



Installation, User and Service Manual Indoor unit

MK SYSTEM

Contents

1	Safety instructions								
2	Standard delivery								
3	Symbols used								
Ŭ	3 1	Symbols	used in the manual	.0					
	3.2	Symbols	used on the indoor unit	0					
	33	Symbols	used on the data plate	· . / 7					
	0.0	Cymbols		. /					
4	Techr	nical spec	ifications	. 7					
	4.1	Homolog	ations	. 7					
		4.1.1	Directives	7					
		4.1.2	Factory test	. 8					
	4.2	Technica	ıl data	8					
		4.2.1	Indoor unit technical specifications	. 8					
		4.2.2	Heating flow sensor specifications	8					
	4.3	Indoor ur	nit dimensions	. 8					
	4.4	Electrica	l diagram	. 9					
-	Deee	-intian of t		40					
Ð		ription of t	ne product	10					
	5.1 5.2	Data piai	10to	10					
	52 52	Descripti	nponents	10					
	5.5	5 3 1		. I I 11					
		532	230V nower cable terminal block						
		533	Ω - 24 V signal cable terminal block	12					
		534	CB-05 PCB	12					
		5.3.5	CB-21 PCB	12					
		5.3.6	GTW-08 PCB	12					
		5.3.7	GTW-21 PCB	.13					
		5.3.8	SCB-01 PCB	13					
	5.4	Descripti	on of the user interface	14					
		5.4.1	Description of the user interface	14					
		5.4.2	Description of the home screen	. 14					
6	Instal			. 15					
	6.1	Installatio		15					
	6.2	Position	Observing the leasting of the independent	.15					
		6.2.1		15					
		0.2.2		10					
	63	0.2.3 Electrica		10					
	0.5	631	Checking and preparing the electrical installation	16					
		632	Connecting the electrical circuits	17					
		633	Accessing the indoor unit connectors	18					
		6.3.4	Creating the cable gland openings	18					
		6.3.5	Routing the cables	. 18					
		6.3.6	Installing and connecting the outdoor temperature sensor	19					
		6.3.7	Fitting the heating flow temperature sensor	.20					
		6.3.8	Connecting a backup heater	20					
		6.3.9	Connecting a heating element	.21					
		6.3.10	Connecting the hydraulic backup	.21					
		6.3.11	Connecting an internal option PCB	22					
		6.3.12	Connecting the external options	23					
		6.3.13	Connecting the indoor unit to a cascade	23					
		6.3.14	Connecting an electricity meter	23					
		6.3.15	Checking the electrical connections	24					
7	C	nicolonina		24					
r		General		24 24					
	7.1		ha takan hafara commissioning	24					
	7.3	Commies	sioning procedure with smartphone	25					
	7.4	Commiss	sioning procedure without smartphone	25					
	7.5	CN1 and	CN2 parameters	.26					

Contents

	7.6	Final inst	ructions for commissioning	. 26
8	Settin	igs		. 26
	8.1	Accessin		. 26
	8.2	Searchin	g for a parameter or a measured value	27
	8.3	Menu tre	e On	. 27
	8.4	Configuri	ng the maintenance message	27
	8.5	Configuri	ng the heating circuit	28
		8.5.1	Setting the circuit function	. 28
		8.5.2	Setting the heating curve	. 28
		8.5.3	Configuring underfloor cooling or a convection fan	. 29
		8.5.4	Selecting the conditions for activating Cooling mode	. 29
	8.6	Configuri	ng the backup	. 29
	8.7	Configuri	ng the backup boiler parameters	. 30
	0.0	Configuri	ng the hybrid operating mode for a backup boller	. 30 24
	0.9	Configuri	e scieeu	. ວ I ວ ວ
	0.10	8 10 1	Configuring an on/off or modulating thermostat	. 33
		8 10 2	Configuring a thermostat with a heating/cooling control contact	.00
	8.11	Configuri	ng the anti-legionella function	.35
	8.12	Configuri	ng a buffer tank	.36
	8.13	Improving	g domestic hot water or heating comfort	. 36
	8.14	Reducing	the noise level of the outdoor unit	.37
	8.15	Configuri	ng the multifunctional output	.37
	8.16	Configuri	ng sources of energy	. 38
		8.16.1	Configuring the electrical energy consumption function	. 38
		8.16.2	Supplying the heat pump with photovoltaic energy	. 39
	0 17	8.16.3 Souting of	Connecting the installation to a Smart Grid	. 39
	0.17	2 17 1	Soving the installer details	. 40
		0.17.1	Saving the commissioning settings	.40
		8.17.3	Resetting or re-establishing the parameters	. 41
9	Parar	neters		. 41
9	Parar 9.1	neters List of pa	rameters	. 41 . 41
9	Parar 9.1	n eters List of pa 9.1.1	rameters	. 41 . 41 . 41
9	Parar 9.1	neters List of pa 9.1.1 9.1.2	rameters A Pleat Pump > Parameters, counters, signals CIRCA > Parameters, counters, signals	. 41 . 41 . 41 . 41
9	Parar 9.1	neters List of pa 9.1.1 9.1.2 9.1.3	rameters . IN > Heat Pump > Parameters, counters, signals . IN > CIRCA > Parameters, counters, signals . IN > DHW tank > Parameters, counters, signals .	. 41 . 41 . 41 . 46 . 49
9	Parar 9.1	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4	 rameters . > Heat Pump > Parameters, counters, signals . > CIRCA > Parameters, counters, signals . > DHW tank > Parameters, counters, signals . > Outdoor sensor setup > Parameters, counters, signals . 	. 41 . 41 . 41 . 46 . 49 . 51
9	Parar 9.1	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5	rameters Image: Planeters	. 41 . 41 . 46 . 49 . 51 . 53
9	Parar 9.1 9.2	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Descriptio	rameters . A Heat Pump > Parameters, counters, signals . A > CIRCA > Parameters, counters, signals . A > DHW tank > Parameters, counters, signals . A > Outdoor sensor setup > Parameters, counters, signals . A > Image: Setup > Parameters, counters, signals . A > Image: Setup > ScB-01 . Con of the parameters . Purpring the back up in bacting mode .	. 41 . 41 . 46 . 49 . 51 . 53 . 54
9	Parar 9.1 9.2	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Descriptio 9.2.1 9.2.2	rameters Image: Planeters Planeters </th <th>. 41 . 41 . 46 . 49 . 51 . 53 . 54 . 54</th>	. 41 . 41 . 46 . 49 . 51 . 53 . 54 . 54
9	Parar 9.1 9.2	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Descriptio 9.2.1 9.2.2 9.2.3	rameters . A > Heat Pump > Parameters, counters, signals . A > CIRCA > Parameters, counters, signals . A > DHW tank > Parameters, counters, signals . A > Outdoor sensor setup > Parameters, counters, signals . A > (a) > Installation Setup > SCB-01 . Con of the parameters . Running the back-up in heating mode . Running the back-up in domestic hot water mode . Operation of the switch between beating and production of domestic bot water .	. 41 . 41 . 46 . 49 . 51 . 53 . 54 . 55 . 55
9	Parar 9.1 9.2	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Descriptio 9.2.1 9.2.2 9.2.3 9.2.4	rameters A > Heat Pump > Parameters, counters, signals . CIRCA > Parameters, counters, signals . A > DHW tank > Parameters, counters, signals . A > Outdoor sensor setup > Parameters, counters, signals . A > (a) > Installation Setup > SCB-01 . on of the parameters . Running the back-up in heating mode . Running the back-up in domestic hot water mode . Operation of the switch between heating and production of domestic hot water . Operation of the heating curve	. 41 . 41 . 46 . 49 . 51 . 53 . 54 . 55 . 55 . 55
9	Parar 9.1 9.2	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Descriptio 9.2.1 9.2.2 9.2.3 9.2.4	rameters → Heat Pump > Parameters, counters, signals → CIRCA > Parameters, counters, signals → DHW tank > Parameters, counters, signals → Outdoor sensor setup > Parameters, counters, signals → Source = S	. 41 . 41 . 46 . 49 . 51 . 53 . 54 . 55 . 55 . 56
9	Parar 9.1 9.2 Exam	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Descriptio 9.2.1 9.2.2 9.2.3 9.2.4 ples of ins	rameters Image: Planeters Running the back-up in heating mode Running the back-up in domestic hot water mode Operation of the switch between heating and production of domestic hot water Operation of the heating curve Image: Planeters Image: Planeters Running the back-up in domestic hot water mode Operation of the heating curve Image: Planeters Image: Planeters <th>. 41 . 41 . 46 . 49 . 51 . 53 . 54 . 55 . 55 . 56 . 58</th>	. 41 . 41 . 46 . 49 . 51 . 53 . 54 . 55 . 55 . 56 . 58
9 10	Parar 9.1 9.2 Exam 10.1	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Descriptio 9.2.1 9.2.2 9.2.3 9.2.4 Installatio	rameters . A Heat Pump > Parameters, counters, signals . A > CIRCA > Parameters, counters, signals . A > DHW tank > Parameters, counters, signals . A > Outdoor sensor setup > Parameters, counters, signals . A > (a) > Installation Setup > SCB-01 . on of the parameters . Running the back-up in heating mode . Running the back-up in domestic hot water mode . Operation of the switch between heating and production of domestic hot water . Operation of the heating curve . Stallation and connection with an AURIGA M/T-A outdoor unit . on with one backup boiler and one low loss header .	. 41 . 41 . 46 . 49 . 51 . 53 . 54 . 55 . 55 . 56 . 58 . 58
9 10	Parar 9.1 9.2 Exam 10.1	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Description 9.2.1 9.2.2 9.2.3 9.2.4 nples of ins Installation 10.1.1	rameters . I → Heat Pump > Parameters, counters, signals . I → CIRCA > Parameters, counters, signals . I → DHW tank > Parameters, counters, signals . I → Outdoor sensor setup > Parameters, counters, signals . I → i ⇒ Installation Setup > SCB-01 . on of the parameters . Running the back-up in heating mode . Running the back-up in domestic hot water mode . Operation of the switch between heating and production of domestic hot water . Operation of the heating curve . stallation and connection with an AURIGA M/T-A outdoor unit . m with one backup boiler and one low loss header . Hydraulic diagram	. 41 . 41 . 46 . 49 . 51 . 53 . 54 . 55 . 55 . 55 . 55 . 58 . 58 . 58
9 10	Parar 9.1 9.2 Exam 10.1	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Description 9.2.1 9.2.2 9.2.3 9.2.4 Installation 10.1.1 10.1.2	rameters. I → Heat Pump > Parameters, counters, signals . I → CIRCA > Parameters, counters, signals . I → DHW tank > Parameters, counters, signals . I → Outdoor sensor setup > Parameters, counters, signals . I → Installation Setup > SCB-01 . on of the parameters . Running the back-up in heating mode . Running the back-up in heating mode . Running the back-up in domestic hot water mode . Operation of the switch between heating and production of domestic hot water . Operation of the heating curve . Stallation and connection with an AURIGA M/T-A outdoor unit . on with one backup boiler and one low loss header . Hydraulic diagram . Connecting and configuring the heat pump .	. 41 . 41 . 46 . 49 . 51 . 53 . 54 . 55 . 55 . 56 . 58 . 58 . 58 . 59
9	Parar 9.1 9.2 Exam 10.1	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Descriptio 9.2.1 9.2.2 9.2.3 9.2.4 Installatio 10.1.1 10.1.2 Installatio	rameters. A > Heat Pump > Parameters, counters, signals . A > CIRCA > Parameters, counters, signals . A > DHW tank > Parameters, counters, signals . A > Outdoor sensor setup > Parameters, counters, signals . A > = > Installation Setup > SCB-01 . on of the parameters . Running the back-up in heating mode . Running the back-up in domestic hot water mode . Operation of the switch between heating and production of domestic hot water . Operation of the heating curve . stallation and connection with an AURIGA M/T-A outdoor unit . on with one backup boiler and one low loss header . Hydraulic diagram . Connecting and configuring the heat pump . on with one DHW cylinder and one low loss header .	. 41 . 41 . 46 . 49 . 51 . 53 . 54 . 55 . 55 . 55 . 56 . 58 . 58 . 59 . 61
9	Parar 9.1 9.2 Exam 10.1	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Descriptio 9.2.1 9.2.2 9.2.3 9.2.4 notes of ins Installatio 10.1.1 10.1.2 Installatio 10.2.1	rameters. A > Heat Pump > Parameters, counters, signals . A > CIRCA > Parameters, counters, signals . A > DHW tank > Parameters, counters, signals . A > Outdoor sensor setup > Parameters, counters, signals . A > © Notation Setup > SCB-01 . on of the parameters . Running the back-up in heating mode . Running the back-up in domestic hot water mode . Operation of the switch between heating and production of domestic hot water . Operation of the heating curve . stallation and connection with an AURIGA M/T-A outdoor unit . on with one backup boiler and one low loss header . Hydraulic diagram . Connecting and configuring the heat pump . on with one DHW cylinder and one low loss header . Hydraulic diagram .	. 41 . 41 . 46 . 49 . 51 . 53 . 54 . 55 . 55 . 55 . 56 . 58 . 58 . 59 . 61 . 61
9	Parar 9.1 9.2 Exam 10.1	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Descriptio 9.2.1 9.2.2 9.2.3 9.2.4 Installatio 10.1.1 10.1.2 Installatio 10.2.1 10.2.2	rameters → Heat Pump > Parameters, counters, signals → CIRCA > Parameters, counters, signals → DHW tank > Parameters, counters, signals → Outdoor sensor setup > Parameters, counters, signals → Counters → Installation Setup > SCB-01 → on of the parameters Running the back-up in heating mode Running the back-up in domestic hot water mode Operation of the switch between heating and production of domestic hot water Operation of the heating curve → Coperation of the heating curve → Connecting and configuring the heat pump → with one DHW cylinder and one low loss header Hydraulic diagram Connecting and configuring the heat pump → Connecting and configuring the heat pump → Connecting and configuring the heat pump	. 41 . 41 . 46 . 49 . 51 . 53 . 54 . 55 . 55 . 55 . 55 . 55 . 58 . 58 . 58
9 10 11	Parar 9.1 9.2 Exam 10.1 10.2	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Descriptio 9.2.1 9.2.2 9.2.3 9.2.4 Installation 10.1.1 10.1.2 Installation 10.2.1 10.2.2	rameters .	. 41 . 41 . 46 . 49 . 51 . 53 . 55 . 55 . 55 . 56 . 58 . 58 . 59 . 61 . 62 . 62
9 10 11	Parar 9.1 9.2 Exam 10.1 10.2 Opera 11.1	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Description 9.2.1 9.2.2 9.2.3 9.2.4 noteallation 10.1.1 10.1.2 Installation 10.2.1 10.2.2 ation Regional	rameters .	. 41 . 41 . 46 . 49 . 51 . 53 . 54 . 55 . 55 . 55 . 56 . 58 . 58 . 58 . 59 . 61 . 62 63 63
9 10 11	 Parar 9.1 9.2 Exam 10.1 10.2 Opera 11.1 11.2 	meters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Description 9.2.1 9.2.2 9.2.3 9.2.4 ples of ins Installation 10.1.1 10.2.2 Installation 10.2.1 notacle Personal	rameters .	. 41 . 41 . 46 . 49 . 51 . 53 . 54 . 55 . 55 . 55 . 56 . 58 . 58 . 59 . 61 . 62 . 63 . 64
9 10 11	Parar 9.1 9.2 9.2 Exam 10.1 10.2 0pera 11.1 11.2	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Descriptio 9.2.1 9.2.2 9.2.3 9.2.4 noteallatio 10.1.1 10.1.2 Installatio 10.2.1 10.2.2 ation Regional Personal 11.2.1	rameters Image: Planeters Planeters Image: Planeters Parameters Running the back-up in heating mode Parameters Running the back-up in domestic hot water mode Poperation of the switch between heating and production of domestic hot water Operation of the switch between heating and production of domestic hot water Operation of the heating curve Stallation and connection with an AURIGA M/T-A outdoor unit Planeters Image: Planeters Planeters Mydraulic diagram Connecting and configuring the heat pump Image: Planeters Planeters Image: Planeters Planeters <	. 41 . 41 . 46 . 49 . 51 . 53 . 54 . 55 . 55 . 55 . 56 . 58 . 58 . 59 . 61 . 62 . 63 . 64 . 64
9 10 11	Parar 9.1 9.2 9.2 Exam 10.1 10.2 0pera 11.1 11.2	meters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Description 9.2.1 9.2.2 9.2.3 9.2.4 mples of ins Installation 10.2.1 10.2.2 ation Personal 11.2.1 11.2.1	rameters A > Heat Pump > Parameters, counters, signals CIRCA > Parameters, counters, signals CIRCA > Parameters, counters, signals A > Outdoor sensor setup > Parameters, counters, signals A >	. 41 . 41 . 46 . 49 . 51 . 53 . 54 . 55 . 55 . 55 . 56 . 58 . 58 . 58 . 59 . 61 . 62 . 63 . 64 . 64 . 64
9 10 11	Parar 9.1 9.2 Exam 10.1 10.2 Opera 11.1 11.2 11.3	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Description 9.2.1 9.2.2 9.2.3 9.2.4 ples of ins Installation 10.2.1 10.2.2 ation Regional Personal 11.2.1 11.2.2 Personal	rameters	. 41 . 41 . 46 . 49 . 51 . 53 . 54 . 55 . 55 . 55 . 55 . 55 . 55 . 58 . 58
9 10 11	Parar 9.1 9.2 Exam 10.1 10.2 Opera 11.1 11.2 11.3	neters List of pa 9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 Descriptio 9.2.1 9.2.2 9.2.3 9.2.4 nples of ins Installatio 10.1.1 10.1.2 Installatio 10.2.1 10.2.2 ation Regional Personal 11.2.1 11.2.2 Personal 11.3.1	rameters	. 41 . 41 . 46 . 49 . 51 . 53 . 55 . 55 . 55 . 55 . 55 . 55 . 58 . 58

	11.4 11.5 11.6	11.3.3 Changing the temperature of an activity 6 Room temperature for a zone 6 11.4.1 Selecting the operating mode 6 11.4.2 Defining a constant room temperature 6 11.4.3 Configuring and activating a timer programme for the heating 6 11.4.4 Activating and configuring a timer programme for cooling 6 11.4.5 Changing the room temperature temporarily 6 11.4.5 Changing the operating mode 6 11.5.1 Selecting the operating mode 6 11.5.2 Activating and configuring a timer programme for domestic hot water 6 11.5.1 Selecting the operating mode 6 11.5.2 Activating and configuring a timer programme for domestic hot water 6 11.5.3 Forcing domestic hot water production (override) 6 11.5.4 Modifying the domestic hot water setpoint temperatures 6 11.6.1 Switching the central heating on/off 6 11.6.2 Forcing cooling 6	5566667777888889
		11.6.3 Periods of absence or going on holiday	39
	11.7	Monitoring the energy consumption	;9
	11.8	Starting and stopping the heat pump	'0
		11.8.1 Starting the heat pump	70
			0
12	Maint 12.1 12.2 12.3 12.4	tenance 7 General 7 Checking operation of the appliance 7 Cleaning the casing 7 Replacing the user interface battery 7	'0 '1 '1 '1
40	Travk	lashaating 7	70
13	13.1 13.2 13.3	Resolving operating errors 7 13.1.1 Types of error code 7 13.1.2 Warning codes 7 13.1.3 Blocking codes 7 13.1.4 Lockout codes 7 Displaying and clearing the error memory 8 Accessing information on the bardware and software versions 8	2 2 2 2 2 2 2 2 2 2 2 3 9 30
	10.0		
14	Deco 14.1 14.2 14.3	mmissioning and disposal	31 31 31
15	Appe 15.1 15.2	ndix 8 Name and symbol of the zones 8 Name and temperature of the activities 8	31 31 32

1 Safety instructions

General safety instructions

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Children must not carry out any unsupervised cleaning or maintenance operations.

