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SA1-RTD

Self-Adhesive RTD Sensor

INSTRUCTION
SHEET

M0503C/0608

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GENERAL DESCRIPTION

The OMEGA SA1-RTD Self-Adhesive RTD (Resistance Temperature Detector) sensor is designed for fast surface temperature measurements up to 260°C (500°F) continuous or short term to 290°C when cemented into place. For easy installation (and removal), the sensor has a self-adhesive backing; no epoxy or cement is required.

These SA1-RTD sensors are manufactured with 100 ohm Class A or B thin film RTD elements whose resistance vs. temperature characteristics conform to the International Standard IEC 60751 (also known as DIN Platinum RTDs). The sensing element comes standard with three #26 AWG stranded nickel plated copper extension wires that are PFA insulated and jacketed (can also be ordered with two or four wires). The RTD element and extension wires are secured between a polyimide base tape layer, and a top covering of high temperature fiberglass cloth and polyimide tape. This construction provides for easy mounting to most clean and dry surfaces, and provides good electrical isolation between the sensor and the mounting surface.

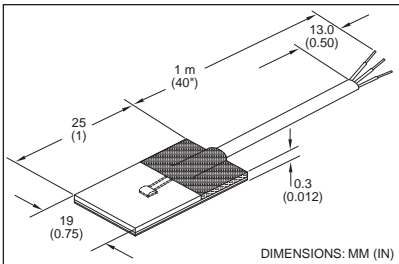


Figure 1. Underside View

OPERATING INSTRUCTIONS:

1. Prepare the surface to be measured by cleaning it of oils and dirt. A general solvent or alcohol will do. Doing this will allow for better surface adhesion.
2. Peel the protective tape from the underside of the sensor (see Figure 1). Please note that the protective paper is sliced approx 1/4" from the leading edge of the sensor to help

removal (take care not to get finger oils on the silicone adhesive or mounting surfaces).

3. Simply press the sensor onto the surface and rub for maximum adhesion. It is advised that the leads also be affixed to the mounting surface to reduce the pull forces on the wires and provide strain relief to the sensor.
4. Connect the extension wires to a temperature measuring or controlling device and you are ready to begin taking temperature readings.

REUSING THESE SENSORS:

The adhesive backing on the SA1-RTD sensors was designed for easy removal, may be removed and re-installed if not damaged during removal, and adhesive remains viable.

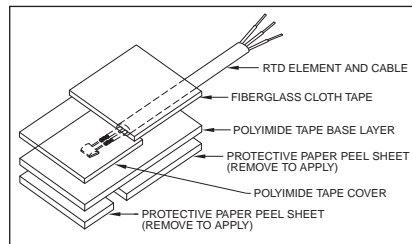


Figure 2. Top View

SPECIFICATIONS:

RTD Type: Platinum

Base Resistance: 100 Ohms at 0°C

Tolerance:

Class A = $\pm 0.15 + 0.002t$ (t=temperature in °C)

Class B = $\pm 0.30 + 0.005t$ (t=temperature in °C)

Temperature

Up to 260°C (500°F) Continuous

Rating:

290°C short term when cemented into place.

Materials: Top Cover:

Polyimide and fiberglass tape

Base Layer:

Polyimide film with silicone adhesive.

Mounting Adhesive:

Silicone adhesive with paper peel backing.

Wire: #26AWG stranded nickel plated copper, PFA insulated & jacketed

Dimensions:

Pad: 19 x 25 x 0.3 mm (0.75 x 1.00 x 0.012")

Wire Lengths Available:

1 m (40"), 2 m (80") and 3 m (120")



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WARNING: These products are not designed for use in, and should not be used for, human applications.



WARRANTY/DISCLAIMER

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The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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