

THERMOCOUPLE

Type XI-TT..SW(T/G), XI-APTT..SW(T/G)

The sensor consists of an exchangeable measuring insert, drilled thermowell, neck and aluminum connection head where mounting a temperature transmitter with 4-20 mA/HART® output signal is possible.

The measuring insert represents the replaceable element of the complete sensor which reduces time and costs of maintenance of the measuring apparatus installed in the object. Spring fixation of the measuring insert provides perfect pressure to the bottom of the protecting tube, reduces time of reaction to changes of temperature and increases accuracy of measurement as well as reduces natural vibration thus mechanical and electrical defects can be avoided.

TECHNICAL DATA

Description

- intrinsically safe for mines MI, gas G and dust D atmospheres
- single and double TC
- exchangeable mineral insulated measuring insert
- connection head types: XE-DANA (G1); XE-DANAW (G2); XE-DAND (G5); XE-DANDW (G6); XE-BE (E1); XE-BED (E2); IP65; ATEX II 2 GD (see technical information)
- solid bored thermowell with flange or thread*
- cable gland ATEX I MI, II GD, IP65; (cable dia. 5.10mm)*
- output signal: TC or 4-20mA (option)

Design temperature range

-40 .. +800°C (K)	for NiCr-NiAl (K)	K
-40 .. +700°C (J)	for Fe-CuNi (J)	J

Sensing element

1x or 2xNiCr-NiAl (K)	acc. to EN 60584-2 class 1, 2
1x or 2xFe-CuNi (J)	acc. to EN 60584-2 class 1, 2

Thermowell type „SW”

Material	stainless steel 1.4541*
Flange DN20, DN25 with raised face acc. to	PN-ISO 7005-1 – Type SWT
Process thread	Type SWG

Temperature transmitter (option)

PR5334B3B, PR5335D (HART®)
FlexTop2212, FlexTop2222 (HART®)

Remarks

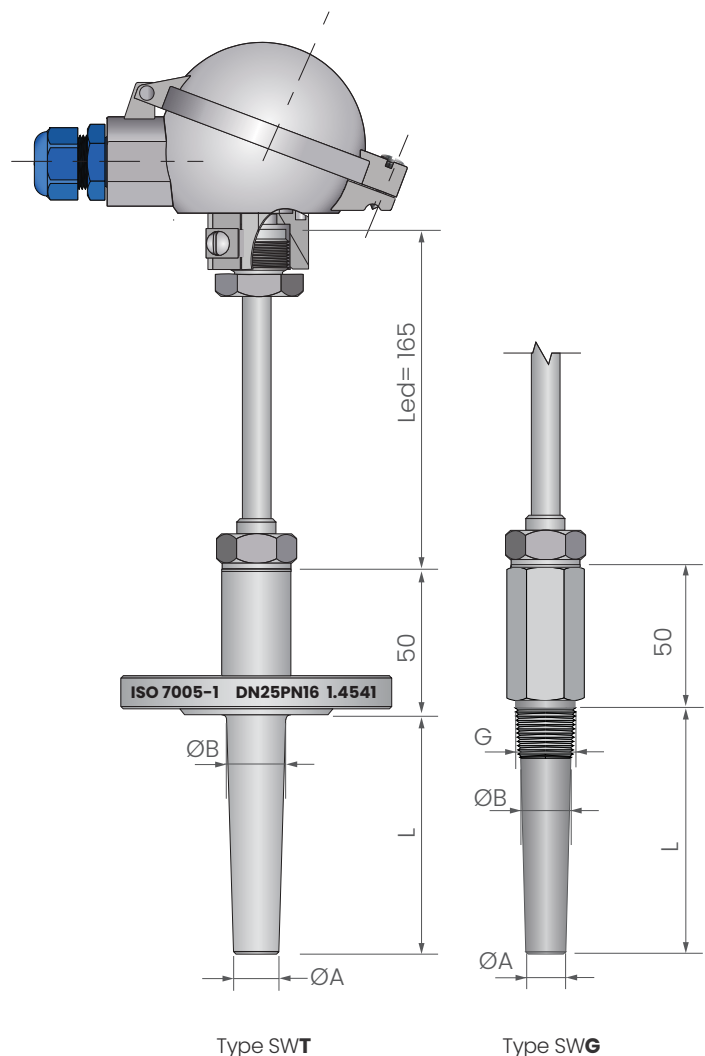
*other parameters on request

ATEX Marking:

