MADGETECH
WE BUILD DATA LOGGERS

HiTemp140X2-FP

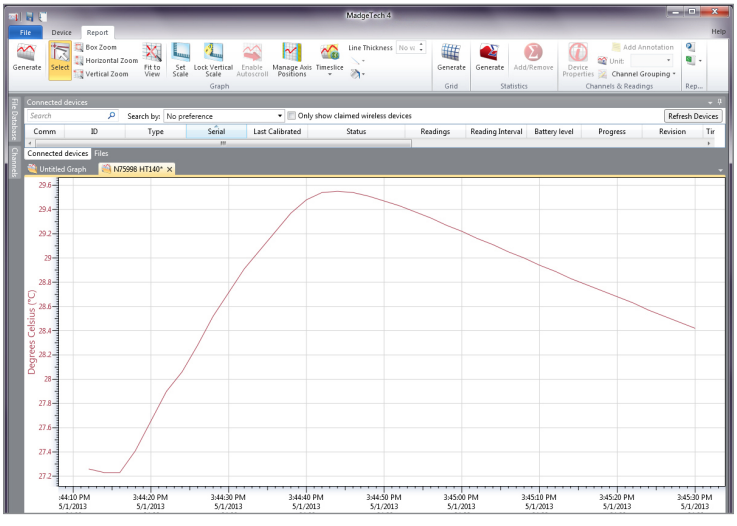
High Temperature Dual Probe Data Loggers with Two Remote Temperature Probes

The HiTemp140X2-FP series of dual probe high temperature data loggers are comprised of a stainless steel data logger body and offers four sizes (6 inch, 12 inch, 36 inch and 72 inch) of flexible FP probes or are available with one flexible probe and a stainless steel bendable PT probe combination. The dual probes of this HiTemp140X2 series allow for simultaneous temperature monitoring and provide flexibility in applications such as oven mapping, surface temperature monitoring, autoclave validation and sterilization processes.

The HiTemp140X2-FP model offers lightweight, flexible RTD probes coated with PFA insulation. The FP probe design allows the probe to be easily maneuvered and is ideal for temperature monitoring inside test tubes, small vials, and other delicate applications. The narrow thermistor probe tip is compatible for use with the MicroDisc probe attachment allowing for precise surface temperature monitoring of shelving and more.

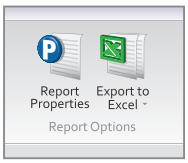
Using the latest MadgeTech Software, starting, stopping and downloading the HiTemp140X2-FP is simple and easy. To use, simply place the HiTemp140X2-FP in the IFC400 or IFC406 docking station (sold separately). Using the software, an immediate or delay start can be chosen, as well as the reading rate. 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

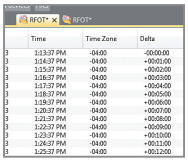


Graph View

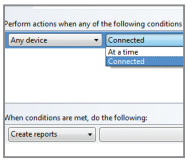
Cooling Flags



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

Features

- ±0.1 °C (±0.18 °F) Accuracy
- Flexible Probe Measures from -60 °C to +260 °C (-76 °F to +500 °F)
- Bendable Probe Measures from -200 °C to +350 °C (-328 °F to +662 °F)
- Submersible (IP68)
- User Replaceable Battery
- Trigger Settings
- Programmable Start and Stop Time
- 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
- Washer Disinfectors
- Pasteurization

SPECIFICATIONS

TEMPERATURE	
Temperature Sensor	**HiTemp140X 2- FP:** Flexible RTD Probe **HiTemp140X 2- FP- PT:** Flexible RTD Probe and Bendable RTD Probe
Probe Measurement Range	**Flexible Probe:** -60 °C to +260 °C (-76 °F to +500 °F) **Bendable Probe:** -200 °C to +350 °C (-328 °F to +662 °F)
Temperature Resolution	0.01 °C (0.02 °F)
Calibrated Accuracy	±0.1 °C (0.18 °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)
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. *(Triggering on channel #1 only)*
Readings in Trigger Settings Mode	16,383 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	32,767 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	1 year typical (1 minute reading rate at 25 °C/ 77 °F)

