

High Temperature Data Logger With 50 mm (2") Fast Response Probe



OM-CP-HITEMP140-FR



Optional

- ✓ Fast Response Time
- ✓ Operating Temperature Range:
-40 to 140°C (-40 to 284°F)
- ✓ Optional Vented or Flush Thermal
Shield for Operation up to 250°C (482°F)
- ✓ Probe Measures from -200 to 260°C
(-328 to 500°F)
- ✓ ±0.1°C (±0.18°F) Accuracy
- ✓ Submersible (IP68)
- ✓ Trigger Settings
- ✓ Programmable Start and Stop Time
- ✓ 4 Hz Reading Rate

The OM-CP-HITEMP140-FR is a high temperature data logger with an ultra-fast response time to record temperature during rapidly changing thermal processes. This high temperature data logger features a 50 L x 1.59 mm dia (2 x 0.0625") probe and is capable of recording up to 4 Hz, which is 4 times faster than other data loggers in this class. This allows the temperature sensor to quickly adapt and accurately record temperature variations in changing environments. Applications include oven profiling, steam sterilization, autoclave verification and mapping, seafood processing, flash freezing and more.

The OM-CP-HITEMP140-FR data logger is designed with food grade stainless steel. The device can be placed in environments up to 140°C (284°F) and the probe is capable of measuring from -200 to 260°C (-328 to 500°F). The OM-CP-HITEMP140-FR is also available with an optional thermal shield enclosure to extend the operating range of the data logger to -200 to 250°C (-328 to 482°F). The OM-CP-HITEMP140-FR-TSK (Thermal Shield Kit) comes with either a vented or flush top enclosure to accommodate a multitude of applications.

The Trigger Settings feature of the OM-CP-HITEMP140-FR allows users to configure high and low temperature thresholds that when met or exceeded, will automatically start or stop recording data to memory. This data logger is capable of storing up to 32,700 date and time stamped readings and features a nonvolatile solid state memory which retains data even if the battery becomes discharged.

The OM-CP-MULTIMOUNT-Z is a versatile mount or stand for use with the OM-CP-HITEMP140 series of data loggers. It can be used to stabilize a logger inside an autoclave, or screwed to a flat surface to create an anchored base. Made of 316 stainless steel, the OM-CP-MULTIMOUNT-Z is able to withstand temperatures up to 150°C (302°F) making it ideal for use in autoclave sterilization processes.

OM-CP-HITEMP140-FR shown
larger than actual size.



The OM-CP-HITEMP140-FR utilizes the latest software. Data can be viewed in graphical or tabular formats and summary and statistics views are available for further analysis. The software features export to Excel®, data annotation, digital calibration and more.

Specifications

OM-CP-HITEMP140-FR (DATA LOGGER WITHOUT THERMAL SHIELD)

TEMPERATURE

Temperature Sensor: 100 Ω platinum RTD

Probe Measurement Range: -200 to 260°C (-328 to 500°F)

Temperature Resolution: 0.01°C (0.02°F)

Calibrated Accuracy: ±0.1°C (±0.18°F)

20 to 140°C (68 to 284°F)

GENERAL

**Data Logger Response Time (Hours: Minutes: Seconds:
Fractions of a Second):**

In Air: t60 - 00:00:39:00 (39 sec to reach 60% of step change)
t90 - 00:02:71:00 (2 min 71 sec to reach 90% of step change)

In Water:
t60 - 00:00:10:00 (10 sec to reach 60% of step change)
t90 - 00:00:12:00 (12 sec to reach 90% of step change)



Reading Rate: 4 readings per second up to 1 reading every 24 hours
Memory: 32,767 readings
Start Modes:

- Software programmable immediate start
- Delay start up to 18 months in advance

Stop Modes: Manual or timed (specific date and time)
Trigger Settings: High and low limits may be set. Once data meets or exceed sets limits, the device will record to memory. Bi-level start and stop triggers can also be programmed. Users can specify the number of readings to take after the device triggers

Readings in Trigger Settings Mode: 10,922 readings

Real Time Recording: May be used with PC to monitor and record data in real time

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

Memory Wrap Around: Yes

Battery Type: 3.6V high-temperature lithium battery included; user replaceable

Battery Life: 2 years typical (1 minute reading rate)

Calibration: Digital calibration through software

Calibration Date: Automatically recorded within device

Data Format: Date and time stamped °C, °F, °R, K

Time Accuracy: ±1 minute/month at 25°C (77°F)

Extended Operation: ±20 minutes/month at 140°C (284°F)

Computer Interface: OM-CP-IFC400 USB docking station or OM-CP-IFC406 multiplexer interface required; 125,000 baud

Software: Windows® XP, SP3/Vista/7 and 8 (32-bit and 64-bit)

Operating Environment: -40 to 140°C (-40 to 284°F), 0 to 100% RH, 0.002 to 100 PSIA

IP Rating: IP68

Dimensions (Body): 48 H x 24.6 mm D (1.89 x 0.970")

Dimensions (Probe):
 44.5 L x 1.59 mm dia (1.75 x 0.0625")
 4.78 mm transitional dia (0.188")

Weight: 65 g (2.3 oz)

Materials: 316 Stainless Steel, PEEK

OM-CP-HITEMP140-FR-TSK (Data Logger with Thermal Shield)

