

Sheathed RTD (Resistance Temperature Detector) Sensor (110 series)

Applications

110 series comprise a thin-walled and flexible mineral insulated sheath cable made of stainless steel. The cable contains low resistance inner wires made of copper embedded in pressed fireproof magnesium oxide. The temperature sensor is connected to the inner wires and fitted in a protective tube. Protective tube and sheathed cable are welded together hermetically.

The minimum mounting length is > 50mm for sheath diameter 0.5 to 2.0 mm; > 100mm for sheath diameter 3.0 to 6.4mm

Good heat transfer between protective tube and temperature sensor allows fast response time and high measuring accuracies. The flexible probe tube allows temperature measurement at locations that are not easily accessible.

110 series are used in difficult measurement application with strong vibrations as well as at all measuring positions where flexibility and ease of replacement are needed.

Areas of application are to be found in chemical plants, power stations, motors, as well as in machine construction and building installation and in general industrial applications.

Standard Specification Overview

Element type

· Pt 100Ω at 0°C, Pt 1000Ω at 0°C (DIN/BS/EN)

Out Diameter (mm)

· 3.2 / 4.8 / 6.4 / 8.0 / etc

Lead connection

· 3-wires / 4-wires / 6-wires

Number of Element

· Single / Double

Sheath Material

· 316 SS / Inconel 600 / etc...

Accuracy

· Class A : $\pm (0.15 + 0.002 | t |)$, Class B : $\pm (0.3 + 0.005 | t |)$

Operating Temperature Range

· -200 ~ 600°C

Rated Current

· 1mA



Ordering Information for Sheathed RTD Sensor (110 Series)

Model	Description		
110	Sheathed RTD (Resistance Temperature Detector) Sensor		
Code (1)	Connection Head type		Explosion Proof
1	Explosion Proof Aluminum Head	(Dual Conduits)	Ex d IIC T6
2	Explosion Proof Aluminum Head	(Single Conduits)	Ex d IIC T6
3	General Aluminum Head	(Single Conduits)	Weatherproof (IP65)
4	General Stainless Steel Head	(Single Conduits)	Weatherproof (IP65)
5	None Head (Sensor only with 150mm long TEFLON insulated lead wires)		N/A
Code (2)	Element Type	TCR	Temperature Range
P	Pt 100Ω at 0°C	3,850 ppm/K	-200 ~ 600°C
Q	Pt 1000Ω at 0°C	3,850 ppm/K	-200 ~ 600°C
Code (3)	Terminal		
S	Single Junction		
D	Double Junction		
Code (4)	No. of Conductor wire		
3	3-wire (Single Junction)		
4	4-wire (Single Junction)		
6	6-wire (Double Junction)		
Code (5)	Sensor type		
GP	General purpose type		
SL	Spring Loaded type		
Code (6)	Extension Type	Extension Length (mm)	
00	None	None	
10	Fixed Thread Lag length	None	
11	Fixed Thread Lag length	100	
13	Fixed Thread Lag length	150	
19	Fixed Thread Lag length	Others	
23	Nipple Length	100	
29	Nipple Length	Others	
33	Union & Nipple Length	150	
39	Union & Nipple Length	Others	
43	Nipple & Flange Lag length	100	
44	Nipple & Flange Lag length	150	
49	Nipple & Flange Lag length	Others	
50	Compression Fitting	None	
60	Movable Thread	None	
61	Movable Flange	None	
99	Others		

Code (7)	Sheath Material	
A	316/316L SS	
C	INCONEL 600	
X	Others	

Code (8)	Sheath Outer Diameter	
32	3.2mm	
34	4.8mm	
36	6.4mm	
38	8.0mm	
99	Others	

Code (9)	Conduit Connection	
A	1/2" PF	
B	1/2" PT	
C	1/2" NPT	
D	3/4" PF	
E	3/4" PT	
F	3/4" NPT	
M	M20 X 1.5P	
X	Others	

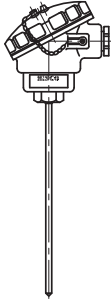
Code (10)	Process Connection Size	Material
A	None	None
B	1/2" (15A)	304 SS
C	3/4" (20A)	304 SS
D	1" (25A)	304 SS
E	1-1/2" (40A)	304 SS
F	2" (50A)	304 SS
G	1/2" (15A)	316 SS
H	3/4" (20A)	316 SS
I	1" (25A)	316 SS
J	1-1/2" (40A)	316 SS

Code (11)	Process Connection Type	
0	None	
2	PT	
3	PF	
4	NPT	
8	NPS	
9	Compression fitting connector	
F01	ANSI 150# RF	
F02	ANSI 150# FF	
F03	ANSI 300# RF	
F04	ANSI 300# FF	
F05	ANSI 600# RF	
F15	JIS 10K RF	
F16	JIS 10K FF	

