

REMKO

FBR-2 ANALOGUE REMOTE CONTROL WITH ROOM SENSOR

Operating and installation instructions



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**Read these operating instructions carefully
before commissioning / using this device!**

**These instructions are an integral part of the system and
must always be kept in the vicinity of the installation loca-
tion or on the unit.**

This operating manual is a translation of the German original.





Made by REMKO

*Subject to modifications; no liability accepted for errors or
misprints!*

REMKO FBR-2 ANALOGUE REMOTE CONTROL WITH ROOM SENSOR

Safety notes

Carefully read the operating instruction before placing the equipment in service. It contains useful tips  and notes  such as hazard warnings to prevent injury and material damage. Failure to follow the directions in this manual can result in endangerment to persons, the environment and the equipment itself and will void any claims for liability.

- Keep this manual in the vicinity of the unit.
- The setup and installation of the unit and its components should only be undertaken by an authorised specialist.
- The set-up, connection, and operation of the unit and its components must be in accordance with the operating conditions stipulated in this manual and comply with all applicable local regulations.
- Modification of equipment and components supplied by REMKO is not permitted and can cause malfunctions.
- Equipment and components may not be operated in areas where there is an increased risk of damage. Observe the minimum clearances.
- The electrical supply is to be adapted to the requirements of the equipment.
- The operational safety of equipment and components is only assured if they are fully assembled and used as intended. Safety devices may not be modified or bypassed.
- Do not operate equipment or components with obvious defects or signs of damage.
- The equipment and components must be kept at a safe distance to inflammable, explosive, combustible, aggressive and dirty areas or atmospheres.
- Installation, repair and maintenance work may be carried out only by authorised specialists. Visual inspections and cleaning can be performed by the operator as long as power is disconnected from the equipment.
- To preclude any danger from the equipment, take appropriate hazard-prevention measures when performing installation, repair or maintenance work or cleaning the equipment.

Environmental protection and recycling

Disposal of packaging

All products are packed for transport in environmentally compatible materials. Make a valuable contribution to reducing waste and sustaining raw materials. Only dispose of packaging at approved collection points.



Disposal of components

Equipment manufacture is subject to continuous quality control. Only high-grade materials are processed, the majority of which are recyclable. You can also contribute to environmental protection by only disposing of components in accordance with local regulations and in an environmentally safe manner, e.g. through authorised disposal and recycling specialists or at collection points.

Warranty

The warranty conditions are listed in the "General terms and conditions". Please contact your contractual partner in the first instance.

Intended use

Depending on the model, the equipment and the additional fittings with which it is equipped is only intended to be used as an air-conditioner for the purpose of cooling or heating the air in an enclosed room.

Different or additional use shall not be classed as intended use. The manufacturer/supplier assumes no liability for damages arising from an unintended use of the equipment. The user bears the sole risk in such cases.

Using the equipment as intended also includes working in accordance with the operating manual and installation instructions and complying with the maintenance requirements.

Description

This remote control is an expansion module for the heat pump manager, which gives the user straightforward and reliable control over the desired room temperature and which allows the mode to be changed. The weather-controlled controller in the direct heating circuit (heat circuit 1) can use the integrated room sensor (optionally) to introduce a change in room temperature in 0.3 K steps. The rotary switch on the remote control can be used to set the heat pump manager to "Automatic operation", "Night mode", "Day mode" and "Summer mode".

