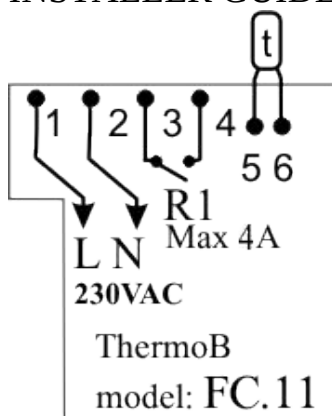


ThermoB.FC.10.W and ThermoB.FC.11.W ELECTRONIC THERMOSTAT WITH WiFi:

INSTALLER GUIDE

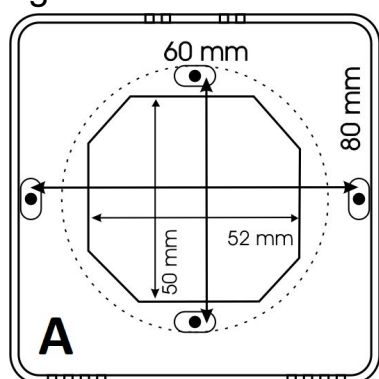


FEATURES:

- Control of an appliance / circuit / underfloor heating.
- Heating / cooling (with an option to lock the operating mode).
- Weekly schedule
- WiFi connectivity for remote access over the Internet
- Access through a mobile app (iOS, Android) and a web browser.
- Frost protection with an adjustable temperature
- Two selectable operating temperatures: economy (ECON) and comfort (COMF), with an option to set ECON as a fixed offset from COMF
- Two configuration modes, BASIC and ADVANCED, for convenient operation
- Temporary temperature override (MAN)
- 1 relay output (potential-free) – 4A max
- Built-in room temperature sensor
- LCD screen and four control buttons.
- Convenient flange mounting or installation in a standard wall box (D60/70)
- Additional remote sensor (FC11 version)
- Temperature control using fixed hysteresis or Fuzzy TPI
- “Warm floor” function for underfloor heating
- Option to switch heating/cooling using an external signal

INSTALLATION:

Before starting installation, read the safety instructions at the end of this guide.



The device is designed for panel mounting or installation in a standard electrical box recessed into the wall.

Mounting dimensions are shown in Figure 1.

Use fasteners with a shank diameter $D < 3.5\text{mm}$.

The correct orientation is marked “A”.

Provide a 230V/AC power supply protected by a fuse rated at no more than 6A.

Figure 1

Open the device's front panel for installation.

Opening the device:

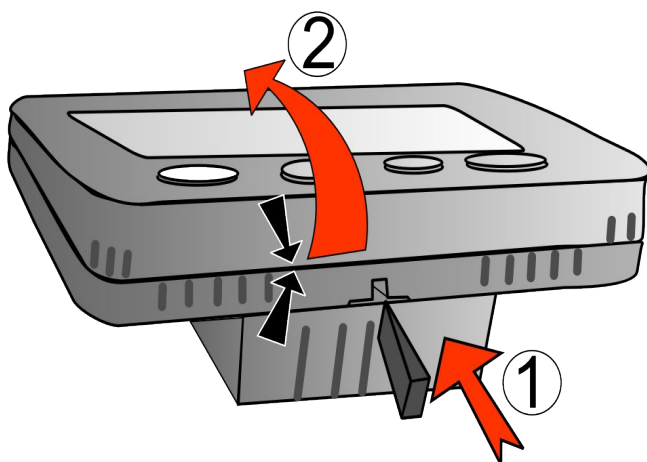


Figure 2

- Gently press the tip of a flathead screwdriver into the slot marked (1), in the indicated direction, on the underside of the front panel, Figure 2.
- At the same time, lift the upper part of the panel in the direction marked (2).
- The two sections are connected by a cable. If necessary, unplug the connector from the front section.

