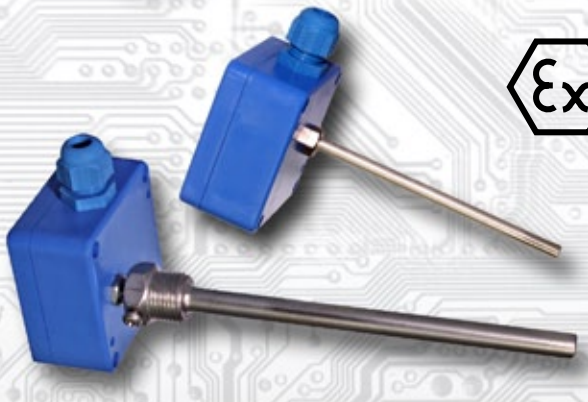
Resistance temperature transducers - Series P...



The resistance temperature transducers are designed for general-purpose application in control and regulation systems for the measuring, registration, and signaling of temperature. Temperature sensors are located in the stem. The transducer head is made of a plastics material, all metallic parts are made of class DIN 1.4301 stainless steel. The operation conditions are met by conventional, chemically non-aggressive environment, where neither attendance nor maintenance is required by the transducers. The transducers can be used in environments endangered by explosion – zone2. They are approved according to the ČSN EN 50 021 standard and identified by the II 3G EEx nA II T5 code.

Summary

Transducers									
Wall Mount (interior)	P10L	P10S	P10J	P10H	P10P	P10PA	P10PB	P10LA	P10SA
Outdoor air	P11L	P11S	P11J	P11H	P11P	P11PA	P11PB	P11LA	P11SA
Duct Probe	P12L	P12S	P12J	P12H	P12P	P12PA	P12PB	P12LA	P12SA
Well insertion probe	P13L	P13S	P13J	P13H	P13P	P13PA	P13PB	P13LA	P13SA
Strap- Mount with a head	P14L	P14S	P14J	P14H	P14P	P14PA	P14PB	P14LA	P14SA
Strap- Mount with a cable	P15L	P15S	P15J	P15H	P15P	P15PA	P15PB	P15LA	P15SA
Quick - acting	P16L	P16S	P16J	P16H	P16P	P16PA	P16PB	P16LA	P16SA
Sensing element	Ni1000	Ni1000	Ni891	NTC 20 kΩ	Pt100	Pt1000	Pt500	Ni10000	Ni10000
Temperature coefficient (ppm/°C)	Tk = 5000	Tk = 6180	Tk = 6371		Tk = 3850	Tk = 3850	Tk = 3850	Tk = 5000	Tk = 6180

Basic technical parameters

Measuring range	P10x, P11x	-30 to 80°C	Current load	$I_{max.}$
	P13x150, P16x	-30 to 150°C [1]	P1xL,P1xS,P1xJ,P1xH,P1xN	0,5 mA
	P12x, P13x250 (200)	-30 to 250°C (200°C) [1]	P1xSA,P1xPA	0,5 mA
Accuracy		Class B	P1xPB	1 mA
Head surroundings temperature		-30 to 80°C	P1xP	2 mA
Relative humidity		< 80 %	Terminal board type	COB5/2 /alt. WAGO/
Degree of protection		IP 65 [2]	Leading-in wires recommended diameter	cross section from 0,35 to 2 mm²
Response velocity τ_{63} for P16x		< 8 s	Maximum pressure for P16x	2 MPa

1) Well insertion probe are delivered in two temperature executions. The first category is comprised of transducers for measuring temperatures up to 150 °C,while the second category comprises the transducers for maximum temperature up to 250 °C.The maximum temperature measured is a part of the transducer name. The transducers for the temperature range up to 250 °C are delivered with a stem, which is lengthened by 60 mm. For both categories it holds, that the maximum permissible temperature adjacent the transducer head is 80 °C.

2) Wall Mount (interior) transducers are provided with the degree of protection IP 30.

Technical description, execution

P10x - transducer for temperature measuring in interior applications.

P11x - transducer is designed for temperature measuring of outdoor air. It is fitted with a plastics console for fastening on a wall. The actual sensing element is built-in in a stainless steel stem of 25 mm length. The terminal board for the connecting is placed in a plastics head.

P12x-L1 - transducer execution with a console for mounting into duct. With the exception of the console, the execution is identical with P11x; L1 specifies the stem length given in milimeters, such as P12x-120 is a conventional transducer with stem length of 120 mm.

P13x150-L2, P13x250-L2 - transducer is designed for measuring applications in pipelines. As an accessory, a part of the transducer is a stainless steel well, provided with a thread G 1/2" of length L2 mm, which was tested for the pressure of 4,0 MPa.

