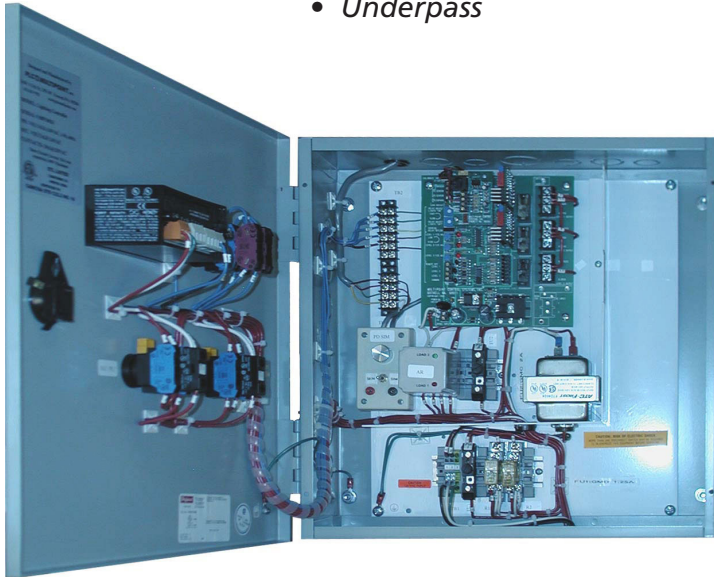


T3X-1

STAND ALONE ANALOG Tunnel Lighting Control System

APPLICATIONS

- Short Tunnel
- Short Tunnel Ramp
- Unidirectional Short Tunnel
- Bidirectional Short Tunnel
- Underpass



DESCRIPTION

PLC Transportation's T3X-1 system provides tunnel lighting control for short tunnel, unidirectional, bidirectional, unidirectional ramp and bidirectional underpass lighting applications. The T3X-1 system is a stand alone analog based on an industrial microprocessor lighting controller, and is packaged with normally closed contactors, dip switch, trim pots, panel meter, selector switches and power distribution in a NEMA rated enclosure.

The purpose of tunnel lighting controls is two fold. Safety, by providing vehicle drivers with sufficient visibility, so that they can avoid roadway hazards, especially in tunnel thresholds. Energy control, by illuminating the tunnel threshold to an appropriate lighting level proportional to sensed exterior light. The LC3X controller has an option of using PLC-Multipoint's PD sensor that receives a 0-10 voltage signal.

The system is cost-effective and easily-configurable. Three output channels can be programmed for night lighting control as well as two daytime light levels. A sensor simulator dial allows easy setup and recording of setpoints.

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PROJECT	
LOCATION	

FEATURES

- 3 Output Channels 1 night and 2 daytime levels per direction
- 0-10V signal input PD sensor
- Hand/Off/Auto Selector switch override control
- 15A interposing relays for external contactor panels
- Analog Setpoints, Timing, and Sensor Calibration
- Monitor light sensor, auxiliary contactor contacts
- Optional Alternation sequence and time clock schedule
- Digital panel meter displays sensors and setpoints

Each level has an On setpoint and a fixed 10 percent dead-band. Each channel has an adjustable ascending and descending input time delay (0-7 min) to filter lightning strikes and fast moving clouds. Hold-On timer, (0-160 min) keep the output on for a minimum time to prevent short cycling of HID fixtures. Optional alternation sequence of lights and night/day crossover method can be configure providing a long life span on tunnel fixtures.

The T3X-1 system can switch any light sources such as Fluorescent (FL), Low Pressure Sodium (LPS), High Pressure Sodium (HPS), Metal Halide (MH) and Light emitting diode (LED). The T3X-1 architecture assembly is very simple, it's housed in a NEMA 1 enclosure depending on the location. The system is pre-wired and tested to UL508A (CAN/CSA C22.2.0014-M91) requirements for industrial control equipment. Incoming 120 VAC powers the system. Other source of power can be converted down by providing an additional transformer inside the system.

TECHNICAL DATA - T3X-1

Input Voltage: 120 VAC, (Additional Transformer 480/277 VAC)
Output Switching: 15 Amp Electrically Held Interposing Relay
Hardware Failsafe: N.C. Contactor

Controller: LC3X Controller
Power Failure Backup: NA
Program Update: NA
Input Controller Power: 24VAC
Adjustment Interface: Dip Switch and Trim Pots
Operator Display: Panel Meter, Sensor/Simulate and Selector Switches
Set points Adjustment: Tick Marks On with fixed 10% deadband
Output Level Control: On, Off, Auto
Auto Control Modes: NA

Input Delay Timer: 0-7 minutes ascending and descending
Hold-ON-Timer: 0-160 minutes interval
Hold-OFF-Timer: 0-7 minutes cool down
Day & Night Crossover: 0-10 minutes
Simulator: PD-Sim Pan with sensor simulate toggle switch

Illuminance Sensor: PLC-Multipoint PD sensor (separate datasheet)
Luminance Sensor: N/A
Signal Input: 0-10 Voltage Signal
Sensor Calibration: Analog Potentiometer
Heater: Thermostatically controlled with fan
Front Door Operators: Local Hand - Off - Auto switch with LED pilot light

Enclosure: NEMA - 1 Enclosure
Dimensions: 20"H x 20"W x 8"D Typical
Temperature Range: 32° to 140°F (0° to 40°C)

Communications: NA
Certification: UL 508A (CAN/CSA C22.2.0014-M91)

ONE-LINE BLOCK DIAGRAM:

