

# HiTemp140

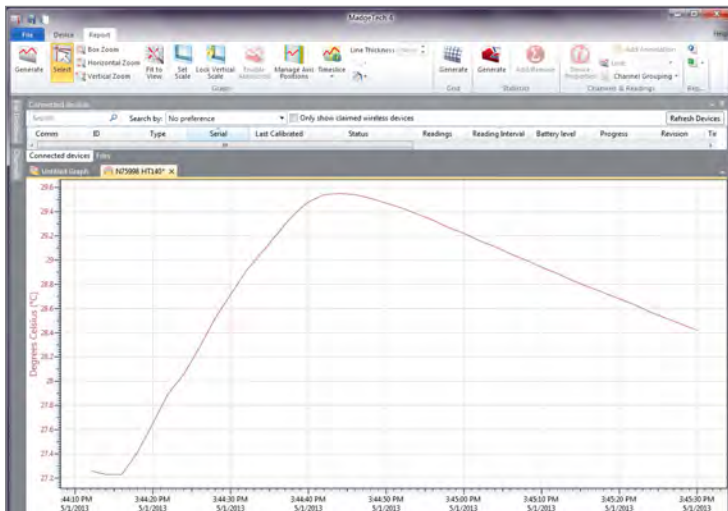
## High Temperature Data Logger

The HiTemp140 is a rugged, high precision, temperature data logger that is built for use in harsh environments. This stainless steel device is submersible and can withstand temperatures up to 140 °C (284 °F). With the HiTemp140's standard calibration, an accuracy of  $\pm 0.1$  °C (0.18 °F) can be achieved over a wide temperature range.

The HiTemp140 can store up to 65,536 readings, and features a rigid external probe capable of measuring extended temperatures, up to 260 °C (500 °F). Custom probe lengths are available up to 7 inches. The device records date and time stamped readings, and has non-volatile solid state memory which retains data even if the battery becomes discharged.

Using the MadgeTech 4 Software, starting, stopping and downloading the HiTemp140 is simple and easy. To use, simply place the HiTemp140 in the IFC400 or IFC406 docking station (sold separately). Using the software, an immediate or delay start can be chosen, as well as the reading rate. Start the data logger, remove it from the docking station and the device is ready to be deployed. 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.

## MadgeTech 4 Software Features



Graph View

- Multiple graph overlay
- Statistics
- Digital calibration
- Zoom in/ zoom out
- Lethality equations (F0, PU)
- Mean Kinetic Temperature
- Full time zone support
- Data annotation
- Min./Max./Average lines
- Summary view



## Features

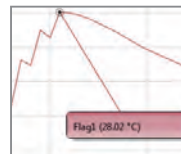
- $\pm 0.1$  °C (0.18 °F) Accuracy
- Operates up to 140 °C (284 °F)
- Submersible (IP68)
- User Replaceable Battery
- Rugged
- Programmable Start Time
- Programmable Stop Time
- Engraved Label
- Probe Lengths up to 7 inches
- Battery Life Indicator

## Benefits

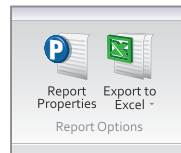
- Simple Setup and Installation
- Minimal Long-Term Maintenance
- Long-Term Field Deployment

## Applications

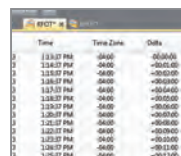
- Autoclave Verification
- Implement HACCP Programs
- Food Preparation and Processing
- Environmental Studies
- Well Monitoring
- Dishwasher Testing
- Pasteurization



Cooling Flags

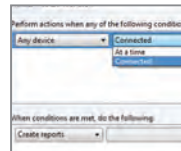


Export to Excel



|    | Time       | Time Zone | Data     |
|----|------------|-----------|----------|
| 1  | 1:13:07 PM | -0400     | -00.0000 |
| 2  | 1:13:07 PM | -0400     | -00.0100 |
| 3  | 1:13:07 PM | -0400     | -00.0200 |
| 4  | 1:13:07 PM | -0400     | -00.0300 |
| 5  | 1:13:07 PM | -0400     | -00.0400 |
| 6  | 1:13:07 PM | -0400     | -00.0500 |
| 7  | 1:13:07 PM | -0400     | -00.0600 |
| 8  | 1:13:07 PM | -0400     | -00.0700 |
| 9  | 1:13:07 PM | -0400     | -00.0800 |
| 10 | 1:13:07 PM | -0400     | -00.0900 |
| 11 | 1:13:07 PM | -0400     | -00.1000 |
| 12 | 1:13:07 PM | -0400     | -00.1100 |
| 13 | 1:13:07 PM | -0400     | -00.1200 |

Tabular Data View



Automation

## SPECIFICATIONS

Specifications are subject to change without notice. Specific warranty remedy limitations apply.

