MADGETECH
WE BUILD DATA LOGGERS

HiTemp140-TC

High Temperature Data Logger with Thermocouple Connector

The HiTemp140-TC is a versatile high temperature data logger featuring an SMP thermocouple connector. Compatible with a wide variety of thermocouple probes, this data logger is capable of measuring temperature as high as +1820 °C (+3308 °F) and as low as -270 °C (-454 °F) (probe dependent).

All of MadgeTech's HiTemp140 data loggers are made of food grade stainless steel and can be placed in environments with temperatures as high as 140 °C (284 °F). The operating range of the data logger body can be extended to higher temperatures when used with MadgeTech's thermal barrier options and suitable probe.

Using the MadgeTech 4 Software, starting, stopping and downloading the HiTemp140-TC is simple and easy. To use, simply place the HiTemp140-TC 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, °R, or mV. The data can also be automatically exported to Excel® for further calculations.

FEATURES

- Measurement Range of -270 °C to +1820 °C (-454 °F to +3308 °F)
- ±0.5 °C (±0.9 °F) Accuracy (probe dependent)
- SMP Thermocouple
- User Replaceable Battery
- Trigger Options
- Programmable Start and Stop Time

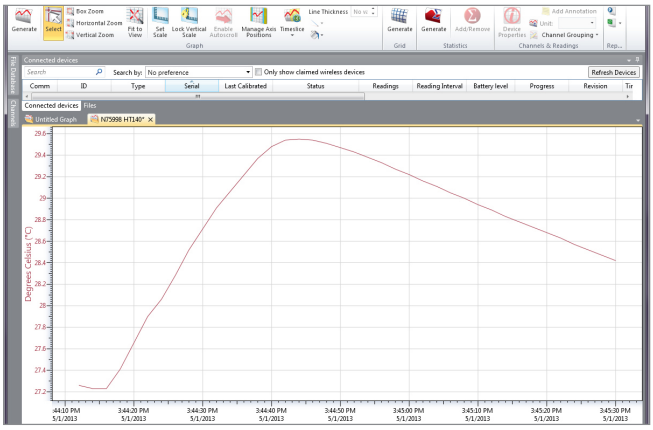
BENEFITS

- Interchangeable Thermocouple Probe Connector for Multipurpose Use
- Simple Setup and Installation
- Minimal Long-Term Maintenance

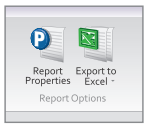
APPLICATIONS

- Depyrogenation
- Food Preparation and Processing
- Environmental Studies
- Well Monitoring
- Pasteurization
- Many More Applications (Probe Dependent)

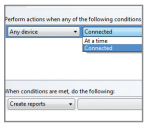
MadgeTech 4 Software Features



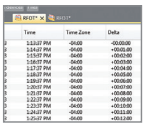
Graph View



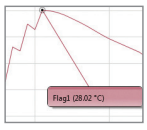
Export to Excel



Automation



Tabular Data View



Cooling Flags

- 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

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Specifications

CHANNEL 1 (Internal)	
Temperature Range	-40 °C to +140 °C (-40 °F to +284 °F)
Temperature Resolution	0.01 °C (0.02 °F)
Calibrated Accuracy	±0.5 °C (±0.9 °F 0 °C to 50 °C (32 °F to 122 °F)

CHANNEL 2 (Thermocouple)			
Thermocouple Types	J, K, T, E, R, S, B, N		
Measurement Range	(-270 °C to +1820 °C / -454°F to +3308 °F) (Probe Dependent)		
Connector Type	Female subminiature (SMP)		
Cold Junction Compensation	Automatic, based on internal channel		
Maximum Thermocouple Resistance	100 Ω		
Thermocouple	Range (°C)	Resolution	Accuracy*
J	-210 to +760	0.1 °C	±0.5 °C
K	-270 to +1370	0.1 °C	±0.5 °C
T	-270 to +400	0.1 °C	±0.5 °C
E	-270 to +980	0.1 °C	±0.5 °C
R	-50 to +1760	0.5 °C	±2.0 °C
S	-50 to +1760	0.5 °C	±2.0 °C
B	+50 to +1820	0.5 °C	±2.0 °C
N	-270 to +1300	0.1 °C	±0.5 °C

*Thermocouple accuracy specified with 24 AWG diameter thermocouple wires.

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).

GENERAL	
Start Modes	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	16,256 readings 5,418 readings in trigger settings mode
Wrap Around	Yes
Reading Rate	1 reading 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	2 years typical (1 minute reading rate at 25 °C/77 °F)
Data Format	Date and time stamped °C, K, °F, °R, or mV
Time Accuracy	±1 minute/month at 25 °C (77 °F)
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 4.2.25.15 or later. MadgeTech Secure Software version 4.2.24.16 or later.
Operating Environment	-40 °C to +140 °C (-40 °F to +284 °F) 0 %RH to 100 %RH non-condensing, 0.002 PSIA to 100 PSIA
IP Rating	IP50
Dimensions (Body)	2.20 in x 1.0 in x 1.0 in (55.9 mm x 26.4 mm x 26.4 mm)
Dimensions (Probe)	Probe Dependent
Weight	3.49 oz (99 g)
Material	316 Stainless Steel, PPSU, Glass-Filled Thermoplastic
Approvals	CE

PST
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Ordering Information

HITEMP140-TC	PN 902424-00	High Temperature Data Logger with built-in SMP thermocouple connector
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-TC