Digital RTD Thermometer
316 SS Enclosure for Sanitary, Wash-Down, and Marine Applications

NEW ®

Antenna connection for wireless option.

DTG-RTD100 Series

Large 25 mm (1") Digits

2 YEAR WARRANTY CE EMC SERVICES

Ω OMEGA®

500.5

0% ······ 100% °F

Magnetic stylus (included).

✔ **Large Multicolor Backlit Display with 25 mm (1") Digits Readable From Over 10.7 m (35')**

✔ **Up to ±0.2°C (±0.3°F) or ±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**

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

Available with Built-In Wireless Transmitter Option

Angle Bracket Option for Flexible Use

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

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OMEGA's new DTG-RTD100 Thermometer Series features a rugged 316 SS 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 make reading at distances up to 10.7 m (35') easy. Models are available with or without integral standard or sanitary 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: update rate, dampening, units, backlight, and auto-off.

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) 5-100% 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 Rate: User adjustable from 0.375 to 30 sec, preset to 1/sec

Power: Two 3.6V lithium, 4.8 Ah capacity ("C" cell) included; 12 to 24 Vdc

Battery Life (Typical): 1.5 years*

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: Electropolished

Enclosure Rating: Weatherproof, NEMA 4 (IP65)

Settings (USB/Software)

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

* Without wireless option

Units: °F, °C, K

Lock: Allows for front button "lock-out"

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: 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 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)

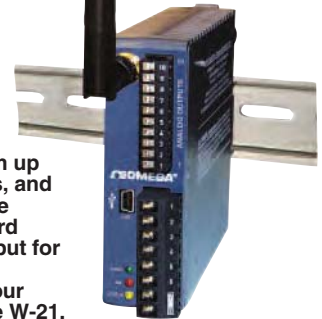**Internal Battery:** Two 3.6V lithium, 4.8 Ah capacity ("C" cell) included

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

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

Large 25 mm (1") Digits

ΩE OMEGA®

500.5

0% 100% °F

25 Segment Bargraph

Temperature Units (°C/°F)

ΩE OMEGA® 300.5 0% 100% °F
Low Alarm Backlight

ΩE OMEGA® 800.5 0% 100% °F
High Alarm Backlight

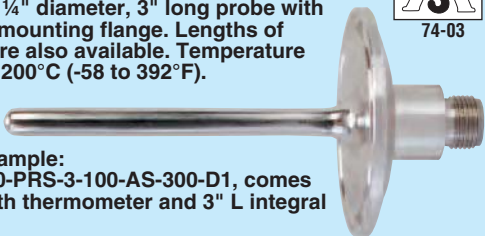# Digital RTD Thermometer with Integral Sensor

Antenna connection for wireless option.
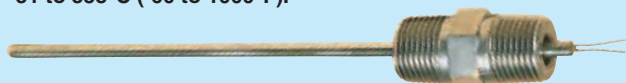
Integral Sensor Options

Attach the DTG-RTD100 to a 3-A approved PRS-3-100-A-S-0300-D1-M12 standard duty sensor for a ¼" diameter, 3" long probe with 1½" 16AMP mounting flange. Lengths of 4, 5 and 6" are also available. Temperature range -50 to 200°C (-58 to 392°F).

74-03

Ordering Example:
DTG-RTD100-PRS-3-100-AS-300-D1, comes complete with thermometer and 3" L integral sensor.

Attach the DTG-RTD100 to a 3-A approved PRS-3-100-A-H-0300-D1-M12 sensor for a heavy duty stepped probe (³⁄₁₆ to ⅜" dia), 3" long with 1½" 16AMP mounting flange. Lengths of 4, 5 and 6" are also available. Temperature range -50 to 200°C (-58 to 392°F).
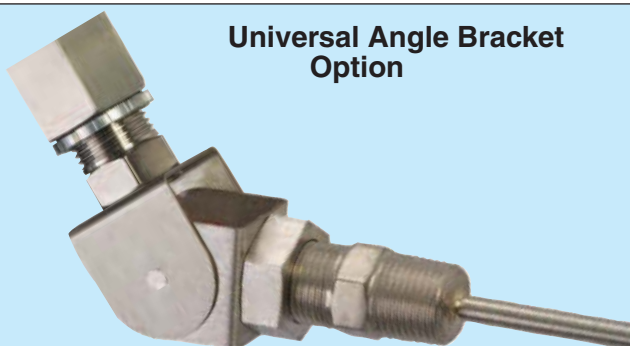
74-03

Ordering Example:
DTG-RTD100-PRS-3-100-AH-400-D1, comes complete with thermometer and 4" L integral sensor.

