Thermocouple & Resistance Thermometer with **Tungsten/ Silicon Carbide Thermowell**

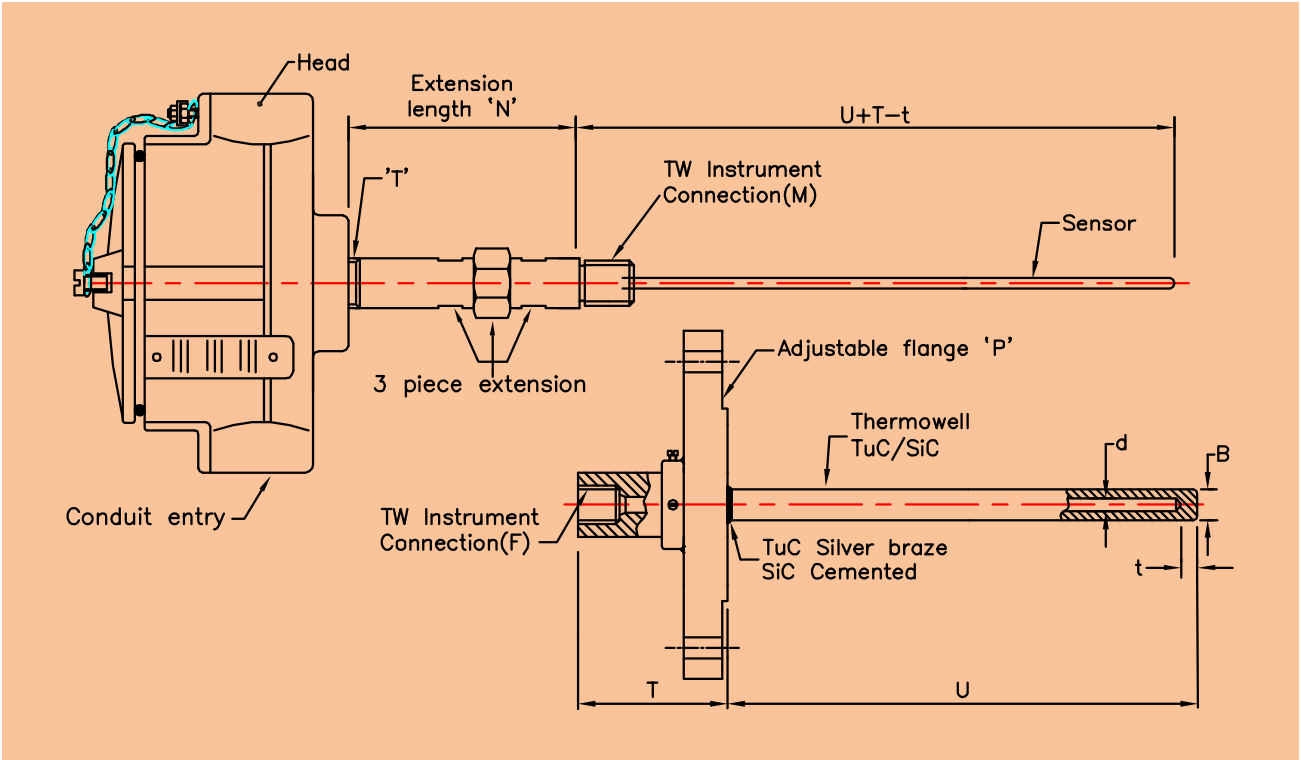
440# Series

- **Solid Sintered Tungsten carbide Thermowell for mill classifier outlet.**
- **Recrystallized Silicon carbide for use on high temperature and abrasive services.**
- **Weather proof execution in 316SS or Aluminium**
- **Available with "in head" 2-wire Temperature Transmitter.**

Mi Thermocouple or Resistance Thermometer sensor fitted into a terminal head, and provided with head extension and solid sintered Tungsten carbide Thermowell would form typically, a complete assembly for use in Power Plants for highly abrasive services such as mill classifier outlet for temperature measurement of Coal + Air ixture. For use at relatively high temperatures we recommend re-crystallized Silicon carbide, which also has a very high abrasion resistance characteristics.

