



Digital RTD Thermometer

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

DTG-RTD100 Series
Starts at
\$395



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
- ✓ User Scalable 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

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



Large 25 mm (1") Digits

Antenna connection for wireless option.

Magnetic stylus (included).

DTG-RTD100-1/4-600-E-W-AB, \$610, 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



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.

† Refer to accessories chart on page 9 for NIST calibration ordering information.

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

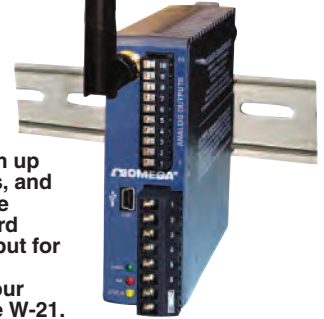
Data Transmitted to Host:

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



Wireless Receivers

UWTC-REC4
receiver, \$275.



Receive data from up
to 48 transmitters, and
provide a scalable
retransmitted, hard
wired analog output for
4 user selected
transmitters in your
system. See page W-21.

UWTC-REC1, \$225.



Receive data from up to
48 transmitters, powered directly by
the USB connection on your
computer. See page W-25.

UWTC-REC3
32-channel receiver
with ethernet, \$235.



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! See page W-24.

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



Digital RTD Thermometer with Integral Sensor

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 1/4" diameter, 3" long probe with 1 1/2" 16AMP mounting flange. Lengths of 4, 5 and 6" are also available. Temperature range -50 to 200°C (-58 to 392°F).



Ordering Example: DTG-RTD100-PRS-3-100-AS-300-D1, comes complete with thermometer and 3" L integral sensor, \$490.

Attach the DTG-RTD100 to a 3-A approved PRS-3-100-A-H-0300-D1-M12 sensor for a heavy duty stepped probe (3/8 to 5/8" dia), 3" long with 1 1/2" 16AMP mounting flange. Lengths of 4, 5 and 6" are also available. Temperature range -50 to 200°C (-58 to 392°F).



Ordering Example: DTG-RTD100-PRS-3-100-AH-400-D1, comes complete with thermometer and 4" L integral sensor, \$520.

1/8" or 1/4" 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, \$465.

