

Non-display Resistance Thermometers

Catalog Numbers 837RTD-N1x, 837RTD-N2x

Summary of Changes

Included product information for PT 100.

Specifications

Attribute	Description
Operation Conditions: Environment	
Ambient temperature	-40...+100 °C (-40...+212 °F)
Medium temperature	Same as measuring temperature ranges
Storage temperature	-40...+85 °C (-40...+185 °F)
Vibration resistance	The acceleration values of 3 g (0.1 oz) required per DIN EN 60 751 (IEC 751) can be exceeded by far. Depending upon the installation situation, medium, temperature, and insertion length, the vibration resistance can be up to 10 g (0.35 oz).
Shock resistance	Up to 500 g (11.637 oz) depending on installation situation, medium, and temperature.
Operating pressure	Maximum 200 bar depending on medium, temperature, and thermal design.
Response time	The response time affects the following: <ul style="list-style-type: none"> • Thermowell that is used, in this case the stainless steel 1.4305 ms • Heat transmission from thermowell to the measuring element • Flow rate of the medium
Electrical connection	Circular connector M12 x 1, four pins, Code A
Ingress protection	IP67
Material	
Thermowell	Stainless steel 1.4305
Diameter	6.0 mm (0.24 in.)
Measuring Temperature Ranges	
Temperature Range	Standard: -30...+130 °C (-22...+266 °F) Extended: -50...+200 °C (-58...+392 °F)

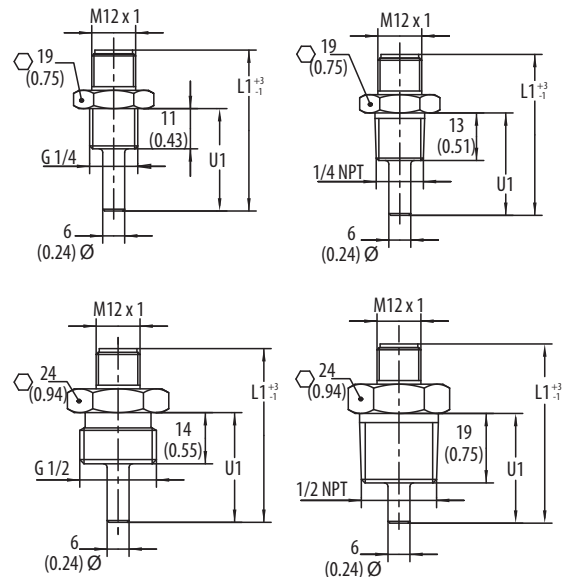
- The installation instructions are part of the product and must be kept in the immediate vicinity of the instrument and readily accessible to qualified personnel at any time.
- Qualified personnel must have carefully read and understood the installation instructions, before any work begins.
- The Bulletin 837RTD is a screw-in thermometer that is designed for temperature measurement. It can, however, be a source of danger if used incorrectly or for anything other than the designated use.
- Qualified personnel are required for installation and commissioning. Failure to comply results in personal injury or equipment damage.
- During mounting, make sure that the sealing faces at the instrument and the measuring point are clean and undamaged.
- Safety Installation Considerations: Before installation, commissioning, and operation, be sure that the appropriate temperature transmitter has been selected in terms of measuring range, design, and specific measuring conditions.

Qualified Personnel

Qualified personnel are required to conduct the work that is described and recognize potential hazards.

Dimensions [mm (in.)]