These are recommended for use in Flue gas application in power plants or for use on incinerators employed in modern day waste management systems of process plants. Standard well is available in diameter of 19mm; and is cemented into stainless steel bushing.

The standard execution as shown in this leaflet is with Cd plated CS extension and Aluminium head with conduit entry of 1/2"NPT (M), and well entry of M20x1.5, and an ungrounded Thremocouple.



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Ordering Example - RTD

Model No: 440#MI-2-Pt100B-3W-6-316-IEC751-CJT1001-400-D-IP-87-1-HA108-TUC-F316-200-50-150-1"-150#-BLRF-28-19-19-9-6-1A,3A,5A,4B,31C,14A

Model	Suffix Codes	Description
440#RTD		440#RTD Assembly
No of Elements	1	Simplex
	2	Duplex
	3	Triplex
Element Type	Pt100A	Pt100 RTD Class A tolerence
	Pt100B	Pt100 RTD Class B tolerence
	Pt200A	Pt200 RTD Class A tolerence
	Pt200B	Pt200 RTD Class B tolerence
	Pt500A	Pt500 RTD Class A tolerence
	Pt500B	Pt500 RTD Class B tolerence
No of Wires	2W	2 Wire RTD
	3W	3 Wire RTD
	4W	4 Wire RTD
Sheath Dia	6	6 mm
	8	8 mm
	10	10 mm
		(For more options refer table F)
Sheath Material	316	SS316
	316L	SS316L
	321	SS321
	INC 600	Inconel 600
Calibration Standard	DIN43760	RTD calibration DIN 43760
	IEC751	RTD calibration IEC 60751
CJT Details	CJT 201	Crimp on Pot and Lead Wire
	CJT 1001	Spring Loaded Terminal Block OD=41 PCD=33(Weatherproof)
	CJT 1005	Spring Loaded Terminal Block Od=41 PCD=33(Flameproof)
		(For more options refer table G)
Length Below Base Plate* (To be specified by Pyro)	X	Length Below Base Plate 'X' mm
Head Type	D_IP67	Weatherproof with IP67 Certified as per IEC 60529
	C	Flameproof Exd IIC T6,IP67 as per IEC 60079
		(For more options refer table H)
No Of Conduit Entries	01-10	Select 2 or 1 for Terminal Head & 1-10 for Junction Box
	XX	Not Applicable
Head Assembly Type	HA108	Head-3 Piece Extension & T(M) (Made in Barstock)
	HA112	Head-3 Piece Extension with Spring Loading & T(M)
	HA113	Head-3 Piece Extension with Sealing Arrangement & T(M)
		(For more options refer table E)
Well Material	321	Tuc & Sic
	316	Tuc & Sic
	INC 600	Tuc & Sic
Flange Material	F321	SS 321
	F316	SS316
	F316L	SS 316L (Other options available)
Well Insertion Length Below Flange*	U	Well Insertion Length Below Flange 'U' mm
Well Extension Length Including Flange*	T	Well Extension Length Including Flange 'T' mm
Head Extension Length*	N	Head Extension Length 'N' mm
Flanged Process Connection Size	1	1" ANSI
	1.5	1.5" ANSI
	2	2" ANSI (Other options available)
Flanged Process Connection Rating	150#	150# as per B16.5
	300#	300# as per B16.5
	600#	600# as per B16.5
	900#	900# as per B16.5
	1500#	1500# as per B16.5
	2500#	2500# as per B16.5
Flanged Process Connection Facing	BLRF	Blind Raised Face
	BLRTJ	Blind Ring Type Joint
	SORF	Slip on Raised Face (Other options available)
Rod Diameter*	A	Rod Diameter 'A' mm
Top End Diameter*	B1	Top End Diameter 'B1' mm
Hot End Diameter*	B	Hot End Diameter 'B' mm
Bore ID*	d	Bore ID 'd' mm
Tip Thickness *	t	Tip Thickness 't' mm
Options		(For options refer table A)

*Please consult our marketing team for any non standard dimensions. Note: For field which are not applicable, select 'XX' or enter '0' whichever is mentioned .

