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High Performance Strain Gage Indicator

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START HERE

Using This Quick Start Manual

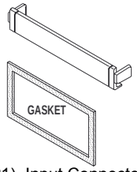
Use this Quick Start Manual to get your High Performance Strain Gage Indicator up and running right out of the box. These instructions use the factory default settings of **100mV unipolar input** and **10 Vdc sensor excitation**. If you have voltage or current input, refer to the main manual. To start your unit:

- Connect ac power
- Wire the sensor
- Configure the meter, using the front panel buttons and the configuration menus

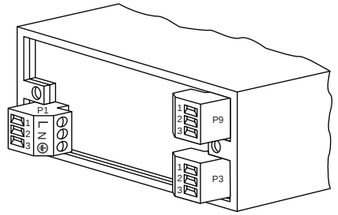
Before You Begin

Your unit should have the following parts:

- Meter
- Front panel button cover
- Panel mounting gaskets



- ac Power Connector (orange -P1), Input Connectors (2) (P3 and P9), and rear protective cover (mounted).



Contact the Customer Service Department nearest you using the number listed on the front of this manual if any of these parts are missing, or if you have questions.

In addition to the unit and related parts, you will need the following items to set up your unit:

- ac power as listed on meter's product/ID label
- External sensor (e.g.; load cell)
- 1/8" Phillips head screwdriver
- 1/8" flat blade screwdriver

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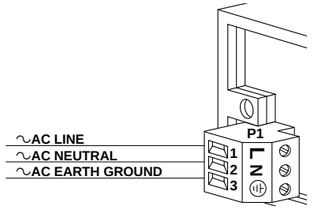
Connect ac Power

1. Remove the rear protective cover and set it aside. The cover is secured with a Phillips-head screw.
2. Locate connector P1 on the bottom-left-rear of the unit. The connector has three screw-down terminals (see below).

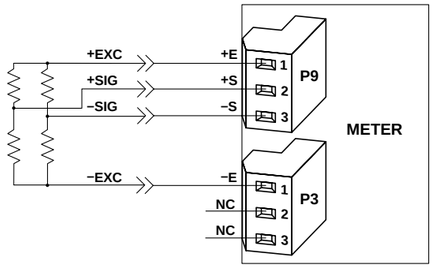


3. Insert the correct wire in each terminal and tighten the lockdown screw. Tug gently on each wire to verify the connection.

Wiring a Millivolt Output Sensor

The following example shows wiring a bridge input to the meter.

1. Locate connectors P3 and P9 on the right-side rear of the unit.
2. Attach the wires and tighten the retaining screws. Tug gently on the wires to verify the connection.



Wiring Example (Factory set at 10Vdc Excitation

3. Apply ac power. The front panel of the unit flashes RESET2. If it does not:
   a. Remove ac power.
   b. Verify the P1 power and sensor connections.
   c. Check your power source.
   d. Apply ac power again.
4. Replace the rear cover. Thread the sensor wires through the slots on the side of the cover. Replace the rear cover retaining screw.

3

Determine Meter Scaling Factor

Calculate the scaling factor so the meter displays the desired engineering units. Assuming no known load, use the formula:

RDG SC = display span/[(sensor's mV/V output) (10,000)]

where: display span = desired display at full scale
sensor's output span = mV/V

Configure the Meter

Use the front panel buttons to access the configuration menus, to either verify or set the unit values. The first table that follows describes functions of each button on the front of the meter. The second table summarizes the key sequences you must press and the menus you will see to get your meter running. For a step-by-step procedure of specific tasks, refer to the configuration sections following the tables.

Meter Button Descriptions

Press This Button	To:
MENU	Access the configuration program menus and move from one menu to the next.
▶/MIN	Enter and scroll through a submenu.
▲/MAX	Change the value of a submenu.
RESET	Move backward one menu (press once), or exit the configurations menus (press twice).
SETPTS	Change the Setpoints.

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Key Sequences and Menus

MENU key	Submenu 1 (▶/MIN)	Action/Description
L 1CNF		Skip past
L2CNF		Skip past
L3CNF		Skip past
L4CNF		Skip past
INPUT	BRIDGE	Select meter input Sub Menu 1 choice (BRIDGE)
RDGCNF	RDG 1=0	Scaling y = mx+b
	RDG2=0	Active decimal point
	RDG3=0	Normal display brightness
	RDG4= 1	Leading zeroes suppressed
	RDG5=0	Not used, skip past
	RDG6= 1	Activates RDG SC/OF
	RDG7=0	External hard reset vs peak reset
RDG SC		See previous formula in "Determine Meter Scaling Factor" section.
RDG OF	000000	
INCNF	INP 1=0	60 Hz ac power
	INP2=0	Slow reading (S1A jumper omitted)
	INP3=0	Unipolor input (S1B jumper omitted)
	INP4=0	Std, for BRIDGE inputs
	INP5=0	Not used, skip past
	INP6=0	Disables IN.SC.OF (Input Scale and Offset)
	INP7= 1	Ratiometric input
INSCOF		Skip past
DEC PT	FFFFFF	Select decimal point
CNT BY		Press RESET twice

Now you are in RUN mode. If the meter does not read zero, refer to "Configure Reading Offset" section.