Without Neck Tube [-30...+130 °C (-22...+266 °F)]



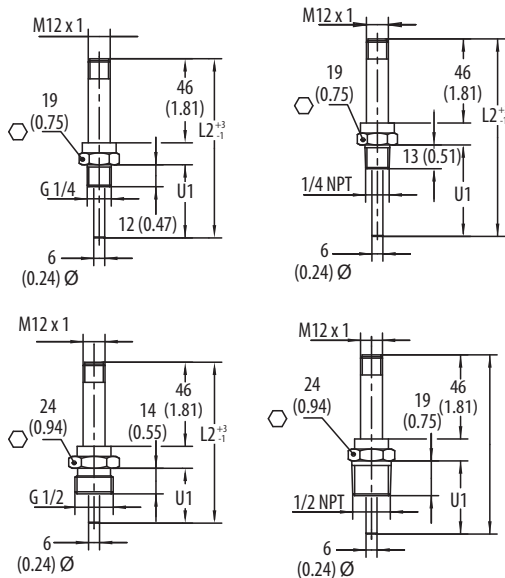
Safety Considerations

Read this document for information on installation, handling, mounting, general product specifications, and operation of this product. These installation instructions contain important information on handling the instrument.

Working safety requires that all safety instructions and work instructions are observed.

- Observe the relevant local accident prevention regulations and general safety regulations for the range of use of the instrument.

With Neck Tube [-50...+200 °C (-58...+392 °F)]



U1	L1	L2
22 (0.87)	38 (1.50)	80 (3.15)
28 (1.10)	44 (1.73)	86 (3.38)
30 (1.18)	46 (1.81)	88 (3.46)
40 (1.57)	56 (2.20)	98 (3.86)
50 (1.97)	66 (2.60)	108 (4.25)

U1	L1	L2
60 (2.36)	76 (2.99)	118 (4.64)
65 (2.56)	81 (3.19)	123 (4.84)
100 (3.94)	116 (4.57)	158 (6.22)
150 (5.90)	166 (6.53)	208 (8.19)
250 (9.84)	266 (10.47)	308 (12.12)

Mating Cables

- 889D-F4AB-2 (M12x1 connector)
- 889D-R4AB-2 (M12x1 right angle connector)

Process Connection

Attribute	Description
Measuring Element	Pt1000, Pt100
Process Connection	Thread – 1/4 NPT male – 1/2 NPT male – G1/4 B male – G1/2 B male

Rockwell Automation Support

For technical support, visit
<http://www.rockwellautomation.com/support/overview.page>.

Rockwell Automation maintains current product environmental information on its website at
<http://www.rockwellautomation.com/rockwellautomation/about-us/sustainability-ethics/product-environmental-compliance.page>.

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Rockwell Otomasyon Ticaret A.Ş., Kar Plaza İş Merkezi E Blok Kat:6 34752 İçerenköy, İstanbul, Tel: +90 (216) 5698400

www.rockwellautomation.com

Power, Control and Information Solutions Headquarters

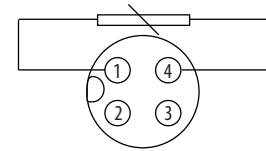
Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444
 Europe/Middle East/Africa: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640
 Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

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Wiring

The screw-in thermometers of the 837RTD are built in two-wire connections. The resistance of the connecting leads affects the measurement value of two-wire connections and must be considered. For copper cable with cross section 0.25 mm² (24 AWG), the following value applies: 0.163 Ω/m 0.04° C/M for PT 1000 and 0.4° C/M for PT 100.



ATTENTION: Before commissioning, the temperature transmitter must be subjected to a visual inspection.

- Fluid leakage is indicative of damage.
- Only use the temperature transmitter if it is in perfect condition concerning safety.

Mounting

The thermometer must be installed so that the permitted operating temperature (ambient, medium) is not exceeded or is lower than the permitted temperature regarding convected and thermal radiation.

Dismantle and Disposal



ATTENTION: Residual media in the dismantled instruments can result in a risk to persons, the environment, and equipment. Take sufficient precautionary measures.



BURN HAZARD: When dismantling, there is a risk that dangerously hot pressure media could escape. Let the instrument cool down sufficiently before dismantling it.

IMPORTANT Incorrect disposal can put the environment at risk. Dispose of instrument and packaging materials in an environmentally compatible way and in accordance with the country-specific waste disposal regulations.

Waste Electrical and Electronic Equipment (WEEE)



At the end of life, this equipment should be collected separately from any unsorted municipal waste.