

HITEMP140

HIGH TEMPERATURE DATA LOGGER



Features

- ± 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

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 ± 0.1 °C (0.18 °F) can be achieved over a wide temperature range.

The HiTemp140 can store up to 32,700 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 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.

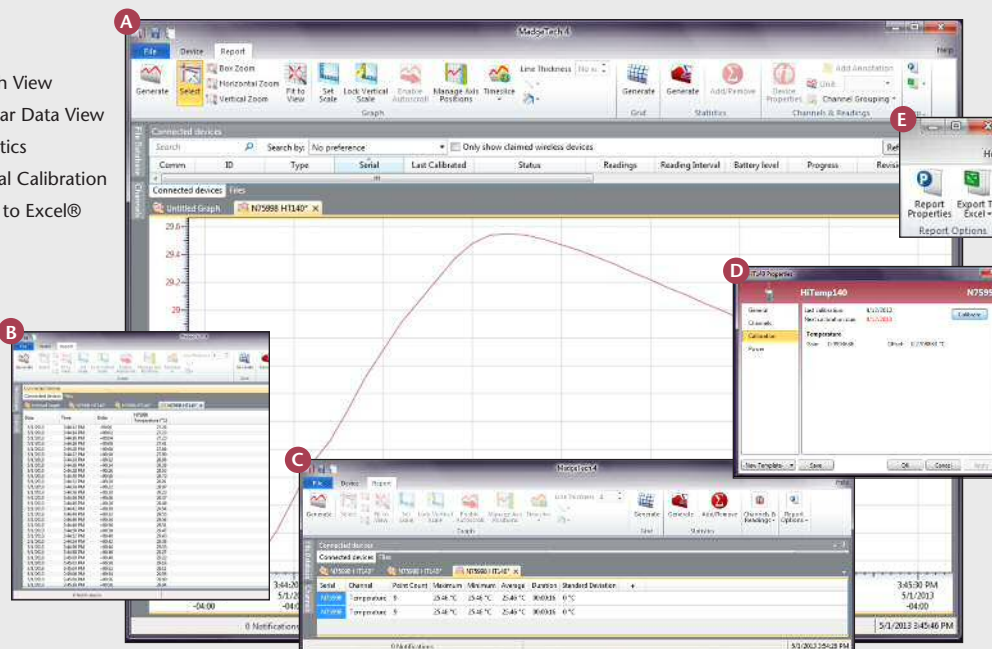


IFC400 (sold separately)

MADGETECH DATA LOGGER SOFTWARE

Key

- A** Graph View
- B** Tabular Data View
- C** Statistics
- D** Digital Calibration
- E** Copy to Excel®



Software Features:

- 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
- Data table view
- Automatic report generation
- Summary view
- Multilingual

HITEMP140 SPECIFICATIONS*

*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. SPECIFIC WARRANTY REMEDY LIMITATIONS APPLY. CALL 1-603-456-2011 OR GO TO WWW.MADGETECH.COM FOR DETAILS.

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)
	±0.3 °C/±0.54 °F (-20 °C to +19.99 °C/-4 °F to +67.98 °F)
	±0.4 °C/±0.72 °F (-40 °C to -20.01 °C/-40 °F to -4.02 °F)
Start Modes:	<ul style="list-style-type: none"> Software programmable immediate start 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:	32,700 readings
Wrap Around:	Yes
Reading Rate:	1 reading every second up to 1 reading every 24 hours
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)

Calibration:	Digital calibration through software
Calibration Date:	Automatically recorded within device
Data Format:	Date and time stamped °C, °F, K, °R
Time Accuracy:	±1 minute/month at 20 °C to 30 °C (68 °F to 86 °F) (Stand alone mode)
Computer Interface:	IFC400 OR IFC406 USB docking station required; 125,000 baud
Software:	XP SP3/Vista/Windows 7/Windows 8 (<i>MadgeTech 4 Only</i>)
Operating Environment:	-40 °C to +140 °C (-40 °F to +284 °F), 0 %RH to 100 %RH, 0.002 PSIA to 100 PSIA
Dimensions (Body HiTemp140-1):	1.6 in x 0.970 in dia. (40 mm x 24.6 mm dia.)
Dimensions (Body HiTemp140-2, 5.25, 7):	1.9 in x 0.970 in dia. (48 mm x 24.6 mm dia.)
Model Number	Dimensions (Probe)
HITEMP140-1:	1.1 in x 0.125 in dia. (0.188 in transitional dia.) 27 mm x 3.2 mm dia. (4.8 mm transitional dia.)
HITEMP140-2: HITEMP140-2-TD:	2.0 in x 0.188 in dia. (51 mm x 4.8 mm) 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.)
HITEMP140-5.25: HITEMP140-5.25-TD:	5.25 in x 0.188 in dia. (133 mm x 4.8 mm dia.) 5.25 in x 0.125 in dia. (0.188 in transitional dia.) 133 mm x 3.2 mm dia. (4.8 mm transitional dia.)
HITEMP140-7:	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: 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

MODEL	DESCRIPTION
HITEMP140-1	High Temperature Data Logger with a 1" probe
HITEMP140-2/ HITEMP140-2-TD	High Temperature Data Logger with a 2" probe / 2" transitional diameter probe
HITEMP140-5.25/ HITEMP140-5.25-TD	High Temperature Data Logger with a 5.25" probe/5.25" transitional diameter probe
HITEMP140-7	High Temperature Data Logger with a 7" probe
IFC400	Docking station with USB cable, software and manual
IFC406	6 Port, Multiplexer docking station with USB cable, software and manual
ER1425S-HT	Replacement battery for the HiTemp140
Calibration Certificate	Calibration Certificate available for data logger

**ASK ABOUT
OUR OTHER
DATA
LOGGERS**

Temperature
Humidity
Pressure
pH
Level
Shock
LCD Display
Pulse/Event/State
Current
Voltage
Wireless
Intrinsically Safe
Spectral Vibration
Motion

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

HITEMP140-FR

HIGH TEMPERATURE DATA LOGGER

WITH 2" FAST RESPONSE

PROBE



HiTemp140-FR 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

Benefits

- Validate a Wide Range of Temperature Processes Using One Data Logger
- Durable Thermal Shield Protects Probe and Allows for a Fast Response Time

MadgeTech has designed the HiTemp140-FR, 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. Applications include oven profiling, steam sterilization, chamber mapping, seafood processing, flash freezing and more.

MadgeTech's entire HiTemp140 data logger series is designed with food grade stainless steel. The device can be placed in environments up to 140 °C and the probe is capable of measuring from -200 °C to +260 °C (-328 °F to +500 °F). The HiTemp140-FR is also available with an optional thermal shield enclosure to extend the operating range of the data logger to -200 °C to +250 °C (-328 °F to +482 °F).

The Trigger Settings feature of the HiTemp140-FR allows users to configure high and low temperature thresholds that when met or exceeded, will automatically start or stop recording data to memory. This data logger is capable of storing up to 32,700 date and time stamped readings and features a nonvolatile solid state memory which retains data even if the battery becomes discharged.

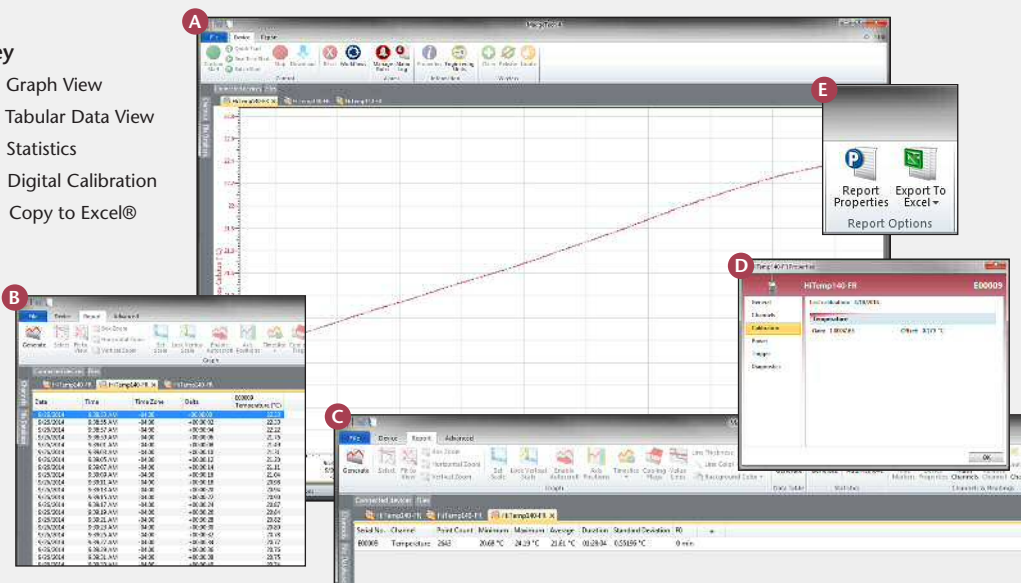
To speak with our knowledgeable sales staff, please call (603) 456-2011.



MADGETECH DATA LOGGER SOFTWARE

Key

- A** Graph View
- B** Tabular Data View
- C** Statistics
- D** Digital Calibration
- E** Copy to Excel®



Software Features:

- 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
- Data table view
- Automatic report generation
- Summary view
- Multilingual

HITEMP140-FR SPECIFICATIONS*

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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

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
Reading Rate:	4 readings per second up to 1 reading every 24 hours	
Memory:	32,767 readings	
Start Modes:	<ul style="list-style-type: none"> Software programmable immediate start Delay start up to 18 months in advance 	
Stop Modes:	Manual or Timed (specific date and time)	
Trigger Settings:	High & 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 & 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 without the password.
Memory Wrap Around:	Yes
Battery Type:	3.6V high-temperature lithium battery included; user-replaceable
Battery Life:	2 years typical (1 minute reading rate)
Calibration:	Digital calibration through software
Calibration Date:	Automatically recorded within device
Data Format:	Date and time stamped °C, °F, °R, K
Time Accuracy:	± 1 minute/month at 25 °C 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:	XP SP3/Vista/Windows 7/Windows 8
MadgeTech Software Compatibility:	<ul style="list-style-type: none"> MadgeTech Standard Software version 4.2.3.0 or later MadgeTech 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:	65 g (2.3 oz)
Materials:	316 Stainless Steel, PEEK
Approvals:	CE

Disclaimer and Terms of Use

Listed specifications can be used to determine maximum allowable exposure times for the HiTemp140 with Thermal Shield at different temperatures beyond the normal operating range of the logger. Both the data logger and Thermal Shield must be at ambient temperature (*approximately 25 °C*) before being placed in the extreme temperature environment.

Immediately following exposure to high temperature, the data logger should be removed from the thermal shield (*using appropriate precautions, as it could be VERY hot*) OR the datalogger and shield should be placed in a water bath (*approximately 25 °C*) for at least 15 minutes to allow it to cool. Failing to do this may allow heat trapped in the Thermal Shield to continue to heat the datalogger to potentially unsafe levels.

If your application involves a ramp up to a temperature above 140 °C and/or any complex temperature profile that isn't simply a constant temperature, please contact MadgeTech to determine whether the HiTemp140 with Thermal Shield is suitable. Please provide MadgeTech with a detailed description of your temperature profile, including temperatures, durations, ramp times, and process media (*air, steam, oil, water, etc.*) If MadgeTech is unable to definitively calculate the suitability of our product for your application, we can provide a test unit outfitted with a high temperature indicator sticker. This sticker has an indicator dot which will turn black if exposed to temperatures above 143 °C. Apply the sticker to the bottom of the data logger itself (*not the thermal shield*), remove the battery for safety, place the data logger into the thermal shield and run the assembly through the proposed temperature program. The first indicator dot on the sticker will turn black at 143 °C. If that happens, the HiTemp140 with thermal shield is not appropriate for the application and we will work to find a solution that is.

BATTERY WARNING: 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 140 °C (284 °F).

ORDERING INFORMATION

MODEL	DESCRIPTION
HiTemp140-FR	High Temperature Data Logger with a 2 inch Fast Response Probe
HiTemp140-FR-TSK	HiTemp140-FR data logger and thermal shield (<i>Flush or Vented</i>)
HiTemp140-TS	Thermal Shield for the HiTemp140-FR data logger (<i>Flush or Vented</i>)
IFC400	Docking station with USB cable, software and manual
IFC406	6 Port, Multiplexer docking station with USB cable, software and manual
ER1425S-HT	Replacement battery for the HiTemp140-FR
Calibration Certificate	Calibration Certificate available for data logger

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

HITEMP140-FP

HIGH TEMPERATURE DATA LOGGER

WITH A FLEXIBLE RTD PROBE



Features

- ± 0.1 °C (0.18 °F) Accuracy
- Probe Operates up to 260 °C
- Submersible (IP68)
- User-Replaceable Battery
- Durable
- Programmable Start and Stop Time
- Two probe lengths, 36 inches & 72 inches
- Battery life indicator

Benefits

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

Applications

- Autoclave Verification and Mapping
- Steam Sterilization
- Lyophilization
- Monitoring High-Temperature Surfaces
- Container Mapping
- Measurements Inside Small Vials & Tubing

HiTemp140-FP-TSK Features

- Withstands Temperatures between -200 °C up to 250 °C
- Submersible
- Vented or Flush Enclosure Options

The HiTemp140-FP is a durable, user friendly high temperature data logger featuring a long, flexible RTD probe with a narrow diameter, making it ideal for use in steam sterilization and lyophilization processes.

Commonly used for mapping, validation and monitoring of high temperature surfaces and environments, this stainless steel data logger is available in two models, the HiTemp140-FP-36 and the HiTemp140-FP-72, which feature either 36 inch or 72 inch flexible probe lengths, respectively. The flexible probe is coated with PFA insulation and can withstand temperatures up to 260 °C with an accuracy of ± 0.1 °C. The HiTemp140-FP is also available with an optional thermal shield enclosure to extend the operating range of the data logger to -200 °C to +250 °C (-328 °F to +482 °F). The HiTemp140-FP-TSK (*Thermal Shield Kit*) comes with either a vented or flush top enclosure to accommodate a multitude of applications.

The HiTemp140-FP probe design is narrow and lightweight making it ideal for placement within small vials, tubing, test tube and other small diameter or delicate applications. Because of the flexible probe, the risks of breakage (*both vial and probe*) generally associated with stainless steel probe loggers are diminished and the location and placement of the probe is easy to manipulate. The device records and stores up to 32,700 time stamped readings and is equipped with non-volatile solid state memory which retains data even if the battery becomes discharged.

The HiTemp140-FP can be configured for delayed start and is capable of reading rates as often as 4 times per second, up to once every 24 hours.

