NEW

High Temperature Thermal Barrier Data Logging System

5 YEAR WARRANTY · NIST · C E
Optional

OM-CP-THERMOVAULT140

✔ **Complete System Includes Data Logger Inside Protective Thermal Enclosure**
✔ **300 Series Stainless Steel Enclosure**
✔ **Small 63.5 mm (2.5") Diameter**
✔ **Submersible**
✔ **Withstands Temperatures up to 350ºC (662°F) for 140 Minutes Continuously**

OM-CP-THERMOVAULT140-5.25-TD shown smaller than actual size.

The OM-CP-THERMOVAULT140 is an extremely high temperature thermal barrier designed for use with the OM-CP-HITEMP140-5.25 and OM-CP-HITEMP140-PT-1 data loggers. The thermal barrier is made from a stainless steel enclosure containing a Dewar flask and PTFE insulation. This durable system can withstand temperatures up to 250°C (482°F) when completely submerged and 350°C (662°F) in dry heat applications (O-Ring removed). The OM-CP-THERMOVAULT140 is built for use in harsh applications that require extreme temperature monitoring, such as with furnace profiling, geothermal down-hole recording, autoclave validation, and oven data logging.

The OM-CP-THERMOVAULT140 includes the thermal barrier only. The OM-CP-THERMOVAULT140-5.25-TD includes the thermal barrier as well as an OM-CP-HITEMP140-5.25 data logger. The OM-CP-THERMOVAULT140-PT-1 includes the thermal barrier as well as an OM-CP-HITEMP140-PT-1 data logger. The 133 mm (5.25") probe on the OM-CP-HITEMP140-5.25 data logger is ideal for ambient temperature monitoring, while the 559 mm (22") flexible probe on the OM-CP-HITEMP140-PT-1 data logger can be easily adjusted to measure hard-to-reach locations, or even the internal temperature of a product.

Using the OM-CP Series data logger software, starting, stopping and downloading the data logger is simple and easy. Graphical, tabular and summary data is provided for analysis and data can be viewed in °C, °F, K or °R. The data can also be automatically exported to Excel® for further calculations. Simply open the enclosure and insert the data logger into the OM-CP-IFC400 docking station (sold separately). Using the software, an immediate or delay start can be chosen, as well as the reading rate. Select start to program the settings and start the data logger. Place the cap back onto the enclosure and screw it back together. The device is ready to be deployed.

SPECIFICATIONS

High Temperature Thermal Barrier Data Logging System (Stainless Steel Barrier and Data Logger)
Operating Environment: Refer to the Time vs. Temperature Chart
IP Rating: IP50 (no O-Ring), IP68 (O-Ring installed)
Probe Junction/Type: 0.130" Thru-Hole, Compression Fitting (³⁄₁₆" PTFE Sealing Ferrule)

Enclosure Materials
  Enclosure: 300 Series stainless steel
  Seals: PTFE and silicone rubber
  Insulation: Dewar flask and PTFE
Dimensions: 165 L x 63.5 mm dia (6.5 x 2.50")
Minimum Recommended Probe Length: 133 mm (5.25")
Weight: 1135 g (2.5 lb)
Maximum Sustainable Pressure: 30 psia
Maximum Sustainable Depth (inH$_2$O): 21 m (70')

Time vs. Temperature (Data Logger Inside OM-CP-THERMOVAULT140 Thermal Barrier)

Ambient Temperature °C (°F)	Maximum Exposure Time in Air (minutes)	Maximum Exposure Time in Liquid (minutes)
150 (302)	525	285
175 (347)	360	165
200 (392)	285	120
225 (437)	240	95
250 (482)	205	80
275 (527)	180	—
300 (572)	165	—
325 (617)	150	—
350 (662)	140	—

SPECIFICATIONS, CONTINUED

OM-CP-HITEMP140-5.25/OM-CP-HITEMP140-PT-1 Data Loggers (Without Stainless Steel Thermal Barrier)

Temperature Sensor: 100 Ω Platinum RTD

Temperature Range (Body): -40 to 140ºC (-40 to 284ºF)

