

# Traffic Cabinet Components and Accessories

## MMU2-16LEip- RM SmartMonitor™

### What, exactly, is a MMU?

MMU, or Malfunction Management Unit, is used to detect and respond to conflicting or malfunctioning signals and operating voltages. The MMU manages any malfunction affecting traffic signal operations of the traffic cabinet. It is designed to display the real-time status of the intersection, ensuring safe traffic control operations.

### Why do agencies use a MMU?

Econolite's family of MMUs meet or exceed all specifications, including NEMA, 170/179, and MMU2 where applicable. We have an MMU for virtually any traffic cabinet and controller application, and intersection type. Traffic cabinet monitoring, including event logs and full intersection displays are available.

### How does a MMU benefit the driving public?

Econolite's MMU offerings monitor up to 16 traffic signal channels, helping ensure proper traffic signal operations, which enhance intersection safety.





## NEMA TS2-2003 (R2008) Standard Including Amendment #4

The MMU2-16LE SmartMonitor meets all specifications of the NEMA Standard TS2-2003 (R2008) for the MMU2 configuration while maintaining compatibility with NEMA TS1-1989 Assemblies.

## NEMA Standard Flashing Yellow Arrow PPLT

Standard MMU2 requirements of TS-2 Amendment #4-2012, providing modes for both TS-2 or TS-1 cabinet configurations.

## ECcom PC Software

Access to the MMU2-16LE data is provided by the industry standard ECcom Windows based software for status, event, log retrieval, configuration, data archival, event logs, and the Help system.

## RMS Engine

A DSP coprocessor converts AC input measurements to true RMS voltages, virtually false sentencing due to changes in frequency, phase, or sine wave distortion.

## LEDguard®

This innovative signal threshold technique can be used to increase the level of monitoring protection when using LED based signal heads.

## Standardized Communications

Real-time SDLC communications with the Controller Unit exchanges field input status, Controller Unit output status, fault status, MMU programming, and time and date.

## Event Logging

A time-stamped nonvolatile event log records the complete intersection status as well as AC line events, configuration changes, monitor resets, temperature, and true RMS voltages.

## Module Choices

- MMU2-16LEiP SmartMonitor 12/16 channel LCD Series with Ethernet Port
- MMU2-16LE SmartMonitor 12/16 channel LCD Series with EIA-232 Port

## Setup Wizard

Use the built-in setup wizard to configure the NEMA enhanced settings of the SmartMonitor by answering a short series of questions regarding intersection design and operation.

## Diagnostic Wizard & Help System

The diagnostic wizard automatically pinpoints faulty signals and offers trouble-shooting guidance. The integrated help system provides context sensitive operational assistance.

## Full Intersection & Status Display

Two high contrast, large area LCD's continuously show full RYG(W) intersection status. A separate graphic LCD provides a menu driven user interface to status, signal voltages, configuration, event logs, and the Help system.

## Program Card Memory

Enhanced settings of the MMU2-16LE SmartMonitor are stored in nonvolatile memory on the program card. Moving the program card to another MMU2-16LE automatically transfers all settings.

