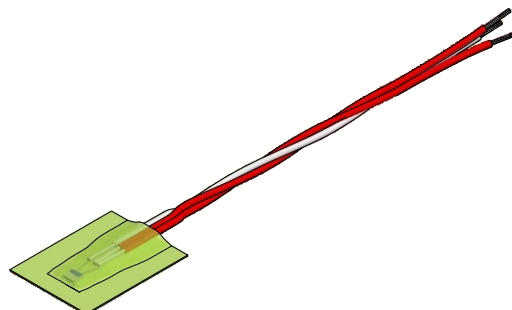


Applications

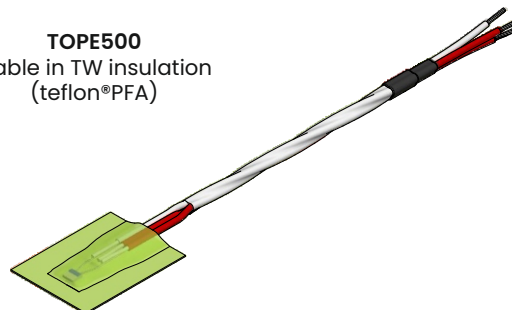
- Temperature measurement of pipeline surface
- General industrial services
- Laboratories

Features

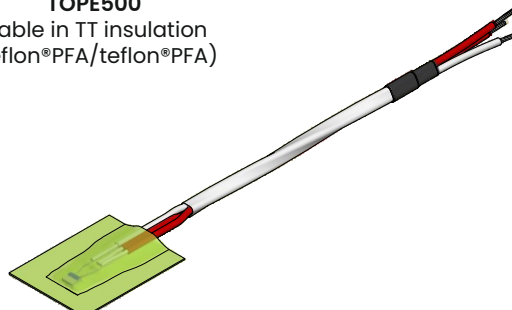
- Single RTD
- 2-, 3-, 4-wire connection
- Sensing element:
Pt100, Pt500, Pt1000 (IEC751),
Ni100, Ni500, Ni1000 (DIN43760),
- For sticking with self-adhesive
teflon® tape



TOPE500
Cable in TW insulation
(teflon®PFA)



TOPE500
Cable in TT insulation
(teflon®PFA/teflon®PFA)



TOPE500
Cable in TCuT insulation
(teflon®PFA/Cu braid
/teflon®PFA)

Resistance thermometers TOPE500 are designed for surface temperature measurement.

TOPE500 sensor consists of thermometric resistor, self-adhesive teflon® tape and connection cable.

Length of self-adhesive tape, accuracy, cable length and insulation can be selected individually for the respective application.

Temperature transmitter (Option)

There is possibility of using standard temperature transmitter(4÷20mA, 0÷10V) or temperature transmitter with HART®, Profibus® PA, Foundation Fieldbus communication protocol, mounted inside electrical control cabinet.

