

# TR02

## Temperature Transmitter for Ambient Air

- resistance thermometer and temperature transmitter
- Pt1000 Measuring element
- for ambient air monitoring
- special version on request
- temperature range  $-20...+150\text{ }^{\circ}\text{C}$



### Description:

The devices of the model type series TR02 are calibrationable outside temperature measuring transducer with 8 switchable measurement ranges. The devices have either internal or external sensors. The output signal is either a 4...20 mA current or a 0...10 V voltage signal.

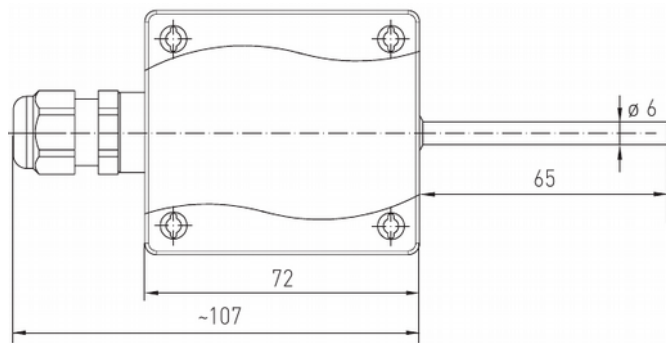
The entire electronic is placed inside a housing made of impact resistant plastic. The quick release fastener screws allow a quick and uncomplicated mounting. The devices can be delivered with or without a display.

### Typical application:

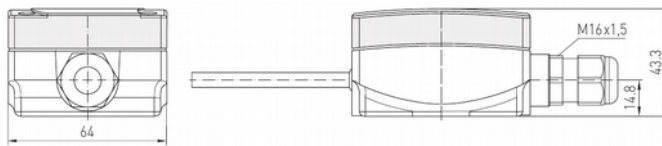
The devices of the model type series TR02 are used to measure the ambient temperature, the temperature in moist room areas, e.g. on external walls, in cooling or greenhouses, in industry areas and in agriculture. In the outdoor area the mounting is preferably done on the north side or a sheltered location.

In direct sunlight a sunscreen has to be used. The outdoor sensor are factory adjusted. A fine calibration by the user is possible through zero and offset adjustment.

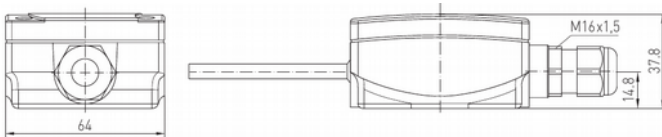
## Models:



### With LCD display:



### Transmitter without display:



## Technical Data:

<b>Power supply:</b>	24 V AC/DC $\pm 10\%$ for 0...10 V 15...36 VDC for 4...20 mA
<b>Power input:</b>	< 1,0 VA at 24 VDC < 2,2 VA at 24 VAC
<b>Output:</b>	0...10 V, 3 wire, $\geq 5$ k $\Omega$ load 4...20 mA, 2 wire load [ $\Omega$ ] = $(U_b - 14 V) / 0,02 A$
<b>Accuracy:</b>	$\pm 0,4 K$ at 25 °C, other $\pm 0,8 K$
<b>Measuring element:</b>	Pt1000, DIN EN 60751, class B
<b>Cable threaded connection:</b>	M16 x 1,5 with tension relief
<b>Electrical connection:</b>	0,14 – 1,5 mm <sup>2</sup> screw terminals
<b>Housing material:</b>	polyamide, 30% glass ball reinforced with quick release fastener screws
<b>Protection class:</b>	IP65 (EN 60529), III (EN 60730)
<b>Permissible humidity:</b>	< 95 % rH non condensing
<b>Ambient temperature:</b>	-50...+80°C transmitter only -30...+70°C with LCD display
<b>Measuring range:</b>	-50...+150°C

## Model Code:

Order number: TR02. I. -020+150. 0. 0

Temperature Transmitter  
for ambient air

### Output signal:

U = 0...10 V  
I = 4...20 mA

### Measuring range

(see table standard-measuring ranges):

-020+150 up to +000+150  
or special measuring range on request

### Models:

0 = measuring transmitter without on site display  
1 = measuring transmitter with LCD display

### Options:

0 = without  
9 = please specify in plain text

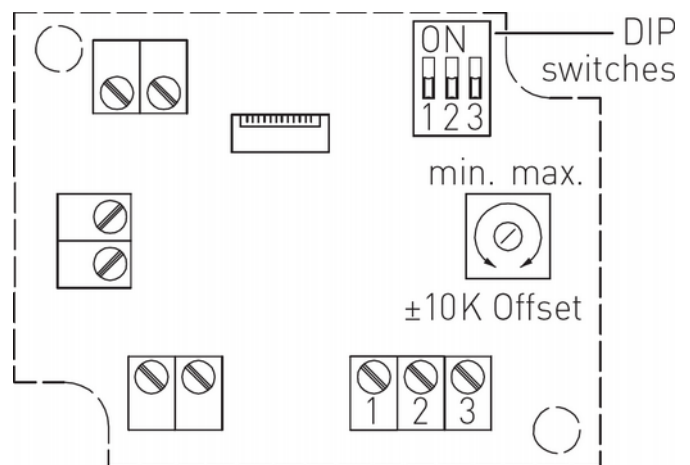
## Standard-measuring range:

via DIP-switch configurable:

Measuring range [°C]	Measuring range code	DIP 1	DIP 2	DIP 3
-20...+150	-020+150	ON	ON	ON
-50... +50	-050+050	off	ON	ON
-20... +80	-020+080	ON	off	ON
-30... +60	-030+060	off	off	ON
0... +40	+000+040	ON	ON	off
0... +50	+000+050	off	ON	off
0...+100	+000+100	ON	off	off
0 +150	+000+150	off	off	off

Special measuring range on request

## Electrical connection:



1 = +Ub 24 VDC    2 = output    3 = GND