



2018 Series

SIGNAL MONITOR UNITS FOR CALTRANS CABINETS

Enhanced monitoring functions to increase cabinet fault coverage, providing additional assurance that equipment malfunctions will be detected and diagnosed properly.

FEATURES

- Enhanced 210 Monitoring Functions
- Event Logging
- RYG Full Intersection Display
- EDI RMS-Engine
- Recurrent Pulse Detection
- LEDguard®

HIGHLIGHTS

- Communications to Laptop PC or Remote Traffic Management Center
- Signal Sequence History Displays
- Configuration Monitor
- Flashing Yellow Arrow PPLT
- Datakey Configuration Memory (2018KCLip only)
- Setup Wizard (2018KCLip only)



CALTRANS CABINET COMPATIBLE

Enhanced 210 Monitoring Functions

The 2018 Series Monitors meets all requirements of the Caltrans "TSCE Specifications 1/89" and Caltrans Transportation Electrical Equipment Specifications (TEES) of March 2009. Basic fault coverage includes Conflict, 24Vdc, and CU Watchdog monitoring. Red Monitoring senses the absence of signals on a channel. Dual Indication Monitoring detects simultaneous active signals on a channel. Clearance Monitoring ensures sequencing of signals with a proper minimum yellow clearance interval. AC Line Monitoring detects and responds to low AC Line voltages as well as interruptions with a minimum flash interval.

2018KCLip Datakey Configuration Memory

Complete 2018KCLip programming is provided by an interchangeable Datakey™ nonvolatile memory device. This rugged key stores all 2018KCL configuration parameters and completely eliminates monitor programming using jumpers, diodes, or DIP switches. Ethernet network parameters are also included (firmware version xx56 or greater).

2018KCLip Setup Wizard

Use the MonitorKey® Setup Wizard to automatically and accurately configure the Enhanced settings of the 2018KCL by answering a short series of questions regarding intersection geometry and operation.



Event Logging

The 2018 Series Monitors maintains a 100 record nonvolatile event log which contains records of fault events showing 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.

RYG Full Intersection Display

The Full Intersection display uses Red, Yellow, and Green LEDs to show active colors of all channel inputs simultaneously for real-time intersection status.

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.

LEDguard®

This EDI innovative signal thresholding technique is used to increase the level of monitoring protection when using LED based signal heads.

Recurrent Pulse Detection

The Recurrent Pulse (RP) Detection function supplements the Conflict, Dual Indication, and Red Fail algorithm. RP Detection works in conjunction with the RMS-Engine to detect faults that are pulsing or intermittent in nature.

Communications to Laptop PC or Remote Traffic Management Center

Ethernet port provides access by a local PC or remote TMC running ECom Windows based software for status, event log review, and archival.

Signal Sequence History Display

Five Signal Sequence History logs stored in nonvolatile memory each graphically display 30 seconds of signal status prior to each fault event. The resulting display eases diagnosing of intermittent and transient faults by viewing the exact signal states that the monitor sensed.

Configuration Monitor

Detects unintended and potentially unsafe programming changes and Red cable problems.

Flashing Yellow Arrow PPLT

Three operational modes are built-in for support of the MUTCD Flashing Yellow Arrow PPLT operation depending on the number of load switches in the cabinet.

Model Options

Model	Channel Capacity	Programming
2018ECLip	18	Program Card
2018KCLip	18	Datakey

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