Data Format	Date and time stamped °C, K, °F or °R
Time Accuracy	±1 minute/month at 25 °C (77 °F) Extended 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	MadgeTech Standard Software version 4.2.1.0 or later MadgeTech Secure Software version 4.2.0.0 or later
Operating Environment	-40 °C to +140 °C (-40 °F to +284 °F) 0 %RH to 100 %RH, 0.002 PSIA to 60 PSIA
IP Rating	IP68
Dimensions (Body)	1.89 in x 0.97 in x 0.97 in (48 mm x 24.6 mm x 24.6 mm)
Dimensions (Probe)	**HiTemp140X2-FP:** **Flexible Probe:** 6 in x 0.10 in (152 mm x 2.5 mm) **Flexible Probe:** 12 in x 0.10 in (305 mm x 2.5 mm) **Flexible Probe:** 36 in x 0.10 in (914.4 mm x 2.5 mm) **Flexible Probe:** 72 in x 0.10 in (1829 mm x 2.5 mm) **HiTemp140X2-FP-PT 1 Inch Bendable Probe:** **Probe tip:** 1.7 in x 0.125 in dia. (42 mm x 3.2 mm dia.) **Bendable portion:** 22 in x 0.062 in dia. (559 mm x 1.6 mm dia.) **HiTemp140X2-FP-PT 5 Inch Bendable Probe:** **Probe tip**: 4.8 in x 0.125 in dia. with 1 in x 0.188 in dia. handle (121 mm x 3.2 mm dia. with 25 mm x 4.8 mm dia. handle) **Bendable portion:** 22 in x 0.062 in dia. (559 mm x 1.6 mm dia.)
Weight	**HiTemp140X2-FP:** 4.1 oz (115 g) **HiTemp140X2-FP-PT:** 3.9 oz (110 g)
Material	**Body:** 316 Stainless Steel, PEEK **Bendable Probe:** 316 Stainless Steel **Flexible Probe:** PFA Insulated Cable
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).

Notice: Steam Sterilization Applications

The pervasive nature of pressurized steam creates a very difficult environment for electronics. Please refer to the following preventative maintenance procedure when using this device in steam sterilization applications. Additionally, this device is not ideal for steam sterilization applications above 121 °C/1.1 bar.

PREVENTATIVE MAINTENANCE

After every 3 hours of steam exposure:

1. Remove the endcap and battery from the device (ref. battery change procedure on Product User Guide)
2. Place open logger (minus battery) in an oven at 120 °C (250 °F) for a minimum of 30 minutes
3. Remove logger from oven and allow to cool to room temperature
4. Re-assemble the logger with the battery (note polarity) and endcap

Ordering Information

HITEMP140X2-FP-6	PN 902071-00	High Temperature dual probe data logger with two 6 inch flexible probes
HITEMP140X2-FP-12	PN 902008-00	High Temperature dual probe data logger with two 12 inch flexible probes
HITEMP140X2-FP-24	PN 902023-00	High Temperature dual probe data logger with two 24 inch flexible probes
HITEMP140X2-FP-36	PN 900265-00	High Temperature dual probe data logger with two 36 inch flexible probes
HITEMP140X2-FP-72	PN 900271-00	High Temperature dual probe data logger with two 72 inch flexible probes
HITEMP140X2-FP-6-FP-12	PN 902070-00	High Temperature dual probe data logger with a 6 inch flexible probe and 12 inch flexible probe
HITEMP140X2-FP-6-FP-36	PN 901894-00	High Temperature dual probe data logger with a 6 inch flexible probe and 36 inch flexible probe
HITEMP140X2-FP-12-PT-1	PN 902022-00	High Temperature dual probe data logger with a 12 inch flexible probe and 24 inch bendable probe with a 1 inch piercing tip
HITEMP140X2-FP-36-PT-1	PN 900267-00	High Temperature dual probe data logger with a 36 inch flexible probe and 24 inch bendable probe with a 1 inch piercing tip
HITEMP140X2-FP-72-PT-1	PN 900273-00	High Temperature dual probe data logger with a 72 inch flexible probe and 24 inch bendable probe with a 1 inch piercing tip
HITEMP140X2-FP-36-PT-5	PN 900269-00	High Temperature dual probe data logger with a 36 inch flexible probe and 24 inch bendable probe with a 5 inch piercing tip
HITEMP140X2-FP-72-PT-5	PN 900275-00	High Temperature dual probe data logger with a 72 inch flexible probe and 24 inch bendable probe with a 5 inch piercing tip
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 HiTemp140X2-FP