Reassemble in reverse order: first engage the upper edges of the two sections, then press the bottom until they lock together. **Remember to reconnect the connector!**

Electrical connection: potential-free output (Figure 3)

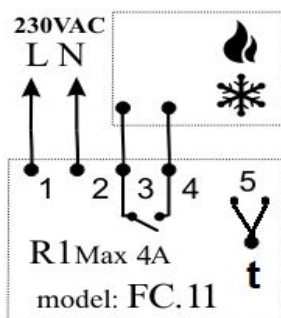


Figure 3

- Supply the device with 230V/AC/50Hz between terminals #1 / "L" and #2 / "N", through a fuse rated at max 6A.
 - Connect terminals #3 and #4 to the controlled appliance.
 - Connect the remote sensor to terminals 5-6, if required.
- Warning! Use conductors with a cross section up to 1.5mm².

Electrical connection: 230V switched output (Figure 3a)

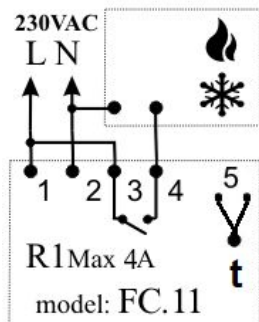


Figure 3A

- Supply the device with 230V/AC/50Hz between terminals #1 / "L" and #2 / "N", through a fuse rated at max 6A. Figure 3a
- Fit an additional link (jumper) between terminal #1 and terminal #3.
- Connect terminal #4 to the controlled appliance.
- If necessary, also connect the controlled appliance's neutral "N".

SYSTEM OPERATING MODES

The system has two main modes: BASIC and ADVANCED.

- BASIC: one operating temperature, heating or cooling selected, no schedule, Internet connectivity.
- ADVANCED: full system functionality with separate economy (ECO) and comfort (COMF) temperatures, a weekly schedule and a temporary temperature override (MAN), with clock synchronization over the Internet.



* Frost protection, its temperature and the BASIC or ADVANCED operating mode can be selected at any time in the service parameters.

** The device is supplied configured for BASIC mode and heating.

FEATURES AVAILABLE IN BASIC MODE:

Operating states:

Off (with or without frost protection*)	- [OFF]
Maintain the comfort temperature	- [COMF]

Heating / cooling selection through the service settings screen

Simple operation: direct setpoint adjustment and an on/off button

FEATURES AVAILABLE IN ADVANCED MODE:

- Operating states:

Off (with or without frost protection*)	- [OFF]
Maintain the economy temperature	- [ECO]
Maintain the comfort temperature	- [COMF]
Automatic (weekly temperature schedule)	- [AUTO]
Manual temperature override for a set period	- [MAN]

- Weekly temperature schedule
- Automatic synchronization of the current day and time over the Internet.
- Separate economy and comfort temperature settings
- Heating / cooling selection and mode locking
- 2 room unit button lock options (child lock and PIN-protected hotel lock)

SYSTEM FUNCTIONS

The system maintains a set temperature in the room it controls.

Depending on its configuration, it can be used for heating or cooling.

Use the service parameters to select **BASIC** or **ADVANCED** mode.

In **BASIC** mode, one temperature setting is available: the comfort temperature (COMF). In **ADVANCED** mode, two temperature settings are available: economy (ECO) and comfort (COMF), together with a weekly schedule.

Users can adjust the temperature settings freely. The adjustment range of each setting can be restricted through the service parameters.

The device can operate in heating or cooling mode.

The device measures and displays the room temperature, compares it with the current setpoint and controls its output accordingly.

The clock can synchronize automatically over the Internet when connected. The correct time zone must be set!

Remote access is available through the Proxel Connect mobile app for iOS and Android. A web version is also available for access from a computer.

Operating states provide a quick way to select the temperature and system behavior, using a button on the room unit or over the Internet.

Operating states in BASIC MODE

- “Off” (OFF): the device is off but can activate frost protection.
- “Comfort” (COMF): the device aims to maintain a comfortable room temperature by switching its output on or off according to the temperatures.