Before any work, read the documents provided with the appliance carefully. These documents are also available on our website. See the back cover.

Keep these documents close to the place where the appliance is installed.

Only qualified professionals are authorised to carry out installation, commissioning, maintenance, repair or removal work on the appliance. They must follow the prevailing local and national regulations.

Do not make any modifications to the appliance without the written consent of the manufacturer. To benefit from warranty cover, no modifications should be made to the appliance.

Installation location

The indoor unit must be installed in a frost-free location.

Allow sufficient space around the appliance to ensure adequate accessibility to the appliance to facilitate maintenance. See "Installation" chapter.

Electrical connections

Only a qualified installer or a qualified technician is authorised to work on the appliance's electrical system, as an incorrectly performed intervention may cause electrical shocks and/or electrical leakage.

Install the appliance in accordance with national rules on electrical installation.

In order to avoid the danger of an unexpected thermal circuit breaker reset, this appliance must not be powered through an external switch, such as a timer, or be connected to a circuit which is regularly switched on and off by the electricity provider.

Before any wiring work on the electrical circuit, switch off the power supply, check that no voltage is present and secure the circuit breaker with a circuit breaker lockout.

Use wiring that meets the specifications in the installation manual and local regulations and laws. Use of wiring which does not meet the specifications may give rise to electric shocks, electrical leakage, smoke and/or a fire.

This appliance must be connected to the protective earthing in accordance with prevailing installation standards. Earth the appliance before making any electrical connections. Incomplete grounding can cause a malfunction or electric shock.

To avoid electric shock, check that the length of the conductors between the cable clamp and the terminal blocks is such that the active conductors are put under tension before the earth conductor.

Install a circuit breaker that meets the specifications in the installation manual and local regulations and laws.

Separate the extra-low voltage cables from the 230/400 V power supply cables.

See the Electrical connections chapter for the following operations:

- · Choosing the type and calibre of the protective equipment
- · Connection to the electrical network
- Wiring the appliance

Maintenance and repair work

Remove the casing only to perform maintenance and repair work. Put the casing back in place after maintenance and repair work.

Repair and maintenance of electrical components must include initial safety checks and component inspection procedures. In the event of a fault that could compromise safety, no power supply may be connected to the circuit until said fault has been dealt with satisfactorily. If the fault cannot be corrected immediately but it is necessary to continue operation, an appropriate temporary solution must be adopted. This shall be reported to the owner of the equipment to ensure all parties are duly informed.

Initial safety checks shall include:

- Discharging of the capacitors: this shall be done in a safe manner to avoid any possibility of sparking
- · Ensuring no live electrical components and wiring are exposed while charging, recovering or draining the system
- · Ensuring the continuity of the earth bonding.

Before any work, switch off the power supply for all the components of your installation.

Use only original spare parts.

Guidelines for the user

If you do not need to heat your home for a long period, deactivate the heating mode. Do not switch off the heat pump in order to guarantee the frost protection of the installation.

Keep the appliance accessible at all times to allow work to be performed.

Never remove or cover the labels and data plates affixed to appliances. These must be legible throughout the entire lifetime of the appliance.

Manufacturer's liabilities

Our products are manufactured in compliance with the requirements of the various applicable directives. They are therefore delivered with the $\zeta \epsilon$ marking and any documents necessary. In the interests of the quality of our products, we strive constantly to improve them. We therefore reserve the right to modify the specifications given in this document.

Our liability as manufacturer may not be invoked in the following cases:

- · Failure to abide by the instructions on installing, commissioning and maintaining the appliance
- · Failure to abide by the instructions on using the appliance
- Faulty or insufficient maintenance of the appliance

Responsibilities of the installer

The installer is responsible for the installation and initial commissioning of the appliance. The installer must observe the following instructions:

- · Read and follow the instructions given in the manuals provided with the appliance
- · Install the appliance in compliance with prevailing legislation and standards
- Carry out initial commissioning and any checks necessary
- · Explain the installation to the user
- · If maintenance is necessary, warn the user of the obligation to check the appliance and keep it in good working order
- Hand over all manuals to the user

Responsibilities of the user

To guarantee optimum operation of the system, you must abide by the following instructions:

- · Read and follow the instructions given in the manuals provided with the appliance
- · Call on a qualified professional to carry out installation and initial commissioning
- · Get your installer to explain your installation to you
- · Have the required inspections and maintenance carried out by a qualified installer
- · Keep the instruction manuals in good condition close to the appliance

2 Standard delivery

The standard delivery includes:

- An indoor unit
- An outdoor temperature sensor (AF60)
- · A bag containing:
 - A contact temperature sensor, a clamp and heat-conducting silicone paste,
 - A bulb temperature sensor with its retaining spring,
- A bag containing:
 - 2 quarter turn fasteners,
 - 4 screws, 4 wall plugs and 4 washers,
 - 11 cable glands and 11 nuts,
 - 5 cable clamps and 10 screws,
- 3 quick-release clips,
- An installation, user and service manual
- Terms of warranty
- The EU Declaration of Conformity
- · A list of important points to ensure successful installation

3 Symbols used

3.1 Symbols used in the manual

This manual uses various danger levels to draw attention to special instructions. We do this to improve user safety, to prevent problems and to guarantee correct operation of the appliance.



3.2 Symbols used on the indoor unit



3.3 Symbols used on the data plate

Fig.2							
1	SP	2		3			
4					MW-6070584-1		

- 1 Protective earthing
- 2 Ground
- **3** Dispose of used products in an appropriate recovery and recycling structure
- 1 Compatibility with the Mago connected thermostat
- 2 Dispose of used products in an appropriate recovery and recycling structure
- **3** Before installing and commissioning the appliance, carefully read the instruction manuals provided
- 4 Double insulation without ground

4 Technical specifications

4.1 Homologations

4.1.1 Directives

Baxi hereby declares that the MK SYSTEM is a product principally designed for domestic use and compliant with the following directives and standards. It has been manufactured and put into circulation in accordance with the requirements of the European Directives.

The full text of the EU declaration of conformity is supplied separately with your appliance.

In addition to the legal requirements and guidelines, the supplementary guidelines in this manual must also be followed.

For all provisions and directives referred to in this manual and the EU declaration of conformity, it is agreed that all addenda or subsequent provisions will apply at the time of installation.

4.1.2 Factory test

Before each indoor unit leaves the factory, its electrical safety is tested.

4.2 Technical data

4.2.1 Indoor unit technical specifications

Tab.1

	Unit	MK SYSTEM
Operating temperature	°C	0 to 30
Storage temperature	°C	-25 to 60
Relative humidity (non condensing)	%	0 to 95
Weight	kg	3.08
Power supply voltage	VAC	230
Power absorbed by the indoor unit only (maximum)	W	14

4.2.2 Heating flow sensor specifications

Tab.2 NTC 10K heating flow sensor

Temperature	°C	0	10	20	25	30	40	50	60	70	80	90
Resistance	Ω	32014	19691	12474	10000	8080	5372	3661	2535	1794	1290	941

4.3 Indoor unit dimensions

Fig.3





MW-6070355-02

4.4 Electrical diagram



Tab.3

Description	Description
Backup	Backup: heating element, backup boiler or district heating network
BL1 Multifunction	BL1 multifunction input
BL2 Multifunction	BL2 multifunction input
CB-05	CB-05 PCB for managing the cascade installation
CB-21	CB-21 PCB: interface between the EHC-14 PCB and an external L-BUS connection
CH/DWH	Heating/Domestic Hot Water - Diverter valve
Condensate sensor	Terminal block for the condensation sensor
Tdhw (Domestic hot water tempera- ture)	Terminal block for the domestic hot water temperature sensor
EHC-14	Main PCB for the heat pump
GTW-30	Optional unit for remote services and diagnostics
HMI	User interface
ON/OFF	On/Off - On/Off switch
Outdoor Unit	Outdoor unit
T out (Outdoor temperature sensor)	Terminal block for the outdoor temperature sensor
OT boiler	OpenTherm boiler
OUTPUT	OUTLET - External power supply option
OUTSIDE	OUTDOOR - Components outside the indoor unit

Description	Description
Product power supply	Main power supply
Room Unit R-Bus (Room Unit)	Room temperature sensor, Mago thermostat, on/off thermostat, modulating thermostat or OpenTherm thermostat
SO+/SO- Energy counter	SO+/SO- Energy meter
S-BUS	Cascade connection
T System sensor	Heating flow temperature sensor
ZONE	Zone - Pump - if a low loss header is used



See also

Connecting a heating element, page 21 Connecting the hydraulic backup, page 21

5 Description of the product

5.1 Data plate



5.2 Main components



- 14 EHC-14 main PCB: heat pump control system
- 15 Location of the optional PCB

5.3 Description of the connection terminal blocks

5.3.1 Main PCB EHC-14



- X1 230 V 50 Hz power supply
- X2 Heating/domestic hot water 3-way directional valve connection
- X3 Micro-fit connector for external options
- Heating element stage 1 X4
 - Hydraulic backup pump
- X5 - Heating element - stage 2
 - ON/OFF contact for the hydraulic backup
- X6 Do not use
- X7-X8 L-Bus
 - X9 Heating flow temperature sensor
 - X10 PWM CIRCA circulating pump maximum 450 W only if a circulating pump is connected after a buffer tank
 - X11 L-Bus / CAN / service port
 - X12 Options
 - Condensation: condensation sensor
 - So+ / So-: electricity meter
 - BL1 IN / BL2 IN: multifunction inputs
 - R-Bus: Mago smart room thermostat, 24 V on/off thermostat, OpenTherm thermostat
 - X13 Not used
 - X15 Do not use
 - X16 Outdoor unit bus connection
 - X17 Do not use
 - X19 Multifunction output on/off signal (dry contact)
 - X20 CIRCA LIN bus connecting a LIN pump using the connector provided as an option
 - X21 Do not use
- X22 Do not use
- X23 Do not use
- X24 Do not use
- **X25** Heating/domestic hot water 3-way directional valve connection
- X26 Circulating pump CIRCA maximum 450 W only if a circulating pump is connected after a buffer tank
- X27 External power supply option
- X28 T out: outdoor temperature sensor
 - T dhw 1: domestic hot water tank temperature sensor
 - T dhw 2: do not use
- X30 Do not use
- X31 OpenTherm boiler

5.3.2 230V power cable terminal block

Fig.8



- 1-2-3 External power supply option
- 4-5-6 Zone pump power supply maximum 450 W 7-8-9 Diverter valve
- 11-12-13 -
 - Signal for the heating element stage 1 Signal for the hydraulic backup pump
 - 14-15 Signal for the heating element stage 2
 - ON/OFF contact for the hydraulic backup

5.3.3 0 - 24 V signal cable terminal block



5.3.4 CB-05 PCB

Fig.10

The CB-05 PCB is used to connect the indoor unit to the power supply and to connect to a cascade.

- X1 Connection to the mains power supply
- **X2** EHC-14 PCB power supply
- X3 S-BUS connection to the other appliances in the cascade
- X4 S-BUS connection to the EHC-14 PCB
- X5 S-BUS connection to the other appliances in the cascade



5.3.5 CB-21 PCB

Fig.11



The CB-21 PCB is used to connect external options.

- X1 L-BUS to the EHC-14 PCB
- X2 L-BUS to external options and/or to a backup boiler

5.3.6 GTW-08 PCB

Optional GTW–08 PCB for connecting to a building management system via Modbus

Fig.12



- X1 L-bus
- X2 L-bus
- Modbus X4
- Modbus X5
- Connection to the building management system X6
- X7 Do not use

5.3.7 GTW-21 PCB



Optional GTW-21 PCB for connecting to a building management system via BACnet

- X1 RJ45 connector Connection to the building management system
- X2 L-bus
- X3 L-bus
- X4 Not used
- SW1 Do not use

5.3.8 SCB-01 PCB

Fig.14



The optional SCB-01 PCB is used for the summer/winter transition and for connecting a 0-10V backup boiler.

- X1 Relay output
- X2 Relay output
- X4 L-Bus
- X5 L-Bus
- 0-10 0-10V backup boiler

5.4 Description of the user interface

5.4.1 Description of the user interface



5.4.2 Description of the home screen

- Rotary knob to select a menu or setting 1
- 2 Validation button 🗸
- 3 Back button **5** to return to the previous level or menu
- 4 Main menu button 🗐
- Display screen 5
- LED for status indication: 6
 - continuous green = normal operation -
 - flashing green = warning
 - red fixed = blockage
 - flashing red = lockout -

The home screen is displayed automatically after the appliance is started up.

The screen automatically goes into standby if no button is pressed for five minutes.

Press one of the buttons on the user interface to exit the standby screen and display the home screen.

- 1 Access icons for menus and parameters
 - The selected icon is highlighted.
- Information on the selected icon 2
- 3 (\mathbf{x}) error notification: only visible if an error occurs 4
 - Navigation level:
 - 🛔 : User level -
 - ₩: Installer level.

This level is reserved for installers and is protected by an access

code. When this level is active, the off licon becomes of



Icons on the home screen and information Tab.4

lcon	Information	Description of the icon
О	Error status	Information on operation of the appliance
None	Maintenance status	Maintenance message
M On	Installer access	Installer Level
(III) Not Set	Holiday programme	Holiday mode in all circuits simultaneously
23.5	Air src heat pump	Heat pump flow temperature display
1,8 bar	Water pressure	Water pressure display
$ \begin{array}{c} \hline \hline$	CIRCA	Symbols representing the circuit or circuits used Display of the temperature for the circuit or circuits used

Icon	Information	Description of the icon		
51,2°C	DHW tank	Temperature display for the domestic hot water		
कि € 6.7°C	Outdoor temperature	Outdoor temperature display		

6 Installation

6.1 Installation regulations



Caution

The appliance must be installed by a qualified professional in accordance with applicable local and national regulations.

6.2 Positioning the indoor unit

6.2.1 Choosing the location of the indoor unit

Fig.17



The location of the indoor unit must guarantee safety, be accessible for maintenance, allow the front panel to be removed and the cover on the user interface to be flipped up.

- 1. Take account of the dimensions shown opposite when choosing the location of the indoor unit.
- 2. Choose a location that complies with the following specifications:
 - · not exposed to water or dust,
 - · close to a wall socket with protective earthing.

MW-6070411-2

6.2.2 Affixing the indoor unit



Once the location has been chosen for the unit, affix the indoor unit using the side tabs.

- 1. Mark the positions of the 4 holes.
- 2. Drill the Ø 6 mm holes.
- 3. Insert the Ø 6 mm wall plugs.
- 4. Secure the indoor unit using Ø 3.5 mm screws.

6.2.3 Mounting on a DIN rail



The fitting bracket on the back of the casing can be used to mount the appliance directly on a DIN rail (35 x 7.5 mm).

1. Mount the rail.

Please refer to the mounting instructions of the rail for more information.

2. Position the appliance on the rail, using the fitting bracket on the back of the casing.

⇒ The appliance is suspended on the top hooks of the fitting bracket. 3. Push the appliance on the rail.

⇒ The appliance snaps into the bottom hooks of the fitting bracket.

6.3 Electrical connections

6.3.1 Checking and preparing the electrical installation

Fig.20



Caution Only a qualified professional is authorised to work on the electrical part of the installation.

- 1. Always switch off the electrical installation before making any
- connections. 2. Respect the requirements of the prevailing standards when selecting the cables and circuit breakers.
- 3. Check the electrical specifications of the mains power supply available and compare these to the specifications indicated on the data plates on the appliances. The electrical specifications must be compatible.
- 4. Read and follow the instructions in the manual and the electrical diagrams supplied with the appliance.
- 5. Select the cables used for the various connections. The cable crosssections must:
 - · Meet the needs of the installation
 - Conform to the prevailing standards to withstand the maximum amperage of the outdoor unit
 - Take into account the distance between the appliances and the electrical panel
 - · Take into account the earthing system
- 6. Supply the appliance via a circuit with an omnipolar switch with an opening gap distance of more than 3 mm. The installation must be equipped with a main switch.
- 7. Check the compliance of the protective earthing before making any electrical connections.

6.3.2 Connecting the electrical circuits





i Important

The cable cross-sections are given as a guide only. Use a shielded cable for the BUS connection between the indoor unit and the outdoor unit to avoid communication problems.

6.3.3 Accessing the indoor unit connectors

Fig.22



- 1. Unscrew the two screws on the front lower cover by a quarter turn.
- 2. Take off the front lower cover.
 - ⇒ The terminal blocks for the power cables and signal cables are now accessible.
- 3. Unscrew the 4 screws on the front upper cover.
- 4. Position the front upper cover in the maintenance position.
- ⇒ The connectors for the printed circuit boards are now accessible.

6.3.4 Creating the cable gland openings



- 1. Locate the slot to open.
- Insert a flat screwdriver in the cable gland slot from the inside of the indoor unit.
- 3. Use the screwdriver as a lever to detach the pre-cut part.

6.3.5 Routing the cables



Use left-hand cable glands for the power cables and right-hand cable glands for the signals.

| Important

For cable feedthroughs to the outside, always use the cable glands and cut-outs designed for this purpose.

- 1 230 V power supply cables
- 2 0 40 V signal cables



i

| Important

Cable glands must be used with cables that are free from grease.

Tighten the cable glands to 2 N.m.

MW-3000014-2

6.3.6 Installing and connecting the outdoor temperature sensor



The connection of an outdoor temperature sensor is mandatory to ensure the correct operation of the appliance.

- 1. Choose a recommended location for the outdoor temperature sensor.
- 2. Fit the two wall plugs (diameter 6 mm) delivered with the outdoor temperature sensor.
- 3. Secure the sensor using the screws provided (diameter 4 mm).
- 4. Connect the cable to the outdoor temperature sensor.

Positions to be avoided

Avoid placing the outdoor temperature sensor in a position with the following characteristics:

- Masked by a building element (balcony, roof, etc.).
- · Close to a disruptive heat source (direct sunlight, chimney, ventilation grille, etc.).



Recommended positions

Place the outdoor temperature sensor in a position that covers the following characteristics:

- On a façade of the area to be heated, on the north if possible.
- · Halfway up the wall of the area to be heated
- · Affected by changes in the weather
- · Protected from direct sunlight.
- · Easy to access.



