HHRTD-2 Handheld Resistance Temperature Detector Probe with Plastic Handle

TEMPERATURE SENSOR

HHRTD- 2 : Hand Held RTD with plastic handle designed for measuring the temperature in multiple applications. It uses an RTD (Resistance Temperature Detector) element, which is highly accurate and stable, to provide precise temperature readings. These probes are commonly used in food processing, cooking, or quality control , metal processing, hvac, steam temperature, for safety and quality reasons.

Key Features

- Sharp tip option for easy Penetration into the meat or other similar foods.
- FDA Approved 316 SS material to use in direct contact with food.
- Available in type Pt100, Pt1000, Ohm
- Available in Class B, Class A, Class AA, (IEC 60751& ASTM E1137)
- Single and Duplex Sensor elements.
- Range -50°C to 260°C (-58°F to +500 °F)
- Sheath diameter is available 0.188., 0.250, 5mm, 6 mm
- Option with Heavy Duty tip for extended life.

Technical Specification

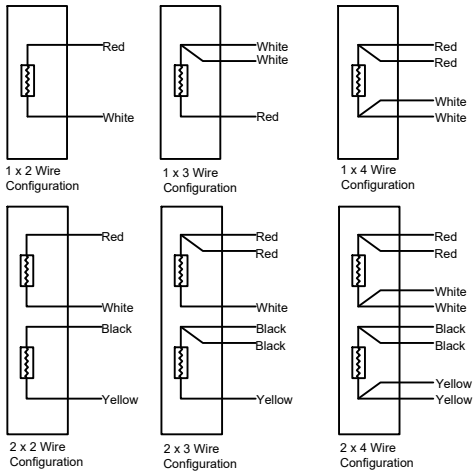
Insulation Resistance : 1000 MG Ohms @ 500 vdc
Response Time : <5 Sec in circulating water @ 1ft/sec
Accuracy : As per IEC60751 (See tolerance chart)
Self Heating Error: < 0.30°F (0.17°C)
Time Constanat : < 5 sec

RTD Wire Configuration

2 Wire: In 2 wire RTDs, one lead wire is connected to each wire of the RTD element. 2 Wire RTDs are an economical option for the applications where high accuracy is not required. Since there is no compensation wire, the accuracy of RTD can be affected if long lead wire is used.

3 Wire : 3 wire RTDs are the most common type of RTDs used in the industry. In 3 three-wire Rtd 1 wire is connected to the one side of the RTD element, and on the other side, 2 wires are connected to compensate for the resistance. With compensating wire, accuracy is very close to the element accuracy at the termination end.

4 wire: 4 wire RTDs are highly accurate. In 4 wire RTDs 2 wires are connected to each side of the RTD element. With additional wire on each side of the RTD element, the output at the termination is highly accurate. 4 wire RTDs are recommended where high accuracy and long lead wire is required.



RTD Type Available				
Element Type	Pt100	Pt200	Pt1000	Ni120
Wire Wound	X	X		
Thin Film	X		X	X
Alpha Value	IEC 0.00385 JIS 0.00391	IEC 0.00385 JIS 0.00391	IEC 0.00385	0.00672

Our RTD class offerings and Tolerance as per IEC60751 (pt100)

Tolerance Class	Temperature Range °C		Tolerance	Tolerance
	Wire Wound	Thin Film	Values Ω	values °C
AA	-50 TO +250	0 TO +150	±0.04	± (0.1 + 0.0017 |t|)
A	-100 TO +450	-30 TO +300	±0.06	± (0.15 + 0.002 |t|)
B	-196 TO +600	-50 TO +500	±0.12	± (0.3 + 0.005 |t|)
C	-196 TO +600	-50 TO +600	±0.23	± (0.6 + 0.01 |t|)
a | t | = modulus of temperature in °C without regard to sign				
For 1/10 DIN B RTD is not standardize. The only accuracy defined is 1/10 of Class B accuracy at 0°C = 0.03°C				

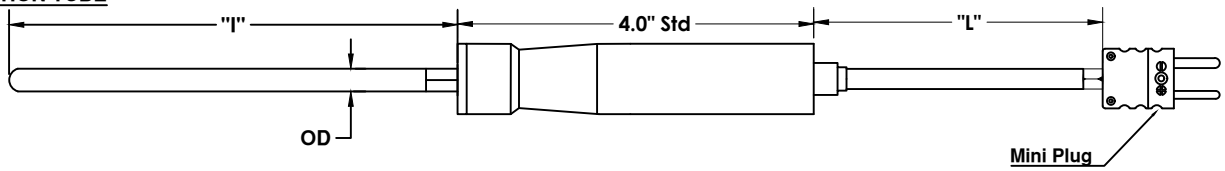
Tolerance Chart pt100 (IEC60751)