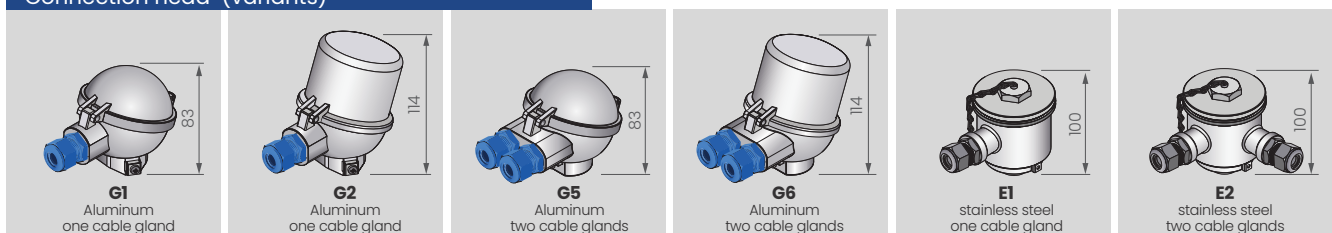
- CE I MI Ex ia I Ma
- CE II 1/2 G Ex ia II C T... Ga/Gb
- CE II 1/2 D Ex ia IIIC T... Da/Db

EAC Ex Marking:

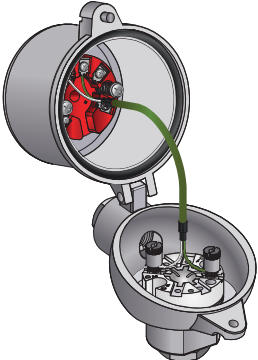
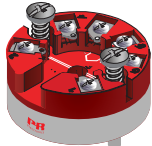

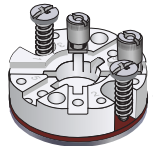
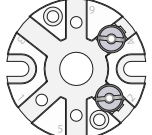

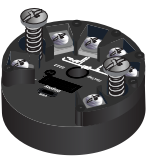
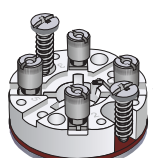
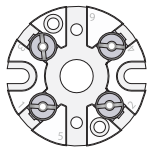
- PO Ex ia I Ma X
- OEx ia IIIC T...Ga X
- OEx ia IIIC T...Da X



Connection head (variants)



Temperature transmitter can be mounted inside a connection head of the sensor. There are two mounting options: directly on the measuring insert or in a high cap of the head. Advantage of the second solution is an easy replacement of the standard insert with a terminal block without need to dismantle the transmitter, which significantly reduces a time and cost of servicing the sensor and protects the connecting wires from damage. At the customer's request, it is possible to mount two transmitters. Temperature transmitter should be protected from temperatures over +85°C.

Temperature transmitters		Ceramic blocks		
 <p>Example of installed transmitter in high cap of connection head</p>	 <p>PR5334B3B</p>	 <p>PR 5335D</p>	 <p>2-terminal</p>	 <p>2-terminal / top view</p>
	 <p>FlexTop2212</p>	 <p>FlexTop2222</p>	 <p>4-terminal</p>	 <p>4-terminal / top view</p>

ORDERING CODE

Temperature sensor		XI -	1	2	TT	3	4	5	6	7	8	9	10	11	12	13	
without transmitter:	without mark																
with transmitter:	AP																
with two transmitters:	2AP																
single:	without mark																
double:	2																
thermocouple Fe-CuNi	J																
thermocouple NiCr-NiAl	K																
Thermowell:	SWT SWG																
connection head type:	G1, G2, G 5, G6, E1, E2																
length L [mm]:	see specification																
thermowell flange type :	type T																
thread type :	type G																
material:	1.4541 or other*																
TC Class	class 1 class 2																
connection line	2, 3, 4 wire for 1xPt100; 2, 3wire for 2xPt100																
measuring range for transmitter output 4-20 mA	(...)°C																
transmitter type	see specification																
diameter of supply cable (for cable other than)	5...10mm (...)																

EXAMPLE

Temperature sensor XI-TTKSWT-G1-400-DN20-1.4541-1

3 4 5 6 7 8 9

Temperature sensor XI-APTTKSWG-G2-250-1/2"NPT-1.4541-1-(0-400)°C-PR5334B3B

1 3 4 5 6 7 8 9 10 11