

SA1-RTD

Self-Adhesive RTD Sensor

INSTRUCTION
SHEET

M0503C/0608

Shop online at: omega.com e-mail: info@omega.com
For latest product manuals: omegamannual.info

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.

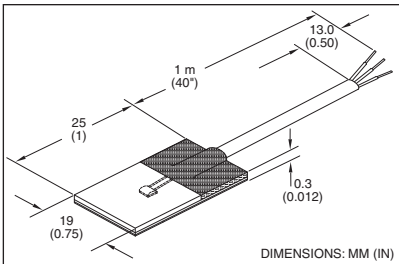


Figure 1. Underside View

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.

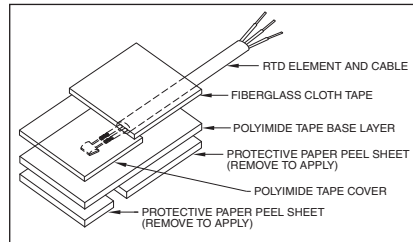


Figure 2. Top View

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")



OMEGAnet® Online Service omega.com	Internet e-mail info@omega.com
--	--

Servicing North America:

U.S.A.: One Omega Drive, Box 4047
ISO 9001 Certified Stamford, CT 06907-0047
 Tel: (203) 359-1660 FAX: (203) 359-7700
 e-mail: info@omega.com

Canada: 976 Bergar
 Laval (Quebec) H7L 5A1, Canada
 Tel: (514) 856-6928 FAX: (514) 856-6886
 e-mail: info@omega.ca

For immediate technical or application assistance:

U.S.A. and Sales Service: 1-800-826-6342/1-800-TC-OMEGA®
Canada: Customer Service: 1-800-622-2378/1-800-622-BEST®
 Engineering Service: 1-800-872-9436/1-800-USA-WHEN®
Mexico: En Español: (001) 203-359-7803 e-mail: espanol@omega.com
 FAX: (001) 203-359-7807 info@omega.com.mx

Servicing Europe:

Czech Republic: Frystatska 184, 733 01 Karviná, Czech Republic
 TEL: +420 (0)59 631899
 FAX: +420 (0)59 6311114
 Tol Free: 0800-1-66342
 e-mail: info@omegashop.cz

Germany/Austria: Daimlerstrasse 26, D-75392 Deckenpfronn, Germany
 Tel: +49 (0)7056 9398-0
 FAX: +49 (0)7056 9398-29
 Toll Free in Germany: 0800 639 7678
 e-mail: info@omega.de

United Kingdom: One Omega Drive, River Bend Technology Centre
ISO 9001 Certified Northbank, Irlam, Manchester
 M44 5BD United Kingdom
 Tel: +44 (0)161 777 6611
 FAX: +44 (0)161 777 6622
 Toll Free in United Kingdom: 0800-488-488
 e-mail: sales@omega.co.uk

It is the policy of OMEGA Engineering, Inc. to comply with all worldwide safety and EMC/EMI regulations that apply. OMEGA is constantly pursuing certification of its products to the European New Approach Directives. OMEGA will add the CE mark to every appropriate device upon certification. The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

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



WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

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.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

OMEGA is a registered trademark of OMEGA ENGINEERING, INC.

© Copyright 2008 OMEGA ENGINEERING, INC. All rights reserved. This document may not be copied, photocopied, reproduced, translated, or reduced to any electronic medium or machine-readable form, in whole or in part, without the prior written consent of OMEGA ENGINEERING, INC.