F17	JIS 20K RF
F18	JIS 20K FF
F99	Others
Code [12]	Sensor Immersion Length (L)
L0100	100mm
L0150	150mm
L0200	200mm
L0250	250mm
L0300	300mm
L0350	350mm
L0400	400mm
L0450	450mm
L0500	500mm
L0550	550mm
L0600	600mm
L0700	700mm
L0800	800mm
L0900	900mm
L1000	1000mm
XXXXX	Others
Code [13]	Tolerance Grade
R1	CLASS B : $\pm (0.3 + 0.005 t)$
R2	CLASS A : $\pm (0.15 + 0.002 t)$
X	Others
Code [14]	Calibrate certifications
N	Not apply
T1	Test Report by Manufacturer
T2	Test Report by KOLAS (ILAC-MRA)
Code [15]	Accessory Options
0	Not apply
1	Thermowell
X	Others
Sample Ordering Code : RTD 1101PS3GP10A32AB4L0150R1N1	
* The standard specification and price are subject to change without prior notice	

R.T.D SHEATH TYPE (110 Series) WEATHERPROOF

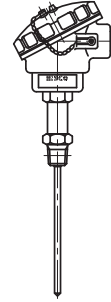
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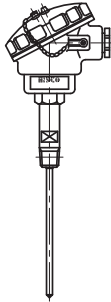
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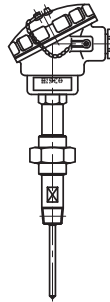
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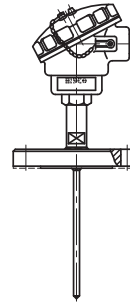
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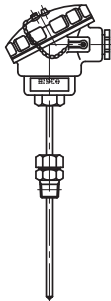
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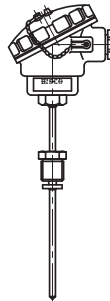
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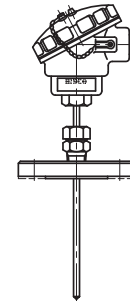
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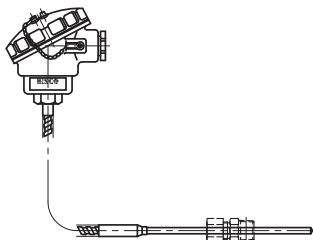
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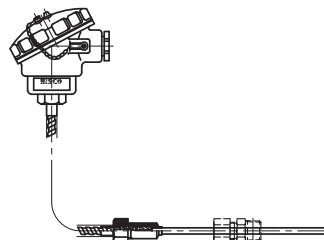
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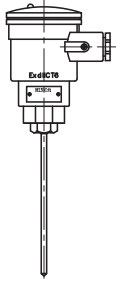


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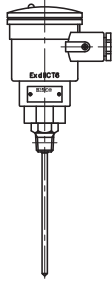


R.T.D SHEATH TYPE (110 Series) EXPLOSION PROOF

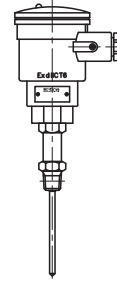
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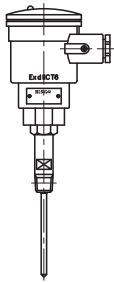
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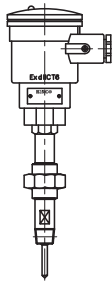
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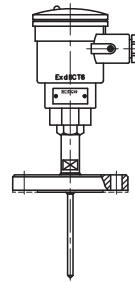
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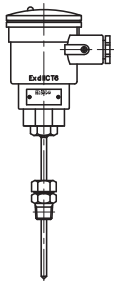
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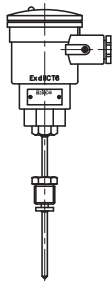
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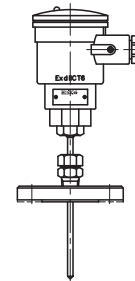
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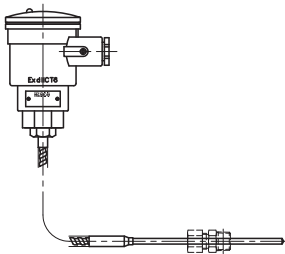
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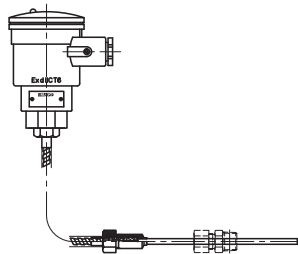
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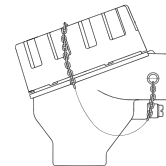
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1102-73



1101 Dual Conduit



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