Trafficware

Engineered by Naztec

MMU 516E Malfunction Management Unit RS232

FEATURES

- Meets and exceeds all TS2 specifications
- High speed internal data transfer and communications via an SDLC port
- High speed external data transfer via an RS-232 port
- Programmable field parameters with two position pencil switches
- LED indicator lamps for operation analysis
- Removable program card
- High performance machine tooled sockets for integrated circuit mounting
- Red, yellow, and green LEDs for channel indications

The **Trafficware Model MMU 516E Malfunction Management Unit** is an enhanced MMU that monitors up to 16 traffic signal indications (channels) for conflict, improper sequencing, incorrect timing, and improper signal voltage levels. The MMU 516E is fully compliant with NEMA Standard TS2-2003. The MMU 516E is also capable of operating in older TS1 type cabinets, and is compatible with 12-channel Conflict Monitor Units conforming to the NEMA Standard TS1-1989.

All connectors, indicators, and operator controls are located on the front panel of the MMU 516E. Channel and control input signals and relay output connections are made through two MIL-C-26482 connectors, and the SDLC Port is an A-size, 15 contact, D shell connector. The RS232 Port is excellent for tracking important phase output data, such as Trace, Fault and Power Logs back to the controller or to a PC for logging. The programming card and the AC line fuse are easily accessed from the front panel.

The MMU 516E provides a Reset Timeout feature to prevent a broken switch or accidental wiring fault from holding the unit in the reset state for an extended period of time. LED indicators, in addition to the TS2 specified indicators, include Dual Indication Fault, Yellow+Red Clearance Fault, Programming Card Ajar, Field Check (active channels do not match SDLC message from controller) Fault, and LEDs for two +24VDC input faults and CVM input faults. Status indicators provided include: AC Line Power, Type 12 Indicator, SDLC Transmitter Active, and SDLC Msg Received.

For added safety, the MMU 516E performs continuous diagnostic tests during all operating modes. All memory elements, the microprocessor, operating voltages, and critical circuitry are checked.

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PROGRAMMING

- Minimum flash; 0-12 seconds
- Short yellow per channel
- Programmable sequence monitor

INDICATIONS

- Conflict LED
- Red Fail LED
- 24 V-1
- 24 V-2
- Controller Voltage Monitor
- Red+Yel Clearance
- Clearance
- Diagnostics
- Port 1 Fault, Tx, Rx
- Program Card Ajar
- Indication Fail LED
- Field Check
- Power LED
- Type 12 Mode

ENVIRONMENTAL

- Operating Temperature: -34° C to +74° C
- Storage Temperature: -45° C to +85° C
- Humidity: Less than 95%

DIMENSIONS

- Height: 10.5 inches
- Width: 4.5 inches

NEMA

- Meets and exceeds TS2-2003 Specifications
- Operates in TS1 Cabinets
- EPROM Memory
- No batteries
- Machine tooled socket I.C.'s
- Programmable Minimum Flash Time
- Latch 24 V failures
- Latch CVM Failure

ELECTRICAL

Power

- Line Voltage: 75 to 150 VAC, RMS
- Line Frequency: 57 to 63 Hz, 60Hz nominal
- Power Consumption: 10 watts, typical
- Fuse, Front Panel: 0.5A Slow Blow

Monitoring Voltage

- Pickup: 96 +/- 2.5 Volts AC, RMS
- Dropout: 91 +/- 2.5 Volts AC, RMS
- Hysteresis: 4 +/- 1.0 Volts AC, RMS