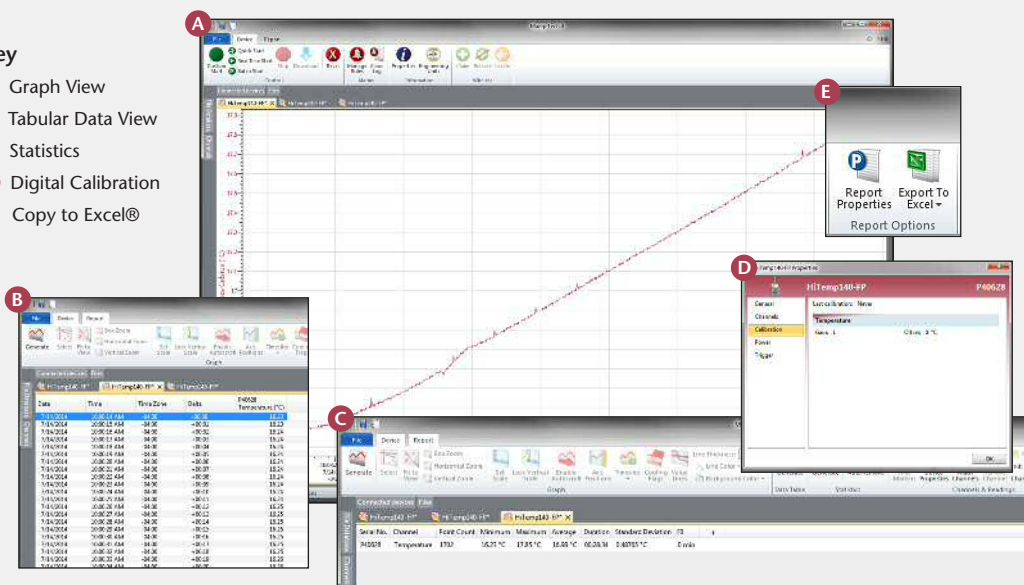
Compatible with the latest MadgeTech Data Logger Software, starting, stopping, and downloading data is simple and reporting capabilities are abundant. The device connects to a PC with the IFC400 interface or the IFC406 docking station (*sold separately*). Downloaded data can be viewed in graphical, tabular, and summary data form in the MadgeTech software, and all data can be exported to Excel® for further analysis and calculations.



MADGETECH DATA LOGGER SOFTWARE

Key

- A** Graph View
- B** Tabular Data View
- C** Statistics
- D** Digital Calibration
- E** Copy to Excel®



Software Features:

- 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
- Data table view
- Automatic report generation
- Summary view
- Multilingual

HITEMP140-FP SPECIFICATIONS*

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Temperature

Temperature Sensor:	Flexible RTD Probe
Probe Measurement Range:	-60 °C to +260 °C (-76 °F to 500 °F)
Temperature Resolution:	0.01 °C (0.02 °F)
Calibrated Accuracy:	±0.1 °C (0.18 °F)

General

Data Logger Response Time:	In Air	In Water
	(hours : minutes : seconds : fractions of a second)	
	t ₆₀ - 00:00:30:00 t ₉₀ - 00:01:10:00	t ₆₀ - 00:00:03:50 t ₉₀ - 00:00:06:50
Reading Rate:	4 readings every second up to 1 reading every 24 hours	
Memory:	32,767 readings	
Start Modes:	<ul style="list-style-type: none"> Software programmable immediate start Delay start up to 18 months in advance 	
Stop Modes:	Manual or Timed (<i>specific date and time</i>)	
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 Wrap Around:	Yes
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)
Calibration:	Digital calibration through software
Calibration Date:	Automatically recorded within device
Data Format:	Date and time stamped °C, °F, °R, K,
Time Accuracy:	<ul style="list-style-type: none"> 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:	XP SP3/Vista/Windows 7/Windows 8
MadgeTech Software Compatibility:	<ul style="list-style-type: none"> MadgeTech Standard Software version 4.2.1.1 MadgeTech Secure Software version 4.2.0.1 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):	2.95 in x 0.97 in x 0.97 in (75 mm x 24.6 mm x 24.6 mm)
Dimensions (probe):	<ul style="list-style-type: none"> HiTemp140-FP-36: 36 in x 0.10 in (914 mm x 2.5 mm) HiTemp140-FP-72: 72 in x 0.10 in (1829 mm x 2.5 mm)
Weight:	85 g (3 oz)
Materials:	<ul style="list-style-type: none"> Body: 316 Stainless Steel Probe: PFA Insulated Cable
Approvals:	CE

HITEMP140-FP-TSK SPECIFICATIONS*

Thermal Shield Specifications	HiTemp140-FP-TSK (Flush)	HiTemp140-FP-TSK (Vented)
Dimensions (enclosure):	2.75 in x 2.0 in dia. (69.85 mm x 51 mm dia.)	4.3 in x 2.0 in dia. (109.2 mm x 50.8 mm dia.)
Weight:	6.7 oz (190 g) not including data logger	9.5 oz (270 g) not including data logger
Operating Environment:	-200 °C to +250 °C (-328 °F to +482 °F) (Time limited) 0 %RH to 100 %RH	
Material:	Enclosure: PTFE	

Maximum Exposure Time Chart	HiTemp140-FP-TSK (Flush)		HiTemp140-FP-TSK (Vented)	
	Exposure Time in Air	Exposure Time in Liquid	Exposure Time in Air	Exposure Time in Liquid
Temperature				
-200 °C (-328 °F)	12 minutes	N/A	14 minutes	N/A
-180 °C (-292 °F)	13 minutes	N/A	15 minutes	N/A
-160 °C (-256 °F)	15 minutes	N/A	16 minutes	N/A
-140 °C (-220 °F)	17 minutes	N/A	18 minutes	N/A
-120 °C (-184 °F)	19 minutes	N/A	21 minutes	N/A
-100 °C (-148 °F)	22 minutes	N/A	24 minutes	N/A
-80 °C (-112 °F)	27 minutes	N/A	30 minutes	N/A
-60 °C (-76 °F)	37 minutes	22 minutes	42 minutes	25 minutes
-40 °C to +140 °C (-40 °F to +284 °F)	Indefinitely	Indefinitely	Indefinitely	Indefinitely
150 °C (302 °F)	59 minutes	34 minutes	66 minutes	40 minutes
160 °C (320 °F)	51 minutes	29 minutes	57 minutes	34 minutes
170 °C (338 °F)	43 minutes	25 minutes	48 minutes	29 minutes
180 °C (356 °F)	37 minutes	23 minutes	42 minutes	26 minutes
190 °C (374 °F)	34 minutes	20 minutes	38 minutes	23 minutes
200 °C (392 °F)	31 minutes	18 minutes	34 minutes	21 minutes
210 °C (410 °F)	29 minutes	17 minutes	32 minutes	19 minutes
220 °C (428 °F)	27 minutes	16 minutes	30 minutes	18 minutes
230 °C (446 °F)	25 minutes	15 minutes	27 minutes	17 minutes
240 °C (464 °F)	23 minutes	14 minutes	26 minutes	16 minutes
250 °C (482 °F)	22 minutes	13 minutes	24 minutes	15 minutes

Disclaimer and Terms of Use

Listed specifications can be used to determine maximum allowable exposure times for the HiTemp140 with Thermal Shield at different temperatures beyond the normal operating range of the logger. Both the data logger and Thermal Shield must be at ambient temperature (*approximately 25 °C*) before being placed in the extreme temperature environment.

Immediately following exposure to high temperature, the data logger should be removed from the thermal shield (*using appropriate precautions, as it could be VERY hot*) OR the datalogger and shield should be placed in a water bath (*approximately 25 °C*) for at least 15 minutes to allow it to cool. Failing to do this may allow heat trapped in the Thermal Shield to continue to heat the datalogger to potentially unsafe levels.

If your application involves a ramp up to a temperature above 140 °C and/or any complex temperature profile that isn't simply a constant temperature, please contact MadgeTech to determine whether the HiTemp140 with Thermal Shield is suitable. Please provide MadgeTech with a detailed description of your temperature profile, including temperatures, durations, ramp times, and process media (*air, steam, oil, water, etc.*) If MadgeTech is unable to definitively calculate the suitability of our product for your application, we can provide a test unit outfitted with a high temperature indicator sticker. This sticker has an indicator dot which will turn black if exposed to temperatures above 143 °C. Apply the sticker to the bottom of the data logger itself (*not the thermal shield*), remove the battery for safety, place the data logger into the thermal shield and run the assembly through the proposed temperature program. The first indicator dot on the sticker will turn black at 143 °C. If that happens, the HiTemp140 with thermal shield is not appropriate for the application and we will work to find a solution that is.

