

## ROOM TEMPERATURE TRANSMITTER / CONTROLLER TEHR LL

TEHR LL 2-wire temperature transmitter is designed for automatic HVAC systems to measure room temperatures. Temperature is measured by a Pt1000 element. The sensor element resistance information is converted to a 4...20 mA signal. The transmitter temperature range can be changed during the commissioning.

TEHR LL-N transmitter is equipped with a 3.5-digit liquid crystal display. The display resolution is 0.1 °C. TEHR LL settings can be changed by using the ML-SER tool. One point field calibration of the transmitter can be executed and the temperature output can be changed to the controller function.

The transmitter can be equipped with passive potentiometer. The passive potentiometer has a  $\pm 3$  °C scale. The passive potentiometer knob movement can be limited with the limiting pins.

There are also available 5-state switch options, K5 and K5R. The K5 is a static 5-stage switch for a fan control. The K5R is a 5-stage switch with resistance output. The resistance output signal can be easily read by NTC10k input in automatic HVAC system. See more information about the options from TEHR order form.

### Wiring:

1 +(-) temperature signal 4...20 mA

2 - (+) temperature signal 4...20 mA

NOTE: The electrical wiring is polarity free.

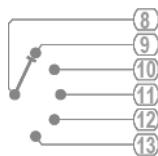
TEHR-P, passive potentiometer

5 potentiometer +  
6 potentiometer slide  
7 potentiometer -



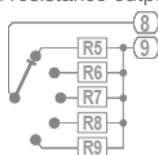
TEHR-K5, 5-state switch (30 V / 0.1 A)

8 selector switch  
9 switch position A  
10 switch position 0  
11 switch position 1  
12 switch position 2  
13 switch position 3



TEHR-K5R, 5-state switch with resistance output

8 selector switch  
9 K5R output



### Technical data:

|                        |                                                                         |
|------------------------|-------------------------------------------------------------------------|
| sensor                 | Pt1000 EN 60751/B                                                       |
| measuring ranges       | selectable                                                              |
| supply                 | 15...35 Vdc                                                             |
| output                 | 4...20 mA (temperature / controller)                                    |
| accuracy               | $\pm 0.5$ °C at 25 °C                                                   |
| potentiometer          | 470 $\Omega$ , 1 k $\Omega$ , 4k7, 10 k $\Omega$ , 22 k $\Omega$        |
| ambient temperature    | 0...+50 °C                                                              |
| housing                | ABS plastic, IP20                                                       |
| dimensions (w x h x d) | 86 x 85 x 32 mm                                                         |
| mounting               | on the wall or on the standard flush mounting box (60 mm hole distance) |
| transmitter type       | 2-wire                                                                  |

### Range selection:

| * 0...+50 °C | 0...+100 °C | -50...+50 °C | -50...+150 °C |
|--------------|-------------|--------------|---------------|
| S1 S2        | S1 S2       | S1 S2        | S1 S2         |
|              |             |              |               |

\* = Factory setting

### Output signal:

| 0...+50 | 0...+100 | -50...+50 | -50...+150 | Signal |
|---------|----------|-----------|------------|--------|
| 0 °C    | 0 °C     | -50 °C    | -50 °C     | 4 mA   |
| 25 °C   | 50 °C    | 0 °C      | 50 °C      | 12 mA  |
| 50 °C   | 100 °C   | 50 °C     | 150 °C     | 20 mA  |

### Ordering guide:

| Model     | Product number | Description                                   |
|-----------|----------------|-----------------------------------------------|
| TEHR LL   | 1177190        | temperature transmitter                       |
| TEHR LL-N | 1177191        | temperature transmitter with display          |
| TEHR-P    | 1170120        | option, passive potentiometer                 |
| TEHR-K5   | 1170240        | option, 5-state switch                        |
| TEHR-K5R  | 1170241        | option, 5-state switch with resistance output |
| TEHR-N V2 | 1170260        | option, display module+ cover                 |
| ML-SER    | 1139010        | transmitter commissioning tool                |

Products fulfill the requirements of directive 2004/108/EC and are in accordance with the standards EN61000-6-3: 2001 (Emission) and EN61000-6-2: 2001 (Immunity).