

Lighting Control Panel



Enclosure
(L3516-E Shown)



Interior & Trim
(L3516-I Shown)



Overview



(interior mounted in enclosure shown)

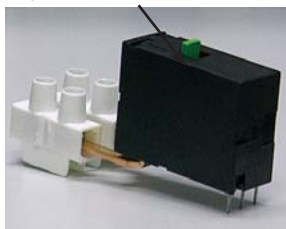
Turnkey Lighting Control's L35 Series UL Listed, Lighting Control Panel provides the capability to control high voltage lighting circuits via a two wire RS-485 network, occupancy sensors, light level sensors, momentary override switches and other output devices.

The L35 Series Lighting Control Panel integrates with most building automation systems. This capability lowers the installation and operating costs through an integrated HVAC/Lighting control system. It also reduces frustration for the building engineer by eliminating the need to learn to operate and maintain a separate lighting control system.

The L35 features improved relays with longer life and direct manual override that can be switched on or off without power. This allows the electricians to manually control the circuits during installation and allows authorized users to override the circuits after installation. This capability is not common in most lighting control products.

Specifications

Direct Override Switch
On Mechanical Latching
Relays



Electrical

Programmable switch Inputs	24 standard, expandable up to 120; dry contact or up to 24 VDC (Maintained or momentary), screw terminal block is removable type
Output Rating	20 amp, 120 VAC Tungsten 20 amp, 277 VAC ballast, 347 VAC general
Output Mechanical life	2,000,000+ operations at no load 300,000 operations at full load
Output Contacts	SPST mechanically latched
Output Terminals	2 terminals for #14-8 AWG solid or stranded wire, copper wire only
Panel Power Supply	115/277:24 or 347:24 ± 10%, 60Hz; fused primary, surge protection provided on LP-3500 controller
Communications	Network ready, two wire RS-485, screw terminal block is removable type; 500 volt isolation provided

Environmental

Operating Temperature	32° to 125°F
Operating Humidity	20% - 95% RH, Non-condensing

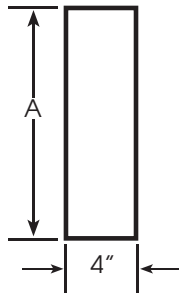
System Certification

Complete System UL 916, CSA, CEC, ISO 9001, NYC approved #37908

Specifications (cont.)

Mechanical

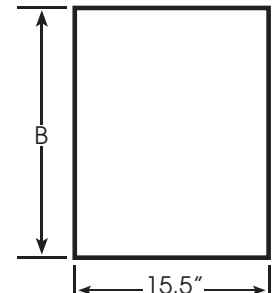
Enclosure Side View



Enclosure Front View



Trim Front View



Enclosure Size
16 Relays (A=16.0")
32 Relays (A=24.8")
48 Relays (A=33.6")
60 Relays (A=42.4")

Interior/Trim Size
16 Relays (B=17.5")
32 Relays (B=26.3")
48 Relays (B=35.1")
60 Relays (B=43.9")

Enclosure Type: NEMA 1

L35 enclosure, interior and trim construction material is 16 gauge steel, painted.

Ordering Instructions

Method 1: Use this 2 step method when the L35 enclosure needs to be shipped separately from the the interior and trim for rough in.

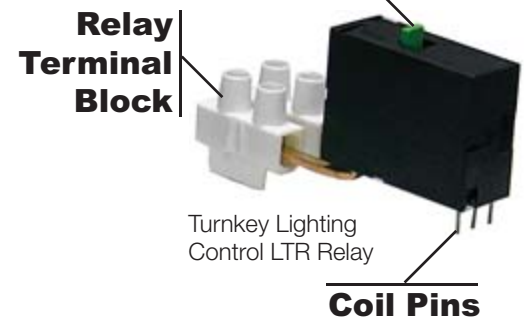
L35__-E (Enclosure only*)

- 16 Relay Enclosure
- 32 Relay Enclosure
- 48 Relay Enclosure
- 60 Relay Enclosure

L35__-I (Interior and Trim*)

- 16 Relays (For 16 Relay Enclosure)
- 32 Relays (For 32 Relay Enclosure)
- 48 Relays (For 48 Relay Enclosure)
- 60 Relays (For 60 Relay Enclosure)

Direct Override Switch*



__* LTR = 20 Amp Latching w/ manual override

*Select quantity of relays between 0-60 in increments of 1, but do not exceed panel maximum. Relays must be ordered separate.

Note: Product Sold Only as a Complete Unit. Enclosure can be shipped separately for rough in.

Method 2: Use this method when the L35 interior will be factory installed in its enclosure as a complete unit.

L35__ (Enclosure,Interior and Trim)

- 16 Relay Enclosure included
- 32 Relay Enclosure included
- 48 Relay Enclosure included
- 60 Relay Enclosure included

__* LTR = 20 Amp Latching w/ manual override

*Select quantity of relays between 0-60 in increments of 1, but do not exceed panel maximum. Relays must be ordered separate.

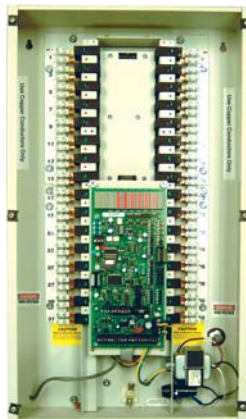
Features



**TLC L35 Series
32 Relay Version**



**TLC L35 Series
32 Relay Version
with Trim Door Open**



**TLC L35 Series
Interior, No Trim
32 Relay Version**

Microprocessor-Based Controller provides hardware and automated lighting control software for up to 24 switch inputs (expandable to 120), RS-485/232 port, LEDs for group, relay and system status, control for up to 60 relays, manual override of relays.

