



PC

Photoconductive Sensors for
PLC-MultiPoint Controllers

DESCRIPTION

The **PLC-MULTIPOINT PC** is a Class 2, low voltage light sensor designed to provide input to **PLC-MULTIPOINT** controllers. **PC** sensor models are available in a wide variety of light sensing ranges and housing styles.

The **PC** allows the **PLC-MULTIPOINT** controllers to switch banks of lights on and off.

ADJUSTABILITY

The sensor sensitivity is fixed, and based upon the sensor range selected. **PC** sensors are calibrated for the specific control installation using a footcandle calibration chart. The sensor measures dark at 10VDC and maximum light level at 1VDC. The maximum footcandle measurement at 1VDC is approximately 40, 50, 500, 750, or up to 3,000 FC. Proper calibration of **PC** sensors with **PLC-MULTIPOINT** controllers requires that the set-points be separated by at least .2VDC.

CONSTRUCTION

To achieve the highest degree of performance and reliability, all components are of computer grade quality and are assembled on a fiberglass epoxy circuit board. The electronic circuit of all exterior sensor models is encased in a clear, glass-like epoxy and sealed with an electronic grade, non-corrosive urethane resin. Skylight and outdoor models are housed in Cynolac T (TM) for UV stabilization.

SENSORS FOR ALL APPLICATIONS

All indoor sensors have a flat Fresnel lens that looks downward in a 60 degree cone of reference to measure actual light on the work surface. The Fresnel lens is used to reduce the influence of stray light striking the sensor from nearby windows or incidental side lighting.

The Outdoor sensor is enclosed in a weatherproof housing with a visor for shading and lens protection.

The Atrium and Skylight sensors both use diffusing dome lenses to provide a 180 degree angle of photo-diode response.



**PC SENSORS
DISCONTINUED**

FEATURES

- Adjustable maximum output voltage for high resolution in 10-3,000 FC range.
- Indoor sensor with 60 degree clear Fresnel Lens, Adhesive mounting to ceiling, facing down. Sensor range 6-50 FC.
- Outdoor sensor with flat clear lens. Sensor range: 2-40FC and 40-500FC. 1/2" IPT connection for horizontal mounting. Weather proof housing.
- Atrium sensor with opaque dome lens filters 33% of light level in upper atrium. Sensor range 40-750 FC. 1/2" IPT connection for horizontal mounting.
- Skylight sensor with dark dome lens filters 90% of light level in skylight. Sensor range: 400-3,000 FC in skylight. 1/2" IPT connection to for upward vertical mounting.
- Interfaces with any PLC-MULTIPOINT controller.
- Fully patented technology.
- 2 year warranty.



PLC-MULTIPOINT, INC.

PHOTO LIGHTING CONTROL & SYSTEMS

DATA SHEET

PC TECHNICAL DATA

Accuracy:	+/-1% at 70 F (21 C) Derated to +/-5% at 120 F or at 0 F (-18 C to 49 C)
Operating Temp:	13 F to +140 F. (-11 C to 60 C)
Sensor Type:	Cd S Photoconductive cell
Sensor Ranges:	<u>Minimum</u> <u>Adjustable Max</u>
PC1A - Indoor	6 Fc 50 Fc
PC5A - Outdoor	2 Fc 40 Fc
PC5AD - Outdoor	40 Fc 500 Fc
PC9A - Atrium	40 Fc 750 Fc
PC9AD - Skylight	400 Fc 3,000 Fc
Input Voltage:	12VDC from controller
Output Voltage:	10 at darkness to 1 VDC at full output
PC Input Controls:	LC3X, LC8, LC9, PC-SIM
Wiring:	Two conductor 22 ga. Stranded cable Green no polarity

PC SENSOR SELECTOR

<u>SENSOR</u>	<u>LENS</u>	<u>FILTER</u>	<u>MOUNTING</u>	<u>ORIENT</u>	<u>Height</u>	<u>Dia.</u>
PC1A	Fresnel	Clear	Ceiling	Down	2.00"	1.23"
PC5A	Flat	Clear	1/2" IPT	Horiz.	1.85"	1.28"
PC5AD	Flat	Dark	1/2" IPT	Horiz.	1.85"	1.28"
PC9A	Dome	Opaque	1/2" IPT	Horiz	2.25"	1.28"
PC9AD	Dome	Dark	1/2" IPT	Up	2.25"	1.28"

SPECIFICATION

PHOTOCONDUCTIVE SENSOR

The photoelectric device shall be a Class 2, low voltage, ambient light sensor designed to interface directly with the analog input of the controller. The sensor shall supply an analog signal to the controller system proportional to the light measured. The sensor shall be capable of a fully adjustable response in the range between 0 and 3,000 footcandles with a +/-1% accuracy at 70 degrees F (21 deg. C).

The sensor shall be calibrated using voltage/footcandle calibration curves. The housing shall be constructed from GE Cyclocac (R) ABS, shall be flame retardant and meet UL 94 HB standards.

INDOOR

Indoor sensors shall have a Fresnel lens, with a 60 degree cone of response. Indoor sensors shall only require a penetration hole in the ceiling of 3/8" dia., and the sensor shall mount to the ceiling using adhesive tape. The indoor sensor range shall be between 6 and 50 FC. The indoor sensor shall be **PLC-MULTIPOINT PC1A**.

OUTDOOR

Outdoor models shall have a hood over the aperture to shield the sensor from direct sunlight. The outdoor sensor circuitry shall be completely encased in an optically clear epoxy resin. Outdoor sensors shall mount to a standard threaded 1/2" conduit or fit a 1/2" knockout. The Outdoor sensor shall have two ranges: between 2 and 40 FC or 40 and 500 FC. The outdoor sensor shall be **PLC-MULTIPOINT PC5A or PC5AD**.

ATRIUM or SKYLIGHT

The Atrium or Skylight sensors shall have a translucent dome with a 180 degree field of view. Atrium or Skylight sensors shall mount to standard threaded 1/2" conduit or fit a 1/2" knockout. Atrium sensor range shall be from 40 - 750 FC. Skylight sensor range shall be between 400 - 3,000 FC. The Atrium or Skylight sensors shall be **PLC-MULTIPOINT PC9A or PC9AD**.