Thermowell Options for Industrial Sensors

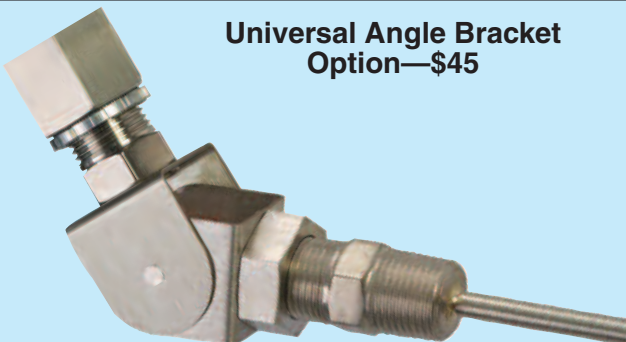


Standard 304 or 316 stainless steel models—260L Series

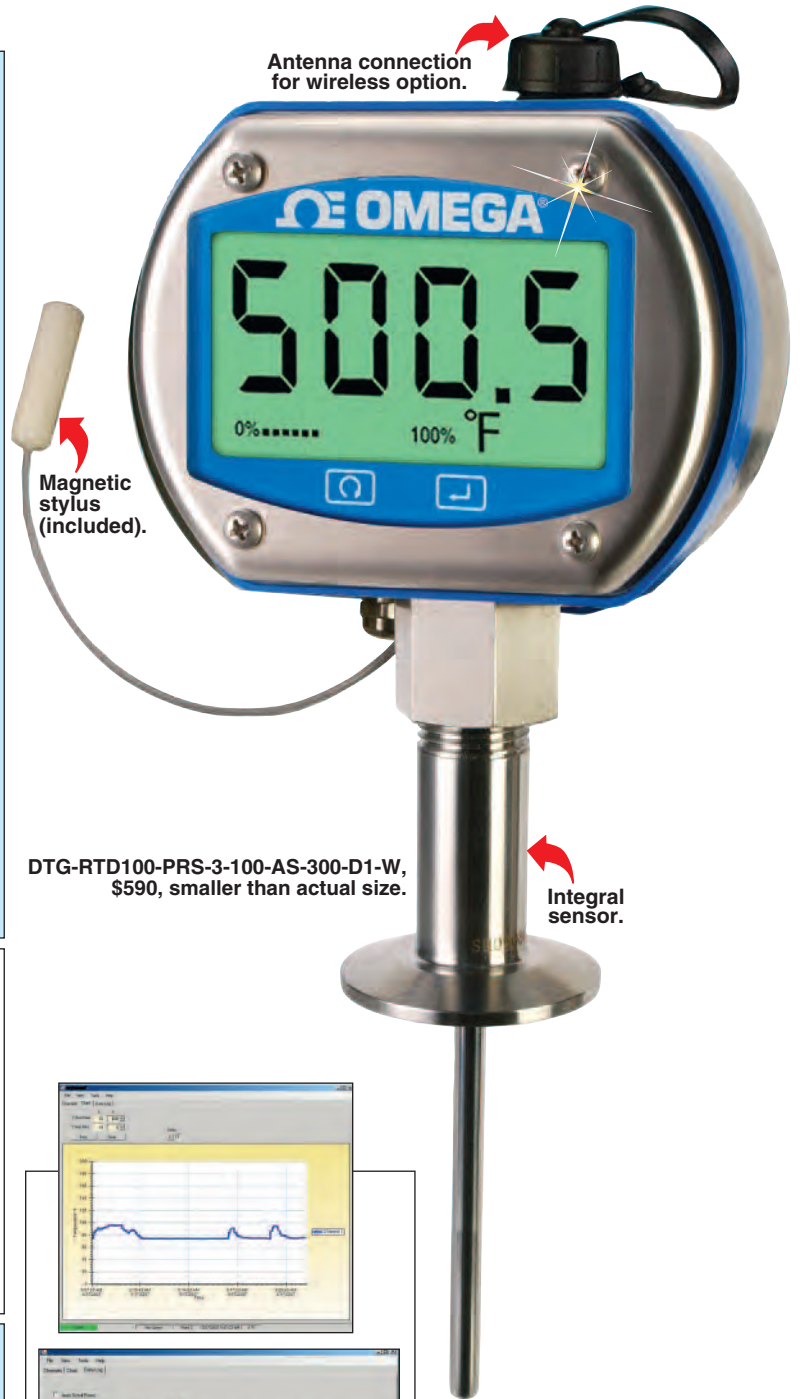


3A approved 316 stainless steel models—S Series. Visit omega.com/thermowells for the complete selection.

Universal Angle Bracket Option—\$45



Ordering Example: DTG-RTD100-1/4-400-E-AB, field adjustable bracket allows sensor to be rotated and angled, \$465 + 45 = \$510.

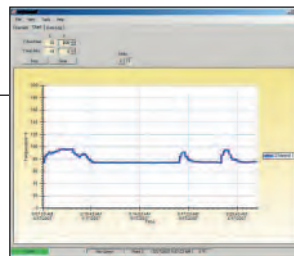


Antenna connection for wireless option.

Magnetic stylus (included).

DTG-RTD100-PRS-3-100-AS-300-D1-W, \$590, smaller than actual size.

Integral sensor.



Time	Temp	Unit	Alarm	...
10:00:00	500.5	°F	OK	...
10:00:05	500.5	°F	OK	...
10:00:10	500.5	°F	OK	...
10:00:15	500.5	°F	OK	...
10:00:20	500.5	°F	OK	...
10:00:25	500.5	°F	OK	...
10:00:30	500.5	°F	OK	...
10:00:35	500.5	°F	OK	...
10:00:40	500.5	°F	OK	...
10:00:45	500.5	°F	OK	...
10:00:50	500.5	°F	OK	...
10:00:55	500.5	°F	OK	...
10:01:00	500.5	°F	OK	...

