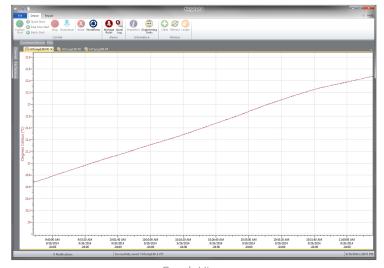# HiTemp140-FR
High Temperature Data Logger with 2 inch Fast Response Probe

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 °C to +260 °C (-328 °F to +500 °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.

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

MadgeTech 4 Software Features

Graph View

Cooling Flags

Export to Excel

Tabular Data View

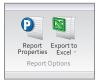
Automation

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

- Mean Kinetic Temperature
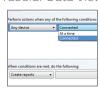- Full time zone support
- Data annotation
- Min./Max./Average lines
- Summary view

SPECIFICATIONS

Specifications are subject to change without notice. Specific warranty remedy limitations apply. Call (603) 456-2011 or go to **madgetech.com** 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	t_{60} - 00:00:10:00 t_{90} - 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).

SYSTEM TECHNOLOGY SWEDEN AB

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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

For Quantity Discounts call (603) 456-2011 or email **sales@madgetech.com**