- **Optimum** location 1
- Possible position 2



- H Inhabited height controlled by the sensor Z Inhabited area controlled by the sensor
- Connecting the outdoor temperature sensor

Fig.27



- 1. Use a cable with a minimum cross section of 2 x 0.35 mm² and a maximum length of 30 metres.
- 2. Connect the outdoor temperature sensor to the **Tout** input on the **X28** connector for the **EHC-14** central unit PCB on the indoor unit.

6.3.7 Fitting the heating flow temperature sensor



Choosing the correct location and positioning the temperature sensor correctly limits discomfort due to incorrect reading of the temperature

- 1. Choose a location within 15 metres from the indoor unit.
- 2. Apply the heat-conducting silicone paste on the temperature sensor.
- 3. Secure the heating flow temperature sensor with the clamp on a metal pipe which is irrigated no matter which heat generator is running.
- 4. Connect the temperature sensor to the indoor unit terminal blocks 28-29.

6.3.8 Connecting a backup heater

Connecting a backup heater guarantees user comfort and heat pump safety. If no backup is connected, heating comfort and protection of the appliance against frost cannot be guaranteed.

6.3.9 Connecting a heating element



6.3.10 Connecting the hydraulic backup



- 1. Connect stage 1 of the heating element **11-12-13** to the 230 V terminal block.
- 2. Connect stage 2 of the heating element **14-15** to the 230 V terminal block.
- Electrical diagram, page 9 Configuring the backup, page 29

Electrical diagram, page 9

Configuring the backup, page 29

Connecting an Opentherm backup boiler

- 1. Take off the front lower cover.
- 2. Connect the boiler to **21-22** on the signal cable terminal block.



Connecting an L-BUS backup boiler

- 1. Disconnect the L-BUS bus terminator from terminal block X2 on the CB-21 PCB.
- 2. Connect the L-BUS bus terminator to the backup boiler PCB.
- 3. Connect the backup boiler to terminal block X2 of the CB-21 PCB.



See the boiler manual.



Connecting a backup boiler controlled via a dry contact

- 1. Connect the backup boiler pump to **11-12-13** on the 230 V terminal block.
- 2. Connect the dry contact **ON/OFF** to **14-15** on the 230 V terminal block.
 - ⇒ This dry contact will control the activation and deactivation of the backup boiler.

Connecting a district heating network

- 1. Connect the pump (live/neutral/earth) to **11-12-13** on the 230 V terminal block.
- 2. Connect the district heat network's primary valve to **14-15** on the 230 V terminal block.



6.3.11 Connecting an internal option PCB



An internal option PCB can be installed in the indoor unit.

- 1. Mark the L-BUS connector available on the wire harness leading from the **X7** terminal block on the **EHC-14** PCB.
- Connect the option PCB.



Option installation instructions.

6.3.12 Connecting the external options



The external options are connected to the **CB-21** external options connection PCB of the indoor unit :

- 1. Recover the factory-connected L-BUS bus terminator, on the terminal block **X2** on the **CB-21** PCB.
- 2. Connect the options to form an L-BUS chain from the CB-21 PCB.
- 3. Connect the L-BUS bus terminator to the last element in the L-BUS chain.

Option installation instructions

6.3.13 Connecting the indoor unit to a cascade



The CB-05 connection PCB allows the indoor unit to be connected as a lag appliance in a cascade.

- Recover the factory-connected S-BUS bus terminators, on the X3 and X5 terminal blocks on the CB-05 PCB.
- Connect the appliances to form an S-BUS chain from the lead appliance.
- Reconnect the S-BUS bus terminator according to the position of the indoor unit in the cascade.

Position of the indoor unit	Action to be taken
The indoor unit is the last appli- ance in the cascade	Reconnect an S-BUS bus termi- nator to the terminal block availa- ble on the CB-05 PCB
The indoor unit is not the last appliance in the cascade	Connect the remaining S-BUS bus terminator to the last element in the S-BUS chain.

6.3.14 Connecting an electricity meter



Connecting an energy meter to the outdoor unit power supply can provide the heat pump with an accurate measurement of electricity consumption.

- Do not install an electricity meter on the power supply of the immersion heater.
- Do not install an electricity meter on the power supply of the indoor unit.
- 1. Choose an EN 62053-31 standard pulse-type energy meter.

Installation manual for the lead appliance.

- Connect the electricity meter to the power supply of the outdoor unit to measure the electricity consumption.
 - If the outdoor unit has a single-phase power supply, connect a single-phase electricity meter.
 - If the outdoor unit has a three-phase power supply, connect a threephase electricity meter.
- Connect the electricity meter to the S0+/S0- input on the PCB EHC-14 of the indoor unit for pulse metering.

See also

See

Configuring the electrical energy consumption function, page 38

6.3.15 Checking the electrical connections

- 1. Check the mains electricity connection to the following components: • Outdoor unit
 - Indoor unit
 - Heating element or backup boiler depending on the appliance model
- If installing with a backup boiler, check the connection between the backup boiler and the indoor unit: backup boiler pump control and heating demand or burner start-up control.
- 3. Check the bus cable between the indoor unit and the outdoor unit:
 - Cable with double insulation
 - Cable separated from power supply cables
 - Cable correctly connected on both sides
- Check the compliance of the circuit breakers and residual current devices (RCD) used:
 - · Circuit breaker and residual current device (RCD) of the outdoor unit
 - Heating element or backup boiler circuit breaker depending on the appliance model
- 5. Check the positioning and connection of the sensors:
 - Outdoor temperature sensor
 - · Heating flow temperature sensor
 - Flow sensor for the second circuit (if present)
- 6. Check the connection of the circulating pump(s).
- 7. Check the connection of the different options.
- 8. Check that the wires and terminals are properly tightened or connected to the terminal blocks.
- 9. Check the separation of the 230 V power cables and extra-low voltage cables.
- 10. Check the connection of the underfloor heating safety thermostat (if used).
- 11. Check that traction arrester devices are used for all cables exiting the appliance.

7 Commissioning

7.1 General

The commissioning procedure for the heat pump is performed:

- · The first time it is used
- After a prolonged period of shutdown

Commissioning of the heat pump allows the user to review the various settings and checks to be made to start up the heat pump in complete safety.

7.2 Action to be taken before commissioning

Caution

The following steps must only be performed by a qualified professional prior to commissioning.

- 1. Refit all the panels, fascias and covers on the indoor unit and outdoor unit.
- 2. Arm the circuit breakers on the electric panel:
 - Outdoor unit circuit breaker
 - Indoor unit circuit breaker
 - Circuit breaker for the immersion heater or backup boiler depending on the type of installation
- 3. Activate the on/off switch on the indoor unit.
 - ⇒ The **Welcome** message is displayed.

7.3 Commissioning procedure with smartphone



Caution

Commissioning must only be performed by a qualified professional.

To commission and configure the installation via the **Baxi START** smartphone app, a **Bluetooth®** connection must be established between the smartphone and the heat pump indoor unit. The **Bluetooth®** connection is only possible in one of the following scenarios:

- The indoor unit is factory fitted with the BLE Smart Antenna PCB.
- The GTW-35 service tool is connected to the indoor unit.
- 1. Download the **Baxi START** application on **Google Play** or on the **App Store**.
- 2. Activate **Bluetooth®** in the smartphone settings.
- 3. Start the application.
- 4. Follow the instructions for the application on the smartphone for commissioning and configuring the heating installation.

Once the procedure is complete, the installation is fully configured. The **Bluetooth®** on the appliance can be deactivated.

7.4 Commissioning procedure without smartphone



Caution

Initial commissioning must be performed by a qualified professional.

- 1. Select the country and language.
- 2. Activate the Daylight Saving Time function.
- 3. Set the date and time.
- 4. Set the CN1 and CN2 parameters. The values are available on the data plate of the indoor unit. They are also shown in the table below. The CN1 and CN2 parameters inform the system of the outdoor unit output and the type of backup on the installation. They can be used to preconfigure the parameters based on the installation configuration.
- 5. Select **Confirm** to save the settings.
- 6. The heat pump begins its vent cycle.

Points to check:

- After commissioning, domestic hot water production takes priority. Keep this operating mode to increase the temperature and check that the heat pump is operating correctly.
- At the end of the vent cycle, if the heat pump does not start, check the flow temperature on the user interface. The flow temperature must be above 10 °C to enable the outdoor unit to start. This protects the condenser during defrosting.

If the flow temperature is below 10 $^{\circ}$ C, the backups start instead of the outdoor unit. The outdoor unit takes over when the flow temperature reaches 20 $^{\circ}$ C.

7.5 CN1 and CN2 parameters

Fig.41



The **CN1** and **CN2** parameters are used to configure the heat pump based on the output of the installed outdoor unit. Only the **CN1** and **CN2** values shown on the data plate are valid.

MW-6070424-1

Tab.5 AURIGA M/T-A

Outdoor unit	CN1	CN2
AURIGA 4 M-A	13	United Kingdom: 2 Other countries: 1
AURIGA 6 M-A	14	United Kingdom: 2 Other countries: 1
AURIGA 8 M-A	15	United Kingdom: 2 Other countries: 1
AURIGA 10 M-A	16	United Kingdom: 2 Other countries: 1
AURIGA 12 M-A AURIGA 12 T-A	17	United Kingdom: 2 Other countries: 1
AURIGA 16 M-A AURIGA 16 T-A	18	United Kingdom: 2 Other countries: 1

See also

Resetting the configuration numbers, page 41

7.6 Final instructions for commissioning

- Check that the following installation components are switched on correctly:
 - Circulating pumps
 - Outdoor unit
- 2. Check that the flow rate in the installation is sufficient according to the outdoor unit instructions.
- 3. Check the setting of the temperature limiting device.
- 4. Shut down the heat pump and carry out the following operations:
 - After about 10 minutes, vent the air in the heating system.
 - Check the hydraulic pressure. If necessary, top up the water level in the heating system.
 - Check the clogging of the filter or filters present on the installation. If necessary, clean the filter(s).
- 5. Restart the heat pump.
- 6. Explain the operation of the installation to the user.
- 7. Hand over all manuals to the user.

8 Settings

8.1 Accessing the Installer level

Certain parameters, which may affect the operation of the appliance, are protected by an access code. Only the installer is authorised to modify these parameters.

To access the installer level:

- 1. Select the off icon.
- 2. Enter the code **0012**.
 - ⇒ The Installer level is activated on. After modifying the desired settings, exit the Installer level.

3. To exit the Installer level, select the on icon, then **Confirm changes**.

If no action is taken for 30 minutes, the system will automatically exit the Installer level.

8.2 Searching for a parameter or a measured value

If you know the code for a parameter or a measured value, using the **Search datapoints** function is the easiest way to access it directly.



1. Follow the access path described below.

Tab.6

Access path	
> Installation Setup > Search datapoints	
	Enter the code for the required parameter or measured value using the knob.
	 3. Press the confirm button ✓ to start the search. ⇒ The requested parameter or measured value is displayed.

8.3 Menu tree 🕅

Та	b.	7
----	----	---

Menus accessible using the 🗐 button
Disable installer access
Installation Setup
Commissioning Menu
Advanced Service Menu
Error History
System Settings
Version Information

8.4 Configuring the maintenance message

The heat pump user interface is used to display a message whenever maintenance is necessary.

To configure the maintenance message:



- 1. Select the Service Status icon.
- Select the Service Status Icon.
 Select AP010 Service notification.
- Select the desired type of notification:

Type of notification:	Description
None	No maintenance message
Custom notification	The maintenance message will be displayed once the heat pump operating hours de- fined by the parameters in the following table have elapsed.

4. With the **Custom notification** notification type, set the number of operating hours before a maintenance message is sent:

Parameter	Description
Service hours (AP009) Compressor operating hours before a maintenance message is sent	
Service hours mains (AP011)	Operating hours switched on before a maintenance message is sent

8.5 Configuring the heating circuit

8.5.1 Setting the circuit function

Set the circuit function based on the constituent components of the heating circuit.



1. Follow the access path described below.

Tab.8

Access path

2. Select the value that corresponds to the type of circuit selected:

Value	Description	CIRCA EHC-14
Disable	No circuit connected	x
Direct	Direct heating circuit, without mixing valve	x
Mixing Circuit	Heating circuit for direct underfloor heating (CIRCA)	x
Swimming pool	Swimming pool heating	not available
High Temperature	Heating a circuit in summer, for example for a towel rail	x
Fan Convector	Heating circuit with convection fans	x
DHW tank	Heating a domestic hot water tank	not available
Electrical DHW	Controlling the electric heating element on a water heater	not available
Time Program	Controlling an electrical circuit based on the timer programme	not available
ProcessHeat	Heating a circuit without a timer programme	not available

8.5.2 Setting the heating curve

The heating curve is set when the installation is commissioned, thermostatic valves open if necessary. In event of major losses from the building, it is necessary to adjust the gradient of the curve mid-season then mid-winter in increments of 0.1 every 24 hours (building inertia).

To set the heating curve for a zone:

1 54

M On

1. Select the icon for the **zone** to be modified;

- 2. Select Heating Curve.
- 3. Set the following parameters:

Parameter Description Slope: Value for the heating curve gradient: • underfloor heating circuit: gradient between 0.4 and 0.7 • radiator circuit: gradient of approx. 1.5 Max: Maximum temperature of the circuit Base: Curve base point temperature (default value: Off = automatic mode). If Base: Off, the curve base point temperature becomes equal to the room set point temperature 50 °C; 0 °C Water temperature in the circuit for an outdoor temperature. This data is visible all along the curve.

Fig.42



Cooling mode is used to lower the temperature in the selected zone to below the outdoor temperature. Cooling of the zone is only possible if it is equipped with underfloor heating (parameter **Zone Function** (CP020) set to **Mixing Circuit** or convection fans (parameter **Zone Function** (CP020) set to **Fan Convector**

This function is only available when the Zone Function parameter (CP020) is set to **Mixing Circuit** or **Fan Convector** (Installation Setup > CIRCA > Parameters, counters, signals > Parameters menu).

On

1. Configure the following parameters:

Т	ab	.9
	~~	

Access path	Parameter	Description	Adjustment required
> Heat Pump	CH function on AP016	Enable central heating demand processing To allow cooling of the heating zone, activate the heating function	On
Heat Pump > Parameters, counters, signals > Settings	Cooling mode AP028	Configuration of the cooling mode Only enables cooling when the summer mode is active, by default when the outdoor temperature ex- ceeds 22 °C: value can be modi- fied via the parameter Summer Winter (AP073).	Active cooling on
24.5 > CIRCA > Parameters, counters,	Floor cool setpoint CP270	Cooling flow temperature setpoint for the underfloor cooling	18(default value). Set the temperature according to the type of floor and the level of humidity.
signals > Settings	Fan cool setpoint CP280	Cooling set point for the flow tem- perature on the convection fan cir- cuit	7 °C(default value). Set the temperature according to the con- vection fans used.
	RevContactOTH cool CP690	Reverse the on/off thermostat contact	 No Yes Check the setting according to the thermostat or room sensor used.

2. If necessary, force cooling or modify cooling temperatures for circuit CIRCA.

8.5.4 Selecting the conditions for activating Cooling mode

In the **Scheduling** operating mode, the Cooling timer programme is activated automatically when the average outdoor temperature is above 22 °C. To change this temperature, proceed as follows:



- 2. Select Summer/Winter.
- 3. Set the outdoor temperature at which the system should switch to Cooling mode.

8.6 Configuring the backup

To allow the backup to operate, the following parameter must be adjusted: **Backup type** HP029.



1. Configure the following parameters:

Access path	Parameter	Description	Adjustment required
Backup	Backup type HP029	Heat pump backup type	The adjustment depends on the type of backup used: 1 Electrical Stage 2 Electrical Stages Boiler Backup

See

Г.		
1.	d T	ה.∥

Installation manual for the backup used

See also Connecting a heating element, page 21 Connecting the hydraulic backup, page 21

8.7 Configuring the backup boiler parameters

To ensure optimal performance of the heat pump system with a backup boiler, it is necessary to configure the parameters of the backup boiler.

- 1. Adjust the boiler in 24/7 comfort mode or set a fixed setpoint.
- 2. Adjust the heating setpoint temperature to a temperature 5 °C above the domestic hot water setpoint temperature.



8.8 Configuring the hybrid operating mode for a backup boiler

Hybrid operating mode is only available for appliances with a backup boiler.

The hybrid function consists of an automatic switch between the heat pump and the boiler, depending on the cost, the consumption or emission of CO_2 of each heat generator.

- C COP: Coefficient of performance
- C_S Threshold COP: if the coefficient of performance of the heat pump is higher than the threshold coefficient of performance, the heat pump takes priority. Otherwise only the boiler backup is enabled. The heat pump COP depends on the outdoor temperature and the heating water setpoint temperature.
- T Outdoor temperature
- T₁ **Min outdoor T HP**(HP051) parameter: Minimum outdoor temperature below which the compressor of the heat pump is stopped
- T₂ Bivalent temperature(HP000) parameter: Bivalent temperature



Influence of outdoor temperatures

Fig.43



1. Configure the heat pump parameters.

Tab.11			
Access	Parameter	Description	Adjustment required
Air Src Heat pump >	Bivalent temperature HP000	Bivalent temperature	5 °C
Parameters, counters, signals > Settings	Hybrid mode HP061	Hybrid mode selection to choose on what basis the hybrid system will optimise	Set according to the optimisa- tion required. See following table. • No Hybrid • Hybrid Cost • Primary Energy • Hybrid CO2
	Peak elec cost HP062	Peak rate electricity cost	Enter the price of electricity at peak rate. By default: 0.19 euro cents
	Off-peak elec cost HP063	Off-peak rate electricity cost	Enter the price of electricity at off-peak rate. By default: 0.15 euro cents
	Gas or oil cost HP064	Cost of gas per m3 or oil per litre	Enter the price of fuel. By default: 0.9 euro cents
	Min outdoor T HP HP051	Minimum outdoor temperature below which the compressor of the heat pump is stopped	Keep the default value: -20 °C

2. Choose energy consumption optimisation.

Tab.12

Value of the Hybrid mode (HP061) parame- ter	Description
Primary Energy	Optimisation of primary energy consumption: the control system chooses the generator that consumes the least primary energy. The switch between the heat pump and the boiler occurs at the value of the coefficient of performance threshold COP Threshold (HP054).
Hybrid Cost	 Optimisation of energy costs for the consumer (factory setting): the control system chooses the cheapest generator according to the coefficient of performance of the heat pump and according to energy cost. Peak elec cost (HP062): Peak rate electricity cost Off-peak elec cost (HP063): Off-peak rate electricity cost Gas or oil cost (HP064): Cost of gas per m3 or oil per litre
Hybrid CO2	Optimisation of CO_2 emissions: the control system chooses the generator that emits the least CO_2 .
No Hybrid	No optimisation: the heat pump always starts up first, regardless of the conditions. The boiler back-up starts up afterwards, if necessary.

8.9 Drying the screed

The **Screed drying** function reduces the drying time of the screed for underfloor heating. This function can be activated even if the outdoor unit is not yet connected. In this case, the heating element of the indoor unit or the backup boiler enables the screed to be dried.

