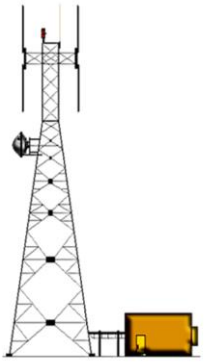

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SLA-FAL08

Description

The SLA-FAL-08 Fiber Alarm Link system has been designed to transport FAA lighting status from an AM tower mounted lighting controller- off the tower to the ATU shelter or other location removed from the tower without requiring a metallic cable connection that can detune the tower characteristics.

The system consists of fiber optic emitter and detector devices connected by POF cable. The system can provide this link in excess of 100' distance between the transmitter and receiver.

The "Input" terminal strips should be connected to lighting controller alarm output connections so as to provide NC controller alarm contacts during normal operation. The "Input" to the FAS-08 system can be either dry mechanical relay contacts or solid state relay contacts that can have up to 50 ohm resistance. There is one Input" terminal strip used for the first four channels and a second strip used for the second set of four channels (if ordered). The standard configuration is the first four channels. The Transmitter can be furnished in a separate polycarbonate NEMA 4 enclosure or mounted in a Slatercom lighting controller at the time of assembly.

The system boards can be optionally ordered with either transmit or receive modules to allow reverse control of the lighting controller if this function is needed.

Upon receipt of a contact closure on the input terminals, the system will activate the corresponding fiber emitter. The fiber cable will transport the light to the fiber detector. The detector circuitry will then activate a solid state relay- providing a contact closure on the corresponding "Output" terminal strips for that channel. The SSR contacts have a maximum voltage rating of 400V- AC or DC and can support 120ma.

The electronics are powered from a 5VDC power source. This may be an internal lighting controller power supply that can provide a regulated 5VDC supply at up to 80ma or can be a 5VDC regulated wall transformer that will be interconnected to the PCB 5VDC input terminal strip.

The system uses 650Nm fiber optic devices. This wavelength provides a red visible light which is helpful for troubleshooting. If the fiber cable is inserted as directed and the system activated, a red glow will be visible on the opposite end of the fiber cable.

The Receiver board is mounted in a polycarbonate NEMA 4 enclosure. A 5VDC regulated wall power supply is furnished to power the Receiver via the PCB mounted 5VDC terminal strip.

Installation Instructions

The Transmitter unit may have already been installed in the Slatercom lighting controller. For other controller installations, it is recommended that the Transmitter be ordered in the polycarbonate enclosure with a separate wall power supply. The Transmitter will require a 120VAC receptacle for the power supply.

The Receiver will be furnished in a similar enclosure and will also require a receptacle for the power supply.

The fiber emitters and detectors are furnished with a very simple connection system for installing the fiber cable. The cable will be cut to the ordered length. We provide the cable in a duplex configuration (2 fibers per cable) that provides two channels. A four channel system will include two duplex cables.

If the fiber needs to be cut, a bypass type cutter is recommended so as to keep from flattening the fiber cable. Cut the fiber as square to the cable as possible. When inserting into the fiber fittings, loosen the compression nut on the end of the fitting, carefully insert the fiber cable to full depth and then tighten the compression nut. The same procedure is used on both the Transmitter and Receiver.

The fiber cable needs to be installed in either PVC conduit or non metallic Sealtite type cable. It is important that the conduit connections are water tight- including the connections into the enclosures. Leaking conduit can fill with water and will eventually cause issues- especially on AM towers.

After installing the cable into the Transmitter, route the cable to the Receiver and then activate the system or jumper input terminals so as to provide a contact closure on the “Input” terminal strips. The on-board red LED’s will illuminate indicating the channel is active. Check the opposite end of the fiber for a red glow in the end of the fiber cable. This will confirm the fiber has not been damaged. Then connect the fiber to the corresponding channel of the Receiver. When the Receiver is powered up, the on board green LED’s will illuminate indicating the channel has received the lighting controller contact closure information.

When used as a lighting controller alarm link, the system will provide a NC output when the controller provides the same signal. The FAA specifications require the lighting controller to utilize NC contacts. If a power failure happens, all NC contacts will switch to open- indicating a general power failure to the system.