

Mineral Insulated Metal Sheathed Thermocouple (TC)

A thermocouple is a device consisting of two different conductors, usually metal alloys. When two dissimilar metals are joined together, a hot junction is formed, and the other end will be cold. When these two ends are subjected to different temperatures, an EMF (electromotive force) will be induced inside the conductor which is measured in millivolts(mv). However, if both junctions are at the same temperature, no EMF is generated.

There are various type of thermocouples of which K, J and S are most commonly used. The S type thermocouple is used for higher temperature. The maximum temperature it can withstand depends on the diameter of the wire, the environment and expected durability.



Special Features

Compliance to IEC 60584

Temperature range -200 to 1250 °C

Mineral insulated construction with K type thermocouple

Available in a variety of sheath materials

High sheath ductility and dielectric strength of conductors

Quick response time

Industrial Applications

Chemical and fertiliser industries

Petrochemical industry

Thermal, nuclear and hydroelectric power stations

Pharmaceutical industry

Food processing industry

Water treatment plants

Iron and steel industry

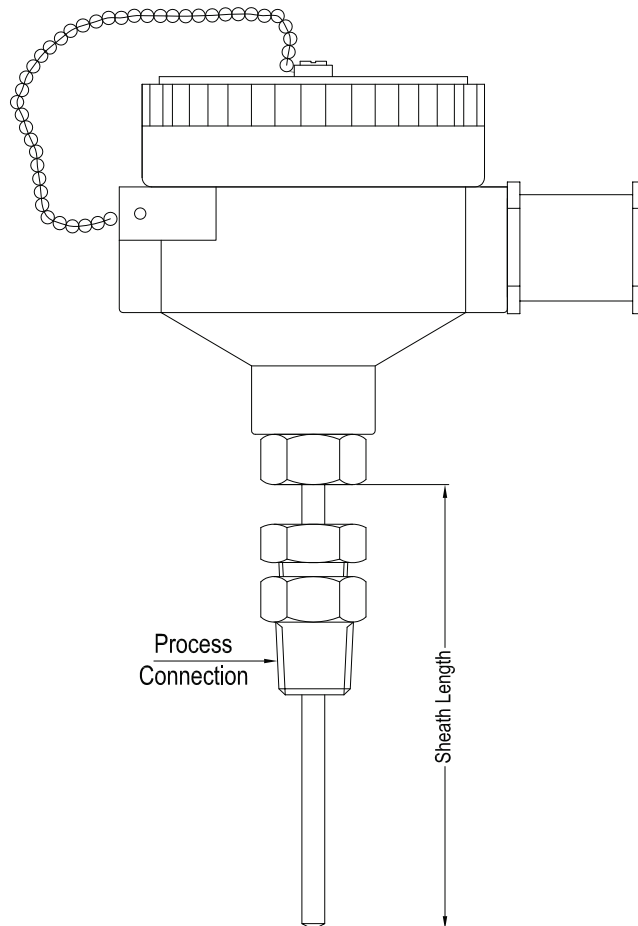
Rubber molding / processing plants

Sugar industry

Refineries

Standard Product Specifications	
Specifications	Description
Reference standard	IEC-60584
Model	Simplex
Type	K-type
Wire configuration	2- wire
Connection	1/2" NPT(M)
Sheath material	SS 316
Sheath type	Mineral insulated measuring insert
Sheath diameter	6 mm
Sheath length	200 mm
Accuracy	Class 1 as per IEC -60584
Terminal head	Screwed type die cast aluminium weatherproof – IP 65
Head extension type	Adjustable connection
Cable gland	3/4" ET single compression gland
Cable gland MOC	Brass nickle plated with rubber
Ambient temperature	-25°C to 65°C
Temperature range	-200 to +1250°C

MI Cable Thermocouple Assembly



Ordering Information

Model		**	*	*	*	*	*	*
Thermocouple(duplex)	TD							
Thermocouple(simplex)	TS							
Type								
K-type (range -200 to +1250°C)	K							
J-type (range 0 to +750°C)	J							
S-type (range 0 to +1450°C)	S							
Wire Configuration								
2 wire	2							
4 wire	4							
Head Extension Type								
Adjustable connection	A							
Nipple connection	B							
Nipple union connection	D							
Fixed connection (standard)	F							
Flanged connection	E							
Connection Size								
M18 X 1P	0							
M20 X 1.5P	1							
1/4"	A							
3/8"	B							
1/2"	C							
3/4"	D							
Not required	N							
Connection Type								
NPT(M)	A							
BSP(M)	B							
BSPT(M)	C							
Metric thread(M)	M							
#150-RF	4							
#300-RF	5							
Without connection	N							
Cable Gland								
1/2" NPT, double compression(1 No)	A							
3/4" ET double compression(1 No)	C							
3/4" ET, Single compression(1 No) (standard)	D							
1/2" NPT, double compression(2 No)	E							
3/4" ET, double compression(2 No)	G							
3/4" ET, single compression(2 No)	H							

Configuration Generation Code

Sheath Diameter		****
6 mm (standard)		
8 mm		
10 mm		
3 mm		
4.5 mm		
Sheath Length		
As per requirement		
Sheath - Material of Construction		
SS 316 (standard)		
Inconel 600		
Inconel 625		
SS 321		
SS 446		
SS 310		
Head Extension - Material of Construction		
SS 316 (standard)		
SS 304		
SS 316L		
Cable Gland - Material of Construction		
Brass nickle plated with rubber		
Optional Features		
Accuracy class 2 as per IEC 60584		
Head protection	IP 67 protected head	
	Ex. proof GR II C	
	Flame proof GR II A	
	Flame proof GR II B	
	Flame proof GR II A, II B	
Lead wire extension	PTFE braided	
	SS braided	
Lead wire length	1 mtr to 15 mtrs	
Flange type	Blind	
	Slip on	
	Weld neck	
Flange Finish	125 AARH	
	63 AARH	
	250 AARH	
Tests and Certificates		
Five point calibration certificate		
Material test certificate		
Third party inspection		
Special requirement – please specify		

Ordering example: TSK2FNND-XXXX (with standard selection)



Forbes Marshall
Krohne Marshall
Forbes Marshall Arca
Codel International
Forbes Solar
Forbes Vyncke
Forbes Marshall Steam Systems

Plot No. A-19/2 & T-4/2, I.D.A
Nacharam, Hyderabad - 500 076
Tel : +91-40-27179223, 27171909,
27170732
Fax : +91-40-27173235

B-85, Phase II, Chakan Indl Area
Sawardari, Chakan, Tal. Khed
Dist. Pune - 410 501. INDIA
Tel : 91(0)2135-393400

A-34/35, MIDC H Block
Pimpri, Pune - 411 018. INDIA.
Tel : 91(0)20-27442020, 39851199
Fax : 91(0)20-27442040

CIN No.: U28996PN1985PTC037806

Email : sales-gauges@forbesmarshall.com, ccmidc@forbesmarshall.com www.forbesmarshall.com

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