Warranty/Disclaimer

NEWPORT Electronics, Inc. warrants this unit to be free of defects in materials and workmanship for a period of one (1) year from the date of purchase. In addition to NEWPORT's standard warranty period, NEWPORT Electronics will extend the warranty period for one (1) additional year if the warranty card enclosed with each instrument is returned to NEWPORT.

If the unit should malfunction, it must be returned to the factory for evaluation. NEWPORT's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by NEWPORT, if the unit is found to be defective it will be repaired or replaced at no charge. NEWPORT'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 being damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of NEWPORT's control. Components which wear are not warranted, including but not limited to contact points, fuses, and triacs.

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CONDITIONS: Equipment sold by NEWPORT 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, or used on humans, or misused in any way, NEWPORT assumes no responsibility as set forth in our basic WARRANTY / DISCLAIMER language, and additionally purchaser will indemnify NEWPORT and hold NEWPORT 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 NEWPORT Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO NEWPORT, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM NEWPORT'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 NEWPORT:

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 NEWPORT for current repair charges. Have the following information available BEFORE contacting NEWPORT:

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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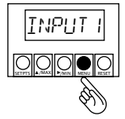
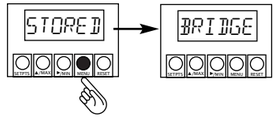
To Configure Type of Input:

1. Press MENU until the meter displays:



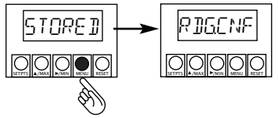
2. Press ▶/MIN to display a flashing input type.
3. Press MENU.

   The meter displays:



4. Press MENU and *BRIDGE* stops flashing.
5. Press MENU.

   The meter displays:

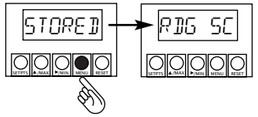


To Configure Meter Display Readings:

1. Press ▶/MIN to display:

2. Press ▲ /MAX, if necessary to change the configuration value to *0* or *1*.
3. Repeat steps 1 and 2 for *RDG2* through *RDG7*
4. Press MENU.

   The meter displays:



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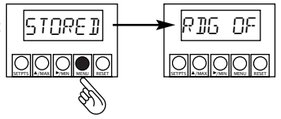
To Configure Scaling Factor:

1. Press ▶/MIN to display and to select the digit (or decimal point) you want to change.

2. Press ▲/MAX to increase the value of the selected digit.
3. Repeat steps 1 and 2 until each digit is the desired value (your calculated scaling factor).
4. Press MENU.

   The meter displays:



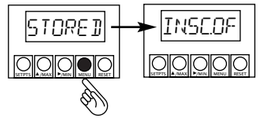
To Configure Meter Inputs:

1. Press MENU until the meter displays:

2. Press ▶/MIN to display:

3. Press ▲/MAX, if necessary to change the configuration value.
4. Repeat steps 2 and 3 for *INP2* through *INP7*
5. Press MENU.

   The meter displays:



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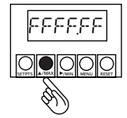
To Set Decimal Point Position:

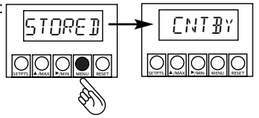
1. Press MENU until the meter displays:

2. Press ▶/MIN to display: Press ▲/MAX to move the decimal point to the desired location.



3. Press MENU.

   The meter displays:



4. Press RESET twice. The meter flashes and displays an output reading.

   The meter is now in RUN mode.

Configure Reading Offset

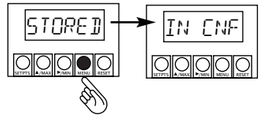
Now that you are in the run mode with a transducer connected to the meter, do the following:

1. Simulate a load on the transducer (leave the pressure port open).
2. Note the display reading. Let's assume the display shows 43.5.
3. To make the display show zeroes, press MENU until the meter displays:

4. Press ▶/MIN to display the previous reading offset value.
5. Using ▶/MIN to scroll through the digits and ▲/MAX to change the value, enter the value -0043.5.

6. Press MENU.

   The meter displays:



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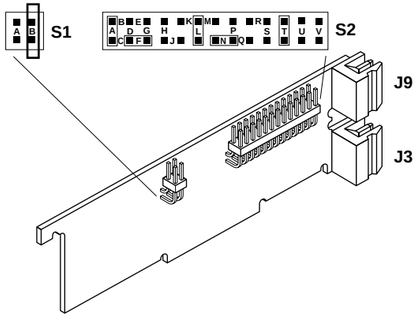
7. Press RESET twice. The meter flashes and then displays a value.

Your meter is now in RUN mode and operational.

If You Have Bipolar Input ±50mV

The typical setting for your meter is unipolar. If, however, you have bipolar input ±50mV, you must install jumper S1B. Remove the outer panel mounting sleeve to expose the jumper.



S1 Jumper Location on Signal Input Board

In addition, you must set configuration menu value INP.3=1 (under IN CNF menu). Refer to the Configuration sections of this Quick Start manual.

It is the policy of NEWPORT to comply with all worldwide safety and EMC/EMI regulations that apply. NEWPORT is constantly pursuing certification of its products to the European New Approach Directives. NEWPORT will add the CE mark to every appropriate device upon certification.

⚠ This device is marked with the international hazard symbol. It is important to read the Setup Guide before installing or commissioning this device as it contains important information relating to safety and EMC.

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

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