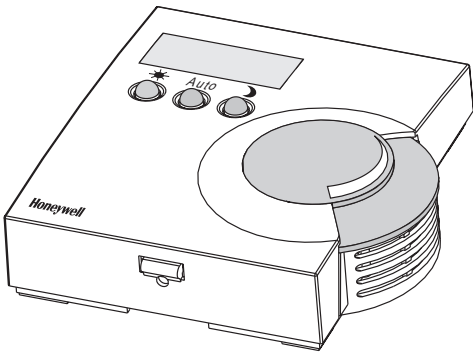


INSTALLATION AND OPERATING INSTRUCTIONS TFU 22 REMOTE CONTROLLER



Mounting of housing

1. Place a screwdriver in the recess at the base of the housing.
2. Carefully pull the opening strap outwards.
3. Remove the housing cover upwards.

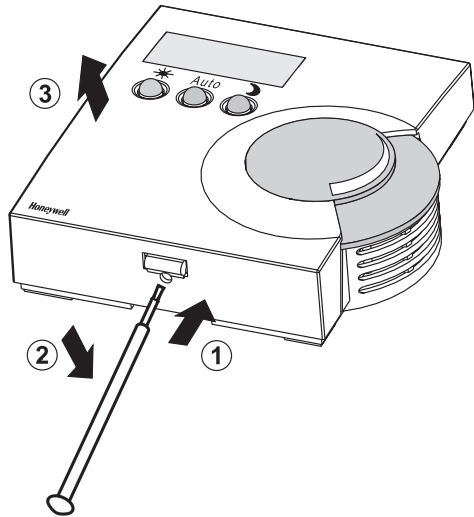


Figure 2: Removing of housing cover

4. Screw remote controller onto the wall.

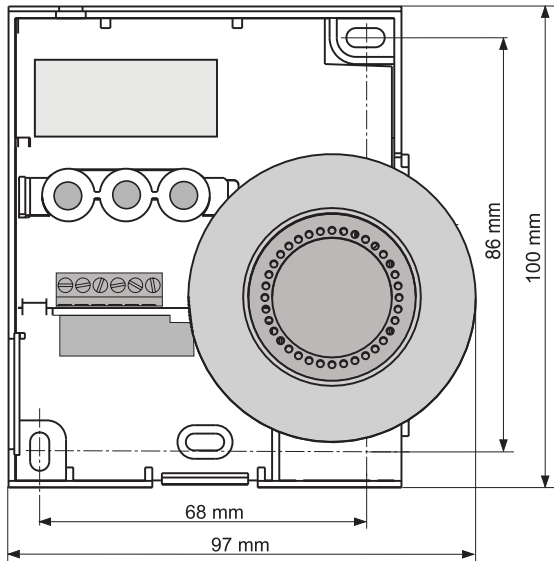


Figure 3: Drill holes and housing dimensions

Wiring diagram

- Connect the cable coming from the controller.

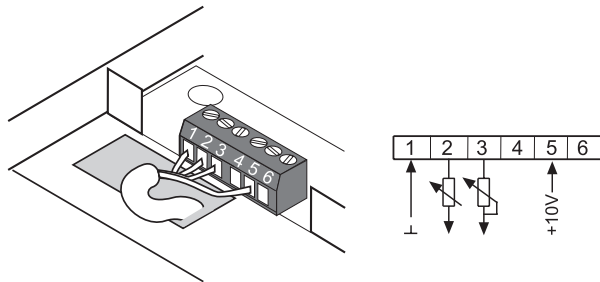


Figure 4: Wiring diagram

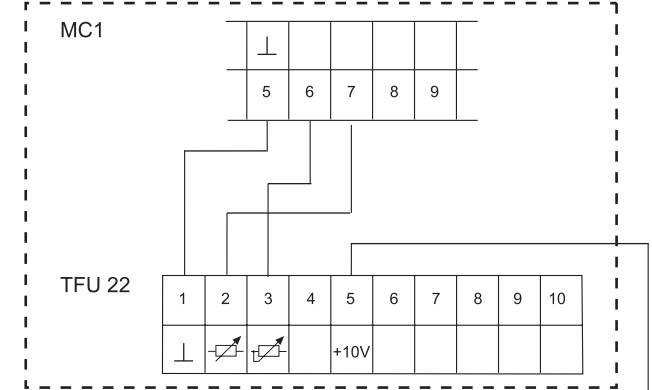
Wiring of the terminals:

