

protherm

Thermolink B

Instructions for use
Installation and servicing



- Version eBUS
- Possible an outside sensor
- Setting the temperature and DHW
- Selecting with or without modulating



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Instructions for use

1 General

Thermolink B is a room thermostat that ensures optimal heating comfort. The installation and commissioning of the appliance has to be carried out by a skilled professional who is responsible for the compliance of the installation and commissioning according to current regulations.

You also have to call on a skilled professional for the maintenance and repairing of the appliance.

2 Documents

- Please keep this manual as well as any documents enclosed with it safe for future reference.

We accept no liability in case of damage due to the non-compliance of the instructions of the present manual.

3 Safety

Please follow the following safety recommendations and guidelines:

- Do not make any changes:
 - To the appliance
 - To the appliance environment
- Do not carry out servicing or repair operations on the appliance yourself
- Do not modify the technical conditions and architectural conditions close to the appliance, as they can have an influence on the operational safety of the appliance.

Important!

We recommend to pay proper attention to setting the hot water temperature; water can be very hot when leaving the taps.

4 Guarantee / Responsibility

Your appliance is guaranteed for a period of 24 months from the date of sale. The manufacture shall accept only defects in materials and workmanship.

- The appliance was installed by a qualified professional in accordance with installation instructions, and all the relevant codes of practice, standards and legislation in force.
- The control has been used for normal domestic purposes and in accordance with the manufacturer's operating and maintenance instructions.
- The control has not been serviced, maintained, repaired dismantled or tampered with during the guarantee period, by anyone other than a competent person.

This guarantee does not cover:

- Any defects or damage resulting from incorrect or poor installation.
- Any defects in the system to which the control is connected.
- Any deterioration or maladjustment following changes in the characteristics of the electrical supply voltage.

Notification of any fault should be made to the control installer. No repairs should be undertaken upon the control, intending it to be covered by the product guarantee without prior authorisation from the manufacturer.

5 Appliance use

This appliance is a room thermostat that controls a heating appliance depending on the room temperature. Any other use is considered as inappropriate and is forbidden.

The manufacturer shall not be responsible for any damage caused by another use. In that case the user shall be the responsible.

6 Servicing

- Clean the case of the appliance with a damp soapy cloth.
- Make sure that no water gets inside the appliance.
- Do not use any abrasive cleaning product as it could damage the housing or plastic case.

7 Recycling

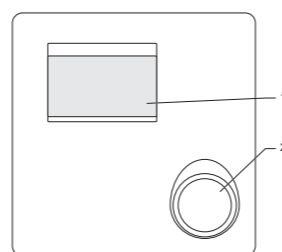
The appliance comprises many recyclable parts, like the packaging, manuals and appliance itself. At the end of the appliance's service life, do not dispose of the packaging and manuals in domestic waste but recycle them. The appliance should be recycled as electronic waste.

8 Appliance Use

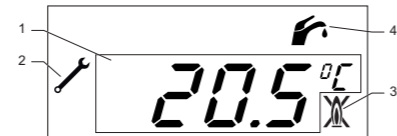
8.1 Front cover

Legend

- 1 Display
- 2 Setting knob



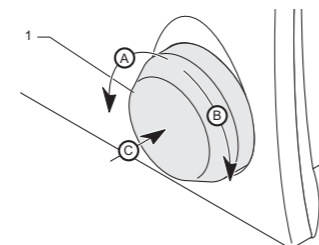
8.2 Description of Display



Legend

- 1 Ambient temperature
- 2 Installer menu
- 3 Boiler fault
- 4 Domestic Hot Water circuit

8.3 Setting knob description



- Turn setting knob clockwise (B) to adjust setting upward.
- Turn setting knob anti-clockwise (A) to adjust setting downward.
- Press the knob (C) to access a setting or to confirm one.

8.4 Setting the temperature

8.4.1 Room temperature setting adjustment

- While on main screen (displays temperature in the control location), turn the setting knob to adjust to desired room temperature.. The set temperature flashes.

	Setting the temperature (°C)
min.	5
recommended	20
max.	30

The setting is confirmed automatically after 5 seconds: the main screen is displayed.