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


Digital RTD Thermometer for use with Remote Sensor



See Page N-9 to Order Optional Wall Mounting Bracket

Remote Sensor Options

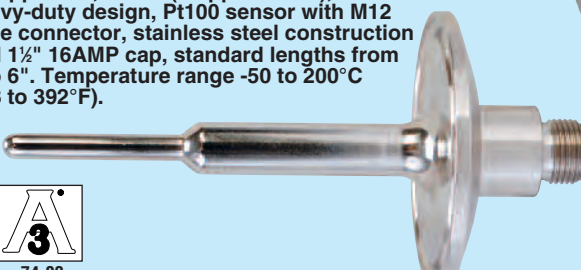
3A approved, 1/4" dia standard duty design, Pt100 sensor with M12 male connector, stainless steel construction and 1 1/2" 16AMP cap, standard lengths from 3 to 6". Temperature range -50 to 200°C (-58 to 392°F).



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: \$425 + 110 + 22 = \$557.


3A approved, 3/8" dia (stepped to 1/8"), 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).




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: \$425 + 140 + 22 = \$587.

1/8" or 1/4" dia, industrial sensor 316 stainless steel construction, 1/2 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: \$425 + 75 + 22 = \$522.




DTG-RTD100-M12-M, \$425, 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, \$21.

M12C-PVC-4-S-M-S-F-2, with straight male and female connectors \$21.


Thermowell Options for Sanitary Sensors



Standard 304 or 316 stainless steel models—260L Series



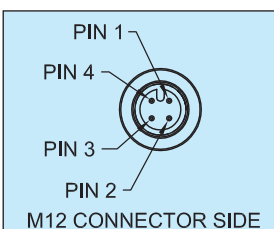
3A approved 316 stainless steel models—S Series. Visit omega.com/sanitary for the complete selection.



M12-R-F-FM, \$11.

Field mountable connectors.

M12-S-F-FM, \$11.



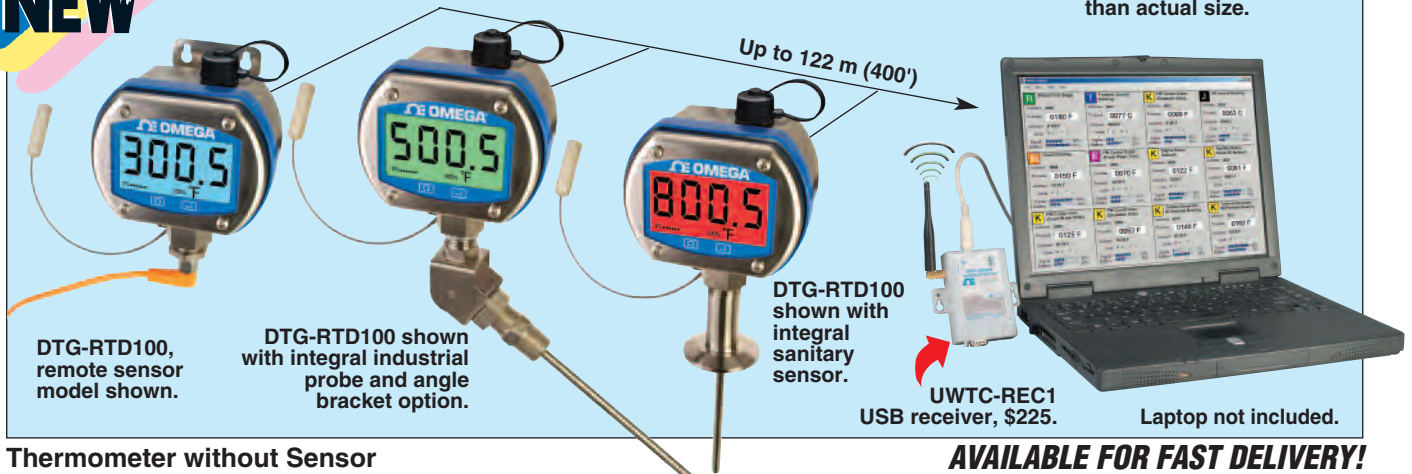
PIN 1
PIN 4
PIN 3
PIN 2
M12 CONNECTOR SIDE

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



Typical Multi-Unit Wireless Data Logging System

Shown smaller than actual size.



