MADGETECH
WE BUILD DATA LOGGERS

HiTemp140X2-TD

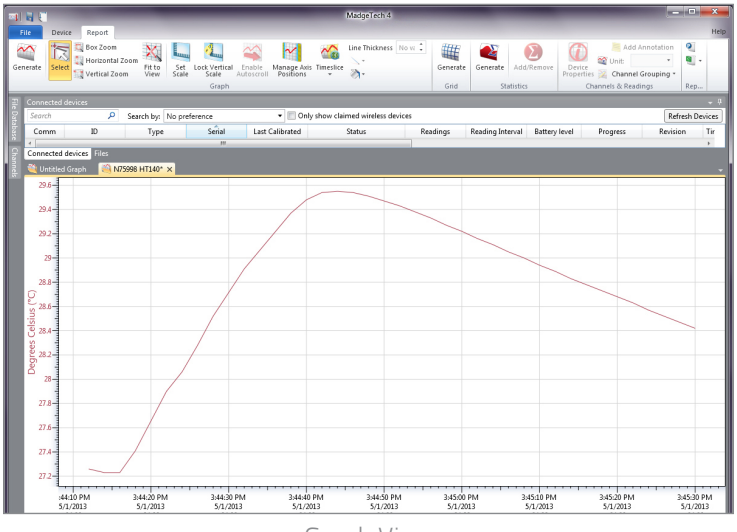
High Temperature Dual Probe Data Loggers with Ambient and Remote Temperature Probes

The HiTemp140X2-TD series of dual probe data loggers offer extreme flexibility for high temperature monitoring applications. These models all feature a 2 inch rigid transitional diameter probe to measure ambient temperature, combined with a second bendable or flexible probe option. The rigid 2 inch TD probe is made of stainless steel, offers a fast response time and is suitable for the harshest environments.

The HiTemp140X2-TD-PT-1 and the HiTemp140X2-TD-PT-5 models combine the 2 inch TD probe with a 24 inch bendable probe made of stainless steel with either a 1 inch or 5 inch probe sheath at the tip. The HiTemp140X2-TD-FP combines the 2 inch TD probe with a 12 inch, 36 inch or 72 inch RTD lightweight flexible FP probe, designed for easy placement. The flexible FP probe option is very pliable and coated with PFA insulation making it ideal for use inside small vials and test tubes.

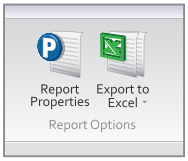
Using the latest MadgeTech Software, starting, stopping and downloading the HiTemp140X2-TD is simple and easy. To use, simply place the HiTemp140X2-TD in the IFC400 or IFC406 docking station (sold separately). Using the software, an immediate or delay start can be chosen, as well as the reading rate.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

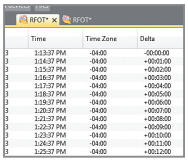


Graph View

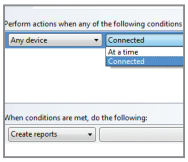
Cooling Flags



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
- Rigid Probe Measures from -200 °C to +260 °C (-328 °F to +500 °F)
- 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

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	**HiTemp140X2-TD-PT:** Rigid RTD Probe with a Bendable RTD Probe **HiTemp140X2-TD-FP:** Rigid RTD Probe with a Flexible RTD Probe
Probe Measurement Range	**Rigid Probe:** -200 °C to +260 °C (-328 °F to +500 °F) **Bendable Probe:** -200 °C to +350 °C (-328 °F to +662 °F) **Flexible Probe:** -60 °C to +260 °C (-76 °F to +500 °F) ***BODY OF LOGGER CANNOT EXCEED 140 °C**
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-TD-PT Rigid Probe:** 2.0 in x 0.125 in dia. (0.188 in transitional dia.) 51 mm x 3.2 mm dia. (4.8 mm transitional dia.) **HiTemp140X2-TD-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-TD-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.) **HiTemp140X2-TD-FP-Flexible Probe sizes:** 12 in x 0.10 in (305 mm x 2.5 mm) 36 in x 0.10 in (914.4 mm x 2.5 mm) 72 in x 0.10 in (1829 mm x 2.5 mm)
Weight	**HiTemp140X2-TD-PT:** 3.0 oz (85 g) **HiTemp140X2-TD-FP:** 3.5 oz (100 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-TD-FP-12	PN 901913-00	High Temperature dual probe data logger with 2 inch transitional diameter probe and 12 inch flexible probe
HITEMP140X2-TD-FP-36	PN 900277-00	High Temperature dual probe data logger with 2 inch transitional diameter probe and 36 inch flexible probe
HITEMP140X2-TD-FP-72	PN 900279-00	High Temperature dual probe data logger with 2 inch transitional diameter probe and 72 inch flexible probe
HITEMP140X2-TD-PT-1	PN 900281-00	High Temperature dual probe data logger with 2 inch transitional diameter probe and 24 inch bendable probe with a 1 inch piercing tip
HITEMP140X2-TD-PT-5	PN 900283-00	High Temperature dual probe data logger with 2 inch transitional diameter 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-TD

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

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