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

ORDERING INFORMATION

MODEL	DESCRIPTION
HiTemp140-FP-36	High Temperature Data Logger with a 36 inch Flexible probe
HiTemp140-FP-72	High Temperature Data Logger with a 72 inch Flexible probe
HiTemp140-FP-TSK	HiTemp140-FP data logger and thermal shield with either a 36 inch or 72 inch flexible probe (<i>Flush or Vented</i>)
HiTemp140-TS	Thermal Shield for the HiTemp140-FP data logger (<i>Flush or Vented</i>)
IFC400	Docking station with USB cable, software and manual
IFC406	6 Port, Multiplexer docking station with USB cable, software and manual
ER1425S-HT	Replacement battery for the HiTemp140-FP
Calibration Certificate	Calibration Certificate available for data logger

HITEMP140-PT HIGH TEMPERATURE DATA LOGGER WITH 24" BENDABLE PROBE



Features

- ± 0.1 °C (0.18 °F) Accuracy
- 24 inch Bendable Probe
- Operates Up To 140 °C (284 °F)
- Submersible (IP68)
- User Replaceable Battery
- Rugged
- Programmable start time
- Programmable stop time
- Engraved Label
- 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

The HiTemp140-PT is a submersible, temperature data logger that can operate up to 140 °C (284 °F) and has an accuracy of ± 0.1 °C (0.18 °F). The HiTemp140-PT comes in two different probe lengths, both probe styles feature a 24 inch bendable stainless steel probe. The HiTemp140-PT-1 has a 1 inch probe tip and where the HiTemp140-PT-5 has a 5 inch probe tip. Both probes can measure extended temperatures up to 350 °C (662 °F) The probe is durable and can be spiraled, bent or angled in any direction, making it easy to log temperatures within bottles, vials or other hard to reach places. The HiTemp140-PT records date and time stamped readings, and has non-volatile solid state memory which retains data even if the battery becomes discharged.

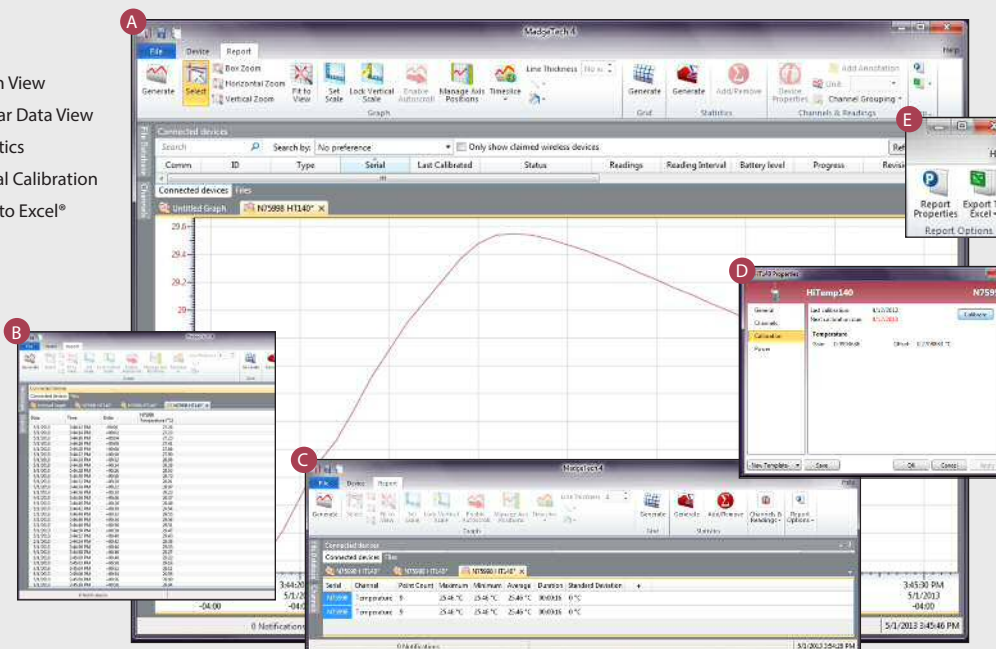
Using the latest MadgeTech Software, starting, stopping and downloading the HiTemp140-PT is simple and easy. To use, simply place the HiTemp140-PT in the IFC400 or IFC406 docking station (sold separately). Using the software, an immediate or delay start can be chosen, as well as the reading rate. Start 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 DATA LOGGER SOFTWARE

Key

- A** Graph View
- B** Tabular Data View
- C** Statistics
- D** Digital Calibration
- E** Copy to Excel®



Software Features:

- 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
- Data table view
- Automatic report generation
- Summary view
- Multilingual

HITEMP140-PT SPECIFICATIONS*

*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. SPECIFIC WARRANTY REMEDY LIMITATIONS APPLY. CALL 1-603-456-2011 OR GO TO WWW.MADGETECH.COM FOR DETAILS.

Temperature Sensor:	100 Ω Platinum RTD
Probe Measurement Range:	-200 °C to +350 °C (-328 °F to +662 °F) *BODY OF LOGGER CANNOT EXCEED 140 °C
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) ±0.3 °C/±0.54 °F (-20 °C to +19.99 °C/-4 °F to +67.98 °F) ±0.4 °C/±0.72 °F (-40 °C to -20.01 °C/-40 °F to -4.02 °F)
Start Modes:	<ul style="list-style-type: none"> Software programmable immediate start 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:	32,700 readings
Wrap Around:	Yes
Reading Rate:	1 reading every second up to 1 reading every 24 hours
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)

Calibration:	Digital calibration through software
Calibration Date:	Automatically recorded within device
Data Format:	Date and time stamped °C, °F, K, °R
Time Accuracy:	±1 minute/month at 20 °C to 30 °C (68 °F to 86 °F) (Stand alone mode)
Computer Interface:	IFC400 OR IFC406 USB docking station required; 125,000 baud
Software:	XP SP3/Vista/Windows 7/Windows 8 (MadgeTech 4 Only)
Operating Environment:	-40 °C to +140 °C (-40 °F to +284 °F), 0 %RH to 100 %RH, 0.002 PSIA to 100 PSIA *BODY OF LOGGER CANNOT EXCEED 140 °C
Dimensions (Body):	1.9 in x 0.97 in dia. (48 mm x 24.6 mm dia.)
Dimensions (PT-1 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.)
Dimensions (PT-5 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:	4.2 oz (120 g)
Material:	316 Stainless Steel
Approvals:	CE

BATTERY WARNING: 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

MODEL	DESCRIPTION
HITEMP140-PT-1	Extended Range Temperature Data Logger with a 24" Bendable Probe with a 1" probe sheath
HITEMP140-PT-5	Extended Range Temperature Data Logger with a 24" Bendable Probe with a 5" probe sheath
IFC400	Docking station with USB cable, software and manual
IFC406	6 Port, Multiplexer docking station with USB cable, software and manual
ER1425S-HT	Replacement battery for the HiTemp140-PT
Calibration Certificate	Calibration Certificate available for data logger

ASK ABOUT
OUR OTHER
DATA
LOGGERS

Temperature
Humidity
Pressure
pH
Level
Shock
LCD Display
Pulse/Event/State
Current
Voltage
Wireless
Intrinsically Safe
Spectral Vibration
Motion

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

HITEMP140X2-FP

HIGH TEMPERATURE DUAL PROBE DATA LOGGERS WITH TWO REMOTE TEMPERATURE PROBES



Features

- $\pm 0.1^{\circ}\text{C}$ ($\pm 0.18^{\circ}\text{F}$) Accuracy
- Flexible Probe Measures from -60°C to $+260^{\circ}\text{C}$ (-76°F to $+500^{\circ}\text{F}$)
- Bendable Probe Measures from -200°C to $+350^{\circ}\text{C}$ (-328°F to $+662^{\circ}\text{F}$)
- 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 & Processing
- Environmental Studies
- Well Monitoring
- Washer Disinfectors
- Pasteurization



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.