The Screed drying function is set in 3 stages. Each stage is defined by:

- A start setpoint temperature in °C
- An end setpoint temperature in °C
- A duration in days

The screed drying times and temperatures are to be defined according to the screed manufacturer's specifications.





1. Configure the screed drying parameters for stage 1:

Access path	Parameter	Description	Adjustment required
CIRCA > Set Screed Drying > Stage 1	Screed drying time 1 ZP000	Set the number of days spent in the first screed drying step	Number of days of drying for stage 1
	Screed start temp 1 ZP010	Set the start temperature for the first step of screed drying	Drying start temperature for stage 1
	Screed end temp 1 ZP020	The end temperature for the first step of screed drying	Drying end temperature for stage 1

2. Configure the screed drying parameters for stage 2:

Access path	Parameter	Description	Adjustment required	
CIRCA > Set Screed Drying > Stage 2	Screed drying time 2 ZP030	Set the number of days spent in the second screed drying step	Number of days of drying for stage 2	
	Screed start temp 2 ZP040	Set the start temperature for the second step of screed drying	Drying start temperature for stage 2	
	Screed end temp 2 ZP050	The end temperature for the second step of screed drying	Drying end temperature for stage 2	

3. Configure the screed drying parameters for stage 3:

Access path	Parameter	Description	Adjustment required	
CIRCA > Set Screed Drying > Stage 3	Screed drying time 3 ZP060	Set the number of days spent in the third screed drying step	Number of days of drying for stage 3	
	Screed start temp 3 ZP070	Set the start temperature for the third step of screed drying	Drying start temperature for stage 3	
	Screed start temp 3 ZP070	Set the start temperature for the third step of screed drying	Drying end temperature for stage 3	

4. Activate screed drying:

Access path	Parameter	Description	Adjustment required
CIRCA > Set Screed Drying	Screed drying enable ZP090	Enable the screed drying of the zone	On

- ⇒ The screed drying programme will start immediately and continue for the number of days selected for each stage.
 - The system evaluates the setpoint temperature every 24 hours and redefines it based on the remaining time for the stage.

To find out the setpoint temperature, start and end date and time for the **Screed drying** function and the remaining drying time, at any moment, refer to the following signals and counters:

Signals/Counters	Description
Screed temp setpoint ZM000	The current flow temperature setpoint for screed drying
Screed start time ZM010	The start date and time of the screed drying procedure

Signals/Counters	Description
Screed end time ZM020	The projected end date and time of the screed drying procedure
Screed dry remaining ZC000	The remaining duration of screed drying in days

8.10 Configuring a room thermostat

8.10.1 Configuring an on/off or modulating thermostat

The on/off or modulating thermostat is connected to the R-Bus terminals on the EHC-14 PCB or the optional SCB-17-B PCB.

The PCBs are delivered with a bridge on the R-Bus terminals.

The R-Bus input can be configured to add the flexibility of using several types of on/off thermostat or OpenTherm (OT).



M On

1. Configuration of the **R-Bus** input for using an on/off thermostat (dry contact) for CIRCA.

Access path	Parameters	Description of the parameters
24.5 CIRCA > Parameters, counters,	OTH LogicLev contact CP640	Configuration of the on/off input contact direction for heating mode. • Closed (default value): heating demand when contact is closed • Open: heating demand when contact is open
signals > Settings	RevContactOTH cool CP690	Reversal of the direction of the logic in cooling mode compared to heating mode.No (default value): cooling demand uses the same logic as the heating demandYes: cooling demand uses the reverse logic to the heating demand

Tab.13 Setting the OTH LogicLev contact CP640 and RevContactOTH cool CP690 parameters

Value of the parameter OTH LogicLev contact CP640	Value of the parameter RevContactOTH cool CP690	Position of the on/off contact for heating	Position of the on/off contact for cooling
Closed (default value)	No (default value)	Closed	Closed
Open	No	Open	Open
Closed	Yes	Closed	Open
Open	Yes	Open	Closed

8.10.2 Configuring a thermostat with a heating/cooling control contact

The AC thermostat (air conditioning) is always connected to the R-Bus and BL1 terminals on the EHC-14 PCB.

The AC thermostat is not compatible with the SCB-17-B PCB, which is used to control a second heating circuit.

Priority will be given to the AC thermostat input over the other Summer/ Winter modes (Auto/Manual).

The PCBs are delivered with a bridge on the R-BUS terminals.

1. Connect the AC thermostat to the EHC-14 PCB.

- EHC-14 PCB 1
- Room unit 2
- ON/OFF output 3
- "Heating/cooling contact" output 4





2. Configure the heat pump parameters.

Tab.14

Access path	Parameter	Description	Adjustment required
Heat Pump > Parameters, counters,	BL input setting AP001	Adjustment of the blocking input (BL1)	Heating Cooling
signals > Advanced	BL1 contact config AP098	BL1 input contact configurationClosed: cooling active when BL contact is closedOpen: cooling active when BL contact is open	ClosedorOpen
CIRCA > Parameters, counters, signals > Settings	OTH LogicLev contact CP640	Circuit contact logic level Closed: heating demand when contact is closed Open: heating demand when contact is open	ClosedorOpen
	RevContactOTH cool CP690	Reverse the contact in cooling mode for the cir- cuit demand No: follows the heating logic Yes: follows the reverse of the heating logic	• Yes or • No

3. Select one of the following configurations

Tab.15 Configuration A - by default

Value of the pa- rameter OTH LogicLev contact CP640	Value of the BL1 contact config pa- rameter AP098	The multifunction input BL1 is:	Operating mode for the heat pump	If the OT contact is open	If the OT contact is closed
Closed (default val- ue)	Closed (default val- ue)	Open	Cooling	No cooling demand	Cooling demand
Closed (default val- ue)	Closed (default val- ue)	Closed	Heating	No heating demand	Heating demand

Tab.16 Configuration B

Value of the pa- rameter OTH LogicLev contact CP640	Value of the BL1 contact config pa- rameter AP098	The multifunction input BL1 is:	Operating mode for the heat pump	If the OT contact is open	If the OT contact is closed
Closed	Open	Open	Heating	No heating demand	Heating demand
Closed	Open	Closed	Cooling	No cooling demand	Cooling demand

Tab.17 Configuration C

Value of the pa- rameter OTH LogicLev contact CP640	Value of the BL1 contact config pa- rameter AP098	The multifunction input BL1 is:	Operating mode for the heat pump	If the OT contact is open	If the OT contact is closed
Open	Closed	Open	Cooling	Cooling demand	No cooling demand
Open	Closed	Closed	Heating	Heating demand	No heating demand

Tab.18 Configuration D

Value of the pa- rameter OTH LogicLev contact CP640	Value of the BL1 contact config pa- rameter AP098	The multifunction input BL1 is:	Operating mode for the heat pump	If the OT contact is open	If the OT contact is closed
Open	Open	Open	Heating	Heating demand	No heating demand
Open	Open	Closed	Cooling	Cooling demand	No cooling demand

8.11 Configuring the anti-legionella function

The anti-legionella function is used to bring the water in the DHW cylinder to a temperature above the normal setpoint to eliminate Legionella bacteria. This function is disabled upon delivery.

To guarantee the efficiency of the anti-legionella programme, the heating element or the backup boiler (depending on the installation) must be able to take over from the heat pump to achieve the requested setpoint temperature.

1. Follow the access path described below to access the domestic hot water management parameters.

Access path

= > | Installer > Installation setup > Domestic Hot Water > Backup

2. Activate triggering of the backups.

Parameter	Description	Adjustment required
DHW management DP051	Management of the operating mode for the heat pump. To guarantee the effectiveness of the anti-legionella pro- gramme, the immersion heater or the backup boiler must be able to take over from the heat pump to allow the setpoint temperature DHW AntiLeg Setpoint (DP160) to be reached	Auto (HP + Boiler)

 Follow the access path described below to access the parameters for setting the anti-legionella function. Adapt the parameters for the antilegionella function based on the recommendations applicable in your country.

Access p	path
⊜> %	Installer > Installation setup > Domestic Hot Water > Anti-legionella

4. Activate the anti-legionella function.

Parameter	Description	Adjustment required
Anti-legionella	Function to protect the DHW cylinder against Legionella bac-	Weekly
DP004	teria.	or
		Daily

5. Adjust the setpoint temperature.

Parameter	Description	Adjustment required
DHW AntiLeg Setpoint DP160	Setpoint temperature for the anti-legionella function.	Can be set from 60 °C to 75 °C

6. Adjust the duration of the anti-legionella programme cycle.

Parameter	Description	Adjustment required
DHW anti-leg runtime	Duration for maintaining the setpoint temperature.	Can be set from 0 Min to 360
DP410	Duration for which the setpoint temperature can be maintained	Min
	to ensure Legionella bacteria are eliminated.	

7. Choose the day and time to start the anti-legionella programme.

Parameter	Description	Adjustment required
Start day anti-leg DP430	Day to start the anti-legionella programme. Only for weekly activation.	Can be set from Monday to Sunday
Start time anti-leg DP440	Time to start the anti-legionella programme.	Can be set from 00:00 to 23:50 in increments of 10 mi- nutes.

8.12 Configuring a buffer tank

In installations equipped with a low loss header or a buffer tank connected as a low loss header, it is necessary to activate the **Buffer tank** function.



1. Configure the buffer tank parameters.

Tab. 19			
Access path	Parameter	Description	Adjustment required
Air Src Heat pump > Parameters, counters, signals > Settings	Buffer tank HP086	Installation with a low-loss header or a buffer tank connected as a low-loss header	Yes
	Buffer tank hyst HP087	Temperature hysteresis to start or stop heating the buffer tank	Default value: 3 °C Do not modify.
	Boiler pump function AP102	Configuration of the boiler pump as zone pump or system pump (feed lowloss header) • OFF: No • ON: Yes	No

8.13 Improving domestic hot water or heating comfort

The system does not allow the simultaneous production of heating and domestic hot water. It is possible to alter the parameters to adapt the operation of the product to your needs.

- 1. The timer programming for domestic hot water production can be altered based on your night-time habits, for example.
- 2. If modification of the timer programming is not sufficient, go into the domestic hot water setting parameters:

Tab.20 Improving hot water comfort

Access path	Parameter	Description	Adjustment required
Parameters, counters, signals > Settings	Max DHW duration DP047	Maximum duration of the domestic hot water production.	Increase the maximum authorised duration for domestic hot water pro- duction. Longer period of hot water produc- tion.
	Min CH before DHW DP048	Minimum heating duration between two periods of domestic hot water production.	Reduce the minimum heating dura- tion between two domestic hot water production runs. The time between two periods of hot water production is decreased.
	Hysteresis DHW DP120	Hysteresis temperature relative to the DHW temperature setpoint	Reduce the setpoint temperature dif- ferential triggering the domestic hot water tank load. More frequent period of hot water production.
Tab.21 Improving heating comfort

Access path	Parameter	Description	Adjustment required
Parameters, counters, signals > Settings	Max DHW duration DP047	Maximum duration of the domestic hot water production.	Reduce the maximum authorised duration for domestic hot water pro- duction. Shorter period of hot water produc- tion.
	Min CH before DHW DP048	Minimum heating duration between two periods of domestic hot water production.	Increase the minimum heating dura- tion between two domestic hot water production runs. The time between two periods of hot water production is increased.
	Hysteresis DHW DP120	Hysteresis temperature relative to the DHW temperature setpoint	Increase the setpoint temperature differential triggering the domestic hot water tank to be charged. Less frequent period of hot water production.

3. Check the improvement in comfort over one week.

4. Readjust the parameters as needed.

8.14 Reducing the noise level of the outdoor unit

Silent mode is used to reduce the noise level of the outdoor unit during specified programmed hours. This mode limits the performance of the heat pump.

M On 1. Activate silent mode.

Та	b.	22

100.22			
Access path	Parameter	Description	Adjustment required
Parameters, counters, signals > Settings	HP silent mode HP058	 Heat pump silent mode level No silent mode : normal operation Silent mode level 1 : level 1 sound reduction Silent mode level 2 : level 2 sound reduction, which is higher than level 1 	Silent mode level 1 or Silent mode level 2

M On 2. Program the operating range in silent mode.

Tab.23

Access path	Parameter	Description	Adjustment required
23.5 Heat Pump > Parameters.	Low noise start time HP094	Start time of the heat pump low noise function	22:00
counters, signals > Settings	Low noise end time HP095	End time of the heat pump low noise function	06:00

8.15 Configuring the multifunctional output

The multifunctional output **X19** for the EHC-14 PCB sends an on/off signal (dry contact) based on the status of the Cooling mode, Defrosting mode or Silent Mode.

1. Follow the access path described below.

Access path

⇒ | Installer > Installation setup > Heat Pump > Advanced

2.	Configure	the	following	parameter:
<u> </u>	connigaro		iono mig	paramotor

Parameter	Description	Adjustment required
Multifunct output HP188	Configure the function of the multifunctional output • Cooling mode • Defrosting mode • Silent Mode	Configure the parameter based on the required status information.

8.16 Configuring sources of energy

8.16.1 Configuring the electrical energy consumption function

In order for the energy metering to work, adjust the parameter: Value of the pulse coming from the electrical counter connected to the energy meter.

1. Note the energy meter pulse value according to standard EN 62053-31.



2. Configure the following parameters:

Tab.24

Access path	Parameter	Description	Adjustment required
Parameters, counters, signals > Settings	HP energy consumpt HP157	Method selection to calculate the electrical consumption of the heat pump	Measured: the consumption for the outdoor unit is measured by the en- ergy meter and the consumption for the indoor unit and the heating ele- ment is estimated.
	Elec pulse value HP033	Pulse value from the electricity me- ter	The adjustment depends on the type of energy meter installed. Adjustment range: 0 (no metering) to 1000 Wh. Default value: 1 Wh

	Deveneter		ام م م ما		A	- 4		
I ab.25	Parameter	value	based	on the	type	στ	energy i	meter

Number of pulses per kWh	Values to be configured for the Elec pulse value (HP033) parameter
1000	1
500	2
250	4
200	5
125	8
100	10
50	20
40	25
25	40
20	50
10	100
8	125
5	200
4	250
2	500
1	1000

⇒ The electricity readings are displayed on the meters CH consumed (AC005), DHW consumed (AC006) and Cooling consumed (AC007). The thermal energy from the backup boiler or heating element is factored in to provide the full tally of restored thermal energy.

See also

Connecting an electricity meter, page 23

8.16.2 Supplying the heat pump with photovoltaic energy

When lower cost electrical energy, such as photovoltaic energy, is available, the heating circuit and domestic hot water tank can be overheated. This option is not available in cooling mode.

- 1. Switch off the power supply to the indoor unit.
- 2. Connect a dry contact to the BL1 IN or BL2 IN multifunction input.
- 3. Switch the indoor unit back on.
- 4. Configure the heat pump parameters.

The BL input setting (AP001) corresponds to the BL1 input.

Tab.	.26
------	-----

Access path	Parameter	Description	Adjustment required
E3.5 Heat Pump>	BL input setting AP001	Blocking input setting (1: Full blocking, 2: Partial blocking, 3: User reset locking)	Photovoltaic HP Only
Parameters, counters, signals > Settings > Advanced	BL2 function AP100	BL2 input function selection	PV HP And backup

M On

M

In order to voluntarily overheat the installation and benefit from lowtariff electricity, set the setpoint temperatures that can be exceeded.

Tab.27 Voluntary overheating parameters

Access path	Parameter	Description	Adjustment required
Heat Pump> Parameters, counters,	Offset heating - PV HP091	Heating setpoint temperature offset when photovoltaic energy is available	Set the authorisation to exceed the heating temperature setpoint be- tween 0 and 30°C
signals > Settings > Advanced	Offset DHW - PV HP092	Domestic hot water setpoint temperature offset when photovoltaic energy is available	Set the authorisation to exceed the domestic hot water setpoint temper- ature from 0 to 30 °C

8.16.3 Connecting the installation to a Smart Grid

The heat pump can receive and manage control signals from the "smart" energy distribution network (**Smart Grid Ready**). Based on the signals received by the terminals of the **BL1 IN** and **BL2 IN** multifunction inputs, the heat pump shuts down or voluntarily overheats the heating system depending on the electricity tariff.

Tab.28 Operation of the heat pump in a Smart Grid

BL1 IN input	BL2 IN input	Operating
Inactive	Inactive	Normal: the heat pump and the backup electric heater operate normally
Active	Inactive	Off: the heat pump and the electric heating element are switched off
Inactive	Active	Economy tariff: the heat pump voluntarily overheats the system without the electric heating element
Active	Active	Super economy tariff: the heat pump voluntarily overheats the system with the electric heating element

Overheating is activated depending on whether the dry contact on inputs BL1 and BL2 is open or closed, and the **BL1 contact config** (AP098) and **BL2 contact config.** (AP099) parameters which control the activation of functions depending on whether the contacts are open or closed.

- 1. Switch off the power supply to the indoor unit.
- Connect the Smart Grid signal inputs to the BL1 IN and BL2 IN inputs on the EHC-14 PCB. Smart Grid signals come from dry contacts.

- M On
- 3. Turn on the electricity supply and switch on the heat pump.
- 4. Configure the heat pump input parameters.
- The BL input setting (AP001) parameter corresponds to the BL1 input.

Access path	Parameter	Adjustment required
Heat Pump> Parameters, counters, signals > Settings > Advanced	BL input setting AP001	Smart Grid ready
	BL2 function AP100	Smart Grid ready

⇒ The heat pump is ready to receive and manage **Smart Grid** signals.

5. Choose the contact directions of the **BL1 IN** and **BL2 IN** multifunction inputs by setting the **BL1 contact config**(AP098) and **BL2 contact**

inputs	by Settin	y ine		COI
config.	(AP099) para	amete	ers.

Access path	Parameter	Adjustment required
Heat Pump > Parameters, counters, signals > Settings > Advanced	BL1 contact config AP098	 BL1 input contact configuration Open = input active on Open contact Closed = input active on Closed contact
	BL2 contact config. AP099	 BL2 input contact configuration Open = input active on Open contact Closed = input active on Closed contact

 Configure the temperature offsets for the voluntary overheating by configuring the Offset heating - PV HP091 and Offset DHW - PV HP092 parameters.

Access path	Parameter	Adjustment required
Heat Pump> Parameters, counters, signals > Settings >	Offset heating - PV HP091	Heating setpoint temperature offset when photovoltaic energy is available
Advanced	Offset DHW - PV HP092	Domestic hot water setpoint temperature offset when photovoltaic energy is available

8.17 Saving and restoring settings

8.17.1 Saving the installer details

The name and phone number of the installer can be saved so that the user can find it easily.

- 1. Press the 😑 button.
- 2. Select System Settings > Installer Details.
- 3. Enter the name and phone number.

8.17.2 Saving the commissioning settings

You can save all installation-specific settings. These settings can be restored if necessary, for example after replacement of the main PCB.



- 1. Press the 🗐 button.
- Select Advanced Service Menu > Save Commissioning Settings.
 Select Confirm changes to save the settings.

