



LCM-PL SERIES

Parking Lot Photo/Time Clock
Lighting Controller

DESCRIPTION

The **LCM-PL** is a stand alone parking lot controller that automatically switches lights, within adjustable time schedules, in response to changes in natural daylight. The LCM-PL consists of a microprocessor controller, a single photodiode outdoor photosensor, Hand/Off/Auto selector switches and terminal blocks, controlling four output zones.

Each output zone is connected to a single pole 20 Amp 120 or 277 VAC interposing relay without the circuits per zone specified. Each single pole relay is landed to a terminal block. Each zone can switch a limited number of circuits in multiples of four. When circuits are called, the circuit operation will be provided by 600 VAC rated 20 Amp lighting (30-amp resistive/ballast) lighting contactors. For example, Zone 1 could have 16 circuits, Zone 2 could have 8 circuits, Zone 3 could have 32 circuits, and Zone 4 could have 1 circuit.

Each zone can be field configured for one of three different logics:

- Time clock on and off
- Photo sensor on and off
- Time clock enable and photo sensor on and off.

Each zone has an internal Hand/Off/Auto selector switch. Each zone is independent of the others and can have its own set points and time settings from the common photosensor and time clock. Unused zones are simply not programmed and are used as spares.

ADJUSTABILITY/OPERATION

The **LCM-PL** is easily configured for the appropriate lighting level and time schedule to optimize energy savings while maintaining a safe operating environment. The 4 line LCD screen prompts the user to enter photo sensor setpoint limits and time schedules which are saved in battery backed memory.

Adjustments to the settings and schedules can be made with pushbuttons on the controller face. (The controllers is inside the locked enclosure door so that no program adjustments may be made by unauthorized personnel).

Time switch on and time switch off operation use the internal real-time clock. Time circuits automatically adjust for daylight savings time and leap year unless specified in advance. Each day of the week within the zone may have a different time schedule.



FEATURES

The advantages of using the LCM-PL lighting control system is the assurance that the panel supplied will be complete, attractive and factory tested unit that will operate safely after minimal installation time.

Other advantages are:

- **Easy adjustment of On and Off set points using integrated pushbuttons**
- **Lifetime free factory phone support**
- **Four independent control zones each with HOA switch.**
- **Each zone allows logic based on photo sensor, time clock, or both**
- **Sensor Fc readings show on screen**
- **Delay time prevent unwanted changes to temporary lighting condition.**
- **Hold-ON-Timer keeps fixtures ON during lamp warm-up period.**
- **Up to 88 circuits split up among the 4 control zones. Circuits rated at 600V 50/60 Hz 30 Amp resistive and ballast, and 20 Amp other lighting.**
- **Startup and programming video included with free factory phone support for long life of equipment.**
- **Single sensor to control all four zones.**

DATA SHEET



PLC-MULTIPOINT, INC.

PHOTO LIGHTING CONTROL & SYSTEMS

ADJUSTABILITY/OPERATION (cont.)

Photo sensor ON and photo sensor OFF operation allows full operation based only on ambient lighting conditions. Lights turn ON at the low setpoint and OFF at the high set point. The resulting deadband along with time delays before activation and deactivation keeps light stable during changing conditions and prevents unwanted operation due to temporary conditions such as lightning storms and fast moving clouds.

Time clock enable and photo sensor ON and OFF allows the photo sensor to turn the system ON and OFF only during the time period allowed by the time clock. Otherwise, the lights will be OFF.

All automatic operation logic that includes photo sensing includes a hold on timer for HID circuits that is factory set at 30 minutes, a time delay before activation that is factory set at 5 minutes, and an adjustable time delay before deactivation

CONSTRUCTION

The LCM-PL controller is housed in a surface mount NEMA TYPE1, hinged door, gray painted steel enclosure. High and Low voltage components are separated by NEC/NFPA mandated voltage barriers.

The photo sensor provided is the industry standard CES/O photodiode sensor from PLC-MULTIPOINT, INC. which is factory calibrated and tested with the system it will be used with.

The sensor is housed in a UL standard 94V-0 weatherproof visored housing and operates at 24VDC.

Entire system construction is to UL508A and Can. CSAC22.2-14M91 standards certified by an ETL (Electrical Testing Laboratories) inspection label.

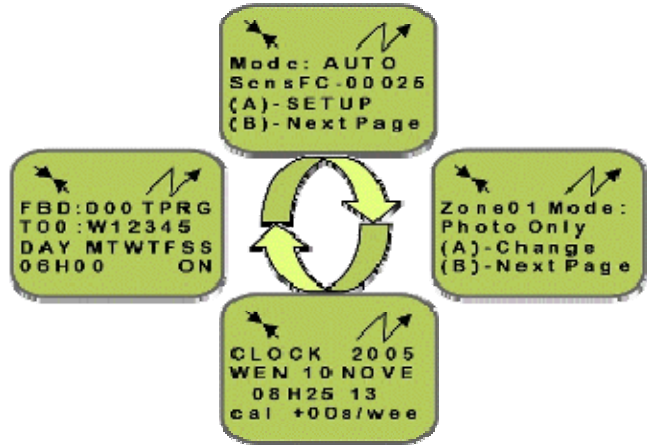
APPLICATION

The LCM-PL is a complete system designed to operate multifunction outdoor lighting systems. Parking lot lighting, canopy lighting, security lighting, and sign lighting can all be independently operated from one device by simply stating how many circuits are needed in each zone.