P14x, P15x - Strap - Mount transducers; P14x / execution provided with a head; P15x – execution provided with a cable outlet.

P16x-L3 - quick-response transducers; stem length L3 = 100 or 160 mm.

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Standard lengths L1 and L2

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

Method of ordering
State the quantity of pieces and the transducer type in your order.
An order example: **5 pieces transducer P13P150-100**

Transducer type
Temperature range
Well length

Mounting the transducers

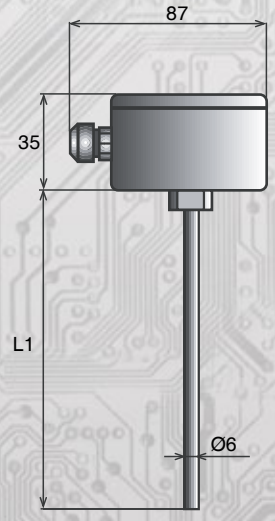
Transducers for outdoor air, into the ducts, and into pipelines
Screw out the small screws and remove the head cover. Then, connect the lead-in cable of the recommended cross section from 0,35 to 2 mm^2 and of the outer diameter 4 to 8 mm to the terminal board through the bushing. Once the small screws are screwed in and the cover is placed back into its position, the mounting is terminated and the transducer is ready for operating.

Wall Mount transducers (for interior application)
Hinge the perforated cover open and pass the lead-in cable through the hole a the base, connecting the individual leading-in wires to the terminal board thereafter. Fasten the base onto the wall using two wood screws, which should be inserted into holes in opposite corners of the base. Snap the cover with a click into the base, whereupon the transducer is ready for operation.

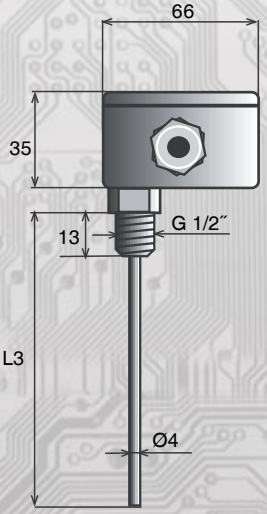
Strap-Mount transducers
Fix the transducer using a tape onto the pipeline, then remove the cover (in case of type P14x transducers) and connect the lead-in cable of the recommended cross section from 0,35 to 2 mm^2 and of external diameter 4 to 8 mm to the terminal board through the bushing. Once the cover is inserted back and the small screws screwed in, the mounting is terminated and the transducer is ready for operating.
The transducers fitted with the cable outlet (P15x) are delivered with a standard cable length of 2 m.

Dimensions and accessories

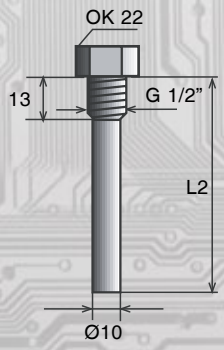
P12x



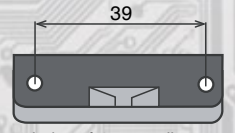
P16x



Thermowell

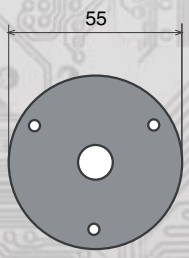


Side holder A – for P11x



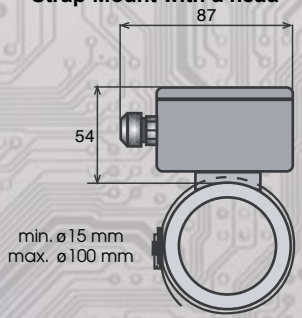
2 holes of 4,5 mm diameter

Central holder A – for P12x

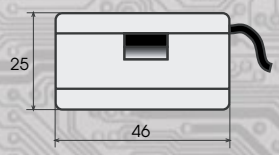


3 holes of 4,5 mm diameter

Strap-Mount with a head - P14x

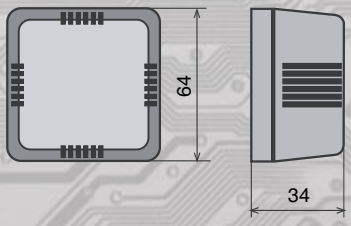


Strap-Mount with a cable – P15x



Maximum temperature or the surface measured tp< 120 °C

Wall Mount - P10x



Remark:
1) Subject of an order, also non/standard transducer lengths or other well thread types may be delivered, such as M20x1,5.
2) Subject to customer wish, detailed temperature characteristics in the form of an equation or a table of values are supplied by the manufacturer.

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