When you have saved the commissioning settings, the option **Resetting to** commissioning settings is available in the **Advanced Service Menu**.

Resetting the configuration numbers

If you have replaced the PCB or made an error during setting, you must reset the configuration numbers CN1 and CN2. The system uses these numbers to identify the outdoor unit output and the type of backup present on the installation.

To reset the configuration numbers:

- 1. Press the 🗐 button.
- Select Advanced Service Menu > Set Configuration Numbers > EHC-14.
- Set the CN1 and CN2 parameters. The values are available on the data plate of the indoor unit.
- 4. Select **Confirm** to save the settings.



CN1 and CN2 parameters, page 26

Auto-detecting options and accessories

Use this function after replacing a power circuit board on the heat pump in order to detect all the devices connected to the **L–BUS** communication bus.

To detect devices connected to the L-BUS communication bus:



M On

- Press the ≡ button.
 Select Advanced Service Menu > Auto Detect.
- 3. Select **Confirm** to carry out the auto-detect.

Reverting to the commissioning settings

If the commissioning settings were saved, you can revert to the values specific to your installation.

To revert to the commissioning settings:

- 1. Press the 🗐 button.
 - Select Advanced Service Menu > Resetting to commissioning settings.
 - 3. Select **Confirm** to revert to the commissioning settings.
- Reverting to the factory settings

To revert to the factory settings for the heat pump:



M On

- 2. Select Advanced Service Menu > Resetting to factory settings.
- 3. Select **Confirm** to revert to the factory settings.

9 Parameters

9.1 List of parameters

The appliance parameters are described directly in the user interface. The following chapters include additional information on some of these parameters as well as their default values (factory settings).

9.1.1 | **H** > Heat Pump > Parameters, counters, signals

In this sub-menu, you will find the parameters related to the behaviour of the heat pump.

Tab.29 > Settings

Parameters	Description of the parameters	Factory setting EHC-14
BL input setting AP001	 Blocking input setting (1: Full blocking, 2: Partial blocking, 3: User reset locking) Full blocking Partial blocking User reset locking Backup relieved Generator relieved Gen.&Backup relieved High, Low Tariff Photovoltaic HP Only PV HP And backup Smart Grid ready Heating Cooling 	Partial blocking
Manual Heat Demand AP002	 Activating the manual heating demand Off With setpoint: In this mode, the temperature setpoint used will be that for the Setpoint manual HD (AP026) parameter. 	Off
Service hours AP009 Service notification	Number of heat generator operating hours before raising a service notification Can be set from 0 Hours to 65534 Hours Select the type of service notification	4000 Hours
AP010	None Custom notification	
Service hours mains AP011	Hours powered to raise a service notification Can be set from 0 Hours to 65534 Hours	8700 Hours
Forced cooling mode AP015	The cooling mode is always enabled and no longer controlled by the outdoor temperature No Yes 	No
CH function on AP016	 Enable central heating demand processing Off On 	On
DHW function on AP017	Enable domestic hot water heat demand processing Off On 	On
Setpoint manual HD AP026	Flow temperature setpoint for manual heat demand Can be set from 7 °C to 70 °C Setpoint used when manual mode is active (Manual Heat Demand (AP002) = With setpoint)	40 °C
Cooling mode AP028	Configuration of the cooling mode • Off • On	Off
Cooling permission AP029	Grant permission for the heat pump to be able to deliver coolingNot allowedAllowed	Allowed
Max CH flow setpoint AP063	Maximum central heating flow temperature setpoint Can be set from 20 °C to 90 °C	Backup boiler: 80 °C Heating element: 75 °C
Humidity sensor AP072	Humidity sensor configuration No OnOff 0-10V 	No
BL1 contact config AP098	BL1 input contact configuration Open Closed 	Open

Parameters	Description of the parameters	Factory setting EHC-14
BL2 contact config. AP099	BL2 input contact configurationOpenClosed	Open
BL2 function AP100	 BL2 input function selection Full blocking Partial blocking User reset locking Backup relieved Generator relieved Gen.&Backup relieved High, Low Tariff Photovoltaic HP Only PV HP And backup Smart Grid ready Heating Cooling 	Partial blocking
Deaeration program AP101	Deaeration program settingsNo deair at power upAlways deair at pwr	Always deair at pwr
Boiler pump function AP102	Configuration of the boiler pump as zone pump or system pump (feed lowloss header) • OFF: No • ON: Yes	Yes
Bivalent temperature HP000	Above the bivalent temperature, the backup energy source is not allowed to operate Can be set from -10 °C to 20 °C	5 °C
Min HP cooling T HP003	Minimum flow temperature of the heat pump in cooling mode Can be set from 5 °C to 30 °C	5 °C
Backup type HP029	Type of backup used in the heat pump • No Backup 1 Electrical Stage • 2 Electrical Stages • Boiler Backup	Backup boiler: Boiler Backup
Delay startbackup CH HP030	Delay time for starting the backup energy source for the heating circuits Can be set from 0 Min to 600 Min	0 Min
Delay stop backup CH HP031	Delay time for stopping the backup energy source for the heating circuits Can be set from 2 Min to 600 Min	4 Min
Elec pulse value HP033	Value of the pulse coming from the electrical counter Can be set from 0 Wh to 1000 Wh	1 Wh
Delay min outdoor T HP047	Delay for starting the backup when the outdoor temp is equal to the parameter Min outdoor T backup Can be set from 0 Min to 60 Min	8 Min
Delay max outdoor T HP048	Delay for starting the backup when the outdoor temp is equal to the parameter max outdoor T backup Can be set from 0 Min to 60 Min	30 Min
Min outdoor T backup HP049	Minimum outdoor temperature related to the parameter delay min outdoor T Can be set from -30 $^\circ\text{C}$ to 0 $^\circ\text{C}$	-10 °C
Max outdoor T backup HP050	Maximum outdoor temperature related to the parameter delay max outdoor T Can be set from -30 $^\circ\text{C}$ to 20 $^\circ\text{C}$	15 °C
Min outdoor T HP HP051	Minimum outdoor temperature below which the compressor of the heat pump is stopped Can be set from -20 $^\circ\text{C}$ to 5 $^\circ\text{C}$	-20 °C
COP Threshold HP054	COP threshold above which the heat pump is authorised to operate Can be set from 1 to 5	2.5

Parameters	Description of the parameters	Factory setting EHC-14
HP silent mode HP058	 Heat pump silent mode level No silent mode : normal operation Silent mode level 1 : level 1 sound reduction Silent mode level 2 : level 2 sound reduction, which is higher than level 1 	No silent mode
Hybrid mode HP061	 Hybrid mode selection to choose on what basis the hybrid system will optimise No Hybrid Hybrid Cost Primary Energy Hybrid CO2 	No Hybrid
Peak elec cost HP062	Peak rate electricity cost Can be set from 0.01 to 655.35 cents per kWh	0.19 cents per kWh
Off-peak elec cost HP063	Off-peak rate electricity cost Can be set from 0.01 to 655.35 cents per kWh	0.15 cents per kWh
Gas or oil cost HP064	Cost of gas per m3 or oil per litre Can be set from 0.01 to 655.35 cents	0.9 cents
Cool setpoint offset HP079	Maximum offset applied to the cooling setpoint when a 0-10V humidity sensor is used Can be set from 0 $^\circ\mathrm{C}$ to 15 $^\circ\mathrm{C}$	5 °C
Humidity level HP080	Relative humidity level over which the offset is added to the cooling setpoint Can be set from 0 % to 100 %	50%
Buffer tank HP086	Activation of hydraulic management mode for the configuration with a low-loss header, or for a buffer tank connected as a low-loss header • No • Yes	No
Buffer tank hyst HP087	Temperature hysteresis to start or stop heating the buffer tank Can be set from 0 °C to 30 °C	3 °C
Offset heating - PV HP091	Heating setpoint temperature offset when photovoltaic energy is available Can be set from 0 °C to 30 °C	0°C
Offset DHW - PV HP092	Domestic hot water setpoint temperature offset when photovoltaic energy is available Can be set from 0 °C to 30 °C	0 °C
Low noise start time HP094	Start time of the heat pump low noise function Can be set from 0 Hours-Minutes to 143 HoursMinutes	132 Hours-Minutes
Low noise end time HP095	End time of the heat pump low noise function Can be set from 0 Hours-Minutes to 143 HoursMinutes	36 Hours-Minutes
CH Pump postrun time PP015	Central heating pump postrun time (in minutes)	0 Min

Tab.30 > Signals

Signals	Description of the signals
Pump running?	Is the pump running?
AM015	Inactive Active
Pump speed AM010	The current pump speed in %
Dhw Temperature	Dhw Temperature depending on loadtype this is TankTemperature or
BM000	DhwOutTemperature in °C
Silent mode	Silent mode function enabled
AM002	No silent mode
	Silent mode level 1
Service required?	Is service currently required?
AM011	• No
	• Yes

Signals	Description of the signals
Status Appliance AM012	Current main status of the appliance.
Sub status Appliance AM014	Current sub status of the appliance.
System Flow Temp AM016	Flow temperature of appliance. in °C
Water pressure AM019	Water pressure of the primary circuit. in bar
3 way valve	Status of the three way valve
AM037	• CH • DHW
Flow rate AM056	Wate flow rate in the system in I/min
Internal setpoint AM101	Internal system flow temperature setpoint in °C
HP flow T. HM001	Heat pump flow temperature in °C
HP return T. HM002	Heat pump return temperature in °C
HP flow T setpoint HM003	Heat pump flow temperature setpoint in °C
BL1 contact position	BL1 contact position
HM004	• Open
	Closed Off
BL2 contact position	BL2 contact position
HM005	• Open
	Closed
Relative humidity	Relative humidity measured by the humidity sensor in %
Compressor	Compressor operation
HM008	• Off
	• On
ODU defrost	ODU defrost mode in progress
	• No • Yes
Backup1	First stage of backup operation
HM012	• Off
	• On
Backup2	Second stage of backup operation
	• Off
HP flow T average	• On Heat nump flow temperature average in °C
HM020	
Start compressor	Request to start compressor
	• No
HP cooling setpoint	Heat pump flow temperature setpoint in cooling mode in °C
HM033	
Delay StartBackup CH HM056	Delay time for starting the backup energy source for central heating in min

Tab.31 > Counters

Meters	Description of the meters
Service run hours AC002	Number of hours that the appliance has been producing energy since last service
Hours since service AC003	Number of hours since the previous servicing of the appliance
Starts since service AC004	Number of heat generator starts since the previous servicing.
CH consumed AC005	Energy consumed for central heating (kWh) in kWh
DHW consumed AC006	Energy consumed for domestic hot water (kWh) in kWh
Cooling consumed AC007	Energy consumed for cooling (kWh) in kWh
CH energy delivered AC008	Thermal energy delivered for central heating (kWh) in kWh
DHW energy delivered AC009	Thermal energy delivered for domestic hot water (kWh) in kWh
Cool energy deliver AC010	Thermal energy delivered for cooling (kWh) in kWh
Pump running hours AC026	Counter that shows the number of pump running hours
Pump starts AC027	Counter that shows the number of pump starts
Backup 1 hours AC028	Number of operating hours of the first electrical backup stage
Backup 1 starts AC030	Number of starts of the first electrical backup stage
Standby used energy AC032	Energy consumed by the appliance in standby mode in kWh
Heating producer hrs PC000	Number of producer operating hours in central heating
Total starts PC002	Total number of heat generator starts for heating and domestic hot water
Heat gen run hrs PC003	Number of compressor operating hours
Cooling producer hrs PC005	Number of producer operating hours in cooling
DHW run hours DC005	Number of compressor start-ups

9.1.2 SCIRCA > Parameters, counters, signals

Tab.32 > Settings

Parameters	Description of the parameters	Factory setting CIRCA
MaxZoneTFlowSetpoi nt CP000	Maximum Flow Temperature setpoint zone Can be set from 7 °C to 80 °C	80 °C
Tflow setpoint zone CP010	Zone flow temperature setpoint, used when the zone is set to a fixed flow setpoint. Can be set from 7 °C to 75 °C	75 °C

Description of the parameters	Factory setting CIRCA
Functionality of the zone	Mixing Circuit
• Disable	
 Direct = radiators. Cooling not possible. 	
 Mixing Circuit = underfloor heating for the CIRCA and CIRCB. Cooling 	
 Swimming pool. = not used. 	
• High Temperature = not used.	
Fan Convector Cooling possible.	
Pump post runtime of the zone Can be set from 0 Min to 20 Min	0 Min
Wished room zone temperature on holiday period Can be set from 5 °C to 20 °C	°℃
Max Room Temperature limit of the circuit in reduced mode, that allows	16 °C
switching to comfort mode	
Type of reduced night mode, stop or maintain heating of circuit	Continue heat demand
Heating is deactivated when the room temperature setpoint in the timer pro- gramme is below the threshold set in CP070	
Continue heat demand	
Desired room temperature setpoint for standby mode Can be set from 5 °C to 30 °C	16 °C
Desired room temperature setpoint for Welcome mode Can be set from 5 °C to 30 °C	20 °C
Desired room temperature setpoint for Absence mode Can be set from 5 °C to 30 °C	6 °C
Desired room temperature setpoint for Morning mode Can be set from 5 °C to 30 °C	21 °C
Desired room temperature setpoint for Evening mode Can be set from 5 °C to 30 °C	22 °C
Desired room temperature setpoint for Custom mode Can be set from 5 °C to 30 °C	23 °C
Manually setting the room temperature setpoint of the zone Can be set from 5 °C to 30 °C	20 °C
Comfort footpoint of the temperature of heat curve of the circuit Can be set from 15 °C to 90 °C	15 °C
Reduced footpoint of the temperature of heat curve of the circuit Can be set from 15 °C to 90 °C	15 °C
Heating curve temperature gradient of the zone Can be set from 0 to 4	1.5
Adjustment of the influence of the zone room unit Can be set from 0 to 10	3
Cooling flow temperature setpoint for the underfloor cooling Can be set from 11 °C to 23 °C	18 °C
Cooling flow temperature setpoint for the fan convector Can be set from 7 °C to 23 °C	7 °C
Operating mode of the zone	Scheduling
SchedulingManualOff	
The connected pump type	Modulating PWM
 On/Off Modulating PWM Modulating LIN 	
	Description of the parameters Functionality of the zone • Disable • Direct = radiators. Cooling not possible. • Mixing Circuit = underfloor heating for the CIRCA and CIRCB . Cooling possible. • Swimming pool. = not used. • High Temperature = not used. • Fan Convector Cooling possible. Pump post runtime of the zone Can be set from 0 Min to 20 Min Wak Room Temperature limit of the circuit in reduced mode, that allows switching to comfort mode. Can be set from 5 °C to 30 °C Type of reduced night mode, stop or maintain heating of circuit • Stop heat demand Besired room temperature setpoint for standby mode Can be set from 5 °C to 30 °C Desired room temperature setpoint for Morning mode Can be set from 5 °C to 30 °C Desired room temperature setpoint for Morning mode Can be set from 5 °C to 30 °C Desired room temperature setpoint for Morning mode Can be set from 5 °C to 30 °C Desired room temperature setpoint for Custom mode Can be set from 5 °C to 30 °C Desired room temperature setpoint for Custom mode Can be set from 5 °C to 30 °C Desired room temperature setpoint for Custom mode Can

Parameters	Description of the parameters	Factory setting CIRCA
Temporary Room Setp CP510	Temporary room setpoint per zone Can be set from 5 °C to 30 °C	20 °C
Zone, fire place CP550	Fire Place mode is active Off On 	Off
ZoneTimeProg Select CP570	Time Program of the zone selected by the user Schedule 1 Schedule 2 Schedule 3 	Schedule 1
OTH LogicLev contact CP640	Opentherm Logic level contact of the zone Open Closed Off 	Open
Cool stop Room T. CP650	The cooling is stopped when the room temperature setpoint is above this value Can be set from 20 °C to 30 °C	29 °C
Icon display zone CP660	Choice icon to display this zone None All Bedroom Livingroom Study Outdoor Kitchen Basement 	None
ConfPairing RU Zone CP680	Select the Bus channel of the room unit for this zone Can be set from 0 to 255	0
RevContactOTH cool CP690	Reversed OpenTherm contact in cooling mode for heat demand per zone No Yes 	No
Zone Heat up speed CP730	Selection of heat up speed of the zone Extra Slow Slowest Slower Normal Faster Fastest 	Extra Slow
Zone cool down speed CP740	Selection of cool down speed of the zone Slowest Slower Normal Faster Fastest 	Slowest
MaxZone Preheat time CP750	Maximum zone preheat time Can be set from 0 Min to 240 Min	0 Min
Control strategy CP780	 Selection of the control strategy for the zone Automatic : adapts the regulation strategy based on the sensors present Room temp based : use if there is no outdoor temperature sensor. Does not allow the heating curve to be used Outdoor temp based : use if there is no room thermostat. Allows the heating curve to be used. If the gradient is not configured correctly, it will cause discomfort Outdoor & room based : allows the heating curve to be used. If the gradient is not configured correctly, it will cause discomfort Outdoor & room based : allows the heating curve to be used. If the gradient is not configured correctly, the setpoint temperature will be corrected using the room temperature sensor measurement. 	Automatic

Tab.33 > Signals

Signals	Description of the signals
DHW tank temp bottom DM001	Domestic Hot Water tank temperature (bottom sensor) in °C
DhwFlowTempSetpoint DM004	Flow temperature setpoint Domestic Hot Water in °C
Error TAS DHW DM007	Error status of the anti-corrosion protection system of the domestic hot water tank • Off • On
Auto/Derog DHWstatus DM009	Automatic/derogation status of Domestic Hot Water mode Scheduling Manual Off Temporary
DHW activity DM019	Domestic Hot Water current activity Off Eco Comfort Anti legionella
DHW setpoint DM029	Domestic Hot Water temperature setpoint in °C
DHW active AM001	Is the appliance currently in domestic hot water production mode? Off On

Tab.34 > Counters

Meters	Description of the meters
DHW valve cycles DC002	Numbers of Domestic Hot Water diverting valve cycles
Number of hours during which the diverting valve is in DHW position DC003	Number of hours during which the diverting valve is in DHW position
DHW starts DC004	Number of compressor start-ups during domestic hot water production

9.1.3 9.1.3 Source of the second seco

The DHW tank circuit is on the EHC-14 PCB. A domestic hot water sensor must be connected to the EHC-14 PCB to display these parameters in the DHW sub-menu.