System arrives complete with an ETL label and ready to connect the power wiring and a simple low-voltage section of the controller & photo sensor. Once the panel is installed, simple, prompted displays allow the end user or their contractor to tailor the panel to the needs of the facility.

COMMUNICATION/ OVER CURRENT DEVICES

Internal over current protection, metering, and remote communications are not provided in this panel. If these are needed, please refer to LCM-PK and contact PLC-MULTIPOINT, INC.



Typical LCM-PL Display Screen

LCM-PL PANEL ASSEMBLY

ORDERING MODEL

(Insert variables from numbered columns.)

EXAMPLE: LCM-PL 16-16-8-1-120V-N3R.

LCM-PL A__ - B__ - C__ - D__ - E__ - F__.

A - Zone A (Poles): 4, 8, 12, 16, 20, 24

B - Zone B (Poles): 4, 8, 12, 16, 20, 24

C - Zone C (Poles): 4, 8, 12, 16, 20, 24

D - Zone D (Poles): 4, 8, 12, 16, 20, 24

E - VOLTAGE: 120V or 277V

F - ENCLOSURE: NEMA1 = N1 or NEMA3R = N3R


Configures LCM-PL for a parking lot, with 1 sensor input, 3 outputs with each controlling 16, 16 and 8 poles. The control power is 120V in a NEMA3R Enclosure.

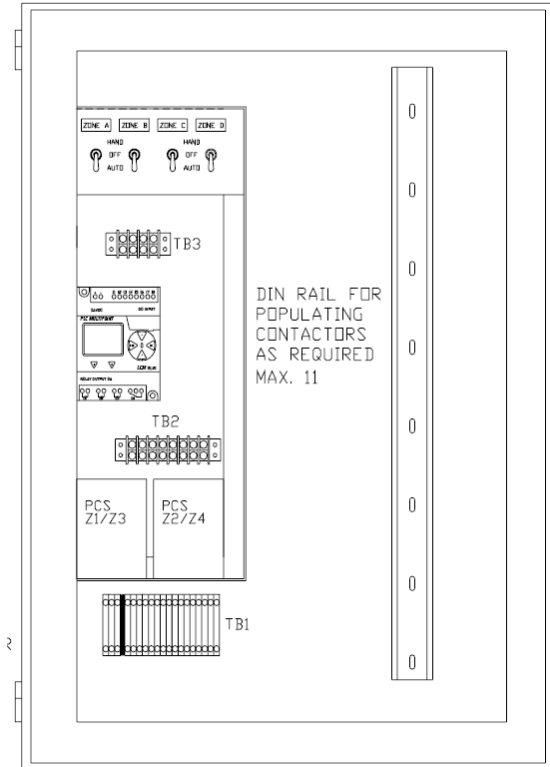
A maximum of 11, 4 or 8 contactors maybe mounted in the enclosures.

DATA SHEET





LCM-PL TECHNICAL DATA

Input Voltage:	120/277 VAC standard
Deadband:	Min 1 Footcandle, Max 20%
Input Delay:	Fixed at 3-minutes
Output:	(Without completed matrix) Four at 120/277 VAC 20 Amps
Load:	Incandescent, Fluorescent & HID
Enclosure:	NEMA1 or 3R - 24"Hx18"Wx6"D
Control Modes:	If entered, each zone controlled by 7-day time clock, photodiode sensor, or both.
Hold-ON-Timer:	Preset at 30-minutes.
Control Inputs:	Photodiode (CES/O) Sensor 1-10 Outdoor Sensor
	
Override:	Internal Hand/Off/Auto selector switch for each zone.
Sensor Accuracy:	+/-5% over sensor temperature range
Sensor Temperature:	-13F. to 140F. (-11C to +60C) Contact factory for lower Temperature operation.
Output Contactor:	4 to 8 Circuits 20 Amp fluorescent 30 Amp resistive/ ballast. Electrical 600V 50/60Hz.



* Insert # of circuits per zone from contactor Take-OFF sheet.

		Zone A=___Circuits*
		Zone B=___Circuits*
		Zone C=___Circuits*
		Zone D=___Circuits*
OP4 AS	OP8 AS	
NEEDED*	NEEDED*	

DATA SHEET

SPECIFICATION

The LCM-PL controller is housed in a surface mount NEMA TYPE1 (NEMA 3R optional), hinged door, gray painted steel enclosure with a locking mechanism and powered from either a 120VAC or 277VAC source. All control power leads are to be connected to terminal blocks mounted in the high voltage section of the controller and protected by a fuse. High and Low voltage components are separated by NEC/NFPA mandated voltage barriers.

The Photo sensor provided is the industry standard CES/O photodiode sensor from PLC-Multipoint, Inc. which is factory calibrated and tested with the system it will be used with. The sensor is housed in a UL standard 94 V-0 weatherproof visored housing and operates at 24VDC. Inputting the zone's parameters shall energize controlling methods.



PLC MULTIPOINT, INC.

PHOTO LIGHTING CONTROL & SYSTEMS

DATA SHEET

