



Digital RTD Thermometer

316 SS Enclosure for Wash-Down and Marine Applications

DTG-RTD100 Series



- ✓ 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
- ✓ User Scaleable 4 to 20 mA, 0 to 5 or 0 to 10 Vdc Analog Output Standard
- ✓ 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

Large 25 mm (1") Digits

Antenna connection for wireless option.

Magnetic stylus (included).



DTG-RTD100-1/4-600-E-W-AB with angle bracket and wireless transmitter option, shown actual size.

New security feature uses magnetic stylus (included) for keypad activation. No accidental button presses. Perfect for dirty hands or if wearing gloves



Available with Built-In Wireless Transmitter Option

Angle Bracket Option for Flexible Use

OMEGA's new DTG-RTD100 Thermometer Series features a rugged 316 SS enclosure that is designed specifically for wash-down and marine applications. The large backlit LCD display incorporates both large 25 mm (1") digits and a 25 segment bar graph that make

reading at distances up to 10.7 m (35') easy. Models are available with or without integral standard sensors. 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: sample interval, units and backlight.

Specifications

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

Accuracy: ±0.2°C (±0.3°F) or ±0.1%
of reading

Resolution: 0.1°C (0.1°F)

Operating Environment: -40 to 70°C
(-40 to 158°F) 5 to 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)

Sample/Display Interval:
User adjustable from 0.375 to
30 seconds, preset to 1/second

Power: 3.6V lithium, 8.5 Ah capacity
("C" cell) included; 12 to 24 Vdc

Battery Life (Typical): 1 year*

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

Enclosure: 316 stainless steel housing,
ABS center gasket

Enclosure Finish: Brushed 316
stainless steel

Enclosure Rating: NEMA 4X (IP65)

Settings (USB/Software)

Units: °F, °C, K

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

Analog Output: User selectable scaling

Backlight: On/off, or 10 second, 30
second, 1 minute, 5 minute

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

Dimensions:
115.1 H* x 114.8 W x 74.2 mm D
(4.53* x 4.52 x 2.92")
(*height not including sensor)

Weight: 0.72 kg (1.59 lb)

Wireless Option Specifications

Transmit Sample Rate:
User programmable from 1 sample/
2 minutes to 1 sample/every 2 seconds

**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® XP/Vista/7 (32- and 64-bit)

Internal Battery: Two 3.6V lithium,
8.5 Ah capacity ("C" cell) included

Data Transmitted to Host:
Temperature reading, ambient
temperature reading, RF transmit
strength and battery level

* Without wireless option

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



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-REC2-D with
analog output and display.



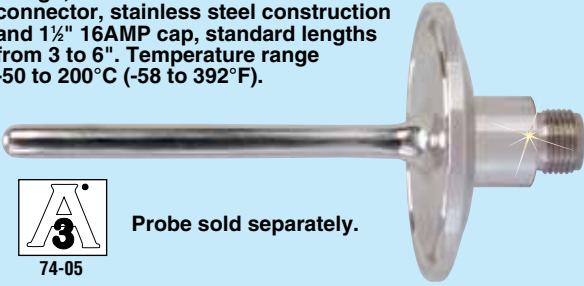
Receiver/host with ethernet is
compatible with UWTC and UWRTD
connectors, transmitters and wireless
probe assemblies. Connects directly to
your network or the Internet—
no PC required!



Digital RTD Thermometer for use with Remote Sensor

Remote Sensor Options

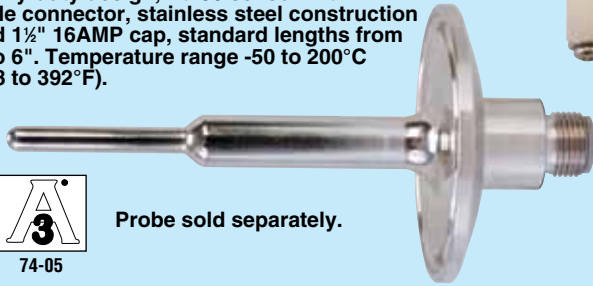
3A approved, 1/4" diameter standard duty design, Pt100 sensor with M12 male connector, stainless steel construction and 1 1/2" 16AMP cap, standard lengths from 3 to 6". Temperature range -50 to 200°C (-58 to 392°F).



Probe sold separately.

Ordering Example: DTG-RTD100-M12-F-1, thermometer with female M12 connection, PRS-3-100-A-S-0600-D1-M12, 6" standard duty sensor, and M12-PVC-4-S-M-R-F-5, cable, PVC jacket, 5 m (16.4') long.