Thermometer without Sensor

AVAILABLE FOR FAST DELIVERY!

To Order (Specify Model Number)

Model No.	Price	Description
DTG-RTD100	\$395	Digital RTD thermometer with internal terminal block connection
DTG-RTD100-M12-F	425	Digital RTD thermometer with female M12 connection
DTG-RTD100-M12-M	425	Digital RTD thermometer with male M12 connection

Thermometer with Integral Sensors

Model No.	Price	Description
DTG-RTD100-PRS-3-100-AS-(*)-D1	\$490	Digital RTD thermometer with integral standard duty 1/4" dia sanitary Pt100 sensor, 1 1/2" Tri-Grip™ 16AMP cap
DTG-RTD100-PRS-3-100-AH-(*)-D1	520	Digital RTD thermometer with integral heavy-duty 3/8" dia (stepped to 3/16") sanitary Pt100 sensor, 1 1/2" Tri-Grip™ 16AMP cap
DTG-RTD100-1/8-(*)-E	465	Digital RTD thermometer with integral 1/8" dia standard duty Pt100 sensor
DTG-RTD100-1/4-(*)-E	465	Digital RTD thermometer with integral 1/4" dia standard duty Pt100 sensor

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



Model No.	Price	Description
PRS-3-100-A-S-(*)-D1-M12	\$110	Standard duty sanitary 1/4" Pt100 sensor, 1 1/2" 16AMP cap
PRS-3-100-A-H-(*)-D1-M12	140	Heavy-duty sanitary 3/8" dia (stepped to 3/16") Pt100 sensor, 1 1/2" 16AMP cap

Accessories

Model No.	Price	Description
DTG-RTD100-MB	\$25	Mounting bracket (not needed for models with integral sensor)
DTG-RTD100-SK	35	Service kit, includes enclosure lid, clear window, gasket, washers, screws
DTG-MS	30	Spare magnetic programming stylus (2 pack)
BATT-C-3V	15	Replacement battery, "C" cell 3.6V lithium (2 required with wireless option)
UWTC-REC1	225	Wireless 48-channel USB receiver (used with wireless option only)
UWTC-REC3	235	Wireless 32-channel web based ethernet receiver (used with wireless option only)
UWTC-REC4(**)	275	48-channel DIN rail wireless receiver with 4 analog outputs and alarms
CAL-3†	75	NIST-traceable calibration (meter only)
CAL-3-SYSTEM†	125	NIST-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 and \$45 to price.

To order with wireless transmitter option, add suffix "-W" to model number, and \$100 to price.

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" dia industrial probe with angle bracket and wireless options, and UWTC-REC1, 48-channel USB receiver, \$465 + 45 + 100 + 225 = **\$835**.

DTG-RTD100-PRS-3-100-AS-300-D1, RTD meter with integral Pt100, 3" L, 1/4" dia sanitary probe, **\$490**.

DTG-RTD100-M12-M, RTD meter with male M12 connector, **\$425**.



UNITED STATES

www.omega.com
1-800-TC-OMEGA
Stamford, CT.

CANADA

www.omega.ca
Laval(Quebec)
1-800-TC-OMEGA

GERMANY

www.omega.de
Deckenpfronn, Germany
0800-8266342

UNITED KINGDOM

www.omega.co.uk
Manchester, England
0800-488-488

FRANCE

www.omega.fr
Guyancourt, France
088-466-342

CZECH REPUBLIC

www.omegaeng.cz
Karviná, Czech Republic
596-311-899

BENELUX

www.omega.nl
Amstelveen, NL
0800-099-33-44



More than 100,000 Products Available!

• Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Glass Bulb Thermometers, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders Relative Humidity Measurement Instruments, RTD Probes, Elements and Assemblies, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples Thermowells and Head and Well Assemblies, Transmitters, Wire

• Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

• pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

• Data Acquisition

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

• Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Strain Gages, Torque Transducers, Valves

• Heaters

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