

# T57-5 SYSTEM

## DISTRIBUTED DIMMING NETWORK Tunnel Lighting Control System

### APPLICATIONS

- Long Tunnels
- Bidirectional
- Unidirectional



PROJECT	
LOCATION	

### FEATURES

- Six Output Channels per direction for one night level and 5 day time levels
- Multiple Ethernet drops for distributed dimming network
- Automatic Daylight Savings Time function
- Accumulated run time hours are logged
- Zero and Span for sensor calibration using the built-in text Graphic Display
- Front operator Hand - Off - Auto selector switch that controls the operation
- 4-20mA signal for PLC-Multipoint's MAS, TMAS and TLUM sensors
- 20 - 30A interposing relays for external contactor panels
- Programmable Configuration for optional Alternation sequence and time clock schedule

### DESCRIPTION

The T57-5 system is engineered in two ways. One function is by Contactor Based or by Distributed Dimming Network. Both functions tunnel lighting control system designed for long unidirectional and bidirectional tunnel lighting applications. The T57-5 system has a T57 micro-processor based lighting controller, and is packaged with a power panelboard, and lighting contactors in a NEMA rated enclosure. The Distributed Dimming Network is used for night and contrast lighting control for LED dimming fixtures.

The T57-5 system helps provide safety by applying the most effective and efficient way of controlling the light fixtures resulting to visibility at vehicular tunnel approaches and interiors. Each channel has an adjustable ascending and descending input time delay, Hold-On timer, Hold-Off timer. Optional alternation crossover method can be configured providing a long life span on fixtures. The controller has a input time delay and hold-on time eliminating any sudden surge in the fixtures of the tunnel.

Different media of communication can be applied by using either the RNE or the RFE for dimming network. The system is cost-effective and easily-configurable with programming and accessories. The system has six output channels per direction providing a night function as well as five daytime light levels according to the sensors input set points for accuracy. The T57 controller has an option of using three PLC-Multipoint's sensors that receives a 4-20mA signal, such sensors are our MAS, TMAS and TLUM sensors.

The T57-5 system can handle controlling any light sources such as Fluorescent (FL), Low Pressure Sodium (LPS), High Pressure Sodium (HPS), Metal Halide (MH) and LED fixtures. The T57-5 architecture assembly is very simple; it is housed in a NEMA 3R, 4X or 12 enclosure depending on the location. The system is pre-wired and tested to UL508A 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 - T57-5 SYSTEM

**Input Voltage:** 120 VAC, (Additional Transformer needed if 277 VAC or 480 VAC incoming)  
**Output Switching:** 20 - 400 Amp Electrically Held Relay  
**Hardware Failsafe:** Software, Hardware

**Controller:** T57 Controller  
**Input Controller Power:** 24VDC  
**Adjustment Interface:** Text Graphic display  
**Operator Display:** LCD Text  
**Set points Adjustment:** Adjustable Deadband  
**Control Modes:** Displayed on LCD mode screen:  
**Photo Control Function:** SETUP: Photo set point control  
 AUTO: Photo sensor control with timers (ON at low, OFF at high set points)  
**Level Control - On/Off/Auto** Keypad operation  
**Power Failure Backup:** Flash Memory

**Timer Function:** Astronomical Clock and Automatic Daylight Savings Time Function  
**Input Delay:** Photo sensor: 0-99 minutes (setup mode override)  
**Hold-ON-Timer:** Time clock: 0-240 minutes (setup mode override)  
**Day & Night Crossover:** Internal timer 0-10 minutes (optional timing methods)  
**Simulator:** Force Constant

**Sensor:** PLC-Multipoint MAS sensor  
**Illuminance:** PLC-Multipoint TMAS sensor (See TMAS datasheet)  
**Luminance:** PLC-Multipoint TLUM sensor (See TLUM datasheet)  
**Signal:** 4-20mA signal  
**Sensor Calibration:** Zero & Span calibration method  
**Heater:** Included inside sensor housing

**Front Operators:** Local Hand/Off/Auto switch with pilot light indicator  
**Enclosure:** NEMA 3R, 4X and 12 Surface Mount Enclosure  
**Temperature Range:** 32° to 140°F (0° to 40°C)  
**Network Communication:** PLC-Multipoint RNE or RFE (separate datasheet)

### ONE-LINE BLOCK DIAGRAM

