



# SA1-J, K, T, E

## Self-Adhesive Thermocouples



M0503/0417

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### GENERAL DESCRIPTION

The OMEGA® Self-Adhesive Thermocouples (T/C) are designed for fast surface temperature measurements up to 177°C (350°F). For easy installation (and removal), the probes have a self-adhesive backing; no epoxy or cement is required.

These SA-1 sensors are manufactured from 30 AWG PFA coated thermocouple wire. This "ribbon type" hot junction T/C is secured between a high temperature fiberglass cloth and a high temperature electrically insulating polyimide film. This type of T/C assembly provides good thermal conductivity and fast response, as well as excellent electrical insulating properties.

### OPERATING INSTRUCTIONS

1. Prepare the surface to be measured by cleaning it of oils and dirt. A general purpose solvent or alcohol will do. Doing this will allow for better surface adhesion.
2. Peel the protective tape from the underside of the polyimide film (see Figure 1).  
(Take care not to get finger oils on either surface.)

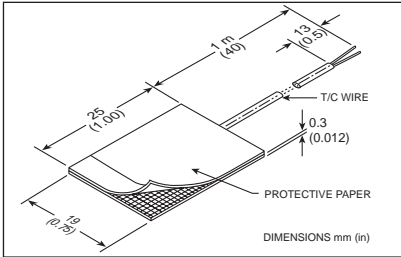


Figure 1. Underside View

3. Simply press the T/C probe onto the surface, and rub for maximum adhesion.
4. Connect the other end of the thermocouple wire to a temperature measuring device (red wire to negative terminal) and you are ready to begin taking temperature readings.

### REUSING THESE PROBES

The adhesive backing on the SA-1 probes was designed for easy removal, but not for repetitive reapplication.

### SPECIFICATIONS

#### T/C TYPES:

Thermocouples

J, K, T, E

#### WIRE:

30 AWG (0.010" dia), PFA coated,  
1 m (40") long  
2 m (80") lengths also available

#### TEMPERATURE RATINGS:

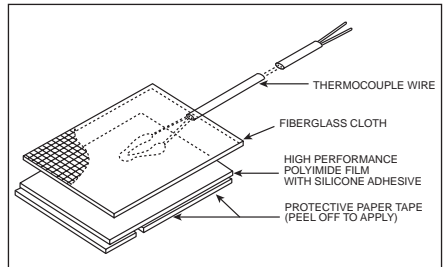
##### Pad/Adhesive Material Rating:

-60° to 177°C  
(-75° to 350°F)

##### Thermocouple Wire:

Limited by the individual T/C rating (30 AWG type "T" thermocouple long term use is limited to 149°C [300°F])

### Figure 2. Top View (Exploded)



#### PAD MATERIALS: (See Figure 2)

- Upper Pad: Fiberglass Cloth
- Lower Pad: High Performance Polyimide Film
- Adhesive Backing: Silicone Polymer

#### 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") (5 probes per pack)



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## Servicing North America:

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**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.

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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.

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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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