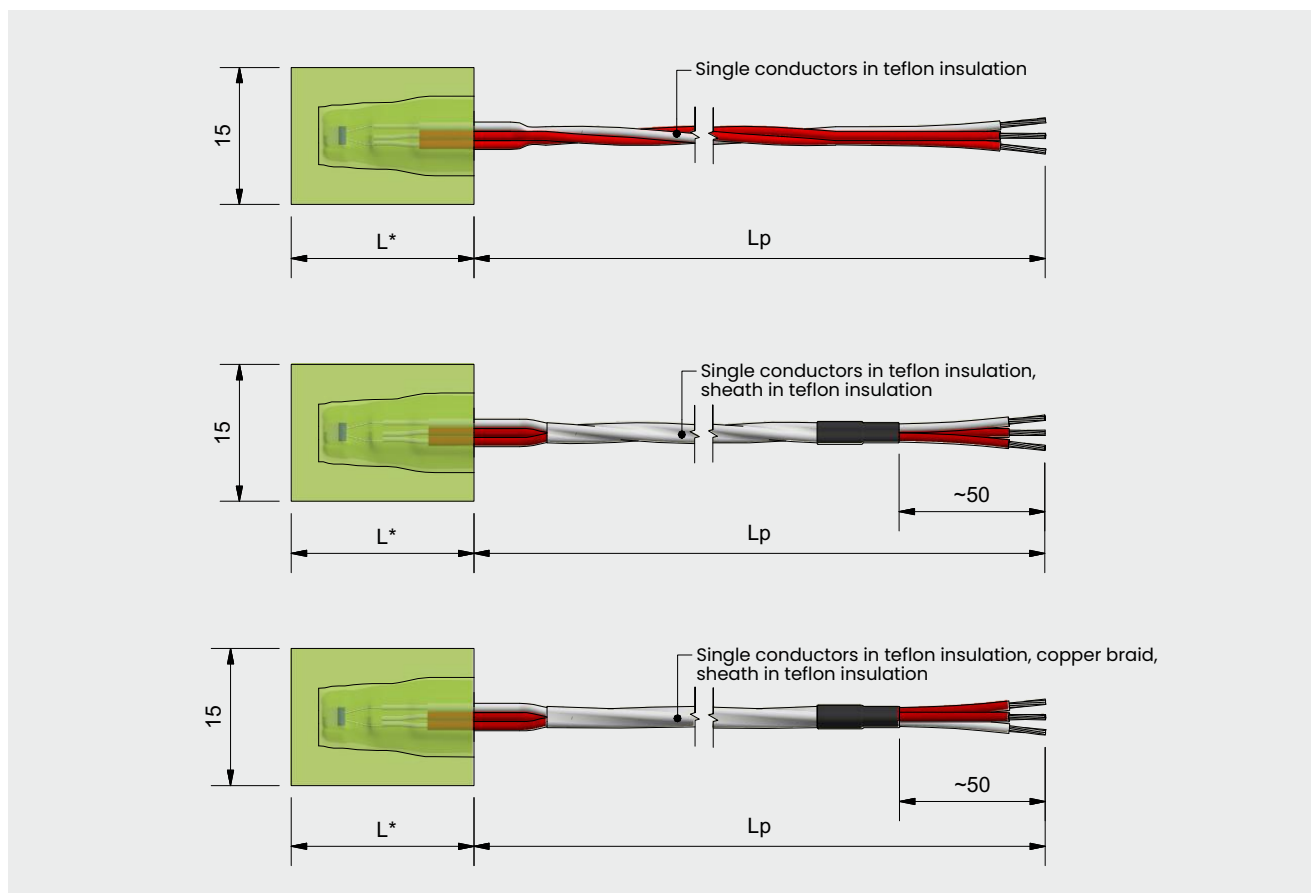
ATEX, IECEx, EAC Ex versions

Intrinsically safe designs are available for applications in hazardous areas. These models are provided with certificate for „intrinsically safe“ type of protection according to Directive 2014/34/UE (ATEX), IECEx scheme and EAC Ex TR-CU 012/2011 (Eurasian Economic Union).

Intrinsically safe (Exi)

XI-TOPE500

Designs



* Minimum length of self-adhesive tape = 15 mm

Measuring range

from -50°C to +200°C (depends on cable insulation type)

Electrical parameters

Measuring current nom. 0,1 mA to 1 mA
Isolation resistance > 10 GΩ (test 500 VDC)

Sensing element

Single or double

Pt100, Pt500, Pt1000 (IEC 751, $\alpha=0.00385$)
Ni100, Ni500, Ni1000 (DIN43760, $\alpha=0.00618$)

Tolerance class

Platinum Class A ($\pm 0.15^\circ\text{C}$ in temp. 0°C)
 Class B ($\pm 0.30^\circ\text{C}$ in temp. 0°C)
Nickel ($\pm 0.40^\circ\text{C}$ in temp. 0°C)

PN-EN 60751 standard defines the formulas for calculating acceptable measure tolerance.

Class of tolerance	Tolerance °C
A	$\pm 0.15 + (0.002 \times t)$
B	$\pm 0.30 + (0.005 \times t)$

Insulation types of connection cable

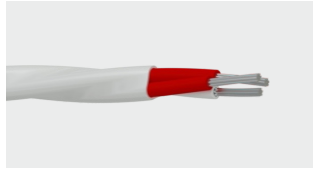
TW insulation

Conductor: Teflon® PFA



TT insulation

Conductor: Teflon® PFA
Sheath: Teflon® PFA



TCuT insulation

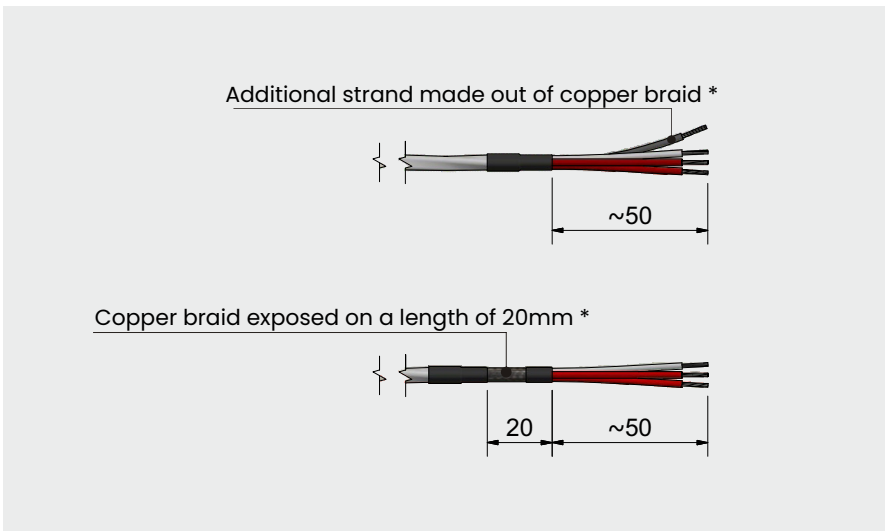
Conductor: Teflon® PFA
Screen: Copper braid
Sheath: Teflon® PFA



