

“MICRO” Thermocouples consists of two dissimilar metallic wires, the + ve & - ve wire, which have a common junction at one end (i.e. hot junction). A difference of temperature between hot end and cold end of thermocouples legs produces thermoelectric voltage, the value of which depends upon the temperature difference between the hot & cold junction.

Construction Features:

Element:

J / K / E / T / N (Simplex or Duplex)

J (Fe-CuNi) : 750°C (Wire Ø 1.6 / 2.5 / 3.2 mm)
K (NiCr-Ni) : 1200°C (Wire Ø 1.6 / 2.5 / 3.2 mm)
E (NiCr-CuNi) : 800°C (Wire Ø 1.6 / 2.5 / 3.2 mm)
T (Ci-CuNi) : 400°C (Wire Ø 1.6 / 2.5 / 3.2 mm)
N (NiCrSi-NiSi) : 1200°C (Wire Ø 1.6 / 2.5 / 3.2 mm)

Sheath OD:

6 mm / 8 mm / 10 mm / 12 mm

Sheath Material:

As per table

Metallic

Material	Temperature °C in Air	
	Normal	Maximum
SS 316	900	1000
SS 310	1000	1150
SS 446	1050	1150
Inconel 600	1100	1200

Non-Metallic

Material	Temperature °C in Air	
	Normal	Maximum
Ceramic 610	1400	1500
Ceramic 710	1700	1900

Sheath Length:

As per requirement

Insulation:

Mineral, Compact MgO

Accuracy:

As per ANSI MC 96.1 (class B)

Junction:

Grounded / Ungrounded / Exposed

Cold End:

Pot seal with PVC / PTFE insulated flexible tails / Quick Connect / Disconnect plug & jack / Ceramic spring loaded terminal block with silver plated brass terminals

Head:

Die cast aluminium / S. S. 304 / S. S. 316 single or double entry with 3/4" ET (F)



Ingress Protection:

Weatherproof as per IP-67 (IS: 13947, part I)

Flameproof to Gr. I, IIA, IIB

Flameproof to Gr. IIC

Extension:

Provided in the form of Nipple or Nipple – Union – Nipple in Cd plated CS or SS

Connection:

1/4" / 3/8" / 1/2" BSP / NPT Adjustable

Optional:

Head Mounted Transmitter can be mounted 'L' shape available on request

Application:

Chemicals & Petro-chemicals,

Fertilizers & Refineries,

Iron & Steel Companies,

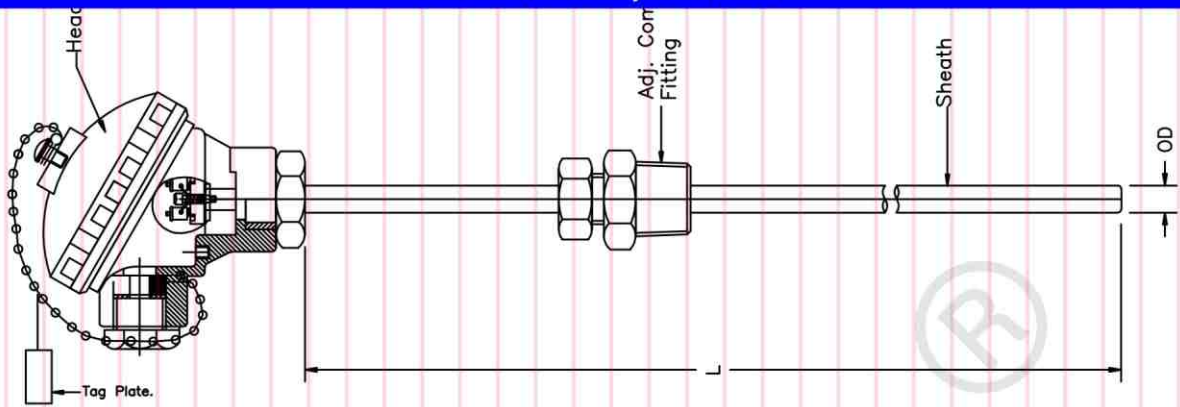
Non Ferrous Metal Industries,

Glass Industries,

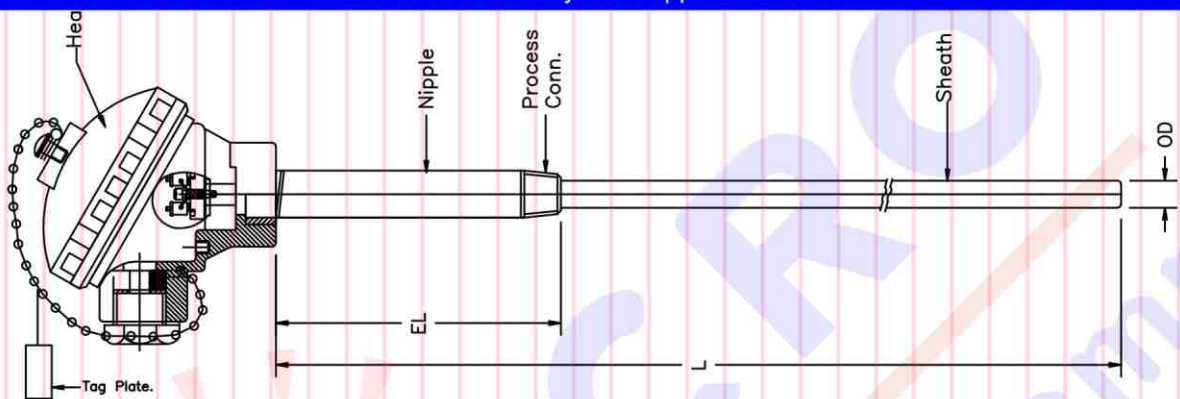
Cement & Refractory Industries,

Nuclear & Thermal Power Generating Plants, etc ...

