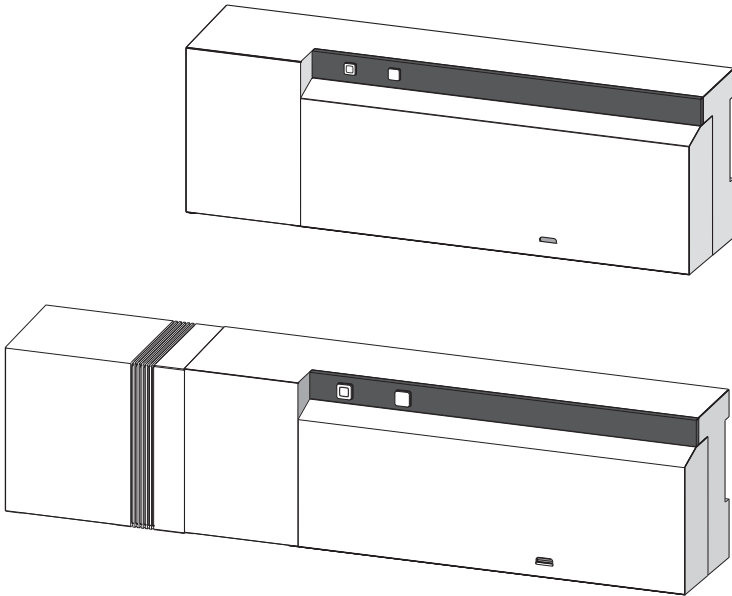


Alpha IP

FAL 210x1-xx - 230 V
FAL 410x1-xx - 24 V



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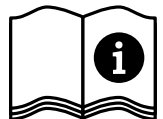
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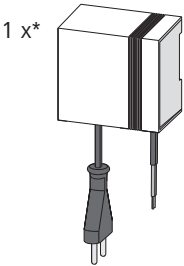
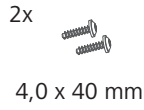
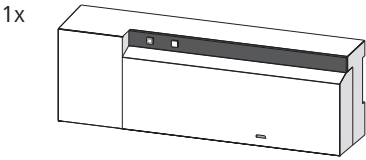




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* FAL 410x1-xx

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1 About these instructions







1.1 Validity, storage and forwarding of the instructions

These instructions apply to the Alpha IP Base Station. These instructions include information necessary for the commissioning. These instructions must be read completely and thoroughly before commencing any work with the device. These instructions must be kept and handed over to future users.

 These instructions as well as constantly up-to-date additional Alpha IP system information can be found under www.alphaip.de.

1.2 Symbols

The following symbols are used in this manual:

-  **Warning** with respect to electrical voltage
-  **Note:** Identifies important or useful information
-  Preconditions
-  Result from an action
-  List without fixed order
-  1., 2. List with fixed order

2 Safety

2.1 Intended use

The Alpha IP base station is a component of the Alpha IP Systems and serves

- for installation in environments of residential use,
- for the arrangement of a room-by-room temperature control system with a maximum of 10 zones (depending on the type used) for heating and cooling systems,
- for the connection of a maximum of 15 actuators and 10 room control units (depending on the type used),
- for the connection of actuators with the control direction NC (normally closed) or NO (normally open),
- for the connection and the supply of a pump.

Every other use, modification and conversion is expressly forbidden. Improper use leads to dangers the manufacturer cannot be held liable for and will exempt guarantees and liabilities.

1.1 Safety notes

All safety notes in these instructions must be observed in order to avoid accidents with personal damage or property damage. No liability is assumed for personal damage and property damage caused by improper use or non-observance of the danger notes. In such cases any warranty claim is invalid. There is no liability for consequential damages.