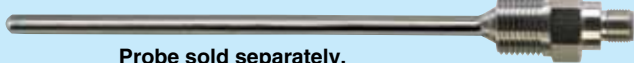
3A approved, 3/8" diameter (stepped to 5/16"), heavy-duty design, Pt100 sensor with M12 male connector, stainless steel construction and 1 1/2" 16AMP cap, standard lengths from 3 to 6". Temperature range -50 to 200°C (-58 to 392°F).



Probe sold separately.

Ordering Example: DTG-RTD100-M12-F-1, thermometer with M12 female connection, PRS-3-100-A-H-0600-D1-M12, 6" heavy-duty sensor, and M12-PVC-4-S-M-R-F-5, cable, PVC jacket, 5 m (16.4') long.

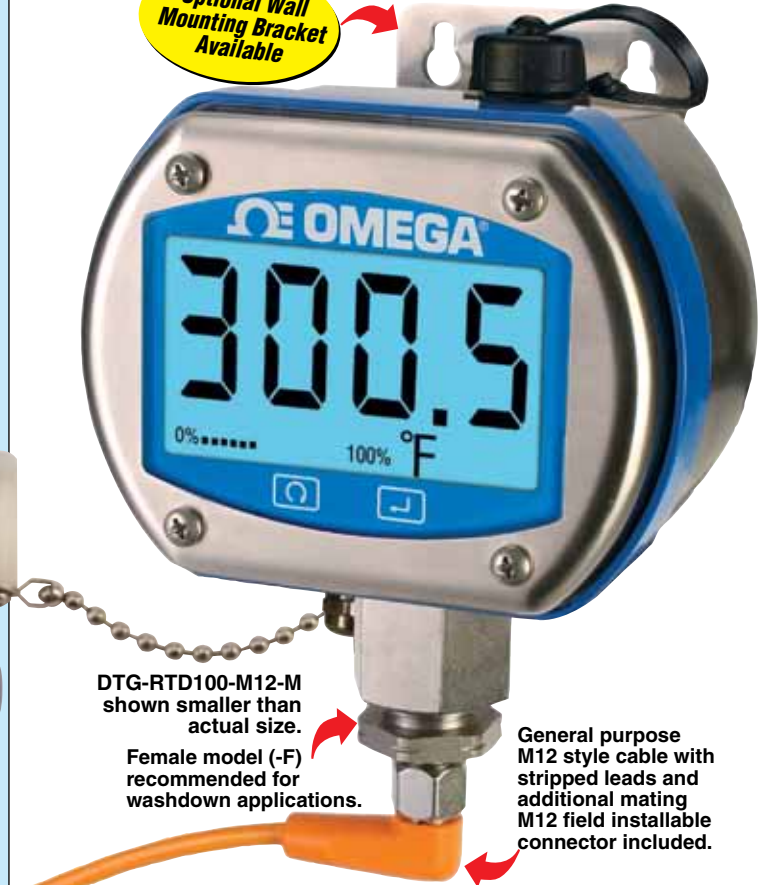
1/8" or 1/4" diameter, industrial sensor 316 stainless steel construction, 1/2 NPT with M12 connector. Temperature range -50 to 260°C (-58 to 500°F).



Probe sold separately.

Ordering Example: DTG-RTD100-M12-F-1, thermometer with M12 female connection PR-21B-3-100-A-1/4-0600-M12, 6" industrial sensor, and M12-PVC-4-S-M-R-F-S, cable, PVC jacket, 5 m (16.4') long.

Optional Wall Mounting Bracket Available



DTG-RTD100-M12-M shown smaller than actual size.

Female model (-F) recommended for washdown applications.

General purpose M12 style cable with stripped leads and additional mating M12 field installable connector included.

Optional Cables with M12C Connectors for Remote Sensor Connection

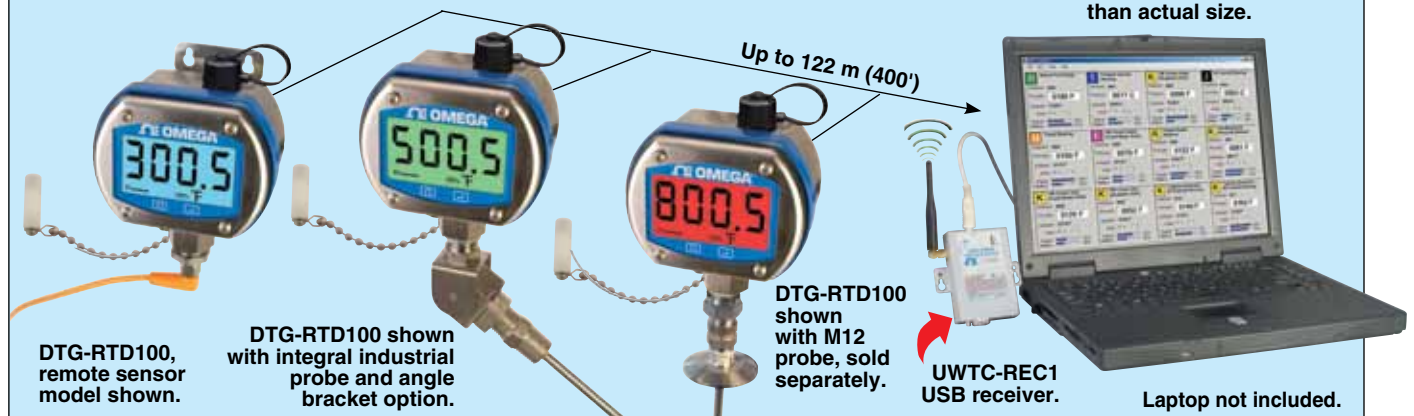
Rugged PVC jacketed cables for wash-down applications.