8.4.2. Domestic Hot Water setting adjustment

- While on main screen, press on setting knob.
- Turn setting knob to adjust to desired hot water temperature. The set temperature flashes.

	Setting the temperature (°C)
min.	38
recommended	60
max.	65

The setting is confirmed:

- **automatically after 5 seconds:** the main screen is displayed.
- **or after pressing on setting knob:** the main screen is displayed

9 Troubleshooting

In the event of an anomaly, the appliance displays error messages on the display.

Warning !

Never try to service or repair the appliance by yourself and only start the appliance once a skilled professional has repaired the fault.

Fault	Cause	Corrective action
The display is off	Power failure	Check the mains power supply is on and that the appliance is switched on at the spur or socket. The appliance starts automatically once the power supply is on. If the fault persists, please contact a skilled professional.
Room temperature does not reach the temperature programmed.	Poor adjustment of thermostatic valves on the radiators	Check that the thermostatic valves of the radiators in the room where the appliance is installed are set to maximum. If this is the case, please contact a skilled professional.
Err	Communication error between the boiler and the appliance	Please contact a skilled professional.
	Boiler fault	Please contact a skilled professional.
Other faults	-	Please contact a skilled professional.

10 Frost protection

The frost protection system activates the boiler when:

- The ambient temperature in the room where the appliance is installed falls below 3 °C.
- The outside temperature falls below 5 °C (protection possible only if an outside sensor is connected to the boiler).
- If you leave home for a long period, consult the boiler manual.

Installation and servicing
Installation and servicing instructions strictly reserved for qualified gas and electrical appliances installers

1 Comments on the instructions

- Please give all of the instructions to the user. The user shall keep them for future reference.

We accept no liability in case of damage due to the non-compliance of the instruction manual.

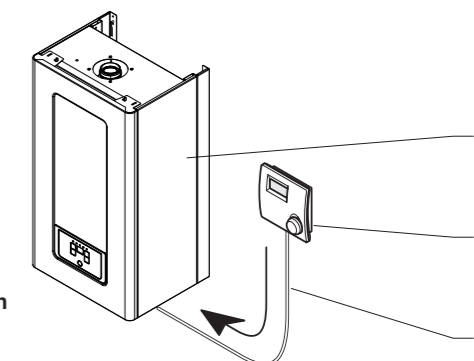
2 Appliance Description

2.1 CE marking

The CE mark on this appliance shows compliance with:

- Directive 89/336/EEC on the approximation of the Laws of Member States relating to electromagnetic compatibility.
- Directive 73/23/EEC on the harmonisation of the Laws of Member States relating to electrical equipment designed for use within safe voltage limits.

2.2 Block diagram



Legend

- 1 Boiler
- 2 Room controller
- 3 Boiler connection

3 Appliance location

- Do not install the appliance above another appliance that could damage it (for example, above a cooker that might emit steam or grease) or in a room, which has a lot of dust in the atmosphere which is corrosive.
- The appliance must be installed in a room protected from freezing temperatures. Take the necessary precautions.
- Install the control in such a manner so as to guarantee optimum measurement of the ambient temperature by positioning it:
 - On inside wall in the main room of the house,
 - Approximately at 1.5 metres from the ground.
- Do not install the appliance:
 - Near heat sources such as radiators, televisions, sunlight, etc.,
 - On cold walls,
 - Between furniture, behind curtains, or other objects that could effect measurement of ambient air temperature in the room,
 - Close to draughts of air that could come from doors or windows.
- Explain these requirements to the home owner.

4 Safety instructions and regulations

This appliance is tested and certified for safety and functionality. It is, therefore, important that no alteration is made to the appliance, without written permission from the manufacturer.

Any alteration not approved by the manufacturer, could invalidate the certification, appliance warranty and may also breach valid laws.

4.1 Safety instructions

Warning! Incorrect installation can cause electric shock or appliance damage.

- Protect all the electrical components from water when you carry out any work.