Tab.35 > Settings

Parameters	Description of the parameters	Factory setting
Abs max fan DHW DP003	Maximum fan speed on Domestic Hot Water Can be set from 1000 Rpm to 7000 Rpm	6800
Anti-legionella DP004	Anti-legionella protection of the calorifier Disabled Weekly 	Disabled
DhwMaxTemp DP046	Maximum temperature of the water circulating in the exchanger of the domestic hot water tank Can be set from 10 °C to 75 °C	70 °C
Max DHW duration DP047	Maximum duration of the domestic hot water production Can be set from 1 to 10 hours	3 hours

Parameters	Description of the parameters	Factory setting
Min CH before DHW DP048	Minimum heating duration between two periods of domestic hot water production Can be set from 0 to 10 hours	2 hours
DHW management DP051	ECO mode; Use of the heat pump only, Comfort mode; Use of the heat pump and backup energy sourcesHP onlyComfort (heat pump and electrical backup)	HP only
DHW timeprog select DP060	Time program selected for DHW. • Schedule 1 • Schedule 2 • Schedule 3	Schedule 1
DHW comfort setpoint DP070	Comfort temperature setpoint for the Domestic Hot Water tank Can be set from 40 °C to 65 °C	53 °C
DHW eco setpoint DP080	Eco friendly temperature setpoint from the Domestic Hot Water tank Can be set from 10 °C to 60 °C	10 °C
Hysteresis DHW DP120	Setpoint temperature differential triggering the DHW tank to be charged Can be set from 0 °C to 40 °C	15 °C
DHW load type DP140	DHW load type (0 = Combi, 1 = Solo) • Combi • Solo • Layered cylinder • Process heat • External	Solo
DHW AntiLeg Setpoint DP160	Setpoint for DHW anti legionella Can be set from 60 °C to 75 °C	65 °C
Start time holiday DP170	Start time of holiday Time stamp	-
End time holiday DP180	End time of holiday Timestamp	-
End change mode DP190	End change mode Time TimeStamp	-
DHW mode DP200	DHW primary mode current working setting Scheduling Manual Off 	Scheduling
Postrun DHW pump/3wv DP213	Post run time of the DHW pump/3 way valve after DHW production Can be set from 0 Min to 99 Min	3 Min
DHW holiday setpoint DP337	Holiday temperature setpoint from the Domestic Hot Water tank Can be set from 10 °C to 60 °C	10°C

Tab.36 > Signals

Signals	Description of the signals
DHW tank temp bottom DM001	Domestic Hot Water tank temperature (bottom sensor) in °C
DhwFlowTempSetpoint DM004	Flow temperature setpoint Domestic Hot Water in °C
DHW tank temp top DM006	Domestic Hot Water tank temperature (top sensor) in °C
Error TAS DHW DM007	Error status of the anti-corrosion protection system of the domestic hot water tank Off On

Signals	Description of the signals
Auto/Derog DHWstatus DM009	Automatic/derogation status of Domestic Hot Water mode Scheduling Manual Off Temporary
DHW activity DM019	Domestic Hot Water current activity Off Eco Comfort Anti legionella
DHW setpoint DM029	Domestic Hot Water temperature setpoint in °C
DHW active AM001	Is the appliance currently in domestic hot water production mode? Off On

Tab.37 > Counters

Meters	Description of the meters
DHW valve cycles	Numbers of Domestic Hot Water diverting valve cycles
Number of hours during which the diverting valve is in DHW position DC003	Number of hours during which the diverting valve is in DHW position
DHW starts DC004	Number of compressor start-ups during domestic hot water production
DHW run hours DC005	Number of compressor start-ups

9.1.4 9.1.4 > Outdoor sensor setup > Parameters, counters, signals

Tab.38 > Settings

Parameters	Description of the parameters	Factory setting CIRCA
Outdoor sensor	Enable outdoor sensor	AF60
AP056	No outdoor sensor	
	• AF60	
	• QAC34	
Summer Winter	Outdoor temperature; Upper limit for heating	22°C
AP073	• Can be set from 10 °C to 30.5 °C in increments of 0.5 °C	
	• When set to 30.5 °C, automatic switching is deactivated, the system remains in	
	Winter mode and heating is active.	
Force summer mode	The heating is stopped, Hot water is maintained, Force summer mode	Off
AP074	• Off	
	• On	
Season cross-over	Temperature variance from set outdoor upper temp limit in which the generator	4 °C
AP075	will not heat or cool	
	Can be set from 0 °C to 20 °C	
Building Inertia	Inertia of the building used for heat up speed	3
AP079	Can be set from 0 to 10	
	 0: 10 hours for a building with low thermal inertia, 	
	• 3: 22 hours for a building with normal thermal inertia,	
	 10: 50 hours for a building with high thermal inertia. 	
	Only modify the factory setting if the inertia of the building is known.	

Parameters	Description of the parameters	Factory setting CIRCA
Frost min out temp AP080	Outdoor temperature below which the antifreeze protection is activated: • Can be set from -30 to 20°C • set to -30 °C = function deactivated	3 °C
Outdoor sens source AP091	Type of outdoor sensor connection to be used • Auto • Wired sensor • Wireless sensor • Internet measured • None	Auto

Tab.39 > Signals

Signals	Description of the signals
Outdoor temperature AM027	Instantaneous outdoor temperature in °C
Internet T.Outdoor AM046	Outdoor temperature received from an internet source in °C
SeasonMode AM091	Outdoor temperature below which the antifreeze protection is activated: • Can be set from -30 to 20°C • set to -30 °C = function deactivated
Out sensor detected AP078	Outdoor sensor detected in the application No Yes

9.1.5 $| \mathbf{A} \rangle \cong$ > Installation Setup > SCB-01

Tab.40 > Settings

Parameters	Description of the parameters	Factory setting SCB-01
Status relay func. 1	Status relay function 1	No Action
EP018	No Action	
	• Alarm	
	Alarm Inverted	
	Generator on	
	Generator off	
	• Reserved	
	Reserved	
	Service request	
	Generator on CH	
	Generator on DHW	
	CH pump on	
	Locking or Blocking	
	Cooling mode	
Status relay func. 2	Status relay function 2	No Action
EPUI9	No Action	
	• Alarm	
	Alarm Inverted	
	Generator on	
	Generator off	
	• Reserved	
	Reserved	
	• 6 Reserved	
	Service request	
	Generator on CH	
	• Generator on DHW	
	• CH pump on	
	Locking or Blocking	
	Cooling mode	
Function 10V-PWM	Selects the function of the 0-10 Volt output	0-10V 1 (Wilo)
EP028	• 0-10V 1 (Wilo)	
	• 0-10V 2 (Gr. GENI)	
	PWM signal (Solar)	
	0-10V 1 limited	
	0-10V 2 limited	
	PWM signal limited	
	PWM signal (UPMXL)	
Source 10V-PWM	Selects the source signal for the 0-10 Volt output	PWM
EP029	• PWM	
	Requested power	
	Actual power	

Tab.41 > Signals

Signals	Description of the signals
Power setpoint	Power setpoint in % of maximum
GM011	

9.2 Description of the parameters

9.2.1 Running the back-up in heating mode

Start-up conditions for the backup

The backups are authorised to start up normally except in cases of power cut-off or limitation linked to bivalency (**Bivalent temperature** - HP000).

If the heat pump should also be limited, the backups are nevertheless authorised to operate to guarantee heating comfort.

In heating mode, the backup is managed by the parameters: **Bivalent** temperature (HP000) and **Delay startbackup CH** (HP030).

If **Delay startbackup CH** (HP030) is set to 0, the time delay for start-up of the backup is set depending on the outdoor temperature: the lower the outdoor temperature, the quicker the backup will be activated.

Fig.46 Time delay curve for starting the backup



- t Time (minutes)
- T Outdoor temperature (°C)
- 1 Delay min outdoor T (HP047) = 8 minutes
- 2 Delay max outdoor T (HP048) = 30 minutes
- 3 Min outdoor T backup (HP049) = -10 °C
- 4 Max outdoor T backup (HP050) = 15 °C

In this example of a time delay to starting the backup when **Delay startbackup CH** HP030 is set to 0, with the factory-set parameters, if the outdoor temperature is 10 °C, the backup will start 25 minutes after the heat pump's outdoor unit.

MW-6000377-7

Backup operation if an error occurs on the outdoor unit

If an error occurs on the outdoor unit during a system heating demand, the backup boiler or the electric heating element starts up after 3 minutes to guarantee heating comfort.

Backup operation when defrosting the outdoor unit

When the outdoor unit is defrosting, the control system ensures the protection of the system by starting up the backup if necessary.

If the backup is not sufficient to ensure the protection of the outdoor unit during defrosting, then the outdoor unit is switched off.

Operation when the outdoor temperature falls below the operating threshold of the outdoor unit

If the outdoor temperature is below the minimum operating temperature of the outdoor unit as defined by the **Min outdoor T HP** (HP051) parameter, the outdoor unit is not authorised to operate.

If the system has a demand pending, the backup boiler or the electric heating element starts up immediately to guarantee heating comfort.

Start-up conditions for the backup

The start-up conditions for the backup for domestic hot water production depend on the **BL input setting** (AP001) and **BL2 function** (AP100) parameters for the blocking inputs BL1 and BL2 respectively.

Operating description

The behaviour of the backup boiler or the electric heating element in domestic hot water mode depends on the configuration of the DHW management(DP051) parameter.

If DHW management (DP051) is set to HP only the system gives priority to the heat pump during domestic hot water production. The backup boiler or the electric heating element is used only if the start-up time delay for the backup during domestic hot water production Delay StartBackupDHW (DP090) has elapsed in domestic hot water mode, unless the hybrid mode is activated. In this case, hybrid logic takes over.

If DHW management (DP051) is set to Auto (HP + Boiler) the domestic hot water production mode gives priority to comfort by accelerating domestic hot water production by simultaneously using the heat pump and the backup boiler or the electric heating element. In this mode, there is no maximum time for domestic hot water production as the use of the backups helps to ensure domestic hot water comfort more quickly.

9.2.3 Operation of the switch between heating and production of domestic hot water

The system does not allow the simultaneous production of heating and domestic hot water.



The switch logic between domestic hot water mode and heating mode operates as follows:

- duration between two domestic hot water production runs
- B Max DHW duration DP047: Maximum authorised duration for domestic hot water production
- С Duration for producing domestic hot water (less than **DP047**) to reach the DHW set point
- Ср DHW comfort setpoint DP070: Domestic hot water "Comfort" setpoint temperature

"Reduced" setpoint temperature

- Т Temperature
- Tp DHW T DM001: Domestic hot water temperature t Time
- Hysteresis DHW DP120: Setpoint temperature D differential triggering the domestic hot water tank to be charged

Tab.42

Phase	Description of the phase	Operating description
1	Domestic hot water production only	When the system is switched on, if domestic hot water production is au- thorised and the parameter DHW management (DP051) is configured to HP only, a domestic hot water production cycle is started up for a maxi- mum duration that can be set and fixed by the Max DHW duration (DP047) parameter. In the event of insufficient heating comfort, the heat pump is running too long in domestic hot water mode: reduce the maximum duration of domes- tic hot water production.
2	Heating only	Production of domestic hot water is off. Even if the domestic hot water set- point is not reached, a minimum heating period is forced. This period can be set and defined with the Min CH before DHW (DP048) parameter. After the heating period, tank loading is enabled again.
3	Domestic hot water production only	When the domestic hot water setpoint is reached, a period in heating mode begins.
4	Heating only	When the Hysteresis DHW (DP120) differential is reached, domestic hot water production is triggered. If there is not enough domestic hot water (e.g. if the domestic hot water does not heat up quickly enough): reduce the trip differential (hysteresis) by modifying the value of the Hysteresis DHW (DP120) parameter. The heat pump will start heating up the domestic hot water more often.
5	Domestic hot water production only	When the domestic hot water setpoint is reached, a period in heating mode begins.

9.2.4 Operation of the heating curve

The relationship between the outdoor temperature and the circuit flow heating water temperature is controlled by a heating curve or water temperature setpoint. This can be adjusted according to the requirements of the installation.

Important

i

Regulation via the heating curve is only possible when the **regulation strategy** CP780 is set on the modes "Acc. to Ext. T." and "Acc. to Ext. T and Room T.".

Fig.48



- 1 Current Flow temperature setpoint of zone CM070
- 2 Maximum Flow Temperature setpoint zone CP000 = 55 °C
- 3 Heating curve temperature gradient of the zone CP230

Tab.43

Outdoor temperature CM210

4

5 Curve base temperature CP210 / CP220 = 20 °C

Parameters	Description of the parameters		
Maximum Flow Temperature setpoint zone CP000	The flow setpoint temperature for the circuit CM070 is limited by the maximum flow temperature setpoint for the circuit CP000. When using a room thermostat, the setpoint retained is the lowest temperature between the flow setpoint temperature for the circuit CM070 and the maximum flow temperature setpoint for the circuit CP000.		
Heating curve temperature gradient of the zone CP230	 The steeper the gradient of the heating temperature curve for the circuit CP230, the quicker the flow setpoint temperature for the circuit CM070 will increase. Decrease the gradient of the heating temperature curve for the circuit CP230 in case of overheating in mid-winter. Example: for an outdoor temperature CM210 of 0 °C: if CP230 = 0.7 then CM070 = 34 °C if CP230 = 1.5 then CM070 = 50 °C 		
Curve base temperature CP210 / CP220	Increase the curve base temperature CP210 / CP220 when the heating is insufficient for mild outdoor temperatures. CP210 corresponds to the curve base temperature in comfort mode. CP220 corresponds to the curve base temperature in reduced mode. If the curve base temperature CP210 / CP220 is set to 15 °C, then it becomes equal to the Re- quired room setpoint temperature for the circuit CM190. Example: if CP210 = 15 °C then CM190 = the room setpoint temperature for the activity/timer programme.		
Wished room temperature setpoint of the zone CM190	Calculated setpoint temperature, taken from the timer programming, manual mode or the over- ride		
Outdoor temperature CM210	The outdoor temperature CM210 is affected by the position of the outdoor temperature sensor: check the sensor is positioned correctly.		
Current Flow temperature setpoint of zone CM070	 The flow setpoint temperature for the circuit CM070 is calculated according to the heating curve parameters: Without setting of the curve base temperature (CP210 / CP220 set to 15 °C): CM070 = (CM190 - CM210) x CP230 + CM190 With setting of the curve base temperature (CP210 / CP220 > 15 °C): CM070 = (CM190 - CM210) x CP230 + (CP210 or CP220) 		
Fig.49 Heating curve witho	ut curve base Without setting of the curve base temperature (CP210 / CP220 set to		

Fig.49 Heating curve without curve base



15 °C): an **outdoor temperature** CM210 of 0 °C will give a **flow setpoint temperature for the circuit** CM070 of 34 °C. If CP210 = 15 °C, then CP210 becomes the **required room setpoint temperature** CM190 (in our example CM190 = 20 °C).



With setting of the curve base temperature (CP210 / CP220) to 30 °C: an outdoor temperature CM210 of 0 °C will give a flow setpoint temperature for the circuit CM070 of 45 °C.

10 Examples of installation and connection with an AURIGA M/T-A outdoor unit

10.1 Installation with one backup boiler and one low loss header



3 Insulated hose kit

10.1.2 Connecting and configuring the heat pump

Fig.52



- Outdoor temperature sensor 1
- 2 Mago connected thermostat
- GTW-30 bus connection 3
- 4 Hydraulic backup pump power supply

- ON/OFF contact for the hydraulic backup 5
- Heating flow sensor 6
- Heating circuit pump power supply 7
- Outdoor unit BUS connection 8
- 1. Connect the accessories and options to the terminal blocks and the EHC-14 PCB, observing the 230-400 V and 0-40 V cable feedthroughs.
- 2. On initial start-up, or following a reset of the factory parameters, set the CN1 and CN2 parameters according to the output of the outdoor unit.



3. Configure the radiator circuit parameters (CIRCA).

Tab.44				
Access path	Parameter	Description	Adjustment required	
CIRCA > Parameters, counters, signals > Settings	MaxZoneTFlowSetpoi nt CP000	Maximum Flow Temperature setpoint zone	75 °C (factory setting) Adjust the temperature as required.	
	Zone Function CP020	Functionality of the zone	Direct (factory setting) This setting does not enable cooling.	
CIRCA > Heating	Slope: CP230	Value of the heating curve gradient.	1.5 (for a radiator circuit) Adapt the values of the heating curve in order to obtain optimum comfort.	



4. Configure the low loss header parameters.

Tab.45

Access path	Parameter	Description	Adjustment required
Air Src Heat pump > Parameters, counters,	Buffer tank HP086	Activation of hydraulic management mode for the configuration with a low-loss header, or for a buffer tank connected as a low-loss header	Yes
signals > Settings	Buffer tank hyst HP087	Temperature hysteresis to start or stop heating the buffer tank	Default value: 3 °C Do not modify.
	Boiler pump function AP102	Configuration of the boiler pump as zone pump or system pump (feed lowloss header) • OFF: No • ON: Yes	No

5. If necessary, configure the hybrid operating mode.

6. Setting up the backup boiler.

Installation with one DHW cylinder and one low loss header 10.2

10.2.1 Hydraulic diagram



- GTW-30 communication PCB 2
- 3 Buffer tank
- 4 Heating/DHW diverter valve and domestic hot water sensor kit
- 5
- Insulated hose kit 6
- Anti-freeze valves 7





- 1 Outdoor temperature sensor
- 2 Mago connected thermostat
- 3 GTW-30 bus connection
- 4 Heating flow sensor

- 5 Heating circuit pump power supply
- 6 Heating/domestic hot water reversing valve
- 7 Outdoor unit BUS connection
- 8 DHW cylinder temperature sensor
- 1. Connect the accessories and options to the terminal blocks and the EHC-14 PCB, observing the 230-400 V and 0-40 V cable feedthroughs.
- 2. On initial start-up, or following a reset of the factory parameters, set the CN1 and CN2 parameters according to the output of the outdoor unit.



3. Configure the radiator circuit parameters (CIRCA).

Tab.46				
Access path	Parameter	Description	Adjustment required	
CIRCA > Parameters, counters, signals > Settings	MaxZoneTFlowSetpoi nt CP000	Maximum Flow Temperature setpoint zone	75 °C (factory setting) Adjust the temperature as required.	
	Zone Function CP020	Functionality of the zone	Direct (factory setting) This setting does not enable cooling.	
CIRCA > Heating	Slope: CP230	Value of the heating curve gradient.	1.5 (for a radiator circuit) Adapt the values of the heating curve in order to obtain optimum comfort.	



4. Configure the buffer tank parameters.

Tab.47

Access path	Parameter	Description	Adjustment required
Air Src Heat pump > Parameters, counters,	Buffer tank HP086	Activation of hydraulic management mode for the configuration with a low-loss header, or for a buffer tank connected as a low-loss header	Yes
signals > Settings	Buffer tank hyst HP087	Temperature hysteresis to start or stop heating the buffer tank	Default value: 3 °C Do not modify.
	Boiler pump function AP102	Configuration of the boiler pump as zone pump or system pump (feed lowloss header) • OFF: No • ON: Yes	No

5. Follow the access path given below to access the parameters for the domestic hot water tank (**DHW**).

Access path	
P → DHW tank	

11 Operation

11.1 Regional and ergonomic parameters

You can personalise your appliance by modifying the parameters linked to your geographic location and the ergonomics of the user interface.

- 1. Press the 🗐 button.
- 2. Select System Settings.

