

THERMOCOUPLE

Type XI-TT..WS, XI-APTT..WS

The sensor consists of an exchangeable measuring insert, neck with threaded connection to external thermowell 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 M1, 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)
- installation in additional thermowell
- cable gland ATEX I M1, 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

Measuring insert

Material	stainless steel 1.4401 (316)*
Diameter D [mm]	Ø3, Ø4.5, Ø6, Ø8 or other*
Length L [mm]	Custom*

Temperature transmitter (option)

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

Remarks

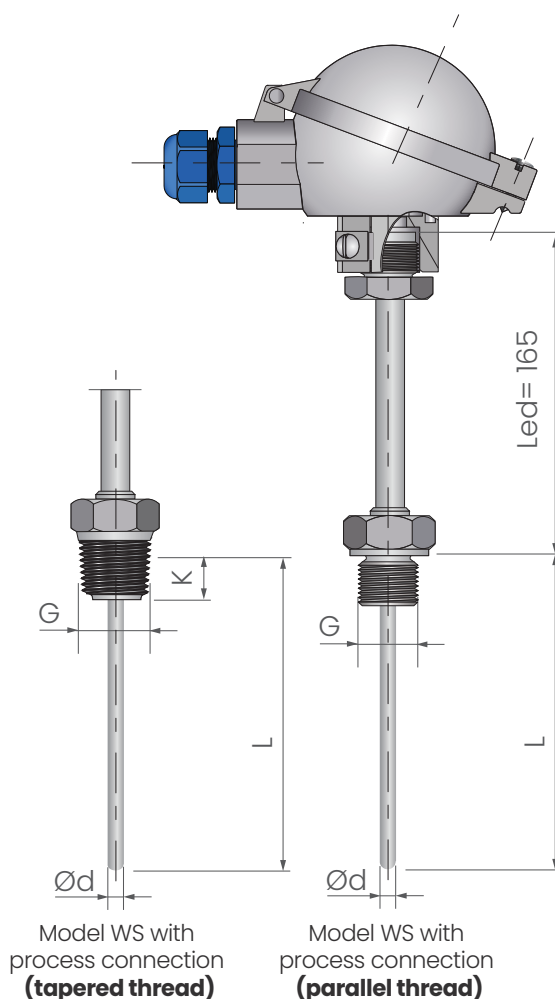
* other parameters on request

ATEX Marking:

CE I M1 Ex ia I Ma
CE II 1/2 G Ex ia II C T... Ga/Gb
CE II 1/2 D Ex ia II C T... Da/Db

EAC Ex Marking:

PO Ex ia I Ma X
0Ex ia IIC T...Ga X
0Ex ia IIC T...Da X

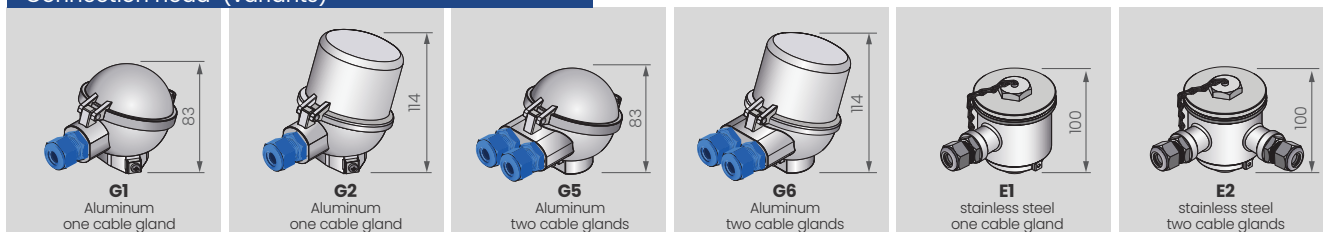


Model WS with process connection (tapered thread)

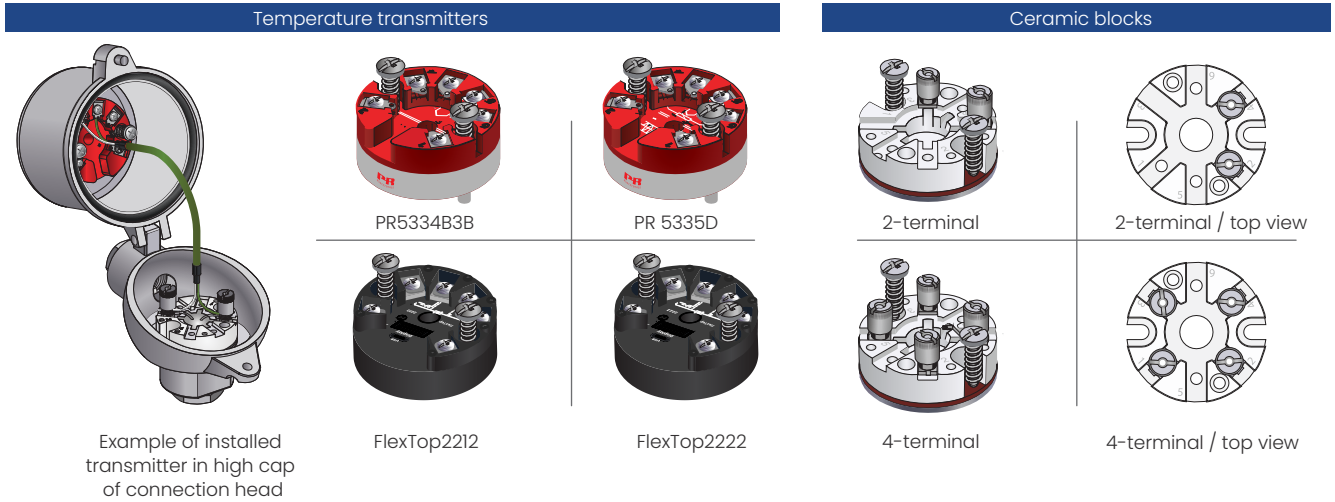
Model WS with process connection (parallel thread)

Handtight engagement	Dimension K
thread 1/2"NPT	8.1 mm
thread 3/4"NPT	8.6 mm

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.



ORDERING CODE

Temperature sensor		XI -	1	2	3	4	5	6	7	8	9	10	11	12
without transmitter:	without mark				TT				/					
with transmitter:	AP													
with two transmitters:	2AP													
single:	without mark													
double:	2													
thermocouple Fe-CuNi	J													
thermocouple NiCr-NiAl	K													
diameter d:	WS1 - 3mm, WS2 - 6mm, WS3 - 4.5mm													
connection head type:	G1, G2, G5, G6, E1, E2													
length L [mm]:	see specification													
length Led [mm]:	165 (without mark), 250, 80 or other*													
thread G:	M12x1.5 M14x1.5 G½ M18x1.5 M20x1.5 ½NPT or other*													
TC Class	class 1 class 2													
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-TTKWS1-G1-400-M12x1.5-1

3 4 5 7 8 9

Temperature sensor XI-APTTWS2-G2-250/250-1/2"NPT-1-(0-400)°C-PR5334B3B

1 4 5 7 8 9 10 11