

# CRYOTEMP

## ULTRA LOW TEMPERATURE

### DATA LOGGER



#### Features

- Ultra low Operating Temperature (-86°C)
- May be place in Direct Contact with Dry Ice
- No External Probes or Wiring
- High Accuracy
- Programmable Alarm and Warn Ranges with Alarm Delay
- LED Status Indicators for Instant Alarm Notification
- Magnetic Start
- Optional Password Protection
- Splash Resistant (IP65)
- CE Compliant

#### Benefits

- Simple Setup and Installation
- Minimal Long-Term Maintenance
- Long-Term Field Deployment

#### Applications

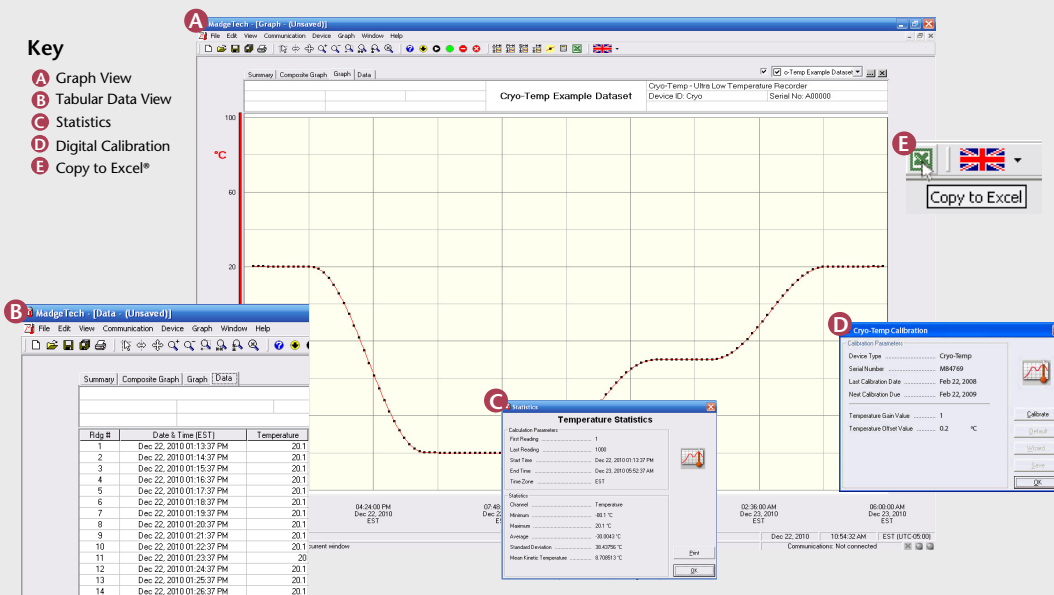
- Dry Ice Shipments
- Plasma and Red Cell Freezers
- Blood Banks/Frozen Tissue Storage
- Monitoring Frozen Vaccines
- Cold Chain Monitoring
- Medical and Pharmaceutical Shipping
- Ultra Low Temperature Storage
- Deep Frozen Foods

MadgeTech's new ultra low temperature data recorder, records temperatures as low as -86°C. The Cryo-Temp can be used in a broad line of applications such as monitoring blood plasma, vaccines, pharmaceuticals, frozen foods and shipping containers. This stand-alone device does not require any additional probes. The enclosure is designed with a handle for easy attachment and is IP65 splash resistant. It utilizes a USB docking station (sold separately), to communicate with a personal computer or laptop.

The Cryo-Temp provides date and time stamped temperature readings and uses the MadgeTech Data Logging Software. The user can view the data in graphical or tabular form. High and low alarm limits and high and low warning limits can be programmed through the software. The user can set the alarm limits in the range required for the goods to be maintained. The warning limits can be set to alert the user when the temperature is nearing a high or low alarm limit, so that proper action can be taken to ensure the integrity of the goods.

The Cryo-Temp is equipped with three LED's. The green LED will blink every 15 seconds while the recorder is logging data. The yellow LED will blink every 3 seconds when the temperature has breached the warning limits. The red LED will blink every 3 seconds when the temperature alarm limits have been exceeded. The Cryo-Temp is the ideal temperature monitoring solution for any application involving ultra low temperature recording.

## MADGETECH DATA LOGGER SOFTWARE



- #### Software Features:
- Multiple graph overlay
  - Statistics
  - Digital calibration
  - Zoom in/ zoom out
  - Lethality equations (F<sub>0</sub>, PU)
  - Mean Kinetic Temperature
  - Full time zone support
  - Data annotation
  - Min./Max./Average lines
  - Data table view
  - Automatic report generation
  - Summary view
  - Multilingual

# CRYO-TEMP SPECIFICATIONS\*

**Temperature Sensor:** NTC Thermistor

**Temperature Range:** -86°C to +35°C recommended, may be used up to +55°C

**Temperature Resolution:** 0.1°C

**Calibrated Accuracy:** ±1.0°C

**Reading Rate:** 5 seconds to 30 minutes, selectable in software

**Memory:** 32,767 readings; software configurable memory wrap

**Start Modes:** Software programmable immediate start, delay start up to 30 days in advance or manual start with magnetic switch.

**Temperature Alarm:** Software programmable high and low alarm limits, high and low warn limits each setpoint may be individually enabled or disabled

**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.

**Status Indicators:** Green: Blinks to indicate safe conditions during logging

Yellow: Blinks to indicate warn limits have been exceeded

Red: Blinks to indicate alarm criteria

**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.

**Calibration:** Digital calibration through software

**Calibration Date:** Automatically recorded within device

**Battery Type:** 3.6V lithium battery (LTC-7PN), **factory replaceable only**

**Battery Life:** 2 years typical @ 25°C, 1 min. reading intervals  
1 year typical @ -80°C, 1 min. reading intervals

**Data Format:** Date and time stamped °C, °F, K, °R

**Time Accuracy:** ±2 minutes/month max. at 20 to 30°C  
±5 minutes/month max at -80°C

**Computer Interface:** USB docking station to PC (IFC300)  
38,400 baud

**Software:** XP SP3/Vista/Windows 7

**Operating Environment:** -86°C to +35°C (may be used up to +55°C);  
0 to 100% RH

**Dimensions:** 3.3" x 2.1" x 0.4" (83 mm x 54 mm x 11 mm)

**Ingress Protection/IP Rating:** IP65 (splash resistant, not submersible)

**Enclosure:** ABS plastic, white, polycarbonate labeling

**Weight:** 1.4 oz (40 g)

**Compliance:** CE, Approved for carriage on Delta® mainline flights

**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 80°C (176°F).

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

## ORDERING INFORMATION

MODEL	DESCRIPTION
CRYO-TEMP	Ultra Low Temperature Recorder
IFC300	Software, manual, docking station and USB connection cable
SVP -Secure	Protocols for validating the 21 CFR Part 11 ready, secure logging system
SVP-Secure License	License for MadgeTech SVP-Secure Software (unlimited users, license per computer)
*NIST	N.I.S.T. Calibration Certificate

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

\*To order the product with the N.I.S.T. certificate add -CERT to the end of the part number .