3. Perform the required settings:

Menu	Description
Set Date and Time	Setting the date and time
Select Country and Language	Select the country and language
Daylight Saving Time	Setting the automatic change to daylight saving time. These changes will be carried out on the last Sunday in March and October
Installer Details	Display the installer details
Set Heating Activity Names	Modify the name of activities used to program heating periods
Set Cooling Activity Names	Modify the name of activities used to program cooling periods
Set Screen Brightness	Setting the screen brightness
Set click sound	Switch the sound of the rotary knob on or off
License Information	Display the creation licenses for the internal software

11.2 Personalising the zones

11.2.1 Definition of the term "zone"

Fig.55



Zone: term given to the different hydraulic circuits. It indicates several rooms served by the same circuit.

Tab.48 Example:

Кеу	Zone	Factory-set name
1	Zone 1	CIRCA
2	Zone 2	CIRCB

11.2.2 Changing the name and symbol of a zone

The names and symbols of the various zones are factory-configured. If required, you can customise the name and symbol used for the zones in your installation.



- 1. Select the icon of the zone to be modified, $\underbrace{29,4^{\circ}}_{29,4^{\circ}}$, for example.
- 2. Select Zone friendly Name.
- 3. Modify the name of the zone (20 characters max.).
- 4. Select Icon display zone.
- 5. Select the symbol to be associated with the zone.
- 6. Change the name and/or the symbol for the zone. Refer to the table provided at the back of the manual.

11.3 Personalising the activities

11.3.1 Definition of the term "Activity"

Activity: this term is used when programming hours. It refers to the client's desired comfort level for different activities during the course of the day. One set point temperature is associated to each activity. The last activity of the day remains valid until the first activity of the following day.



Activity	Set point temperature
Morning 1	20 °C
Away 2	19 °C
Home ³	20 °C
Evening 4	22 °C
Sleep (5)	16 °C
Custom 6	15°C
	Activity Morning ① Away ② Home ③ Evening ④ Sleep ⑤ Custom ⑥

11.3.2 Changing the name of an activity

The name of the different activities is factory-set: Sleep, Home, Away, Morning, Evening and Custom. If you wish, you can personalise the name of the activities for all of the zones in your installation.

- 1. Press the 🗐 button.
- 2. Select System Settings.
- 3. Select Set Heating Activity Names or Set Cooling Activity Names.
- 4. Select the activity you want to change.
- 5. Change the name of the activity (10 characters max.).

11.3.3 Changing the temperature of an activity

The temperatures of the various activities are factory-configured. If you desire, you can personalise the temperatures for these activities for all of the zones in your installation. These activities are used in the timer programmes.

- 1. Select the icon for the zone to be programmed, $\left(\underbrace{\blacksquare}_{2^{A/C}} \right)$, for example.
- 2. Select Set activity temperatures, either for heating or for cooling.
 - ⇒ Information on the selected menu is given in the lower part of the screen.
- 3. Select the activity you want to change.
- 4. Modify the temperature for the activity.

11.4 Room temperature for a zone

To set the room temperature for the different living zones, you can choose between five operating modes.

If you are using a programmable on/off thermostat, we recommend selecting the **Manual** operating mode for the heat pump.

If you are using any other kind of thermostat, we recommend the **Scheduling** operating mode which enables the room temperature to be modulated according to your needs and optimises your energy consumption.

Mode		Description
tion and the second sec	Scheduling	The room temperature is modulated according to the timer programme chosen. Recommended mode.
6	Manual	The room temperature is constant.
₽ [©]	Short temperature change	The room temperature is forced for a defined period.
(Î)	Holiday	The room temperature is reduced during an absence period to save energy.
	Off	The installation and equipment are protected against frost during the winter peri- od.

Tab.50

11.4.1 Selecting the operating mode

- 1. Select the icon for the affected zone, for example.
- 2. Select Operating mode.
- 3. Select the desired operating mode.

11.4.2 Defining a constant room temperature

Manual mode is used to define a constant temperature in a selected zone.

- 1. Select the icon for the affected zone, for example. 29,4°C
- 2. Select Operating mode.
- 3. Select Manual.
- 4. Set the desired temperature for the zone.
- 5. Select Confirm.

11.4.3 Configuring and activating a timer programme for the heating

Fig.57 14 : 23 Zo.. Zone setup: ... Heating Schedule Monday Add time and Activi Copy to other day Set activity temperatures MW-5000770-04 A timer programme can be used to vary the room temperature in a living zone depending on activities during the day. This can be programmed for each day of the week.

- Ш 1. Select the icon for the zone to be programmed, , for example. 29.4°C ⇒ Information on the current operating mode is given in the upper part of the screen.
- 2. Select Time programs heating.
- 3. Select the timer programme to be configured: Schedule 1 or Schedule 2 or Schedule 3
 - ⇒ The programmed activities for Monday are displayed. The last activity of the day remains active until the first activity of the following day.
- 4. Select the day to be modified.
- 5. Carry out the following actions according to your needs:
 - · Modify the timings for programmed activities.
 - Add a new time range.
 - Delete a programmed activity (choose the "Delete" activity).
 - Copy programmed daily activities to other days.
 - Modify temperatures linked to an activity.
- 6. Then select Time programs heating > ZoneTimeProg Select to choose the timer programme to be activated.

11.4.4 Activating and configuring a timer programme for cooling

If your installation is configured to allow cooling, the corresponding timer programme can be modified in Cooling mode.

Important i

Your appliance will automatically switch to cooling mode when the outdoor temperature exceeds 22 °C (factory setting).

- for example. 29,4°C
- 1. Select the icon for the zone to be programmed, ⇒ Information on the current operating mode is given in the upper part of the screen.
- 2. To activate the timer programming or to change the timer programme, select Time programs cooling.
- 3. Select the timer programme to be activated.
 - ⇒ Information on the active timer programme is given in the upper part of the screen.

Fig.58



- 4. To modify the timer programme for the Cooling mode, select Time
 - ⇒ The programmed activities for Monday are displayed. The last activity of the day remains active until the first activity of the
- 5. Select the day to be modified.
- 6. Carry out the following actions according to your needs:
 - Modify the timings for programmed activities.
 - · Add a new activity.
 - Delete a programmed activity (choose the activity "Delete").
 - · Copy programmed daily activities to other days.
 - · Modify temperatures linked to an activity.

11.4.5 Changing the room temperature temporarily

Regardless of the operating mode selected for a zone, it is possible to modify the room temperature for a defined period. Once this time has elapsed, the selected operating mode will restart.

- 1. Select the icon of the zone to be modified,
- for example. 2. Select Zone setup > Short temperature change.
- 3. Define the duration in Hour and in Minute.
- 4. Set the temporary room temperature setpoint for the circuit selected.

11.5 Domestic hot water temperature

11.5.1 Selecting the operating mode

> For the production of domestic hot water, you can choose between five operating modes. We recommend the Scheduling mode which enables domestic hot water production periods to be programmed according to your needs and to optimise your energy consumption.

- 1. Select the DHW tank icon. 51,2°C
- 2. Select the desired operating mode:

Tab.51

Mode		Description
i t	Scheduling	The domestic hot water is produced according to the timer programme chosen
6	Manual	The domestic hot water temperature remains at the comfort temperature permanently
e.©	Hot water boost	The production of domestic hot water is forced at the comfort temperature for a defined duration
Û	Holiday	The domestic hot water temperature is reduced during an absence period to save energy
	Off	The equipment and the system are protected when the heat pump is in frost protection mode.

11.5.2 Activating and configuring a timer programme for domestic hot water

A timer programme can be used to vary the domestic hot water temperature depending on activities during the day. This can be programmed for each day of the week.

- ⇒ Information on the current operating mode is given in the upper part of the screen.
- 2. To activate the timer programming or to change the timer programme, select Time programs.

Fig.59



- 3. Select the timer programme to be activated.
 - ⇒ Information on the active timer programme is given in the upper part of the screen.
- 4. To change the timer programming, select the programme you wish to change.
 - ⇒ The programmed activities for Monday are displayed.
 - The last activity of the day remains active until the first activity of the following day.
- 5. Select the day to be modified.
- 6. Carry out the following actions according to your needs:
 - Modify the timings for programmed activities.
 - Add a timer and an activity.
 - Delete a programmed activity (choose the "Delete" activity).
 - Copy to another day.
 - · Set the activity temperatures.

11.5.3 Forcing domestic hot water production (override)

Regardless of the selected operating mode, you can force domestic hot water production to the comfort temperature (DHW comfort setpoint DP070 parameter) for a defined period.

- 1. Select the DHW tank icon.
- 2. Select Operating mode > Hot water boost.
- 3. Define the duration in Hour and in Minute.

11.5.4 Modifying the domestic hot water setpoint temperatures

The production of domestic hot water operates with two setpoint temperature parameters:

- DHW comfort setpoint DP070: used in the Scheduling, Manual and Hot water boost modes
- DHW eco setpoint DP080: used in the Scheduling, Holiday and Off modes

You can change these setpoint temperature settings to adapt them to your needs.

. Select the	51,2°C	DHW tank icon.

- 2. Select Domestic Hot Water Setpoints > DHW comfort setpoint to change this setpoint.
- 3. Select Domestic Hot Water Setpoints > DHW eco setpoint to change this setpoint.

11.6 Managing the heating, cooling and domestic hot water production

11.6.1 Switching the central heating on/off

Your appliance will automatically deactivate the heating function and switch to cooling mode when the average outdoor temperature exceeds 22 °C (factory setting). However, you can manually switch off the heating function for all circuits to save energy during the summer period, for example.



Important

- · Cooling mode is not authorised by default.
- · If the heating function is shut off, then the cooling will also be shut off.



- 1. Select the 2 Heat Pump icon.
- 2. Select CH function on.

- 3. Select the desired value:
 - Off to stop the heating/cooling function.
 - On to switch the heating/cooling function on again.

11.6.2 Forcing cooling

Your appliance will automatically switch to cooling mode when the outdoor temperature exceeds 22 °C (factory setting). However, you can force cooling mode at any time, regardless of the outdoor temperature.



- 1. Select the (3,7) icon.
- 2. Select Force summer mode.
- 3. Select On.

11.6.3 Periods of absence or going on holiday

If you will be absent for several weeks, you can reduce the room temperature and domestic hot water temperature in order to save energy. To do this, activate the **Holiday** operating mode for all zones, including for domestic hot water.

1. Select the Holiday Mode icon.

2. Set the following parameters:

Tab.52

Parameter	Description
Start date holiday	Set the date and time for the start of the absence period.
End date holiday	Set the date and time for the end of the absence period.
Wished room temperature during holiday	Set the desired room temperature for the absence period
Reset	Restart or cancel the holiday programme

11.7 Monitoring the energy consumption

If your installation is equipped with an energy meter, you can monitor your energy consumption.



⇒ The energy consumed since the last energy consumption meter reset is displayed:

Tab.53

Parameter	Description
Cooling consumed	Energy consumed for cooling (kWh)
DHW consumed	Energy consumed for domestic hot water (kWh)
CH consumed	Energy consumed for central heating (kWh)

2. To reset the meters to zero, select **Réinitialiser la consommation** énergétique.

Starting and stopping the heat pump 11.8

11.8.1 Starting the heat pump

	1. Switch on the outdoor unit, the indoor unit and the backup (immersion
	 Important The outdoor unit is powered via its circuit breaker. The indoor unit is powered via the circuit breaker and the ON/OFF button. The immersion heater is powered via its circuit breaker. The backup boiler must be powered on according to its user guide. The heat pump will begin an automatic vent cycle (which lasts approx. three minutes), run each time the power is switched on. If there is a problem, an error message is displayed on the home screen. If an error message is displayed on the home screen, contact the installer. Check the hydraulic pressure in the installation indicated on the user interface. Important Recommended hydraulic pressure between 1.5 and 2.0 bar.
11.8.2 Shutting down the heat pump	
	The heat pump must be shut down in certain situations, for example during any intervention on the equipment. In other situations, such as an extended absence period, we recommend that the Holiday operating mode is used in order to benefit from the heat pump anti-blocking function and to protect the installation from frost.
	To shut down the heat pump:
	 Switch off the indoor unit by pressing the on/off switch. Cut the power to the indoor unit, outdoor unit and backup circuit breakers.
12 Maintenance	
12.1 General	
	An annual inspection with a leak-tightness check of the heating installation in accordance with prevailing standards is obligatory.

Maintenance operations are important for the following reasons:

- To guarantee optimum performance
- To extend the life span of the equipment
- To provide an installation which offers the user optimum comfort over time



M On

- 1. Press the 🗐 button.
- 2. Select Commissioning Menu.
 - 3. Select Load Test.
 - 4. Select the operating mode for which you would like to see the information. **Off**, **Load test CH max** or **Control unit Cooling**.

12.3 Cleaning the casing

12.2

1. Clean the outside of the appliance using a damp cloth and a mild detergent.

12.4 Replacing the user interface battery

If the indoor unit is switched off, the user interface battery takes over to keep the correct time.

The battery must be replaced when the time is no longer saved.

1. Remove the front panel.



13 Troubleshooting

13.1 Resolving operating errors

When your appliance malfunctions, the LED and display switch from their initial colour to red and may flash. A message is displayed with an error code on the home screen.

This error code is important for the correct and rapid diagnosis of the type of malfunction and for any technical assistance that may be needed.

If an error occurs:

1. Make a note of the code displayed on the screen.

Accessing the indoor unit connectors, page 18

- 2. Remedy the problem described by the error code or contact the installer.
- 3. Switch off the outdoor unit and the indoor unit.
- 4. Switch on the indoor unit then the outdoor unit to check that the cause of the error has been removed.
- 5. If the code is displayed again, contact the installer.

13.1.1 Types of error code

The user interface can display three types of error code:

Type of code	Code format	Colour of the status LED
Warning	Axx.xx	Green flashing
Blockage	Hxx.xx	Continuous red
Lockout	Exx.xx	Flashing red

13.1.2 Warning codes

A warning code signals that the optimal operating conditions are not fulfilled. The system continues to operate safely, but there is a risk of shutdown if the situation continues to deteriorate.

If the situation improves, the warning code may disappear spontaneously.

Tab.55 List of warning codes

Code	Message	Description
A02.06	Water Press Warning	Water Pressure Warning active
A02.22	System flow warning	System water flow warning active
A02.55	Inval or miss SerNR	Invalid or missing device serial number
A blocking code signals an anomaly affecting the heating system. Several possibilities:

- The system automatically attempts to correct the error (for example in the event of a fault related to the flow rate).
- The error is still present and the system functions in defect mode (for example, in the event of a fault affecting the outdoor unit, then the backup electric heater or the backup boiler is started up).
- The system is shut down but automatically switches on again when the error disappears.

Code	Message	Description			
H00.16	DHW sensor Open	Domestic Hot Water tank temperature sensor is either removed or measures a temperature below range			
		 Check the wiring between the central unit PCB and the sensor. Check that the sensor has been fitted properly. Check the Ohmic value of the sensor. Replace the sensor if necessary. 			
H00.17	DHW sensor Closed	Domestic Hot Water tank temperature sensor is either shorted or measures a temperature above range			
		 Check the wiring between the central unit PCB and the sensor. Check that the sensor has been fitted properly. Check the Ohmic value of the sensor. Replace the sensor if necessary. 			
H00.32	TOutdoor Open	Outdoor temperature sensor is either removed or measures a temperature below range			
		 Check the wiring between the central unit PCB and the sensor. Check that the sensor has been fitted properly. Check the Ohmic value of the sensor. Replace the sensor if necessary. 			
H00.33	TOutdoor Closed	Outdoor temperature sensor is either shorted or measures a temperature above range			
		 Check the wiring between the central unit PCB and the sensor. Check that the sensor has been fitted properly. Check the Ohmic value of the sensor. Replace the sensor if necessary. 			
H00.34	TOutdoor Missing	Outdoor temperature sensor was expected but not detected Wired sensor:			
		 Check the wiring between the central unit PCB and the sensor. Check that the sensor has been fitted properly. Check the Ohmic value of the sensor. Replace the sensor if necessary. Reset the values CN1 and CN2. This solution also resets all the other parameters. 			
		Radio-controlled outdoor temperature sensor:			
		 Check the wiring between the radio receiver and the central unit PCB (R-Bus line). Check that the radio gateway is supplied with power. Perform a pairing sequence. If necessary, perform a new pairing sequence and reduce the distance between the outdoor radio sensor and the radio receiver. Replace the sensor if necessary. Replace the radio receiver if necessary. 			
H00.48	THp Flow Closed	Heat pump flow temperature sensor is either shorted or measures a temperature above range			
		 Check the wiring between the central unit PCB and the sensor. Check that the sensor has been fitted properly. Check the Ohmic value of the sensor. Replace the sensor if necessary. 			

