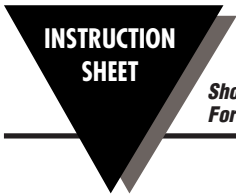




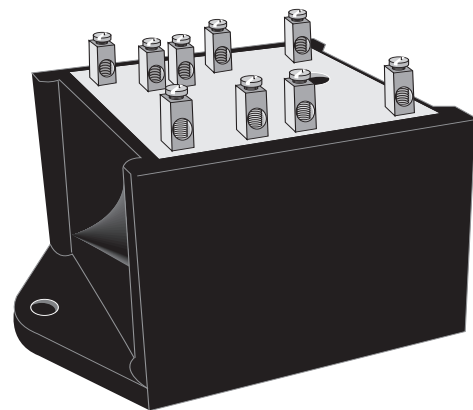
BCM-1

Bridge Completion Module

M1760/1106



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DESCRIPTION

The OMEGA® BCM-1 Bridge Completion Module provides a convenient means of completing the Wheatstone Bridge circuit used for strain gage measurements. The module can be used for quarter bridge measurements with 120 or 350 ohm gages or for half bridges with gages of any resistance. Quarter bridges with two or three wire hookup can be accommodated. In addition, a bridge balance adjustment potentiometer is provided to zero the bridge output. Screw terminals are provided for strain gage, excitation, and output signal connections.

The BCM-1 is constructed using precision resistors with 5 PPM/°C temperature coefficient for maximum temperature stability. The unit is completely encapsulated for use in rugged environments and can be mounted by using the screw holes provided in the baseplate.

MOUNTING

The BCM-1 module is equipped with a baseplate which provides holes for screw mounting. Where required, it can also be glued or secured in place with double-sided tape or Velcro.

SPECIFICATIONS

Maximum Excitation	
120 Ohm Bridge:	10 VDC
350 Ohm Bridge:	16 VDC
Temperature Limits:	-20 to 80°C (-4 to 176°F)
Temperature Effects:	±1.5 microvolts/volt/°C
Zero Adjust:	±6 mV/V
Resistor Tolerance:	±0.1%
Resistor TEMPCO:	5 PPM/°C
Dimensions:	3.0" W x 1.25" H x 1.0" D (50.8 mm x 31.8 mm x 25.4 mm)
Mounting Holes:	0.175" holes (2) on 2.5" center

BCM-1 HOOKUP

Connections to the BCM-1 are made using the screw terminals on the top of the unit using stripped wires. One side has four terminals used for excitation and signal output connections. The excitation voltage is connected to the outer terminals labeled +EX and -EX. The readout device is connected to the two center terminals which are labeled + and - Vout.

Connection of the strain gages to the BCM-1 depends on the particular application. For the proper hookup, refer to Figures 1-3.

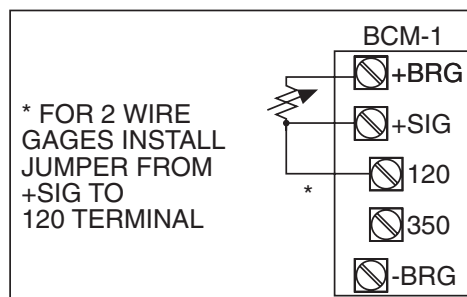


Figure 1. 1/4 Bridge 120Ω Hook-up

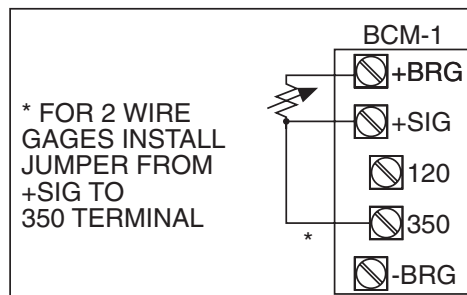


Figure 2. 1/4 Bridge 350Ω Hook-up

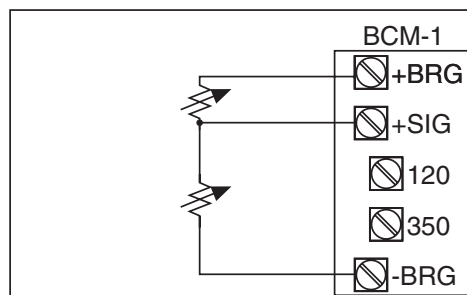


Figure 3. 1/2 Bridge Hook-up



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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.

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
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