Scaling With Known Loads (Continued)

6. Press MENU to store Rd1. The unit displays:

7. Press [MAX] (MAX flashes). The unit displays the last setting for Rd1. (The first digit flashes.)

8. Change Rd1 as necessary:
   - Press [MAX] to set or change the digit’s current value. Continue to press [MAX] until the meter displays the desired value for the flashing digit. Values can range from 0 to 9. For the first digit, you can also enter a minus sign (−) or –1.
   - Press [TARE] to scroll to the digit(s) you want to change.

9. Press MENU to store the value shown for Rd1. The unit displays:

To identify the maximum known load Rd2 and Rd3:

1. Apply the maximum known load (100%).

2. Repeat steps 4–9 above, for Rd2 and Rd3.

Once you’ve completed all steps, the unit displays:

St Rd 1
St Rd CF

Scaling Without Known Loads

For 4-20 mA sensors, the values for the minimum and maximum input loads are always as follows:

- Minimum load (IN!1) — 9999.
- Maximum load (IN!2) — 65535.

To begin operation:

1. Apply the maximum known load (100%).

2. Enter the values for Rd1 and Rd2.

The unit displays:

Determine Reading Offset

The run mode reading for meters scaled without known loads may reflect an offset. For example, say you set Rd1 to 0 and Rd2 to 100, but when the minimum load is applied, a negative value of −1.5 displays on the front panel.

To correct the reading offset:

1. With zero load applied, note the reading on the display.
2. Subtract that amount from the Rd1 and Rd2 values you originally entered.

In the example, the offset would be −1.5, if Rd1 is to read 0 in Run Mode, it must be reentered as 1.5. Rd2 can be reentered as 101.5 if the meter is to read 100 when the maximum load is applied.

3. Reinitialize the unit and resume operation.

4. If it’s not already shown, press MENU until the unit displays:

5. Press [TARE]. The unit displays:

6. Press [TARE] again. The unit displays the last setting for Rd1. (The first digit flashes.)

7. Change Rd1 as necessary:
   - Press [MAX] to set or change the digit’s current value. Continue to press [MAX] until the meter displays the desired value for the flashing digit. Values can range from 0 to 9. For the first digit, you can also enter a minus sign (−) or –1.
   - Press [TARE] to scroll to the digit(s) you want to change.

8. Press MENU to store the value shown for Rd1. The unit displays:

9. Change Rd1 as necessary:
   - Press [MAX] to set or change the digit’s current value. Continue to press [MAX] until the meter displays the desired value for the flashing digit. Values can range from 0 to 9. For the first digit, you can also enter a minus sign (−) or –1.
   - Press [TARE] to scroll to the digit(s) you want to change.

To define the maximum load Rd2 and Rd3:

1. Repeat steps 3–8 above, entering the values for Rd2 and Rd3.

2. Once you’ve completed all steps, the unit displays:

St Rd 1
St Rd CF

To begin operation:

1. Apply the maximum known load (100%).

2. Enter the values for Rd1 and Rd2.

The unit displays:

Determine Reading Offset

The run mode reading for meters scaled without known loads may reflect an offset. For example, say you set Rd1 to 0 and Rd2 to 100, but when the minimum load is applied, a negative value of −1.5 displays on the front panel.

To correct the reading offset:

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In the example, the offset would be −1.5, if Rd1 is to read 0 in Run Mode, it must be reentered as 1.5. Rd2 can be reentered as 101.5 if the meter is to read 100 when the maximum load is applied.

3. Reinitialize the unit and resume operation.

4. If it’s not already shown, press MENU until the unit displays:

5. Press [TARE]. The unit displays:

6. Press [TARE] again. The unit displays the last setting for Rd1. (The first digit flashes.)

7. Change Rd1 as necessary:
   - Press [MAX] to set or change the digit’s current value. Continue to press [MAX] until the meter displays the desired value for the flashing digit. Values can range from 0 to 9. For the first digit, you can also enter a minus sign (−) or –1.
   - Press [TARE] to scroll to the digit(s) you want to change.

8. Press MENU to store the value shown for Rd1. The unit displays:

9. Change Rd1 as necessary:
   - Press [MAX] to set or change the digit’s current value. Continue to press [MAX] until the meter displays the desired value for the flashing digit. Values can range from 0 to 9. For the first digit, you can also enter a minus sign (−) or –1.
   - Press [TARE] to scroll to the digit(s) you want to change.

To begin operation:

1. Apply the maximum known load (100%).

2. Enter the values for Rd1 and Rd2.

The unit displays:

For WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of 5 years from date of purchase. OMEGA’s WARRANTY adds an additional 1 month grace period 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, 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 specifications; misapplication; misuse or other operating conditions outside of OMEGA’s control. Components reusable by OMEGA are not warranted, include but are not limited to contact points, fuses, and so forth.

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Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. Before returning products 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.

FOR WARRANTY RETURNS, please have the following information available before contacting OMEGA:

1. Purchase Order number under which the product was purchased.
2. Customer name and address.
3. Serial number of the product under warranty, and
4. Repair instructions and/or specific problems relative to the product.

If you wish to return a product, you must cover the COST OF THE REPAIR OR REPAIR CHARGES. Have the following information available before contacting OMEGA:

1. Purchase Order number under which the product was purchased.
2. Manufacturer/Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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For complete product manual:

omega.com manuals/manualpdf/dM3597.pdf

DM25B-E

Process Panel Meter

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Servicing North America:

U.S.A.

