

HITEMP140-TSK

HITEMP140 DATA LOGGER WITH THERMAL SHIELD



Features

- Withstands Temperatures between -200°C up to 250°C
- Small Diameter - 2.0" (51mm)
- Submersible
- Immediate or Delay Start
- Up to 1 Second Reading Rate

Benefits

- Validate a Wide Range of Temperature Processes Using One Data Logger
- HiTemp140 can be used With or Without Thermal Shield
- Durable Thermal Shield Protects Probe and Allows for a Fast Response Time

Applications

- Peanut Roasting
- Food Processing
- Meat Processing
- Autoclave Validation
- Conveyer Ovens
- Dishwasher Testing
- Incubator Validation

The HiTemp140-TSK is a kit that includes a HiTemp140 data logger housed in a thermal shield. The combined features of the $\pm 0.1^{\circ}\text{C}$ accuracy of the HiTemp140 and the properties of the durable thermal shield allow the device to be used for a wide range of validation applications. This rugged system can be placed in and withstand temperatures from -200°C to 250°C , making it ideal for use in autoclave validation, monitoring food processing and dishwasher testing.



Using the MadgeTech software, the data logger is fast and easy to setup. Remove the thermal shield and place the HiTemp140 into the 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 thermal shield around the HiTemp140 and screw it back together. The device is ready to be deployed.

The HiTemp140-TSK can be completely submerged and is built for applications that require extreme temperature monitoring.

MADGETECH DATA LOGGER SOFTWARE

Key

- A Graph View
- B Tabular Data View
- C Statistics
- D Digital Calibration
- E Copy to Excel*

The screenshot displays the MadgeTech software interface. The main window shows a graph of temperature over time with a red data line. A 'Copy to Excel' button is visible. A 'Temperature Statistics' window is open, showing a table of data points. A 'HiTemp140 Calibration' window is also open, showing calibration parameters.

Row #	Date & Time (EST)	Probe Temperature	Units
1	Dec 22, 2010 01:13:37 PM	24.9	°C
2	Dec 22, 2010 01:14:37 PM	24.9	°C
3	Dec 22, 2010 01:15:37 PM	24.9	°C
4	Dec 22, 2010 01:16:37 PM	24.9	°C
5	Dec 22, 2010 01:17:37 PM	24.9	°C
6	Dec 22, 2010 01:18:37 PM	24.95	°C
7	Dec 22, 2010 01:19:37 PM	24.9	°C
8	Dec 22, 2010 01:20:37 PM	24.95	°C
9	Dec 22, 2010 01:21:37 PM	24.9	°C
10	Dec 22, 2010 01:22:37 PM	24.9	°C
11	Dec 22, 2010 01:23:37 PM	24.9	°C
12	Dec 22, 2010 01:24:37 PM	24.9	°C
13	Dec 22, 2010 01:25:37 PM	24.95	°C
14	Dec 22, 2010 01:26:37 PM	24.95	°C

- Software Features:**
- Multiple graph overlay
 - Statistics
 - Digital calibration
 - Zoom in/ zoom out
 - Lethality equations (F_0 , PU)
 - Mean Kinetic Temperature
 - Full time zone support
 - Data annotation
 - Min./Max./Average lines
 - Data table view
 - Automatic report generation
 - Summary view
 - Multilingual

HITEMP140 SPECIFICATIONS (DATA LOGGER)*

Probe Measurement Range: -200°C to +260°C (-328°F to +500°F)
Temperature Resolution: 0.01°C (0.02°F)
Calibrated Accuracy: ±0.1°C/±0.18°F (20°C to +140°C/68°F to +284°F) ±0.3°C/±0.54°F (-20°C to +19.99°C/-4°F to +67.98°F)
Start Modes: Software programmable immediate start Delay start up to 18months in advance
Stop Modes: Manual or Timed (specific date and time)
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 out without the password.
Memory: 32,700 readings
Wrap Around: Yes
Reading Rate: 1 second up to once every 24 hours
Battery Type: 3.6V high-temperature lithium battery included; user replaceable

BATTERY WARNING: WARNING: FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT SHORT CIRCUIT, CHARGE, FORCE OVER DISCHARGE, CRUSH, PENETRATE, OR INCINERATE. BATTERY MAY LEAK OR EXPLODE IF HEATED ABOVE 150°C (302°F).

