

### THERMOCOUPLE

#### Type XD-TT..G, XD-APTT..G

The sensor consists of an exchangeable measuring insert, outer protective tube (thermowell) with 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	
• flameproof for mines M2, gas G and dust D atmospheres	
• single and double TC	
• exchangeable mineral insulated measuring insert	
• connection head types: XD-AD ( <b>GW1, GW2</b> ); XD-ADwin ( <b>GW3, GW4</b> ); XD-SD ( <b>S1, S2</b> ); IP65, ATEX II 2 GD (see technical information)	
• process connection: M27x2, G1/2, G3/4, 3/4NPT, INPT* welded-in to the thermowell	
• cable gland ATEX I M2, II GD, IP65; (cable dia. 3.8mm)*	
• output signal: TC or 4-20mA (option)	
• local display LPI-02 (option)	

Design temperature range	
-40 .. +800°C (K)	for NiCr-NiAl (K) <b>K</b>
-40 .. +700°C (J)	for Fe-CuNi (J) <b>J</b>

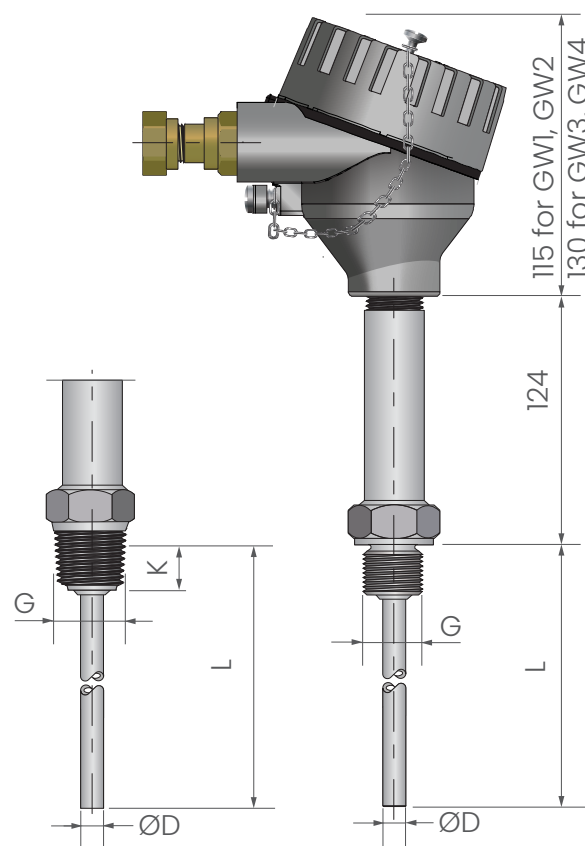
Sensing element	
1x or 2xNiCr-NiAl (K)	acc. to EN 60584-2 class 1, 2
1x or 2xFe-CuNi (J)	acc. to EN 60584-2 class 1, 2

Thermowell	
Material	stainless steel 1.4541*
Diameter D [mm]	Ø10, Ø11, Ø12, Ø14, Ø15 mm*
Length L [mm]	160, 200, 250, 400, 500 or other*

Temperature transmitter (option)	
PR5334A3B, PR5335A (HART®), FlexTop2202, FlexTop2212, FlexTop2222 (HART®)	

Remarks  
 \* other parameters on request  
 \* local display LPI-02 (see technical information)

ATEX Marking:	EAC Ex Marking:
CE M2 Ex db I Mb	PB Ex d I Mb X
CE II 1/2 G Ex db II C T... Ga/Gb	Ga/Gb Ex d IIC T.X
CE II 1/2 D Ex ta/tb IIIC T... Da/Db	Ex ta/tb IIIC T..Da/Db X

