Logicbus HiTemp140-FP Flexible RTD Probe User Guide

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Logicbus HiTemp140-FP Flexible RTD Probe

Product Information

Specifications:

- **Product Name:** HiTemp140-FP
- **Type:** High Temperature Data Logger with Flexible RTD Probe
- **Probe Material:** Stainless Steel
- **Probe Design:** Narrow and lightweight
- **Probe Length:** Flexible
- **Probe Tip:** Stainless Steel
- **Data Storage Capacity:** Up to 32,256 date and time stamped readings
- **Memory Type:** Non-volatile solid state memory
- **Water Resistance Rating:** IP68 (fully submersible)

Product Overview:
The HiTemp140-FP is a durable, user-friendly high temperature data logger featuring a long, flexible RTD probe with a narrow diameter and stainless steel tip. It is specifically designed for use in steam sterilization and lyophilization processes. The narrow and lightweight probe design makes it ideal for placement within small vials, tubing, test tubes, and other small diameter or delicate applications. The flexible probe reduces the risks of breakage, both for the vial and the probe itself. Additionally, the location and placement of the probe are easy to manipulate. The HiTemp140-FP also includes a Trigger Settings feature that allows users to configure high and low temperature thresholds. When these thresholds are met or exceeded, the data logger will automatically start or stop recording data to memory. The device is capable of storing a large number of readings with its non-volatile solid state memory, which retains data even if the battery becomes discharged.

Device Operation:
To operate the HiTemp140-FP data logger, follow these steps:

Connecting and Starting the Data Logger:

1. Install the software by downloading it from the MadgeTech website at madgetech.com and following the instructions provided in the Installation Wizard.
2. Plug the interface cable into the docking station.
3. Connect the USB end of the interface cable into an open USB port on the computer.
4. Place the data logger into the docking station.
5. The data logger will automatically appear under Connected Devices within the software.
6. Select Custom Start from the menu bar and choose the desired start method, reading rate, and other parameters appropriate for the data logging application. Click Start.
7. The status of the device will change to Running or Waiting to Start, depending on your start method.
8. Disconnect the data logger from the interface cable and place it in the environment to measure.

Note: The device will stop recording data when the end of memory is reached or the device is stopped. To restart the device, it needs to be re-armed by connecting it to the computer again.

Downloading Data from a Data Logger:

1. Place the logger into the docking station.
2. Highlight the data logger in the Connected Devices list. Click Stop on the menu bar.
3. Once the data logger is stopped, with the logger highlighted, click Download.
4. All recorded data will be offloaded and saved to the PC.

Device Maintenance:
No specific maintenance instructions are provided in the user manual for the HiTemp140-FP. However, it is recommended to keep the device clean and dry to ensure its proper functioning and longevity.

Need Help?
If you need further assistance with the HiTemp140-FP data logger or have any questions, please visit our website at madgetech.com or contact our customer support.

FAQ:

- **Q: Where can I download the software for the HiTemp140-FP data logger?**
  A: The software can be downloaded from the MadgeTech website at madgetech.com. Follow the instructions provided in the Installation Wizard.
- **Q: How do I install the USB Interface Drivers for the docking station?**
  A: If you have the IFC400 or IFC406 docking station (sold separately), follow the instructions provided in the Installation Wizard to install the USB Interface Drivers. Alternatively, the drivers can also be downloaded from the MadgeTech website at **madgetech.com**.

Product Overview

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

Commonly used for mapping, validation and monitoring of high temperature surfaces, 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 (+500 °F).

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 Trigger Settings feature of the HiTemp140-FP 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 32,256 date and time stamped readings and features a non-volatile solid state memory which retains data even if the battery becomes discharged.

Water Resistance
The HiTemp140-FP is rated IP68 and is fully submersible.

Installation Guide

Installing the Software
The Software can be downloaded from the MadgeTech website at madgetech.com. Follow the instructions provided in the Installation Wizard.

Installing the Docking Station
IFC400 or IFC406 (sold separately) — Follow the instructions provided in the Installation Wizard to install the USB Interface Drivers. Drivers can also be downloaded from the MadgeTech website at **madgetech.com**.

