



MMU-16E

Malfunction Management Unit

INTRODUCING A NEW STANDARD OF
SAFETY AND DIAGNOSTIC CAPABILITIES

The EDI MMU-16E meets all specifications of NEMA Standard TS2-1998, Section 4 (MMU), while maintaining downward compatibility with existing TS-1989 traffic control assemblies. The MMU-16E incorporates many of the features of a TS-1989 Conflict Monitor Unit along with additional enhanced monitoring display, and trouble shooting functions.

☐ REJECTED ☐ REVISE AND RESUBMIT ☐ FURNISH AS CORRECTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR: CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING HIS WORK IN A SAFE AND SOUND MANNER.

MMU-16E STANDARD TS-2 FEATURES

- Dual Mode Operation:** Operates as a 16 channel unit (Type 16) with 3 inputs per channel (Red/Yellow/Green) or as a 4 channel unit (Type 12) with 4 inputs per channel (Red/Yellow/Green/Walk) for downward compatibility with TS-1989.
- Standardized Communications:** Type 16 real time SDLC communication with the Controller Unit exchanges field input status, controller unit output status, fault status, MMU programming, and time and date, along with a watchdog function for Port 1 activity.

MMU-16E ENHANCED FEATURES

- RYG Full Intersection Display:** The Full Intersection display uses Red, Yellow, and Green LEDs to show active colors of all channel inputs simultaneously for both real-time intersection status and latched fault status.
- Event Logging:** The MMU-16E maintains a nonvolatile event log recording the complete intersection status as well as AC Line events, configuration changes, monitor resets, cabinet temperature and true RMS voltages. A real time clock time stamps each log event with time and date.
- Signal Sequence History Log:** The Signal Sequence History Log stored in nonvolatile memory graphically displays up to 30 seconds of signal status prior to the fault trigger event with 50ms resolution to ease diagnosing of intermittent and transient faults.
- 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.
- Dual Indication Monitoring:** Detects simultaneous active Green and Yellow, Green and Red, or Yellow and Red inputs on the same channel (Type 12 mode includes Walk).
- Field Check Monitor:** In Type 16 mode, the MMU-16E analyzes the Controller Unit output commands and field input status to isolate whether the problem was caused by a Controller Unit malfunction, or a failure in the load bay or field wiring and identifies the faulty channel and input directly.
- ECcom PC Software:** Access by a computer is provided by EDI ECcom Windows based software for status, event log review, and archival.

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Engineered, Manufactured, and Tested in the United States of America

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