Operating states in ADVANCED MODE

- “Off” (OFF)
- “Economy” (ECO) and “Comfort” (COMF)
- “Weekly temperature schedule” (AUTO)
- “Manual temperature override” (MAN)

Weekly temperature schedule

The weekly temperature schedule combines a time period, defined by a start and end time, with a selectable state (off, economy temperature or comfort temperature). For each day of the week, select the temperature to maintain during that period.

The device provides 6 independent time periods and corresponding operating states for each day of the week.

** For more information on ADVANCED MODE, see the full operating instructions.*

The service parameters are an important part of the system, allowing fine adjustment of temperature comfort and the overall user experience.

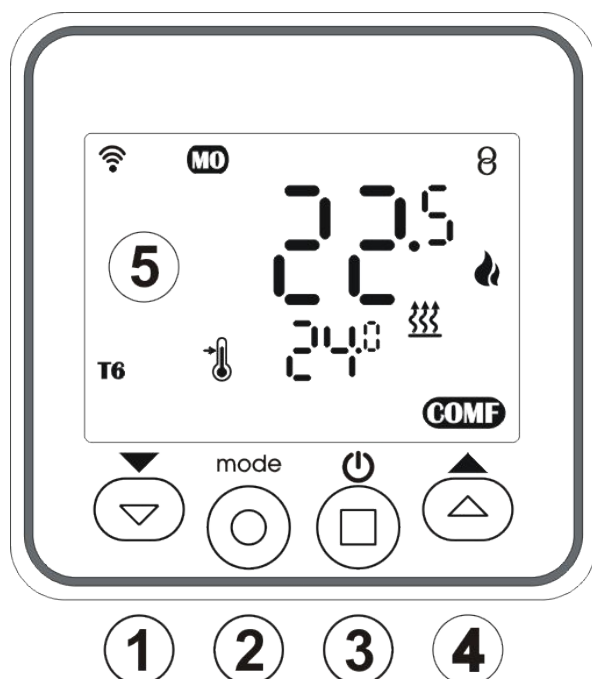
The parameters include adjustable hysteresis, heating and/or cooling mode locking, BASIC or ADVANCED mode selection, measured temperature calibration, economy and comfort temperature limits, and the time zone. Two screen lock options prevent unauthorized access: a child lock using a button combination and a PIN-protected hotel lock.

OPERATING THE DEVICE

Operating screens: a total of 5 settings and information screens are available.

- Main screen: the system is on when this screen is displayed.
- Off
- Current time (*available only in ADVANCED mode*)
- Schedule (*available only in ADVANCED mode*)
- Service settings

The control panel includes:



- a large LCD screen
- 4 control buttons
- a temperature sensor
- a backlight

Button functions:

- Buttons [1] and [4]: “Decrease” / “Increase” — adjust the displayed temperature or value.
- Button [2], “Mode”: selects the operating mode: economy temperature (ECO), comfort temperature (COMF) or the weekly temperature schedule (AUTO).
- Button [3], “ON/OFF”

