

CABLE RESISTANCE THERMOMETER

Type XI-TOPE411, XI-TOPE412

Resistance thermometers of this series are designed for push-in fitting directly into the process. These thermometers are suitable for liquid and gaseous media under moderate mechanical load and normal chemical conditions.

The sensor consists of thermometric resistor, protection tube and cable.

TECHNICAL DATA

Description

- Intrinsically safe for mines MI, gas G and dust D atmospheres
- Single and double RTD
- Angle version (TOP411) and straight (TOP412)

Design temperature range

-10.. +105°C	with cable in PVC
-50.. +180°C	with cable in silicone rubber
-50.. +260°C	with cable in teflon® PFA
-50.. +400°C	with cable in fiberglass

Sensing element

1x or 2xPt100	Class A or B, acc. to PN-EN 60751
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Thermowell

Material	stainless steel 1.4541**
Diameter [mm]	Ø3, Ø4, Ø5, Ø6, Ø8, Ø9**
Length L [mm]	custom

Connection cable

JJ	PVC / PVC (up to +105°C)
SLSL	silicone / silicone (up to +180°C)
TSL	teflon® / silicone (up to +180°C)
TPSL	teflon® / Cu braid / silicone (up to +180°C)
TT	teflon® PFA / teflon® PFA (up to +260°C)
TP	teflon® PFA / steel braid (up to +260°C)
TCuT	teflon® PFA / Cu braid / teflon® PFA (up to +260°C)
GLGLP	fiberglass / fiberglass / steel braid (up to +400°C)

Remarks

- * Pt500, Pt1000, Ni100, Ni1000
- ** other parameters upon request

ATEX Marking:

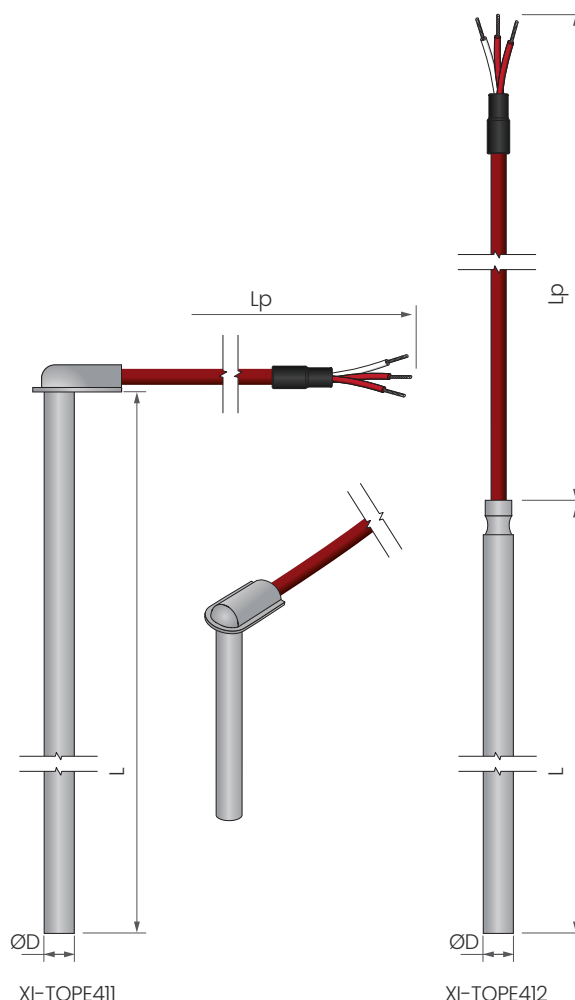
- CE I MI Ex ia I Ma
- CE II 1/2 G Ex ia II C T... Ga/Gb
- CE II 1/2 D Ex ia III C T... Da/Db

IECEx Marking:






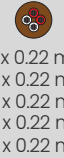


- Ex ia I Ma
- Ex ia IIC T ...Ga
- Ex ia III C T ...Da

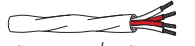


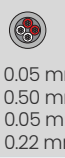
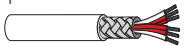
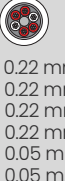


EAC Ex Marking:

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



List of available connection cables.

Connection cable	cross	diameter	code
up to +105°C.  PVC / PVC	 4 x 0.22 mm ²	Ø4.4	JJ-4x0.22mm ²
up to +180°C.  silicone / silicone	 3 x 0.22 mm ²	Ø3.4	SLSL-3x0.22mm ²
up to +180°C.  teflon® FEP / silicone		Ø4.2 Ø3.8 Ø3.8 Ø4.4 Ø5.0	TSL-2x0.22mm ² TSL-3x0.22mm ² TSL-4x0.22mm ² TSL-6x0.22mm ² TSL-8x0.22mm ²
up to +180°C.  teflon® FEP / Cu braid / silicone		Ø3.9 Ø4.0 Ø4.2 Ø4.4	TPSL-3x0.22mm ² TPSL-4x0.22mm ² TPSL-6x0.22mm ² TPSL-8x0.22mm ²

Connection cable	cross	diameter	code
up to +260°C.  teflon® PFA / teflon® PFA	 2 x 0.22 mm ² 3 x 0.22 mm ² 4 x 0.22 mm ²	Ø2.5 Ø2.6 Ø2.6	TT-2x0.22mm ² TT-3x0.22mm ² TT-4x0.22mm ²
up to +260°C.  teflon® PFA / steel braid		Ø1.7 Ø3.5 Ø2.0 Ø3.6	TP-3x0.05mm ² TP-3x0.50mm ² TP-4x0.05mm ² TP-4x0.22mm ²
up to +260°C.  teflon® PFA / Cu braid / teflon® PFA		Ø3.1 Ø3.9 Ø4.1 Ø4.6 Ø2.6 Ø3.0	TCuT-3x0.22 mm ² TCuT-4x0.22 mm ² TCuT-6x0.22 mm ² TCuT-8x0.22 mm ² TCuT-6x0.05 mm ² TCuT-8x0.05 mm ²
up to +400°C.  fiberglass / fiberglass / steel braid		Ø3.8 Ø5.0	GLGLP-4x0.22 mm ² GLGLP-6x0.22 mm ²

ORDERING CODE

Temperature sensor	XI - TOPE4							
	1	2	3	4	5	6	7	8
version:	(angled) 11 <input type="checkbox"/>	(straight) 12 <input type="checkbox"/>						
sensing element:	1xPt100 <input type="checkbox"/>	2xPt100 <input type="checkbox"/>	1xPt500 <input type="checkbox"/>	1xPt1000 or other* <input type="checkbox"/>				
diameter [mm]:	3, 4, 5, 6 or other* <input type="checkbox"/>							
length L [mm]:	custom <input type="checkbox"/>							
cable length Lp [mm]:	custom <input type="checkbox"/>							
RTD class:	A, B <input type="checkbox"/>							
connection line:	2, 3, 4 wire for 1xPt100; 2, 3 wire for 2xPt100	1x <input type="checkbox"/>	2x <input type="checkbox"/>					
cable insulation	(see specification) <input type="checkbox"/>							

EXAMPLE: Temperature sensor XI-TOPE411-1xPt100-6-100-1500-A-4-TT

1 2 3 4 5 6 7 8

Temperature sensor XI-TOPE412-1xPt100-3-50-3000-A-3-TT

1 2 3 4 5 6 7 8