⅛" or ¼" dia, industrial sensor, 316 stainless steel construction, and ½ x ½ 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.

Magnetic stylus (included).

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DTG-RTD100-PRS-3-100-AS-300-D1-W, smaller than actual size.

Integral sensor.

Thermowell Options for Industrial Sensors

Standard 304 or 316 stainless steel models–260L Series

3A approved 316 stainless steel models–S Series. Visit omega.co.uk/thermowells for the complete selection.

Universal Angle Bracket Option

Ordering Example: DTG-RTD100-1/4-400-E-AB, field adjustable bracket allows sensor to be rotated and angled.
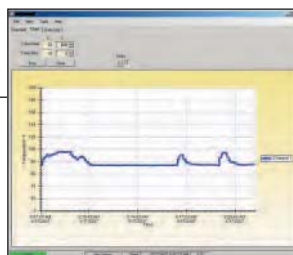
Wireless Models Include FREE Monitoring, Charting and Data Logging Software For Your PC!

Digital RTD Thermometer for use with Remote Sensor

NEW

Remote Sensor Options

3A approved, ¼" dia standard duty design, Pt100 sensor with M12 male connector, stainless steel construction and 1½" 16AMP cap, standard lengths from 3 to 6". Temperature range -50 to 200°C (-58 to 392°F).

3 74-03

Ordering Example: DTG-RTD100-M12-F, thermometer with male 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. Total system price.

3A approved, ⅜" dia (stepped to ³⁄₁₆"), heavy-duty design, Pt100 sensor with M12 male connector, stainless steel construction and 1½" 16AMP cap, standard lengths from 3 to 6". Temperature range -50 to 200°C (-58 to 392°F).

3 74-03

Ordering Example: DTG-RTD100-M12-F, thermometer with M12 male 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. Total system price.

⅛" or ¼" dia, industrial sensor 316 stainless steel construction, ½ NPT with M12 connector. Temperature range -50 to 260°C (-58 to 500°F).

Ordering Example: DTG-RTD100-M12-F, thermometer with M12 male connection **PR-21B-3-100-A-1/4-0600-M12**, 6" industrial sensor, and **M12C-PVC-4-R-F-5**, cable, PVC jacket, 5 m (16.4') long. Total system price.

ΩE OMEGA®

300.5
0% ▪▪▪▪▪▪ 100% °F

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.

Thermowell Options for Sanitary Sensors
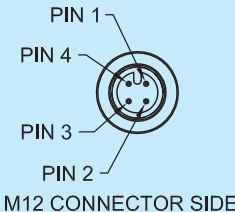
Standard 304 or 316 stainless steel models–260L Series

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3A approved 316 stainless steel models–S Series.
Visit **omega.com/sanitary** for the complete selection.
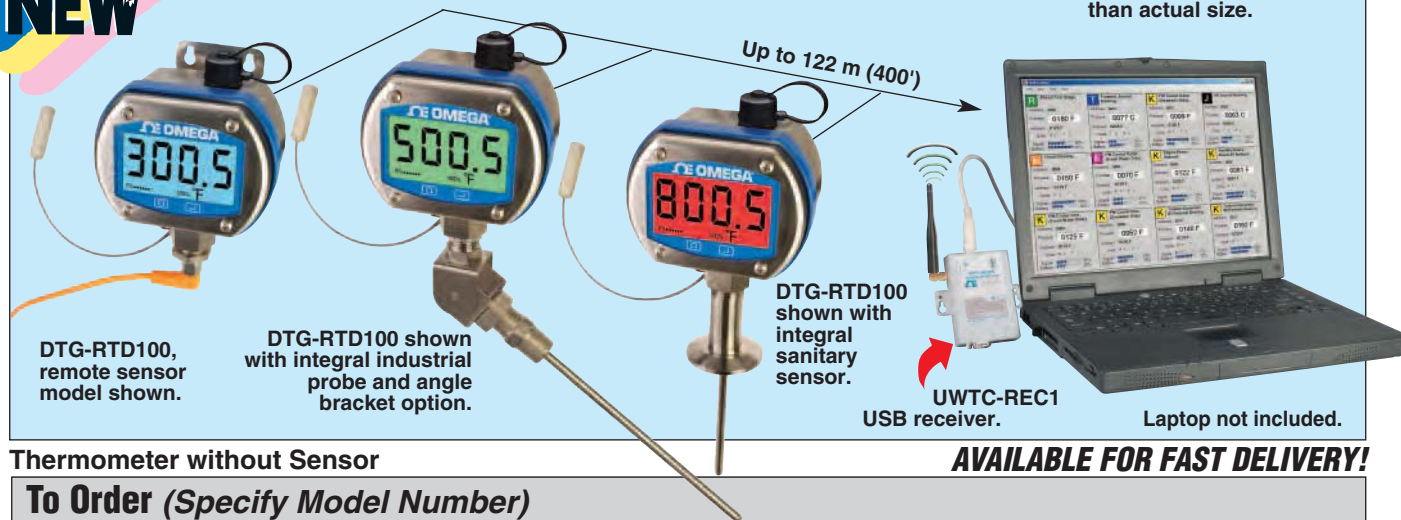
M12-R-F-FM, $11.

