

Lighting Control Cabinet – (LCC)

General Description

The LCC is an integrated control cabinet specifically designed for tunnel lighting control. It supports multiple configurations, allowing optimal solutions for a wide range of tunnels layouts.

The LCC is used in TLACS-EM configurations to individually control and monitor luminaires. Multiple interconnected LCCs can also be deployed to support very long tunnels and distributed lighting control architectures. The system interfaces with luminance and illuminance photometers to continuously monitor exterior daylight and interior tunnel lighting conditions. This allows the lighting system to automatically adapt lighting levels and maintain safe driving visibility throughout the tunnel entrance, transition, and interior zones.

The LCC includes a standard intuitive Human Machine Interface (HMI) accessible through a Web interface, as well as an integrated data logger that maintains a historical record of system operations. Features include redundant Network Controller (NWC) components, an integrated SCADA system, and an industrial touchscreen display for local control and operation of the lighting system.



Features

- Lighting control based on photometer readings or a fixed-time astronomical schedule, or manually through HMI
- Configurable adaptive lighting zones
- Multiple LCCs can be inter-connected to share photometer data across tunnels for coordinated operation and redundancy.
- Embedded Web Server for remote access and system monitoring
- Communication failure detection
- Integrated diagnostics
- Programmable fail-safe mode
- SCADA system



Specifications

Mechanical

Item	Description
Enclosure	Painted steel or stainless steel 316
Dimensions (overall)	36" H x 30" W x 16" D

Electrical

Item	Description
Input voltage range (nominal)	120-240 VAC, 50/60 Hz
Power Consumption	Max. 215 W Max. 645 W with optional heater

Interface

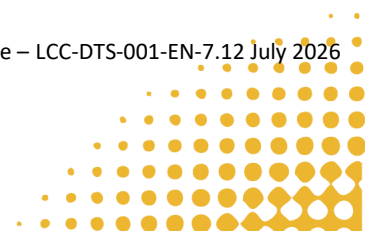
Item	Description
Ethernet	RJ45 Interface 10/100 Mbit/s
Fiber optics	Single or multimode (LC or SC)

Environmental

Item	Description
Operating temperature	0°C to 40°C
Operating temperature with heating option (custom option)	-25°C to 40°C
Storage temperature	-25°C to 75°C
Protection Rating (painted steel enclosure)	NEMA 4
Protection Rating (stainless steel enclosure)	NEMA 4X

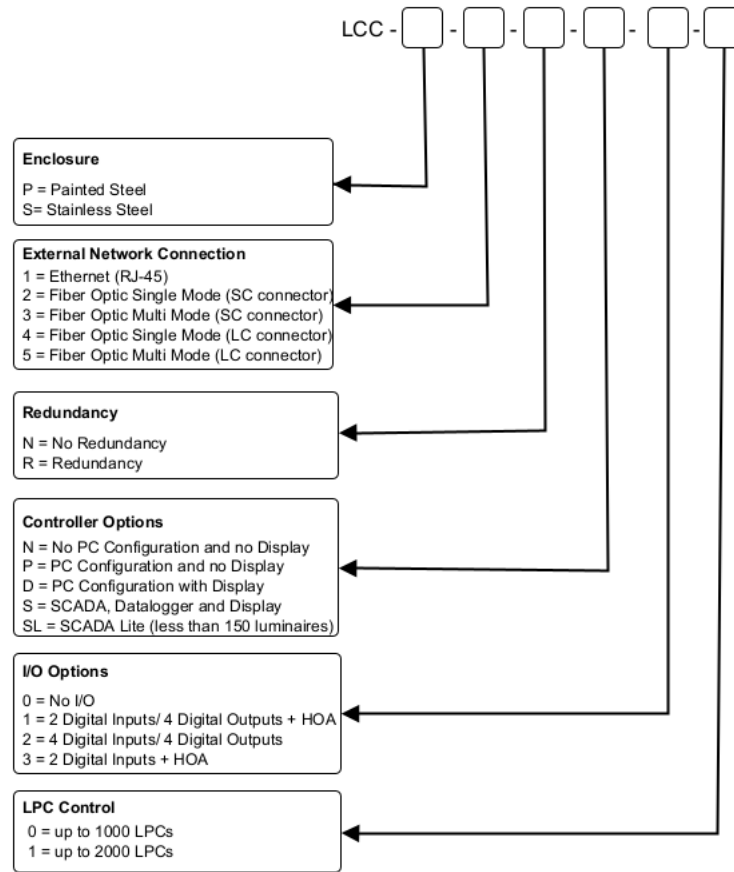
Standards

Item	Description
Safety (cabinet)	CAN/CSA-C22.2 No. 286 UL 508A (2nd Edition)



Product Ordering Information

The LCC product identification follows the chart diagram below.



Other options available, please contact info@nyx-hemera.com for:

- Optional Customized Human Machine Interface as per tunnel configuration
- Optional maintenance of the historical data on lighting stage transition/alarm/user intervention
- Optional support of multiple standardized communication protocols for easy interface to any SCADA type system
- Optional enclosure heater for operation in outdoor or non-climate-controlled environments

