

CABLE THERMOCOUPLE

Type XI-TTE414

Thermocouple with threaded process connection. Universal temperature measurement of liquids, gases and solid bodies. Temperature range of the sensor depends on insulation of connection cable.

Thermocouples of this series are designed for screw-in directly into the process. These thermocouples are suitable for liquid and gaseous media under moderate mechanical load and normal chemical conditions. The sensor consists of thermocouple cable and threaded process connection.

Thread type, thermocouple type, accuracy, cable insulation can be selected individually for the respective application.

TECHNICAL DATA

Description

- Intrinsicly safe for mines M1, gas G and dust D atmospheres
- Single and double TC

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	K	acc. to EN 60584-2 class 1, 2
1 or 2x NiCrSi-NiSi	N	acc. to EN 60584-2 class 1, 2
1x Fe-CuNi	J	acc. to EN 60584-2 class 1, 2
1x NiCr-CuNi	E	acc. to EN 60584-2 class 1, 2
1x Cu-CuNi	T	acc. to EN 60584-2 class 1, 2

Process connection

Material	stainless steel 1.4541*
Thread G	M8x1, M10x1, M12x1, G½", G¼"

Thermocouple cable

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

Remarks

*other parameters upon request

ATEX Marking:

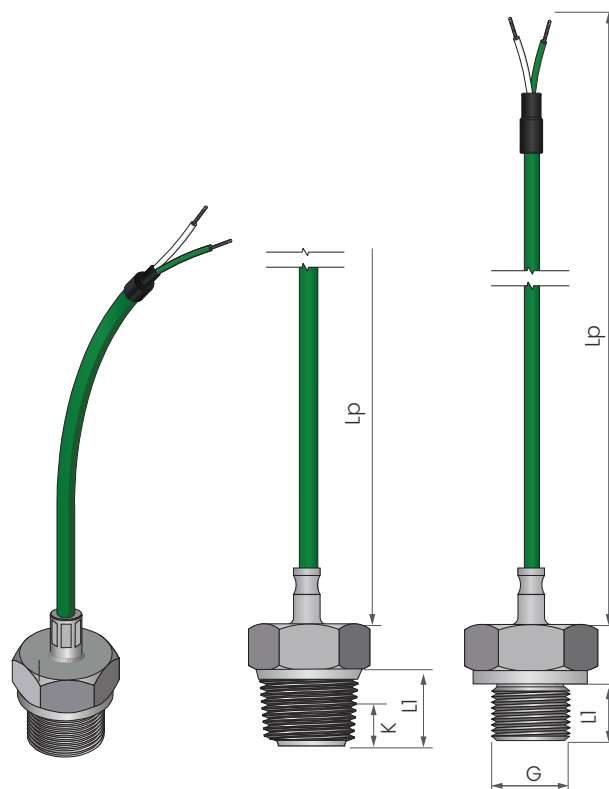
- CE I M1 Ex ia I Ma
- CE II 1/2 G Ex ia II C T... Ga/Gb
- CE II 1/2 D Ex ia IIIC T... Da/Db

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







Thread G	Length L1 [mm]
M8x1	10
M10x1	10
M12x1	10
G ¼"	12
G ½"	20





Handtight engagement

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

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

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

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

ORDERING CODE

Temperature sensor		XI - TTE414 - [] - [] - [] - [] - []				
sensing element:	Type K <input type="checkbox"/> K Type J <input type="checkbox"/> J Type N <input type="checkbox"/> N Type E <input type="checkbox"/> E Type T <input type="checkbox"/> T	1	2	3	4	5
cable length Lp [mm]:	custom <input type="checkbox"/>					
TC class:	1, 2 <input type="checkbox"/>					
thread G:	M10x1, M12x1, M20x 1.5, G¼, G½ or other* <input type="checkbox"/>					
cable insulation	(see specification) <input type="checkbox"/>					

EXAMPLE: Temperature sensor XI-TTE414-K-1500-1-M12x1-GLGLP

1 2 3 4 5

Temperature sensor XI-TTE414-J-2000-1-M10x1-TT

1 2 3 4 5