Field mountable connectors.

M12-S-F-FM.

PIN 1
PIN 4
PIN 3
PIN 2
M12 CONNECTOR SIDE

Color Codes			
Pin 1	**Pin 2**	**Pin 3**	**Pin 4**
Brown	White	Blue	Black

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NEW®

Up to 122 m (400')

Shown smaller than actual size.

DTG-RTD100, remote sensor model shown.

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

DTG-RTD100 shown with integral sanitary sensor.

UWTC-REC1 USB receiver.

Laptop not included.

Thermometer without Sensor

AVAILABLE FOR FAST DELIVERY!

To Order *(Specify Model Number)*

Model No.	Description
DTG-RTD100	Digital RTD thermometer with internal terminal block connection
DTG-RTD100-M12-F	Digital RTD thermometer with female M12 connection
DTG-RTD100-M12-M	Digital RTD thermometer with male M12 connection

Thermometer with Integral Sensors

Model No.	Description
DTG-RTD100-PRS-3-100-AS-(*)-D1	Digital RTD thermometer with integral standard duty ¼" dia sanitary Pt100 sensor, 1½" Tri-Grip™ 16AMP cap
DTG-RTD100-PRS-3-100-AH-(*)-D1	Digital RTD thermometer with integral heavy-duty ⅜" dia (stepped to ³⁄₁₆") sanitary Pt100 sensor, 1½" Tri-Grip™ 16AMP cap
DTG-RTD100-1/8-(*)-E	Digital RTD thermometer with integral ⅛" dia standard duty Pt100 sensor
DTG-RTD100-1/4-(*)-E	Digital RTD thermometer with integral ¼" dia standard duty Pt100 sensor

3A Approved Sensors with M12 Connector
(For use with DTG-RTD100-M12 Thermometers) [3A logo]

Model No.	Description
PRS-3-100-A-S-(*)-D1-M12	Standard duty sanitary ¼" Pt100 sensor, 1½" 16AMP cap
PRS-3-100-A-H-(*)-D1-M12	Heavy-duty sanitary ⅜" dia (stepped to ³⁄₁₆") Pt100 sensor, 1½" 16AMP cap

Accessories

Model No.	Description
DTG-RTD100-MB	Mounting bracket (not needed for models with intregral sensor)
DTG-RTD100-SK	Service kit, includes enclosure lid, clear window, gasket, washers, screws
DTG-MS	Spare magnetic programming stylus (2 pack)
BATT-C-3V	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-REC3	Wireless 32-channel web based ethernet receiver (used with wireless option only)
UWTC-REC4-(**)	48-channel DIN rail wireless receiver with 4 analog outputs and alarms
CAL-3†	Traceable calibration (meter only)
CAL-3-SYSTEM†	Traceable calibration (meter with probe)

Comes complete with operator's manual, USB cable, user software, magnetic programming stylus and two 3.6V lithium "C" cell batteries.
* *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.*
To order with wireless transmitter option, add suffix ***"-W"*** *to model number.*
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, ¼ " dia industrial probe with angle bracket and wireless options, and* ***UWTC-REC1***, *48-channel USB receiver.*
DTG-RTD100-PRS-3-100-AS-300-D1, *RTD meter with integral Pt100, 3" L, ¼ " dia sanitary probe.*
DTG-RTD100-M12-M, *RTD meter with male M12 connector.*

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Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485, Ehernet and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

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Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters