MQS4778/0714

5

Mode Button Operation

To activate the "MODE" button, place the tip of the magnetic stylus over the "MODE" button and hold for three seconds until the unit enters the "MODE" menu. Then move away the magnetic stylus. Each time the magnetic stylus is again placed near the "MODE" button the meter will step through each parameter.

Set Button Operation

The "SET" button has two primary functions. Independently the button is used to turn the backlighting on. To activate the "SET" button, place the tip of the magnetic stylus over t"SET" button and hold for three seconds until the backlighting turns on. The backlighting will remain on for the amount of time you selected during the setup and configuration process. Note: if you selected "Always Off" when setting the meter up, then the "SET" button will not turn the backlighting on from the front keypad.

When in the "MODE" menu, the "SET" button is used to turn the wireless transmitter "On" or "Off" and also to select the unit of measurement.

Design for CE Conformity

All models of the DTG-RTD100 Digital RTD Meter have been designed to meet requirements as outlined in European Community EMC Directive. EN 61326-2-1: 2013 for analog output cable length up to 98 feet or 30 m. Some loss of performance may be observed in the presence of strong RF electromagnetic fields. For a field strength of 10V/m in the 400 MHz to 1 GHz range, reading errors of up to ±5°C may occur.

6
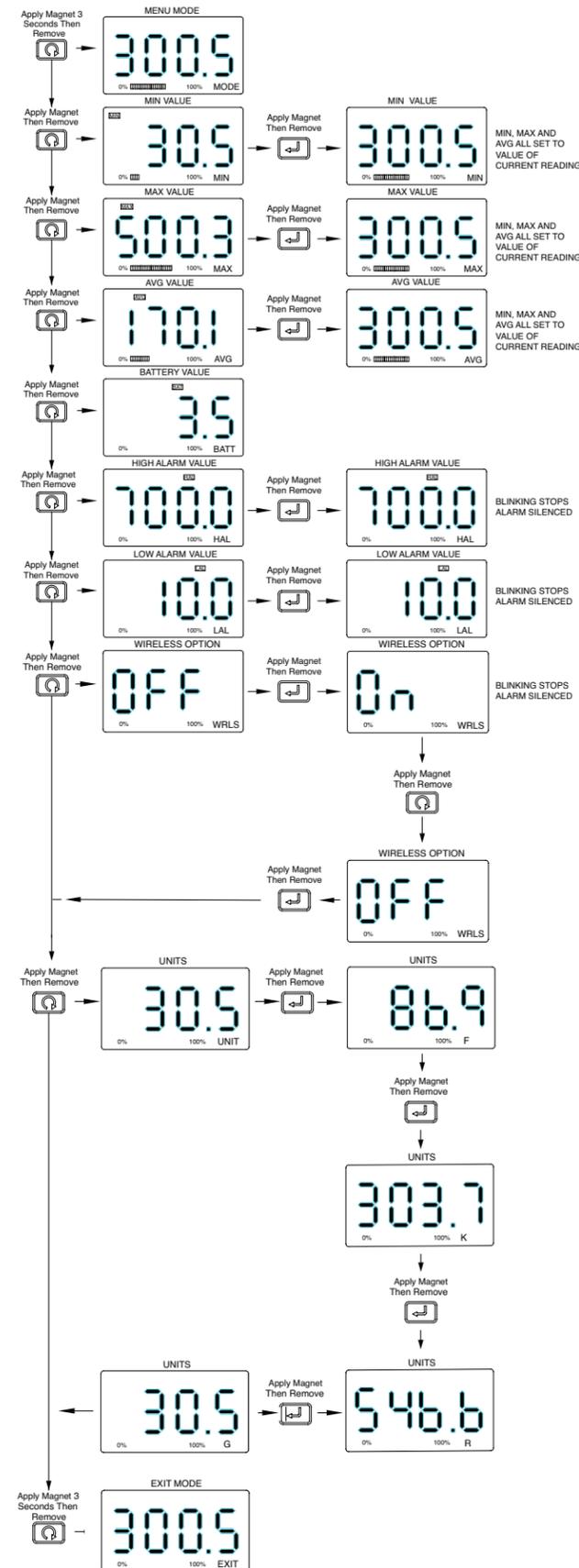
Menu Button Operation

DTG-RTD100 SERIES
Digital Temperature Gauge

OMEGA
omega.com   info@omega.com

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, human applications.

