



# SmartMonitor

## MMU-16LE(IP) SERIES

### NEMA LCD MALFUNCTION MANAGEMENT UNIT

- MMU-16LE with EIA-232 Port
- MMU-16LEip with Ethernet Port

Whether you're a **NOVICE** or **EXPERT** Signal Technician, wouldn't it be great if you could:

- Use a built-in SETUP WIZARD to **quickly and accurately configure** the Signal Monitor to the exact requirements of the cabinet and intersection?
- Use a MENU DRIVEN LCD interface to **view** vital cabinet operational details such as field signal voltages, historical event logs, and monitor configuration data?
- Use a built-in DIAGNOSTIC WIZARD to **automatically diagnose** cabinet malfunctions and **pinpoint** faulty signals?

If your answer is Yes, the **MMU-16LE SmartMonitor®**, is for YOU!

## MMU-16LE(ip) SmartMonitor® ENHANCED FEATURES

- Nema TS2-2003 Standard:** The MMU-16LE *SmartMonitor®* meets all specifications of the Nema Standard TS2-2003 (R2008) while maintaining downward compatibility with existing Nema TS1-1989 Traffic Control Assemblies.
- 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.
- Full Intersection & Status Display:** Two high contrast, large area Liquid Crystal Displays (LCD) 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.
- 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.
- 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 and Help System:** The Diagnostic Wizard *automatically pinpoints* faulty signals and offers trouble-shooting guidance. The integrated Help System provides context sensitive operational assistance.
- TS-1 Type 12 with SDLC Mode:** The MMU-16LE *SmartMonitor®* can be configured to operate with the Port 1 SDLC function and Diagnostic Wizard enabled in a TS-1 twelve channel cabinet with no cabinet wiring changes.
- Program Card Memory:** Enhanced settings of the MMU-16LE *SmartMonitor®* are stored in nonvolatile memory on the EDI Program Card. Moving the Program Card to another MMU-16LE automatically transfers all settings.
- Signal Sequence History Log:** The five Signal Sequence History logs stored in nonvolatile memory graphically display up to 30 seconds of signal status prior to each fault event.
- LEDguard®:** This EDI innovative signal threshold technique can be used to increase the level of monitoring protection when using LED based signal heads.
- EDI RMS-Engine:** A DSP coprocessor converts AC input measurements to True RMS voltages, virtually eliminating false sensing due to changes in frequency, phase, or sine wave distortion.
- ECcom PC Software:** Access to the MMU-16LE data is provided by the industry standard EDI ECcom Windows based software for status, event log retrieval, configuration, and data archival.
- Flashing Yellow Arrow PPLT:** The *SmartMonitor®* supports Flashing Yellow Arrow PPLT operation with two different modes for either TS-2 or TS-1 cabinet configurations.

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