

# ELM-Series Electrolyte Level Monitor



ELM Monitor

## Product Advantages

- Low cost monitor for electrolyte level & cell/unit temperature monitoring
- Auto calibrating sensors adjust to battery in seconds
- Alarm contacts for external alarming
- LED lights on monitor and sensors for visual alarming on-site
- Fast and easy installation, all cabling cut to length based on simple site survey
- Applicable to any flooded battery system regardless of voltage & amp-hour
- Utilized commonly available cabling between sensors for easy sourcing of additional materials

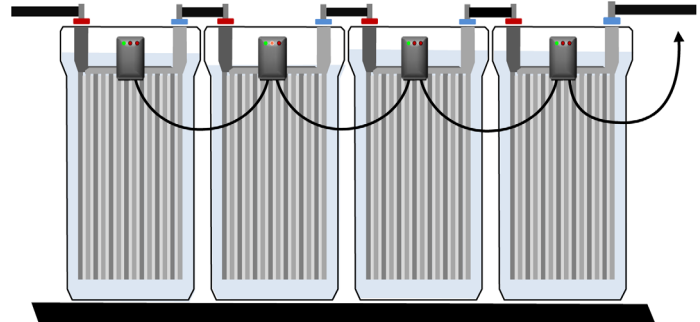


ELM Sensor with Mounting Cradle

## Product Description

The **ELM-Series** is a reliable dual sensor system that monitors the electrolyte level and temperature of individual flooded batteries. Utilizing low cost, easy to install sensors, the system will alarm on low electrolyte level or higher than normal temperature. The sensors are simply and securely attached, either directly to the cell/unit, or via an optional (included) clip which allows the sensor to be removed and re-used if the cell/unit should require replacement.

In the condition of a low electrolyte or temperature alarm, the sensors communicate to the system monitor and the system monitor activates a changeover relay output while simultaneously activating the appropriate alarm LED lights. In the event that four or more cells/units fall to an alarm level, the monitor will trigger a group alarm in addition to the single alarm. The alarm contacts are volt-free and can be made as 'make-on-alarm' or 'fail-safe' mode (giving warning of a supply failure) and may be linked in to any facilities management or alarm system for remote monitoring.



## Sensor Installation

Installation of the ELM sensors is simple and fast. Sensors are daisy chained together via provided, pre-cut ribbon cable. All required materials for installation are provided and do not require modification. Each ELM sensor is installed to front of the battery case via a peel off adhesive. Small marks on the sensor allow it to be easily lined up with the minimum line on the cell/unit for accurate level detection. No marking of the battery jar is required during installation.

## Sensor LED Indicators

Each sensor has (3) LED lights. A green LED will illuminate when there is no fault. Separate red LEDs will illuminate in the event of level or temperature alarm. The LED's provide quick visual cues to determine the condition of specific cells/units in a string.



Sensors Installed to Level Line on Flooded Cells

Technical Specifications	
<b>Battery Types:</b>	Compatible with all transparent flooded battery types
<b>Temperature Alarm Activation:</b>	35°C (95°F), ± 2°C (3.5°F) 49°C (120°F), ± 2°C (3.5°F) 63°C (145°F), ± 2°C (3.5°F) <b>Optional:</b> No temperature alarm
<b>Level Accuracy:</b>	± 2mm (± 0.08") above or below line label
<b>Input Voltage:</b>	12V DC ± 10%, 1 Amp
<b>Output Relays</b>	SPDT volt-free contact relays for: 1+ low electrolyte level detection 4+ low electrolyte level detection 1+ high temperature detection 4+ high temperature detection
<b>Dimensions: (L x W x D)</b>	<b>Monitor:</b> 176 x 80 x 51 mm (6.9 x 1.6 x 3 in) <b>Sensor:</b> 54 x 35 x 15 mm (2.2 x 1.4 x 0.8 in) <b>Sensor Cradle:</b> 65 x 52 x 14 mm (2.6 x 2.1 x 0.6 in) <b>Cables:</b> 1.25mm pitch at nominal length of 305 mm (12 in)

## System Includes

- Monitor
- Sensors
- Sensor Mounting Cradles
- Pre-Cut Ribbon Cable
- 12V AC Wall Adapter
- Support Literature

## Ordering Information

No.	Model # <sup>(1)</sup>	Description
1	ELM-4C	Electrolyte Level Monitoring Solution: Up to 4 Cells/Units
2	ELM-6C	Electrolyte Level Monitoring Solution: Up to 6 Cells/Units
3	ELM-8C	Electrolyte Level Monitoring Solution: Up to 8 Cells/Units
4	ELM-12C	Electrolyte Level Monitoring Solution: Up to 12 Cells/Units
5	ELM-24C	Electrolyte Level Monitoring Solution: Up to 24 Cells/Units
6	ELM-60C	Electrolyte Level Monitoring Solution: Up to 60 Cells/Units
7	ELM-120C	Electrolyte Level Monitoring Solution: Up to 120 Cells/Units
8	ELM-240C	Electrolyte Level Monitoring Solution: Up to 240 Cells/Units

1) Common configurations shown, custom configurations available.