Using This Quick Start Manual

Use this Quick Start Manual with your DTG-RTD100 Series Digital Temperature Gauge for quick installation and basic operation. For detailed information, refer to the User's Guide (Manual Number M4778A).

General Description

The DTG-RTD100 Thermometer Series features a rugged 316 stainless steel enclosure that is designed specifically for wash-down, sanitary and marine applications. The large backlit LCD display incorporates both large 25 mm (1") digits and a 25 segment bar graph that makes reading at distances up to 10.7 m (35') easy. Models are available with or without integral industrial or sanitary temperature sensors. Standard features include: internal battery or external DC power supply operation, analog output and user programmable alarms. The optional built-in wireless transmitter allows for remote monitoring, chat recording and data logging. A variety of user configurable options and settings include: sample interval, units, backlight level, alarm setting, analog output scaling.

The DTG-RTD100 is NEMA 4X rated (water tight, dust tight, corrosion – resistance - indoor & outdoor use). The temperature gauge can be installed in locations where it will be intermittently exposed to spraying water, rain or high humidity. The meter should never be used under water.

Software Installation

Insert the software CD that was included with your unit into the CD-ROM drive on your PC. Your system should begin the installation process automatically. The installer will guide you through the steps required to install the DG Configuration Wizard on your computer.

Lid/Cover Removal

To access the USB programming connector on your meter, the enclosure lid/cover must be removed. Four screws must be removed. Be careful to not lose or discard these screws. These screws play a vital part in providing the water tight seal on your unit.

REMOVE THESE FOUR SCREWS
IN ORDER TO REMOVE
THE METER FRONT COVER
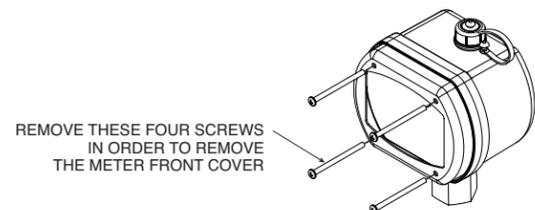
Lid/Cover Removal

▼ CAUTION:

The same four screws removed in this procedure must be re-installed into your meter housing or you will not have the proper water tight seal. Failure to install these screws correctly may results in damage to your unit when the meter is exposed to wet conditions. When reinstalling enclosure screws they must be tightened to 9 in-lb ±10%.

Setting Up Your Meter

Connect the USB Programming cable included with your unit to your PC and your meter.

ON/OFF SWITCH

USB
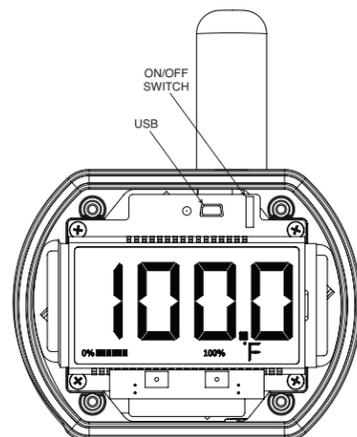
USB Connector Location

Now that you have connected your USB cable to your PC and to your meter, you can now configure your meter before placing the unit into operation. You will be using the configuration software utility that you installed onto your PC. If you have not installed the configuration software utility you should do so now.

Launch Setup Utility Program

To launch the setup utility program on your PC begin by finding and clicking on the DG program Icon that was placed on your computer desk top during installation of the software or in your "Programs" list accessible through your "Start Menu".

Configuring Your Meter

The Omega Digital Gauge Configuration Wizard will open once you have launched the DG Configuration Wizard software. Follow the step-by-step instructions given to you by the Configuration Wizard. Step 5 - Choose Options: Select the type of analog output your application requires. You can leave the default setting if you will not be using the analog output feature.

▼ NOTE:

You must set the wire jumpers located on the back of your meter to match the analog output type you selected here in the setup process.

4-20 mA SETTING   0-5 Vdc/0-10Vdc SETTING
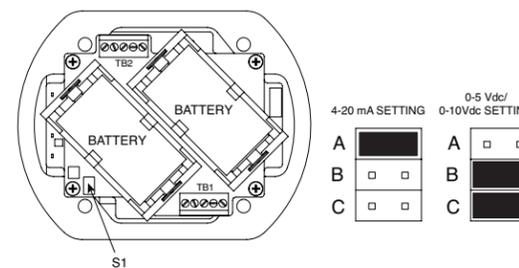
Analog Output Options

Installation, Mounting, & Wiring

Mounting

For mounting instructions with or without optional integral probe, refer to the User's Guide Page 4-3 Section 4.5.

