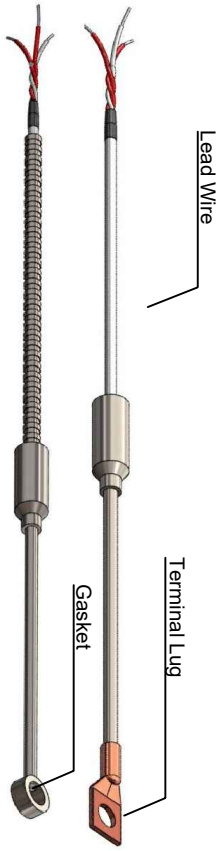
RTD24- Ring Style/Gasket Resistance Temperature Detector With Lead Wire and Connector

TEMPERATURE SENSOR

RTD24 series from Tempotech Controls is designed for precise surface temperature measurement in a variety of industrial applications. This sensor offers flexibility with multiple options, including different bolt sizes and wire configurations, to meet specific requirements. The RTD24 provides reliable and accurate temperature readings, making it ideal for surface monitoring in processes such as manufacturing, heating systems, and machinery. Its customizable features ensure that it can be tailored to fit a wide range of installation environments, delivering consistent performance and enhanced operational efficiency across diverse industries.

Key Features

- Available in type Pt100,Pt100(0.00392),Pt200,Ni20 ohm .
- Available in Class B, Class A, Class AA, 1/10 DIN B(IEC 60751& ASTM E1137)
- Single and Duplex Sensor elements.
- Range -50°C to 510°C (-58°F to 1,112 °F)
- Gasket Style and Lug Type Option
- Bare ends and Connector option avaible
- TEFLON (200°C and fiberglass wire 480°C with SS braiding and Armours available



Technical Specification

Insulation Resistance : 100 MG Ohms @ 250 vdc

Response Time : <5 Sec in circulating water @ 3ft/sec

Accuracy : As per IEC60751 (See tolerance chart)

Self Heating Error: < 0.30°F (0.17°C)

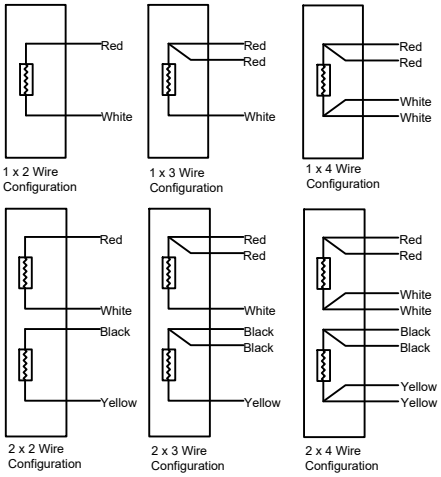
Time Constanat : < 5 sec

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
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				

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	-

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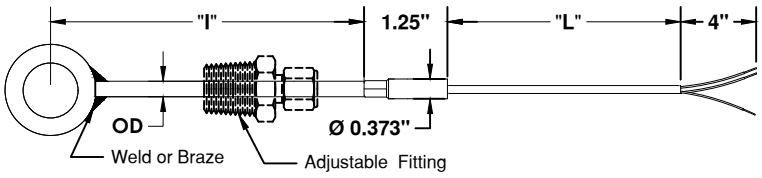
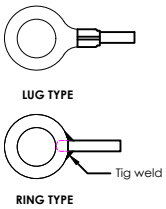
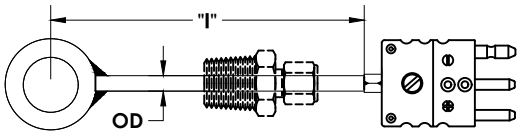
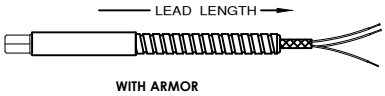
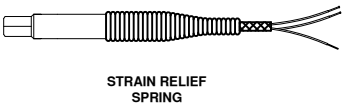
TEMPERATURE SENSOR