**Warning****Danger to life due to the electrical voltage at the base station!**

- Always disconnect from the mains network and secure against unintended activation before opening.
- Only an authorised electrician may open the device.
- Disconnect external voltages and secure against activation.
- Only use the product if it is in flawless state.
- Do not operate the device without device cover.
- This unit is not intended to be used by persons (including children) with restricted physical, sensory or mental skills or who lack experience or knowledge. If necessary, these persons must be supervised by a person responsible for their safety or receive instructions from this person on how to use this unit.
- Ensure that children do not play with this device or its packaging. Children must be monitored if necessary.
- In case of emergency, disconnect the complete room-by-room temperature control system.
- Observe the performance limits of the device and its environmental conditions.
- Lay the cables of connected consumers in a way that they do not lead to dangers (e. g. trip hazards) for persons and pets.
- Only operate the device in a dry and dust-free environment.
- Do not expose the device to the influence of humidity, vibration, continuous solar radiation or other types of radiation, coldness or mechanical load.

3 Functions

The Alpha IP base station serves for the room-by-room control of a floor heating system. The base station registers and processes the registered target and actual temperatures of connected Alpha IP room control units. According to this information, the rooms are always set to the specified temperature via the connected thermal actuators. As an option, a recirculation pump is connected to the base station to be controlled or supplied with energy by the station (depending on the model).



The range inside buildings can be strongly different from the range in open air.

Communication with other components is performed via the Homematic (HmIP) radio protocol. Radio transmission is realised on a non-exclusive transmission path; thus, interference cannot be completely excluded. Interference can be caused e. g. by switching processes, electric motors or defective electric appliances.

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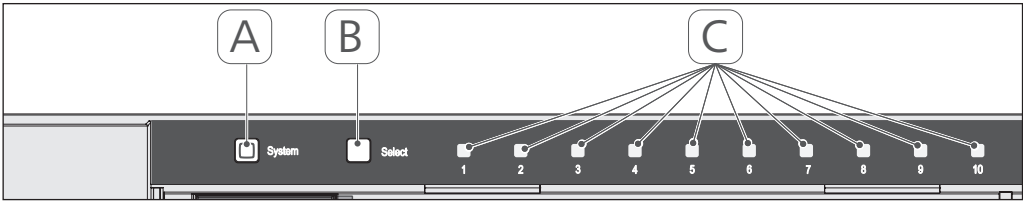
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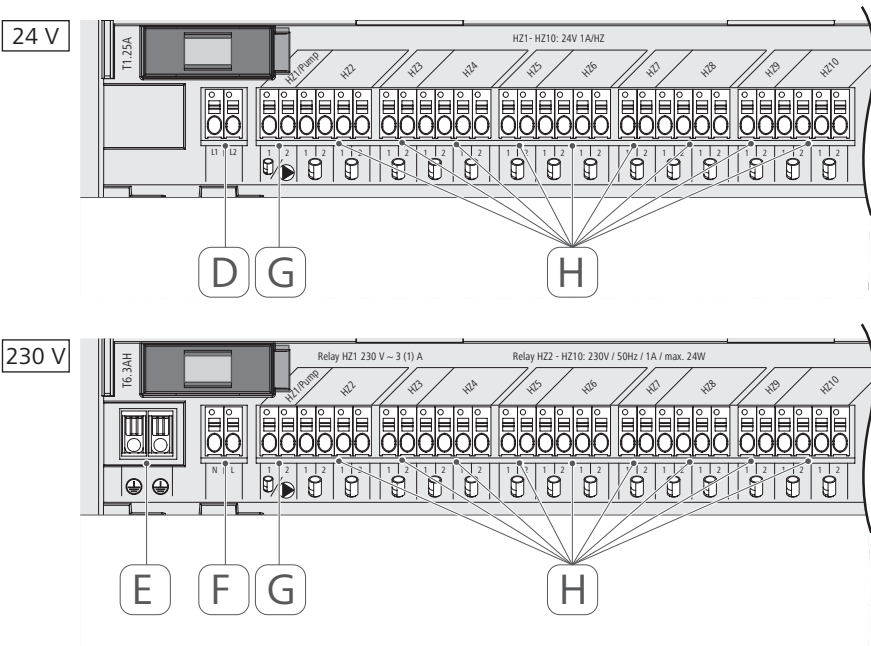
4 Device overview

