

USER MANUAL

OM-CP-RFOT-A

Wireless Meat Temperature Data Logger with External Probe



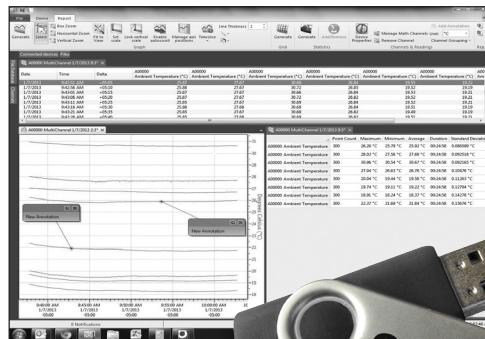
A Complete Wireless Data Logging System

Data Logger



OM-CP-RFOT-A Wireless Data Logger

OM-CP Data Logger Software



Interface Device &
USB Cable



*OM-CP-RFC1000-EXT
Wireless Transceiver*



*Power Adapter
(Included accessory with OM-CP-RFC1000-EXT)*



*USB Cable
(Included accessory with OM-CP-RFC1000-EXT)*

Quick Start Steps

1. Install the OM-CP Data Logger Software and USB Drivers onto a Windows PC.
2. The OM-CP-RFC1000-EXT interface device comes with a USB cable. Plug one end of the cable into an available USB port on the PC and plug the opposite end of the cable into the communication port on the OM-CP-RFC1000-EXT.
3. The OM-CP-RFOT-A is shipped with wireless transmission in an active, low power state. During normal use, inserting a USB (micro B type) cable into the OM-CP-RFOT-A will pass control to the OM-CP software and disable the wireless transmission. When the USB cable is unplugged, wireless transmission resumes with settings that were chosen in the OM-CP software.
4. Launch the OM-CP Data Logger Software. All active Omega Data Loggers that are within range will automatically appear in the connected devices window. Each data logger in the list can be identified by serial number (imprinted on the probe handle of the logger).
5. Select the data logger within the Connected Devices window and click the **Claim** icon.
6. Select the start method, reading rate and any other parameters appropriate for the desired data logging application. Once configured, deploy the data logger by clicking **Start**.
7. To download data, select the device in the list, click the **Stop** icon, and then click the **Download** icon. A graph will automatically display the data.

OM-CP-RFOT-A Product Overview

The Omega OM-CP-RFOT-A is a two-way wireless meat cooking and cooling data logger. The OM-CP-RFOT-A's rugged design, equipped with a flexible piercing probe allows it to be used in harsh environments. The OM-CP-RFOT-A is perfectly suited for use in smoke houses, ovens and other cooking processes up to 212 °F (100 °C) as well as refrigerators and freezers down to -4 °F (-20 °C). The OM-CP-RFOT-A is completely splash proof, and can withstand wash down cycles. The OM-CP-RFOT-A records and transmits internal product temperature readings back to a central PC for instant real-time monitoring, even when a smoke house or freezer door is closed.

The OM-CP-RFOT-A allows the user to also set-up real-time wireless alarming within the software, so that the user is notified by email or text if an alarm condition has been met or exceeded. The OM-CP-RFOT-A assists in complying with HACCP requirements as well as USDA regulations.

OM-CP-RFOT-A Options & Accessories



OM-CP-BAT109
3.6V Lithium Battery.

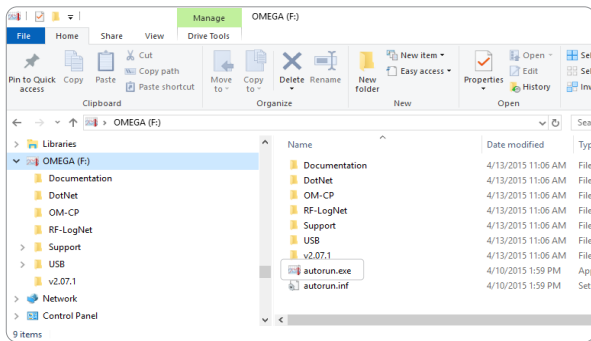


Software Installation

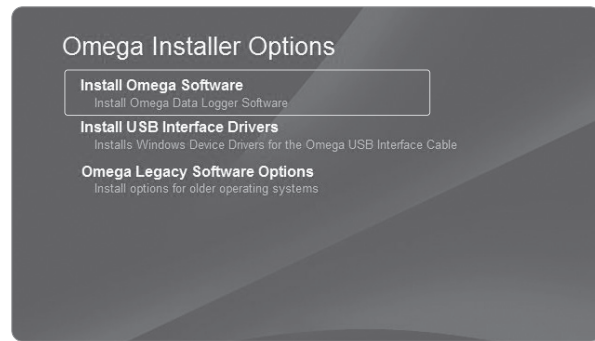
Installing the OM-CP Data Logger Software

Insert the OM-CP Data Logger Software Flash Drive into an open USB port on a Windows PC. If the autorun does not appear, locate the drive on the computer and double click on **Autorun.exe**. Follow the instructions provided in the Installation Wizard.

