BRTD-41 Adjustable Depth Bearing RTD with Spring Loaded Bayonet Lock and Lead Wire

TEMPERATURE SENSOR

BRTD 41- Tip Sensitive Bayonet Style RTDs with copper tip are flexible temperature sensors that offer easy installation and secure mounting, making them perfect for applications requiring reliable and consistent surface contact. They are equipped with a spring-loaded bayonet cap that maintains constant pressure against the measurement surface, ensuring accurate and stable temperature readings.

Key Features

- Available in type Pt100,Pt200,Pt1000,Ni120 ohm.
- Adjustable depth spring loaded bayonet lock.
- 20 time faster response than standard stainless steel tip.
- Available in Class B, Class A (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, 0.215 and 0.250 Inch.
- High Vibration resistance and ultra-temperature option available

Technical Specification

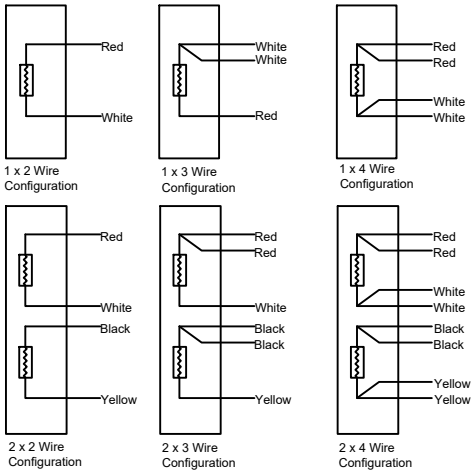
Insulation Resistance : 1000 MG Ohms @ 500 vdc
Response Time : <5 Sec in circulating water @ 1ft/sec
Accuracy : As per IEC60751 (See tolerance chart)
Self Heating Error: < 0.30°F (0.17°C)
Time Constanat : < 3 sec

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	-

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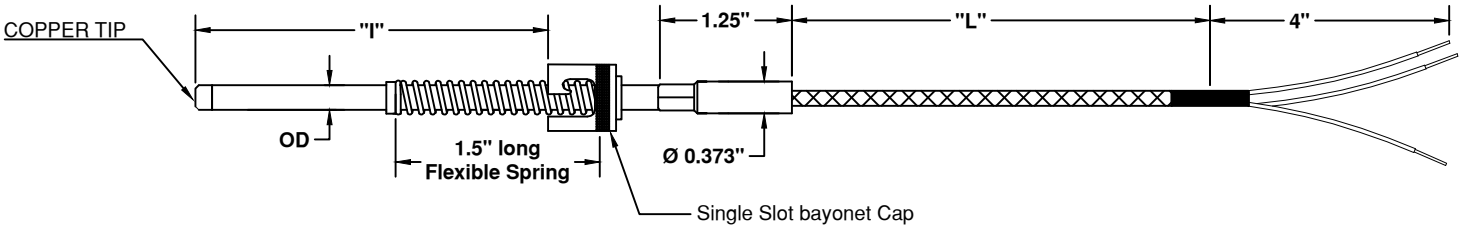
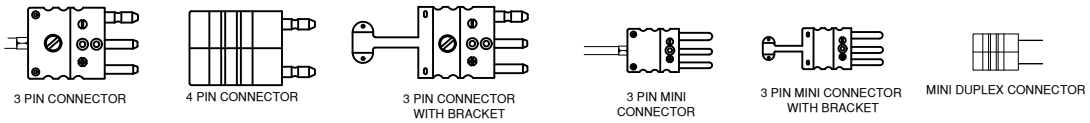


Termination options-



Notes:
1. Standard temperature range is -50°C to 260°C
2. Standard sheath material is SS316.

	1	2	3	4	5	6	7	8	9	10	11	12
BRTD41												

For Example- BRTD41-PT-A-S-04-0-3-4i-18i-1-Z-0-0

1. RTD TYPE	
CODE	
PT	Pt100 Ohm, 0.00385, Coefficient
PT2	Pt200 Ohm, 0.00385, Coefficient
PTK	Pt1000 Ohm, 0.00385 Coefficient
NI	Ni120 Ohm, 0.00672 Curve Class B Only (Only Available in Low temp)

2. RTD ACCURACY	
CODE	
B	Class "B" (For Ni120)
A	Class "A" (For PT100)

3. SENSOR ELEMENT	
CODE	
S	Single
D	Dual

4. WIRE CONFIGURATION	
CODE	
02	2 wire (Red/White)
03	3 wire (Red/Red/White)
04	3 wire (Red/White/White) STD
06	6 wire (4Red/2Red) Dual Element
07	6 wire (Red/Red/White/ Black/Black/Yellow)Only available with Dual Element

5. TIP STYLE	
CODE	
0	Standard Copper Tip
INS	Stainless Steel Isolated Tip

6. SHEATH OD		
CODE	IMPERIAL SIZE	METRIC SIZE
3	3/16"	4.76 mm

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

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

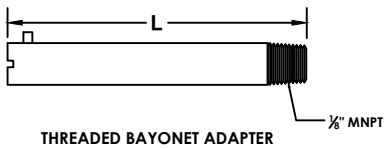
9. WIRE TYPE	
CODE	
6	TEFLON (260° C)
NOTE:- Add "X" for SS braiding & "Z" for SS Armor	

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

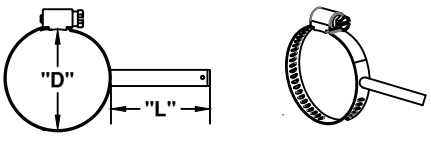
11. CODES FOR TERMINATION (JACK)	
CODE	
0	Not required
TPJ	3 Pin Standard Jack
MTPJ	Miniature 3 Pin Jack
FPJ	4 Pin Standard Jack

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

ACCESSORIES



THREADED BAYONET ADAPTER



HOSE CLAMP ADAPTER

NOTE : SEE ACCESSORIES PAGE TO ORDER