4.1 Indications and operating elements



- (A) System key and LED
- (B) Select key and LED
- (C) Heating zones 1-10 (10-zone variant), or heating zones 1-6 (6-zone variant)

4.2 Connections



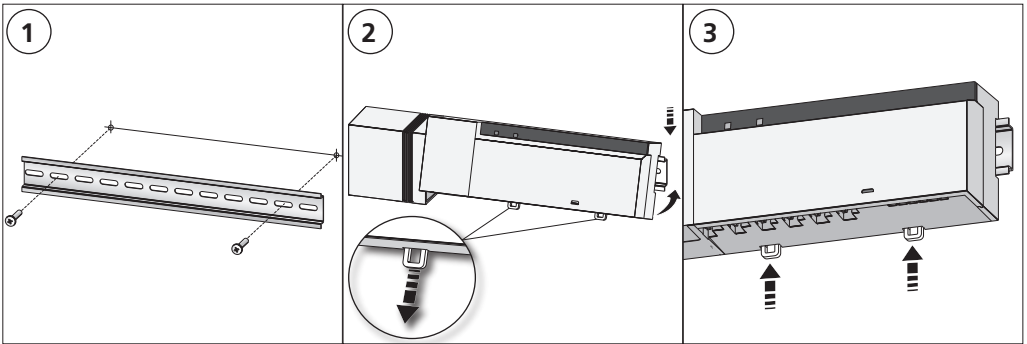
- (D) Only 24 V variant: Mains transformer connection
- (E) Only 230 V variant: Connection 1 and 2 protective conductors
- (F) Mains connection N/L
- (G) Actuator connection / recirculation pump connection
- (H) Actuator connection (up to 15 actuators according to variant)

4.3 Technical data

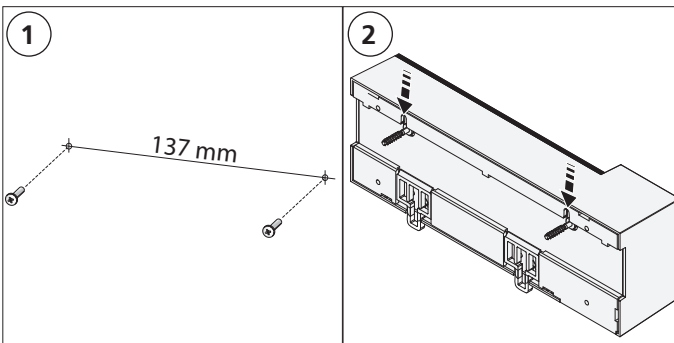
Short designation of the device	FAL 21001-06	FAL 21001-10	FAL 41011-06	FAL 41011-10
Supply voltage	230 V / ±15% / 50 Hz		24 V / ±20% / 50 Hz	
Power consumption	0.35 A		1.25 A	
Fuse	T6.3AH		T1.25A	
Number of heating zones	6	10	6	10
Number of actuators	9	15	9	15
Switching power of heating zone 1	1380 W		24 W	
Switching power Heating zone 2...6 / 2...10	230 W		24 W	
Max. nominal load of all actuators		24 W		
Line type and line section		rigid and flexible line, 0.75 – 1.5 mm ²		
Protection type		IP20		
Protection class	I		III	
Ambient temperature		0 to 50°C		
Dimensions (W x H x D)		225 x 75 x 52 mm		
Transformer dimensions (W x H x D)	-		80 x 75 x 52 mm	
Weight	550 g	566 g	268 g	282 g
Transformer weight	-		718 g	
Radio frequency		868.3 MHz/869.525 MHz		
Receiver category		SRD category 2		
Typical radio range		270 m (in open air)		
Duty cycle		< 1 % per h/< 10 % per h		
Guidelines		2014/53/EU 2014/30/EU 2011/65/EU	Radio installations EMC RoHS 1999/5/EG	

5 Installation

5.1 DIN rail installation



5.2 On-surface installation (only 230 V versions)



6 Connections



Warning

Danger to life due to the electrical voltage at the base station!

