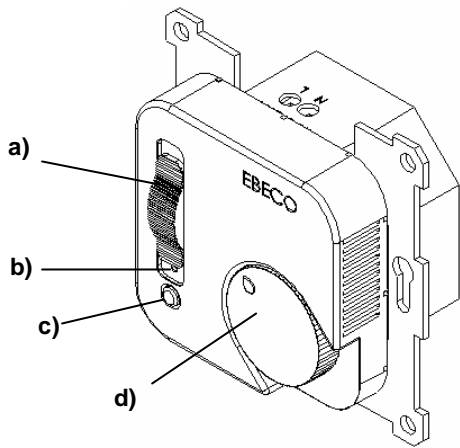# *EB-Therm 200*

E 85 816 63 / SSTL 35 304 77

MONTERINGSANVISNING / INSTALLATION INSTRUCTIONS
MANUAL DE INSTALACIÓN / MANUEL D'INSTALLATION
ASSENNUSOHJEET / INSTRUKCJA MONTAZU I OBSLUGI

EBECO 》》》®

Pictures EB-Therm 200

fig 1

a)
b)
c)
d)

EBECO

Golvgivare/Floor sensor (NTC)	
Temp (°C)	Value (kOhm)
10°C	19,9 kOhm
15°C	15,7 kOhm
20°C	12,5 kOhm
25°C	10,0 kOhm
30°C	8,0 kOhm

fig 3

18mm

fig 2

a) 230/240 VAC

L   N

d) PE

b)   c)

fig 4

IP21   66 210 06

fig 5

a)

b)

c)
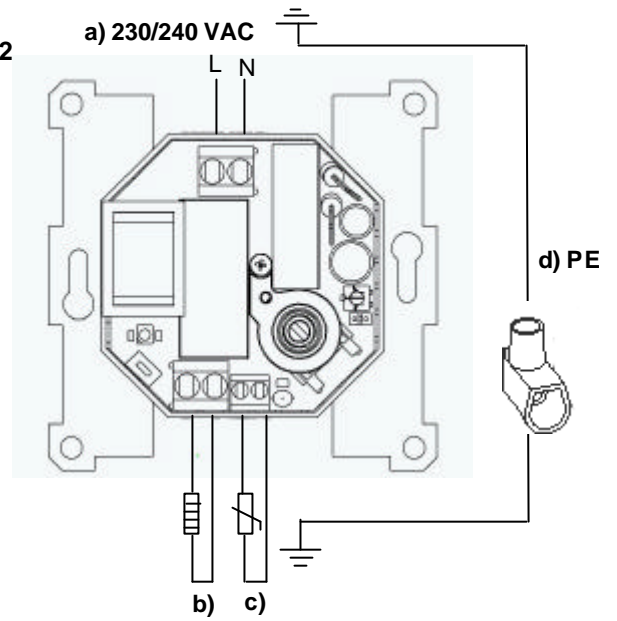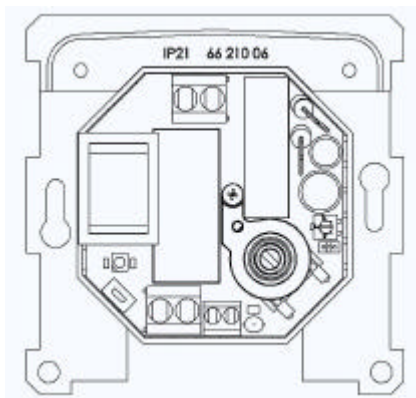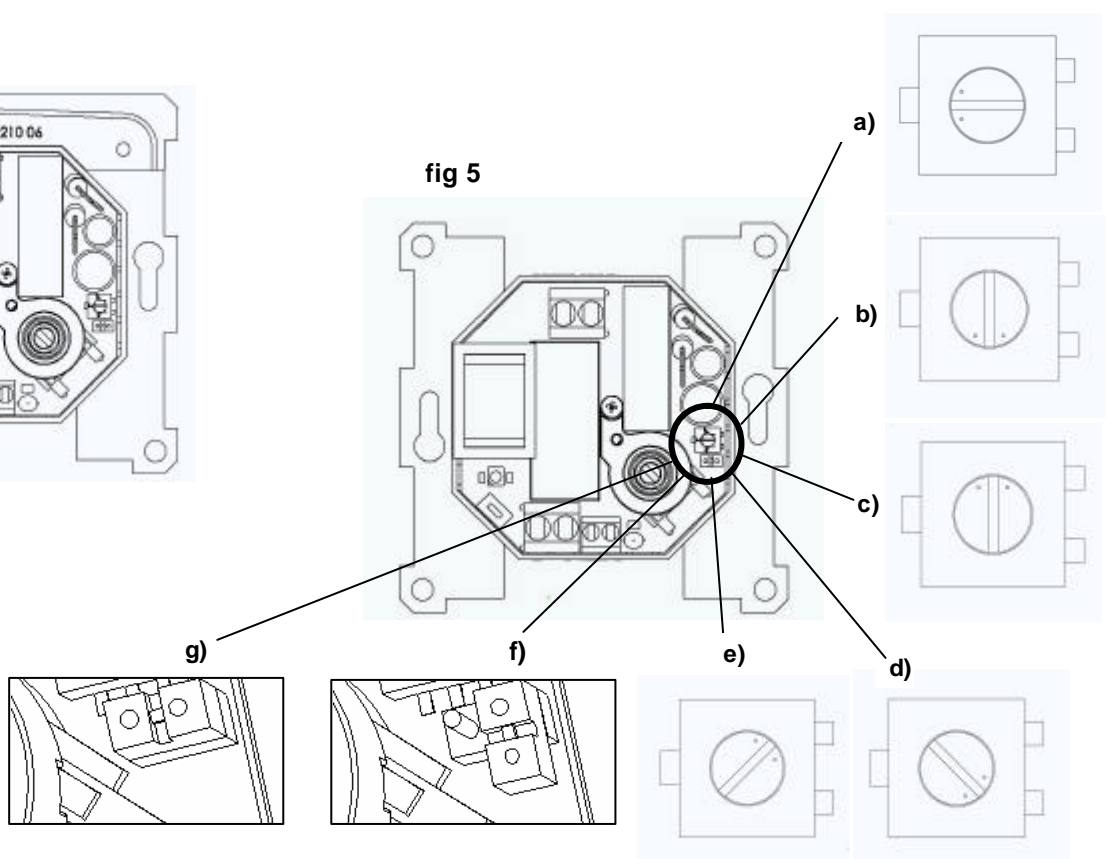
g)   f)   e)   d)
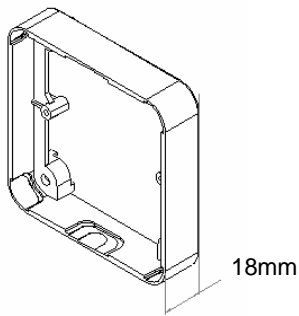
Description EB-Therm 200 P

