

# Battery Powered Benchtop Meter

## Single-Channel RTD Models with Wireless Option



### MDS-DTM-RTD Series



Optional

- ✓ Large Multicolor Backlit Display with 25 mm (1") Digits Readable From Over 10.7 m (35')
- ✓ Up to  $\pm 0.2^{\circ}\text{C}$  ( $\pm 0.3^{\circ}\text{F}$ ) or  $\pm 0.1\%$  Rdg Accuracy
- ✓ Connects Directly to 3-Wire Pt100 RTD Sensors
- ✓ Powered by Internal Battery or External DC Power Supply
- ✓ Included Setup and Service Software Allows for Fast Maintenance and Calibration via USB Connection

- ✓ Wireless Transmitter Option Sends Readings to Remote Locations and Allows for PC-Based Chart Recording and Data Logging
- ✓ Low Power Operation and Sleep Mode for Long Battery Life
- ✓ Display Backlight Changes from Green to Blue for Low Alarm and from Green to Red for High Alarm
- ✓ Portable, Rugged Metal Benchtop Enclosure with Tilt Handle
- ✓ User-Friendly, Simple to Configure
- ✓ High Quality

MDS-DTM-RTD-W with wireless transmitter option, shown smaller than actual size.

The OMEGA® MDS-DTM-RTD is a rugged benchtop metal enclosure featuring a large backlit LCD display that 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 wireless capability. Standard features include: internal battery, external DC power supply operation, analog output and user programmable alarms. The wireless transmitter option allows for remote monitoring, chart recording and data logging. A variety of user-configurable options and settings include: update rate, dampening, units, backlight, and auto-off.

## Specifications

**Range:** -51 to 538°C (-60 to 1000°F)  
(depending on sensor selected)

**Accuracy:**  $\pm 0.2^{\circ}\text{C}$  ( $\pm 0.3^{\circ}\text{F}$ ) or  $\pm 0.1\%$   
of reading

**Resolution:**  $0.1^{\circ}\text{C}$  ( $0.1^{\circ}\text{F}$ )

**Operating Environment:** -40 to 70°C  
(-40 to 158°F) 5-100% RH  
non-condensing

**RTD Probe/Sensor Input:** Pt100, 3-wire

**Display Type:** LCD with selectable  
backlight

**Display Digits:** 4 digits, 9999 counts

**Character Height:** 25.4 mm (1.0")

**Computer Interface:** USB (one  
programming cable included)

**Input Type:** RTD, analog voltage,  
analog current

**RTD Input (ITS 68):** 100/500/1000  $\Omega$   
Pt sensor, 2-, 3-, or 4-wire; 0.00385 or  
0.00392 curve

**Sample/Display Rate:** User adjustable  
from 0.375 to 30 sec, preset to 1/sec

**Power:** Two "D" size alkaline batteries  
included, 12 to 24 Vdc

**Battery Life (Typical):** 2 years\*

**Analog Output:** 0 to 5 Vdc, 0 to 10 Vdc,  
or 4 to 20 mA; Requires external 12 to  
24 Vdc power supply for operation

**Enclosure:** Case—aluminum,  
handle—aluminum

**Enclosure Finish:** Case—painted,  
handle—anodized

### Settings (USB/Software)

**Auto-Off:** Locked-on, 1 min, 2 min,  
5 min, 10 min, 15 min, 30 min, 60 min

**Units:** °F, °C, K

**Lock:** Allows for front button "lock-out"

\* Without wireless option

**Alarms:** User selectable "high" and  
"low" alarm limits

**Analog Output:** User selectable scaling

**Backlight:** On/off, or 10 sec, 30 sec,  
1 min, 5 min

**Wireless Transmitter (Optional):**  
Channel number, transmission rate,  
alarms, sensor offset, chart recording,  
data logging

### Dimensions:

93.47 H x 206.50 W x 203.20 mm D  
(3.68 x 8.13 x 8.00"), height not  
including sensor

**Calibrate:** Zero and span

**Weight:** 1.2 kg (2.65 lb)

## Wireless Option Specifications

**Transmit Sample Rate:** User  
programmable from 1 sample/2 min to  
1 sample/every 2 sec

**Radio Frequency (RF) Transceiver**

**Carrier:** ISM 2.4 GHz

**RF Output Power:** 10 dBm (10 mW)

**Range of RF Link:**

**Outdoor Line of Sight:**

Up to 120 m (400')

**Indoor/Urban:** Up to 40 m (130')

**Software (Included Free):** Requires  
Windows® 2000, XP or Vista (32 bit)

**Internal Battery:** Two (2) "D" size  
Alkaline batteries; recommended battery  
type: Duracell® type MN1300 "D" size  
batteries for the best performance at low  
temperatures

**Data Transmitted to Host:**

Temperature reading, ambient  
temperature reading, RF transmit  
strength and battery level

Visit [omega.com/wireless](http://omega.com/wireless)  
for Details

## Wireless Receivers

**UWTC-REC4**  
receiver.



Receive data from up  
to 48 transmitters, and  
provide a scalable  
retransmitted, hard wired  
analog output for  
4 user selected  
transmitters in your  
system.

**UWTC-REC1.**



Receive data from up to  
48 transmitters, powered directly  
by the USB connection on your  
computer.

**UWTC-REC3**  
32-channel receiver  
with ethernet.



Receiver/host with ethernet is compatible  
with UWTC and UWRTD connectors,  
transmitters and wireless probe  
assemblies. Connects directly to your  
network or the Internet—no PC required!

## Read From Up to 10.7 m (35') Away!

Large 25 mm  
(1") Digits



25 Segment  
Bargraph

Temperature  
Units (°C/°F)

Low Alarm Backlight



High Alarm Backlight



## MDS-DTM-RTD Benchtop Meter Wireless Versions



MDS-DTM-RTD-W model shown with terminal RTD input, wireless option, alarm output, and analog output.

MDS-DTM-RTD-M8-W model shown with M8 RTD connector input, wireless option, alarm output, and analog output.



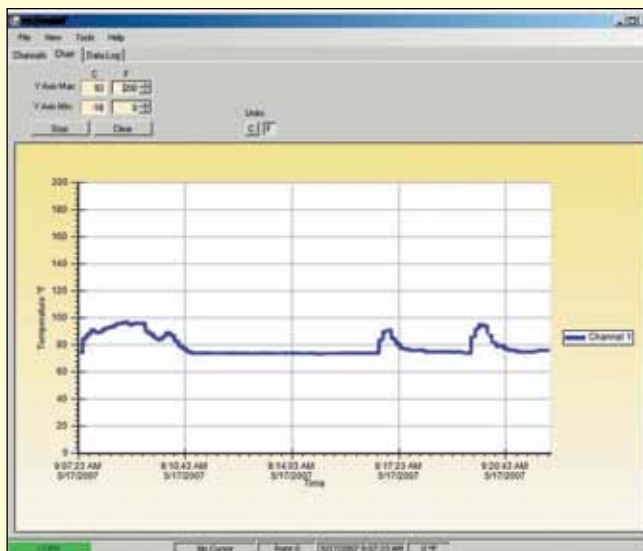
MDS-DTM-RTD-M12-W model shown with M12 RTD connector input, wireless option, alarm output, and analog output.

All models shown smaller than actual size.

