PLC Multipoint

PROJECT

LOCATION

T43

Tunnel Lighting Switch Control

APPLICATIONS

- Unidirectional
- Bidirectional
- Unidirectional Ramp
- Bidirectional Underpass

FEATURES

- 6 Outputs: 1 night and 5 daytime level-s
- 4-20mA signal input MSA, TMAS and TLUM sensors
- Hand/Off/Auto Selector switch for each relay
- 15A Interposing Relays with close tab
- 7" Touchscreen with VNC for remmote connection
- Configure Setpoints, Timing, and Sensor Calibration
- Control Outputs Operating Mode
- Monitor sensor, switches and control output status
- Optional Alternation sequence and time clock schedule

DESCRIPTION

PLCTransportation's T43 system provides tunnel lighting control for long unidirectional and bidirectional lighting applications. The T43 system is a standalone industrial microprocessor lighting controller, and is packaged with Form C interposing relays, fuses and power distribution in a NEMA 1 rated enclosure.

The purpose of tunnel lighting controls is twofold. 1) Safety, by providing vehicle drivers with sufficient visibility, so that they can avoid roadway hazards, especially in tunnel thresholds. 2) Energy control, by illuminating the tunnel threshold to an appropriate lighting level proportional to sensed exterior light. The T43 controller can measure light at the portal with one of three PLC- Transportation 4-20mA sensors. Illuminance is detected by the MAS or TMAS, while luminance is sensed by the TLUM.

The system is cost-effective and easily-configurable. Four output channels can be programmed for night lighting control as well as five daytime light levels.

All levels have separate On and Off setpoints and timers to prevent lightning strikes or fast-moving clouds from effecting the controller. Night/day crossover timing ensures lights are always on at this critical time of day.

The T43 display provides Alarm and Event logging to an external USB thumb drive. The sensor trend display shows 5 hours of readings. The T43's Virtual Network Computing (VNC) connection allows remote users to configure, control and monitor the system.

The T43 assembly is very housed in a NEMA1, enclosure (NEMA 3R, 4X or 12 enclosures are also available). The system is pre-wired and tested to UL508A (CAN/CSA C22.2.0014-2013) 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.

T · Series

PLC Transportation Control Systems

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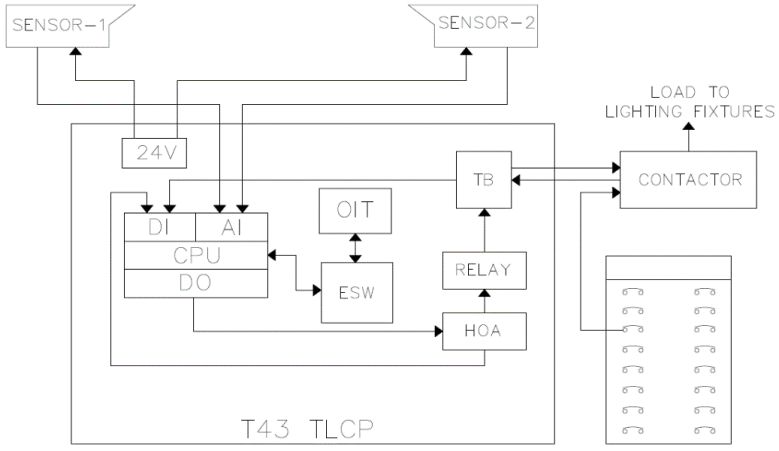
TECHNICAL DATA

Input Voltage:	120/277 VAC,
Output Switching:	15 Amp Electrically Held Interposing Relay
Override:	Hand/Off/Auto Selector, Relay mechanical tab to close contact
Controller:	T43 Controller
Power Failure Backup:	Flash Memory
Program Update:	USB/ Ethernet
Input Controller Power:	24VDC
Operator Display:	7" Touchscreen Display
Ethernet:	TCP/IP 100Mb/s RJ45 Configurable Address, Mask, Gateway
Logging:	Display or log to USB.
Output Level Control:	Manual On/Off, Auto for night and 5 daytime outputs
Auto Control Modes:	RUN: Photo, timing, crossover, alternation or combinations: TEST: Photo setpoint control with no timing
Configuration Display:	Night/Day, Level Setpoints (FC), Timing and Crossover (Min)
Graphic Display:	Sensor values and output states over last 5 hours
Log Display:	Event Alarm Summary and 1000 record History Log
Simulator:	Force Constant using keypad
Illuminance Sensor:	PLC Multipoint MAS or TMAS (separate Data Sheet)
Luminance Sensor:	PLC Multipoint TLUM2 sensor (separate Data Sheet)
Signal Input:	4-20mA with 24VDC compliance Zero
Sensor Calibration:	& Span configuration
Heater:	Thermostatically controlled with fan
Front Door Operators:	Local Hand - Off - Auto switch with LED pilot light
Enclosure:	NEMA - 1 Enclosure
Dimensions:	16"H x 16"W x 6"D Typical
Temperature Range:	32° to 140°F (0° to 40°C)
Communications:	5 Port Ethernet switch with VNC Connection
Certification:	UL 508A (CAN/CS22.2 No. 14)

ONE-LINE BLOCK DIAGRAM



ORDERING INFORMATION

Contact PLC Multipoint or your local Manufacturer's Representative for more information.

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