

### CABLE THERMOCOUPLE

#### Type XI-TTE418, XI-TTE419

Thermocouple with protection tube and moveable threaded process connection. Surface temperature measurement of blocks, parts of machinery or other construction elements. Temperature range of the sensor depends on insulation of connection cable.

The sensor consists of thermocouple cable, protection tube with moveable threaded process connection.

Insertion length, process connection, construction type, thermocouple type, accuracy, cable insulation can be selected individually for the respective application.

### TECHNICAL DATA

#### Description

- Intrinsically safe for mines MI, gas G and dust D atmospheres
- Single and double TC
- Angle version (XI-TTE418) and straight (XI-TTE419)

#### 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 2x NiCr-NiAl	<b>K</b>	acc. to EN 60584-2 class 1, 2
1x or 2x NiCrSi-NiSi	<b>N</b>	acc. to EN 60584-2 class 1, 2
1x or 2x Fe-CuNi	<b>J</b>	acc. to EN 60584-2 class 1, 2
1x or 2x NiCr-CuNi	<b>E</b>	acc. to EN 60584-2 class 1, 2
1x or 2x Cu-CuNi	<b>T</b>	acc. to EN 60584-2 class 1, 2

#### Process connection

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

#### Thermocouple cable

<b>JJ</b>	PVC / PVC (up to +105°C)
<b>TPSL</b>	teflon® / Cu braid / silicone (up to +180°C)
<b>TT</b>	teflon® PFA / teflon® PFA (up to +260°C)
<b>TCuT</b>	teflon® FEP / Cu braid / teflon® FEP (up to +205°C)
<b>GLGLP</b>	fiberglass / fiberglass / steel braid (up to +400°C)

#### Remarks

\*other parameters upon request

#### ATEX Marking:

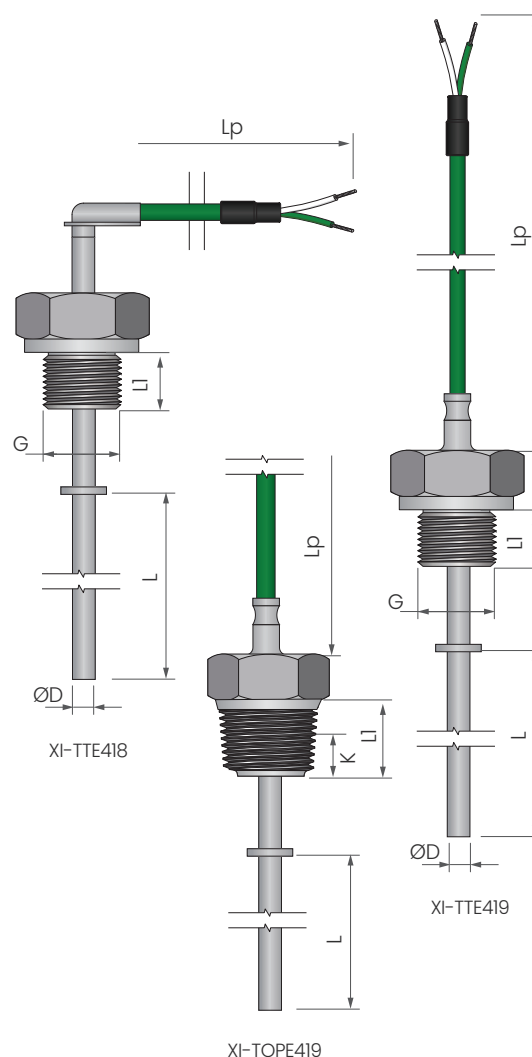
- CE I MI Ex ia I Ma
- CE II 1/2 G Ex ia II C T... Ga/Gb
- CE II 1/2 D Ex ia IIIC T... Da/Db

#### IECEx Marking:

- Ex ia I Ma
- Ex ia IIC T ...Ga
- Ex ia IIIC T ...Da

#### EAC Ex Marking:

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



#### Handtight engagement

- thread 1/2"NPT
- thread 3/4"NPT

#### Dimension K

- 8.1 mm
- 8.6 mm

Temperature range of the sensor depends on insulation of connection cable.

Connection cable	cross	diameter	code
up to +105°C. PVC / PVC	2 x 0.22 mm <sup>2</sup>	Ø4.0 Ø5.0 Ø5.0 Ø6.0	JJ-2x0.22mm <sup>2</sup> JJ-2x0.44mm <sup>2</sup> JJ-4x0.50mm <sup>2</sup> JJ-2x0.75mm <sup>2</sup>
up to +180°C. silicone / silicone	2 x 0.22 mm <sup>2</sup>	Ø3.4 Ø4.5	TSL-2x0.22mm <sup>2</sup> TSL-2x0.75mm <sup>2</sup>
up to +400°C. fiberglass / fiberglass / steel braid	2 x 0.22 mm <sup>2</sup>  2 x 0.50 mm <sup>2</sup> 2 x 0.50 mm <sup>2</sup>	Ø3.6 3x4 4x5	GLGLP-2x0.22 mm <sup>2</sup>  GLGLP-2x0.50 mm <sup>2</sup> GLGLP-2x0.75 mm <sup>2</sup>

Connection cable	cross	diameter	code
up to +260°C. teflon® PFA / teflon® PFA	2 x 0.22 mm <sup>2</sup> 2 x 0.50 mm <sup>2</sup> 2 x 0.75 mm <sup>2</sup>	1.9x2.3 1.7x3.0 2.4x4.2	TT-2x0.22mm <sup>2</sup> TT-2x0.50mm <sup>2</sup> TT-2x0.75mm <sup>2</sup>
up to +205°C. teflon® FEP/Cu braid/ teflon® FEP	2 x 0.22 mm <sup>2</sup> 4 x 0.22 mm <sup>2</sup> 2 x 0.50 mm <sup>2</sup> 4 x 0.50 mm <sup>2</sup> 6 x 0.50 mm <sup>2</sup> 4 x 0.75 mm <sup>2</sup> 6 x 0.75 mm <sup>2</sup>	Ø2.9 Ø3.6 Ø3.8 Ø4.6 Ø5.1 Ø5.1 Ø6.3	TCuT-2x0.22 mm <sup>2</sup> TCuT-4x0.22 mm <sup>2</sup> TCuT-2x0.50 mm <sup>2</sup> TCuT-4x0.50 mm <sup>2</sup> TCuT-6x0.50 mm <sup>2</sup> TCuT-4x0.75 mm <sup>2</sup> TCuT-6x0.75 mm <sup>2</sup>

### ORDERING CODE

Temperature sensor		XI - TTE4	1	2	3	4	5	6	7	8	9
version:	(angled) 18 (straight) 19										
sensing element:	Type K <b>K</b> Type J <b>J</b> Type N <b>N</b> Type E <b>E</b> Type T <b>T</b>										
diameter [mm]:	3, 4, 5, 6 or other**										
length L [mm]:	custom										
cable length L <sub>p</sub> [mm]:	custom										
TC class:	1, 2										
connection line:	2, 3, 4 wire for 1xPt100; 1x <input type="checkbox"/> 2, 3 wire for 2xPt100; 2x <input type="checkbox"/>										
thread:	M10x1, M 12x1, M20 x1.5 G½, G¾ or other* *										
cable insulation	(see specification)										

**EXAMPLE:** Temperature sensor XI-TTE418-K-6-100-2500-1-G1/4-GLGLP

1 2 3 4 5 6 8 9

Temperature sensor XI-TTE419-J-4-100-1000-1-M10x1-TT

1 2 3 4 5 6 8 9