| TEMPERATURE             |                                                                                                                                                                                                                 |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Temperature Sensor      | 100 $\Omega$ Platinum RTD                                                                                                                                                                                       |
| Probe Measurement Range | -200 °C to +260 °C (-328 °F to +500 °F)                                                                                                                                                                         |
| Temperature Resolution  | 0.01 °C (0.02 °F)                                                                                                                                                                                               |
| Calibrated Accuracy     | $\pm 0.1$ °C/ $\pm 0.18$ °F (20 °C to +140 °C/68 °F to +284 °F)<br>$\pm 0.3$ °C/ $\pm 0.54$ °F (-20 °C to +19.99 °C/-4 °F to +67.98 °F)<br>$\pm 0.4$ °C/ $\pm 0.72$ °F (-40 °C to -20.01 °C/-40 °F to -4.02 °F) |

| GENERAL             |                                                                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Start Modes         | Software programmable immediate start<br>Delay start up to 18 months 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              | 65,536 readings                                                                                                                                |
| Wrap Around         | Yes                                                                                                                                            |
| Reading Rate        | 1 reading every second up to 1 reading every 24 hours                                                                                          |
| Calibration         | Digital calibration through software                                                                                                           |
| Calibration Date    | Automatically recorded within device                                                                                                           |
| Battery Type        | 3.6V high-temperature lithium battery included; user replaceable                                                                               |
| Battery Life        | 2 years typical (1 minute reading rate)                                                                                                        |
| Data Format         | Date and time stamped °C, K, °F or °R                                                                                                          |

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Time Accuracy                  | $\pm 1$ minute/month at 20 °C to 30 °C (68 °F to 86 °F)<br>(Stand alone mode)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Computer Interface             | IFC400 OR IFC406 USB docking station required;<br>125,000 baud                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Operating System Compatibility | Windows XP SP3 or later                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Software Compatibility         | Standard Software version 2.03.06 or later<br>Secure Software version 4.1.3.0 or later                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Operating Environment          | -40 °C to +140 °C (-40 °F to +284 °F)<br>0 %RH to 100 %RH, 0.002 PSIA to 100 PSIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| IP Rating                      | IP68                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Dimensions (Body)              | <b>HiTemp140-1:</b><br>1.6 in x 0.970 in dia. (40 mm x 24.6 mm dia.)<br><b>HiTemp140-2, 5.25, 7:</b><br>1.9 in x 0.970 in dia. (48 mm x 24.6 mm dia.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Dimensions (Probe)             | <b>HiTemp140-1:</b><br>1.1 in x 0.125 in dia. (0.188 in transitional dia.)<br>27 mm x 3.2 mm dia. (4.8 mm transitional dia.)<br><b>HiTemp140-2:</b><br>2.0 in x 0.188 in dia. (51 mm x 4.8 mm)<br><b>HiTemp140-2-TD:</b><br>2.0 in x 0.125 in dia. (0.188 in transitional dia.)<br>51 mm x 3.2 mm dia. (4.8 mm transitional dia.)<br><b>HiTemp140-5.25:</b><br>5.25 in x 0.188 in dia. (133 mm x 4.8 mm dia.)<br><b>HiTemp140-5.25-TD:</b><br>5.25 in x 0.125 in dia. (0.188 in transitional dia.)<br>133 mm x 3.2 mm dia. (4.8 mm transitional dia.)<br><b>HiTemp140-7:</b><br>7.0 in x 0.188 in dia. (178 mm x 4.8 mm dia.) |
| Weight                         | 4.2 oz (120 g)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Material                       | 316 Stainless Steel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Approvals                      | CE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

**BATTERY 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).

## Ordering Information

|                   |              |                                                                           |
|-------------------|--------------|---------------------------------------------------------------------------|
| HITEMP140-1       | PN 900140-00 | High Temperature Data Logger with a 1 inch probe                          |
| HITEMP140-2       | PN 900153-00 | High Temperature Data Logger with a 2 inch probe                          |
| HITEMP140-2-TD    | PN 900165-00 | High Temperature Data Logger with a 2 inch transitional diameter probe    |
| HITEMP140-5.25    | PN 900173-00 | High Temperature Data Logger with a 5.25 inch probe                       |
| HITEMP140-5.25-TD | PN 900180-00 | High Temperature Data Logger with a 5.25 inch transitional diameter probe |
| HITEMP140-7       | PN 900198-00 | High Temperature Data Logger with a 7 inch probe                          |
| IFC400            | PN 900319-00 | Docking station with USB cable                                            |
| IFC406            | PN 900325-00 | 6 Port, Multiplexer docking station with USB cable                        |
| ER14250MR-145     | PN 900097-00 | Replacement battery for the HiTemp140                                     |