

ULT90 ULTRA LOW FREEZER VALIDATION SYSTEM

Features

- NIST Traceable Calibration Certificates
- FDA 21 CFR Part 11 Compliant
- IQ/OQ/PQ Validation Protocols
- Splash Proof Cryo-Temp Data Logger
- -86 °C to +35 °C Temperature Range
- 0.1 °C Resolution and ± 1.0 °C Accuracy
- 1 Year Battery Life at -80 °C
- User-Programmable Temperature Alarms with LED's (OK, Warn, and Alarm)
- Hardware and Software Password Protection
- Simultaneous Starts, Memory Wrap
- User-Programmable Start Times, Sample Intervals, Logger Descriptions, Unique ID's



Available with 9, 15 or a custom number of Cryo-Temps

MADGETECH's Ultra Low Temperature Freezer Validation System can measure and log data as low as -86 °C. It can be placed in small and large freezers of varying configurations.

Applications

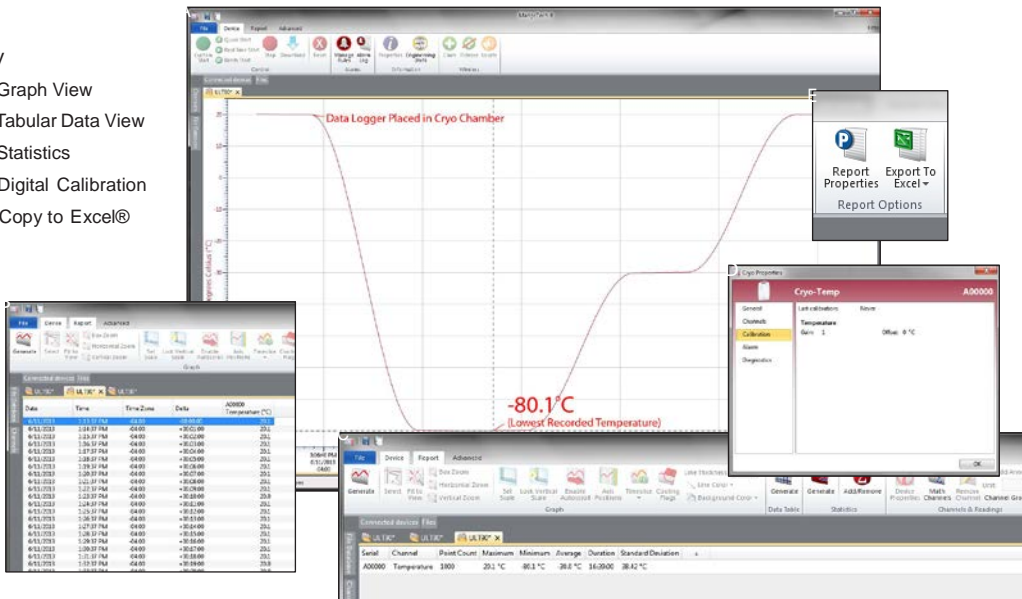
- Ultralow Freezer Validation
- Ultralow Freezer Mapping
- Ultralow Freezer Stabilization Studies
- Temperature Surveys
 - Reveal stratification of air
 - Reveal hot spots
 - Reveal anomalies in chilling systems

The system provides a complete stand-alone temperature mapping and validation solution for freezers to ensure uniform storage and testing conditions. The ULT90 includes a USB docking station with 6 feet of cable (IFC300), the Cryo-Temp data logger, and MADGETECH's FDA 21 CFR Part 11 Secure Software and IQ/OQ/PQ validation protocols. For larger freezers, loggers can be plotted in one graph to show variances in different parts of the freezer. Finally, as failure to monitor external freezer temperatures may invalidate internal freezer temperatures, an additional Cryo-Temp can be included for placement outside of the freezer.

MADGETECH DATA LOGGER SOFTWARE

Key

- Graph View
- Tabular Data View
- Statistics
- Digital Calibration
- Copy to Excel®



ULT90 SPECIFICATIONS* (CRYO-TEMP DATA LOGGER)

TEMPERATURE		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.
Sensor:	NTC Thermistor	Calibration:	Digital calibration is available to the user through software
Measurement Range:	-86 °C to +35 °C recommended, may be used up to +55 °C	Calibration Date:	Automatically recorded within device
Resolution:	0.1 °C	*Battery Type:	3.6V lithium battery (LTC-7PN), *Must be sent to MadgeTech for battery replacement.
Calibrated Accuracy:	±1.0 °C	Battery Life:	2 years typical @ 25 °C, 1 min. reading intervals 1 year typical @ -80 °C, 1 min. reading intervals
Specified Accuracy Range:	-80 °C to 0 °C	Time Accuracy:	±2 minutes/month max. at 20 °C to 30 °C ±5 minutes/month max at -80 °C
Memory:	32,767 readings; software configurable memory wrap	Data Format:	Date and time stamped °C, °F, K, °R
Reading Rate:	5 seconds to 30 minutes, selectable in software	Computer Interface:	USB docking station to PC (IFC300) 38,400 baud
Start Modes:	Software programmable immediate start, delay start up to 30 days in advance or manual start with magnetic switch.	Software:	XP SP3/Vista/Windows 7 Not Compatible with 64 bit systems
Temperature Alarm:	<ul style="list-style-type: none"> Software programmable high and low alarm limits and high and low warn limits Each setpoint may be individually enabled or disabled 	Operating Environment:	-86 °C to +35 °C (may be used up to +55 °C); 0 to 100% RH
Alarm Delay:	Software programmable time delay for warn/alarm limits. Logger will not indicate out of range status until the temperature has been out of range for a set period of time.	Dimensions:	3.3" x 2.1" x 0.4" (83 mm x 54 mm x 11 mm)
Status Indicators:	<ul style="list-style-type: none"> Green: Indicates safe conditions during logging Yellow: Indicates warn limits have been exceeded Red: Indicate alarm criteria (limits/delay) have been exceeded 	Ingress Protection/IP Rating:	IP64 (splash resistant, not submersible)
		Enclosure:	ABS plastic, white, polycarbonate labeling
		Weight:	1.4 oz (40 g) each Total for packages: ULT90-9 - 50.9 oz (1443 g) ULT90-15 - 59.3 oz (1681 g)
		Compliance:	CE

BATTERY WARNING: FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT RECHARGE, DISASSEMBLE, HEAT ABOVE 212 °F, INCINERATE OR EXPOSE CONTENTS TO WATER.

*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. SPECIFIC WARRANTY REMEDY LIMITATIONS APPLY.

ORDERING INFORMATION

MODEL	DESCRIPTION
ULT90-9	Includes 9 Cryo-Temp data loggers with NIST Traceable calibration certificates, IFC300 docking station, MadgeTech's FDA 21 CFR Part 11 Secure Software and IQ/OQ/PQ validation protocols.
ULT90-15	Includes 15 Cryo-Temp data loggers with NIST Traceable calibration certificates, IFC300 docking station, MadgeTech's FDA 21 CFR Part 11 Secure Software and IQ/OQ/PQ validation protocols.
ULT90-Custom	Includes a custom number of Cryo-Temp data loggers with NIST Traceable calibration certificates. IFC300 docking station. MadgeTech's FDA 21 CFR Part 11 Secure Software and IQ/OQ/PQ validation protocols.

ASK ABOUT OUR OTHER DATA LOGGERS

- Temperature
- Humidity
- Pressure
- pH
- Level
- Shock
- LCD Display
- Pulse/Event/State
- Current
- Voltage
- Wireless
- Intrinsically Safe
- Spectral
- Vibration
- Motion