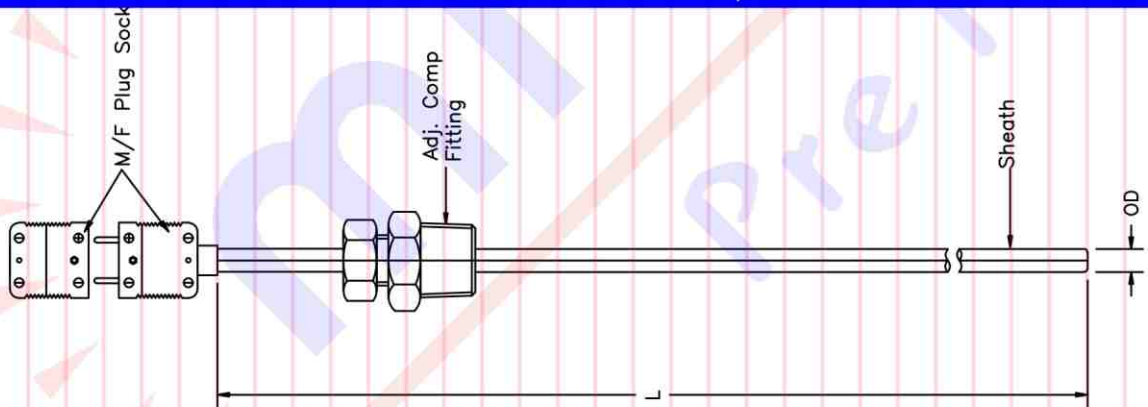
Standard Assembly with Head



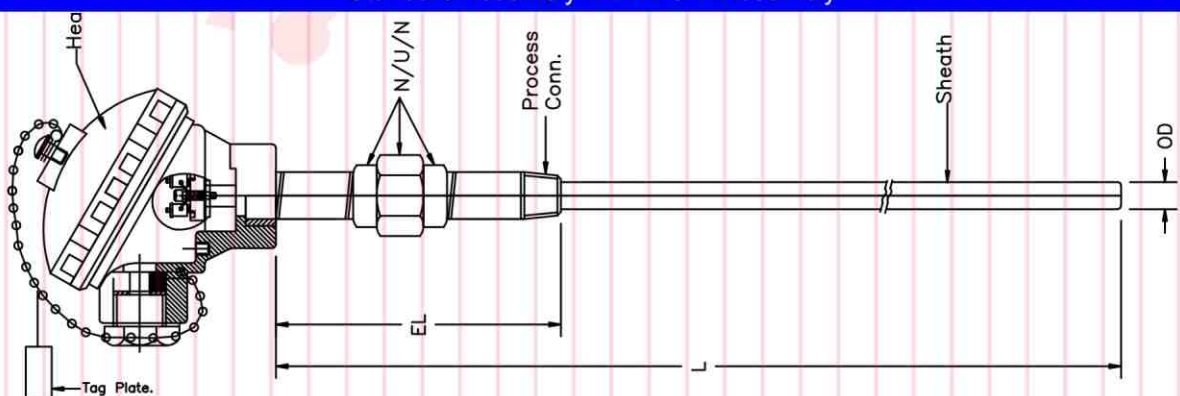
Standard Assembly with Nipple Extension



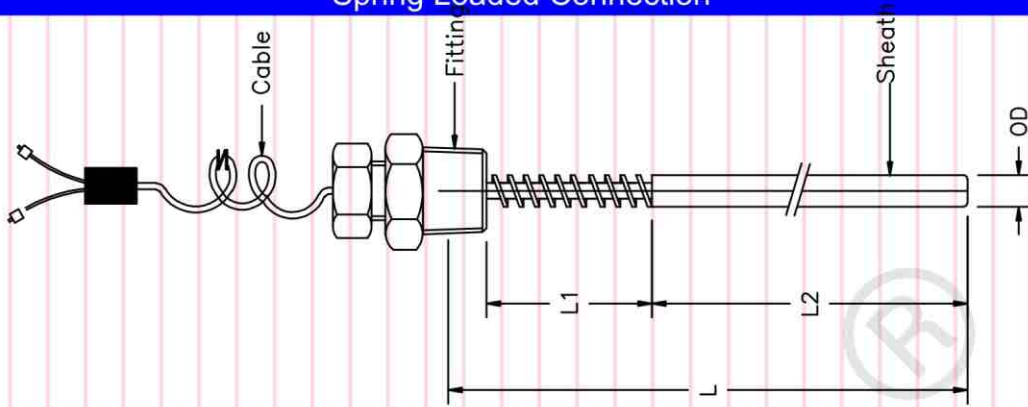
Quick Connection Thermocouple



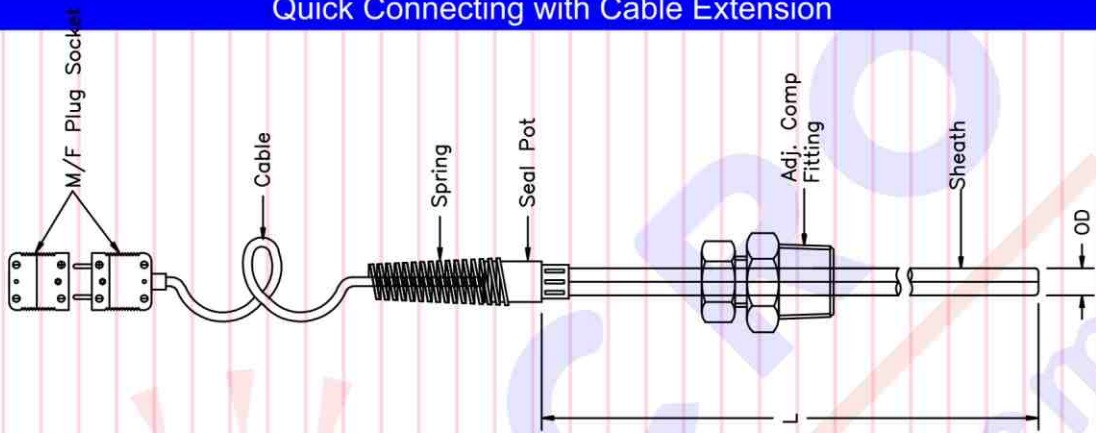
Standard Assembly with N-U-N Assembly



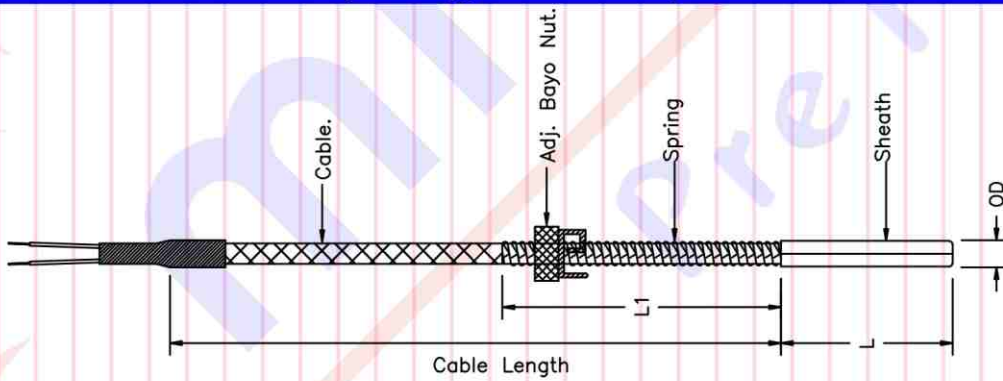
Spring Loaded Connection



Quick Connecting with Cable Extension



Bayonet Type Thermocouple



How To Order Gas Filled or Mercury Filled Temperature Gauge -

1. Basic Code / Series -		
MTC	"MICRO" Brand Thermocouple	XXX
2. Sensor Type		
TCJ	'J' Type Thermocouple (Fe-CuNi) – 750°C	XXX
TCK	'K' Type Thermocouple (NiCr-Ni) – 1250°C	
TCE	'E' Type Thermocouple (NiCr-CuNi) – 900°C	
TCT	'T' Type Thermocouple (Cu-CuNi) – 350°C	
TCN	'N' Type Thermocouple (NiCrSi-NiSi) – 1300+C	
3. Accuracy		
A	Class A	X
B	Class B	
4. No. of Elements		
S	Simplex	X
D	Duplex	
5. Junction Style		
2	Ungrounded Junction	X
3	Grounded Junction	
0	Others Please Specify (2 Wire or 4 Wire System)	
6. Enclosure		
BH	Standard Black Head	XX
WP	Weatherproof Head	
FP	Flameproof Head	
SS	SS Weatherproof Head	
