

Description	ULT90-9	ULT90-15
Temperature Sensor	Thermistor	
Temperature Range	-86 °C to +35 °C (-122.80 °F to +95 °F)	
Temperature Resolution	0.1 °C (0.18 °F)	
Calibrated Accuracy	±1.0 °C	
Memory	32,767 readings	
Reading Rate	1 reading every 5 seconds up to 1 reading every 30 minutes	
Required Interface Package	IFC300	
Baud Rate	38,400	
Typical Battery Life	2 years @ +25 °C (+77 °F), 1 year at -80 °C (-112 °F)	
Operating Environment	-86 °C to +35 °C (-122.80 °F to +95 °F), 0 %RH to 95 %RH	
Submersible	Splash Resistant (IP65)	
Material	ABS plastic	
Dimensions	3.3 in x 2.1 in x 0.4 in (83 mm x 54 mm x 11 mm)	
Weight	1.4 oz (40 g) each	
Total Weight for Packages	50.9 oz (1443 g)	59.3 oz (1681 g)
Number of data loggers included in the system	9 Cryo-Temps	15 Cryo-Temps
Approvals	CE	

Battery Warning

WARNING: FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT RECHARGE, DISASSEMBLE, HEAT ABOVE 100 °C (212 °F), INCINERATE OR EXPOSE CONTENTS TO WATER.

*Specifications subject to change.
See MadgeTech's terms and conditions at www.madgetech.com*

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ULT90-9

Ultra Low Temperature Monitoring System with 9 Cryo-Temps

ULT90-15

Ultra Low Temperature Monitoring System with 15 Cryo-Temps

Product Notes

The ULT90 is an ultra low temperature monitoring system. The system includes the MadgeTech Secure Software which aids in compliance with Federal Register 21 CFR Part 11, IQ/OQ/PQ documentation for the software and Cryo-Temp data logger(s). The ULT90-9 comes with nine Cryo-Temps for monitoring up to nine locations and the ULT90-15 includes fifteen Cryo-Temps to monitor up to fifteen different locations.

The Cryo-Temp's can be placed in used to verify and profile freezers, refrigerators and other environments in the temperature range of -86 °C up to 35 °C.

Manual Start

To start the data logger with the **Manual Start** option, use the magnetic wand provided (in the IFC300) to touch the start/mark switch, (manual start is defaulted to a 10 minute reading rate) In the MadgeTech 4 software, the reading rate can be modified. Connect the data logger, touch the wand to the start/mark switch, the green LED (OK) will blink 5 times followed by the yellow LED (WARN) and the red LED (ALARM), indicating the device is recording. The logger must be manually stopped through the MadgeTech 4 software.



To start the device, hold the magnetic wand over the start/mark switch.

Submergibility

The Cryo-Temp is splash resistant, rated IP65.

LEDs

Green: Blinks to indicate safe conditions during acquisition.

Yellow: Blinks to indicate warning limits have been exceeded.

Red: Blinks to indicate alarm criteria (limits/delay) have been exceeded

Alarm Settings

To change the settings for the temperature alarm;

- Select **Alarm Settings** from the **Device Menu** in the MadgeTech Software. A window will appear allowing the customer to set the high and low temperature alarms and warning alarms.
- Press **Change** to edit the values.
- Check **Enable Alarm Settings** to enable the feature and check each high and low, warn and alarm box to activate it. The values can be entered in the field manually or by using the scroll bars.
- Click **Save** to save the changes. To clear an active alarm or warn, press the **Clear Alarm** or **Clear Warn** button.
- To set an alarm delay, enter the duration of time into the **Alarm Delay** box in which the readings can be outside of the alarm parameters.

Marking Feature

A date and time stamp may be placed in the recorded data by using the magnetic wand and placing it against the start mark on the data logger. The marking feature may be configured to clear the alarm / warn indicators.

Set Password

To password protect the device so that others cannot start, stop or reset the device;

- Click Identify Device and Read Status, then select the Device Detail Tab.
- Choose Set Password.
- Enter and confirm the password and click OK.

Installation Guide

Installing the Interface cable

- IFC300

Refer to the "Quick Start Guide" included in the package.

Installing the software

Insert the MadgeTech4 Software Flash Drive in an open USB port. If the autorun does not appear, locate the drive on the computer and double click on **Autorun.exe**. Follow the instructions provided in the Installation Wizard. The Software can also be downloaded from the MadgeTech website at the following link: www.madgetech.com/software-download.

Connecting the data logger

- Once the software is installed and running, plug the interface cable into the docking station.
- Place the Cryo-Temp data logger into the IFC300 dock.
- In the MadgeTech 4 software the Cryo-Temp will automatically appear under **Connected Devices**.

Note: For additional installation instructions refer to your "Data Logger & Software Operating Manual".

Device Operation

Starting the data logger

- Click **Device Menu** then **Start Device**.
- Choose the desired start method.
- Choose the start parameters by selecting a **Reading Rate** suitable for your application.
- Enter in any other desired parameters and click **Start**.
- A box will appear stating the data logger has been started. Click **OK**.
- Disconnect the data logger from the interface cable and place in the measurement area.

Note: The device will stop recording data when the end of memory is reached or the device is stopped. At this point the device cannot be restarted until it has been re-armed by the computer.

Downloading data from a data logger

- Connect the data logger to the interface cable.
- Click the **Device Menu** then **Read Device Data**. This will offload recorded data onto the PC.

Device Maintenance

Battery Replacement

The Cryo-Temp's in the ULT90 system must be sent to MadgeTech for battery replacement.

Recalibration

The Cryo-Temp standard calibration is two points at -80 °C and 25 °C.

Prices and specifications subject to change. See MadgeTech's terms and conditions at www.madgetech.com To send the devices back, visit www.madgetech.com, select **Services** then **RMA Process**.