- 1 Locate the Autorun.exe file on the OM-CP Data Logger Software Flash Drive.



- 2 Select "Omega Software" in the Omega Installer Options window panel.



- 3 Install Omega Software



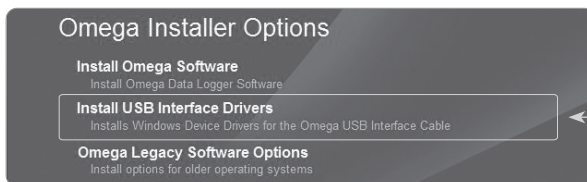
If the Windows PC doesn't already have .NET 4.0 Framework, installation may be required.

To see if the .NET 4.0 Framework is installed, go to the Windows **Control Panel** and select **Programs**. "**Microsoft .NET Framework 4.0**" would be listed as a Windows program.

Select "Install Omega Software" if .NET framework is installed on the Windows PC, or if installing on a Windows 8 machine.

Installing the USB Driver

With the USB Flash Drive inserted into the computer, locate the drive on the computer and double click on **Autorun.exe**. Install the **USB Interface Drivers** (under **Drivers and Third Party Tools**).

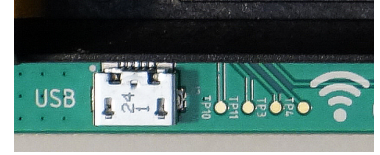


Select "Driver and Third Party Tools" in the Omega Installer Options window panel.

Once the installation of the software and driver is confirmed, the OM-CP-RFC1000-EXT can then be connected to the computer.

Activating & Deploying the Data Logger

1. Connect the OM-CP-RFC1000-EXT wireless transceiver (sold separately) to the Windows PC with the provided USB cable.
2. Additional OM-CP-RFC1000-EXT's can be used as repeaters to transmit over greater distances or to maintain signal if walls, corners, or other obstacles impede line of sight. Plug each one into an electrical outlet in the desired locations.
3. Launch the OM-CP Data Logger Software.
4. The OM-CP-RFOT-A is shipped with wireless transmission in an active, low power state.
Inserting a USB (micro B type) cable into the OM-CP-RFOT-A enables direct USB communication and disables wireless transmission. Direct USB communication allows for changing the wireless channel in the device's Properties, if necessary.
5. When the USB cable is unplugged, wireless transmission is enabled.
6. All active data loggers will be listed within the Connected Devices panel. Select a logger, and click the **Claim** icon to pair the logger to the OM-CP-RFC1000-EXT connected to the PC.
7. Choose the start method, either **Real Time Start** to view data as it is collected, or Custom Start for standalone logging to memory.
By default, a report is generated automatically when starting a logger using Real Time Start. With Custom Start, data is recorded to memory and can be viewed by selecting **Stop** to end the cycle, and **Download** to retrieve the data from the logger's internal memory.



Mounting Instructions

For best performance, the OM-CP-RFOT-A should always be hung by the hook in an upright position. This will allow for the best path for the wireless signal.

Transmission Distance

Typical transmission distance from an OM-CP-RFC1000-EXT to an OM-CP-RFOT-A:

- Unobstructed line of sight (outdoors): 2,000 feet max
- Typical urban environment (indoors): 500 feet max

Obstacles

Obstacles will decrease the line-of-sight from an OM-CP-RFC1000-EXT to another OM-CP-RFC1000-EXT as well as from an OM-CP-RFC1000-EXT to an OM-CP-RFOT-A. Obstacles that interfere with or decrease the wireless signal could include but are not limited to smokehouse doors, freezer/refrigerator doors, building structures such as walls and metal beams and internal traffic such as forklifts and metal racks or carts. Additional OM-CP-RFC1000-EXT's can be placed near obstacles to lengthen and strengthen the wireless signal.

Deflection

When a wireless signal "hits" an object such as a metal wall, the wireless signal will not just stop but rather it could turn a corner, bend or slow down. When installing the OM-CP-RFC1000-EXT's obstacles and possible deflection should also be considered.

Channel Programming

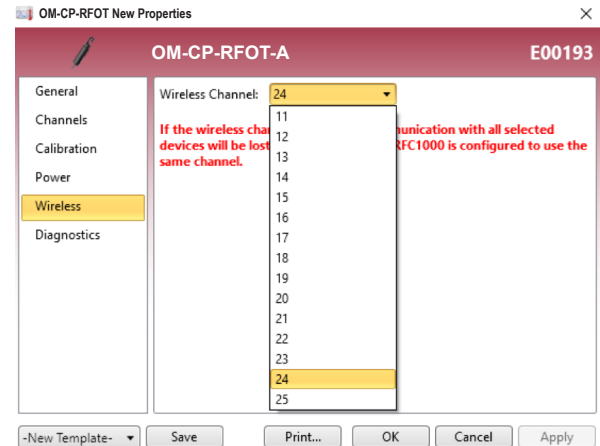
Different wireless channels may be used to create multiple networks in one area, or to avoid wireless interference from other devices. Any data logger or OM-CP-RFC1000-EXT wireless transceiver that is on the same network is required to use the same channel. If all of the devices are not on the same channel, the devices will not communicate with one another. OM-CP-RFC1000-EXT wireless transceivers are programmed by default on channel 25.

CHANNEL NOTE: *Omega wireless data loggers and wireless transceivers purchased prior to April 15, 2016 are programmed by default to channel 11. Please refer to the Product User Guide provided with these devices for instructions to change the channel selection if needed.*

Changing the channel settings of the OM-CP-RFOT-A

Connect the OM-CP-RFOT-A to the PC with a USB cable. In the OM-CP Data Logger Software, select a device from the connected devices window, then click the properties icon at the top of screen, or, right click on a device in the connected devices window and select properties. On the properties screen, select Wireless and in the Wireless Channel box, click the down arrow, then the desired channel. Click OK to confirm the choice.

Be sure that the channel chosen matches the channel settings of the OM-CP-RFC1000-EXT wireless transceiver which this device will communicate through. To configuring the channel settings of the OM-CP-RFC1000-EXT wireless transceiver (sold separately), please refer to the OM-CP-RFC1000-EXT Product User Guide.



Troubleshooting

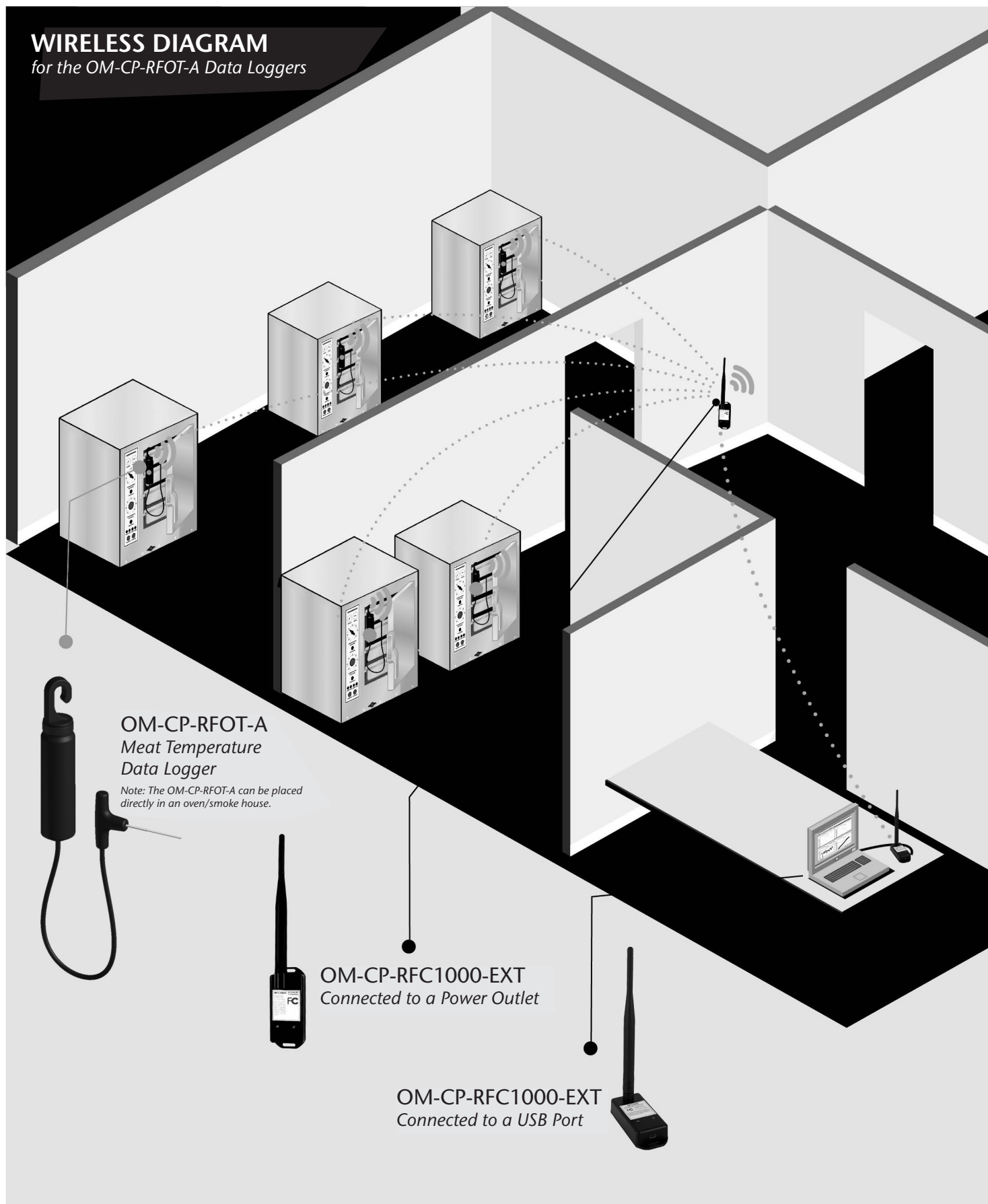
Why is the wireless data logger not appearing in the OM-CP Data Logger Software?

