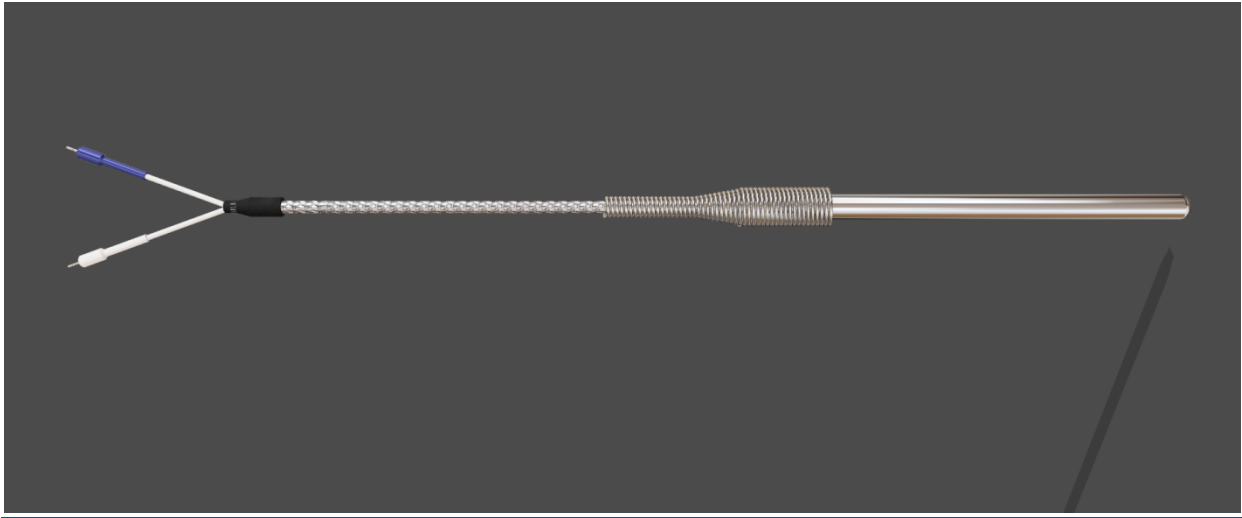


## HS201 PROBE TYPE IMMERSION THERMOCOUPLE



Thermocouple is available in K, J, T, N & E type. The Probe Type Thermocouple is designed to measure the temperature of diverse substances, ranging from liquid to semi-solid to air and gas. The response time of a measurement is affected by the position of the sensor relative to the substance being measured. The HS201 normally curved tip and we customize pointed tip, pin tip and other design as per customer demand. Normally constructed thermocouple offers a speedy 6-10 second responses for a temperature reading and it depends on the outer diameter of the sheath material and thermowell.

With a strong, corrosion-resistant construction, this probe is able to measure surfaces up to 1200°C as per the selection of thermocouple chosen. Spring was added nearer to the cable connection for strain relief.

This type of thermocouples assembly can be used to measure and monitoring the temperature of the vessels, pipe, circular plates etc., purpose. Instead of spring heat shrink sleeve also be added in the place of spring as per customer request.

The temperature rating of the sensor is governed by the temperature rating of the extension cable used to the thermocouple. Please refer the table for temperature rating of extension material.

We will supply the sensor once we calibrate the sensor in our internal ISO/IEC 17025:2015 (NABL) accredited thermal lab by comparison Method.

FEATURES	PRODUCT PROBE THERMOCOUPLE
AVAILABLE TYPE	K, J, N,E,T & E
TEMPERATURE RANGE	-200 TO +1300 °C
STANDARD BARE WIRE SIZE	0.8, 1.2, 1.6, 2.0, 2.5, 3.2 mm
RESPONSE TIME	10 SEC
CONNECTORS	MIL STD, NYLON, PLASTIC, CERAMIC
TERMINATION	PVC LUGS, U TYPE LUGS,
CONFIGURATION	SIMPLEX, DUPLEX, AS PER THE REQUEST
SHAEATH MATERIAL	SS 304, SS 316, SS 310, SS446, INCONEL 600, INCONEL 800, INCOLY, TITANIUM, INCONEL, CERAMIC, APM (SPECIAL ALLOYS ON REQUEST)
GRADE OF PROTECTION	IP 55, IP 65, IP 67, ATEX, CCOE, FLAMEPROOF