Available measuring range

Measuring range	Insulation type
-50 .. +200°C	TW, TT, TCuT teflon® PFA

Non-standard sensor versions



* Available only for TCuT cable insulation

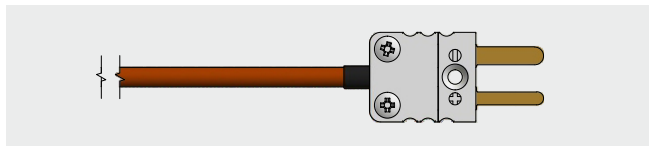
Connectors (optional)

Sensors with connection cable can be equipped with connector.

Available options:

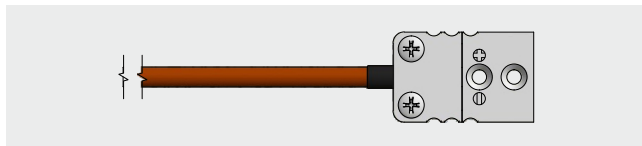
Connector S-010-Cu-W

Miniature plug, 2-pin.



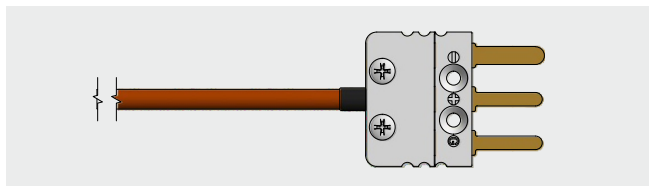
Connector S-010-Cu-G

Miniature socket, 2-pin.



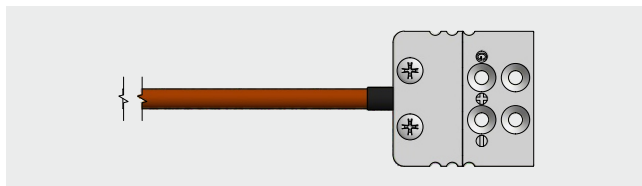
Connector S-013-Cu-W

Miniature plug, 3-pin.



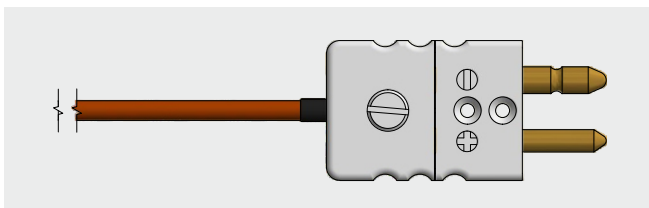
Connector S-013-Cu-G

Miniature socket, 3-pin.



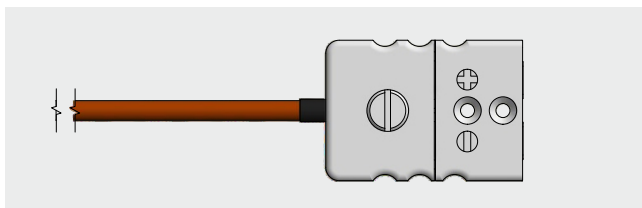
Connector S-020-Cu-W

Standard plug, 2-pin.



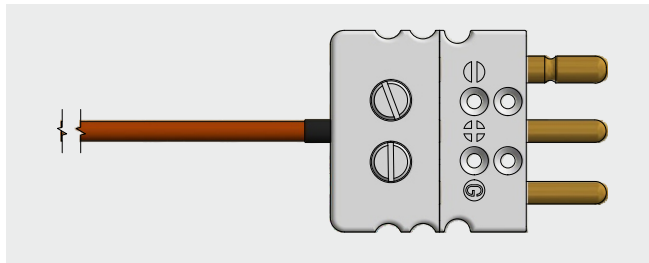
Connector S-020-Cu-G

Standard socket, 2-pin.



