HITEMP140-TS
THERMAL SHIELD FOR THE HITEMP140 DATA LOGGER

MADGETECH
WE BUILD DATA LOGGERS

Features
- Withstands Temperatures between -200 °C up to 250 °C
- Small Diameter: 2.0 in (51 mm)
- Submersible

Applications
- Peanut Roasting
- Food Processing
- Autoclave Validation
- Conveyer Ovens
- Dishwasher Testing

The HiTemp140-TS is a thermal shield designed for use with the HiTemp140 data logger. This durable enclosure allows the data logger to be used in temperatures from -200 °C to +250 °C, making it ideal for peanut roasting, food processing, autoclave validation and other extreme temperature applications.

To use, simply place the HiTemp140 in the IFC400 or IFC406 docking station (*sold separately*). Use the MadgeTech software to program a start method and reading rate. Place the HiTemp140 in the HiTemp140-TS enclosure and screw it back together. The device is ready to be deployed.

The HiTemp140-TS flush style is designed to have the probe entirely exposed while the data logger is protected by the thermal shield. This allows full use of the length of the probe for applications that require internal temperature monitoring. The Vented style offers more probe protection and is designed for shorter probe lengths in applications where the data logger might be subject to movement in a fully submerged application.


Flush Vented

HITEMP140-TS SPECIFICATIONS*

*Specifications are subject to change without notice. Specific warranty remedy limitations apply. Call (603) 456-2011 or go to madgetech.com for details.

Operating Environment:	-200 °C to +250 °C (-328 °F to +482 °F) (*Time limited*) 0 %RH to 100 %RH, 0.002 PSIA to 100 PSIA
Dimensions:	• **Flush Top:** 2.75 in x 2.0 in dia. (69.85 mm x 51 mm dia.) • **Vented Top:** 4.3 in x 2.0 in dia. (109.2 mm x 50.8 mm dia.)
Material:	Enclosure: PTFE
Weight:	• **Flush:** 6.7 oz (190 g) (not including data logger) • **Vented:** 9.5 oz (270 g) (not including data logger)

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 data logger 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 data logger 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.

Ambient Temperature	HiTemp140-TS *(Flush)*		HiTemp140-TS *(Vented)*	
	Exposure Time in Air	Exposure Time in Liquid	Exposure Time in Air	Exposure Time in Liquid
-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

ORDERING INFORMATION

MODEL	DESCRIPTION
HiTemp140-TS	Thermal Shield for the HiTemp140-5.25/7, HiTemp140-PT and HiTemp140-FP Data Logger
HiTemp140-5.25/7 in	Extended Range High Temperature Data Logger
HiTemp140-PT/FP	Bendable Probe/Flexible Probe High Temperature Data Logger
IFC400	Docking station with USB cable, software and manual
IFC406	6 Port, Multiplexer docking station with USB cable, software and manual

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

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DOC-1238009-00 REV 13 2019.08.20