**APPLICATION:**

- ENGINE & BEARING HOUSINGS
- CHEMBER TEMPERATURE MEASUREMENT
- LIQUID AND SEMI SOLOD MEDIA TEMPEARTURE MESUREMENT

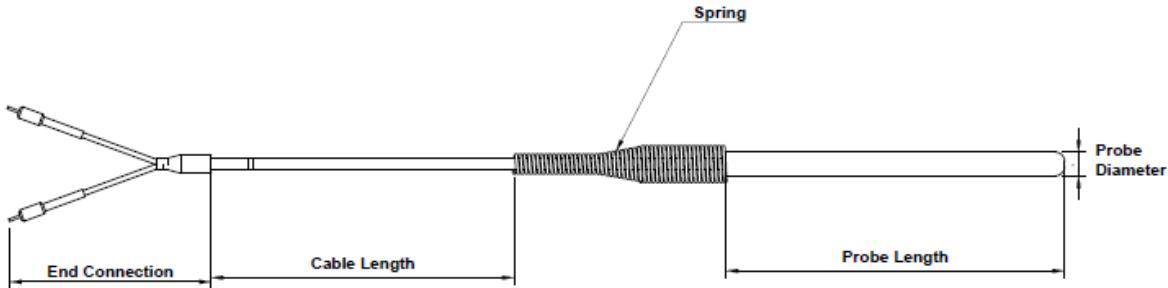
**THERMOCOUPLE MATERIAL TABLE:**

THERMOCOUPLE TYPE	MATERIAL	TEMPERATURE RANGE
K	Chromium-Alumel	-200 to 1200 °C
J	Iron-Constantan	-200 to 760 °C
T	Copper-Constantan	-200 to 390 °C
N	NICROISIL-NISIL	-270 to 1300 °C
E	Chromium-Constantan	-200 to 990 °C

**TOLERENCE CHART OF THE THERMOCOUPLE**

Thermocouple Type	TEMPERATURE RNGE	TOLERENCE VALUE			
		IEC 60751		Indian Standard	
		CLASS A (±C°)	CLASS B (±C°)	TEMPERATURE RNGE	(In ±°C)
T	-200...+370°C	0.004*Temp	0.0075*Temp	-200...+400°C	3 °C
				above +400 °C	0.75%*Temp
J	0...+760°C	0.004*Temp	0.0075*Temp	0...+400°C	3 °C
				+400.....760 °C	0.75%*Temp

<b>K OR N</b>	-200...+1260°C	0.004*Temp	0.0075*Temp	0...+400°C	3 °C
				+400.....1260 °C	0.75%*Temp



### How To Order HS201 Probe Type Thermocouple

A	B	C	D	E	F	G	H	I	J	K	L	M	
HS201	200	8	2	2	1	2	0	400	1	150	1	2	3

<b>A.</b>	<b>MODEL</b>	HS201	*
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<b>B</b>	<b>SPECIFY PROBE LENGTH IN mm</b>
** 200	

<b>C</b>	<b>SPECIFY PROBE DIAMETER IN MM</b>
** 8	

<b>D</b>	<b>CALIBRATION TYPE</b>	
1	J-TYPE	
2	K-TYPE	*
3	T-TYPE	
4	E-TYPE	
5	N-TYPE	

<b>E</b>	<b>SENSOR CONFIGURATION</b>	
1	SIMPLEX	
2	DUPLEX	*
3	TRIPLEX	
4.	SPECIFY	

<b>F</b>	<b>CLASS OF CALIBRATION</b>	
1	CLASS A (IEC 60751)	*
2	CLASS B(IEC 60751)	
3	CLASS A (IS)	
4	CLASS B(IS)	

<b>G</b>	<b>JUNCTION TYPE</b>	
1	GROUNDED	
2	UN GROUNDED	*
3	OPENED	

<b>H</b>	<b>MAX &amp; MIN OPERATING TEMPERATURE in °C</b>	
1	MIN TEMP:	0
2	MAX TEMP:	400

<b>I</b>	<b>SHAETH MATERIAL</b>	
1	SS 304	*
2	SS 310	
3	SS 316	
4	INCONEL 600	
5	INCONEL 800	
6	TITANIUM	






















































<b>J</b>	<b>SPECIFY LEAD WIRE LENGTH IN MM</b>
**150	

<b>K</b>	<b>LEAD WIRE MATERIAL</b>	
1	PTFE/PTFE	*
2	PTFE/PTFE/METAL BRAIDED	
3	FIB/FIB	
4	FIB/FIB/METAL BRAIDED	
5	PVC/PVC	
6	CERAMIC/CERAMIC	

<b>L</b>	<b>TEMINAL TYPE</b>	
1	STRIPPED BARE LEADS	
2	MINIATURE MALE PLUG	*
3	HIGH TEMPERATURE MALE PLUG	
4	MAX. TEMP MALE PLUG	
5	CERAMIC CONNECTORS	
6	RING TYPE LUGS	
7	PVC LUGS	

<b>M</b>	<b>CALIBRATION REQUIREMENT</b>	
1	WITH CALIBRATION REPORT	
2	WITHOUT CALIBRATION REPORT	
3	ISO/IEC 17025-2017 NABL CALIBRATION	*

### COLOUR CODE OF THE THERMOCOUPLE

Thermocouple Type	United States Color Codes  ANSI MC96.1 1982		IEC 60584 -3 Color Coding 		Redundant national color coding for insulation of thermocouple cables			
	Thermocouple Grade	Extension Grade	Thermocouple Grade	Intrinsically Safe	British to BS1843	German to DIN13711	French to NFC42324	Japanese to JIS C1610-1981
								
<b>K Type</b>	KK 	KX 						
<b>T Type</b>	TT 	TX 						
<b>J Type</b>	JJ 	JX 						
<b>N Type</b>	NN 	NX 						
<b>E Type</b>	EE 	EX 						
<b>S Type</b>	None Established	SX 						
<b>R Type</b>	None Established	RX 						
<b>B Type</b>	None Established	BX 