If the data logger doesn't appear in the Connected Devices panel, or an error message is received while using the data logger, try the following:

- Ensure the data logger and OM-CP-RFC1000-EXT are on the same wireless channel. If the devices are not on the same channel, the devices will not communicate with one another. Please refer to the Channel Programming section for information on changing the device channel.
- Check that the OM-CP-RFC1000-EXT is properly connected.
- Ensure that the battery is not discharged. For best voltage accuracy, use a voltage meter connected to the battery of the device. If possible, replace battery.
- Ensure that the Omega 4 Software is being used.
- Ensure that the Connected Devices panel is large enough to display devices. This can be verified by positioning the cursor on the edge of the Connected Devices panel until the resize cursor appears, then dragging the edge of the panel to resize it.

WIRELESS DIAGRAM

for the OM-CP-RFOT-A Data Loggers



Product Maintenance

(Battery compartment shown with cover removed)

Battery Replacement

Materials needed: OM-CP-BAT109 Replacement Battery

Procedure:

1. Unscrew the end cap from the logger.
2. Remove the battery retention clip by sliding a small screwdriver blade or paper clip between the clip and battery holder and prying away from the holder.
3. Grasp the black base of the unit with cord hanging downward and both edges of the circuit board, all with one hand. Pull the old battery out with the other hand.
4. Install a new battery, observing the polarity markings on the circuit board and battery holder. Position the battery retention clip over the new battery and install by pressing downward until a click is heard from each side.
5. Install the new battery as shown by the diagram on the bottom of the battery holder.
6. Screw the body of the logger back together making sure the O-Rings are not visible.

Battery Warning

DISCARD USED BATTERY PROMPTLY. KEEP OUT OF REACH OF CHILDREN. DO NOT DISPOSE OF IN FIRE, RECHARGE, PUT IN BACKWARDS, DISASSEMBLE, OR MIX WITH OTHER BATTERY TYPES. MAY EXPLODE, FLAME, OR LEAK AND CAUSE PERSONAL INJURY.

O-Ring Maintenance:

Omega data loggers come directly from the factory with high quality O-Rings that have been properly installed. As a user, there are only a few things that need to be remembered to maintain a functional O-Ring seal.

DO:

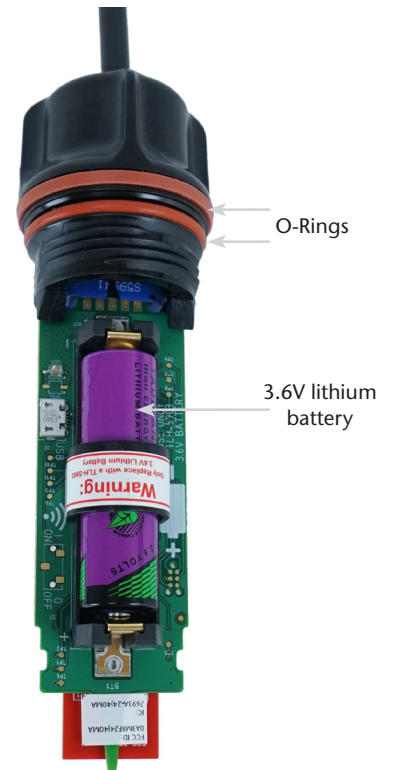
- Clean them frequently (use compressed air or a soft brush to avoid abrasion).
- Lubricate regularly (if it doesn't feel slippery, it needs to be lubricated). We recommend Parker® Super-O-Lube, but any silicone based O-Ring lubricant will work. This is most important on the seals that are frequently opened and closed for communication with the logger.
- Inspect the O-Ring regularly for signs of failure (see the reverse side of this pamphlet for details on what to look for)