The HiTemp140X2-FP-PT-1 and HiTemp140X2-FP-PT-5 models feature a 24 inch stainless steel bendable probe with the option of either a 1 inch or 5 inch probe tip (sheath). The stainless steel probe can be bent, angled, and coiled in any direction and formed into position as needed. The sharp probe tip allows for easy insertion and has an extended measurement range of -200°C to $+350^{\circ}\text{C}$.

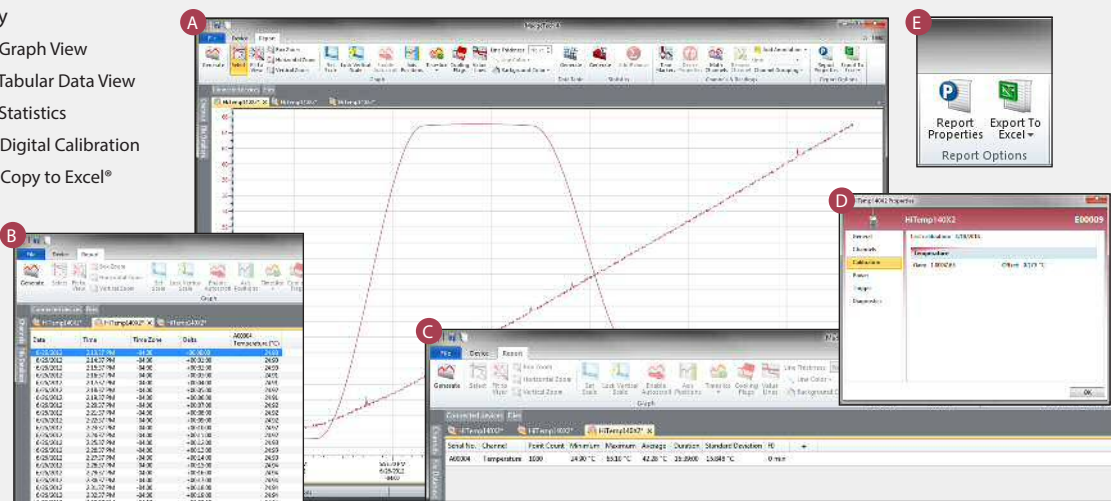
The body of the HiTemp140X2-FP is capable of operating in temperatures from -40°C to 140°C . All models have the capacity to store up to 32,700 time and date stamped readings and feature non-volatile solid state memory that will retain data even if the battery becomes discharged.

Using the latest version of MadgeTech Data Logger Software, the device can be started, stopped, and data can be downloaded quickly and easily. Once in the software, the data can be reviewed in graphic, tabular, or summary form as well as exported to Excel® for further analysis and calculations.

MADGETECH DATA LOGGER SOFTWARE

Key

- A** Graph View
- B** Tabular Data View
- C** Statistics
- D** Digital Calibration
- E** Copy to Excel®



Software Features:

- 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
- Data table view
- Automatic report generation
- Summary view
- Multilingual

HITEMP140X2-FP SPECIFICATIONS*

*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. SPECIFIC WARRANTY REMEDY LIMITATIONS APPLY. CALL 1-603-456-2011 OR GO TO WWW.MADGETECH.COM FOR DETAILS.

Temperature

Temperature Sensor:	<ul style="list-style-type: none"> HiTemp140X2-FP: Flexible RTD Probe HiTemp140X2-FP-PT: Flexible RTD Probe & Bendable RTD Probe
Probe Measurement Range:	<ul style="list-style-type: none"> Flexible Probe: -60 °C to +260 °C (-76 °F to +500 °F) Bendable Probe: -200 °C to +350 °C (-328 °F to +662 °F) *BODY OF LOGGER CANNOT EXCEED 140 °C
Temperature Resolution:	0.01 °C (0.02 °F)

General

Reading Rate:	1 reading every second up to 1 reading every 24 hours
Memory:	32,767 readings
Start Modes:	<ul style="list-style-type: none"> Software programmable immediate start 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.
Readings in Trigger Settings Mode:	16,383 readings
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)
Wrap Around:	Yes
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)

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

MODEL	DESCRIPTION
HiTemp140X2-FP	High temperature dual probe data logger with four different flexible probe length options. (6 inch, 12 inch, 36 inch and 72 inch).
HiTemp140X2-FP-PT-1	High temperature dual probe data logger with one 24 inch bendable stainless steel probe with a 1 inch probe sheath and one flexible probe.
HiTemp140X2-FP-PT-5	High temperature dual probe data logger with one 24 inch bendable stainless steel probe with a 5 inch probe sheath and one flexible probe.
IFC400	Docking station with USB cable, software and manual.
IFC406	6 Port, Multiplexer docking station with USB cable, software and manual.
ER1425S-HT	Replacement battery for the HiTemp140X2-FP Series
Calibration Certificate	Calibration Certificate available for data logger

ASK ABOUT OUR OTHER DATA LOGGERS

Temperature
Humidity
Pressure
pH
Level
Shock
LCD Display
Pulse/Event/State
Current
Voltage
Wireless
Intrinsically Safe
Spectral Vibration
Motion

Calibration:	Digital calibration through software
Calibration Date:	Automatically recorded within device
Data Format:	Date and time stamped °C, °F, °R, K,
Time Accuracy:	<ul style="list-style-type: none"> 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:	XP SP3/Vista/Windows 7/Windows 8
MadgeTech Software Compatibility:	<ul style="list-style-type: none"> 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 *BODY OF LOGGER CANNOT EXCEED 140 °C
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):	<ul style="list-style-type: none"> 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:	<ul style="list-style-type: none"> HiTemp140X2-FP: 4.1 oz (115 g) HiTemp140X2-FP-PT: 3.9 oz (110 g)
Materials:	<ul style="list-style-type: none"> Body: 316 Stainless Steel, PEEK Bendable Probe: 316 Stainless Steel Flexible Probe: PFA Insulated Cable
Approvals:	CE

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

HITEMP140X2-TD

HIGH TEMPERATURE DUAL PROBE DATA LOGGERS WITH AMBIENT & REMOTE TEMPERATURE PROBES



Features

- $\pm 0.1\text{ }^{\circ}\text{C}$ ($\pm 0.18\text{ }^{\circ}\text{F}$) Accuracy
- Rigid Probe Measures from $-200\text{ }^{\circ}\text{C}$ to $+260\text{ }^{\circ}\text{C}$ ($-328\text{ }^{\circ}\text{F}$ to $+500\text{ }^{\circ}\text{F}$)
- Bendable Probe Measures from $-200\text{ }^{\circ}\text{C}$ to $+350\text{ }^{\circ}\text{C}$ ($-328\text{ }^{\circ}\text{F}$ to $+662\text{ }^{\circ}\text{F}$)
- Flexible Probe Measures from $-60\text{ }^{\circ}\text{C}$ to $+260\text{ }^{\circ}\text{C}$ ($-76\text{ }^{\circ}\text{F}$ to $+500\text{ }^{\circ}\text{F}$)
- 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 & Processing
- Environmental Studies
- Well Monitoring
- Washer Disinfectors
- Pasteurization



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 stainless steel PT probe options provide the ability to retain shape when bent into position and offer an extremely high measurement range of up to $350\text{ }^{\circ}\text{C}$.

The HiTemp140X2-TD-FP combines the 2 inch TD probe with a 6 inch, 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. This probe style has a narrow diameter, high accuracy and is ideal for steam sterilization and lyophilization. The FP probe is also compatible with the MicroDisc probe attachment, used for the surface temperature monitoring of shelving and more.

