

Installation and Operating Instructions

Uponor Comfort E Thermostat dial Set T-85 230 V



Caution !

The device may only be opened and installed according to the circuit diagram on the device or these instructions by a qualified electrician. The existing safety regulations must be observed.

Appropriate installation measures must be taken to achieve the requirements of protection class II.

This independently mountable electronic device is de-signed for controlling the temperature in dry and enclosed rooms only under normal conditions. The device confirms to EN 60730, it works according operating principle 1C.

1. Application

- Electric Floor Heating Systems
- Hot Water Floor Heating Systems

2. Operation

The controller recognizes the temperature via the external remote sensor. The controller switches on when sensor temperature is below set temperature and it switches off as soon as required room temperature (set value) will be reached and rise.

The setting range 1 ... 4 corresponds to temperature 10 ... 40°C.

The controller can be switched ON and OFF by means of the rocker switch.

Adjustable heating interrupt according standard EN 50559 (Interrupts heating after continuous heating of 1hr for 5 Minutes).

2.1 Function of the lamps

Function	Lamp red
Heating is on	on
Floor sensor fault	flashes

2.2 Fault of the floor sensor

If a sensor fault (short-circuit or break) occurs, the controller will switch to fault mode. The heating will function with max. 30% of the energy (operation for 30% of the time). This provides frost- and overheat protection.

3. Installation

a) Controller

- System to be wired free of voltage
- Pull off the adjusting knob
- Loosen the fixing screw
- Remove the cover
- Connection acc. to wiring diagram (inside cover)

b) Remote Sensor

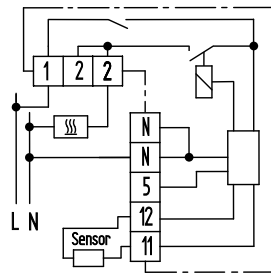
Attention:

For more easy replacement sensor cable should be put into a protection tube. The sensor cable can be lengthened up to 50 m by using a standard 2-core cable for mains voltage and with a cross section of 1,5 mm². Close parallel routing along high voltage cables or in cable ducts should be avoided or otherwise a screened cable has to be installed.

Attention:

In case of failure the sensor cable still can carry mains voltage.

4. Wiring Diagram



5. Technical Data

Controller

Article no.	T-85 230 V
Switching current	16 A (4 A cos φ = 0,6)
Operating voltage at 50 Hz	230 V AC (207 ... 253 V)
Temperature range depending on variant	1 ... 4 (=10 ... 40°C)
Switch	mains ON/OFF
Indicator lamp red	Controller calls for heat
Control algorithm	PID
Contact (Relay)	1 n/o (for „heating“)
Switching differential	approx. 1 K
Protection class of housing	IP 30
Degree of safety	II (See point "Caution")
Storage temperature	-20 ... +70 °C
Pollution degree	2
Rated impulse voltage	4 kV
Ball pressure test temperature	75 ± 2 °C
Voltage and Current for the purposes of Interference measurements	230 V, 0,1 A
Energy class	IV = 2%
(acc. EU 811/2013, 812/2013, 813/2013, 814/2013)	

Remote Sensor

Sensor identification	white
Sensing element	NTC
Sensor cable	PVC (2 x 0,5 mm ²)
Length of cable	4 m, can be extended up to 50m
Protection class	IP 68
Ambient temperature	-25 ... +70 °C

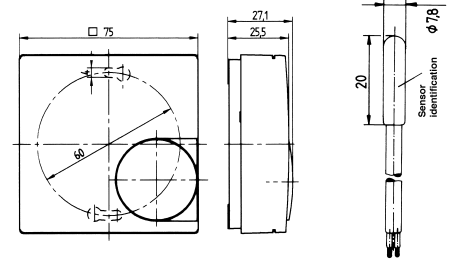
Characteristics of NTC resistor

Temperature range 10 ... 60°C

Temperature [°C]	[kΩ]
10 °C	66,8
20 °C	41,3
30 °C	26,3
40 °C	17,1
50 °C	11,3
60 °C	7,5

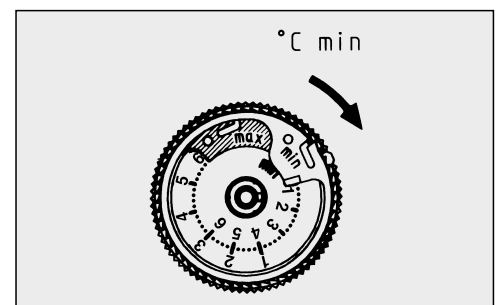
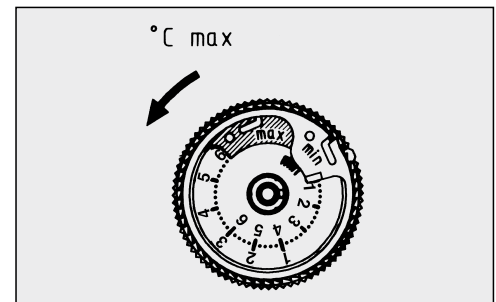
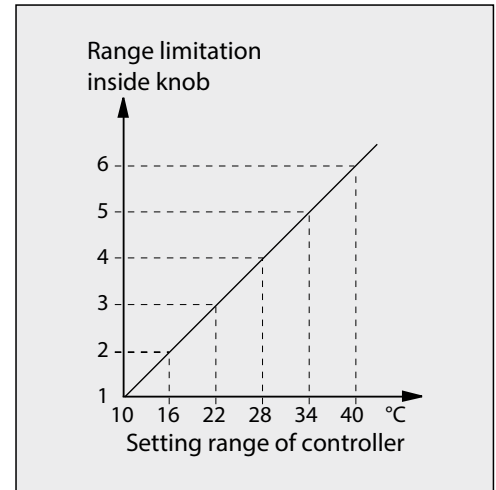
Ohmic values only can be tested on disconnected sensor cable.

6. Dimensions



7. Limiting the temperature range

Preset of controller to max. setting range at factory. Inside of adjustable knob there are 2 setting rings with a range of 1 to 6. For limiting the range, please consider following diagram.



This product should not be disposed of with household waste. Please recycle the products where facilities for electronic waste exist. Check with your local authorities for recycling advice.

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