**\* Wireless Models Include FREE Monitoring, Charting and Data Logging Software For Your PC!**

**\* Supplied with receivers**

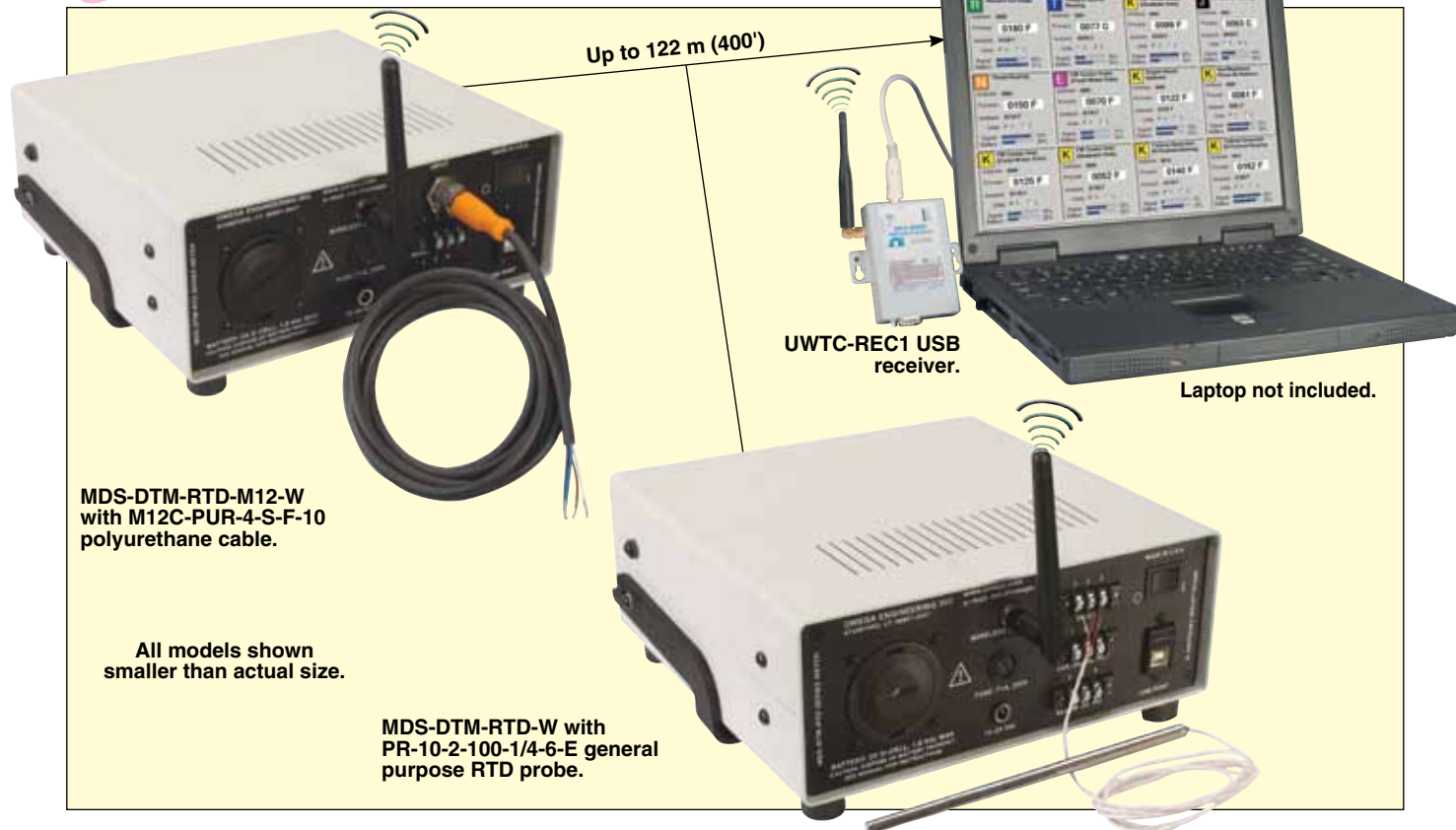
Time	Ch1	Ch2	Ch3	Ch4	Ch5	Ch6	Ch7	Ch8	Ch9	Ch10	Ch11	Ch12	Ch13	Ch14	Ch15	Ch16	Ch17
9/17/2007 9:07:23 AM	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
9/17/2007 9:07:24 AM	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
9/17/2007 9:07:25 AM	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
9/17/2007 9:07:26 AM	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
9/17/2007 9:07:27 AM	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
9/17/2007 9:07:28 AM	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
9/17/2007 9:07:29 AM	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
9/17/2007 9:07:30 AM	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
9/17/2007 9:07:31 AM	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
9/17/2007 9:07:32 AM	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
9/17/2007 9:07:33 AM	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
9/17/2007 9:07:34 AM	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
9/17/2007 9:07:35 AM	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
9/17/2007 9:07:36 AM	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
9/17/2007 9:07:37 AM	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
9/17/2007 9:07:38 AM	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
9/17/2007 9:07:39 AM	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
9/17/2007 9:07:40 AM	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
9/17/2007 9:07:41 AM	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
9/17/2007 9:07:42 AM	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85







## Typical Multi-Unit Wireless Data Logging System



### To Order Visit [omega.com/mds-dtm-rtd](http://omega.com/mds-dtm-rtd) for Pricing and Details

Model No.	Description
MDS-DTM-RTD	Benchtop meter with RTD terminal block input connection, alarm output, analog output
MDS-DTM-RTD-W	Wireless benchtop meter with RTD terminal block input connection, alarm output, analog output*
MDS-DTM-RTD-M8	Benchtop meter with RTD M8 input connection, alarm output, analog output
MDS-DTM-RTD-M8-W	Wireless benchtop meter with RTD M8 input connection, alarm output, analog output*
MDS-DTM-RTD-M12	Benchtop meter with RTD M12 input connection, alarm output, analog output
MDS-DTM-RTD-M12-W	Wireless benchtop meter with RTD M12 input connection, alarm output, analog output*

Comes complete with operator's manual, USB cable, user software, and two alkaline "D" cell batteries.

\* Units with the wireless option require a UWTC series receiver or transceiver to operate.

**Ordering Example:** MDS-DTM-RTD-M8-W, wireless benchtop meter with RTD M8 input connection, alarm output, analog output, and UWTC-REC1, 48 channel USB receiver.

MDS-DTM-RTD-M12, benchtop meter with RTD M12 input connection, alarm output, analog output, and UWTC-REC1, 48 channel USB receiver.

### Accessories

Model No.	Description
UWTC-REC1	Wireless 48-channel USB receiver (used with wireless option only)
UWTC-REC4(**)	48-channel DIN rail wireless receiver with 4 analog outputs and alarms
UNIV-AC-100/240	Replacement universal 9 Vdc adaptor
CAL-3	NIST traceable calibration (meter only) 3 points
CAL-3-SYSTEM	NIST traceable calibration (meter with probe) 3 points

\*\* Specify analog output signal: "V1" for 0 to 5 Vdc; "V2" for 0 to 10 Vdc, "TC" for Type K Thermocouple, or "MA" for 4 to 20 mA signal.