Device Operation

Connecting and Starting the Data Logger

1. Once the software is installed and running, plug the interface cable into the docking station.
2. Connect the USB end of the interface cable into an open USB port on the computer.
3. Place the data logger into the docking station.
4. The data logger will automatically appear under Connected Devices within the software.
5. For most applications, select Custom Start from the menu bar and choose the desired start method, reading rate and other parameters appropriate for the data logging application and click Start. (Quick Start applies the most recent custom start options, Batch Start is used for managing multiple loggers at once, Real Time Start stores the dataset as it records while connected to the logger.)
6. The status of the device will change to Running or Waiting to Start, depending upon your start method.
7. Disconnect the data logger from the interface cable and place it in the environment to measure.

Note: The device will stop recording data when the end of memory is reached or the device is stopped. At this point the device cannot be restarted until it has been re-armed by the computer.

Downloading Data from a Data Logger

1. Place the logger into the docking station.
2. Highlight the data logger in the Connected Devices list. Click Stop on the menu bar.
3. Once the data logger is stopped, with the logger highlighted, click Download.
4. Downloading will offload and save all the recorded data to the PC.

Trigger Settings
The device can be programmed to only record based off user configured trigger settings.

1. In the Connected Devices panel, click the device desired.
2. On the Device Tab, in the Information Group, click Properties. Or, right-click the device and select Properties in the context menu.
3. Select Trigger in the Properties window.
4. Trigger formats are available in Window or Two Point Mode. Window mode allows a high and/or low trigger set point, and a trigger sample count or “window” of time recorded when set points are exceeded to be defined. Two point allows for different Start and Stop setpoints to be defined for both the high and low triggers. Refer to the Trigger Settings – MadgeTech 4 Data Logger Software video on madgetech.com for instructions on how to configure Trigger Settings.

Set Password
To password protect the device so that others cannot start, stop or reset the device:

1. In the Connected Devices panel, click the device desired.
2. On the Device Tab, in the Information Group, click Properties. Or, right-click the device and select Properties in the context menu.
3. On the General Tab, click Set Password.
4. Enter and confirm the password in the box that appears, then select OK.

Device Maintenance1

O-Rings
O-ring maintenance is a key factor when properly caring for the HiTemp140-FP. The O-rings ensure a tight seal and prevent liquid from entering the inside of the device. Please refer to the application note O-Rings 101: Protecting Your Data, found at madgetech.com, for information on how to prevent O-ring failure.

Battery Replacement
Materials: ER14250-SM

1. Unscrew the bottom of the logger and remove the battery.
2. Place the new battery into the logger. Note the polarity of the battery. It is important to insert the battery with positive polarity pointing upward towards the probe. Failure to do so could result in product inoperability or potential explosion if exposed to high temperatures.
3. Screw the cover back onto the logger.

Recalibration
MadgeTech recommends annual recalibration. To send devices back for calibration, visit **madgetech.com**.

Note: This product is rated for use up to 140 °C (284 °F). Please heed the battery warning. The product will explode if exposed to temperatures above 140 °C (284 °F).

NEED HELP?

Product Support & Troubleshooting:

- Visit our Resources online at **madgetech.com/resources**.
- Contact our friendly Customer Support Team at (603) 456-2011 or **support@madgetech.com**.

MadgeTech 4 Software Support:

- Refer to the built-in help section of the MadgeTech 4 Software.
- Download the MadgeTech 4 Software Manual at madgetech.com.
- Contact our friendly Customer Support Team at (603) 456-2011 or **support@madgetech.com**.

Ordering Information

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

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Documents / Resources

	Logicbus HiTemp140-FP Flexible RTD Probe [pdf] User Guide HiTemp140-FP Flexible RTD Probe, HiTemp140-FP, Flexible RTD Probe, RTD Probe, Probe

References

- MadgeTech Data Loggers | Solutions for Critical Applications
- Resources | MadgeTech
- User Manual