



### 1. Short description

This electronic thermostat serves for the single stage regulation of heating.

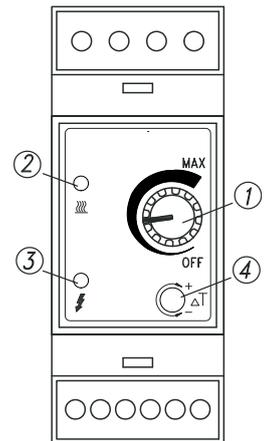
### 2. Operation and display

The required temperature can be set by the turning knob ①. If the knob is turned to the left the device is turned off.

The differential gap can be set by means of a potentiometer ④ using a flat-bladed screwdriver.

The green display (LED) ③ shows when there is a correct power supply and there are fault-free sensors. If the green LED does not light up, the power supply or the sensors could be faulty. When there is a defective sensor the relay is shut down.

The red LED ② indicates when it is heating.



### 3. Sensor connector

The temperature sensor is connected to two terminals. Because of this, polarity does not have to be taken into account. The maximum line length amounts to 100m with 1.5mm<sup>2</sup> Cu.

### 4. Installation

#### For electricians only!

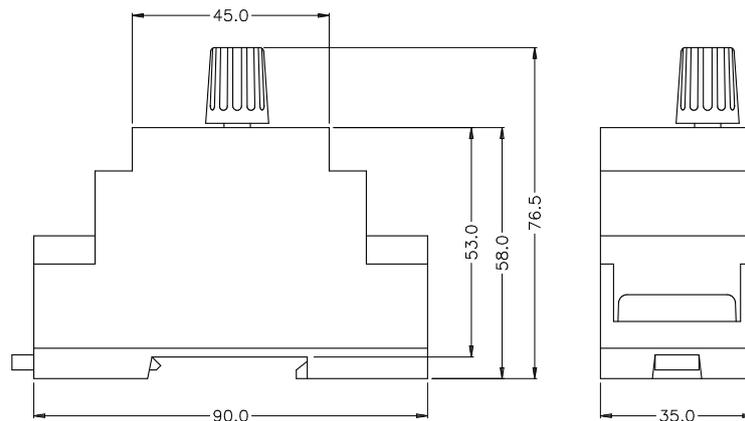
**Warning:** Mistakes made when connecting can lead to damage to the control device! We accept no liability for damages resulting from incorrect connection and/or improper use!

- The device is meant exclusively for mounting in switching units!
- Before work on the device, switch off the power!
- Connection and servicing should only be carried out by qualified personnel!
- The connection is to be carried out according to the enclosed simplified diagram.
- The device is only designed for connection to firmly fixed power lines.
- When installing the device, be aware that mains voltage lines like net supply and relay connection lines should not come into contact with low voltage lines like sensor wires (minimum gap should be 4mm between insulated wires).
- Besides this an adequate protection against perpetual loosening of all line connections that satisfies the requirements of EN 60730 part 1 is to be provided for. This can, for example, be achieved by binding the cables with tie-wraps.
- Take note of the VDE (German Engineering Association) 0100 (particularly part 705), the EN 60730, part 1, as well as the regulations of the local electricity board.
- The sensor lines should not be installed together with other power conducting lines, so that faults can be avoided.
- The device is to be fused with a max. 10 amp cut-out.
- The connecting lines must be laid in such a way that they cannot be reached by animals.
- The connecting wires must be protected in the floorscreed (empty pipe).
- Current carrying wires (L and N) must not be looped from device to device but have to be separately connected in each case from a busbar.
- If the device should not function, please check first the terminals and the power supply.

## 5. Technical Data

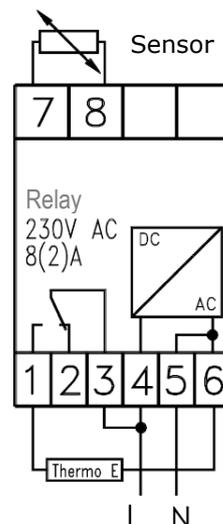
|  |   |
|--|---|
| <b>Type</b>                            | <b>TR - A</b>   |
| Temperature range .....                | +20 ... +50°C   |
| Differential gap.....                  | ±0.25 ... ±2.5K   |
| Sensor .....                           | PTC 2k, polarity does not have to be taken into account                     |
| Operational voltage.....               | 230V AC (±10%)  |
| Power consumption.....                 | approx. 2.5VA   |
| Type of contact.....                   | two-way (Relay contact, potential free)                                     |
| max. allowable switching current ..... | 8(2)A, 250V AC<br>with an ambient temperature of max.+40°C: 10(3)A, 250V AC |
| Electrical lifespan.....               | 0,5 x 10 <sup>5</sup> switching operations                                  |
| Electrical connections .....           | Screw connections   |
| allowable ambient temperature.....     | -10 ... +50°C   |
| storage temperatur .....               | -10 ... +70°C   |
| Housing: Material .....                | Plastic   |
| Type of protection .....               | IP 20   |
| Protection class .....                 | As DIN EN 60730-1<br>(with in-built switching box)                          |
| Width .....                            | 2x machine width (35mm)   |
| Fastening.....                         | on DIN-rail   |
| Weight .....                           | approx. 150 g   |

## 6. Measurements



## 7. Connection diagram

Connections for maximum:  
 20 Thermo E 400x600  
 7 Thermo E 400x1200  
 7 Thermo E 500x1200  
 7 Thermo E 600x1200



Subject to alteration.