Temperature	Class B±	Class A±	Class AA± (1/3 DIN B)	Class 1/10 DIN B±
-50° C	0.55	0.25	0.19	0.060
0° C	0.30	0.15	0.10	0.030
100° C	0.80	0.35	0.27	0.070
200° C	1.30	0.55	0.44	0.120
250° C	1.55	0.65	0.53	0.160
300° C	1.80	0.75	0.61	0.220
350° C	2.05	0.85	0.70	-
400° C	2.30	0.95	0.78	-
450° C	2.55	1.05	0.87	-
500° C	2.80	1.15	0.95	-
550° C	3.05	1.25	1.04	-
600° C	3.30	1.35	1.12	-
650° C	3.55	1.45	1.21	-

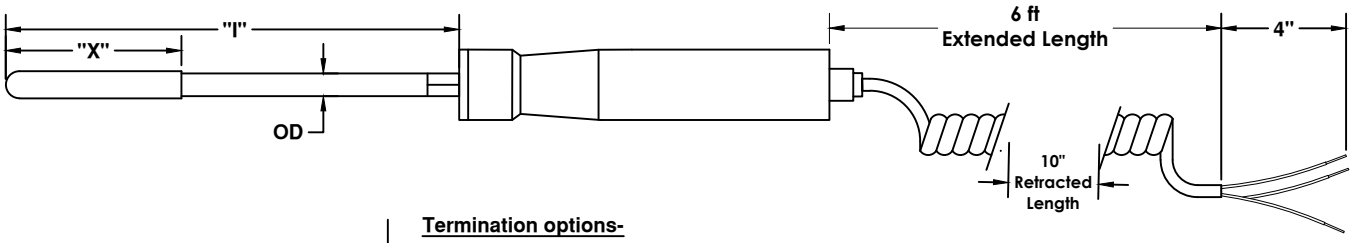
HHRTD-2 Handheld Resistance Temperature Detector Probe with Plastic Handle

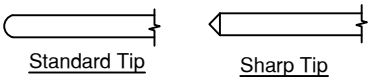
TEMPERATURE SENSOR

WITHOUT PROTECTION TUBE

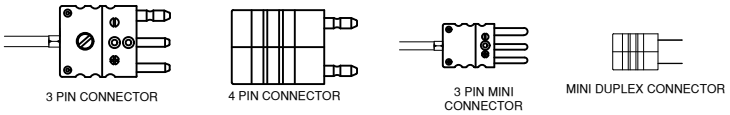


WITH PROTECTION TUBE





Termination options-



	1	2	3	4	5	6	7	8	9	10	11	12
HHRTD2												

For Example- HHRTD2-01-A-S-03-3-8-ST-01-6i-0-6-48i-Z

1. RTD TYPE	
CODE	
01	Pt100 Ohm, 0.00385, Coefficient
04	Pt1000 Ohm, 0.0035, Coefficient

2. RTD ACCURACY	
CODE	
B	Class "B"
A	Class "A"

3. SENSOR ELEMENT	
CODE	
S	Single
D	Dual

4. WIRE CONFIGURATION	
CODE	
02	2 wire
03	3 wire
04	4 wire
06	Dual 6 wire
08	Dual 8 wire

5. SHEATH OD		
CODE	IMPERIAL SIZE	METRIC SIZE
3	3/16"	4.76 mm
4	1/4"	6.35 mm
3M	0.197"	5.0mm
4M	0.236"	6.0 mm

6. SHEATH MAT.	
8	SS316

7. TIP STYLE	
CODE	
ST	Standard
SH	Sharp
NOTE:- Sharp tip only available for RTD without protection tube	

8. PROTECTION TUBE	
CODE	
01	Not Required
02	Required

9. IMMERSION LENGTH (I)
Immersion length- use "I" for inches and "M" or millimetre

10. PROTECTION TUBE LENGTH (X)	
CODE	
0	Protection tube not required
Protection tube length- use "I" for inches and "M" or millimetre	

11. WIRE TYPE/STYLE		
CODE	STYLE	TYPE
1	Straight	PVC (105° C)
6	Straight	TEFLON (260° C)
7	Coil Cord	Polypropylene (PP) (80° C)
NOTE:- Coil Cord is only available in Single element RTD		

12. LEAD LENGTH (L)
Specify lead length , use "I" for inches and "M" for millimeters.
USE **"10i"** for coilcord wire . Maximum extended length for coilcord is 6 ft.

13. CODES FOR TERMINATION	
CODE	
Z	Bare ends
TPP	3 Pin Standard Plug
MTPP	Miniature 3 Pin Plug
FPP	4 Pin Standard Plug