1	GND	4	not used
2	Room sensor	5	+ 10 V
3	Desired value	6	not used

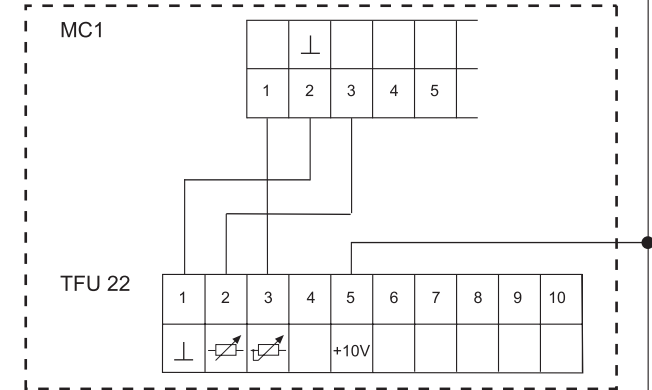
Connection to MCR 200-45

For other controllers, please refer to the respective controller instructions.

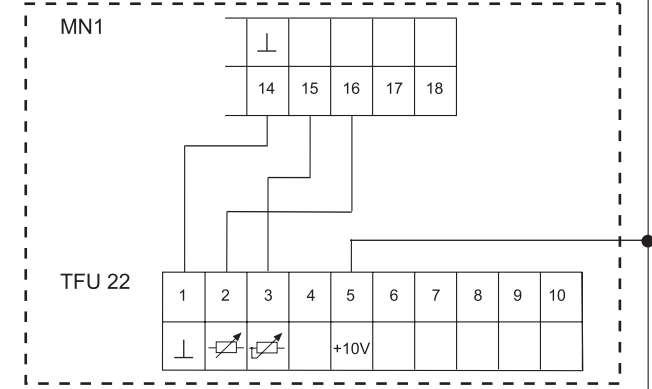
Mixing cycle 4



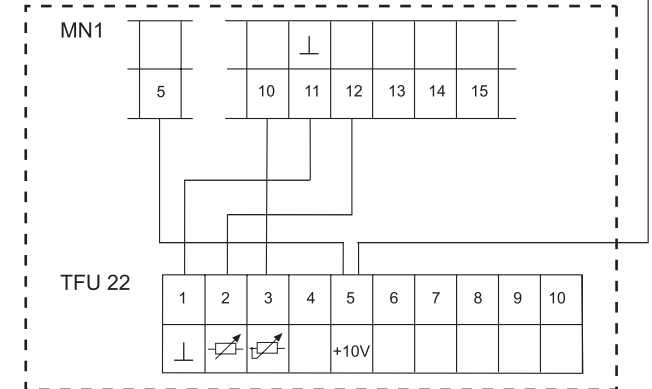
Mixing cycle 3



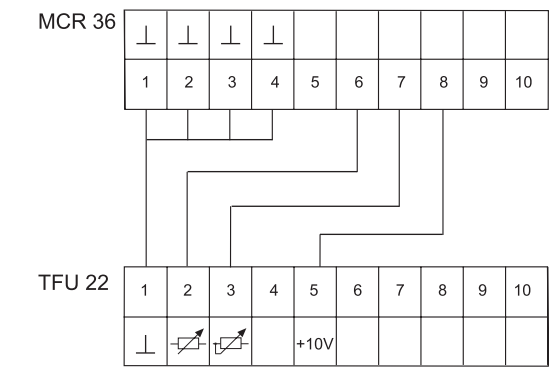
Mixing cycle 2



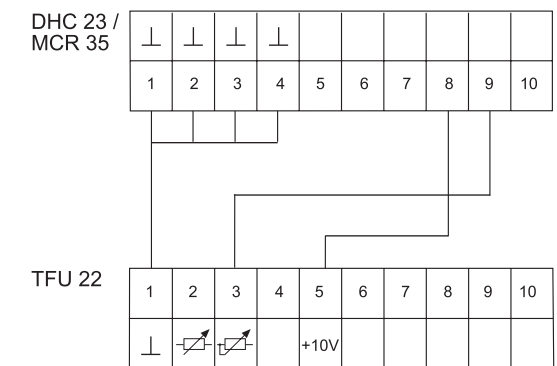
Mixing cycle 1



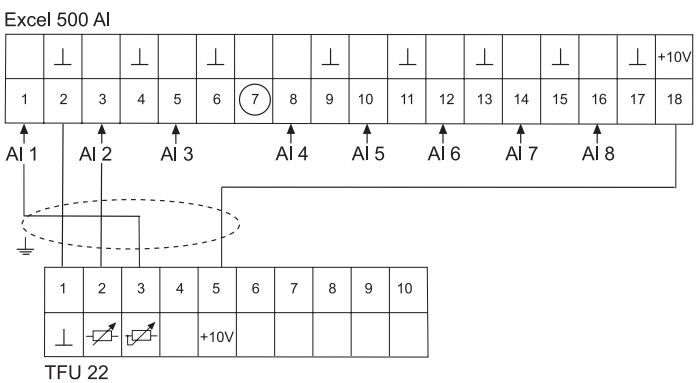
Connection to MCR 36



Connection to DHC 23 or MCR 35



Connection to Excel 500



XF 521 A analog input module
Desired temperature to AI 1
Room temperature sensor to AI 2

Closing of housing

- Return cover to housing by placing top edge against back-plate and snap lower part of cover onto housing.

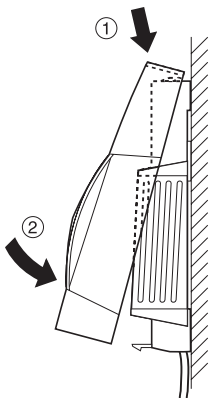


Figure 5: Returning cover to housing

