OM-CP-IRTC101A

**10-Year Battery Life**
**Wide Temperature Range**
**Uses Type K Infrared Thermocouple**
**High Speed Download**
**NIST Traceable Calibration**
**Real-Time Operation**
**Programmable Start/Stop Time**
**Miniature Size**

The OM-CP-IRTC101A is a battery powered infrared thermocouple based temperature data logger. It provides nearly instantaneous, non-contact temperature measurements, making it a perfect solution for applications such as surface temperature recording and monitoring moving objects.

The OM-CP-IRTC101A features a 10 year battery life, 1 second reading rate, a multiple start/stop function, ultra-high speed download capability, 500,000 reading storage capacity, optional memory wrap, battery life indicator, optional password protection, programmable high-low alarms and more.

The OM-CP-IRTC101A was designed with our customers in mind. OMEGA offers free firmware upgrades for the life of the product so that data loggers already deployed in the field can grow with new technological developments.

Units do not need to be returned to the factory for upgrades. The user can do this from any PC.

This is an all-in-one compact, portable, easy to use device that will measure and record up to 500,000 measurements per channel. The storage medium is non-volatile solid state memory, providing maximum data security even if the battery becomes discharged. The device can be started and stopped directly from your computer and its small size allows it to fit almost anywhere.

The OM-CP-IRTC101A makes data retrieval quick and easy. Simply plug it into an empty COM or USB port and our user-friendly software does the rest.

**Specifications**

**DATA LOGGER INTERNAL TEMPERATURE CHANNEL**
- **Range:** -40 to 80°C (-40 to 176°F)
- **Temperature Resolution:** 0.1°C (0.18°F)
- **Logger Calibrated Accuracy:** ±0.25°C (±0.45°F)

**REMOTE CHANNEL**
- **Thermocouple Type:** K (infrared, contact sales for other types)
- **Thermocouple Connection:** Female subminiature (SMP)
- **Cold Junction Compensation:** Automatic, based on internal channel
- **Maximum Thermocouple Resistance:** 3000Ω
- **Thermocouple Type:** K

**Range (°C):** See To Order chart on next page.
**Sensor:** ±0.3°C
**Field of View:** 60° (1:1)
**Minimum Spot Size:** 8 mm (0.3")
**Spectral Response:** 6.5 to 14 µ
**Reading Rate:** 1 reading every 2 seconds to 1 every 12 hours
**Memory:** 500,000 readings per channel (1,000,000 readings total) software configurable memory wrap 250,000 readings in multiple start/stop mode
**Wrap Around:** Yes
**Start Modes:**
- Immediate start
- Delay start up to 18 months
- Multiple pushbutton start/stop

**Stop Modes:**
- Manual through software
- Timed (specific date and time)

**Multiple Start/Stop Mode:**
Start and stop the device multiple times without having to download data or communicate with a PC

**Multiple Start/Stop Mode Activation:**
- **To Start the Device:** Press and hold the pushbutton for 5 seconds, the green LED will flash during this time. The device has started logging
- **To Stop the Device:** Press and hold the pushbutton for 5 seconds, the red LED will flash during this time. The device has stopped logging.
Real Time Recording: May be used with PC to monitor and record data in real time.
Alarm: Programmable high and low limits; alarm is activated when temperature reaches or exceeds set limits.

LED Functionality:
- Green LED Blinks: 10 second rate to indicate logging; 15 second rate to indicate delay start
- Red LED Blinks: 10 second rate to indicate low battery and/or full memory; 1 second rate to indicate an alarm condition

Password Protection: An optional password may be programmed into the device to restrict access to configuration options. Data may be read out without the password.

Battery Type: 3.6V lithium battery included; user replaceable
Battery Life: 10 years typical at a 15 minute reading rate
Data Format: Date and time stamped °C, °F, K, °R, µV, mV, V
Time Accuracy: ±1 minute/month (at 20°C, stand alone data logging)
Computer Interface: USB (interface cable required); 115,200 baud
Software: XP SP3/Vista/7 and 8 (32- and 64-bit)
Operating Environment: -18 to 70°C (-40 to 158°F)
Dimensions: 36 x 56 x 16 mm (1.4 x 2.2 x 0.6”)
Weight: 24 g (0.9 oz)

Infrared Thermocouples
Dimensions:
3.25 L x 1.80 cm Dia.
(1.28 x 0.71”); 0.9 m (36") PFA coated unshielded stranded wire
OM-CP-WATERBOX101A
Operating Temperature: -20 to 80°C (-4 to 176°F)
IP Rating: IP65
Dimensions: 62 H x 93 W x 25 mm D (2.45 x 3.66 x 0.93”)
Material: Anodized aluminum with polycarbonate cover
Weight: 140 g (5 oz)

Infrared Thermocouples

### To Order

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OM-CP-IRTC101A</td>
<td>Infrared thermocouple data logger</td>
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<tr>
<td>OM-CP-IRTC101A-CERT</td>
<td>Infrared thermocouple data logger with NIST calibration certificate</td>
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<tr>
<td>OM-CP-IFC200</td>
<td>Windows software and 1.8 m (6’) USB interface cable</td>
</tr>
<tr>
<td>OM-CP-BAT105</td>
<td>Replacement 3.6V lithium battery</td>
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<tr>
<td>OM-CP-WATERBOX101A</td>
<td>Weatherproof NEMA 4 (IP65) enclosure for data logger</td>
</tr>
<tr>
<td>OM-CP-WATERBOX101A-KIT</td>
<td>Maintenance kit for OM-CP-WATERBOX101A</td>
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Comes complete with 3.6V lithium battery. Operator’s manual and USB interface cable are included with the OM-CP-IFC200 software/cable package (required for data logger operation, sold separately).

Infrared Thermocouples

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<tr>
<td>OS36-01-K-50F-SMPW</td>
<td>Type K infrared thermocouple, -18 to 27°C (0 to 80°F)</td>
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<tr>
<td>OS36-01-K-80F-SMPW</td>
<td>Type K infrared thermocouple, 10 to 49°C (50 to 120°F)</td>
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<tr>
<td>OS36-01-K-98.6F-SMPW</td>
<td>Type K infrared thermocouple, 16 to 39°C (60 to 102°F)</td>
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<tr>
<td>OS36-01-K-140F-SMPW</td>
<td>Type K infrared thermocouple, 25 to 80°C (80 to 180°F)</td>
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<tr>
<td>OS36-01-K-180F-SMPW</td>
<td>Type K infrared thermocouple, 70 to 104°C (160 to 220°F)</td>
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<tr>
<td>OS36-01-K-240F-SMPW</td>
<td>Type K infrared thermocouple, 95 to 130°C (200 to 270°F)</td>
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<tr>
<td>OS36-01-K-280F-SMPW</td>
<td>Type K infrared thermocouple, 125 to 155°C (260 to 310°F)</td>
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<tr>
<td>OS36-01-K-340F-SMPW</td>
<td>Type K infrared thermocouple, 145 to 175°C (290 to 350°F)</td>
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<tr>
<td>OS36-01-K-440F-SMPW</td>
<td>Type K infrared thermocouple, 170 to 250°C (340 to 480°F)</td>
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