Battery Life: 1 year typical (1 minute reading rate at 25°C/77°F)
Calibration: Digital calibration through software
Calibration Date: Automatically recorded within device
Data Format: Date and time stamped °C, °F, K, °R
Time Accuracy: ±1 minute/month at 20°C to 30°C (68°F to 86°F)
Computer Interface: IFC400 docking station required; 125,000 baud
Software: XP SP3/Vista/Windows 7
Operating Environment: -20°C to +140°C (-4°F to +284°F), 0%RH to 100%RH
Dimensions (Body): 2.7" x 0.97" dia. (67mm x 25mm dia.)
Dimensions (Probe**): 1": 1.0"OAL x 0.125"OD (0.188" transition dia.) 25mmOAL x 3.2mmOD (4.8mm transition dia.) 2": 2.0"OAL x 0.125"OD (0.188" transition dia.) 51mmOAL x 3.2mmOD (4.8mm transition dia.) 5.25": 5.25"OAL x 0.125"OD (0.188" transition dia.) 133mmOAL x 3.2mmOD (4.8mm transition dia.) 7" model: 7.0"OAL x 0.188"OD 178mmOAL x 4.8mmOD
Weight: 4.2 oz (120g)
Material: 316 Stainless Steel
Approvals: CE

*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. SPECIFIC WARRANTY REMEDY LIMITATIONS APPLY.

HITEMP140-TSK SPECIFICATIONS*

Operating Environment: -200 to +250°C (-328 to +482°F) <i>(Time limited)</i>
0 to 100% RH
Dimensions: 4.3" x 2.0" dia. (110mm x 51mm dia.)
Material: Enclosure: PTFE
Weight: 9.7 oz. (274g) <i>(not including data logger)</i>

Ambient Temperature	Exposure Time in Air	Exposure Time in Liquid
-200°C (-328°F)	18 minutes	N/A
-180°C (-292°F)	19 minutes	N/A
-160°C (-256°F)	21 minutes	N/A
-140°C (-220°F)	24 minutes	N/A
-120°C (-184°F)	27 minutes	N/A
-100°C (-148°F)	32 minutes	N/A
-80°C (-112°F)	40 minutes	N/A
-60°C (-76°F)	55 minutes	25 minutes
-40°C (-40°F)	70 minutes	32 minutes
-20°C to +140°C (-4°F to +284°F)	Indefinitely	Indefinitely
150°C (302°F)	88 minutes	40 minutes
160°C (320°F)	75 minutes	34 minutes
170°C (338°F)	63 minutes	29 minutes
180°C (356°F)	55 minutes	26 minutes
190°C (374°F)	50 minutes	23 minutes
200°C (392°F)	45 minutes	21 minutes
210°C (410°F)	42 minutes	19 minutes
220°C (428°F)	39 minutes	18 minutes
230°C (446°F)	36 minutes	17 minutes
240°C (464°F)	34 minutes	16 minutes
250°C (482°F)	32 minutes	15 minutes

ORDERING INFORMATION

MODEL	DESCRIPTION
HITEMP140-TSK	HiTemp140 data logger and thermal shield
IFC400	Docking station with USB cable, software and manual
*NIST	N.I.S.T. Calibration Certificate
ER1425S-HT	Replacement battery for the HiTemp140

ASK ABOUT OUR OTHER DATA LOGGERS

- Temperature
- Humidity
- Pressure
- pH
- Level
- Shock
- LCD Display
- Pulse/Event/State
- Current
- Voltage
- Wireless
- Intrinsically Safe
- Spectral Vibration
- Motion

*To order the product with the N.I.S.T. certificate add -CERT to the end of the part number.

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