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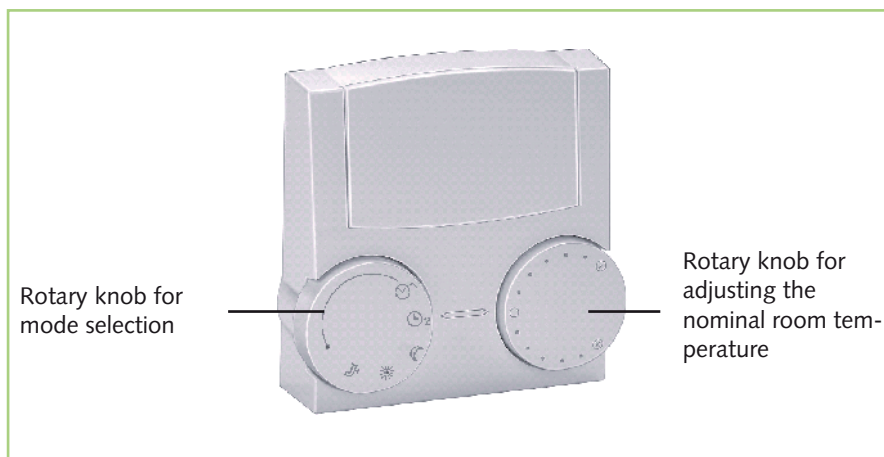
Operation

Two rotary knobs are located on the front side of the remote control with room sensor. The left-hand rotary knob is a switch that can be used to set the mode. The following modes can be selected:

- 🕒 1 Automatic mode (operates according to time programme 1 in controller)
- 🕒 2 Automatic mode (operates according to time programme 2 in controller)
- 🌙 24 hour night programme (Decreasing temperature)
- ☀️ 24 hour daytime programme (Comfort temperature)
- 🔌 Summer mode (Heating OFF, only hot water)

The right-hand rotary knob can be used to set the nominal room temperature. The adjustment range is $\pm 5\text{K}$ from the programmed room temperature on the heat pump manager. There is a tolerance of $\pm 2\text{K}$.

- Nominal room temperature according to programming on heat pump manager
- ⊕ Nominal room temperature around 5 K warmer than programming on heat pump manager
- ⊖ Nominal room temperature around 5 K warmer than programming on Heat pump manager



NOTE

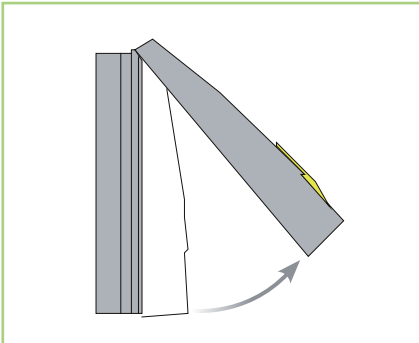
The mode on the heat pump manager must be set to "Automatic 1".

Installation

The remote control with room sensor may only be installed to the internal wall of the reference living space of heating circuit 1 (direct heating circuit). It must not be installed near to heating elements or other heat-emitting devices. If the room sensor effect on the heat pump manager is switched off, it can be installed in every x-optional room.

Mounting

1. Remove the caps from the socket at the base.

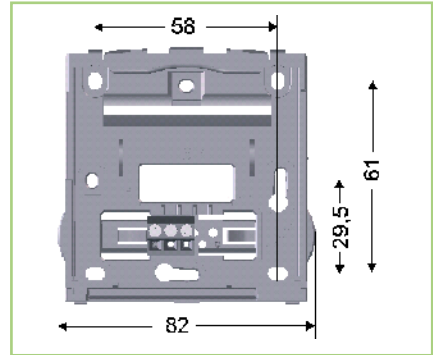


2. Secure the socket to the wall. The hole spacing for the wall holes can be found in the diagram shown. An opening for cable passage is available.



NOTE

Installation should only be undertaken by an authorised specialist.



3. Establish the electrical connection.



CAUTION

The resistance of the connection cable influences the nominal setting and room temperature measurement. (See "Commissioning" section.)

4. Position the top of the controller on the upper side of the socket and lightly press downwards on to the socket until the top locks in place.

