Infrared Thermocouple Data Logger
Part of the NOMAD® Family

OM-CP-WATERBOX101A, enclosure assembly shown smaller than actual size.

OM-CP-IRTC101A data logger with infrared thermocouple, shown actual size.

OS36-01 infrared thermocouple, sold separately.

OM-CP-IRTC101A

5 YEAR WARRANTY

NIST Optional

- 🗸 **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: ±2.0°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:
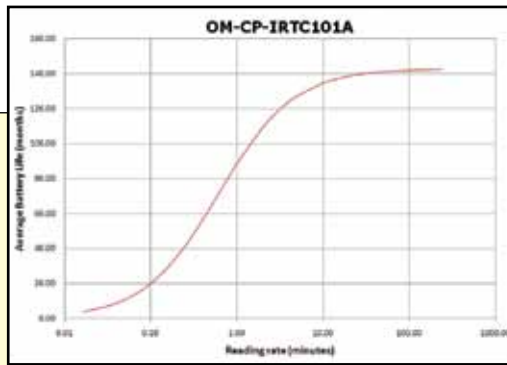Start and stop the device multiple times without having to download data or communicate with a PC

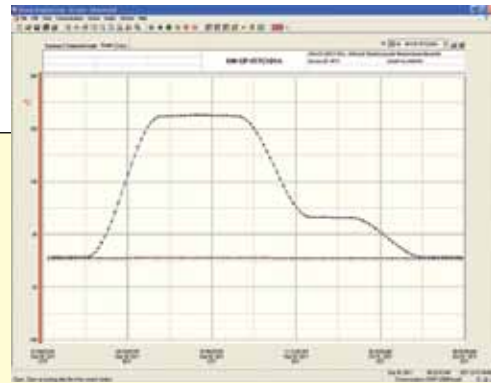**Multiple Start/Stop Mode Activation:**
To Start the Device:
Press and hold the pushbutton for 5 seconds, the green LED will flash during this time. The device has started logging

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.

Average battery life vs. reading rate of OM-CP-IRTC101A recording in a 25°C environment.

OM-CP-IFC200, Windows® software displays data in graphical or tabular format.

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 Thermocouple 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)

To Order

Model No.	Description
OM-CP-IRTC101A	Infrared thermocouple data logger
OM-CP-IRTC101A-CERT	Infrared thermocouple data logger with NIST calibration certificate
OM-CP-IFC200	Windows software and 1.8 m (6') USB interface cable
OM-CP-BAT105	Replacement 3.6V lithium battery
OM-CP-WATERBOX101A	Weatherproof NEMA 4 (IP65) enclosure for data logger
OM-CP-WATERBOX101A-KIT	Maintenance kit for OM-CP-WATERBOX101A

*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

Model No.	Description
OS36-01-K-50F-SMPW	Type K infrared thermocouple, -18 to 27°C (0 to 80°F)
OS36-01-K-80F-SMPW	Type K infrared thermocouple, 10 to 49°C (50 to 120°F)
OS36-01-K-98.6F-SMPW	Type K infrared thermocouple, 16 to 39°C (60 to 102°F)
OS36-01-K-140F-SMPW	Type K infrared thermocouple, 25 to 80°C (80 to 180°F)
OS36-01-K-180F-SMPW	Type K infrared thermocouple, 70 to 104°C (160 to 220°F)
OS36-01-K-240F-SMPW	Type K infrared thermocouple, 95 to 130°C (200 to 270°F)
OS36-01-K-280F-SMPW	Type K infrared thermocouple, 125 to 155°C (260 to 310°F)
OS36-01-K-340F-SMPW	Type K infrared thermocouple, 145 to 175°C (290 to 350°F)
OS36-01-K-440F-SMPW	Type K infrared thermocouple, 170 to 250°C (340 to 480°F)

***Ordering Example: OM-CP-IRTC101A-CERT,** infrared thermocouple data logger with NIST calibration certificate, **OS36-01-K-440F-SMPW,** infrared thermocouple with 170 to 250°C (340 to 480°F) temperature range, and **OM-CP-IFC200** Windows software and USB cable.*