

# EM-1



## Overview

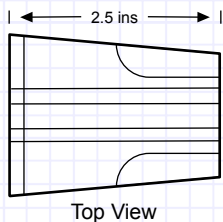
The **EM-1** is a self-contained monitoring module designed to monitor and test the individual cells or jars that make up a lead-acid based battery system.

The module is attached to each battery cell or jar and is connected to the positive and negative posts using a pre-assembled cable assembly.

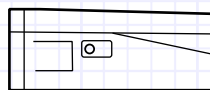
The individual modules are then linked to each other and a **CELLQ** controller using the "S" Bus, a proprietary four wire serial bus.

Each module can be individually instructed to read the cell or jar voltage and temperature. It can also measure and report the internal impedance of the cell or jar by causing an AC current to flow through the cell or jar to which it is connected.

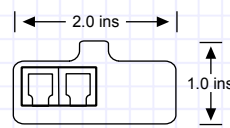
## Dimensions



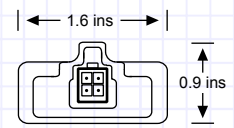
Top View



Side View



Network Connections



Battery Connections

## Specifications

### Supply Voltage Range

**EM-1** 1.5 - 18 V

### Current Consumption

**EM-1** @ 12V 21 mA

Sleep Mode < 3 mA

### Performance Data @20° C

Voltage accuracy @ 2.3V ± 0.25 %

Temperature range -10 + 70°C

Temperature accuracy ± 0.5 °C

Impedance range 50μΩ to 99 mΩ

Impedance Repeatability ± 2 %

Sample Rate-discharge ~100/sec

Communication Bit Rate 19,200

### External Interface

S-Bus RJ11 (qty 2)

Cell / Jar Connector Molex Mini-Fit Jr

### General Data

Operating temperature - 5 to + 75 °C

Storage temperature - 25 to + 85 °C

Weight 1.3 oz

### Approvals

Safety UL 508C