Tab.56 AURIGA M/T-A outdoor unit blocking codes

Code	Message	Description		
H00.49	THp Flow Missing	Heat pump flow temperature sensor was expected but not detected		
		• Check the wiring between the main PCB and the sensor.		
		 Check that the sensor has been fitted correctly. Check the Ohmic value of the sensor 		
		Replace the sensor if necessary.		
H00.51	THp Return Open	Heat pump return temperature sensor is either removed or measures a temperature below range		
		Check the wiring between the central unit PCB and the sensor.		
		Check that the sensor has been fitted properly. Check the Obmic value of the concerned		
		Replace the sensor if necessary.		
H00.52	THp Return Closed	Heat pump return temperature sensor is either shorted or measures a temperature above range		
		Check the wiring between the central unit PCB and the sensor.		
		Check that the sensor has been fitted properly.		
		Check the Onmic Value of the sensor. Replace the sensor if necessary.		
H02.02	Wait Config Number	Waiting For Configuration Number		
		Waiting for configuration parameters to be entered:		
		 Configure CN1 / CN2 depending on the output of the outdoor unit installed (CNF menu). 		
		Central unit PCB replaced: heat pump not configured.		
H02.03	Conf Error	Configuration Error		
		Configuration parameters entered are incorrect.		
		Configure CN1 / CN2 depending on the output of the outdoor unit installed (CNF menu).		
H02.04	Parameter Error	Parameter Error		
		Restore the factory settings.If the error is still present: change the central unit PCB.		
H02.05	CSU CU mismatch	CSU does not match CU type		
		Software change (software number or version parameter inconsistent with the memory).		
H02.09	Partial block	Partial blocking of the device recognized BL input on the central unit PCB terminal block open:		
		Check the contact on the BL input.		
		Check parameters AP001 and AP100.		
H02.10	Full Block	Full blocking of the device recognized BL input on the central unit PCB terminal block open:		
		Check the contact on the BL input.		
		Check the wiring.		
H02.36	Funct dovice lost	Check parameters AP001 and AP100.		
HU2.30		No communication between the central unit PCB and the additional circuit PCB:		
		 Check the connection of the power supply cable between the PCBs. Check the connection of the BUS cable between the PCBs. 		
		Run automatic detection.		
H02.37	Uncritic device lost	Uncritical device has been disconnected No communication between the central unit PCB and the additional circuit PCB:		
		 Check the connection of the power supply cable between the PCBs. Check the connection of the BUS cable and the PCBs. Pure automatic detection 		
H02.60	Unsupported function	The zone doesn't support the selected function		
H06.01	HP Unit Failure	Heat Pump Unit Failure occured		
		Error code shown on the digital display of the outdoor unit: E3, E4, H5, H9		
H06.06	BL CompHighPressure	A high pressure anomaly has stopped the compressor		

Code	Message	Description		
H06.07	BL CompLowPressure	A low pressure anomaly has stopped the compressor Error code shown on the digital display of the outdoor unit: P0, HP		
		 The system's refrigerant level is too low. Add the appropriate quantity. In heating or DHW mode, the outdoor heat exchanger is dirty or clogged. Clean the exchanger. 		
		• The water flow rate is too low in cooling mode. Increase the water flow rate.		
H06.17	Delta I CH max limit	The Delta Temperature on the central heating side exceeds the maximum overshoot. Error code shown on the digital display of the outdoor unit: P5		
		 Check whether the water filter needs cleaning. Make sure that there is no air in the system (venting). Check the water pressure. The water pressure must be above 1 bar (0.1 MPa) (at low temperature). Check that the pump's speed setting is the highest speed. Make sure that the expansion vessel is not broken. Check that the resistance in the hydraulic circuit is not too high for the pump. 		
H06.21	Tret heat pump	Heat pump return temperature sensor error		
		 Check the wiring between the EHC-14 PCB and the sensor. Check that the sensor has been fitted properly. Check the Ohmic value of the sensor. Replace the sensor if necessary. 		
H06.22	Heating error	Heating operation error		
H06.23	Refr pressure	Refrigerant pressure sensor error Error code shown on the digital display of the outdoor unit: H8		
		 Check the wiring between the EHC-14 PCB and the sensor. Check that the sensor has been fitted correctly. Reconnect the sensor connector, if necessary. Check the ohmic value of the sensor. Replace the sensor if necessary. 		
H06.24	Refr high pressure	The refrigerant high pressure protection is activated Error code shown on the digital display of the outdoor unit: P1 Heating/DHW mode:		
		 The water flow rate is low, the water temperature is high: if there is air in the water system, release the air. The water pressure is below 0.1 MPa: add water to the circuit until the pressure is between 0.15 and 0.2 MPa. The refrigerant level is too high. Adjust the quantity of refrigerant. The electric expansion valve is locked or the winding connector is loose. Tap the valve body and connect/disconnect the connector several times to check that the valve is working correctly. Fit the winding in the correct position. DHW mode: the water tank's heat exchanger is smaller. 		
		Cooling mode:		
		The heat exchanger cover has not been taken off: remove the coverThe heat exchanger is dirty or clogged. Clean the heat exchanger.		
H06.25	Tflow heat pump	Heat pump flow temperature sensor error		
		 Check the wiring between the EHC-14 PCB and the sensor. Check that the sensor has been fitted properly. Check the Ohmic value of the sensor. Replace the sensor if necessary. 		
H06.26	HP liquid temp	Heat pump liquid temperature sensor error Error code shown on the digital display of the outdoor unit: H2		
		 Check the wiring between the EHC-14 PCB and the sensor. Check that the sensor has been fitted properly. Check the Ohmic value of the sensor. Replace the sensor if necessary. 		
H06.27	Frost protection	The heat pump frost protection is activated		

Code	Message	Description		
H06.28	Comm IDU - ODU	Communication error between the indoor unit and outdoor unit Error code shown on the digital display of the outdoor unit: E2		
		• The main PCB B and the main control PCB of the hydraulic module are not connec-		
		 ted. Connect the wire. Check the value of signal HM024. If the value of HM024 is less than 75%, the communication errors are too severe. It is essential to use a shielded communication cable. 		
		If there is a strong magnetic field or strong interference, (e.g. lifts, powerful trans- formers), add a barrier to protect the unit or move the unit to another location.		
		 Switch off the outdoor unit and the indoor unit. Wait 3 minutes for the outdoor unit capacitors to discharge. Switch on the indoor unit then the outdoor unit. 		
H06.29	ODU-interface	Mismatch between the outdoor unit and the interface board		
H06.30	ODU temperature	The outdoor unit temperature is anomalous Error code shown on the digital display of the outdoor unit: P4		
		 The discharge temperature sensor connector is loose. Reconnect it. The discharge temperature sensor connector is wet or contains water. Drain the water, dry the connector and add waterproof adhesive. The discharge temperature sensor is faulty. Replace it. 		
H06.31	ODU temp sensor	Outdoor unit temperature sensor error		
		 Check the wiring between the main PCB and the sensors. Check that the sensors have been fitted correctly. Check the Ohmic value of the sensors. 		
H06.32	ODU temp sensor	Outdoor unit temperature sensor error		
		 Check the wiring between the main PCB and the sensors. Check that the sensors have been fitted correctly. Check the Ohmic value of the sensors. Replace the sensors if necessary. 		
H06.33	ODU heatsink temp	Outdoor unit heatsink temperature is anomalous Heat sink = radiator		
H06 34		Cutdoor unit power module is appropriate asperatous		
1100.04		Error code displayed on the outdoor unit digital display: bH, H4, P6, L0, L1, L2, L4, L5, L7, L8, or L9		
		 The power supply voltage of the unit is low, increase the power supply voltage to the required range. The space between the units is too narrow for heat exchange. Increase the space between the units. 		
		 The heat exchanger is dirty or clogged. Clean the exchanger. 		
		• The fan is not running. The fan motor or the fan is broken. Replace it.		
		 The retrigerant level is too high. Adjust the quantity of retrigerant. The water flow rate is low, there is air in the system or the pump stroke is insufficient. Release the air and reselect the pump. 		
		 The water outlet temperature sensor is loose or broken, reconnect it or replace it. The wires or screws on the module are loose. Reconnect the wires and tighten the screws. The thermally conductive adhesive has dried out or has fallen off. Add a little 		
		thermally conductive adhesive. • The wire connection is loose or has fallen off. Reconnect the wire		
		The inverter module board is faulty, replace it.		
		• If you find that there is no problem with the control system, then the compressor is fourthy replace it with a new one		
		 The stop valves are closed, open them. 		
H06.35	ODU superheat	The outdoor unit superheat is anomalous		
H06.36	Fan motor	Outdoor unit fan motor is anomalous. Error code shown on the digital display of the outdoor unit: H6. HE or HH		
		 A strong wind is blowing against the fan, making it turn in the opposite direction. Reorient the unit or shelter it to prevent the wind from blowing against the fan. The fan motor is broken, replace it. 		

Code	Message	Description		
H06.37	Overheat protection	The outdoor unit overheat protection is activated		
H06.38	ODU pressure	The outdoor unit pressure is anomalous		
H06.39	ODU overcurrent	Compressor overcurrent in the outdoor unit Error code shown on the digital display of the outdoor unit: P3		
		See possible causes and action list for code H06.24.The power supply voltage of the unit is low. Increase the power voltage to the required range.		
H06.40	ODU current sensor	Current sensor error in the outdoor unit		
H06.41	ODU Tinl water	The outdoor unit inlet water temperature is anomalous		
H06.42	ODU refrigerant	Outdoor unit refrigerant is anomalous		
H06.43	DIP switch	The DIP switch on the interface board has a configuration error interface panel = EHC-14 PCB		
H06.53	Tambiant air minimum	The ambient air temperature is below the allowed minimum		
H06.58	HP outdoor temp	Heat pump outdoor temperature sensor error Error code shown on the digital display of the outdoor unit: E6		
H06.59	HP suction temp	Heat pump compressor suction temperature sensor error Error code shown on the digital display of the outdoor unit: E9		
		 The connector of sensor Th is loose. Reconnect it. The connector of temperature sensor Th is wet or contains water. Drain the water, dry the connector and add waterproof adhesive. The temperature sensor Th is faulty. Replace it. 		
H06.60	HP inverter voltage	The inverter voltage of the heat pump is too low Error code shown on the digital display of the outdoor unit: F1		
		 Check the power supply. If the power supply is correct, check that the LED indicator light is ok. Check the PN voltage: if it is 380 V, the source of the problem is generally the motherboard. If the indicator light is off, switch off the power supply, check the IGBT, check the dioxides, if the voltage is not correct, the inverter board is damaged, replace it. If there is no problem with the IGBT, this means that there are no problems with the inverter board. Check the bridge rectifier to see if the bridge voltage is correct. (Same method as for the IGBT, disconnect the power supply, check if the dioxides are damaged. normally, if F1 is present when the compressor is started up, the motherboard could be the problem. If F1 is present when the fan is started up, this could be due to the inverter board. 		
H06.61	HP supply voltage	The heat pump power supply voltage is out of range Error code shown on the digital display of the outdoor unit: H7		
		 Check that the power supply input is in the available range. Switch off and on again several times in quick succession. The unit should remain off for more than 3 minutes before being switched back on. The part in the circuit on the main control board is faulty. Replace it with a new main PCB. 		
H06.62	HP discharge temp	Heat pump compressor discharge temperature sensor error Error code shown on the digital display of the outdoor unit: EA		
		 See possible causes and action list for code H06.24. The temperature sensor TWout is loose. Reconnect it. The temperature sensor T1 is loose. Reconnect it. The temperature sensor T5 is loose. Reconnect it. 		
H06.63	HP EEPROM error	Heat pump Inverter module EEPROM error Error code shown on the digital display of the outdoor unit: HF		
		 Error in the EEprom parameter, rewrite EEprom data. The part in the EEprom chip is broken, replace it. The main PCB is broken, replace it. 		

Code	Message	Description		
H06.64	HP inverter com	Communication error between the outdoor main control unit and the inverter module of the heat pump Error code shown on the digital display of the outdoor unit: H1		
		 If there is a power supply connected to the PCB and to the drive board. Check whether the PCB LED is on or off. If the LED is off, reconnect the power supply wire. If the LED is on, check the wire connection between the main PCB and the drive PCB. If the wire is loose or broken, reconnect the wire or replace it. Fit a new main PCB or drive board. 		
H06.65	HP high temp cooling	HP refrigerant outlet temperature is too high in cooling mode Error code shown on the digital display of the outdoor unit: Pd		
		 The heat exchanger cover has not been taken off. Remove it. The heat exchanger is dirty or clogged. Clean the exchanger. There is insufficient space around the unit for heat exchange. The fan motor is broken, replace it 		
H06.66	HP gas temp	Heat pump gas temperature sensor error Error code shown on the digital display of the outdoor unit: H3		
		 Check the sensor resistance The connector for sensor T2B is loose. Reconnect it. The connector for sensor T2B is wet or contains water. Drain the water and dry the connector. Add a waterproof adhesive. Sensor T2B is faulty, replace it with a new sensor. 		
H06.67	ODU return high flow	The heat pump return temperature is higher than the flow temperature in the outdoor unit Error code shown on the digital display of the outdoor unit: PP		
		 Check the resistance of the two Tw_out - Tw_in sensors Check the position of the two sensors. The water inlet/outlet sensor (TWJn/TW_out) is broken, replace it with a new sensor. The 4-way valve is jammed. Restart the unit again to allow the valve to change the direction. The 4-way valve is broken, replace it with a new valve. 		
H06.68	ODU air temp sensor	Refrigerant outlet temperature sensor error in air side of heat exchanger of the outdoor unit Error code shown on the digital display of the outdoor unit: E5		
		 The connector for sensor T3 is loose. Reconnect it. The connector for sensor T3 is wet or contains water. Drain the water and dry the connector. Add a waterproof adhesive. Sensor T3 is faulty, replace it with a new sensor. 		
H06.69	3 phase sequence	Invalid phase sequence in the 3 phase heat pump power supply Error code shown on the digital display of the outdoor unit: E1		
		Check that the power supply cables are correctly connected and avoid phase loss.Check whether the connections of the neutral and live wires have been reversed.		
H06.75	ODU flow error	Water flow error active in the outdoor unit module Error code shown on the digital display of the outdoor unit: E0 or E8		
		 Check whether the water filter needs cleaning. Make sure that there is no air in the system (venting). Check the water pressure. The water pressure must be greater than 1 bar (0.1 MPa). Check that the pump's speed setting is the highest speed. Make sure that the expansion vessel is not broken. Check that the resistance in the hydraulic circuit is not too high for the pump. If this error occurs during operation in Defrost mode (when heating spaces or domestic water), make sure that the power supply to the backup electric heater is correctly cabled and the fuses are not blown. Check that the pump fuse and the PCB fuse are not blown. The electric circuit is short circuited or open. Reconnect the wire correctly. The water flow rate is too low. The water flow rate controller is faulty, it is continuously open or closed. Switch the water flow rate controller. 		

Code	Message	Description		
H06.76	ODU return temp err	Return temperature sensor is on error in the outdoor unit Error code shown on the digital display of the outdoor unit: Ed		
		 Check the sensor resistance The connector for the Tw_in sensor is loose. Reconnect it. The connector for the Tw_in sensor is wet or contains water. Drain the water and dry the connector. Add a waterproof adhesive The Tw_in sensor is faulty. Replace it with a new sensor. 		
H06.77	ODU EEPROM error	EEPROM error in hydronic system main control board in the outdoor unit Error code shown on the digital display of the outdoor unit: EE		
		 The EEprom parameter is incorrect. Rewrite the EEprom data. The EEprom chip is broken. Replace it with a new EEprom chip. The main control PCB for the hydraulic module is broken. Replace it with a new PCB. 		
H06.78	ODU internal com Err	Communication error between refrigerant system and hydronic system main control boards Error code shown on the digital display of the outdoor unit: H0		
		 The cable is not connecting the main PCB B and the main control PCB of the hydraulic module. Connect the cable. The communication cable order is incorrect. Reconnect the cables in the correct order. There is significant magnetic or electrical interference caused by lifts, large electrical transformers, etc. Add shielding to protect the unit or move the unit. 		
H06.79	ODU flow temp err	Flow temperature sensor is on error in the outdoor unit Error code shown on the digital display of the outdoor unit: HA		
		 The connector for sensor Tw_out is loose. Reconnect it. The connector for sensor Tw2 is loose. Reconnect it. The connector for sensor Tw2 is wet or contains water. Drain the water and dry the connector. Add a waterproof adhesive. sensor Tw2 is faulty. Replace it with a new sensor. 		
H06.80	HE frost protection	ODU water side heat exchanger anti-freeze protection Error code shown on the digital display of the outdoor unit: Pb The unit will resume normal operation.		
H06.81	Evaporator error	Evaporator error in the outdoor unit		

Refer to the installation manual for the outdoor unit for the codes linked to the outdoor unit.

13.1.4 Lockout codes

A lockout code signals a major anomaly affecting the heating system: the heating system is shut down as the safety conditions are not fulfilled.

Two operations are necessary for the system to resume normal operation:

- 1. Remove the causes of the anomaly.
- 2. Acknowledge the error message manually on the user interface.

When one of the codes below is displayed, contact the professional responsible for maintenance of the heat pump.

Tab.57	List of lockout codes
--------	-----------------------

Code	Message	Description	
E00.00	TFlow Open	Flow temperature sensor is either removed or measures a temperature below range	
		 Check the wiring between the PCB and the sensor 	
		- Check that the sensor has been correctly fitted	
		Sensor failure:	
		 Check the Ohmic value of the sensor 	
		 Replace the sensor if necessary 	
E00.01	TFlow Closed	Flow temperature sensor is either shorted or measures a temperature above range	
		 Poor sensor connection: Check the wiring between the PCB and the sensor 	
		Check that the sensor has been correctly fitted Sensor failure:	
		 Check the Ohmic value of the sensor Replace the sensor if necessary 	
E02.13	Blocking Input	Blocking Input of the Control Unit from device external environment	
		Check the wiringCheck the component connected to the BL. contact	
E02.24	System flow locking	System water flow locking active	
E06.03	Locking HydrauBackup	Locking Hydraulic Backup	

13.2 Displaying and clearing the error memory

The error memory stores the 32 most recent errors. To display, consult and clear the error history:



- 1. Press the 🗐 button.
- 2. Select Error History.
 - ⇒ The list of the 32 most recent errors is displayed with the error code, a short description and the date.
- 3. Select the required error to find out the details
- 4. Press and hold the knob \checkmark to clear the error history.

13.3 Accessing information on the hardware and software versions

Information about the hardware and software versions of the different appliance components is stored in the user interface.

- 1. Press the 🗐 button.
- 2. Select the Version Information menu.
- 3. Select the component for which you would like to see the version information.

Component	Description
MK3	User interface
EHC-14	Main PCB for the control system for the heat pump, the first heating circuit (direct circuit) and the backup heating
CB-05	PCB - S-BUS communication gateway
CB-21	PCB for connecting external options
GTW-08	Optional PCB for connecting to a building management system via Modbus
GTW-21	Optional PCB for connecting to a building management system via BACnet
SCB-01	Optional PCB for summer/winter transition and connecting a 0-10V backup boiler

14 Decommissioning and disposal

14.1 Removing the indoor unit from the DIN rail



- 1. Press the two clickers on both sides of the housing.
- 2. Pull the bottom of the appliance from the rail.

14.2 Decommissioning procedure

- 1. Switch off the indoor and outdoor units.
- 2. Shut off the electrical power supply to the outdoor and indoor units.
- 3. Switch off the power supply to the electric heating element, if present.
- 4. Switch off the power supply to the backup boiler, if present.
- 5. Drain all the heating circuits.

14.3 Disposal and recycling

Fig.62



Warning

Removal and disposal of the heat pump must be carried out by a qualified professional in accordance with prevailing local and national regulations.

- 1. Switch off the heat pump.
- 2. Cut the mains supply to the heat pump.
- 3. Recover the refrigerant in accordance with prevailing regulations



- Do not allow the refrigerant to escape into the atmosphere.
- 4. Close the water mains.
- 5. Drain the installation.
- 6. Dismantle all hydraulic connections.
- 7. Dismantle the heat pump.
- 8. Scrap or recycle the heat pump in accordance with applicable local and national regulations.

15 Appendix

15.1 Name and symbol of the zones

Tab.58

Factory-set name	Factory-set sym- bol	Customer-set name and symbol	
CIRCA			

15.2 Name and temperature of the activities

Activities	Factory-set name	Factory-set tempera- ture	Name and temperature defined by the customer	
Activity 1	Sleep	16 °C		
Activity 2	Home	20 °C		
Activity 3	Away	6 °C		
Activity 4	Morning	21 °C		
Activity 5	Evening	22 °C		
Activity 6	Custom	23 °C		

Tab.59 Name and temperature of the activities for heating

Tab.60 Name and temperature of the activities for cooling

Activities	Factory-set name	Factory-set tempera- ture	Name and temperature defined by the customer	
Activity 1	Sleep	30 °C		
Activity 2	Home	25 °C		
Activity 3	Away	25 °C		
Activity 4	Morning	25 °C		
Activity 5	Evening	25 °C		
Activity 6	Custom	25 °C		

Original instructions - © Copyright

All technical and technological information contained in these technical instructions, as well as any drawings and technical descriptions supplied, remain our property and shall not be multiplied without our prior consent in writing. Subject to alterations.



36061 BASSANO DEL GRAPPA (VI) - ITALY Via Trozzetti, 20 Customer care: Tel +39 0424 517800 - Fax +39 0424 38089 www.baxi.it

CE





7856310-001-02