



BS6050/6051

RTD Input Benchtop Meters



INSTRUCTION
SHEET

M2067/0915

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Unpacking Instructions

Remove the Packing List and verify that you have received all equipment, including the following:

- BS6050 or BS6051 Meter
- Mating Connector
- Power Cord

If you have any questions about the shipment, please call the Customer Service Department at 1-800-622-2378 or 203-359-1660.

When you receive the shipment, inspect the container and equipment for signs of damage. Note any evidence of rough handling in transit. Immediately report any damage to the shipping agent.

NOTE:

The carrier will not honor damage claims unless all shipping material is saved for inspection. After examining and removing contents, save packing material and carton in the event reshipment is necessary.

Introduction

The BS6050/6051 thermometers are highly accuracy microprocessor-driven thermometers for use with PT100 Sensors. PT100 calibrations are based upon NBS and BS tables. The units are housed within tough ABS cases complete with tilt feet for ease of viewing.

Features

- BS6000: Single RTD input
- BS6051: 6 RTD inputs, switch selectable
- Resolution 0.1° to 999.9°
- °C/°F switchable
- LCD backlit display
- Overrange/faulty probe indication

Installation

Mechanical

The units may be used either flat or at an angle, depending upon the desired viewing angle. The tilt feet are located on the underside of the instrument, and should be pulled down and toward the front of the instrument until the stop is reached.

Electrical

The units are supplied with a power plug. It is important to be sure that the appropriate input supply voltages are used.

Sensor Connections

The thermocouples are connected via miniature thermocouple plugs on the front of the unit. On the BS6001, the switch must be positioned to the corresponding thermocouple socket. Refer to the wiring diagram on the unit.

Selecting Temperature Scale

The choice of temperature scale (°C/°F) is made using the slideswitch on the rear panel, observing the table shown above the switch. There is no need to reset the unit as it continually monitors the switch settings and will automatically reconfigured itself.

Open Circuit Sensor Detection

An error in the probe is shown by a series of bars (---) on the display. Under these conditions, either the probe has an error or the temperature you are measuring is out of range.



SPECIFICATIONS

Environmental

Ambient Operation Range: 0 to 50°C (32 to 122°F)
Storage Temperature Range: -40 to 50°C (-40 to 122°F)
Humidity: 0 to 70% R. H.

General

Weight: BS6050: 500 grams
BS6051: 850 grams
Dimensions: BS6050: 118 x 57 x 150 mm (4.65 x 2.24 x 5.90")
BS6051: 148 x 67 x 190 mm (5.83 x 2.64 x 7.48")
Connections: Miniature T/C Connectors

Electrical

Accuracy @ 23°C: ±0.25% reading ±0.2°C
Characterizing Errors: Less than 0.05°C
Temperature Coefficient: 0.01% of reading/°C
Cold Junction Compensation: 0.0075°C/°C
Resolution: 0.1 to 999.9
1° above 1000°
Input Voltage Ranges: 110 Vac ±10%
240 Vac ±10% optional
9-30 Vac or DC optional

Measurement Ranges

Celsius	Fahrenheit
-200 to 850	-200 to 1562

Notes:

1. Strong RF fields may adversely affect measurement accuracy.
2. To avoid earth ground problems, it is recommended that wherever possible, insulated sensors be used.
3. If non-insulated sensors are used, care must be taken to minimize the common mode voltage between the sensor input and the power supply to the instrument.

Recalibration

It is recommended that calibration of the thermometers be performed annually.



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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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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 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 RETURNS**, 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 customers the latest technology and engineering.

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