Low Voltage Switching add low voltage switches and sensors for basic low voltage switching.

Building Automation Systems (BAS) Interoperability provides seamless integration with:

- Alerton Technologies
- Andover Controls
- Automated Logic
- BACNET via Turnkey Lighting Control LINK
- Delta Controls
- Honeywell
- Johnson Controls Metasys
- MODBUS via Turnkey Lighting Control LINK
- Siemens Building Technologies
- Teletrol Systems
- Trane Company

Durable Mechanical Latching Relay provides ~300,000 cycles of switching at full load and over 2,000,000 cycles of mechanical life.

Each relay provides direct manual override capability without power.

Small Panel Size takes up less wall space than most lighting control manufacturers; and maybe flush or surface mounted.

Windows Setup Software provides easy setup and commissioning of Turnkey Lighting Control control panels.

LED Display provides visual indication of group and relay status

Software Grouping of Relays and Groups through point and click Windows software eliminates hardwire grouping.

Input Timers turn lights OFF after a programmable amount of time.

Priority Control set-up hierarchies or priorities for each of the relay groups.

Flash Warning flash the lights associated with a lighting group to warn occupants

prior to turning the lights off.

Flash Warning Time select the off time for the lights during the Flash Warning.

On-Time After Flash Warning select the length of time the lighting group will be on after the lights have been flashed.

Relay Energize Time - set the length of time the relay coil is energized.

Easy To Install - Relay numbering matches typical circuit breaker numbering to simplify installation.

Relays and Inputs can be set to user-desired limits.

Automatic Output Sequencing - Each relay is sequenced rather than energizing all relays simultaneously.

Input Polarity select either normally open or normally closed input contacts.

Programmable Inputs - Select the type of input as Maintained, Momentary On, Momentary Off, Momentary Toggle, State Change for 3 way switches, and Linked On switch for three-level lighting control.

Manual Override all relays through a push button on the LMB controller or use manual override on each relay.

EPROM and EEPROM Diagnostics - Verifies integrity of the unit's EPROM (Electrically Programmable-Read Only Memory) and EEPROM (Electrically Erasable Program.

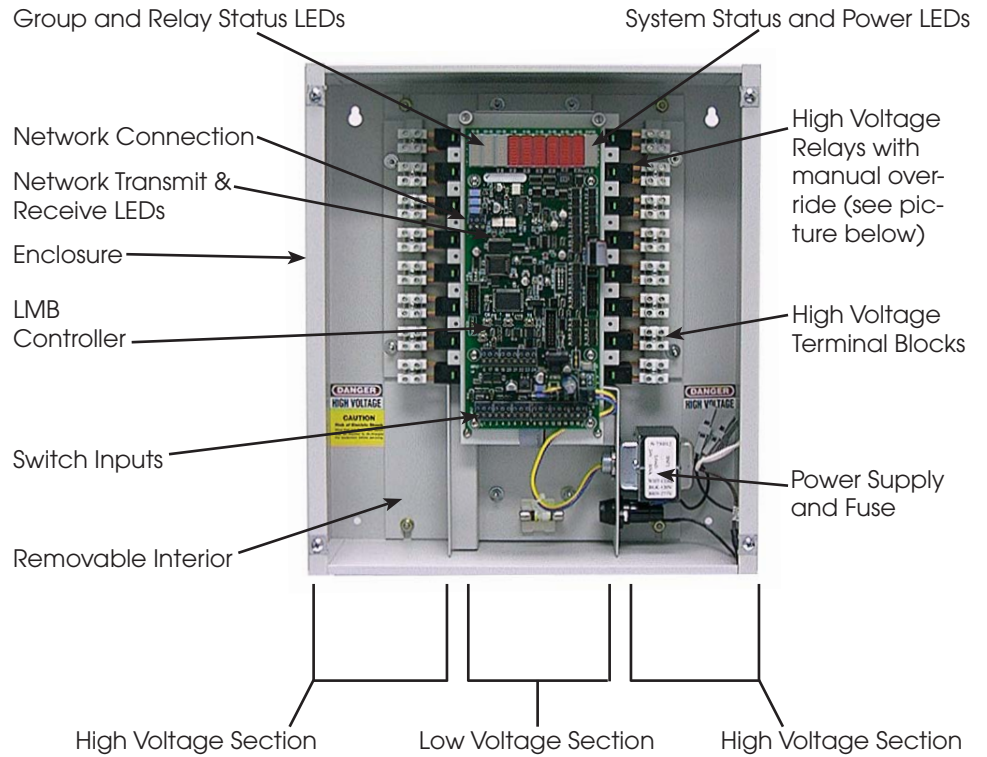
Memory Backup - All programming configurations set through Turnkey Lighting Control's LPPK software are saved in each panel on an EEPROM. The EEPROM retains memory during a power outage up to 10 years.

Light Level Sensor Input

Telephone Override- Override relays groups through a touch tone telephone with Turnkey Lighting Control's optional TI-4500 or TI-5000 Telephone Override products.

For a more detailed description of these features see Turnkey Lighting Control's LMB Controller User Guide.

Panel Layout



Add or Changing a relay is quick and easy.

To add or replace a relay, first remove the front cover. The LMB Controller is easily tilted away to expose the lower relays by loosening the two thumbscrews. To remove a relay, loosen the screw in the center of the relay's terminal block. Gently pull the relay out in the same direction as the screw. When installing the new relay, be certain that the relay coil pins align with and plug into the coil connector. Replace the relay terminal block screw. Replace the front cover.