DESCRIPTION

The TFU 22 remote controller measures the room temperature and transfers the measured values to the heating system controller.

The operating mode keys allow you to select the operating mode and timer program and to activate and deactivate the lock.

By means of the regulator wheel, you can adjust the set desired temperature by $\pm 7\text{ }^{\circ}\text{C}$ and also the time settings in order to adjust the timer program to your needs.

The TFU 22 is compatible with the following control systems:

- MCR 35, 36, 200
- DHC 23
- Excel 500

INSTALLATION

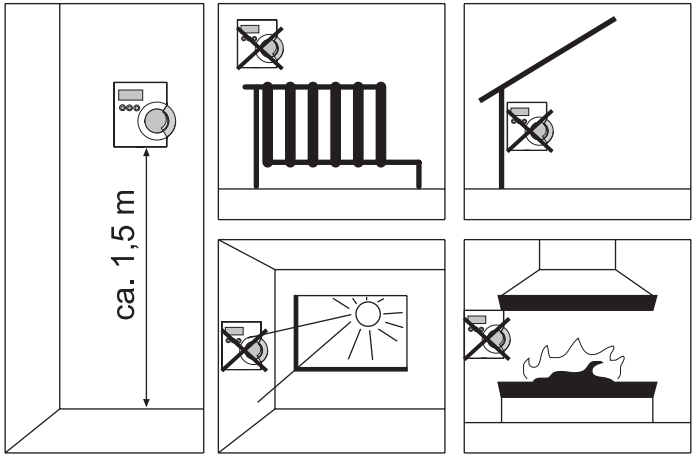


Figure 1: Installation

OPERATION

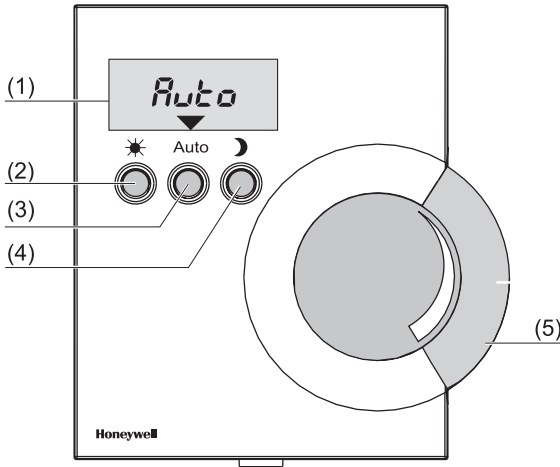


Figure 6: Operating devices and indicators

- (1) Display
(2) Button for day operation ☀
(3) Button for automatic mode **Auto**
(4) Button for switch-off mode 🌙
(5) Regulator wheel

