

HiTemp140-FR

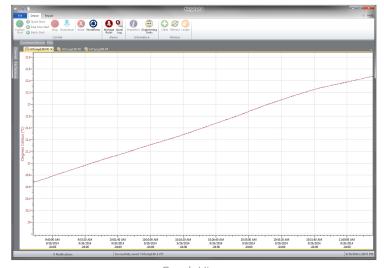
High Temperature Data Logger with 2 inch Fast Response Probe

The 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 2 inch x 0.0625 inch diameter 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.

The HiTemp140-FR can store up to 65,536 readings, and features a rigid external probe capable of measuring extended temperatures from -200 $^{\circ}$ C to +260 $^{\circ}$ C (-328 $^{\circ}$ F to +500 $^{\circ}$ F). 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-FR is simple and easy. To use, simply place the HiTemp140-FR 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

Mean Kinetic TemperatureFull time zone support

Min./Max./Average lines

Data annotation

Summary view

- Multiple graph overlay
- Statistics
- Digital calibration
- Zoom in/zoom out
- Lethality equations (F0, PU)

Flug1 (28.02 °C)

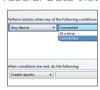
Cooling Flags



Export to Excel



Tabular Data View



Automation



Features

- Fast Response Time
- ±0.1 °C (0.18 °F) Accuracy
- Measures from -200 °C to +260 °C (-328 °F to +500 °F)
- Submersible (IP68)
- User-Replaceable Battery
- Trigger Settings
- Programmable Start and Stop Time
- 4 Hz Reading Rate
- Battery Life Indicator

Benefits

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

Applications

- Autoclave Verification and Mapping
- Seafood Processing
- Steam Sterilization
- Oven Profiling
- Roasting
- Flash Freezing
- Frying

HiTemp140-FR

SPECIFICATIONS

Specifications are subject to change without notice. Specific warranty remedy limitations apply. Call 03 3774793 or go to **madgetech.co.nz** for details.

| TEMPERATURE | | |
|----------------------------|--|--|
| Temperature Sensor | 100 Ω 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 | ±0.1 °C/±0.18 °F (20 °C to +140 °C/68 °F to +284 °F) | |

| GENERAL | | |
|--------------------------------------|--|--|
| Start Modes | Software programmable immediate start Delay start up to 18 months in advance | |
| Stop Modes | Manual or Timed (specific date and time) | |
| Data Logger Response Time | In Air | In Water |
| | (hours: minutes: seconds: fractions of a second) | |
| | t ₆₀ - 00:00:39:00 t ₉₀ - 00:02:43:00 | teo - 00:00:10:00 teo - 00:00:12:00 |
| 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 out without the password | |
| Memory | 65,536 readings | |
| Wrap Around | Yes | |

| Reading Rate | 4 readings per 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 | ±1 minute/month at 25 °CExtended Operation: ±20 minutes/month at 140 °C (±450 ppm) |
| Computer Interface | IFC400 OR IFC406 USB docking station required; 125,000 baud |
| Operating System Compatibility | Windows XP SP3 or later |
| Software Compatibility | Standard Software version 4.2.3.0 or later Secure Software version 4.2.2.0 or later |
| Operating Environment | -40 °C to +140 °C (-40 °F to +284 °F) 0 %RH to 100 %RH, 0.002 PSIA to 100 PSIA |
| IP Rating | IP68 |
| Dimensions (Body) | 1.89 in x 0.970 in x 0.970 in (48 mm x 24.6 mm x 24.6 mm) |
| Dimensions (Probe) | 1.75 in x 0.0625 in dia. (0.188 in transitional dia.) 44.5 mm x 1.59 mm (4.78 mm Transitional dia.) |
| Weight | 2.3 oz (65 g) |
| Material | 316 Stainless Steel, PEEK |
| 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-FR | PN 900221-00 | High Temperature Data Logger with a 2 inch fast response 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-FR |



