

RTD23 series from Tempotech Controls, featuring a melt-bolt design, is used in extruders and injection molding machines to directly measure the melt temperature of plastic as it flows through the extruder barrel. For applications requiring specific materials, values, or tolerances, customized elements are available upon request. The RTD23 offers accurate and reliable temperature measurement, ensuring efficient control of plastic melt temperatures in various manufacturing processes.

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)
- Bolt Length 3",6",9" and 12"
- Bare ends and Connector option available
- 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 @ 1ft/sec

Accuracy : As per IEC60751 (See tolerance chart)

Self Heating Error: < 0.30°F (0.17°C)

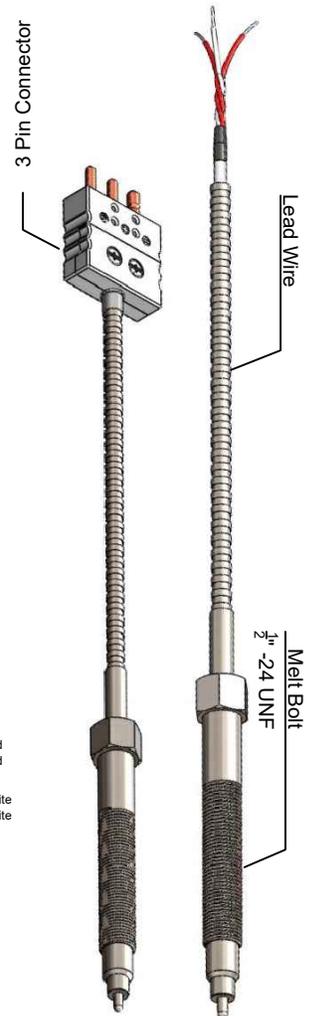
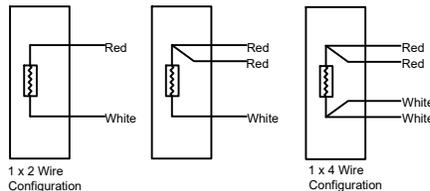
Time Constanat : < 5 sec

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
Thin Film	X		X	X
Alpha Value	IEC 0.00385 JIS 0.00391	IEC 0.00385 JIS 0.00391	IEC 0.00385	0.00672

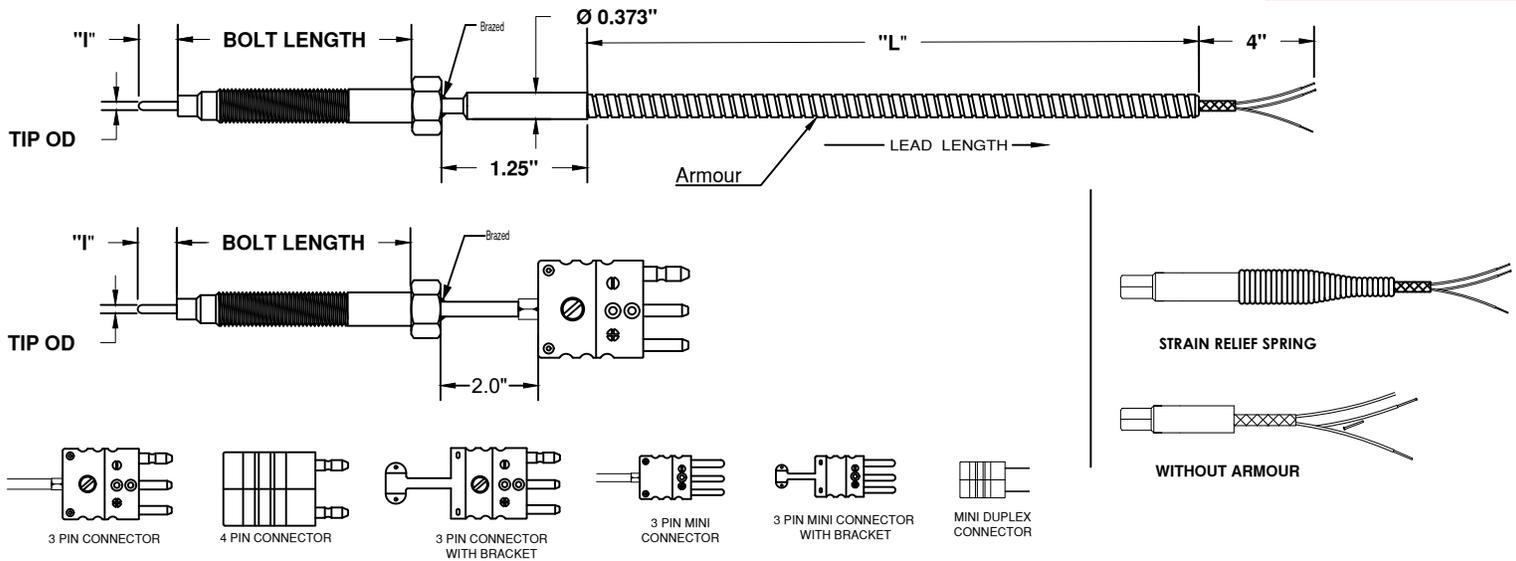
Our RTD class offerings and Tolerance as per IEC60751 (pt100)

Tolerance Class	Temperature Range °C		Tolerance Values Ω	Tolerance values °C
	Wire Wound	Thin Film		
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	-



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RTD23															

For Example- RTD23-01-A-S-03-LT-3-8-6-32i-2Z-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

4. WIRE CONFIGURATION	
CODE	
03	3 wire
04	4 wire

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

6. TIP OD		
CODE	IMPERIAL SIZE	METRIC SIZE
2	1/8"	3.2 mm
3	3/16"	4.76 mm
2M	0.079"	3.0 mm
3M	0.197"	5.0 mm

7. SHEATH MAT.	
CODE	
8	SS 316

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

9. BOLT LENGTH	
CODE	
3	3"
6	6"
9	9"
12	12"
09	Specify if any other

10. LEAD LENGTH (L)	
CODE	
0	No lead wire required
Lead length - use "I" for inches and "M" for millimetre	

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

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

13. CODES FOR TERMINATION (JACK)	
CODE	
0	Not required
TPJ	3 Pin Standard Jack
MTPJ	Miniature 3 Pin Jack
FPJ	4 Pin Standard Jack

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

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