Figure 4

Main screen

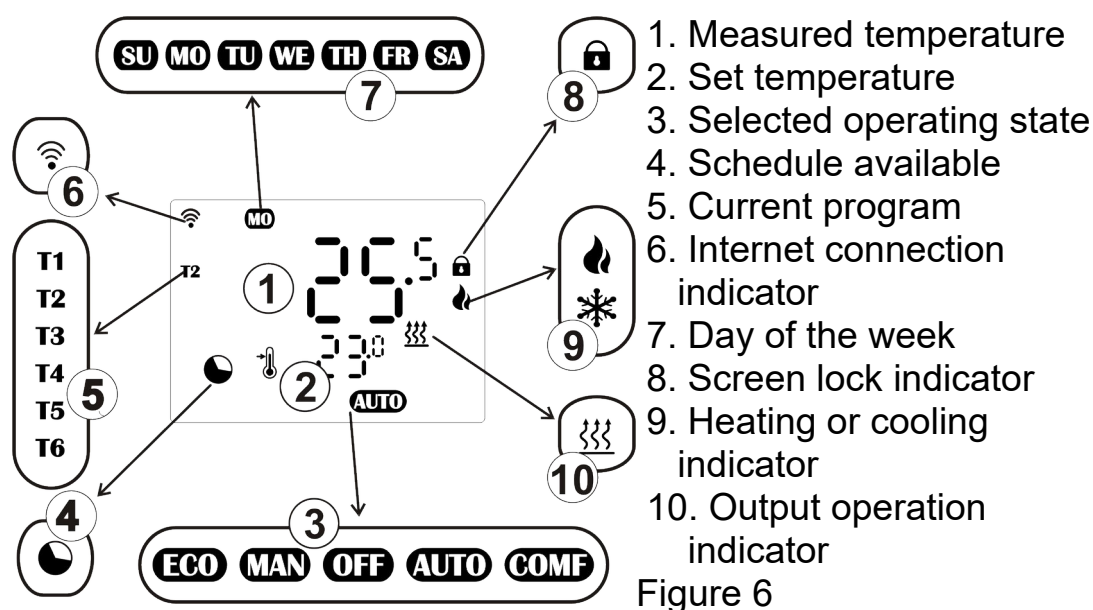


Figure 6

Operating states:

- Economy temperature (ECO)
- System off (OFF)
- Temporary temperature override (MAN)
- Comfort temperature (COMF)
- Scheduled operation (AUTO)

SWITCHING THE DEVICE ON / OFF:

Press and hold button [3], “On/Off”, for about 2 sec to switch the system on or off.

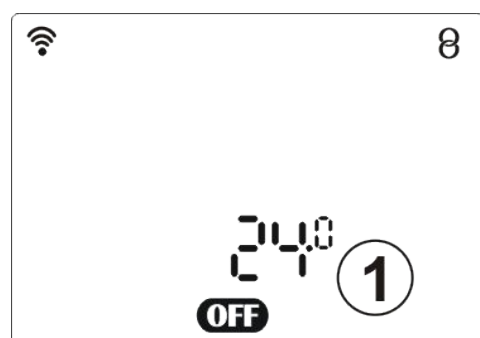
When off, indicator [3] in Figure 3 displays (**OFF**). See the “Off” screen in Figure 7. When on, the main screen appears and indicator [3] shows one of the other states: (**ECO**), (**COMF**), (**AUTO**) or (**MAN**).

If frost protection is enabled through PR02, the selected frost protection temperature is monitored and maintained in (**OFF**).



Important! Each temperature (ECO) and (COMF) has a permitted range or a relationship between the two settings, defined in the service parameters. If a value outside the permitted range is entered, the corresponding temperature is automatically brought back within that range.

“Off” screen in BASIC mode



Item 1: measured temperature
The “OFF” indicator shows that the system is off.

When the system is:

- on, the “main screen” is displayed.
- off, the “Off screen” is displayed.

Figure 7

Note For more information, including ADVANCED MODE, see the full operating instructions.*

Selecting the operating state and setting the desired temperature

with the system on and in ADVANCED mode

The system has two main temperature settings: “Comfort temperature” (COMF) and “Economy temperature” (ECO).

The selected operating state determines which temperature the system maintains: ECO, COMF or the scheduled temperature.

In BASIC mode, the available states are (OFF) and (COMF), and only the comfort temperature can be set.

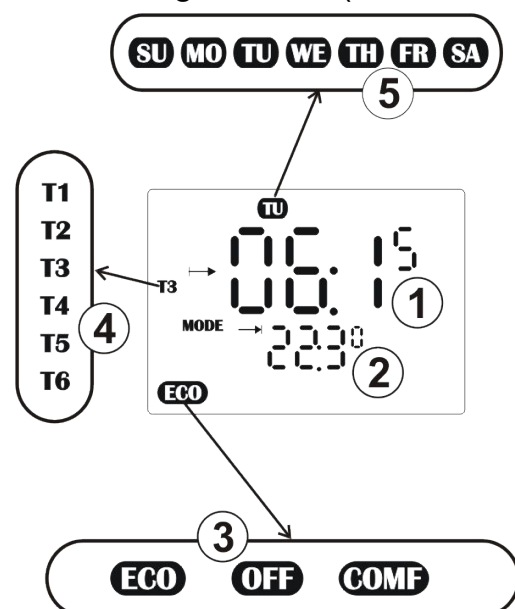
“Manual temperature override” (MAN) — *available only in ADVANCED mode*

Heating / cooling

- Fixed through parameter PR03.
- Selected by the user by holding [▼] and [On/Off] until the mode changes (about 2 sec), if mode changes are permitted.