4.2 Safety regulations

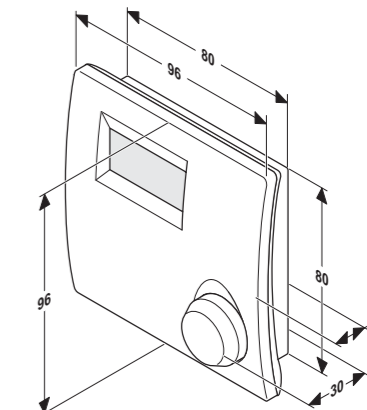
When installing and commissioning the appliance, the regulations below shall be observed in their current version.

The installation of this appliance must be carried out by a competent person in accordance the rules in force in the countries of destination. Manufacturer's instructions must not be taken as overriding statutory requirements.

5 Appliance installation

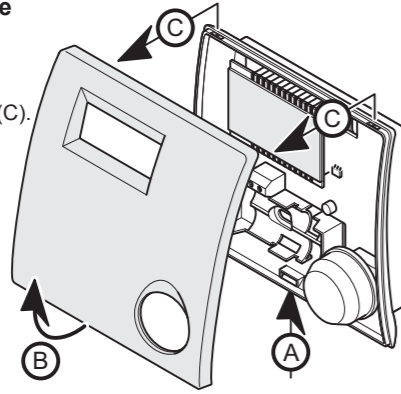
All the dimensions in this chapter are expressed in mm.

5.1 Dimensions



5.2 Opening the appliance

- Remove the front cover from the appliance box respecting the order of operations (A) to (C).

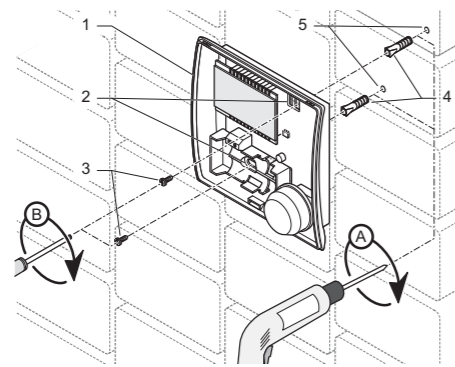


5.3 Fixing to the wall

- Make sure the material you use fits those of the appliance.
- Chose the location of the appliance. See chapter „Appliance location“.

Legenda

- Appliance box
- Attachment holes
- Attachment screws
- Wall plugs
- Drilled holes



- Position the appliance box (1) on a wall.
- Drill the holes (5) for the attachment screws in line with the 2 attachment holes (2).
- Insert the wall plugs in the drilled holes.
- Proceed with connecting the appliance as per chapter „Electrical connection“.
- Position and attach control casing on wall with top screw (3).
- Secure control casing by screwing in the two additional screws (3) as illustrated above.
- Replace the front cover on the appliance box.

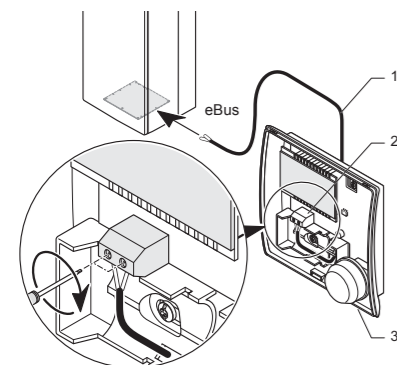
6 Electrical connection

Important: An installation and service company or appropriately qualified electrician should make the electrical connection to the appliance.

- Use a connection cable that complies with the specifications given at the end of this manual (see chapter 11 „Technical data“).

Important! If the cable is longer than 10 metres, use separate eBUS and high voltage cables.

Conductors used to connect the room thermostat and outside sensor must not be routed parallel with the supply voltage conductors.



Legend

- Connection cable
- Room thermostat connection terminal
- Room thermostat

- Do not remove the link wire from the «Room thermostat» connection terminal of the main board of the boiler.

- Connect the cable (1) to the terminal (2) of the appliance as illustrated. Polarity does not matter.
- Connect the cable (1) to the eBUS terminal of the boiler as illustrated. Polarity does not matter.

7 Commissioning

- Put the boiler into operation.

8 Adjustments

Access to appliance technical data enables certain adjustments to be carried out and the analysis of possible malfunctions.