The TFU 22 remote controller is equipped with 3 operating modes:

- Automatic mode:
The room temperature is regulated according to the control program of the heating system controller. By means of the regulator wheel, the desired temperature can be adjusted by $\pm 7^\circ\text{C}$.
- Daytime mode:
The room temperature is maintained continuously or for a limited period only at the desired daytime temperature. Adjustments of the desired temperature in automatic mode are effective.
- Switch-off mode:
The heating period is limited or the heating is switched off. The frost protection remains activated.

Note

The warm water program of the heating system controller is not affected by the selected operating mode. For MCR 200, the desired daytime temperature code is 107 and the desired nighttime temperature code is 108.

Adjusting desired temperature

Note

The desired temperature can only be adjusted in automatic mode.

1. If the TFU 22 is not in automatic mode, press the **Auto** button.
The display reads as follows:



2. Turn the regulator wheel clockwise to increase the desired temperature. Turn the regulator wheel anti-clockwise to lower the desired temperature.

Note

The adjusted desired temperature is applied in daytime mode.

Automatic mode

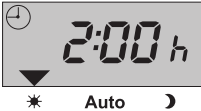
1. Press the **Auto** button.
The display reads as follows:



The TFU 22 is now set to automatic mode.

Limited daytime mode

1. Press the ☀ button.
The display reads as follows:



2. Turn the regulator wheel to adjust the time period. The time period can be set to intervals of 1–23 hours or 1–99 days.
For the selected time period, the room temperature is maintained at the desired daytime temperature. After the lapse of the selected period, the TFU 22 returns to automatic mode.

Continuous daytime mode

1. Press the ☀ button twice.
The display reads as follows:



The room temperature is maintained at the desired daytime temperature until a different operating mode is selected.

Limited switch-off mode

1. Press the 🌙 button.
The display reads as follows:



2. Turn the regulator wheel to select the time period. The time period can be set to intervals of 1–23 hours or 1–99 days.
The heating will be switched off for the selected period of time. After the lapse of the period, the TFU 22 returns to automatic mode.

Continuous switch-off mode

1. Press the 🌙 button twice.
The display reads as follows:



The heating remains switched off until a different operating mode is selected. In the event of danger of frost, the heating pump and the burner are automatically switched on.

Lock mode

Activating lock mode:

1. Simultaneously press the ☀ and the **Auto** buttons for at least 2 seconds.
The display reads as follows:



As soon as you release the buttons, the display shows the previously selected operating mode.

The TFU 22 is now locked and protected against accidental operation. As soon as the operating mode button or the regulator wheel are activated, the message *bLoc* is displayed.

Deactivating lock mode:

1. Simultaneously press the ☀ and the **Auto** button for at least 2 seconds.
The display reads as follows:



As soon as you release the buttons, the display shows the previously selected operating mode.
The lock is now deactivated.

Note

The lock mode can be activated/deactivated in any operating mode.

TECHNICAL DATA

Sensor element:	NTC thermistor
Resistance:	20 kOhm at 25 °C
Temperature range:	–15...+40 °C
Dimensions (H×W×D):	103 × 98 × 28 mm
Installation:	Installation on wall
Max. ambient temperature / humidity:	0...50 °C / 5...95 %
Max. storage temperature / humidity:	–35...+70 °C / 5...95 %
Electric connection:	Terminals for max. 1.0 mm ² wire diameter
Protection class:	IP 30, DIN 40 050 or IEC 144
Timer programs:	1 × daytime mode, limited period 1 × switch-off mode, limited period
Time range:	1 hour (h) to 99 days (d)
Time intervals:	1...23 hours (h) at intervals of 1 hour 1...99 days (d) at intervals of 1 day

For technical information on NTC thermistor: see publication GE 3R-1106.

Centra Regelungstechnik

Honeywell AG
Böblinger Strasse 17
D-71101 Schönaich
Telephone: ++49 (0)7031 637 01
Fax: ++49 (0)7031 637 574
<http://www.honeywell.de/hga>

Subject to change

DIN EN
Company **ISO 9001** certified

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