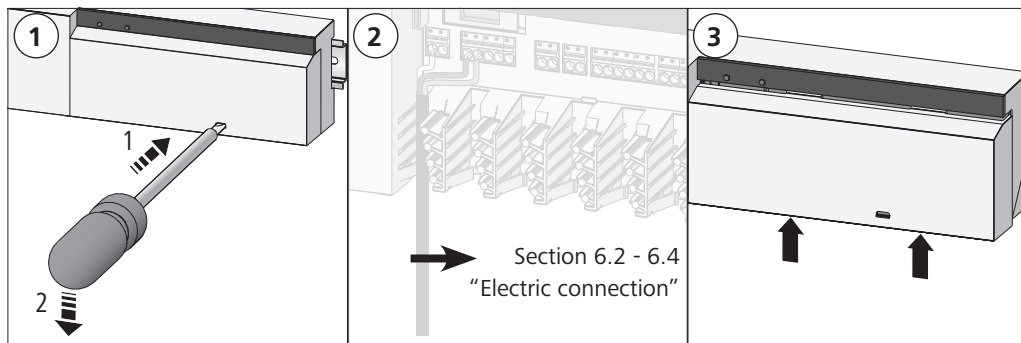
- Only an authorised electrician may open the device.
- Always disconnect from the mains network and secure against unintended activation before opening.
- Disconnect external voltages and secure against activation.

The wiring of a room-by-room temperature control system depends on several factors and must be planned and carried through carefully by the installer. The following cross-sections are applicable for the plug-in/clamping connections:

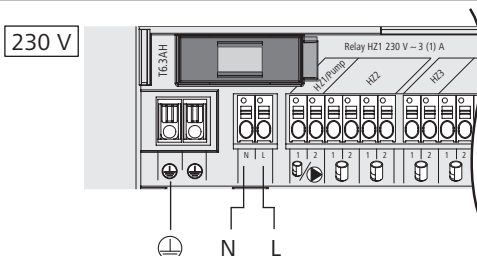
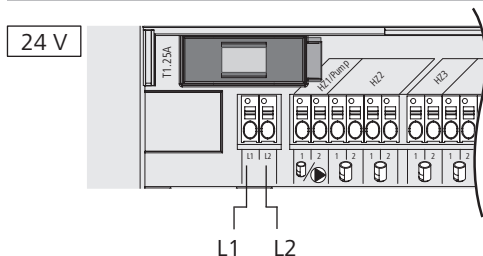
- solid wire: 0.5 – 1.5 mm²
- flexible wire: 1.0 – 1.5 mm²
- 8 - 9 mm insulation stripped off the wire

The wires of the actuators can be used with factory-mounted end sleeves.

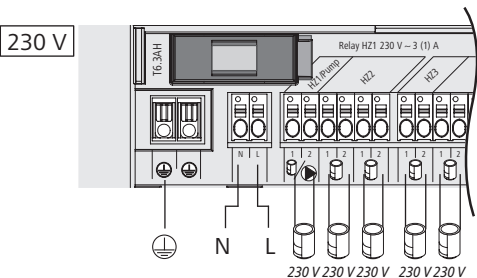
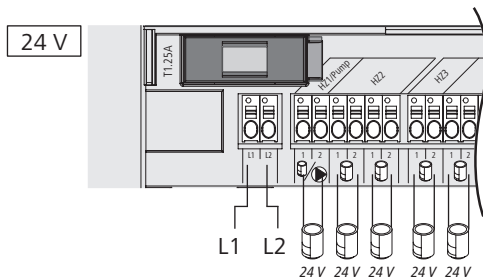
6.1 Opening the housing