EB-Therm 200 is an electronic thermostat, with built-in energy saving program, developed for optimal regulation of underfloor heating systems. The thermostat controls the heating in 3 ways. You can choose between room thermostat, floor thermostat or room thermostat with overheat protection in the floor. EB-Therm 200 is supplied with a front cover and frame suitable for the Eljo Trend wall box system. An extra front cover suitable for Elko RS is also included. EB-Therm is approved for installation in wet rooms, SEMKO-certified and CE-marked. The thermostat is designed for flush or surface mounting. The front panel is fitted with a double-pole switch (Fig 1a) and a dual-function LED (Fig 1b). The temperature setting can be locked on the underside of the knob (Fig 1d). EB-Therm 200 also has a programming button (Fig 1c). The thermostat has built-in auto-calibration of temperature sensors and fault monitoring of floor sensors. If the floor sensor is damaged or goes open-circuit, the thermostat contact opens and the LED starts to flash (twice a second). The floor sensor can be replaced. If the room sensor becomes faulty, the thermostat must be replaced.

Installation

Flush mounting EB-Therm mounts in a standard 65 mm wall box. The location should be chosen so that the thermostat is protected from direct sunlight and draughts. The sensor must be installed in a protective tube in the floor. The end of the tube must be sealed. All incoming pipes and ducts must be sealed so that the temperature sensor is not affected by draughts.

1. Make sure that the wall box is flush with the wall.
2. Remove the setting knob. Loosen the screw. Remove the front cover and the frame.
3. Connect the 230 V AC electric power supply (Fig 2a), the load (Fig 2b) and the sensor cable (Fig 2c). If the sensor cable needs to be extended, heavy-current cable must be used. The protective earth (PE) (Fig 2d) is connected past the thermostat via a terminal block.
4. Place the thermostat in the wall box and secure it with the screws provided.
5. Refit the frame, front cover and setting knob.