- Press for more than 10 seconds on setting knob to access setting menu.
- When and “0” appear, turn setting knob up to “96” on display.
- Validate by pressing on setting knob.
- When first menu “1” appears, turn knob to select desired setting.
- Press on setting knob to go on to next menu (see table below).
- To validate all settings, press for at least 5 seconds on setting knob.

Display will return to its normal setting by itself after 1 minute or after pressing again for at least 5 seconds on setting knob.

Menu	Title	Action / Information
1	Selecting appliance mode	Choose a value: 0 = non modulating ► On/Off mode 1 = modulating ► automatic calculation of the heating setting. (factory setting)
2	Selecting the heating curve (*)	Choose a value between 0,2 and 4 (factory setting: 1,2) Refer to the manual for the outside sensor connected to the boiler to carry out this adjustment. Caution: When an outdoor temperature sensor is connected to the boiler, modulation mode is automatically selected. It is not possible to switch the mode.

(*) Display only possible if an outside sensor is connected to the boiler

9 Control / Commissioning

Once the appliance is installed, check whether it runs:

- Start the appliance according to the indications of the operating instructions and check whether it runs.
- Check the whole control and safety devices, their setting and their operating state.

Caution: In case the room control unit is connected, the maximum temperature of the HoW and heating water (HeW) must be selected on the boiler control panel. Under these conditions the temperature set at the boiler serves as a limit value.

Example: HeW temperature is calculated at 65°C by the equithermal regulation. At the boiler control panel however, a lower temperature is set, e.g. 55°C. In that case, the boiler heats the HeW only up to the 55°C.

Maximum HeW temperature must be set with regard to a given heating system (e.g. floor heating).

10 User information

The user should know how to use the appliance.

- Explain to the user the appliance operating principles and demonstrate if required.
- Have a look at the operating instructions together and answer any questions if need be.
- Give the user all of the manuals and documents concerning the appliance and tell the user to keep them near the appliance.
- Explain more precisely the safety principles they should observe.

11 Technical data

Description	Unit	
Max room temperature in the room where the control is installed	°C	50
Dimensions:		
Height	mm	96
Width	mm	96
Depth	mm	30
Supply voltage	V	24
Electrical rating	mA	17
Min diameter of electrical connection cables	sq.mm	2 x 1,5
Max. length of electrical connection cables	m	300
Electrical protection		IP20
Electrical category		III

12 Outside sensor* - optional accessories

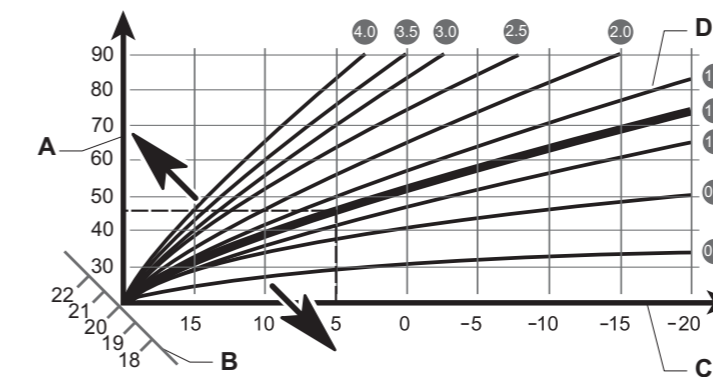
(*)Not delivered with thermostat

12.1 Sensor location

- The outside sensor should be located on the north/northwest wall of the building.
- For optimal indication of outside temperature for 3-storey or lower buildings, the sensor should be located on the wall at about 2/3 of the building height. For higher buildings a position between the 2nd and 3rd floor is recommended.
- When installed, the outside sensor should not be protected against wind, but should also not be exposed to draught. Also, it should not be exposed to sunshine.
- The outside sensor should be located at least 1 m from openings in the outside walls and away from constant or random sources of hot air.