Ambient Temperature

Your meter should only be installed in locations that maintain an ambient temperature between -40 to 70°C (-40 to 158°F).

Battery Installation/Replacement

To install or replace the battery in your DTG-RTD100 you must first remove the four screws located on the Lid of the enclosure. This will allow you to remove the meter assembly and access the battery holders.

▼ NOTE:

Model DTG-RTD100 requires only one battery for normal operation (Battery 1). A second battery (Battery 2) can be added to extend operation when on battery power. It is also recommended that the additional battery (Battery 2) be installed for models that include the optional wireless transmitter.
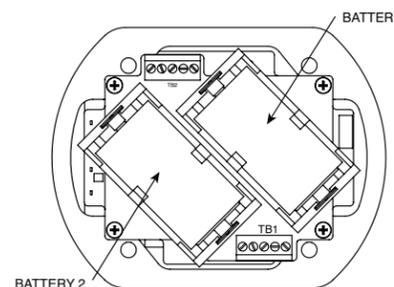
BATTERY 1

BATTERY 2

Battery Installation/Replacement

Wiring

Temperature Sensor Wiring

Model DTG-RTD100 is designed to operate with a 3-wire, PT100 external sensor or integral probe assembly. Wires are connected to TB1 located on the rear circuit board between the battery holder.

TB1

1 2 3

RED WIRE

BLACK WIRES

PT100 SENSOR

Wiring - Temperature Sensor

BLACK WIRES   RED WIRE   RED WIRE   BLACK WIRES

PT100 SENSOR   PT100 SENSOR

M12 Male Connector Standard Wiring Option   **M12 Male Connector -1 Wiring Option**

BLACK WIRES   RED WIRE   RED WIRE   BLACK WIRES

PT100 SENSOR   PT100 SENSOR

M12 Male Connector Standard Wiring Option   **M12 Male Connector -1 Wiring Option**
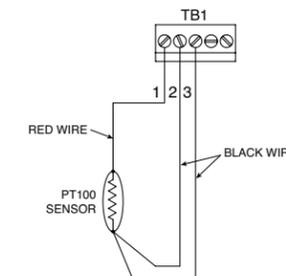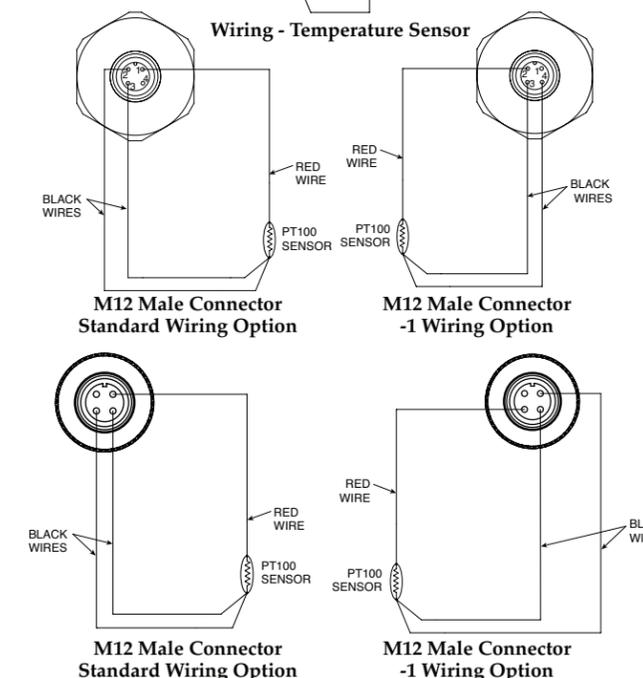
Keypad Operation

A magnetic stylus is attached to your meter. This stylus is used to activate the front buttons on the display. If you do not need to view the "MIN", "MAX" or "AVERAGE" readings during normal operation, or have a need to turn the backlight on during normal operation you can remove and store this stylus. You will need to select "Disable Keypad" during the setup and configuration process.

Button Operation

The "MODE" and "SET" buttons located on the front of the display of your meter are activated by waving or tapping the magnetic stylus included with your unit above or onto the keypad button symbol on the front meter label.