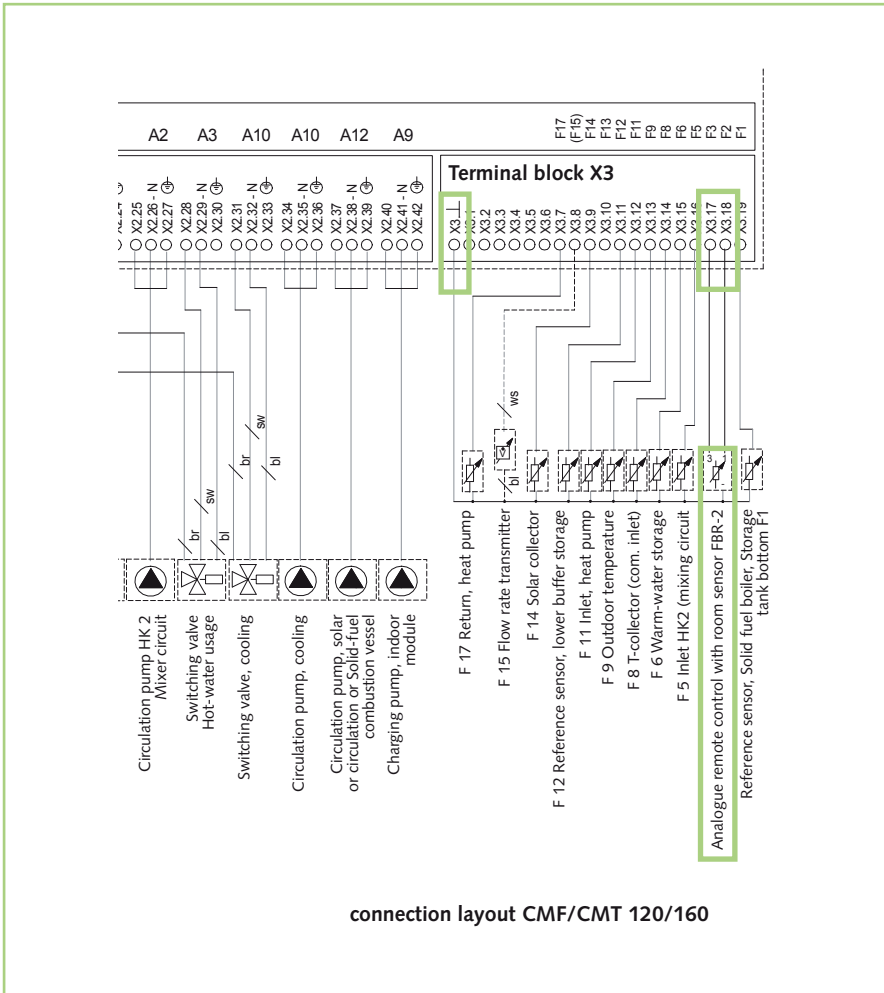
Disassembly

1. Remove the caps from the socket at the base.
2. Loosen all cable connections.
3. Unscrew the socket from the wall.

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Electrical connection

Connect the remote control with room sensor to the heat pump manager or to the heat pump with a phone cable. You need 3 wires. For this, use connection terminals X3.17 and X3.18 and X3-ground on heat pump types CMF/CMT 120 and CMF/CMT 160 in accordance with the connection plan (figure: heat pump connection plan drawn in truncated form)



Commissioning

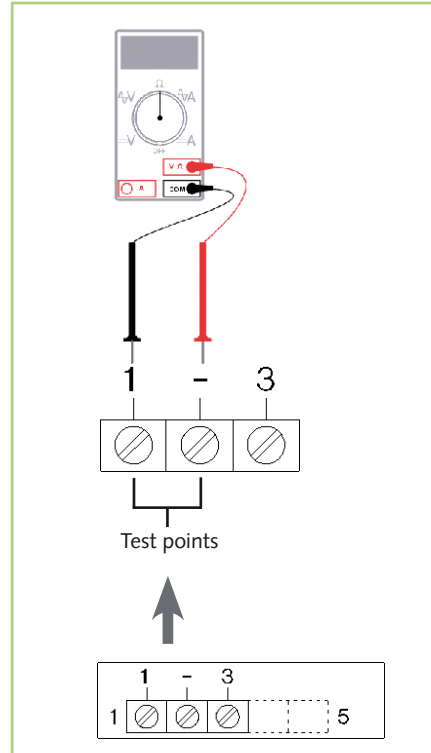


NOTE

Commissioning should only be performed and documented by specially trained personnel.

