

# OMEGA

HH63KC-MV

Temperature Transducer



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# INTRODUCTION

This instrument is a portable compact-sized temperature transducer designed to use external K-type thermocouple and a digital Multimeter(DMM). The temperature transducer accepts the output of any K-type thermocouple and converts it to 1 millivolt per degree Celsius. Temperature indication follows Reference Temperature/Voltage Tables N.I.S.T. Monograph 175 Revised to ITS-90 for K-type thermocouples. One K-type thermocouple is supplied with the thermometer.

## SAFETY INFORMATION

It is recommended that you read the safety and operation instructions before using the temperature transducer.

### **WARNING**


To avoid electrical shock, do not use this instrument when voltages at the measurement surface exceed 24V AC or DC.

### **WARNING**

To avoid damage or burns, do not make temperature measurement in microwave ovens.

### **CAUTION**

Repeated sharp flexing can break the thermocouple leads. To prolong lead life, avoid sharp bends in the leads, especially near the connector.

The  symbol on the instrument indicates that the operator must refer to an explanation in this manual.

# SPECIFICATIONS

## ELECTRICAL

**Temperature Scale:** Celsius.

**Measurement Range:** -50°C to 1300°C.

**Output:** 1mV/1°C.

**Accuracy:** Accuracy is specified for operating temperatures over the range of 18°C to 28°C, for 1 year, not including thermocouple error.

±(0.3%rdg + 1°C) -50°C to 1000°C

±(0.5%rdg + 1°C) 1000°C to 1300°C

**Temperature Coefficient:** 0.1 times the applicable accuracy specification per °C from 0°C to 18°C and 28°C to 50°C.

**Input Protection:** 24V dc or 24V ac rms maximum input voltage on any combination of input pins.

**Input Connector:** Accepts standard miniature thermocouple connectors.

## **ENVIRONMENTAL**

**Ambient Operating Ranges:** 0°C to 50°C <80% R.H.

**Storage Temperature:** -20°C to 60°C <70% R.H.

## **GENERAL**

**Battery:** 4 pcs 1.5V (AAA size).

**Battery Life:** 200 hours typical.

**Dimensions:** 170mm(H) x 44mm(W) x 40mm(D).

**Weight:** 140g.

## **OPERATING INSTRUCTIONS**

1. Plug the temperature transducer test leads into the dc volts input of the Multimeter. Observe polarity.
2. Set the multimeter to the 200mV range.
3. Use the 2V range for higher temperatures. Ignore the decimal point.
4. Plug the K-type thermocouple into the temperature transducer thermocouple input connector.
5. Turn on the temperature transducer and the multimeter. Temperature transducer Green LED Lighted.
6. Read the temperature on the multimeter.

# OPERATOR MAINTENANCE

## WARNING

To avoid possible electrical shock, disconnect the thermocouple connectors from the thermometer before removing the cover.

### **Battery Replacement**

Power is supplied by four 1.5V (AAA size) batteries. The red LED Lighted when replacement is needed. To replace the batteries, remove the screw from the back of the meter and lift off the battery cover. Remove the batteries from battery contacts.



## **WARRANTY**

OMEGA warrants this unit to be free of defects in materials and workmanship and to give satisfactory service for a period of 13 **months** from date of purchase. OMEGA 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 should malfunction, 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. However, this WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of being 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 which wear or which are damaged by misuse are not warranted. This includes contact points, fuses, and triacs.

**OMEGA is glad to offer suggestions on the use of its various products. Nevertheless, OMEGA only warrants that the parts manufactured by it will be as specified and free of defects**

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Every precaution for accuracy has been taken in the preparation of this manual; however, OMEGA ENGINEERING, INC. neither assumes responsibility for any omissions or errors that may appear nor assumes liability for any damages that result from the use of the products in accordance with the information contained in the manual.

**SPECIAL CONDITION:** Should this equipment be used in or with any nuclear installation or activity, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the equipment in such a manner.

It is the policy of OMEGA 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 Engineering, Inc. 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, patient connected application.

## **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. P.O. 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. P.O. number to cover the COST of the repair.
2. Model and serial number of product , and
3. Repair instructions and/or specific problems relative to the product.

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