

RTD

Resistance Temperature Detector, Platinum

Introduction

RTDs change resistance with temperature changes. They are more accurate than thermocouples, especially over a narrow range. Standard accuracy ratings of 0.25% and 0.10% are offered. However, they offer less resistance to physical shock, and respond slower.

The RTD element is a wire coil precision wound to a specific resistance value, hermetically sealed to prevent influence from moisture. It is mounted in the tip of a metal protection tube for physical protection

Ordering Information

Model No. R - - - -

Field No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Schedule: S2

Fields 1, 2, 3. BASE MODEL

☞ Determine length by completing Fields 8, 9 and Fields 10, 11, 12, then add together

Description	Accuracy	Temperature Rating
R51 - 0.00391 $\Omega/\Omega/^\circ\text{C}$	0.25%	500°F (Teflon)
R52 - 0.00391 $\Omega/\Omega/^\circ\text{C}$	0.10%	500°F (Teflon)
R53 - 0.00391 $\Omega/\Omega/^\circ\text{C}$	0.25%	932°F (Fiberglass)
R54 - 0.00391 $\Omega/\Omega/^\circ\text{C}$	0.10%	932°F (Fiberglass)
R71 - 0.00385 $\Omega/\Omega/^\circ\text{C}$	0.25%	500°F (Teflon)
R72 - 0.00385 $\Omega/\Omega/^\circ\text{C}$	0.10%	500°F (Teflon)
R73 - 0.00385 $\Omega/\Omega/^\circ\text{C}$	0.25%	932°F (Fiberglass)
R74 - 0.00385 $\Omega/\Omega/^\circ\text{C}$	0.10%	932°F (Fiberglass)

Field 4. NUMBER OF ELEMENTS AND WIRES

See compatibility table after Fields 14, 15

- 1 - Single element, 3 wire .
- 2 - Dual element, 3 wire (Requires 0.250" protection tube, Fields 5, 6)
- 5 - Single element, 4 wire

Fields 5, 6. PROTECTION TUBE

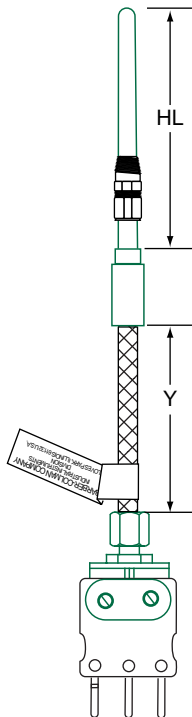
☞ Use length determined in Fields 8, 9

Size	Material	12" Min.	Ea. Add'l 6"
65 - 0.188" o.d.	304 stainless steel		
66 - 0.250" o.d.	304 stainless steel		
68 - 0.188" o.d.	316 stainless steel		
69 - 0.250" o.d.	316 stainless steel		
72 - 0.250" o.d.	Inconel		

Field 7. FLEXIBLE LEAD MATERIAL

☞ Use length determined in Fields 10, 11, 12. See compatibility table after Field 15.

- | | First 24" | Ea Add'l 6" |
|--|-----------|-------------|
| 0 - None | | |
| 1 - Teflon (500°F) or Fiberglass (932°) | | |
| 2 - Teflon (500°F) or Fiberglass (932°) with armor | | |
| 3 - Teflon (500°F) or Fiberglass (932°) with SS overbraid
(available only if Field 4 is code 1) | | |



Ordering Information (continued)

Fields 8, 9. HOT LENGTH (DIMENSION "HL")

- ☞ Complete these Fields to determine lengths for Fields 1, 2, 3, and Fields 5, 6
- HL - Actual length in whole inches; minimum 3"
- 99 - Longer than 98". Specify details on order Consult factory

Field 10, 11, 12. FLEXIBLE LEAD LENGTH (DIMENSION "Y")

- ☞ Complete these Fields to determine lengths for Fields 1, 2, 3, and Field 7
- 000 - None - no flexible lead
- YYY- Actual length in whole inches
- 999 - Longer than 998". Specify details on order Consult factory

Field 13. MOUNTING FITTING

- 4 - 1/4" NPT nickel plated brass compression fitting
- 5 - 1/4" NPT stainless steel compression fitting
- 7 - Stainless steel double ended bushing, 1/2" NPT only
- 8 - Spring loaded stainless steel double ended bushing, 1/2" NPT only
- 9 - Specify details on order Consult factory

Fields 14, 15. COLD END TERMINATION

See page 3-24 for protection tube/cold end termination compatibility table.
See compatibility table below

- | | Single | Dual |
|---|--------|------|
| 00 - 2-1/2" split leads, ends stripped . | | |
| 01 - 2-1/2" split leads, spade lugs | | |
| 02 - 2-1/2" split leads, spade lugs, 1/2" NPS box connector with lock nut | | |
| 03 - Solid pin quick disconnect plug | | |
| 04 - Solid pin quick disconnect plug with mating jack | | |
| 05 - Ceramic wafer open head | | |
| 06 - Miniature head and cover | | |
| 08 - General purpose, cast iron head | | |
| 09 - General purpose, aluminum head | | |
| 10 - Weatherproof, cast iron head | | |
| 12 - Weatherproof, plastic head | | |
| 27 - Weatherproof, aluminum head | | |
| 21 - Amphenol connector | | |
| 22 - Explosion proof head | | |
| 30 - Single ended 1/4" NPT hex bushing, 6" leads | | |

Compatibility Table. Blank cell = compatible; filled cell = not compatible

Fields 14, 15	00	01	02	03	04	05	06	08	09	10	12	27	21	22	30
Field 4, Code 1															
Field 4, Code 2															
Field 4, Code 5															
Field 4, Code 4															
Field 7, Code 0															
Field 7, Code 1															
Field 7, Code 2															
Field 7, Code 3															