THERMOCOUPLE

Type **XI-TT4.., XI-APTT4..**

The sensor consists of an exchangeable measuring insert, ceramic protection tube with stainless steel holding tube 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.

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)
- ceramic protection tube for high temperatures
- cable gland ATEX I M1, II GD, IP65; (cable dia. 5..10mm)*
- output signal: TC or 4-20mA (option)

Design temperature range

0 .. +1200°C (K)	for NiCr-NiAl (K)	K
0 .. +700°C (J)	for Fe-CuNi (J)	J
0 .. +1200°C (N)	for NiCrSi-NiSi (N)	N
+600 .. +1800°C (B)	for Pt30Rh-Pt6Rh (B)	B
0..+1600°C (S)	for Pt10Rh-Pt (S)	S
0..+1600°C (R)	for PtRh13-Pt (R)	R

Sensing element

1x or 2x NiCr-NiAl (K)	acc. to EN 60584-2 class 1, 2
1x or 2x Fe-CuNi (J)	acc. to EN 60584-2 class 1, 2
1x or 2x PtRh30-PtRh6 (B)	acc. to EN 60584-2 class 2
1x or 2x NiCrSi-NiSi (N)	acc. to EN 60584-2 class 1, 2
1x or 2x PtRh13-Pt (R)	acc. to EN 60584-2 class 1, 2
1x or 2x Pt10Rh-Pt (S)	acc. to EN 60584-2 class 1, 2

Ceramic protection tube

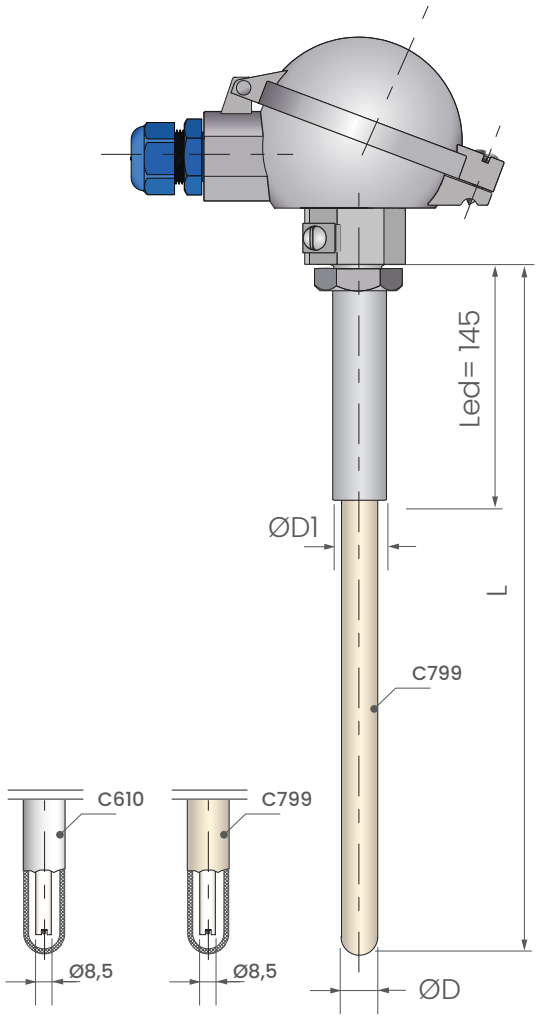
ceramic thermowell	C610 or C799
heat-resistant holding tube	1.4841

Temperature transmitter (option)

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

Remarks
* other parameters on request

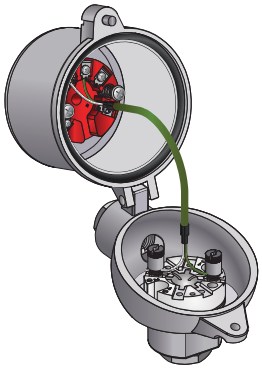
ATEX Marking:	EAC Ex Marking:
CE I M1 Ex ia I Ma	PO Ex ia I Ma X
CE II 1/2 G Ex ia II C T... Ga/Gb	0Ex ia IIC T..Ga X
CE II 1/2 D Ex ia IIIC T... Da/Db	0Ex ia IIIC T..Da X



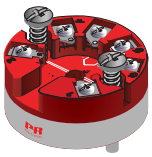
Model	Ceramic tube ØD [mm]	Holding tube ØD [mm]	Holding tube length Led [mm]
TT440	15	22	150
TT441	15 (duplex)	22	150
TT442	10	15	100
TT443	8	15	100
TT444	6	12	100

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



Example of installed transmitter in high cap of connection head



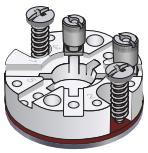
PR5334B3B

PR 5335D

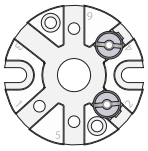
FlexTop2212

FlexTop2222

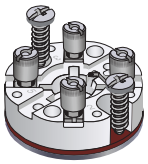
Ceramic blocks



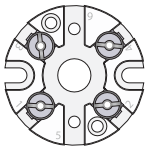
2-terminal



2-terminal / top view



4-terminal



4-terminal / top view

ORDERING CODE

Temperature sensor		XI -	1	2	TT	3	-	4	-	5	-	6	-	7	-	8	-	9	-	10	-	11
without transmitter: with transmitter: with two transmitters:	without mark AP 2AP																					
single: double:	without mark 2																					
model:	440, 441, 442, 443, 444																					
Element Type: NiCr-NiAl (K)	K																					
Fe-CuNi (J)	J																					
NiCrSi-NiSi (N)	N																					
Pt30Rh-Pt6Rh (B)	B																					
Pt10Rh-Pt (S)	S																					
PtRh13-Pt (R)	R																					
connection head type:	G1, G 2, G5, G6																					
ceramic tube material:	C610 , C799																					
length L [mm]:	500, 710, 100 0, 1200, 1400 or o ther *																					
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-TT440-K-G1-C610-1000-1

(3) (4) (5) (6) (7) (8)

Temperature sensor XI-APTT440-S-G2-C799-1000-1-(0-1600)°C-PR5334B3B

(1) (3) (4) (5) (6) (7) (8) (9) (10)