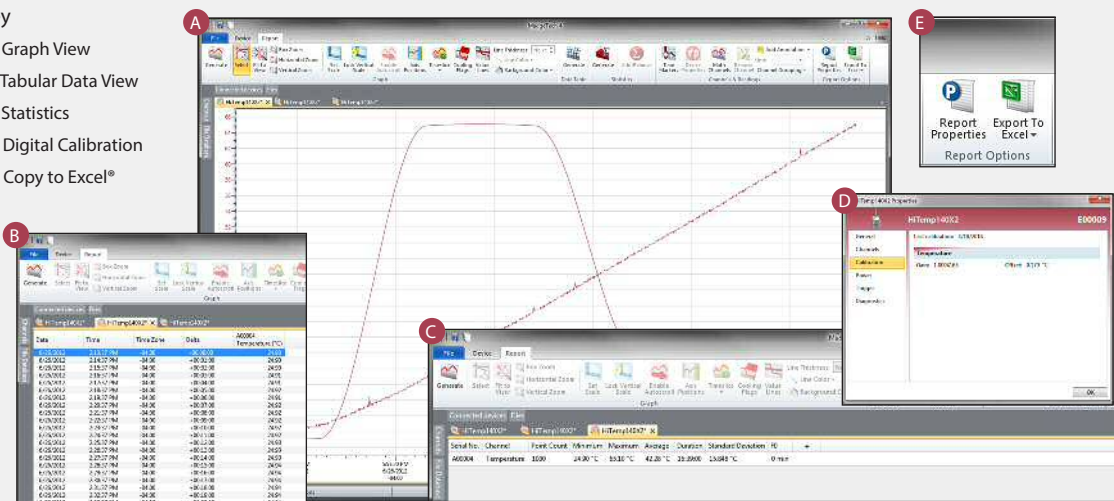
The temperature operating range for the data logger body is $-40\text{ }^{\circ}\text{C}$ to $140\text{ }^{\circ}\text{C}$. Because of the simultaneous ambient and remote temperature recording, the HiTemp140X2-TD series is ideal for use in autoclave mapping, food processing applications, and much more.

The HiTemp140X2-TD series is compatible with the latest version of the MadgeTech Software. This allows for simple starting, stopping and downloading of collected data. The devices are able to store up to 32,700 time and date stamped readings in non-volatile solid state memory. Once the readings have been downloaded to the software, it can be viewed in graphic, tabular, and summary form for easy analysis, as well as the potential to be exported into Excel for further calculations.

MADGETECH DATA LOGGER SOFTWARE

Key

- A** Graph View
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- D** Digital Calibration
- E** Copy to Excel®



Software Features:

- 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
- Data table view
- Automatic report generation
- Summary view
- Multilingual

HITEMP140X2-TD SPECIFICATIONS*

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Temperature

Temperature Sensor:	<ul style="list-style-type: none"> 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:	<ul style="list-style-type: none"> 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

Reading Rate:	1 reading every second up to 1 reading every 24 hours
Memory:	32,767 readings
Start Modes:	<ul style="list-style-type: none"> Software programmable immediate start 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.
Readings in Trigger Settings Mode:	16,383 readings
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)
Wrap Around:	Yes
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)
Calibration:	Digital calibration through software

Calibration Date:	Automatically recorded within device
Data Format:	Date and time stamped °C, °F, °R, K,
Time Accuracy:	<ul style="list-style-type: none"> 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:	XP SP3/Vista/Windows 7/Windows 8
MadgeTech Software Compatibility:	<ul style="list-style-type: none"> 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 100 PSIA Note: any X2 logger with an FP probe is only rated to 60 PSIA. *BODY OF LOGGER CANNOT EXCEED 140 °C
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):	<ul style="list-style-type: none"> 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: 6 in x 0.10 in (152 mm x 2.5 mm) 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:	<ul style="list-style-type: none"> HiTemp140X2-TD-PT: 3.0 oz (85 g) HiTemp140X2-TD-FP: 3.5 oz (100 g)
Materials:	<ul style="list-style-type: none"> Body: 316 Stainless Steel, PEEK Rigid/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).

ORDERING INFORMATION

MODEL	DESCRIPTION
HiTemp140X2-TD-FP	High temperature dual probe data logger with one rigid transitional diameter probe and one flexible RTD probe available in four sizes. 6 inch, 12 inch, 36 inch, and 72 inch.
HiTemp140X2-TD-PT-1	High temperature dual probe data logger with one rigid probe with a transitional diameter probe and one 24 inch bendable probe with a 1 inch probe sheath.
HiTemp140X2-TD-PT-5	High temperature dual probe data logger with one rigid probe with a transitional diameter probe and one 24 inch bendable probe with a 5 inch probe sheath.
IFC400	Docking station with USB cable, software and manual.
IFC406	6 Port, Multiplexer docking station with USB cable, software and manual.
ER1425S-HT	Replacement battery for the HiTemp140X2-TD Series
Calibration Certificate	Calibration Certificate available for data logger

ASK ABOUT OUR OTHER DATA LOGGERS

Temperature
Humidity
Pressure
pH
Level
Shock
LCD Display
Pulse/Event/State
Current
Voltage
Wireless
Intrinsically Safe
Spectral Vibration
Motion

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

PR140 HIGH TEMPERATURE PRESSURE DATA LOGGER



Features

- Operates up to 140 °C
- Submersible (IP68)
- User Replaceable Battery
- Rugged
- Programmable Start Time
- Engraved Label
- CE Compliant
- Software Battery Life Indicator
- 1/8 inch NPT Pressure Port
- Wrench Flats

Benefits

- Simple Setup and Installation
- Compatible with 1/8 inch NPT
- Adaptors and Fittings

Applications

- Autoclave Validation and Mapping
- Canning and Cooking Pouches
- Pressurized Process Reactors
- Beverage Production, Including
- Wine and Sod

The PR140 is a pressure data logger designed for use in autoclave validation and mapping. This rugged device can withstand temperatures up to 140 °C and is completely submersible (IP68).

The PR140 is built with a precision stainless steel pressure gauge. The device has an accuracy of ± 0.03 Bar (± 0.435 PSI), which can be achieved over a wide temperature range, from 20 °C to +140 °C (68 °F to 284 °F). The PR140 can be programmed to take readings as often as once per second (1 Hz), and has non-volatile memory that can store up to 32,700 measurements.

The 1/8 inch NPT pressure port featured on the device allows for compatibility with a variety of fittings and adapters. This is ideal for calibration purposes, as well as connecting the data logger to measure process pressure systems.

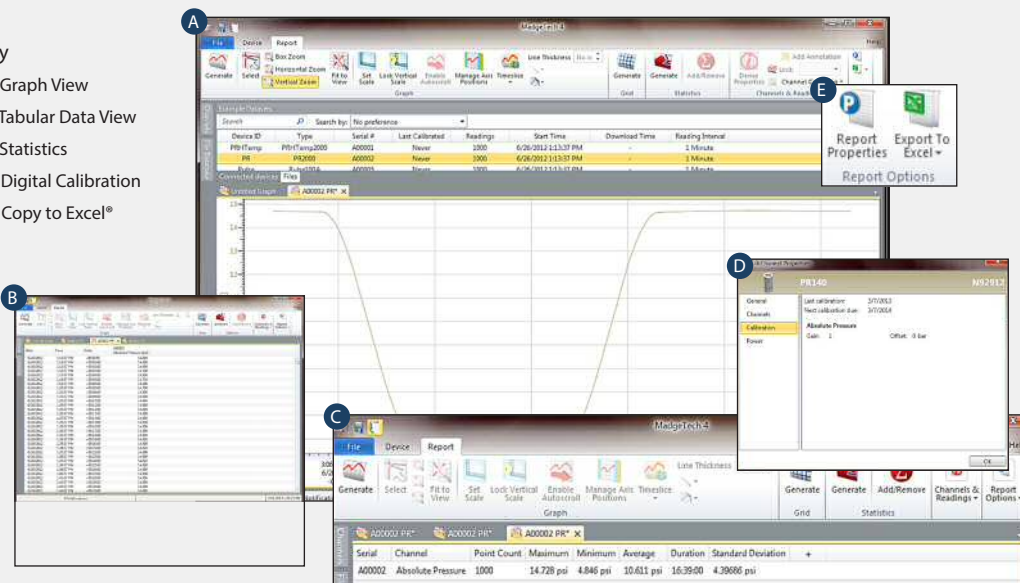
The PR140 is easy to use. Simply place it in the IFC400 or IFC406 docking station (sold separately), connect to a computer, and the device can be started, stopped or downloaded using the MadgeTech software. Graphical, tabular and summary data is provided for analysis and can be viewed in PSIA, mmHg, bar, Torr and kPa. The data can also be automatically exported to Excel® for further calculations.



