 80. C5tr alarm 81. C6tr alarm 82. B1A alarm 	
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 73. APFL alarm 74. ALC1 alarm 75. ALC2 alarm 76. C1tr alarm 77. C2tr alarm 78. C3tr alarm 79. C4tr alarm 80. C5tr alarm 81. C6tr alarm 82. B1A alarm 	Status relay
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 73. APFL alarm 74. ALC1 alarm 75. ALC2 alarm 76. C1tr alarm 77. C2tr alarm 78. C3tr alarm 79. C4tr alarm 81. C6tr alarm 82. B1A alarm 84. Auxiliary heating 1st step 	Status relay
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 73. APFL alarm 74. ALC1 alarm 75. ALC2 alarm 76. C1tr alarm 77. C2tr alarm 78. C3tr alarm 79. C4tr alarm 81. C6tr alarm 82. B1A alarm 83. B2A alarm 84. Auxiliary heating 1st step 85. Auxiliary heating 2nd step 	Status relay
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 73. APFL alarm 74. ALC1 alarm 75. ALC2 alarm 76. C1tr alarm 77. C2tr alarm 78. C3tr alarm 79. C4tr alarm 81. C6tr alarm 82. B1A alarm 84. Auxiliary heating 1st step 85. Auxiliary heating 2nd step 86. Auxiliary heating 3rd step 	Status relay
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 73. APFL alarm 74. ALC1 alarm 75. ALC2 alarm 76. C1tr alarm 77. C2tr alarm 78. C3tr alarm 79. C4tr alarm 81. C6tr alarm 82. B1A alarm 83. B2A alarm 84. Auxiliary heating 1st step 85. Auxiliary heating 2nd step 	Status relay
 62. Circuit 1 charge modulating valve 63. Circuit 2 charge modulating valve 64. Operating unit 65. APS Alarm (phase sequence) 66. HP1 alarm 67. HP2 alarm 68. LP1 alarm 69. LP2 alarm 70. AEFL alarm 71. ACFL alarm 72. AHFL alarm 73. APFL alarm 74. ALC1 alarm 75. ALC2 alarm 76. C1tr alarm 77. C2tr alarm 78. C3tr alarm 79. C4tr alarm 81. C6tr alarm 82. B1A alarm 84. Auxiliary heating 1st step 85. Auxiliary heating 2nd step 86. Auxiliary heating 3rd step 	Status relay

- 89. IV management valve 14
- 90. IV management valve 15
- 91. IV management valve 16

8.4 CONFIGURATION OF PROPORTIONAL OUTPUTS

Configurable output signal 4:20mA - 0:10V

- 0. output disabled
- 1. proportional output 0÷10V condensation control circuit 1
- 2. proportional output 0÷10V condensation control circuit 2
- 3. proportional output 0÷10V damper / mixing valve free cooling direct action
- 4. proportional output 0÷10V damper / mixing valve free cooling direct action
- 5. auxiliary output 1 0÷10V
- 6. auxiliary output 2 0÷10V
- 7. auxiliary output 3 0÷10V
- 8. auxiliary output 4 0÷10V
- 9. modulating output 0÷10V compressor 1 circuit 1
- 10. modulating output 0÷10V compressor 1 circuit 2
- 11. modulating output 0÷10V auxiliary heating
- 12. proportional output 4÷20mA condensation control circuit 1
- 13. proportional output 4÷20mA condensation control circuit 2
- 14. proportional output 4÷20mA damper / mixing valve free cooling direct action
- 15. proportional output 4÷20mA damper / mixing valve free cooling inverse action
- 16. auxiliary output 1 4÷20mA
- 17. auxiliary output 2 4÷20mA
- 18. auxiliary output 3 4÷20mA
- 19. auxiliary output 4 4÷20mA
- 20. modulating output 4:20mA compressor 1 circuit 1
- 21. modulating output 4:20mA compressor 1 circuit 2
- 22. modulating output 4÷20mA auxiliary heating
- External relay drive ON/OFF output

8.5 ADDITIONAL OUTPUTS

- 1 USB
- 1 RS485 slave
- 1 LAN





Dixell S.r.l. - 32010 Pieve d'Alpago (BL) ITALY - Z.I. Via dell'Industria, 27 Tel. +39.0437.9833 r.a. - Fax +39.0437.989313 - www.dixell.com - dixell@emerson.com