The following steps must be followed when commissioning:

1. Read this manual carefully before commissioning.
2. Remember that the resistance of the connection cable influences the nominal setting and room temperature measurement.
For example, a cable with 0.25 mm² cross section (telephone wire) and 10m in length causes a nominal value increase of 2K and a reduction in room temperature measurement of 0.01K.
3. Check the resistance at the next measure point shown.
4. Compare your measurement with the table given, taking into account the room temperature.



Room temperature in °C	Resistance in Ohms
+ 10°C	9.950 Ω
+ 15°C	7.855 Ω
+ 20°C	6.245 Ω
+ 25°C	5.000 Ω
+ 30°C	4.028 Ω

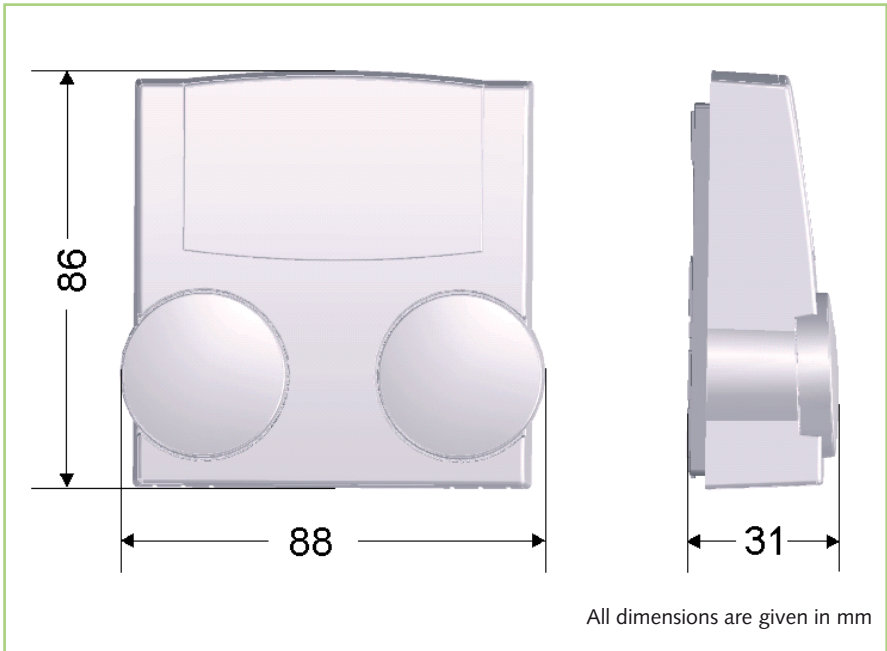
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Troubleshooting and customer service

The equipment and components are manufactured using state-of-the-art production methods and tested several times to verify their correct function. If malfunctions should occur, please check the functions as detailed in the list below. Please inform your dealer if the unit is still not working correctly after all the functional checks have been performed!

Fault	Possible cause	Checks	Remedial measures
Communication fault	Bus and sensor cables are too close to power cables	Check position of connection cables	Reposition cables with sufficient spacing
	Polarity switched (+/-)?	Check polarity	Connect with correct polarity
	BUS feed too low	Check voltage on BUS plug	A voltage of at least 8V DC must be present between the "+" and "-" terminals - add external power if not.

Unit dimensions



Technical data

Series		Remote control with room sensor
Protection category in accordance with EN 60529	IP	40
Protection class according to EN 60730		III
permitted ambient temperature in operation	°C	0 - 50
permitted ambient temperature in storage	°C	-20 - +60
permitted humidity, non-condensing	r.H. %	95
EDP No.		260130

We reserve the right to modify the dimensions and constructional design as part of the ongoing technical development process.

REMKO INTERNATIONAL

*... and also right in your neighbourhood!
Make use of our experience and advice*



REMKO GmbH & Co. KG
Air conditioning and heating technology

Im Seelenkamp 12
Postbox 1827
Telephone
Fax
Email
Website

D-32791 Lage
D-32777 Lage
+49 52 32 606-0
+49 52 32 606-260
info@remko.de
www.remko.de