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- D** Digital Calibration
- E** Copy to Excel®



Software Features:

- Multiple graph overlay
- Statistics
- Digital calibration
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- Lethality equations (F0, PU)
- Mean Kinetic Temperature
- Full time zone support
- Data annotation
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- Data table view
- Automatic report generation
- Summary view
- Multilingual

PR140 SPECIFICATIONS*

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Pressure

Pressure Sensor:	Semiconductor strain gauge
Pressure Range:	0 to 5 Bar (0 to 72.5 PSIA)
Pressure Resolution:	0.0001 Bar
Calibrated Accuracy:	+0.03 Bar (+0.435 PSI), +20 °C to +140 °C (+68 °F to +284 °F)
Pressure Response Time:	0.1 ms (10 to 90 % FSR)
Reading Rate:	1 reading every second up to 1 reading every 24 hours
Memory:	32,700 readings; software configurable memory wrap
Start Modes:	Software programmable immediate start or delay start up to six months
Real Time Recording:	May be used with PC to monitor and record data in real time
Calibration:	Digital calibration through software
Calibration Interval:	Yearly calibration recommended

Reading Rate:	1 reading every 2 seconds 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
Data Format:	PSIG, inHg, mmHg, bar, atm, Torr, Pa, kPa, MPa
Time Accuracy:	±1 minute/month (at 20 °C to 30 °C)
Computer Interface:	USB (interface cable required); 115,200 baud
Software:	XP SP3/Vista/Windows 7/Windows 8
Operating Environment:	-20 °C to +140 °C (-4 °F to +284 °F), 0 %RH to 100 %RH, 0.002 PSIA to 100 PSIA
Dimensions:	Flush Top: 2.0 in x 1.0 in dia. (50.8 mm x 25.4 mm dia.) NPT Pressure Port Top: 2.3 in x 1.0 in dia. (58.2 mm x 25.4 mm dia.)
Weight:	40 oz (1134 g)
Enclosure:	Stainless Steel
Approvals:	CE

BATTERY WARNING: RISK OF FIRE OR EXPLOSION. DO NOT RECHARGE, FORCE OPEN, HEAT OR DISPOSE OF IN FIRE.

ORDERING INFORMATION

MODEL	DESCRIPTION
PR140-LVL	Pressure Data Logger, with Flush Top
PR140	Pressure Data Logger, with NPT Pressure Port Top
IFC400	Docking station with USB cable, software and manual
IFC406	6 Port, Multiplexer docking station with USB cable, software and manual
ER1425S-HT	Replacement battery for the PR140
Calibration Certificate	Calibration Certificate available for data logger

ASK ABOUT OUR OTHER DATA LOGGERS

Temperature
Humidity
Pressure
pH
Level
Shock
LCD Display
Pulse/Event/State
Current
Voltage
Wireless
Intrinsically Safe
Spectral Vibration
Motion

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

RHTEMP1000

HUMIDITY AND TEMPERATURE DATA LOGGER



Features

- Software Battery Life Indicator
- 316 Stainless Steel Enclosure
- Small, sleek design
- Fast Response Time
- Engraved Label
- CE compliant

Benefits

- Faster Downloads
(1 min. full memory)
- Docking station communication
- Easily identify low battery voltage

Applications

- Implement HACCP Programs
- Environmental studies
- Hostile environment monitoring
- Medical & Pharmaceutical

The new RHTemp1000 humidity and temperature logger is a rugged, IP30, battery powered, stand alone device which can be used to automatically record humidity and temperature. This all in one compact, portable, easy to use device is able to measure and record up to 16,350 humidity and temperature measurements.

The RHTemp1000 is ideal for use in harsh environments. Its real time clock ensures that all the data is time and date stamped. The storage medium is non-volatile solid state memory, providing maximum data security even if the battery becomes discharged. With the added battery life indicator feature, users can now easily identify low voltage and change batteries before usage. The device can be started and stopped directly from your computer and its small, sleek size allows it to fit almost anywhere. The RHTemp1000 makes data retrieval quick and easy. Simply insert the device into the IFC400 or the IFC406 USB docking station (*sold separately*) and our user-friendly software does the rest. No more removal of end-caps to download your data!

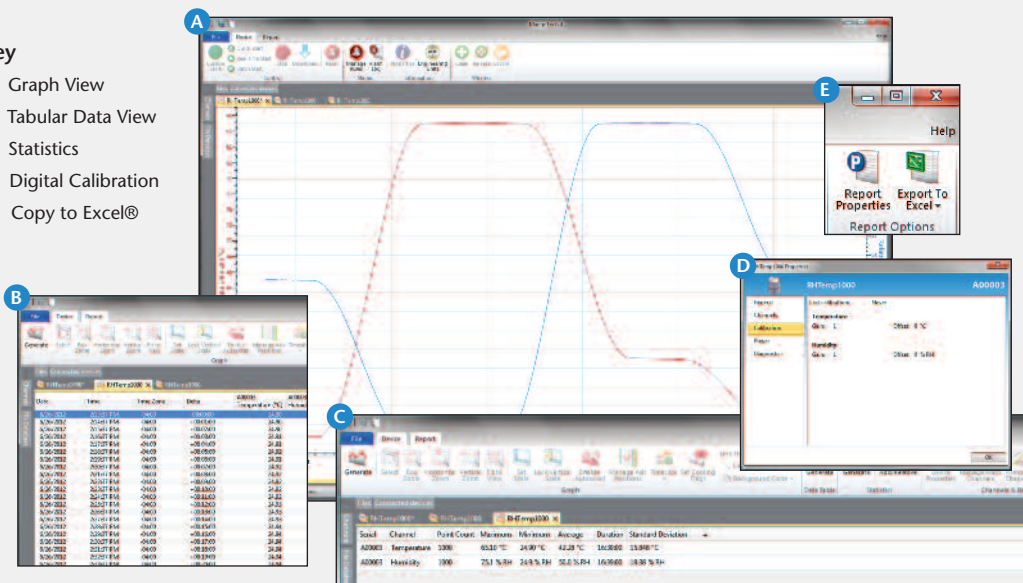
The MadgeTech Software is a powerful, analytic tool, available to download for free from our website www.madgetech.com. Data can be viewed in graphical or tabular formats and summary and statistics views are available for further analysis.



MADGETECH DATA LOGGER SOFTWARE

Key

- A** Graph View
- B** Tabular Data View
- C** Statistics
- D** Digital Calibration
- E** Copy to Excel®



Software Features:

- 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
- Data table view
- Automatic report generation
- Summary view
- Multilingual

RHTEMP1000 SPECIFICATIONS*

Temperature

Temperature Sensor:	Resistance Temperature Detector (RTD)
Temperature Range:	-40 °C to +80 °C (-40 °F to +176 °F)
Temperature Resolution:	0.01 °C
Temperature Response Time in Air:	t ₆₃ - 8 minutes to 63% of change t ₉₀ - 68 minutes to 90% of change
Calibrated Accuracy:	±0.5 °C (0 °C to 55 °C)

Humidity

Humidity Sensor:	Capacitive Polymer
Humidity Range:	0 %RH to 100 %RH (non-condensing)
Humidity Resolution:	0.1 %RH
Humidity Response Time in Air:	t ₆₃ - 30 seconds to 63% of change t ₉₀ - 2 minutes to 90% of change
Calibrated Accuracy:	±3.0 %RH maximum

General

Start Modes:	Software programmable immediate start or delay start up to 24 months in advance
Real Time Recording:	May be used with PC to monitor and record data in real time
Memory:	16,350 readings per channel
Password Protection:	Yes
Reading Rate:	1 reading every second up to 1 reading every 24 hours

*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. SPECIFIC WARRANTY REMEDY LIMITATIONS APPLY. CALL 1-603-456-2011 OR GO TO WWW.MADGETECH.COM FOR DETAILS.

