

Metallic Protection Tube Thermocouple Sensor (140 series)

Applications

140 series are designed specially for measurement of temperature up to +1600°C but under low pressure only. They comprise a metal thermowell which houses a ceramic inset containing either one or two thermocouple sensors in common metal.

Each probe also comprises a process connection and a connection head.

- industrial ovens (heat treatment, incineration)
- Chimneys (combustion gases)
- Fusion baths for metal and glass



Standard Specification Overview

Element type

- K / T / J / E type

Protection Tube Out Diameter (mm)

- 8.0 / 10 / 12 / 15 / 17.3 / 21.7 / etc

Number of Conductor wire

- 2-wires / 4-wires

Number of Element

- Single / Double

Tube Material

- 304 SS / 316 SS / etc...

Accuracy

- Class 1 (Special), Class 2 (Standard)
- * Class 1, 2 (DIN/IEC 584-2, BS/EN 60584-2, JIS C1602)
- * Special, Standard (ASTM E 230, E988, ISA MC 96.1)

Operating Temperature Range

- -200 ~ 1200°C

Hot Junction Shape

- Grounded / Ungrounded / Exposed

Ordering Information for 140 Series

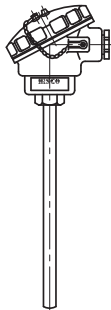
Model	Description		
140	Metallic Protection Tube Thermocouple Sensor		
Code (1)	Connection Head type		Explosion Proof
1	Explosion Proof Aluminum Head	(Dual Conduits)	Ex d IIC T6
2	Explosion Proof Aluminum Head	(Single Conduits)	Ex d IIC T6
3	General Aluminum Head	(Single Conduits)	Weatherproof (IP65)
4	General Stainless Steel Head	(Single Conduits)	Weatherproof (IP65)
Code (2)	Element Type	Thermocouple Wire Alloys	Temperature Range
K	Thermocouple "K"	Chromel / Alumel	-200 ~ 1200°C
E	Thermocouple "E"	Chromel / Constantan	-200 ~ 800°C
J	Thermocouple "J"	Iron / Constantan	0 ~ 750°C
T	Thermocouple "T"	Copper / Constantan	-200 ~ 350°C
X	Others		
Code (3)	Terminal		
S	Single Junction		
D	Double Junction		
Code (4)	No. of Conductor wire		
2	2-wire (Single)		
4	4-wire (Double)		
Code (5)	Sensor type		
G	General purpose type		
Code (6)	Tip Shape		
G	Grounded		
U	Ungrounded		
S	Exposed		
Code (7)	Extension Type	Length (mm)	
00	None		
10	Fixed Thread	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 [8]	Protection Tube Material	
A	304 SS	
B	316 SS	
C	INCONEL 600	
X	Others	
Code [9]	Protection Tube Outer Diamter (mm)	
30	8.0mm	
40	10mm	
50	12mm	
60	15mm	
70	17.3mm	
80	21.7mm	
99	Others	
Code [10]	Conduit Connection	
Z	None	
A	1/2"PF	
B	1/2"PT	
C	1/2"NPT	
D	3/4"PF	
E	3/4"PT	
F	3/4"NPT	
X	Others	
Code [11]	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)	316 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 [12]	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	

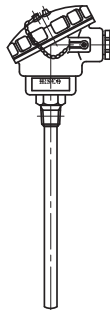
F04	ANSI 300# FF
F05	ANSI 600# RF
F15	JIS 10K RF
F16	JIS 10K FF
F17	JIS 20K RF
F18	JIS 20K FF
F99	Others
Code (13)	Sensor Immersion Length (L)
L0100	100mm
L0150	150mm
L0200	200mm
L0250	250mm
L0300	300mm
L0350	350mm
L0400	400mm
L0450	450mm
L0500	500mm
L0550	550mm
L0600	600mm
L0700	700mm
L0800	800mm
L0900	900mm
L1000	1000mm
XXXXX	Others
Code (14)	Tolerance Grade
C1	Class 1 (Class 0.4) DIN / IEC / EN / JIS I Special ($\pm 0.4\%$) ASTM / ISA
C2	Class 2 (Class 0.75) DIN / IEC / EN / JIS I Standard ($\pm 0.75\%$) ASTM / ISA
Code (15)	Calibrate certifications
N	Not apply
T1	Test Report by Manufacturer
T2	Test Report by KOLAS (ILAC-MRA)
Code (16)	Accessory Options
0	Not apply
1	Thermowell
X	Others
Sample Ordering Code : Thermocouple 1401KS2GU33B40AB4L0150C1N1	
* The standard specification and price are subject to change without prior notice	

Metallic Protection Tube Thermocouple (140 Series) WEATHER PROOF

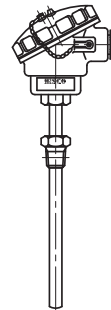
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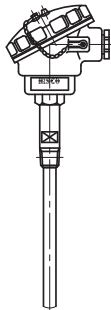
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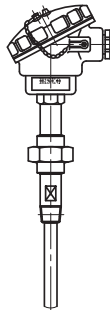
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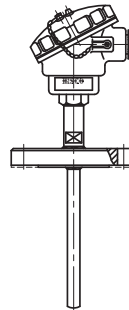
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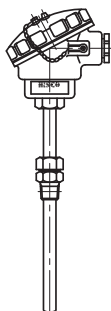
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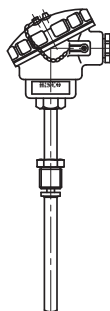
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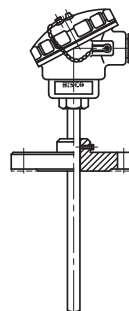
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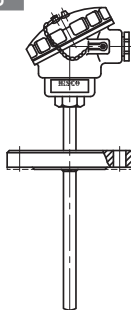
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1403-61

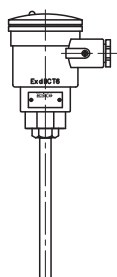


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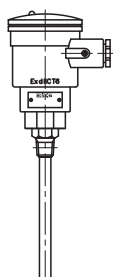


Metallic Protection Tube Thermocouple (140 Series) EXPLOSION PROOF

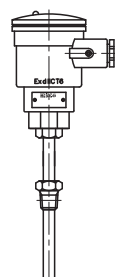
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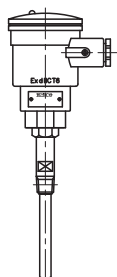
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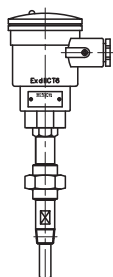
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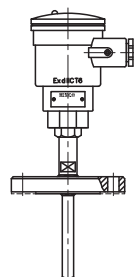
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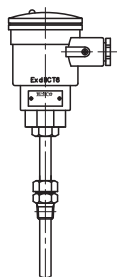
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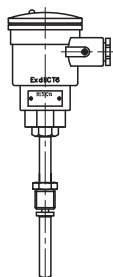
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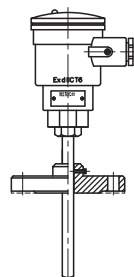
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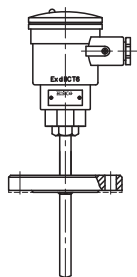
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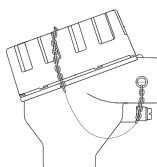
1402-61



1402-73



1401 Dual Conduit



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