

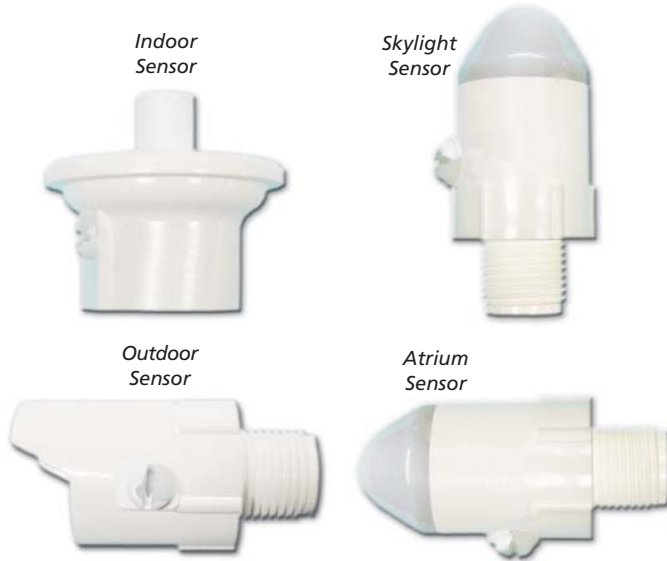
# PD

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

PROJECT	
LOCATION	

## FEATURES

- Compatible with the PLCBuildings LC3X controller
- Measuring range 0 - 10,000 Fc
- Output 0 - 9 Volts
- 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



[ CORRECT ORIENTATION SHOWN ]

## 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 3X/IPD.

The PD sensors can be used without the 3X/IPD 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  
 Repeatability +/- 0.5%  
 Linearity 2%  
 Temperature +/- 10%

Wiring: Black: 12VDC  
 Red: Signal Voltage  
 Yellow: Gain  
 Green: Return

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

Sensor Characteristics at Unity Gain

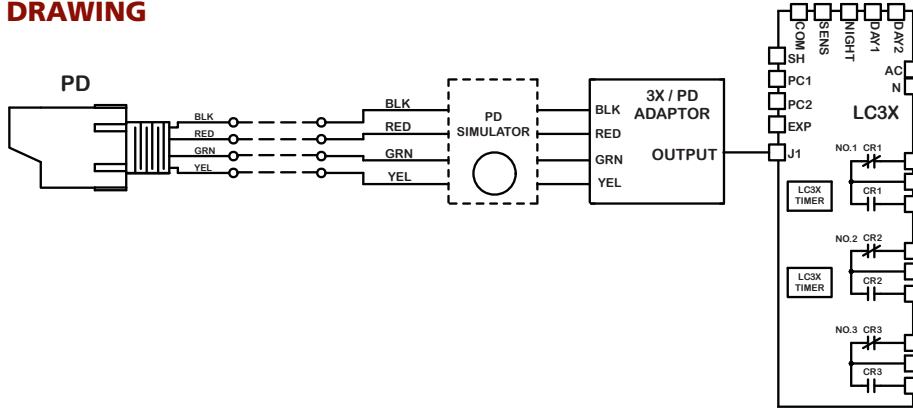
Sensor	Maximum Range
PD1	0 - 750
PD5	0 - 750
PD5D	0 - 2,500
PD9	0 - 2,500
PD9D	0 - 10,000

TABLE 1

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

## CONNECTION DRAWING



## 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