

PD SIMULATOR INSTALLATION AND  
MAINTENANCE MANUAL (IMM)

p/n N120I rev 11/07/05

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# PD SIMULATOR INSTALLATION AND MAINTENANCE MANUAL (IMM) p/n N120I

## **GENERAL**

1. Please read these instructions carefully to prevent any possible injury or equipment damage.
2. Installer must be a qualified and experienced service technician.
3. Verify the product ratings to confirm that this product will satisfy your requirements and application.

## **INTRODUCTION**

The PD simulator is used to calibrate and setup the LC3X board to function in the range of the target sensors. The same simulator will function with all versions of PD sensors. Refer to Figure 1 for connection diagram.

## **INSTALLATION**

The PD simulator is typically only used during calibration and setup of the LC3X controller board. Normally it will not be permanently installed, except in tunnel lighting systems. Before proceeding with wire connections, ensure that the power to the controller board and/or system is OFF.

## **CONNECTION**

The PD sensor wires should be connected to a terminal block that connects to a jack on the controller. Remove this connection and plug into the simulator. Connect the plug on the simulator into the jack on the 3X/PD board. If desired, connect a digital volt meter to the red and black terminals on the simulator and adjust the DVM for the 10 VDC scale.

## **CALIBRATION**

There is no calibration for the PD simulator.

## **OPERATION**

PD sensors are powered by and receive DC voltage from the 3X/PD board. The photodiode and circuitry in the sensor return a signal according to the amount of light present. At low light levels, a low voltage is presented. At high light levels, a high voltage is presented.

With the simulator knob at full counter clockwise (CCW) a low light level will be simulated. The DVM should read between 0 and 5 VDC. As the knob is rotated clockwise (CW) a higher light level will be simulated and DVM will read between 5 and 10 VDC.

Set the Simulate/Sense switch on simulate and ensure that any delay switches on the LC3X controller boards are OFF. Rotate the knob back and forth from full CCW to full CW several times and observe that the controller switches its LED's ON and OFF. This confirms that the Simulator is working properly. Perform any calibrations using the Footcandle (Fc) vs. VDC table/calculations for your particular sensor. Consult the LC3X IMM for this procedure.

## **MAINTENANCE**

Occasionally inspect the simulator for broken or frayed wires and ensure that the knob can rotate freely. Check the connector terminals for proper operation.

**FIGURE 1: PD SIMULATOR CONNECTION DIAGRAM**

