

HITEMP140X2-TS

THERMAL SHIELD FOR THE HITEMP140X2 DATA LOGGER SERIES



Features

- Withstands Temperatures from -200 °C to 250 °C
- Small Diameter: 2.85 in (72.4 mm)

Applications

- Peanut Roasting
- Food Processing
- Autoclave Validation
- Conveyor Ovens
- Dishwasher Testing

The HiTemp140X2-TS is a thermal shield designed for use with the HiTemp140X2 series of data loggers. 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 HiTemp140X2 data logger in the IFC400 or IFC406 docking station (*sold separately*) and use the MadgeTech software to program a start method and reading rate. Place the HiTemp140X2 data logger in the HiTemp140X2-TS enclosure and screw it back together. The device is ready to be deployed.

The HiTemp140X2-TS is designed to have both probes entirely exposed while the data logger body is protected by the thermal shield. This allows full use of the length of the probe for applications that require internal temperature monitoring.



HITEMP140X2-TS SPECIFICATIONS*

Operating Environment:	-200 °C to +250 °C (-328 °F to +482 °F) (<i>Time limited</i>) 0 %RH to 100 %RH
Dimensions:	2.85 in x 1.95 in x 1.55 in (72.4 mm x 49.5 mm x 39.4 mm)
Material:	Enclosure: PTFE
Weight:	6.7 oz (190 g) (not including data logger)
IP Rating:	The Thermal Shield alone does not provide any sealing against fluid ingress. The Thermal Shield will inherit IP rating of the logger.

Disclaimer and Terms of Use

Listed specifications can be used to determine maximum allowable exposure times for the HiTemp140X2 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 HiTemp140X2 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 HiTemp140X2 with thermal shield is not appropriate for the application and we will work to find a solution that is.

Ambient Temperature	HiTemp140X2-TS	
	Exposure Time in Air (150 °C/302 °F)	Exposure Time in Liquid (150 °C/302 °F)
-200 °C (-328 °F)	12 minutes	N/A
-180 °C (-292 °F)	13 minutes	N/A
-160 °C (-256 °F)	15 minutes	N/A
-140 °C (-220 °F)	17 minutes	N/A
-120 °C (-184 °F)	19 minutes	N/A
-100 °C (-148 °F)	22 minutes	N/A
-80 °C (-112 °F)	27 minutes	N/A
-60 °C (-76 °F)	37 minutes	22 minutes
-40 °C to +140 °C (-40 °F to +284 °F)	Indefinitely	Indefinitely
150 °C (302 °F)	59 minutes	34 minutes
160 °C (320 °F)	51 minutes	29 minutes
170 °C (338 °F)	43 minutes	25 minutes
180 °C (356 °F)	37 minutes	23 minutes
190 °C (374 °F)	34 minutes	20 minutes
200 °C (392 °F)	31 minutes	18 minutes
210 °C (410 °F)	29 minutes	17 minutes
220 °C (428 °F)	27 minutes	16 minutes
230 °C (446 °F)	25 minutes	15 minutes
240 °C (464 °F)	23 minutes	14 minutes
250 °C (482 °F)	22 minutes	13 minutes

ORDERING INFORMATION

MODEL	DESCRIPTION
HiTemp140X2-TS	Thermal Shield for the HiTemp140X2 Data Logger Series
HiTemp140X2	High Temperature Dual Probe Data Logger (variety of probe combinations available)
IFC400	Docking station with USB cable, software and manual
IFC406	6 Port, Multiplexer docking station with USB cable, software and manual