The temperature sensor with current output and display are designed to remote temperature measuring of liquids, steam, air, and of other media in the control and regulation systems for standardised signals 4 to 20 mA processing. The sensor head is made of a plastics material, all metallic parts are of class DIN 1.4301 stainless steel. The resistance sensor is encapsulated in a stem tube; the leading-in elements of the sensor is comprised of wires, the other ends of which are connected to the converter temperature – current, which is positioned in the sensor head. The converter is not provided with a galvanic separation. The signal there of has a linear dependence on temperature. In the head is located the display type LCD too. The operation conditions are met by conventional, chemically non/aggressive environment, in which neither attendance nor maintenance is required by the sensors.

TECHNICAL DESCRIPTION, EXECUTION

PD11I (X) T1/T2 - sensors are designed for temperature measuring of outdoor air. They are provided with a plastics console for attaching to a wall; the actual sensing element is positioned in a stainless steel stem of 25 mm length; the terminal board for connecting is positioned in a plastics head

PD12I-L1(X) T1/T2 - sensor execution for mounting into ducts. With the exception of the console, the execution is identical with P11x; L1 denotes the stem length specified in millimeters, for example P12I/120 is a conventional sensor with stem length of 120 mm

PD13I-L2 (X) T1/T2 - the sensors are designed for measuring operations in pipelines. As an accessory, a part of the sensor is a stainless steel well fitted with a thread G 1/2: of length L2 mm, which was tested for pressure of 4,0 MPa.

PD14I T1/T2 - Strap-Mount sensors.

PD16I/L3 T1/T2 - quick-response type of sensors: stem length L3 = 100 or 160 mm.

X = R (displey set parallel to stem)
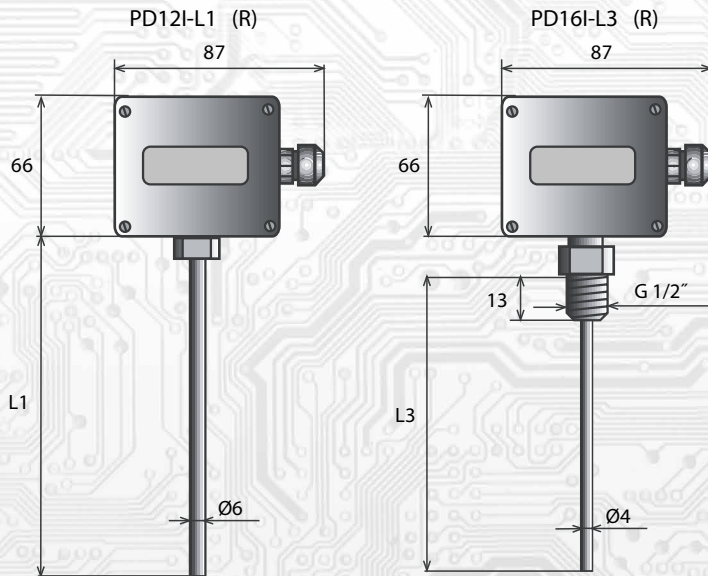X = K (displey set sheer to stem)

BASIC TECHNICAL PARAMETERS

Power supply	18 to 40V DC
Output signal Iz	4 to 20 mA
Sensitivity Rs	0,1 or 1°C
Measurement error	< 0,6%
Load resistance	$Rz < (Ucc-11) \times 50 \, [\Omega]$
Sensing element break	Iz > 24 mA
Sensing element short	Iz < 3 mA
Ambient temperature	0 to 60°C
Relative humidity	< 80%
Degree of protection	IP 54
Recommendet diametr of connecting cable	0,35 to 2mm²

Measuring ranges: 0 to 35°C   Rs = 0,1
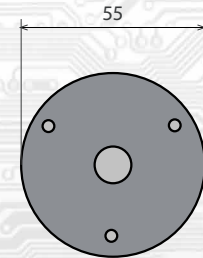0 to 100°C   Rs = 0,1
0 to 150°C   Rs = 0,1
0 to 250°C   Rs = 1

Standard lengths L1 and L2

L1 (mm)	L2 (mm)
120	100
180	160
240	220
300	280
360	340
420	400

Dimensions and accessories

PD12I-L1 (R)

87

66

L1

Ø6

PD16I-L3 (R)

87

66

L3

13

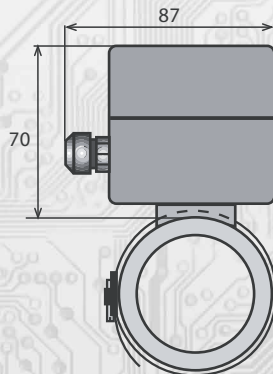G 1/2″

Ø4

Central holder A – for PD12I

55

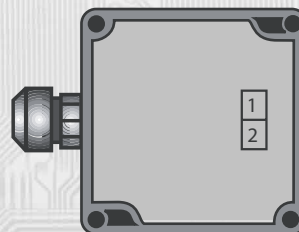3 holes Ø 4,5 mm

Side holder A – for PD11I
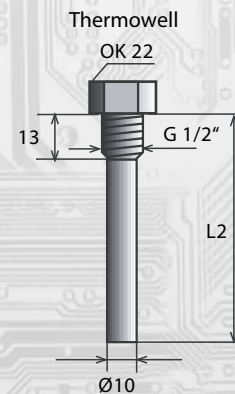
39

2 holes Ø 4,5 mm

Strap Mount with a head - PD14I

87

70

min. ø15 mm
max. ø100 mm

Wiring diagram PD1xI

1
2

1,2 : current loop , arbitrary polarity

Thermowell
OK 22

13

G 1/2″

L2

Ø10

Mounting the sensors

Sensors for outdoor air, into the ducts, and into pipelines

Screw out the small screws and remove the head cover, then connect the lead-in cable of the recommended cross section from 0,35 to 2 mm^2 and of outer diameter 4 to 8 mm to the terminal board through the bushing. Once the cover is replaced onto the head and the small screws screwed in, the mounting is terminated and the sensor is ready for operation.

Strap-Mount sensors

Fasten the sensor on to the pipeline, using a tape, and having removed the cover, connect the lead-in cable of recommended cross section from 0,35 to 2 mm^2 and of outer diameter 4 to 8 mm to the terminal board through the bushing. Replace the cover onto the head and screw in the small screws, where upon the mounting is terminated and the sensor is ready for operation.