12.2 Equithermal curves

Graph with heating curves for required room temperature 20 °C



Legend

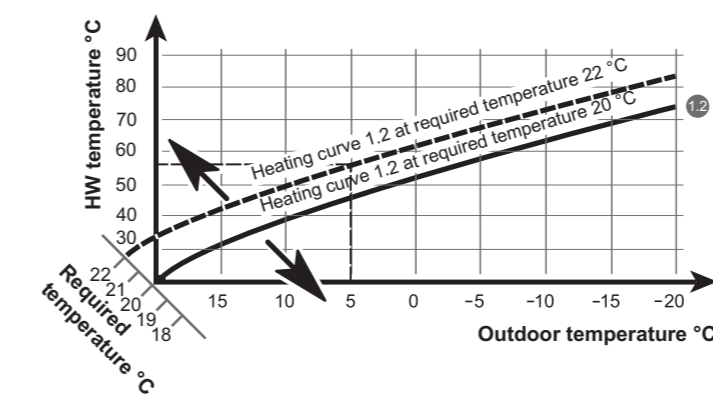
A - Heating water temperature [°C] C - Outside temperature [°C]

B - Curve base selection*

D - Heating Curves

*(required room temperature [°C])

12.3 Setting the control unit with outdoor sensor connected – example



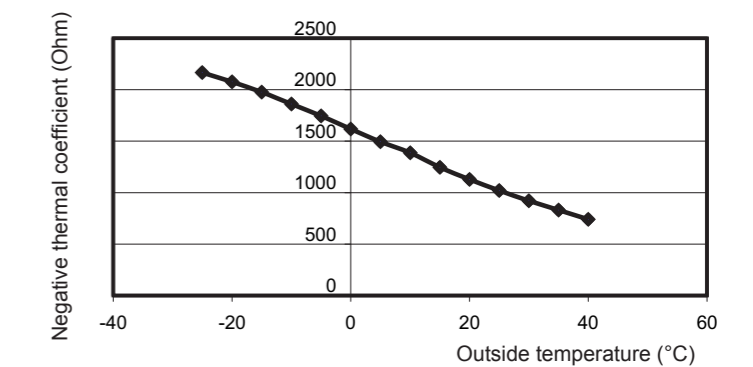
Example: If a heating curve 1.2 is selected and a different temperature than 20°C is required for the heated room, e.g. 22°C, the heating curve is shifted as shown (see picture). The selected heating curve 1.2 is shifted in parallel at a 45° angle on the “B” axis. Hence for required room temperature of 22°C and outdoor temperature of 5°C, HeW temperature is automatically calculated at about 56°C.

Caution: If the required temperature is not reached in the room, or the temperature rises too slowly, please select a heating curve of a higher number.

12.4 Outdoor sensor value table

Temperature (°C)	Negative thermal coefficient (Ohm)	Temperature (°C)	Negative thermal coefficient (Ohm)
-25	2167	10	1387
-20	2076	15	1246
-15	1976	20	1128
-10	1862	25	1020
-5	1745	30	920
0	1619	35	831
5	1494	40	740

12.5 Outdoor sensor curve

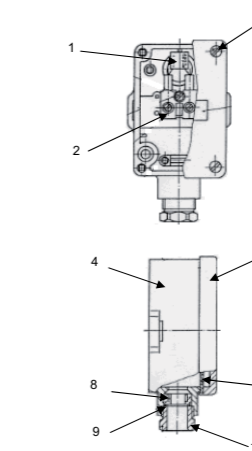


12.6 Outdoor sensor deviation

The negative thermal coefficient value must be in the following intervals:

- 20 °C < outside temperature < 25 °C → +/-0,8K
- 40 °C < outside temperature < -20 °C or 25 °C < outside temperature < 40 °C → +/-2K

12.7 Outside sensor parts



Description	Qty
1 Sensor	1
2 Bipolar connection terminal	1
3 Stainless screws	4
4 Plastic box	1
5 Plastic cover	1
6 Seal	1
7 Cable gland	1
8 Rubber O-ring	1
9 Metal washer	1

12.8 Connection and technical parameters of sensor

Outdoor sensor is connected to the boiler control board right to the dedicated terminal box (Outdoor NTC) with a twin core cable with minimum 2 x 1.5 sq.mm cross section.

Nominal voltage	5 V
Power consumption	< 10 mW
Electrical category	II
Electrical protection	IP44