WH	Without Head Flexible Leads	
QC	Male x Female Quick Connector	
7. Sheath Material		
S4	SS 304	XX
S6	SS 316	
S0	SS 310	
I6	Inconel 600	
OT	Others Please Specify	
8. Sheath Diameter		
(06 x L)	Ø 6 mm Dia. (L = Length of Stem, Please Specify)	(XX x X)
(08 x L)	Ø 8 mm Dia. (L = Length of Stem, Please Specify)	
(10 x L)	Ø 10 mm Dia. (L = Length of Stem, Please Specify)	
(12 X L)	Ø 12 mm Dia. (L = Length of Stem, Please Specify)	
9. Connection		
14B/14N	1/4" BSP / 1/4" NPT	XXX
38B/38N	3/8" BSP / 3/8" NPT	
12B/12N	1/2" BSP / 1/2" NPT	
NUN	Nipple – Union – Nipple (1/2" NPT Standard)	
ADF	Adjustable Flange Connection (Please specify the size or dimensions)	
BTC	Bayonet Type Connection	
SLC	Spring Loaded Connection (Please Specify the Connection Size)	
OTH	Others (Please Specify)	
10 Cable Type without Head		
WFC	Without Flexible Cable	XXX
TTC	Teflon / Teflon Flexible Cable	
TSB	Teflon / SS Braided Flexible Cable	
PPC	PVC / PVC Flexible Cable	
OTH	Others (Please Specify)	
11. Optional		
0	None	X
1	Head Mounted Transmitter	
2	Thermowell	
3	'L' Type Thermocouple (For Molten Metal Application) (Please Specify Hot & Cold Arm Length)	