316 SS nut.

M12C-PVC-4-S-M-R-F-2 with right angle male and female connectors.

M12C-PVC-4-S-M-S-F-2, with straight male and female connectors.

Typical Multi-Unit Wireless Data Logging System



DTG-RTD100, remote sensor model shown.

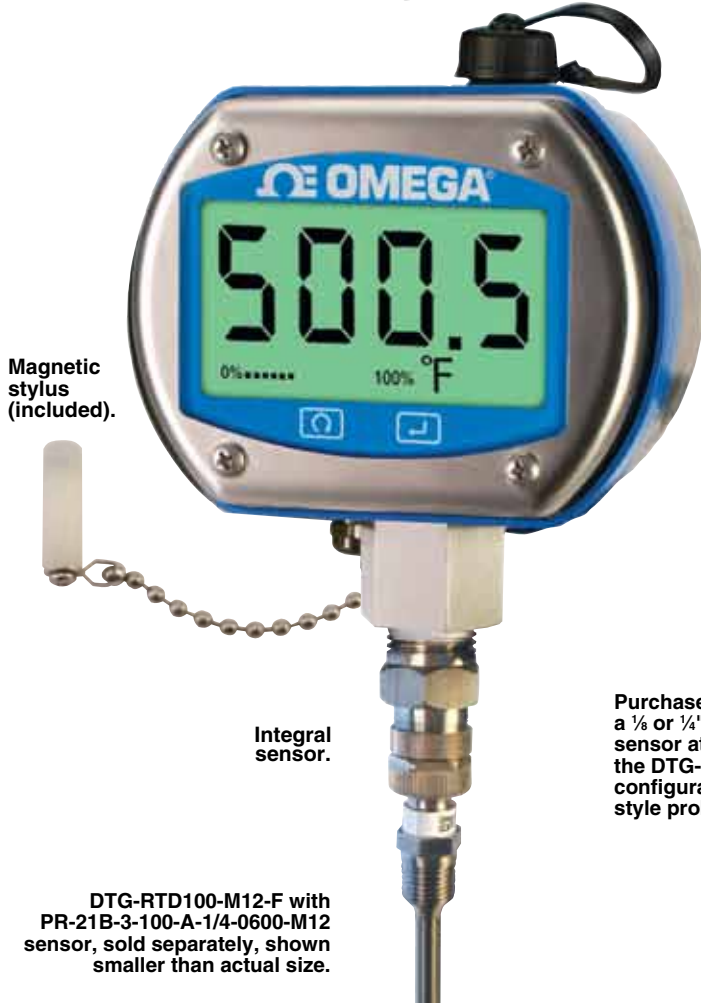
DTG-RTD100 shown with integral industrial probe and angle bracket option.

DTG-RTD100 shown with M12 probe, sold separately.

UWTC-REC1 USB receiver.

Laptop not included.