Calibration:	Digital calibration through software
Calibration Date:	Automatically recorded within device
Memory Wrap:	Yes
Data Format:	Date and time stamped °C, °F, K, °R; %RH, mg/mL, Dew Point
Battery Life:	2 years typical at 25 °C (15 minute reading rate)
Battery Type:	3.6V lithium battery included, user replaceable
Time Accuracy:	±1 minute/month at 25 °C
Required Interface Package:	IFC400 or IFC406
Computer Interface:	USB (interface cable required); 125,000 baud
Operating System Compatibility:	Windows XP SP3/Vista/Windows 7/Windows 8
MadgeTech Software Compatibility:	<ul style="list-style-type: none"> Standard Software version 4.1.0.2 or later Secure Software version 4.1.3.0 or later
Operating Environment:	-40 °C to +80 °C (-40 °F to +176 °F), 0 %RH to 100 %RH (non-condensing)
Dimensions:	1.7 in x 0.97 in x 0.97 in (42 mm x 24.6 mm x 24.6 mm)
Weight:	2.3 oz (65 g)
Material:	316 Stainless Steel/PEEK
IP Rating	IP30
Approvals:	CE

BATTERY WARNING: FIRE, EXPLOSION AND SEVERE BURN HAZARD. DO NOT RECHARGE, DISASSEMBLE, HEAT ABOVE 100 °C (212 °F), INCINERATE, CRUSH, OR EXPOSE CONTENTS TO WATER.

ORDERING INFORMATION

MODEL	DESCRIPTION
RHTEMP1000	Humidity and Temperature Recorder with Stainless Steel enclosure
IFC400	Docking station with USB cable, software, and manual
IFC406	6 Port, Multiplexer docking station with USB cable, software and manual
Calibration Certificate	Calibration Certificate available for data logger
TL-2150/S	Replacement battery for RHTemp1000

ASK ABOUT OUR OTHER DATA LOGGERS

- Temperature
- Humidity
- Pressure
- pH Level
- Shock
- LCD Display
- Pulse/Event/State
- Current
- Voltage
- Wireless
- Intrinsically Safe
- Spectral Vibration
- Motion

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RHTEMP1000IS

INTRINSICALLY SAFE HUMIDITY & TEMPERATURE DATA LOGGER



Features

- Software Battery Life Indicator
- Intrinsically Safe Certified
- 316 Stainless Steel Enclosure
- Small, Sleek Design
- Fast Response Time
- Engraved Label
- CE Compliant

Benefits

- Faster Downloads
(1 min. full memory)
- Docking Station Communication
- Easily Identify Low Battery Voltage

Applications

- EtO Sterilization
- Environmental Studies
- Hostile Environment Monitoring
- Medical & Pharmaceutical

The new RHTemp1000IS is an Intrinsically Safe humidity and temperature data logger. The RHTemp1000IS is FM Approvals certified as Intrinsically Safe for Class 1, Division 1, groups A, B, C, and D and non-incendive for Class 1, Division 2 groups A, B, C, D and hazardous environments. This certification makes the device ideal for EtO Sterilization, environmental studies, and numerous other hostile environment applications.



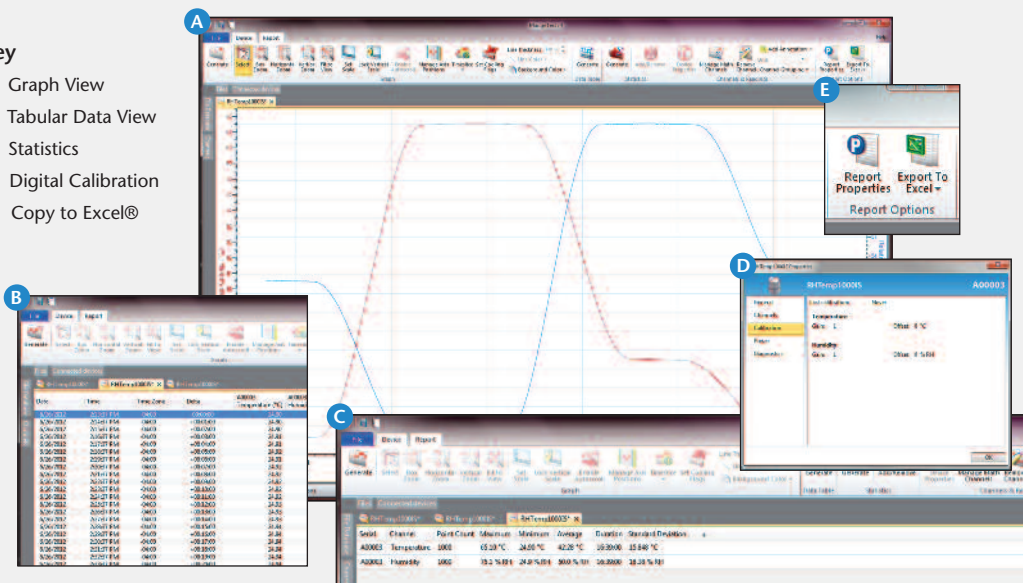
One of the enhancements to the RHTemp1000IS is the stainless steel enclosure with engraved serial number and device name. The device interfaces with the IFC400 or the IFC406 (sold separately) docking station and can be placed directly into the dock for full communications. No more removal of end-caps to download data! The small size of the RHTemp1000IS, allows it to be placed in remote or hard to reach locations. The device now features a battery life indicator allowing users to easily identify low voltage and change batteries when required. This feature maximizes the use of your battery life and is a cost saving efficiency. The RHTemp1000IS can hold up 16,350 humidity and temperature measurements. Its real time clock ensures that all the data is time and date stamped.

The MadgeTech Software is a powerful, analytic tool, available to download for free from our website www.madgetech.com. Data can be viewed in graphical or tabular formats and summary and statistics views are available for further analysis.

MADGETECH DATA LOGGER SOFTWARE

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- Mean Kinetic Temperature
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- Data annotation
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- Data table view
- Automatic report generation
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Temperature Range:	-40 °C to +80 °C (-40 °F to +176 °F)
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Calibration Date:	Automatically recorded within device
Memory Wrap:	Yes
Data Format:	Date and time stamped °C, °F, K, °R; %RH, mg/mL, Dew Point
Battery Life:	2 years typical at 25 °C (15 minute reading rate)
Battery Type:	3.6V lithium battery included, user replaceable
Time Accuracy:	±1 minute/month at 25 °C
Required Interface Package:	IFC400 or IFC406
Computer Interface:	USB (interface cable required); 125,000 baud
Operating System Compatibility:	Windows XP SP3/Vista/Windows 7/Windows 8
MadgeTech Software Compatibility:	<ul style="list-style-type: none"> Standard Software version 4.1.0.2 or later Secure Software version 4.1.3.0 or later
Operating Environment:	-40 °C to +80 °C (-40 °F to +176 °F), 0 %RH to 100 %RH (non-condensing)
Dimensions:	1.7 in x 0.97 in x 0.97 in (42 mm x 24.6 mm x 24.6 mm)
Weight:	2.3 oz (65 g)
Material:	316 Stainless Steel/PEEK
Approvals:	CE; Intrinsically Safe for Class I, Div 1, groups ABCD; Non-incendive for Class I, Division 2, groups ABCD Hazardous (Classified) Locations

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ORDERING INFORMATION

MODEL	DESCRIPTION
RHTEMP1000IS	Intrinsically Safe Humidity and Temperature Data logger
IFC400	Docking station with USB cable, software, and manual
IFC406	6 Port, Multiplexer docking station with USB cable, software and manual
Calibration Certificate	Calibration Certificate available for data logger
TL-2150/S	Replacement battery for RHTemp1000IS

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