“Schedule” screen

To open the schedule settings screen, press button [2] (M) from the current time settings screen (see below).



The screen shown in Figure 8 appears.

* The schedule settings screen is disabled in BASIC mode and is available only in ADVANCED MODE.

*1 – Period start time

*2 – Period end time

*3 – Selected temperature setting (ECO) or (COMF) for this period on the corresponding day of the week

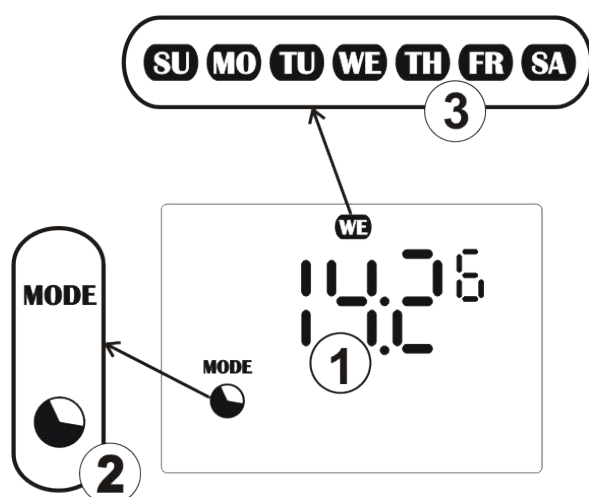
*4 – Period number

*5 – Current day of the week.

Figure 8

Setting the current time

To open the current time settings screen, press and hold button [2] (M) for about 2 sec.



The screen shown in Figure 6 appears.

* The current time settings screen is disabled in BASIC mode and is available only in ADVANCED MODE.

“Current time” screen

1 – current time

2 – day of the week

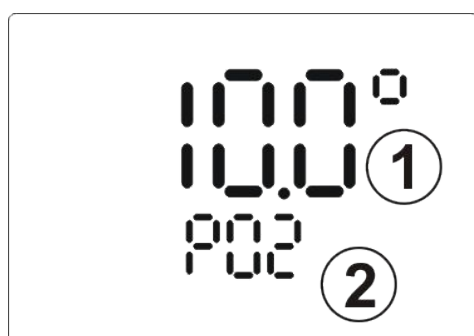
Figure 9

Day-of-week abbreviations:

SU	MO	TU	WE	TH	FR	SA
Sunday	Monday	Tuesday	Wednesd	Thursday	Friday	Saturday
			ay			

*Note * For more information, including ADVANCED MODE, see the full operating instructions.*

Service settings



To access the service settings, press and hold for about 3 sec the “Mode” and “ON/OFF” buttons ([2] [3]) simultaneously.

Item 1 – value

Item 2 – parameter number.

If an access password is set, first enter the correct PIN.

If an incorrect PIN is entered, the system locks temporarily.

Scroll through the parameters by pressing “Decrease” / “Increase” ([1] and [4]).

To edit or confirm a value, press “ON/OFF” ([3]). The parameter value flashes during editing.

Use “Decrease” / “Increase” ([1] and [4]) to adjust values.

To exit this screen, press and hold button [2], “Mode”.

Display:

- The upper row (large digits) shows the parameter value.
- The lower row (small digits) shows the parameter number, “PR XX”.

