



# HITEMP140-PT SPECIFICATIONS\*

\*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. SPECIFIC WARRANTY REMEDY LIMITATIONS APPLY. CALL 1-603-456-2011 OR GO TO WWW.MADGETECH.COM FOR DETAILS.

<b>Temperature Sensor:</b>	100 Ω Platinum RTD
<b>Probe Measurement Range:</b>	-200 °C to +350 °C (-328 °F to +662 °F)
<b>Temperature Resolution:</b>	0.01 °C (0.02 °F)
<b>Calibrated Accuracy:</b>	<ul style="list-style-type: none"> <li>±0.1 °C/±0.18 °F (20 °C to +140 °C/68 °F to +284 °F)</li> <li>±0.3 °C/±0.54 °F (-20 °C to +19.99 °C/-4 °F to +67.98 °F)</li> <li>±0.4 °C/±0.72 °F (-40 °C to -20.01 °C/-40 °F to -4.02 °F)</li> </ul>
<b>Start Modes:</b>	<ul style="list-style-type: none"> <li>Software programmable immediate start</li> <li>Delay start up to 18 months in advance</li> </ul>
<b>Stop Modes:</b>	<ul style="list-style-type: none"> <li>Manual through software</li> <li>Timed (specific date and time)</li> </ul>
<b>Real Time Recording:</b>	May be used with PC to monitor and record data in real time
<b>Password Protection:</b>	An optional password may be programmed into the device to restrict access to configuration options. Data may be read out without the password.
<b>Memory:</b>	32,700 readings
<b>Wrap Around:</b>	Yes
<b>Reading Rate:</b>	1 reading every second up to 1 reading every 24 hours

<b>Battery Type:</b>	3.6V high-temperature lithium battery included; <b>user replaceable</b>
<b>Battery Life:</b>	1 year typical (1 minute reading rate at 25 °C/77 °F)
<b>Calibration:</b>	Digital calibration through software
<b>Calibration Date:</b>	Automatically recorded within device
<b>Data Format:</b>	Date and time stamped °C, °F, K, °R
<b>Time Accuracy:</b>	±1 minute/month at 20 °C to 30 °C (68 °F to 86 °F) (Stand alone mode)
<b>Computer Interface:</b>	IFC400 or IFC406 USB docking station required; 125,000 baud
<b>Software:</b>	XP SP3/Vista/Windows 7/Windows 8 ( <i>MadgeTech 4 Only</i> )
<b>Operating Environment:</b>	-40 °C to +140 °C (-40 °F to +284 °F), 0 %RH to 100 %RH
<b>Dimensions (Body):</b>	1.9 in x 0.97 in dia. (48 mm x 24.6 mm dia.)
<b>Dimensions (PT-1 Probe):</b>	<ul style="list-style-type: none"> <li>Probe tip: 1.7 in x 0.125 in dia. (42 mm x 3.2 mm dia.)</li> <li>Flexible portion: 22 in x 0.062 in dia. (559 mm x 1.6 mm dia.)</li> </ul>
<b>Dimensions (PT-5 Probe):</b>	<ul style="list-style-type: none"> <li>Probe tip: 4.8 in x 0.125 in dia. with 1 in x 0.188 in dia. handle (121 mm x 3.2 mm dia. with 25 mm x 4.8 mm dia. handle)</li> <li>Flexible portion: 22 in x 0.062 in dia. (559 mm x 1.6 mm dia.)</li> </ul>
<b>Weight:</b>	4.2 oz (120g)
<b>Material:</b>	316 Stainless Steel
<b>Approvals:</b>	CE

# HITEMP140-PT-TSK SPECIFICATIONS\*

<b>Operating Environment:</b>	-200 °C to +250 °C (-328 °F to +482 °F) ( <i>Time limited</i> ) 0 %RH to 100 %RH
<b>Dimensions:</b>	<ul style="list-style-type: none"> <li><b>Flush Top:</b> 2.75 in x 2.0 in dia. (69.85 mm x 51 mm dia.)</li> <li><b>Vented Top:</b> 4.3 in x 2.0 in dia. (109.2 mm x 50.8 mm dia.)</li> </ul>
<b>Material:</b>	Enclosure: PTFE
<b>Weight:</b>	<ul style="list-style-type: none"> <li><b>Flush:</b> 6.7 oz (190 g) (not including data logger)</li> <li><b>Vented:</b> 9.5 oz (270 g) (not including data logger)</li> </ul>

Maximum Exposure Time Chart	HiTemp140-TS ( <i>Flush</i> )		HiTemp140-TS ( <i>Vented</i> )	
	Ambient Temperature	Exposure Time in Air	Exposure Time In Liquid	Exposure Time in Air
-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

## 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 datalogger 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.*).

**BATTERY WARNING:** 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).

\*\*Other probe lengths up to 7" available. Contact MadgeTech for details.

## ORDERING INFORMATION

MODEL	DESCRIPTION
HITEMP140-PT-1-TSK	HiTemp140-PT-1 data logger and vented thermal shield
HITEMP140-PT-1-TSK-FL	HiTemp140-PT-1 data logger and flush thermal shield
HITEMP140-PT-5-TSK	HiTemp140-PT-5 data logger and vented thermal shield
HITEMP140-PT-5-TSK-FL	HiTemp140-PT-5 data logger and flush thermal shield
IFC400	Docking station with USB cable, software and manual
IFC406	6 Port, Multiplexer docking station with USB cable, software and manual
ER1425S-HT	Replacement battery for the HiTemp140-PT
Calibration Certificate	Calibration Certificate available for data logger

For Quantity Discounts call 603-456-2011 or email [sales@madgetech.com](mailto:sales@madgetech.com).

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