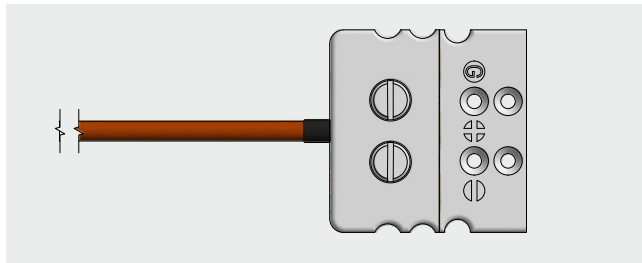
Connector S-023-Cu-W

Standard plug, 3-pin.



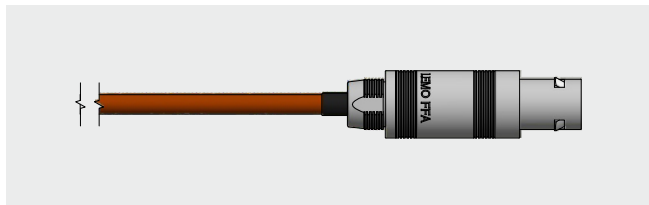
Connector S-023-Cu-G

Standard socket, 3-pin.



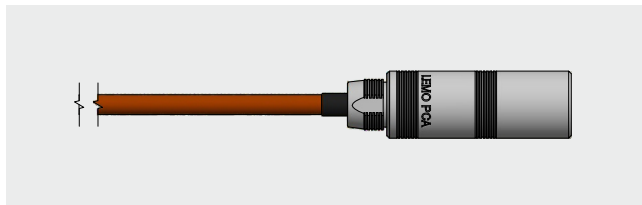
Connector LEMO® FFA

Plug size from 0S to 3S. 2-, 3-, 4-, 6-pin.



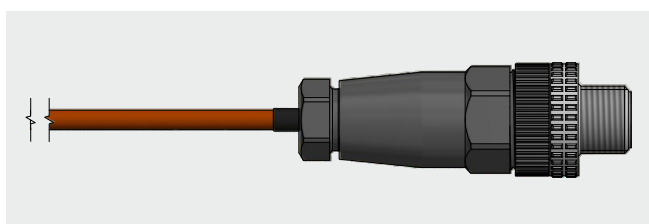
Connector LEMO® PCA

Plug size from 0S to 3S. 2-, 3-, 4-, 6-pin.



Hirschmann M12 series

4-pin.



Ordering code

TOPE500 - 1 - 2 - 3 - 4 - 5 - 6 - 7

1	<input type="text"/>	Type of sensing element			
		1xPt100	Single Pt100 IEC 751, $\alpha=0.00385$		
		1xNi100	Single Ni100 DIN43760, $\alpha=0.00618$		
	xxx	other, please specify			
2	<input type="text"/>	Self-adhesive tape length L			
		15	15 mm		
		20	20 mm		
	xxx	other, please specify			
3	<input type="text"/>	Connecting cable length Lp			
		1000	1000 mm		
		2500	2500 mm		
	xxx	other, please specify			
4	<input type="text"/>	Tolerance class			
		A	Class A wg PN-EN 60751 / IEC 751 (available only for platinum sensing elements)		
		B	Class B wg PN-EN 60751 / IEC 751 / DIN43760 / GOST 6651-94		
5	<input type="text"/>	Measuring circuit			
		2	2-wire (available only in B tolerance class)		
		3	3-wire		
		4	4-wire		
6	<input type="text"/>	Connecting cable type		Temperature range of sensor	
		TW	Teflon® PFA		-50 .. +200°C
		TT	Teflon® PFA / Teflon® PFA		-50 .. +200°C
		TCuT	Teflon® PFA / Cu braid / Teflon® PFA	-50 .. +200°C	
7	<input type="text"/>	Connector (optional)			
			without connector, free end conductors of connection cable		
		S-013-Cu-W	Miniature plug, 3-pin		
		FFA.1S	Connector LEMO® FFA size 1S		
		xxx	other, please specify		

Example

TOPE500-1xPt100-15-2000-A-3-TW

RTD sensor 1xPt100, self-adhesive tape length 15 mm, connection cable length Lp=2000 mm, A tolerance class, 3-wire measuring circuit, single conductors in teflon insulation.

TOPE500-1xPt100-20-2500-B-2-TT-LEMO® FFA.1S

RTD sensor 1xPt100, self-adhesive tape length 20 mm, connection cable length Lp=2500 mm, B tolerance class, 2-wire measuring circuit, single conductors in teflon insulation, sheath in teflon insulation, connection cable equipped with LEMO® FFA plug size 1S.