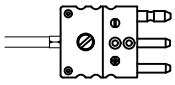


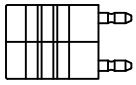


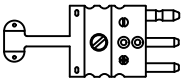


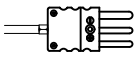


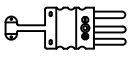



3 PIN CONNECTOR


4 PIN CONNECTOR


3 PIN CONNECTOR WITH BRACKET


3 PIN MINI CONNECTOR


3 PIN MINI CONNECTOR WITH BRACKET


MINI DUPLEX CONNECTOR

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
RTD24																	

For Example- RTD24-01-A-S-04-LT-02-03-3-8-12i-96i-S8N-3X-Z-0-0-0

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

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

3. SENSOR ELEMENT	
CODE	
S	Single
D	Dual
Note Dual RTD not available in 1/8" and 3 mm OD	

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

5. TEMPERATURE RANGE	
CODE	
LT	-50°C to 250°C, Thin Film
MT	-50°C to 485°C, Thin Film

6. RING TYPE	
CODE	
01	Lug Type
02	Ring Type

7. LUG/GASKET SIZE		
CODE	LUG	GASKET
01		#8 screw(.173" ID)
02		#10 screw(.204" ID)
03		1/4" screw (6mm)
04		5/16" screw (8mm)
05		3/8" screw(9mm)
06		1/2" screw(12mm)
10	3/8" screw(9mm)	
11	#8 screw	
12	#10 screw	

8.SHEATH OD		
CODE	IMPERIAL SIZE	METRIC SIZE
2	1/8"	3.2 mm
3	3/16"	4.76 mm
4	1/4"	6.35 mm
5	5/16"	7.9mm
6	3/8"	9.5 mm
7	0.215"	5.46 mm
2M	0.079"	3.0mm
3M	0.197"	5.0mm
4M	0.236"	6.0 mm
5M	0.315"	8.0mm
6M	0.354"	9.0 mm
7M	0.394"	10.0 mm

9. SHEATH MAT.	
CODE	
8	SS 316
4	SS 310
9	SS 304
6	SS 321

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

11. LEAD LENGTH (L)	
0	No Lead Wire required
Lead length - use "I" for inches and "M" for millimetre	

12. PROCESS FITTING	
CODE	
0	Not Required
12-1. MATERIAL	
S	Stainless Steel
B	Brass
M	Mild Steel
12-2. SIZE	
2	1/8"
4	1/4"
6	3/8"
8	1/2"
18	M18 X 1.5
20	M20 X 1.5
12-3. THREAD TYPE	
N	NPT
B	BSP
Leave blank for metric thread	
12-4. FERRULE MATERIAL	
	Leave Blank for SS
T	Teflon

CONTINUE ON NEXT PAGE

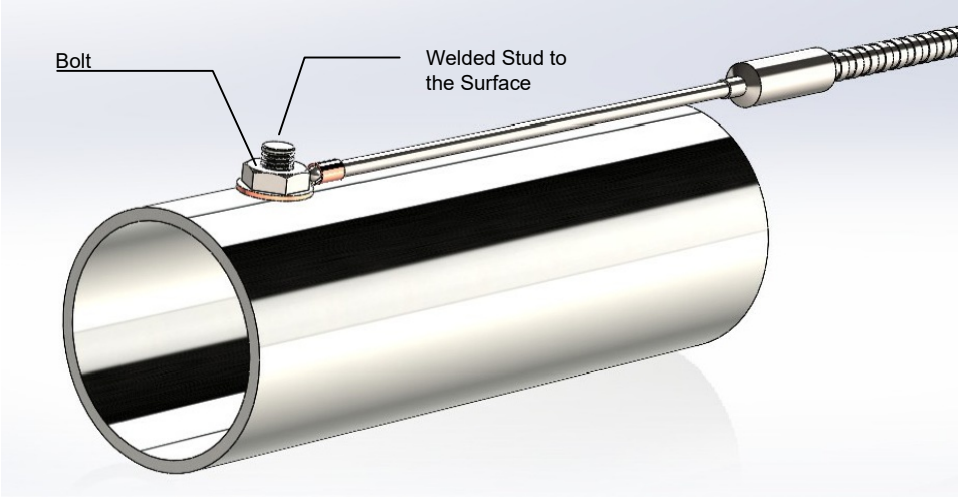
13. WIRE TYPE	
CODE	
0	No Leade Wire
2	TEFLON (200° C)
3	FIBRE GLASS (480° C)
NOTE:- Add "O" for no jacketing. Add "X" for SS braiding & "Z" for Armour	

14. CODES FOR TERMINATION	
CODE	
Z	Bare ends
TPP	3 Pin Standard Plug
MTPP	Miniature 3 Pin Plug
FPP	4 Pin Standard Plug
RM	M12 Round Connector Male

15. CODES FOR TERMINATION (JACK)	
CODE	
0	Not required
TPJ	3 Pin Standard Jack
MTPJ	Miniature 3 Pin Jack
FPJ	4 Pin Standard Jack
RF	M12 Round Connector Female

16. OPTIONAL ACCESSORY	
CODE	
0	Not required
02	Strain relief spring (Only for lead wire without Armour)

17. OPTIONAL ACCESSORY	
CODE	
0	Not required
WC	Wire clamp
Only choose when ordering with connector	



Typical Installation