

RTD43- Flexible Spring Bayonet Style RTD (Resistance Temperature Detector) consist of a long flexible SS spring along with bayonet cap locking mechanism mounted on wire. This arrangement allows for spring loading of temperature measuring tip and facilitates firm contact of tip with the surface to achieve fast response and accurate temperature readings. This construction is designed to withstand vibration, movement and challenging mounting conditions, this RTD delivers consistent performance in harsh applications.

Key Features

- Spring-Loaded Tip – Ensures consistent contact with the measuring surface for improved accuracy and faster response times.
- Accommodates variations in installation depth by applying constant pressure.
- Most suited for installations requiring movement or frequent adjustments.
- Typically operating ranging is from -50°C to 500°C, depending on insulation and sheath material.
- Available in 2-wire, 3-wire, or 4-wire configurations for enhanced accuracy and reduced lead wire resistance errors.
- Available in Insulations like Teflon (PTFE), Fiberglass, or PVC based on environmental requirements.
- Typically uses Pt100 or Pt1000 elements with Class A or B accuracy (per IEC 60751).

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)

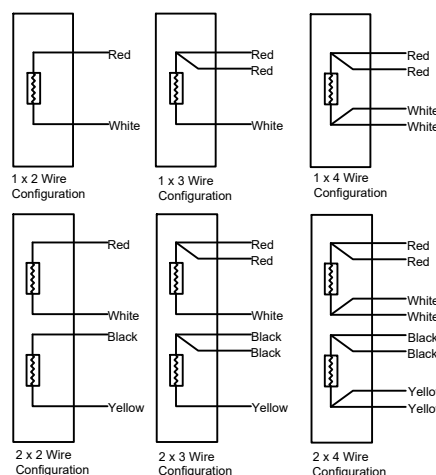
Time Constanat : < 5 sec

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.



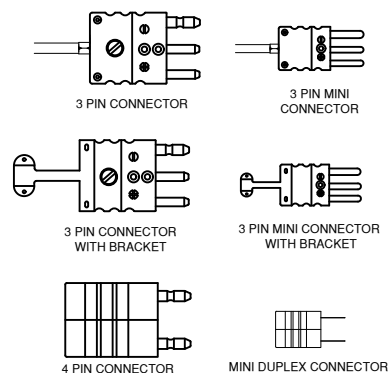
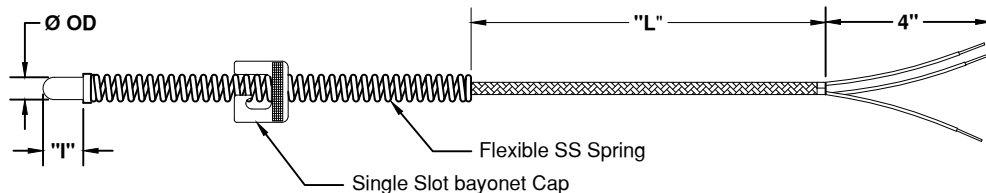
RTD Type Available

Element Type	Pt100	Pt200	Pt1000	Ni120
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 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	-



Notes:

1. Standard Spring length 12".

	1	2	3	4	5	6	7	8	9	10	11	12	13
RTD43													

For Example- RTD43-01-A-S-03-LT-3-8-1i-72i-3X-Z-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

4. WIRE CONFIGURATION	
CODE	
03	3 wire
04	4 wire
06	Dual 6 wire
08	Dual 8 wire
Note: Dual RTD not available with 1/8" and 3 mm OD	

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
3	3/16"	4.76 mm
4	1/4"	6.35 mm
2M	0.079	3.0mm
3M	0.197"	5.0mm
4M	0.236"	6.0 mm
5M	0.315"	8.0mm

7. SHEATH MAT.	
CODE	
8	SS 316

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

9. LEAD LENGTH (L)	
Lead length - use "I" for inches and "M" for millimetre	

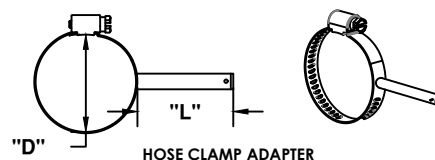
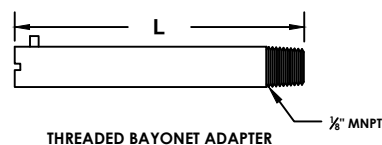
10. WIRE TYPE	
CODE	
2	TEFLON (200° C)
3	FIBRE GLASS (480° C)
NOTE:- Add "O" for no jacketing. Add "X" for SS braiding & "Z" for Armour	

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

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

13. OPTIONAL ACCESSORY	
CODE	
0	Not required
WC	Wire clamp
EL	Cord End Lugs
SL	Spade (Fork) Lugs
Only choose when ordering with connector	

ACCESSORIES



NOTE : SEE ACCESSORIES PAGE TO ORDER