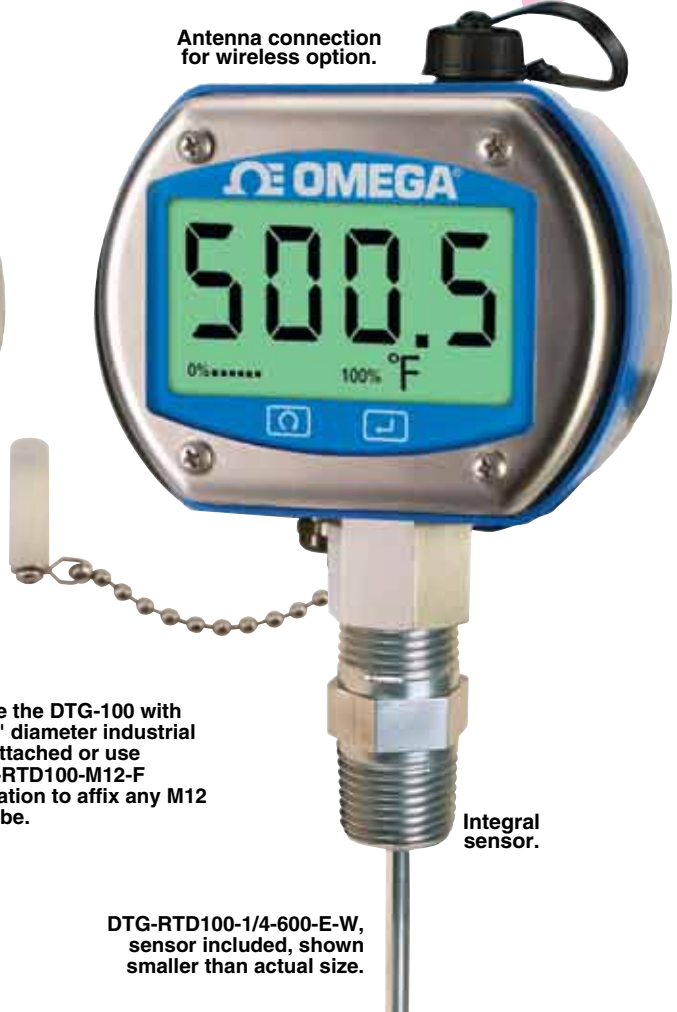
Digital RTD Thermometer as an Integral Sensor



Magnetic stylus (included).

Integral sensor.

DTG-RTD100-M12-F with PR-21B-3-100-A-1/4-0600-M12 sensor, sold separately, shown smaller than actual size.



Antenna connection for wireless option.

Integral sensor.

DTG-RTD100-1/4-600-E-W, sensor included, shown smaller than actual size.

Thermowell Options for Industrial Sensors

Standard 304 or 316 stainless steel models—260L Series

3A approved 316 stainless steel models—S Series.

3/8" or 1/2" dia, industrial sensor, 316 stainless steel construction, and 1/2 x 1/2 NPT fitting, temperature range -51 to 538°C (-60 to 1000°F).

Ordering Example: DTG-RTD100-1/4-400-E, comes complete with thermometer and 4" L integral sensor.

Universal Angle Bracket Option

Ordering Example: DTG-RTD100-1/4-400-E-AB, field adjustable bracket allows sensor to be rotated and angled.

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





Thermometer without Sensor

To Order	
Model No.	Description
DTG-RTD100	Digital RTD thermometer with internal terminal block connection
DTG-RTD100-M12-F	Digital RTD thermometer with female M12 connection, compatible with PR-21, -2 wiring, PR-22
DTG-RTD100-M12-F-1	Digital RTD thermometer with female M12 connection, compatible with PR-21, -1 wiring, PRS-M12 and PR-25AP sensors
DTG-RTD100-M12-M	Digital RTD thermometer with male M12 connection, for use with extension cable and compatible sensor
DTG-RTD100-M12-M-1	Digital RTD thermometer with male M12 connection, for use with extension cable and compatible sensor

Thermometer with Integral Sensors

Model No.	Description
DTG-RTD100-1/8-(*)-E	Digital RTD thermometer with integral 1/8" diameter standard duty Pt100 sensor
DTG-RTD100-1/4-(*)-E	Digital RTD thermometer with integral 1/4" diameter standard duty Pt100 sensor

Accessories

Model No.	Description
DTG-RTD100-MB	Mounting bracket (not needed for models with integral sensor)
DTG-RTD100-SK	Service kit, includes enclosure lid, clear window, gasket, washers, screws
DTG-MS	Spare magnetic programming stylus (2 pack)
BATT-C-3.6V	Replacement battery, "C" cell 3.6V lithium (2 required with wireless option)
UWTC-REC1	Wireless 48-channel USB receiver (used with wireless option only)
UWTC-REC2-D-(*)	48-channel transmitter receiver with analog output and digital display
UWTC-REC4-(**)	48-channel DIN rail wireless receiver with 4 analog outputs and alarms
CAL-3	NIST-traceable calibration (meter only)
CAL-3-SYSTEM	NIST-traceable calibration (meter with probe)

Comes complete with operator's manual, USB cable, user software, magnetic programming stylus and 3.6V lithium "C" cell battery.

* Specify probe length; "300" for 3", "400" for 4", "500" for 5", or "600" for 6".

** 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.

To order with angle bracket option, add suffix "-AB" to model number for additional cost.

To order with wireless transmitter option, add suffix "-W" to model number for additional cost.

Note: Units with the wireless option require a UWTC series receiver or transceiver to operate.

Ordering Examples: DTG-RTD100-1/4-600-E-W-AB, RTD meter with integral Pt100, 6" long, 1/4" diameter industrial probe with angle bracket and wireless options, and UWTC-REC1, 48-channel USB receiver.

DTG-RTD100-M12-M, RTD meter with male M12 connector.