DON'T:

- Poke, jab, pry at the O-Ring with sharp or pointed objects.
- Expose the O-Rings to harsh chemicals (when in doubt, call Omega).
- Expose the seals to high pressure (all of Omega's submersible data loggers are rated to 60 PSIG).
- Expose the seal to high temperatures (see data logger Specification Sheet for operating temperature range).

Recalibration

Recalibration is recommended annually for all Omega data loggers. The Properties window in the OM-CP Data Logger software displays the date of the last calibration and the date that the device is next due for calibration. The OM-CP Data Logger Software can also be configured to send an on screen notification prior to the calibration due date for each device. By default this is set to seven days prior to calibration due date and can be changed by the user by going to the file tab in the OM-CP Data Logger software and clicking on **Options**. Select device and check "**Display popup notification when a device nears its next calibration date**". The user can then select the number of days before calibration due date to notify.



OM-CP-RFOT-A Specifications

General Specifications

Reading Rate	One reading every two seconds to one every 24 hours
Memory	21,504 readings; software configurable memory wrap
Wrap Around	Yes
Start Modes	Immediate start & delayed start
Calibration	Digital calibration through software
Calibration Date	Automatically recorded within device
Battery Type	3.6 V lithium battery included; user replaceable
Battery Life	2 years typical at 15 second reading rate
IP Rating	IP67
Data Format	Date and time stamped °C, °F, K, °R
Time Accuracy	±10 second / month (at 25 °C)
Computer Interface	USB (interface cable required); 115,200 baud
Software	Windows XP SP3/7/8/10
Operating Environment	-20 °C to +100 °C (-4 °F to 212 °F), 0 %RH to 100 %RH non-condensing
Dimensions	Body: 7.8 in x 1.62 in dia. (198 mm x 41 mm dia.) Hook ID: 0.625 in (16 mm) Probe: 4 in x 0.188 in (102 mm x 4.8 mm dia.) Cable Length: 30 in (760 mm)
Weight	8.8 oz (250 g)
Material	Body: Radel R-5100 Cable Jacket: Silicone Polyurethane
Approvals	CE, US (FCC), CA (IC)

Temperature

Probe Temperature Range	-50 °C to +200 °C (-58 °F to +392 °F)
Resolution	0.01 °C (0.018 °F)
Calibrated Accuracy	±0.1 °C at 0 °C to 100 °C (±0.18 °F at 32 °F to 212 °F) ±0.5 °C (±0.9 °F) outside of that range

Wireless

RF Frequency	2.45 GHz IEEE 802.15.4 ultra-low power wireless transceiver with fully bi-directional communication
Band	ISM band 2.405-2.475 GHz. Operation (channels 11 through 25) @ 250 kbps
Maximum Output Power	+0 dBm typical
Receiver Sensitivity	-95 dBm typical
Wireless Interface	OM-CP-RFC1000-EXT OM-CP-RFC1000-EXT-EUR OM-CP-RFC1000-IP69K
Transmission Distance	2000 ft max. outdoors (line of sight unobstructed) 500 ft max. indoors (typical urban)

Battery Warning

BATTERY MAY LEAK, FLAME OR EXPLODE IF DISASSEMBLED, SHORTED, CHARGED, CONNECTED TOGETHER, MIXED WITH USED OR OTHER BATTERIES, EXPOSED TO FIRE OR HIGH TEMPERATURE. DISCARD USED BATTERY PROMPTLY. KEEP OUT OF REACH OF CHILDREN.

Specifications subject to change.

See Omega's terms and conditions at www.omega.com.

Countries approved for use, purchase and distribution of the OM-CP-RFOT-A:

Australia, Austria, Belgium, Bulgaria, Canada, Chile, Colombia, Croatia, Cyprus, Czech Republic, Denmark, Ecuador, Estonia, Finland, France, Germany, Greece, Honduras, Hungary, Iceland, Ireland, Israel, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malaysia, Malta, Mexico, New Zealand, Norway, Peru, Poland, Portugal, Romania, Saudi Arabia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Thailand, The Netherlands, Turkey, United Kingdom, United States, Venezuela, Vietnam



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