



# TS-02

## Temperature Switch



## Features

/ High switching capacity

/ Plug connection

/ Optionally as Ex version

/ With a separate protection tube

## Description:

The TS-02 series of rod thermostats has a fluid-filled copper chamber system which is inserted into a brass or stainless steel protection tube by means of a sideways-mounted locking screw. When this rod is subjected to a media temperature to be monitored, the fluid becomes warm and, subsequently, begins to vaporize with increasing temperature. A pressure switch permanently fixed to the capillary system detects the resulting vapour pressure and connects to a potential-free change-over contact which can be loaded up to 8 A at 250 V AC. The setpoint of the TS-02 can be set externally within the operating range of the particular version by means of a screw-driver and read on a scale.

## Application:

The TS-02 rod thermostat is used wherever the temperature of a solid, fluid or gaseous medium in containers, silos, conduits or pipes needs to be reliably monitored. In this, it meets the highest requirements of pressure and sealing tightness as well as robustness and life span. The brass or stainless steel protection tubes used for insertion can withstand pressures up to 63 bar (brass 25 bar). They are compatible with a large number of media as well. Also the micro-switch used here fits into the entire concept of the TS-02. With a switching capacity of 2.0 kW, it is capable of directly controlling even smaller and medium drives. In this way, for example, maximum temperature monitoring can be implemented to directly cutoff a pump or a compressor by deploying a single cost-effective device.



## Technical Specifications:

<b>Temperature /</b>	see table
<b>max. Media-temp. /</b>	see table
<b>max. Ambient temp. /</b>	-15...+70°C, in hazardous areas +60°C
<b>max. Pressure /</b>	The maximum permissible pressure for a brass protection tube is 25 bar, for a stainless steel protection tube 63 bar.
<b>Mounting position /</b>	vertical or horizontal, preferably vertical
<b>Housing material /</b>	aluminium pressure casting GD AL Si 12 as per DIN1725
<b>Adjustment /</b>	The scale value corresponds to the lower setpoint (for decreasing temperature), the upper setpoint is higher by the hysteresis.
<b>Setpoint /</b>	Can be set externally by means of an screw-driver on the setting spindle.
<b>Vibration /</b>	Up to 4g no significant deviations. In higher acceleration, the hysteresis decreases slightly. Usage above 25g not permissible.
<b>Insulation parameters /</b>	Excess voltage category III, degree of pollution 3, rated surge voltage 4000 V. Compliance to DIN VDE 0110 (01.89) is confirmed.
<b>Options /</b>	Gold contacts, ATEX version Zone 1 and Zone 21 (0 and 20 available on request), setpoint can be set at factory.

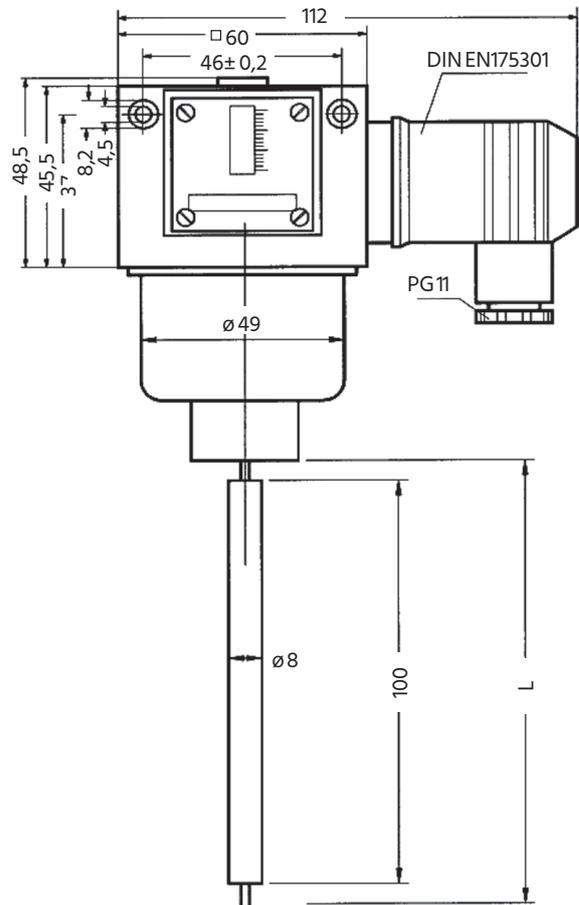
## Electrical Specifications:

<b>Electrical connection /</b>	Plug connection as per DIN EN175301 with cable insertion of PG11.
<b>Protection cl. /</b>	IP54 in vertical mounting position
<b>Switching load /</b>	250VAC 8A (ohmic), 5A (inductive) 250VDC 0.3A, 24VDC 8A min. 12VDC 10mA
<b>Contacts /</b>	change-over (SPDT)

## Operating range:

Type	Range	Hysteresis	max. Temp.
TS-02.x.x.x.A	-20...+30 °C	1,5 K	+110 °C
TS-02.x.x.x.B	+10...+50 °C	1,5 K	+110 °C
TS-02.x.x.x.C	+40...+90 °C	2,5 K	+125 °C

## Dimensions in mm:



## Ordering Codes:

<b>Order number</b>	TS-02.	1.	2.	1.	A
<b>TS-02 Temperature Switch</b>					
<b>Protection tube material /</b>					
1 = Ni-plated brass					
2 = stainless steel 1.4571 and 1.4401					
<b>Process connection /</b>					
1 = G 1/2"-male					
2 = 1/2"-NPT-male					
<b>Insertion length /</b>					
1 = 135 mm					
2 = 220 mm					
<b>Operating range in °C /</b>					
A = -20...+30°C					
B = +10...+50°C					
C = +40...+90°C					