6.2 Supply connection

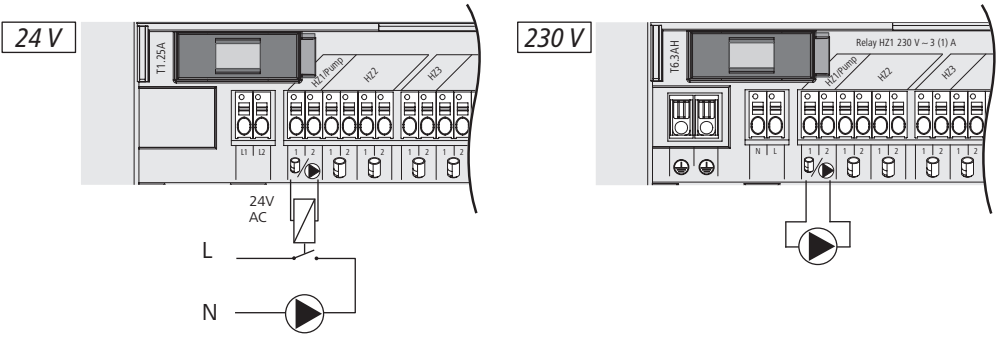


6.3 Connection of actuators



6.4 Pump connection (optional)

Heating zone 1 (HZ1) can alternatively be used for controlling a recirculation pump. The recirculation pump is wired as follows, using the connection terminal (G):



The pump control is activated or deactivated directly at the base station, or with an Alpha IP room control unit Display.

6.4.1 Activation/deactivation of the pump control (base station)

The connection terminal (G) can be used for the control of a recirculation pump. For this, set the heating zone to pump control directly at the device as follows:

1. Press and hold the Select key (B) of the Alpha IP base station approximately for 4 seconds, until the LED of heating zone 1 flashes in green:

Display	Meaning
<p>Duration in seconds</p> <p>0 0,1 0,2 0,3 0,4</p> <p>HZ1 </p>	<p>Pump inactive (UnP1: P025, value 4)</p>
<p>Duration in seconds</p> <p>0 0,5 1,0 1,5 2,0</p> <p>HZ1 </p>	<p>Pump active (UnP1: P025, value 0)</p>

2. Toggling the pump from active to inactive or vice versa: Press the Select key (B) for 4 seconds.
3. Leaving the menu without changes: Press the Select key shortly.

6.4.2 Activation/deactivation of the pump control (Room control unit Display)

With the Alpha IP room control unit Display, different parameters can be assigned to the pump control. For this, the parameter P025 in menu UnP1 (see section 8: Configuration) must be changed according to the requirements.



For parametrisation, one Alpha IP room control unit must have been taught in to heating zone 1. This device can be used for further heating zones.

7 Commissioning


For the commissioning of the Alpha IP base station, at least one Alpha IP room control unit Display, Display S or Analog must be taught-in to the base station. As an alternative, the base station can be integrated to the Alpha IP Access Point via the app into the Alpha IP system. If used without Access


Point, the base station must be configured via the Alpha IP room control unit Display.


1. Establish the electrical supply of the Alpha IP base station.

- ✓ All heating zones of the base station are activated for 10 minutes in order to unlock the first-open function of connected actuators.
 - ✓ A 2-point regulation is performed in the first 30 minutes after the initial voltage supply.
2. Proceed with section 7.1 or 7.2 depending on the system configuration.

7.1 Teach-in without Alpha IP Access Point (stand-alone operation)


 Keep a minimum distance of 50 cm between the devices for teaching-in.

 The teach-in process can be interrupted shortly pressing the teach-in key again. This will be confirmed by a red illumination of the device LED.

 If no teach-in process takes place, the teach-in mode is automatically finished after 3 minutes.

1. Choose the channel through which the room control unit shall be taught-in, by a short press of the Select key (B). Pressing 1x = HZ1 / Pressing 2x = HZ2.... Pressing 10x = HZ10

- ✓ The corresponding LED of the heating zone flashes.
- 2. Press the System key (A) for 4 seconds, until the LED of the System key flashes rapidly in orange.
- ✓ The teach-in mode for the selected channel is active for three minutes.
- 3. Press the System key of the room control unit for a minimum of 4 seconds in order to activate the teach-in mode.
- ✓ The device LED of the room control unit flashes in orange. You can find further information on this in the corresponding manuals of the Alpha IP room control units.

 The LED will light up in green after a successful teach-in process. The process must be repeated if the LED lights up in red.