Mounting with extension frame Extension frame E 85 816 68, see Fig 3.
1. Fix the extension frame to the wall with screws.
2. Install the thermostat as described above.

Wet room installation Use the IP 21 rated gasket E 66 210 06 as shown in Fig 4.

Setting

The EB-Therm 200 can provide three distinct functions.
- **Room and floor thermostat** - The thermostat regulates the room temperature by means of the built-in sensor. We recommend this setting for wood floors. The external floor sensor operates as a temperature limiter. The setting as shown in Fig 5a of approx. 27°C applies to wooden floors.
- **Floor thermostat (preset at the factory) -** The thermostat regulates the floor temperature by means of the floor sensor. Setting as shown in Fig 5d (maximal turning to the left).
- **Room thermostat** - The thermostat regulates the room temperature by means of the built-in sensor. Setting as shown in Fig 5e. (maximal turning to the right)

In function mode A the external temperature limiter is normally not changed, but it can be adjusted on the potentiometer, with a small screwdriver. Overheat protection can be regulated from 15°C (Fig 5b) to 39 °C (Fig 5c). The room temperature is set with the setting knob (Fig 1d). In function modes B and C, only the temperature setting knob is used to set the floor or room temperature (Fig 1d). Normal setting is between 3 and 4. It may take up to 15 min from connecting the thermostat until the temperature sensors are calibrated.

After a few days, when the temperature has stabilized, it may be advisable to adjust the thermostat setting. After the final calibration, the room temperature setting can be locked by moving the two pins under the setting knob.

EB-Therm 200 - programming

EB-Therm 200 has a built-in night setback program which is suitable for the home or office environment. To choose the function, move the jumper as shown in Figs 5g and 5f. 5g shows the jumper position for the home environment **(set at the factory)** and 5f for the office environment.

Temperature setback times for the home (Fig 5g)	Temperature setback times for the office (Fig 5f)
The temperature is automatically reduced by 5°C between the following times: Mon - Fri between 08:30 and 15:00 and Mon - Sun between 23:00 and 05:00	The temperature is reduced by 5°C all the time except: Mon - Fri between 05:00 and 18:00

Setting the clock

Before the temperature setback program can be used, the clock must be set. The time must be set at 17.00 on a Monday. Press and hold the button (Fig 1c) until the lamp starts to flash (after about three seconds). The time is now set, ie the clock is set to 17.00 on Monday.

Starting / stopping the program

To start the program, press the button once (Fig 1c). The LED starts to flash once a second. This confirms that the program is running. To stop the program, press the button once (Fig 1c). The LED stops flashing. The running reserve of the thermostat is four hours. This is the time for which the programming is held in the thermostat in the event of power failure. After a long power outage the LED lights up brightly. This means that the clock must be re-set again and the program re-activated.

Technical data - EB-Therm 200		EB-Therm 200 with accessories		
Voltage	230 V AC±10% 50 Hz	**Art. no.**	**Article**	**Dimensions(mm)**
Air temperature range	+5 °C to +45 °C	E 85 816 63	EB-Therm 200	81x81x40
Floor temperature range	+5 °C to +45 °C	E 85 816 68	Extension frame	81x81x18
Temperature limiter	+15 °C till +39 °C	E 85 816 71	Sensor cable 3 m[1)]*	
Load relay	250 V 12 A 2700 W	66 210 27	Front cover for Eljo Trend*	
Main switch	double-pole	66 210 30	Front cover for Eljo RS*	
Load	power factor = 0.3 max	66 210 06	IP21 gasket*	
Hysteresis	±0.5 degC	66 210 54	Frame for Eljo Trend*	
Ambient temperature	0 °C to +60 °C	66 210 56	Frame for Strömfors*	
Housing	IP21	14 408 80	Terminal*	
Colour	Polar white			
Indication		[1)] Max length of sensor cable – 50 m, 2x1.5mm^2		
230 V supply connected	Green LED	* Included in the packing		
Heating cable operating	Red LED			
Suitable for Eljo Trend, Elko RS, Strömfors and Merten frame systems				
EMC certified. Withstands a surge of 2500 V AC.				