“PARAMETERS”

No	Description	Adjustment step	Range
PR01	Room temperature control hysteresis in °C; 0 selects Fuzzy TPI control.	in 0.5°C steps	0°C ~ 3.0 °C
PR02	Frost protection when Off / Paused - At “0”, the function is disabled. - Operation starts when T.Room < PR02.	in 1 °C steps	+0°C ~ +15°C
PR03	BASIC or ADVANCED functionality selection Heating / cooling selection = 0 : ADVANCED functionality - Switches to heating when T.ECON < T.COMF. - Switches to cooling when T.ECON > T.COMF. = 1 : ADVANCED functionality, fixed heating mode - Operation using T.ECON and T.COMF temperatures, a weekly schedule and MAN (temporary temperature override) * When [PR20 > 0], T. ECON = T.COMF – [PR20] = 2 : ADVANCED functionality, fixed cooling mode - Operation using T.ECON and T.COMF temperatures, a weekly schedule and MAN (temporary temperature override) * When [PR20 > 0], T. ECON = T.COMF + [PR20] = 3 : BASIC functionality, heating selected Operation at a single COMF temperature without a schedule = 4 : BASIC functionality, cooling selected Operation at a single COMF temperature without a schedule = 5 : BASIC functionality, locked in heating mode without the option to change the mode = 6 : BASIC functionality, locked in cooling mode without the option to change the mode	in steps of 1	0 ~ 6
PR04	“Warm floor”: while paused, the output switches on for 4 min. every PR04 min.; 0 disables the function.	1 minute	0 ~ 120
PR05	Time zone relative to UTC for Internet clock synchronization. Daylight saving / standard time is adjusted automatically over the Internet. If your region does not observe daylight saving time and you use a schedule, adjust this value manually by +/- 1h each spring and fall.	1 hour	-12 ~ +12
PR06	Room temperature calibration	in 0.5°C steps	-5°C ~ +5 °C
PR07	Lock code; 0 disables locking.	in steps of 1	0 ~ 255
PR08	Duration of MAN mode (temporary temperature override) At 0, the device remains in MAN mode. At 1~4h, the device automatically returns to the previous mode after the set time has elapsed.	1 hour	0 ~ 4
PR09	Minimum T.ECON temperature limit	in 0.5°C steps	15 ~ 45
PR10	Minimum T.COMF temperature limit	in 0.5°C steps	15 ~ 45
PR11	Maximum T.ECON temperature limit	in 0.5°C steps	15 ~ 45
PR12	Maximum T.COMF temperature limit	in 0.5°C steps	15 ~ 45
PR13	Visual temperature deviation alarm. - The backlight flashes when dT [T.Meas - T.Setp] > [PR13]. - At “0”, the function is disabled.	0°C	0 ~6.0°C

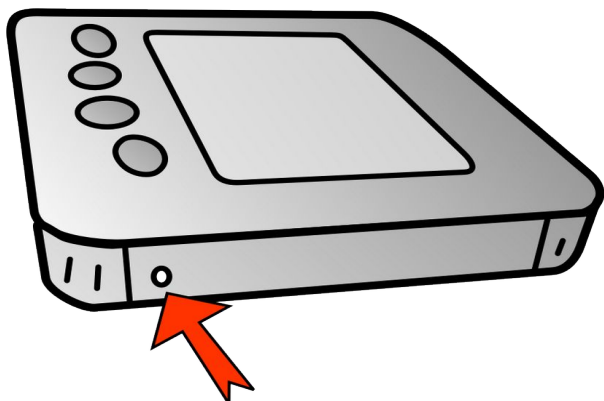
PR14	NTC.2 sensor function =0 – not connected =1 – zone 2 temperature; enables/disables operation by comparing the NTC.2 temperature with PR15 and PR16 =2 – replaces the main sensor * This parameter is not used on FC10. =3 – External heating/cooling signal: * NTC2 terminals shorted or $t.NTC2 > PR15 \Rightarrow$ Heating * NTC2 terminals open or $t.NTC2 < PR16 \Rightarrow$ Cooling	1	0 ~ 3
PR15	Upper temperature limit for zone 2 operation. (n1)	in 1°C steps	20°C~70°C
PR16	Lower temperature limit for zone 2 operation. (n1)	in 1°C steps	5°C~24°C
PR17	Not used		
PR18	Not used		
PR19	Measured NTC.2 value		
PR20	Automatic T.ECON temperature setting At 0: T. ECON is freely adjustable. At 0.5 ~ 5: T.ECON is set as a fixed offset from T.COMF. In heating: $T.ECON = T.COMF - [PR20]$ In cooling: $T.ECON = T.COMF + [PR20]$	in 0.5°C steps	0 ~ 5
PR21	Zone 2 hysteresis, used with PR15 and PR16 * This parameter is not used on FC10.	in 0.5°C steps	0.5°C ~ 5.0 °C
PR22	Not used		
PR23	Not used		
PR24	Backlight brightness when dimmed; 0 – off; 10-100%	1	0 ~ 10
(*1)	This parameter is not used on FC10.		

