

RTD-831-Series

Bolt-On RTD Sensor with Aluminum Flag Housing

Omega's RTD-831 series 3-wire RTD sensor features an improved barrel and flag design on the aluminum housing which gives improved durability. The flag is machined to accept various size screws for easy installation on flat surfaces by either being bolted or cemented onto the surface. This is available in 100 Ω or 1000 Ω Platinum RTD element and is available in a high temperature (-HT) version. Connection options available are miniature 3-pin connector (-MTP), standard 3-pin connector (-OTP), stripped ends (-SE), and spade lugs (-LUG). For other connector types, please contact Sales. Applications for this type of sensor include product performance testing; climate control/HVAC; monitoring and control of processes; hot plate equipment, and process pipes.



Features

- Updated housing design for improved strain relief
- Standard hole for #3 and #4 screw. Other holes sizes available
- Small aluminum housing allows for installation on most flat surfaces
- Sensor can be bolted or cemented into place
- Class A or Class B RTD element conforming to IEC 60751
- Temperature range -60 to 230°C (-76 to 446°F) for standard item. “-HT” (high temp) range -60 to 450°C (-76 to 842°F)
- Resistance value: PT100 Ω or PT1000 Ω
- Connection options are miniature 3-pin connector, standard 3-pin connector, stripped ends, and spade lugs

Specifications

Process Temperature Range	-60 to 230°C (-76 to 446°F) -60 TO 450°C (-76 to 842°F) -HT units
Resistance and Accuracy	PT100 or PT1000 Ω Class A or Class B accuracy per IEC 60751
Connection Type	Four available: Miniature, Standard, Stripped ends, Spade Lugs
Dimensions and mounting screw	Barrel dimensions: 0.562 in. by 0.190 in. Mounting body dimension: 0.31 in. x 0.31 in. Screw sizes: #3 and #4 standard; other holes sizes available for #5 and #6, #8 and #10
Cable length	1-meter standard. Other cable lengths available
Cable material	Standard, PFA coated leads. For -HT (high temp), fiberglass with stainless steel overbraid
Mounting Style	Bolt-on or Cement-on

Ordering Example: RTD-831-MTP: 100 Ω , Class A Surface RTD with 0.116 in. hole for #3 or #4 screw, 1-meter leads, 3-pin mini connector

RTD-831 Termination Options		
Suffix	Connector Part Number	Termination Description
-MTP	MTP-U-M	3-pin male miniature
-OTP	OTP-U-M	3-pin male standard
-LUG	n/a	Spade lugs
-SE	n/a	Stripped ends

Ordering Example: RTD-831-LUG: 100 Ω , Class A Surface RTD, 1-meter leads, 0.116 in. hole dimension for #3 and #4 screw, with spade lug termination.

RTD-831 Screw size Designation		
Suffix	Hole Dimension	Screw size
None	0.116 in.	#3 and #4
-H147	0.147 in.	#5 and #6
-H170	0.170 in.	#8

Ordering Example: RTD-831-MTP-H147: 100 Ω , Class A Surface RTD, 1-meter leads, 0.147 in. hole dimension for #5 and 6 screw, with male mini connector.