Temperature Measurement Range (Probe):
-200 to 260ºC (-328 to 500ºF)

Temperature Resolution: 0.01ºC (0.02ºF)

Calibrated Accuracy: ±0.1ºC (±0.18ºF)
[20 to 140ºC (68 to 284ºF)]; ±0.3ºC (±0.54ºF)
[-20 to 19.99ºC (-4 to 67.98ºF)]; ±0.4ºC (±0.72ºF)
[-40 to -20.01ºC (-40 to -4.02ºF)]

Start Modes:
 • Software programmable immediate start
 • Delay start up to eighteen months in advance

Stop Modes:
 • Manual through Software
 • Time (specific date and time)

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

Memory: 32,700 readings

Reading Rate: One second up to once every 24 hours

Battery Type: 3.6V high-temperature lithium battery (included)

Battery Life: 1 year typical
[1 minute reading rate at 25ºC (77ºF)]

Calibration: Digital calibration through software

Calibration Date: Automatically recorded within device

Data Format: Date and time stamped ºC, ºF, K, ºR

Time Accuracy: ±1 minute/month at 20 to 30ºC (68 to 86ºF) (RS232 cable not in use)
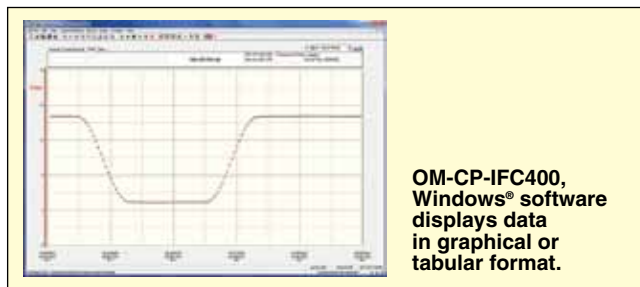
Computer Interface: OM-CP-IFC400 USB docking station required (125,000 baud)

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

Operating Environment: -40 to 140ºC (-40 to 284ºF), 0 to 100% RH

OM-CP-THERMOVAULT140-5.25-TD, OM-CP-HITEMP140-PT-1 and OM-CP-HITEMP140-5.25 shown smaller than actual size.

OM-CP-IFC400, Windows® software displays data in graphical or tabular format.

Weight: 120 g (4.2 oz)

Material: 316 stainless steel

Dimensions

OM-CP-HITEMP140-5.25
   Body: 48 H x 25 mm dia (1.9 x 0.97")
   Probe: 133 L x 4.8 to 3.2 mm transitional dia (5.25 x 0.188 to 0.125")

OM-CP-HITEMP140-PT-1
   Body: 48 H x 25 mm dia (1.9 x 0.97")
   Probe Tip: 42 L x 3.2 mm dia (1.7 x 0.125")
   Flexible Probe Portion: 559 L x 1.6 mm dia (22 x 0.062")

To Order

Model No.	Description
OM-CP-THERMOVAULT140-5.25-TD	High temperature thermal barrier and OM-CP-HITEMP140-5.25 data logger
OM-CP-THERMOVAULT140-5.25-TD-C	High temperature thermal barrier and OM-CP-HITEMP140-5.25 data logger and NIST calibration certificate
OM-CP-THERMOVAULT140-PT-1	High temperature thermal barrier and OM-CP-HITEMP140-PT-1 data logger
OM-CP-THERMOVAULT140-PT-1-CERT	High temperature thermal barrier and OM-CP-HITEMP140-PT-1 data logger with NIST calibration certificate
OM-CP-THERMOVAULT140	Submersible stainless steel high temperature thermal barrier only (for use with OM-CP-HITEMP140-5.25 or OM-CP-HITEMP140-PT-1 data loggers)
OM-CP-IFC400	Docking station (for single data logger) with software, USB cable and manual
OM-CP-IFC406	Multiplexer data logger interface (accepts up to 6 data loggers) with software, USB cable and manual
OM-CP-BAT110	Replacement 3.6V lithium battery for data logger
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/docking station package (required for data logger operation, sold separately).*