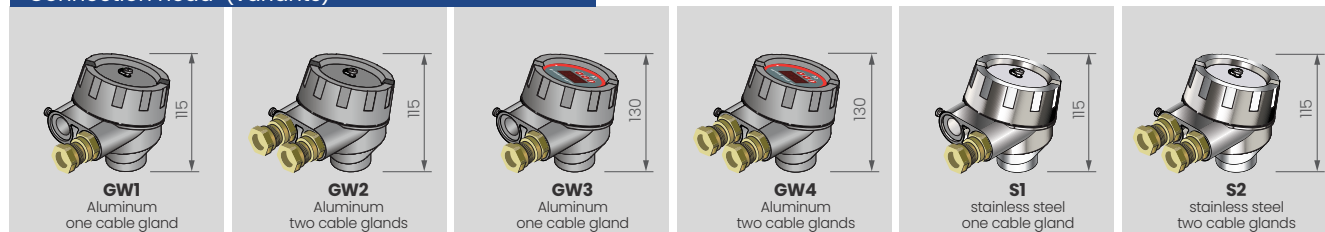


Thermowell G with process connection (tapered thread)

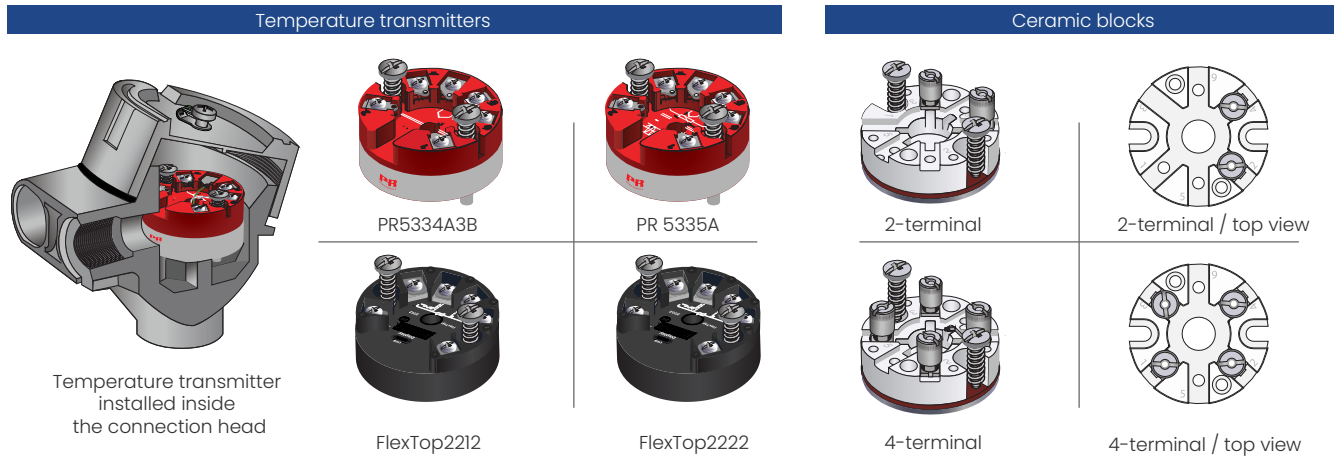
Thermowell G with process connection (parallel thread)

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

### Connection head (variants)



A transmitter can be built upon the measuring insert. In this case, the transmitter replaces the terminal block and is directly attached to the terminal plate of the measuring insert. The temperature transmitter should be protected from temperatures over +85 °C.



**ORDERING CODE**

Temperature sensor		XD -	1	2	3	TT	G -	4	5	6	7	8	9	10	11
without transmitter:	without mark														
with transmitter:	AP														
with two transmitters:	2AP														
single:	without mark														
double:	2														
thermocouple Fe-CuNi	J														
thermocouple NiCr-NiAl	K														
connection head type:	GW1, GW 2, GW 3, GW4, S1, S2														
length L [mm]:	100, 160, 250, 400, 500 or other*														
diameter D [mm]:	10, 11, 12, 14, 15 or other*														
thread:	M27x2, G½, G¾, ¾ NPT, 1 NPT 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)	3..8mm (...)														

**EXAMPLE** Temperature sensor XD-2TTKG-GW1-250-11-G½-1

2 3 4 5 6 7 8

Temperature sensor XD-APTTJG-GW2-160-12-M20x1.5-2-(0-100)°C-PR5334A3B

1 3 4 5 6 7 8 9 10