Omega Engineering, Inc.

Tel: Toll Free: 1-800-826-6342 (USA & Canada only)

Customer Service: 1-800-622-2378 (USA & Canada only)

Engineering Service: 1-800-872-9436 (USA & Canada only)

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For other locations visit omega.com/worldwide

The information contained in this document is believed to be correct, but OMEGA 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 applications.

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

The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.
Using This Quick Start Manual

Use this Quick Start Manual to set up your Process Meter and begin operation. Information is provided on how to:
- Connect ac power
- Set basic options for operation
- Connect the sensor
- Scale the meter

Features with **B** are for the “B” version which has three-color programmable “Big” LED display - All segment characters shown are for the “B” version.

**IMPORTANT:** For complete information on all setup options, please refer to the Operator’s Manual.

This Quick Start Manual includes specific configuration parameters for transducers with an output range of 4–20 mA and 24 V excitation. Other sensor types may require different parameters or additions. When this is the case, we refer you to the Operator’s Manual for detailed instructions.

Safety Consideration

This device is marked with the international Caution symbol.

The instrument is a panel mount device protected in accordance with 2014/35/EU. Read the Safety Considerations section to determine if the unit is suitable for your application.

When using DC power, do not use internal excitation or Isolated Analog Output connections. When using AC powered units, use only a Safety Agency Approval DC Source with the same Overvoltage Category and Pollution Degree.

For both methods, you must first identify the minimum input load and the corresponding display reading you want until the unit displays:

1. Remove the panel at the back of the unit.
2. Locate the TB2 connector on the rear of the unit.
3. Tug gently on the wires to verify the connections.
4. Replace the panel at the back of the unit.

Using the Configuration Menu

To configure the meter, you use the buttons on the front panel.

**To:** Take This Action:

- Display:
  - Press the desired button. The first function Configuration Menu on the menu, is displayed.
  - Select a submenu function:
    - Press MENU until the function you want is shown.
  - Select a value for that submenu function:
    - Press MAX to display the option you want.
    - Press MENU to store it.

Refer to the Operator’s Manual for more information on changing ranges.

- Press MENU to select the sensor shown. The meter displays the next menu item. If you changed input type, the meter displays:

**To Set the Input Type**

1. Press MENU until the unit displays:

2. Press ➤ TARE. The unit displays:

3. For this application you want INPT. If INPT is not displayed, press MAX until it appears. Other choices are INPT, and INPT.

**To Set the Decimal Point**

1. If it’s not already shown, press MENU until the unit displays:

2. Press ➤ TARE. The unit displays:

3. Press ➤ MAX to move the decimal point to the desired location. The choices are FFFF, FFF, and F.

4. Press MENU to select the decimal point position shown. The unit displays:

**To Scale the Meter**

You can scale the meter in one of two ways:

1. With a known load — This method uses input (load) information from another device such as a scale or a simulator for voltage or current.
2. Without a known load — This involves calculating the load based on transducer specifications and manually entering it to the meter.

For both methods, you must first identify the minimum input load and its corresponding display reading. Then you identify the maximum input load and its corresponding display reading.

The decimal point is for display purposes only — you set it where you want it to display for your application.

When entering MIN and MAX values, ignore any decimal point on the display. However, you must enter MIN and MAX values with the decimal point in the desired position.

**Scaling With Known Loads**

To identify the minimum known load and MAX:

- 1. If it’s not already shown, press MENU until the unit displays:
  - 2. Apply the minimum known load (%).
- 3. Press ➤ TARE again. The unit displays the last setting for MIN.
- 4. Press ➤ TARE again. The unit displays the last setting for MIN.
- 5. Press ➤ TARE again. The unit displays the actual reading being received from the sending device.

**Using the Configuration Menu (continued)**

**Wiring (continued)**

Connect the Sensor

1. Locate the TB2 connector on the rear of the unit.
2. Attach the sensor wires and tighten the lockdown screws.
3. Install retaining clips on both sides of the meter and tighten against the panel.

Mount the Unit

1. Cut a panel opening using the dimensions shown to the right.
2. Position the unit in the opening, making sure the front bezel is flush with the panel.
3. Install retaining clips on both sides of the meter and tighten against the panel.

Wiring

**Warning:** Do not connect ac power to your device until you have completed all input and output connections. This device must only be installed by a specially trained electrician with corresponding qualifications. Failure to follow all instructions and warnings may result in injury!

- 1. Remove the panel at the back of the unit.
- 2. Locate the TB1 connector.
- 3. Insert the correct wire in each terminal as shown in the following figure and tighten the lockdown screws.
- 4. Tug gently on the wires to verify the connections.

External Fuse Required:

- Time-Delay, UL, 208 A listed 175 mA (115 Vac line) 80 mA (230 Vac line)
- Time-lag, IEC 137-3 recognized 125 mA (115 Vac line) 63 mA (230 Vac line)
- Check for proper earth grounding to the power (grounding) system service supply panel.

AC Powered Unit Connections

When using DC power, do not use internal excitation or Isolated Analog Output connections. When using AC powered units, use only a Safety Agency Approval DC Source with the same Overvoltage Category and Pollution Degree.