



## GRADE CROSSING SAFETY LOCOMOTIVE DITCH LIGHT CONTROLLER

### Controlled Functions:

**ELCONS's** Ditch Light Controller operates in five (5) basic modes. Operating modes are selected through customer defined control parameters as follows:

- (1) **OFF:** System Shut Down.
- (2) **ON:** (Continuous) Both Lights ON.
- (3) **FLASH:** (Continuous) Both Lights FLASH Sequentially.
- (4) **AUTO 1:** Both Lights ON continuous except FLASH for customer specified duration from customer specified signal.
- (5) **AUTO 2:** Lights FLASH for customer specified duration from customer specified signal whether ON or OFF.

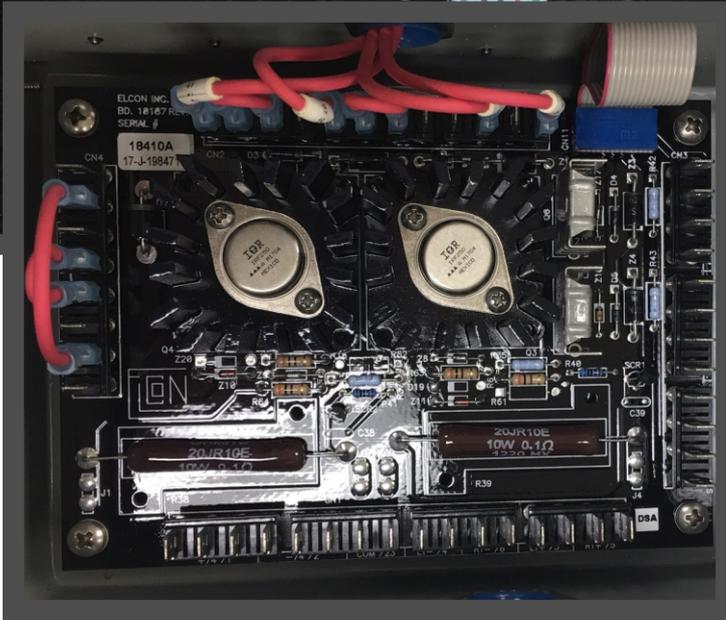
**ELCON, Inc.** of Minooka, Illinois, manufactures an electronic system to control Ditch Lights and Warning Lights applied to freight or passenger locomotives or cars used in inter-city service. The ELCON Ditch Light Controller operates two standard locomotive headlight lamps. These are generally mounted low and wide just above or below the locomotive underframe at the front of the locomotive similar to automobile headlights. Ditch Light beams are aimed to converge 300 to 400 feet ahead of the locomotive. The alternate flashing of these low mounted lamps affords greater frontal visibility for grade crossing safety than any other form of visual warning.

The ELCON Ditch Light Controller operates on the locomotive's 74 volt DC supply. The lamps are 200 or 350 Watt, 30 or 74 volt, PAR 56 sealed beam lamps, the same as used in standard locomotive headlights. In addition, the system operates with standard headlight dropping resistors, minimizing additional inventory. The lamps may be mounted to pedestals, hangers or boxes for attachment to the locomotive. As an alternative, the lamp housing may be mounted directly to the locomotive end sheet. Customer selection of operating mode can be through manual selection via various switch arrangements or selected signals such as pressure switches in the horn air line. In addition, electronic logic can be used to determine operating mode. For example, ON (continuous) may be available only if headlights are on full bright or if locomotive speed is above 10 m.p.h. etc. Essentially, any control configuration can be accommodated according to customer requirements.



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## Design Criteria

In basic applications, the customer is responsible for any external system components such as headlight switches, horn pressure switches, auxiliary push buttons, mounting hardware, etc. However, complete kits can be assembled as required

All ELCON Ditch Light controller components are 100% solid state-NO RELAYS, utilizing "off-the-shelf" components with proven reliability and longevity. The ELCON Ditch Light Controller will withstand all environmental conditions encountered in Diesel locomotives, including temperature extremes, electrical transients, and vibrations.

The enclosure is a NEMA 12 type with a hinged door. Electronic devices are mounted inside the box on removable panels. The optional circuit breaker can be mounted on the door of the enclosure. The controller and dropping resistors are mounted on a common panel but can easily be separated for individual mounting depending on space limitations.

For More Information, Contact us at:

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