7.2 Teach-in of the room control unit to several heating zones

In rooms with several heating/cooling circuits, a room control unit can be taught-in to several heating/cooling zones. For this, the teach-in process must be repeated with the same room control unit for the additional heating zone (HZx) (see section 7.1).

7.3 Teach-in of the room control unit to several base stations

For a teach-in of a room control unit to several Alpha IP base stations, the base stations must be coupled to each other first.

1. Press the System key (A) of the first base station for 4 seconds, until the LED of the System key flashes rapidly in orange.
 - ✓ The teach-in mode is active for three minutes.
2. Press the System key (A) of the second base station for 4 seconds.

 The LED will light up in green after a successful teach-in process. The process must be repeated if the LED lights up in red.

- ✓ The base stations are coupled.
- 3. A room control unit can now be taught-in to the heating zones of the second base station, as described in section 7.1 / 7.1.1.

7.4 Teach-off of the room control unit from a heating zone

1. Choose the channel through which the room control unit shall be taught-off, by a short press of the Select key (B). Pressing 1x = HZ1 / Pressing 2x = HZ2.... Pressing 10x = HZ10
2. Press the System key (A) and the Select key (B) simultaneously until the LED of the system key (A) of the base station lights up in green.



If the room control unit is logged on to several Alpha IP base stations, this process must be repeated for every base station.

3. Resetting the room control unit to factory settings (see manual of the respective room control unit).

7.5 Teach-in with Alpha IP Access Point

For a control via the Alpha IP app, the teach-on of the Alpha IP base station must be performed via the Access Point (HAP 21001). Teach-in the device as follows:

- ✓ The Alpha IP Access Point has been set-up via the Alpha IP app (see manual HAP 21001).
1. Open the Alpha IP app on your smart phone.
 2. Select the menu item *Teach-in device*.
 3. Press the System key (A) shortly until the LED flashes slowly in orange. The teach-in mode is active for three minutes.
 4. The device will be displayed automatically in the Alpha IP app.
 5. For confirmation, enter the last four digits of the device number (SGTIN) or scan the supplied QR code. The device number can be found below the supplied QR code or directly on the device.



The LED will light up in green after a successful teach-in process. The process must be repeated if the LED lights up in red.

6. Follow the directions of the app.

8 Configuration

The Alpha IP base station is configured via the Alpha IP room control unit Display, Display S, or via the Alpha IP Access Point in conjunction with the Alpha IP app.

8.1 Configuration with Alpha IP room control unit Display (S)

Proceed as follows in order to configure the Alpha IP base station via the Alpha IP room control unit Display (S):

1. Press and hold the setting wheel (E) in order to open the configuration menu.
2. Select the symbol "**FAL**" and confirm the selection by shortly pressing the wheel.



If the room control unit is taught-in to more than one base station, select the desired base station with the setting wheel.

The configuration menu for the Alpha IP base station includes device parameters “UnP1/UnP2” and channel parameters “ChAn”, allowing to change lead and follow-up times for the pump, setback temperatures, time intervals and many other parameters. The following table shows the available parameters:

UnP1:

Parameters	Index	Value	Meaning
Antifreeze temperature	P024	3 4 5 ... 16 (default) ... 19 20	Antifreeze protection inactive 2.0 °C 2.5 °C ... 8.0 °C ... 9.5 °C 10.0 °C
Pump control Load equilibration: Heating zones will be controlled in a staggered way if possible Load collection: Heating zones are controlled collectively. Actuator types: NC - Normally Closed NO - Normally Open *If heating zone 1 is used as pump control, it is necessary to teach in a wall thermostat to this heating zone, if an adaptation of the pump parameters shall be performed.	P025	0 1 2 3 4 (default) 5 6 7	active, with load equilibration, actuator type NC active, with load equilibration actuator type NO active, with load collection actuator type NC active, with load collection actuator type NO inactive, with load equilibration actuator type NC inactive, with load equilibration actuator type NO inactive, with load collection actuator type NC inactive, with load collection actuator type NO
Emergency operation in heating mode	P026	0 1 ... 25 (default) ... 99 100	0 % 1 % ... 25 % ... 99 % 100 %
Emergency operation in heating mode	P032	0 (default) 1 ... 99 100	0 % 1 % ... 99 % 100 %

