MINERAL INSULATED RESISTANCE THERMOMETER
Type **XI-TRP-..-BT**

Sheathed resistance thermometers are made of metal sheathed cable with internal wires (Cu or Ni) are insulated from each other and from the outer sheath with magnesium oxide (MgO) powder. This provides the sensor with high vibration resistance, flexibility as well as resistance to temperature and with good electrical insulation.

These sensors are designed for direct temperature measuring in places with difficult access, as well as in all places, where it is required to use flexible sensors of small diameters, high resistance to vibrations and shock, and with short response time to temperature changes. Due to tight pressing of the insulating layer (MgO) and appropriate structure of the inner wires and the sheath, the sensors can be bent with a minimal radius of curvature of three times the outer diameter of the sheath.

TECHNICAL DATA

Description

- Intrinsically safe for mines M1, gas G and dust D atmospheres
- Single and double RTD
- Mineral insulated construction
- Free unisolated RTD wires with silicone protection tubes color coded IEC 751

Design temperature range

-50.. +550ºC

Sensing element

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

Sheath

Material	stainless steel 1.4541 (AISI321) (V)
	stainless steel 1.4401 (AISI316) (Y)
Diameter d [mm]	Ø1.5, Ø2, Ø3, Ø4.5, Ø6
Length L [mm]	custom

Multiplicity

Possible combinations:

	1 x Pt100*			2 x Pt100*		
Sheath dia.	2-wire	3-wire	4-wire	2-wire	3-wire	4-wire
Ø 1.5	√	√	√	√	X	X
Ø 2.0	√	√	√	√	X	X
Ø 3.0	√	√	√	√	√	X
Ø 4.5	√	√	√	√	√	X
Ø 6.0	√	√	√	√	√	√

Remarks
* Pt500, Pt1000, Ni100, Ni1000
** other parameters upon request
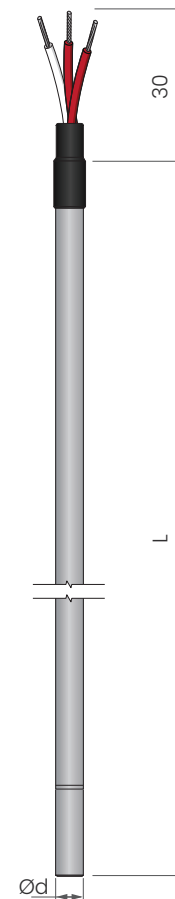
ATEX Marking:

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

ORDERING CODE

1 **2** **3** **4** **5** **6** **7**

XI-TRP- ☐ - ☐ - ☐ ☐ - ☐ - ☐ - ☐

Temperature sensor		
sensing element:	1xPt100,	1x ☐
	2xPt100	2x ☐
	or other	☐
version:	BT	☐
sheath material:	(1.4541)	V
	(1.4401)	Y
sheath diameter:	(Ø1.5)	15
	(Ø2.0)	20
	(Ø3.0)	30
	(Ø4.5)	45
	(Ø6.0)	60
RTD class:	A,	☐
	B,	☐
	1/3B	☐
	or other	☐
connection line:	2-, 3-, 4-wire	☐
length L:	custom	☐

EXAMPLE: Temperature sensor XI-TRP-1xPt100-BT-Y30-A-4-500
1 **2** **3** **4** **5** **6** **7**

Temperature sensor XI-TRP-2xPt100-BT-Y60-A-3-1000
1 **2** **3** **4** **5** **6** **7**