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Ordering Example - THERMOCOUPLE

Model No: 440#-MI-2-K-6-20AWG-SS316-IEC584-CJT1001-400-D_IP67-1-HA108-SS316-F316-250-0-80-150-1/2"-150-RF-28-26-16-50-0-0-7-6-Op 1A,3A,5A,4B,31A,15B,16B

Model	Suffix Codes	Description
440#TC		440#TC Assembly
Thermocouple Type	MI	Mineral Insulated
	BE	Ceramic Beaded
Number of Elements	1	Simplex
	2	Duplex
	3	Triplex
Element Type	J	Iron Constantan
	K	Chromel Alumel
	T	Copper Constantan
	E	Chromel Constantan
	N	Nicrosil Nisil
	R	PTRH13%_PT
	S	PTRH10%_PT
	B	PTRH30%_PTRH6%
	C	TU 5% Rhenium –TU 26% Rhenium
Sheath Diameter of TC	6	6 mm
	8	8 mm
	9.5	9.5 mm (For more option refer table F)
Size of Conductor of TC	16AWG	1.29032 mm
	18AWG	1.02362 mm
	24AWG	0.51054 mm
	XX	Not Applicable (For more options refer table C)
Sheath Material for TC	316	SS316
	316L	SS316L
	321	SS321
	INC 600	Inconel 600 (For more options refer table D)
Calibration Standard	ANSIMC96.1	TC calibration as per ANSIMC 96.1
	DIN43710	TC calibration as per DIN 43710
	IEC60584	TC calibration as per IEC 60584
Details of CJT	CJT 201	Crimp on Pot and Lead Wire
	CJT 1001	Spring Loaded Terminal Block OD=41 PCD=33(Weatherproof)
	CJT 1005	Spring Loaded Terminal Block Od=41 PCD=33(Flameproof)
		(For more options refer table G)
Length Below Base Plate* (To be specified by Pyro)	X	Length Below Base Plate X mm
Head Type	D_IP67	Weatherproof with IP67 Certified as per IEC 60529
	C	Flameproof Exd IIC T6,IP67 as per IEC 60079
		(For more options refer table H)
Number of Conduit Entries	01-10	Select 2 or 1 for Terminal Head & 1-10 for Junction Box
Head Assembly Type	HA108	Head-3 Piece Extension & T(M) (Made in Barstock)
	HA112	Head-3 Piece Extension with Spring Loading & T(M)
	HA113	Head-3 Piece Extension with Sealing Arrangement & T(M)
		(For more options refer table E)
Well Material	321	Tuc & Sic
	316	Tuc & Sic
	INC 600	Tuc & Sic
Flange Material	F321	SS 321
	F316	SS316
	F316L	SS 316L (Other options available)
Well Insertion Length Below Flange*	U	Well Insertion Length Below Flange 'U' mm
Safe Length Below Collar*	U1	Well Insertion 'U1' mm
		(Write 0 if Velocity Collar Not Applicable)
Well extension length including Flange*	T	Well Extension Length Including Flange 'T' mm
Head extension length*	N	Head Extension Length 'N' mm
Flanged Process Connection Size	1	1" ANSI
	1.5	1.5" ANSI
	2	2" ANSI (Other options available)
Flanged Process Connection Rating	150#	150# as per B16.5
	300#	300# as per B16.5
	600#	600# as per B16.5
	900#	900# as per B16.5
	1500#	1500# as per B16.5
	2500#	2500# as per B16.5
Flanged Process Connection Facing	BLRF	Blind Raised Face
	BLRTJ	Blind Ring Type Joint
	SORF	Slip on Raised Face (Other options available)
Rod Diameter*	A	Rod Diameter 'A' mm
Top End Diameter*	B1	Top End Diameter 'B1' mm
Hot End Diameter*	B	Hot End Diameter 'B' mm
Bore ID*	d	Bore ID 'd' mm
Tip Thickness*	t	Tip Thickness 't' mm
Options		(For options refer table A)

*Please consult our marketing team for any non standard dimensions. Note: For field which are not applicable, select 'XX' or enter '0' whichever is mentioned.

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