



# HiTemp140-FP

High Temperature Data Logger with a Flexible RTD Probe

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 several models. The flexible probe is coated with PFA insulation and can withstand temperatures up to 260 °C. The body of the logger cannot exceed 140 °C. 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.

Using the latest MadgeTech Software, starting, stopping and downloading the HiTemp140-FP is simple and easy. To use, simply place the HiTemp140-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 interval. 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



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)



Cooling Flags



Export to Excel



Tabular Data View



Automation



#### **Features**

- ±0.1 °C (± 0.18 °F) Accuracy
- Probe Measurement Range -200 °C to +260 °C (-328 °F to +500 °F)
- Operating Environment -40 °C to +140 °C
- Submersible (IP68)
- User-Replaceable Battery
- Durable
- Programmable Start and Stop Time
- Five probe lengths: 6, 12, 24, 36 and 72 inches
- Battery life indicator

#### **Benefits**

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

#### Applications

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

# HiTemp140-FP

## **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	Flexible RTD Probe	
Probe Measurement Range	-200 °C to +260 °C (-328 °F to +500 °F)  BODY OF LOGGER CANNOT EXCEED 140 °C	
Temperature Resolution	0.01 °C (0.02 °F)	
Calibrated Accuracy	±0.1 °C from +20 °C to +140 °C ±0.3 °C from -20 °C to +19.99 °C ±0.4 °C from -40 °C to -20.01 °C	

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 <sub>60</sub> - 00:00:30:00 t <sub>90</sub> - 00:01:10:00	t60 - 00:00:03:50 t90 - 00:00:06:50	
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		
Memory	32,256 readings		
Readings in Trigger Settings Mode	6,451 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		

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	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 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 4.2.1.1 or later 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 100 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)	HiTemp140-FPST-6: 6 in x 0.13 in (152 mm x 3.2 mm) HiTemp140-FPST-12: 12 in x 0.13 in (305 mm x 3.2 mm) HiTemp140-FPST-24: 24 in x 0.13 in (609 mm x 3.2 mm) HiTemp140-FPST-36: 36 in x 0.13 in (914 mm x 3.2 mm) HiTemp140-FPST-72: 72 in x 0.13 in (1829 mm x 3.2 mm)	
Weight	3 oz (85 g)	
Material	<b>Body:</b> 316 Stainless Steel, Radel <b>Probe:</b> PFA Insulated Cable with Stainless Steel Tip	
Approvals	CE	

 $\frac{\text{BATTERY WARNING:}}{\text{FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT SHORT CIRCUIT, CHARGE, FORCE OVER DISCHARGE, CRUSH, PENETRATE, OR INCINERATE. BATTERY MAY LEAK OR EXPLODE IF HEATED ABOVE 150 °C (302 °F).}$ 

## **Ordering Information**

HiTemp140-FPST-6	PN 902330-00	High Temperature Data Logger with a 6 inch Flexible Probe and Stainless Steel Tip
HiTemp140-FPST-12	PN 902312-00	High Temperature Data Logger with a 12 inch Flexible Probe and Stainless Steel Tip
HiTemp140-FPST-24	PN 902364-00	High Temperature Data Logger with a 24 inch Flexible Probe and Stainless Steel Tip
HiTemp140-FPST-36	PN 902313-00	High Temperature Data Logger with a 36 inch Flexible Probe and Stainless Steel Tip
HiTemp140-FPST-72	PN 902316-00	High Temperature Data Logger with a 72 inch Flexible Probe and Stainless Steel Tip
HiTemp140-FPST-6-KR	PN 902339-00	High Temperature Data logger with a 6 inch Flexible Probe and Stainless Steel Tip with Key Ring
HiTemp140-FPST-36-KR	PN 902336-00	High Temperature Data logger with a 36 inch Flexible Probe and Stainless Steel Tip with Key Ring
IFC400	PN 900319-00	Docking Station with USB Cable
IFC406	PN 900325-00	6 Port, Multiplexer Docking Station with USB Cable
ER14250-SM Formerly ER14250MR-145	PN 900097-00	Replacement Battery for the HiTemp140-FP