Technical data:

- SELV power supply	170-230V / AC / 50Hz
- Power consumption	<2VA
- Potential-free relay output – 1 output	4A Max/ 230V AC
- Front panel dimensions	90x90x17mm
- Measured temperature	-10° .. +45° in steps of 0.5°C
- Set temperature range	+15°C .. +45°C in steps of 0.5°C
Ingress protection rating	IP20
Operating conditions	-5T45, RH80%
Transport and storage	-20T60, RH90%
Current time	Synchronization over the Internet
Panel mounting or installation in a D65 wall box	Mounting centers: 60mm / 80mm
Rear section dimensions (recessed part)	50x53x28mm

WiFi pairing

To start WiFi pairing, press and hold the concealed button on the right side for 10 sec.



When WiFi pairing starts, the concealed LED flashes rapidly

(visible through the housing).

To continue pairing, follow the additional instructions in the mobile app or download the separate instructions.

https://thermob.eu/downloads/ThermoB_WiFi_setup_EN.pdf

WiFi connection setup instructions.

Download using the link or scan the QR code.



Proxel Connect App mobile application.



Download the app directly from our website.



Android



iOS



Android

Commissioning

- 1. Check the device version.** Match the model, power supply, sensors and outputs to the supplied wiring diagram. Relay outputs are rated up to 4A.
- 2. Open the service menu.** Hold [M] and button [3] simultaneously for about 3 seconds. If prompted for a PIN, enter the installation's code.
- 3. Set the parameters.** Use [▲]/[▼] to select the parameter number. Press [3] to make the value flash; adjust it with [▲]/[▼] and confirm with [3]. Hold [M] to exit.
- 4. Check the main settings.** BASIC heating: PR03=3. Check the permitted temperatures, frost protection, MAN duration and time zone. Set values to suit the installation; do not rely solely on factory settings.
- 5. Check the sensor and temperature control.** If an external sensor is used, check its function in PR14 and the corresponding thresholds. Check the hysteresis or TPI setting and the “warm floor” function setting, if used.
- 6. Check the output.** Select a temperature that should generate a heating or cooling demand and check the connected appliance's response. Compare the displayed room temperature with the actual temperature in the room.
- 7. Check the clock and access.** On the WiFi version, check the app, day, time and schedule. If locking is enabled, check which actions are available to the user and retain the service PIN.
- 8. Hand over the system.** Demonstrate switching on, temperature adjustment, operating modes and temporary overrides. Provide the separate user guide and record the model, restrictions and support telephone number. Record the actual settings below.

Ordering code

The code consists of the base model, WiFi option and housing/display combination, in that order. Enter the designations without spaces or separators.

Code component	Option and designation
Base model	FC11
WiFi	Yes: W. No: no designation.
Housing and display	White housing with a positive display: no designation. White housing with a negative display: N. Black housing with a positive display: BP. Black housing with a negative display: BN.

A positive display shows dark characters on a light background. A negative display shows light characters on a dark background.

Examples

FC11 — without WiFi, white housing and a positive display.

FC11WBN — with WiFi, black housing and a negative display.

The WiFi functions described in this guide apply only to the WiFi version.