

## Part # CM-000135 M-Tag Data Loggers

Used as spot verification tools and for mapping and thermal studies, Mesa's M-Tag data loggers are the ideal solution for several industries and situations. With a variety of options and configurations, these units pack a large amount of capabilities into a small, affordable form factor.

The M-Tag P/N CM-000135 low temperature external probe recorder measures and stores up to 8000 temperature readings over a measurement range of -80 °C to +40 °C (-112 °F to +104 °F) using interchangeable M-Tag External Temperature Probes. Intended for use in monitoring of articles stored at low temperatures such as in dry ice type environments.



### Key Features:

- Interchangeable External Probe with high quality gold plated connector
- Records temperature from +40 °C to as low as -80 °C
- 'OK' & 'ALERT' Indicator with high and low customizable alarms
- 8000 reading memory capacity

The M-Tag P/N CM-000135 is easily set-up for recording conditions including delayed start, sampling interval, number of readings, continuous or fixed number of readings and configuration of conditions to activate the 'ALERT' indicator.

- A real time clock provides date/time stamps for each temperature reading.
- Push-to-start button with optional delay or a specific time & date.
- Comprehensive customization options including alert settings, sample interval and trip duration.
- Complies with industry standards.

Using the M-Tag Interface Cradle and available companion software, M-Tags are easily set-up for recording including delayed start, sampling interval, number of readings and configuration of conditions to activate the 'ALERT' indicator.

M-Tag software also provides facilities for charting, zooming, listing data statistics and allows exporting the data to other applications such as MS Excel once the data has been downloaded.

### Specifications

<b>External Sensor Measurement Range</b>	-80 °C ~ +40 °C (-112 °F ~ +104 °F)
<b>Recorder Operating Measurement Range</b>	-30 °C ~ +70 °C (-22 °F ~ +158 °F)
<b>Resolution</b>	< than 0.1 °C for -80 °C ~ +0.0 °C < than 0.2 °C for -0.0 °C ~ +20 °C < than 0.5 °C for -20 °C ~ +40 °C (see below)

# M-Tag Data Loggers Specification Sheet

<b>Accuracy</b>	With recorder case sitting in environmental temperature between 0 °C ~ 50 °C Better than ±1 °C for -30 °C~ +20 °C Better than ±1.2 °C for -45 °C~ -30 °C & +20 °C~+40 °C Better than ±1.7 °C for -80 °C~-45 °C
<b>Sensor Reaction Time</b>	Typically less than 2 minutes in moving air (1 m/s)
<b>Capacity</b>	8032 readings (16K bytes memory)
<b>Sampling Frequency</b>	Adjustable, 30 sec to several hours
<b>Logging Start Options</b>	Push button start or specific date & time
<b>Recording Indication</b>	Flashing 'OK' indicator / flashing 'ALERT' indicator
<b>Download Time</b>	Typically with full memory (8000 readings) in less than 5 secs depending on computer or readout device used
<b>Environmental</b>	IP61
<b>Power Source</b>	3V LiMg battery
<b>Battery Life</b>	2 ~ 3 years of normal use (based on 15 minute logging, download data monthly)
<b>Size</b>	86 mm (H) x 54.5 mm (W) x 8.6 mm (T)
<b>Weight</b>	35 grams
<b>Case Material</b>	Polycarbonate
<b>Standard External Sensor Cable Lengths</b>	Standard: 50 cm (19") Extended: 3 m (9'10")
<b>External Sensor Cable Type</b>	PTFE/FEP (FDA food contact rated) coaxial
<b>Other Features</b>	<ul style="list-style-type: none"> <li>• Logging start by push button or specific date/time start</li> <li>• Optional clearing of alert indication by push button (places inspection make at same time)</li> <li>• Download inspection mark recorded in M-Tag memory every time M-Tag is downloaded</li> <li>• 'Prestart' fail-safe logging (records temperature data even if not started)</li> <li>• Low Battery indication in software</li> <li>• Comprehensive Alert indicator configuration</li> <li>• Calibration to achieve higher accuracy possible</li> </ul>