Data Logger Response Time with Thermal Shield (Hours: Minutes: Seconds: Fractions of a Second)	OM-CP-HITEMP140-FR-TSK-FL (Flush)		OM-CP-HITEMP140-FR-TSK (Vented)	
	Exposure Time in Air	Exposure Time in Water	Exposure Time in Air	Exposure Time in Water
	t60 - 00:00:30:00	t60 - 00:00:09:00	t60 - 00:00:59:00	t60 - 00:00:10:00
t90 - 00:13:10:00	t90 - 00:00:12:00	t90 - 00:22:10:00	t90 - 00:00:12:00	
Dimensions (Enclosure)	70 x 51 mm dia. (2.75 x 2.0")		109 x 51 mm dia (4.3 x 2.0")	
Weight	190 g (6.7 oz) not including data logger		270 g (9.5 oz) not including data logger	
Operating Environment	-200 to 250°C (-328 to 482°F) (Time limited - See table below) 0% to 100% RH			
Material	Enclosure: PTFE			

Maximum Exposure Time Chart	OM-CP-HITEMP140-FR-TSK-FL (Flush)		OM-CP-HITEMP140-FR-TSK (Vented)	
	Exposure Time in Air 150°C (302°F)	Exposure Time in Liquid 150°C (302°F)	Exposure Time in Air 150°C (302°F)	Exposure Time in Liquid 150°C (302°F)
Ambient Temperature				
-200°C (-328°F)	12 minutes	N/A	14 minutes	N/A
-180°C (-292°F)	13 minutes	N/A	15 minutes	N/A
-160°C (-256°F)	15 minutes	N/A	16 minutes	N/A
-140°C (-220°F)	17 minutes	N/A	18 minutes	N/A
-120°C (-184°F)	19 minutes	N/A	21 minutes	N/A
-100°C (-148°F)	22 minutes	N/A	24 minutes	N/A
-80°C (-112°F)	27 minutes	N/A	30 minutes	N/A
-60°C (-76°F)	37 minutes	22 minutes	42 minutes	25 minutes
-40 to 140°C (-40 to 284°F)	Indefinitely	Indefinitely	Indefinitely	Indefinitely
150°C (302°F)	59 minutes	34 minutes	66 minutes	40 minutes
160°C (320°F)	51 minutes	29 minutes	57 minutes	34 minutes
170°C (338°F)	43 minutes	25 minutes	48 minutes	29 minutes
180°C (356°F)	37 minutes	23 minutes	42 minutes	26 minutes
190°C (374°F)	34 minutes	20 minutes	38 minutes	23 minutes
200°C (392°F)	31 minutes	18 minutes	34 minutes	21 minutes
210°C (410°F)	29 minutes	17 minutes	32 minutes	19 minutes
220°C (428°F)	27 minutes	16 minutes	30 minutes	18 minutes
230°C (446°F)	25 minutes	15 minutes	27 minutes	17 minutes
240°C (464°F)	23 minutes	14 minutes	26 minutes	16 minutes
250°C (482°F)	22 minutes	13 minutes	24 minutes	15 minutes



All models shown smaller than actual size.



Vented thermal shield option.



Flush top thermal shield option.



OM-CP-MULTIMOUNT-Z bracket, sold separately.

OM-CP-MULTIMOUNT-Z

Material: 316 SS

Dimensions: 44.5 H x 38 L x 38 mm W (1.75 x 1.5 x 1.5")



OM-CP-IFC406 multiplexer data logger interface, sold separately.



Data logger software, sold separately.

To Order

Model No.	Description
OM-CP-HITEMP140-FR	High temperature data logger with 50 mm (2") fast response probe
OM-CP-HITEMP140-FR-CERT	High temperature data logger with a 50 mm (2") fast response probe and NIST calibration certificate
OM-CP-HITEMP140-FR-TSK	OM-CP-HITEMP140-FR data logger and vented thermal shield
OM-CP-HITEMP140-FR-TSK-CERT	OM-CP-HITEMP140-FR data logger and vented thermal shield and NIST calibration certificate
OM-CP-HITEMP140-FR-TSK-FL	OM-CP-HITEMP140-FR data logger and flush top thermal shield
OM-CP-HITEMP140-FR-TSK-FL-CERT	OM-CP-HITEMP140-FR data logger and flush top thermal shield and NIST calibration certificate
OM-CP-IFC400	Docking station (for single data logger) with USB cable, software and manual
OM-CP-IFC406	Multiplexer data logger interface (accepts up to 6 data loggers) with USB cable, software and manual
OM-CP-BAT110	Replacement 3.6V high temperature lithium battery
OM-CP-MULTIMOUNT-Z	Mount/stand for OM-CP-HITEMP140 series data loggers
OM-CP-SVP-SYSTEM	FDA 21 CFR part 11 compliant IQ/OQ/PQ secure software validation workbook and software package (unlimited users, license per computer)

Comes complete with 3.6V lithium battery. Operator's manual and USB interface cable are included with the OM-CP-IFC400 software/cable package and OM-CP-IFC406 multiplexer. OM-CP-IFC400 required for data logger operation. Both models sold separately.

Ordering Example: OM-CP-HITEMP140-FR-CERT high temperature data logger with 50 mm (2") fast response probe and NIST certificate.