

PD

**PHOTODIODE SENSOR
WITH REMOTE ADJUSTMENTS
4 Wire, External Power w/ Fixed Output Range**



[CORRECT ORIENTATION SHOWN]

PROJECT	
LOCATION	

FEATURES

- Compatible with the PLCBuildings LC3X controller
- Measuring range 0 - 10,000fc
- Output 0 - 9V
- Instant response time
- Indoor sensor adhesive ceiling mount
- All others 1/2" NPT mount
- UL 916 Listed
- Title 24 Listed
- RoHS compliant
- 2 year warranty

DESCRIPTION

The PD Sensor is a four wire, analog photosensor which provides a light level input into PLCBuildings S-Series, LC3X lighting controls and other building automation systems. The PD has six models which are used in different locations in and around buildings in addition to specialty applications. Indoor sensors are used in offices and classrooms. Two types of sensors detect light for outdoor control; low range sign and site lighting and high range sensors for contrast lighting. Atrium sensors measure light in lobbies. Skylight sensors read the ambient light available in warehouse skylights. Other sensors include a high range outdoor sensor for tunnel daytime lighting control. Each sensor has a different range and focus of the light being measured.

PD sensors are powered by a PLCBuildings LC3X controller's onboard 12VDC power supply. There is one output range, 0-9VDC. The footcandle range of sensor can be

calibrated using an external gain potentiometer board part number 3XIPD. The PD sensors can be used without the 3XIPD Adapter if it is acceptable to operate at Unity Gain. Unity Gain is the natural output of the sensor without any amplification. Unity Gain is achieved by connecting the Red and Yellow wires together as the signal output. The following chart shows the response characteristics of the PD sensors when used at Unity Gain: **See Table 2**

Systems are calibrated to a specific footcandle setting using PLCBuildings' NIST traceable equipment. These standard ranges are based on 20 years experience in the lighting controls industry and are the most suitable for many applications. All PD sensors are Class 2 wiring devices and are listed as UL916 accessory equipment. Custom wire lengths, lens and housing modifications, and multi-point NIST calibration services are also available.

TECHNICAL DATA - PD SERIES

Input Voltage:	12VDC
Current:	2mA
Low Output:	0VDC
High Output:	9VDC
Photodiode:	Blue Enhanced
Fixed Signal Range:	0-9V
Adjustment:	NONE
Tolerance:	Time Response Instant 12% Repeatability +/- 0.5% Linearity 2% Temperature +/- 10%
Wiring:	Black: 12VDC Red: Signal Voltage Yellow: Gain Green: Return

Sensor	Maximum Range
PD1	0 - 750
PD5	0 - 750
PD5D	0 - 2,500
PD9	0 - 2,500
PD9D	0 - 10,000

TABLE 1

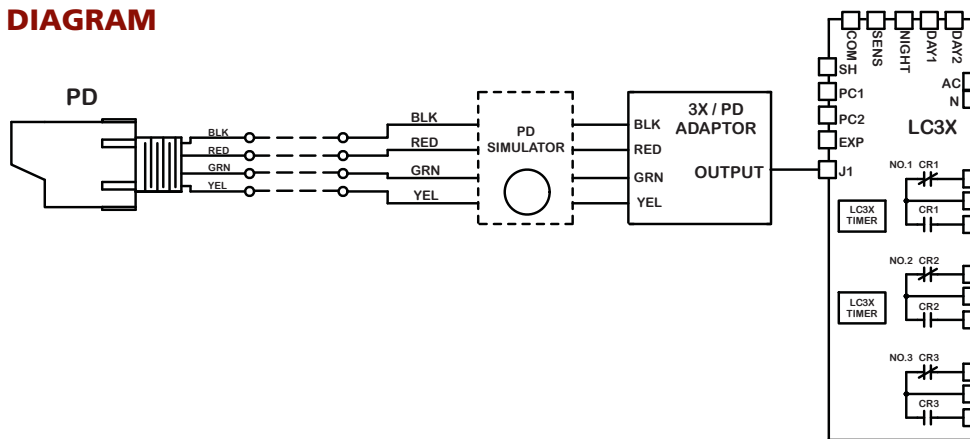
Sensor Characteristics at Unity Gain

Sensor	fc / Volt DC	fc at 9 Volts DC
PD1	308.6	2778
PD5	429.2	3863
PD9	792.4	7132
PD9D	2301.5	20713

TABLE 2

Compliance: NEC Class 2 ; ETL / UL 916 ; RoHS ; Title 24

ONE-LINE DIAGRAM



PD SENSOR SELECTION

Sensor	Style	Lens	Filter	Mounting	Orientation
PD1	Indoor	Fresnel	Clear	Ceiling	Down
PD5	Outdoor	Flat	Clear	1/2" NPT	Horizontal
PD5D	Outdoor	Flat	Dark	1/2" NPT	Horizontal
PD9	Atrium	Dome	Opaque	1/2" NPT	Horizontal
PD9D	Skylight	Dome	Dark	1/2" NPT	Up
PD9DT	Tunnel	Flat	Dark	1/2" NPT	Horizontal

ORDERING INFORMATION



Sensor Style

- PD1
- PD5
- PD5D
- PD9
- PD9D
- PD9DT