UnP2:

Parameters	Index	Value	Meaning
Duration of valve protection function	P007	128	0 minutes
		129	1 minute
	
		133 (default)	5 minutes
	
Time interval for valve protection function:	P051	224	0 days
		225	1 day
	
		238 (default)	14 days
	
		251	27 days
		252	28 days

ChAn:

Parameters	Index	Value	Meaning
Pump lead time (only available for Ch01)	P006	128	0 minutes
		129	1 minute
		130 (default)	2 minutes
	
		147	19 minutes
		148	20 minutes
Duration of pump protection function (only available for Ch01)	P007	128	0 minutes
		129 (default)	1 minute
	
		137	9 minutes
		138	10 minutes
Pump follow-up time (only available for Ch01)	P008	128	0 minutes
		129	1 minute
		130 (default)	2 minutes
	
		147	19 minutes
		148	20 minutes
Minimum floor temperature in connection with a floor temperature sensor	P045	10	5.0 °C
		11	5.5 °C
	
		38 (default)	19.0 °C
	
		59	29.5°C
		60	30.0°C
Humidity limit	P050	40	40 %; inactive
	
		80	80 %; inactive
	
		168	40 %; active
	
		188 (default)	60 %; active
	
		208	80 %; active

Parameters	Index	Value	Meaning
Time interval for pump protection function (only available for Ch01)	P051	225 226 ... 238 (default) ... 251 252	1 day 2 days ... 14 days ... 27 days 28 days
Cooling in cooling mode	P052	0 1 (default)	inactive active
Heating in heating mode	P053	0 1 (default)	inactive active
Room with/without external heat source	P054	0 (default) 1 2	without with fireplace with towel rail heating
Selection of heating system	P055	0 (default) 1 2 3 4	Floor heating, standard Floor heating, low energy Radiator Convactor, passive Convactor, active

9 Displays

9.1 LED System key

Display	Meaning	Solution
Short flashing, orange	Radio transmission/transmission attempt/data transmission	Wait until the transmission has ended.
1 long lighting, green	Process confirmed	You can continue your operations.
1 long lighting, red	Process failed	Retry.
Short flashing, orange (once every 10 seconds)	Teach-in mode active	Enter the last four digits of the serial number of the device for confirmation.
1 long lighting, red	Process failed or duty cycle limit reached	Retry.
6x long flashing, red	Device defective	Observe the information in your app or contact your specialist dealer.
1 lighting in orange and 1 lighting in green	Test indication	You can proceed after the test indication has gone out.

9.2 LED Heating zones

Display	Meaning	Solution
Slow flashing	Emergency operation active	Change the batteries of the wall thermostat, perform a radio test, reposition the wall thermostat if necessary, replace a defective wall thermostat.
Double short flashing	Bad radio connection to wall thermostat	Change the position of the wall thermostat or use a repeater.

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10 Cleaning

Only use a dry and solvent-free, soft cloth for cleaning.

11 Resetting factory settings

All settings will be lost when the factory settings are restored.

1. Keep the System key (A) pressed for 4 seconds, until it flashes rapidly in orange.
 2. Release the System key.
 3. Press the System key again for 4 seconds until it lights up in green.
 4. Release the System key again.
- ✓ The factory settings are reset.
 - ✓ The device restarts.

12 Decommissioning



Warning

Danger to life due to the electrical voltage at the base station!

- Only an authorised electrician may open the device.
 - Always disconnect from the mains network and secure against unintended activation before opening.
 - Disconnect external voltages and secure against activation.
1. Loosen all connected cables.
 2. Uninstall the device and dispose of properly.

13 Disposal



Do not dispose of the device with domestic waste! Electronic devices/products must be disposed of according to the Directive for Waste Electrical and Electronic Equipment at the local collection points for waste electronic equipment.

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