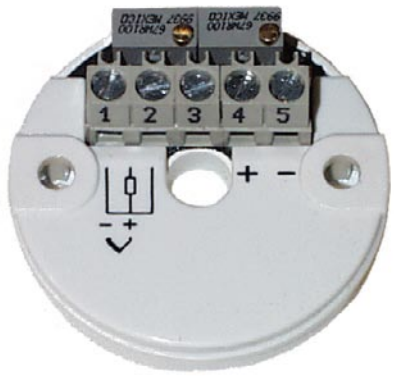
Transmitter for temperature, head mounting for Pt 100, selectable measuring ranges, Type series PA2240



Features

- Suitable for mounting in connection heads per DIN 43729
- Connection Pt 100, 3-wire circuitry
- Measuring range selectable via solder pads
- Output signal: 4...20 mA, 2-wire circuitry, temperature linear
- Adjustable Pt 100 sensor break alarm
- Power supply: 6.5...32 V DC
- Large ambient temperature range
- Compact low profile for easy installations

Application

The transmitter for Pt 100 converts a temperature dependent change of resistance into a standard load-independent current signal of the type commonly used in process control systems. It is designed for mounting in the connection head model B, DIN 43729. Measuring ranges are adjusted easily with solder pads.

Techn. Data

Mechanical design
housing material zinc alloy and ABS/VO
protection:
housing with cover IP 20
terminals IP 10

Mounting
screw holes for in-head mounting according to DIN B-head or larger

Connections
terminal screws for wire or flexible lead ≤ 2.5 mm²

Housing temperature
operation: -40...+85 °C
storage: -40...+100 °C

Auxiliary energy supply
connection polarity safe
function range: 6.5...32 V DC
residual ripple 4 V_{SS} at 50/60 Hz

EMC
noise immunity as per EN 50082, section 2
emitted interference as per EN 50081, section 2

Influence of the supply voltage on the output signal
± 0.02 % of span/V
supply ripple influence, 50/60 Hz, 4 V_{SS}:
± 0.05 % of span

Signal input
Pt 100, 3-wire circuitry. 2-wire connection possible with wire jumper.
The wire jumper has to be connected during installation.
Sensor feed I approx. 1.1 mA
max. sensor wire resistance: 15 Ohm/wire
terminal assignment as per connection diagram

Measuring ranges
adjustable according to table "Zero point configuration"
Zero point between -50...+50 °C

Measuring spans
see page 3, ± 10 % changeable

Output signal
temperature linear 4...20 mA

Break alarm
if the Pt 100 sensor is fractured, the output signal optionally takes values approx. 25 mA or approx. 3 mA

Current limitation in output signal
max. output current approx. 25 mA

Load
for U = 24 V DC, 25 mA
R = 700 Ohm

Load diagram
see page 2

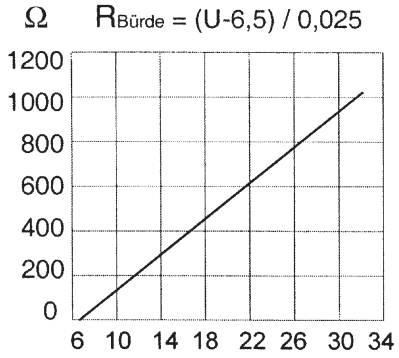
Linearity error
± 0.1 % of span

Temperature influence
± 0.6 % of span/25 °C

Adjusting range
zero point: between -50...+50 °C
measuring span: ± 10 % f.s.

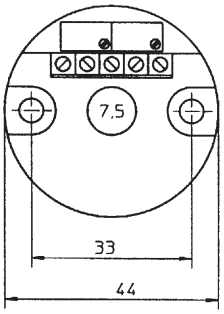
Weight
approx. 40 g

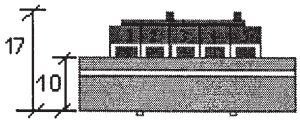
Load diagram



supply voltage VDC

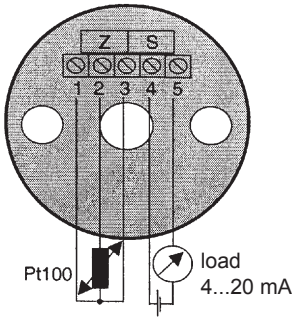
Dimensions





dimensions in mm

Connections



supply voltage

Note: Connect a wire jumper from terminal 1 to 3 for a 2-wire connection. The line resistance of the sensor will thus be included as a measuring error in the measurement.

Order Details

- please give additional specifications for models not listed -

Transmitter for temperature		**PA2240**		
meas. range	without configuration		**F11001**	
meas. range adjusted at factory	-50...50 °C		**F12160**	
	-10...40 °C		**F12345**	
	0...50 °C		**F12420**	
	0...100 °C		**F12426**	
	0...150 °C		**F12430**	
	0...200 °C		**F12434**	
	0...300 °C		**F12438**	
	0...400 °C		**F12440**	
	0...500 °C		**F12441**	
	per customer choice		**F12999**	
break alarm	without configuration			**K1**
	· signal approx. 25 mA, standard [1]			**K2**
	· signal approx. 3 mA [1]			**K3**
Order code (example):		**PA2240**	**F12426**	**K2**

[1] configured only when measuring range is adjusted at factory, otherwise not configured

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