

### RESISTANCE THERMOMETER

#### Type XI-TOPGN, XI-APTOPGN

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

- intrinsically safe for mines M1, gas G and dust D atmospheres
- single and double RTD
- 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)
- process connection: M20x1.5 or G1/2" welded-in to the thermowell\*
- cable gland ATEX I M1, II GD, IP65; (cable dia. 5..10mm)\*
- output signal: RTD or 4-20mA (option)

#### Design temperature range

-200 .. +550°C

#### Sensing element

1x or 2xPt100 acc. to EN 60751 class A, B

#### Thermowell

Material	stainless steel 1.4541*
Diameter D [mm]	Ø6, Ø8, Ø9, Ø10 mm
Length L [mm]	100, 160, 200, 250, 400, 500 or other*

#### Temperature transmitter (option)

PR5333D, PR5335D (HART®)  
FlexTop2202, FlexTop2212,  
FlexTop2222 (HART®)

#### Remarks

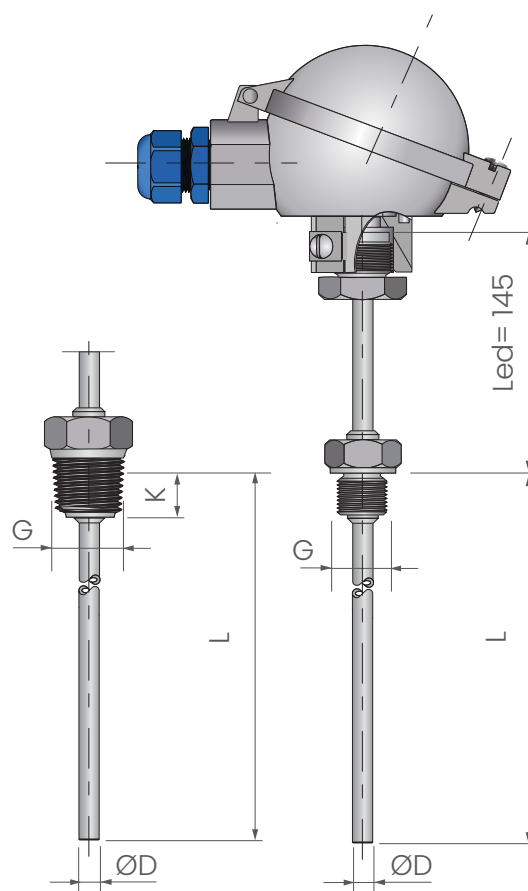
\* other parameters on request

#### 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 IIIC T... Da/Db

#### EAC Ex Marking:

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



Thermowell GN with process connection (tapered thread)

Thermowell GN with process connection (parallel thread)

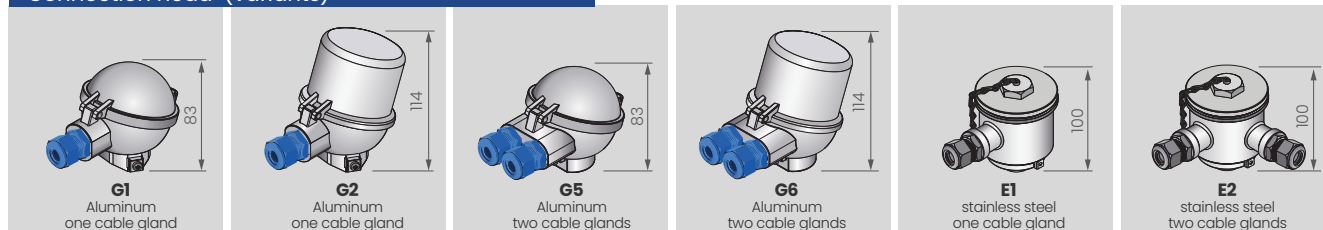


#### Handtight engagement

thread 1/2"NPT	8.1 mm
thread 3/4"NPT	8.6 mm

#### Dimension K

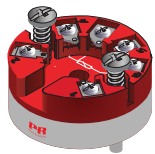
#### Connection head (variants)



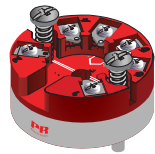
Temperature transmitter can be mounted inside a connection head of the sensor. There are two mounting options: directly on the measuring insert or in a high cap of the head. Advantage of the second solution is an easy replacement of the standard insert with a terminal block without need to dismantle 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

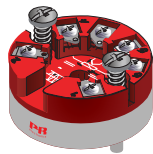
Ceramic blocks



PR5333D (for RTD)



PR5334B3B



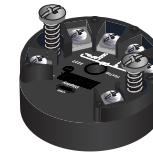
PR 5335D



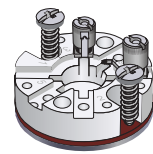
FlexTop2202



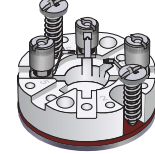
FlexTop2212



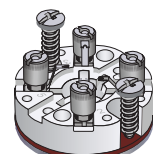
FlexTop2222



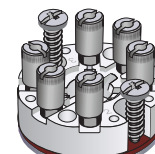
2-terminal



3-terminal



4-terminal



6-terminal

## ORDERING CODE

Temperature sensor	XI -	1	2	TOPGN	3	4	5	6	7	8	9	10	11
without transmitter:													
with transmitter:													
with two transmitters:													
single:													
double:													
connection head type:													
length L [mm]:													
diameter D [mm]:													
thread:													
RTD class:													
connection line													
measuring range for transmitter output 4-20 mA													
transmitter type													
diameter of supply cable (for cable other than)													

**EXAMPLE** Temperature sensor XI - TOPGN- G1- 160- 9 - G1/2- A- 4

Temperature sensor XI-APTOPGN-G2-250-10-M20x1.5-A-3-(0-50)°C-PR5333D