PCRK

PC SENSOR REPLACEMENT KIT

PLC Accessories

A Division of PLCMultipoint

1. INTRODUCTON

PCRK: PC photo sensor replacement kit. This kit consists of four parts; A T455 power supply, a Sensor Adaptor, a plastic Placard that fits over the LC8 controller's trimpots, and this Installation and Maintenance Manual.

In addition to the PCRK, an MAS sensor will need to be selected and ordered separately to replace the obsolete PC Sensor. Please use Table 1 to confirm that you are using the correct replacement sensor.

PC Sensor will need to be replaced with an MAS Sensor

If replacing a …	Select a …
PC1A	MAS/I
PC5A	MAS/O
PC5AD	MAS/OD or MAS/O – Max 500fc
PC9A	MAS/A
PC9AD	MAS/S

TABLE 1: REPLACEMENT SENSOR SELECTION

2. Overview

The photoconductive (PC) sensor was used as a 24 VAC sensor that provided a low voltage inverse parabolic analog signal to a set-point lighting controller, the LC8. The PC sensor was placed in obsolescence in 2005, and became obsolete in 2009. This product kit provides several advantages over the PC sensor.

- The new sensor's straight line analog response is directly proportional to the increase or decrease in the levels of the light monitored. This offers easier and more accurate setpoint control.
- The new sensor's +/- 1% at a constant temperature and +/- 10% over a 100 degree F response repeatability is superior to the +/- 30% of the old sensor.
- The new sensor is an environmentally friendly RoHS compliant device.
- The same low voltage conductors used to connect the PC sensor can be used to connect the new sensor.

DIRECTIONS

1. Remove existing PC sensor from its mounting.
2. Disconnect existing PC sensor leads and LC8 Terminals 1, 2, 3, 4, and 5. (See Figure 1)
3. Remove AC Power Supply (if present)
4. The replacement sensor is polarity sensitive; therefore care should be taken in marking the conductors between the sensor and the LC8. This is particularly true since the PC sensor was not polarity sensitive so the wiring may be the same color or may not follow industry standards for positive and negative conductors. These instructions will assume that the electrician has marked the positive (red) conductor.
5. Connect the marked conductor to the red lead from the replacement sensor and the unmarked conductor to the black lead from the replacement sensor.
6. Mount the replacement sensor in the same mounting method as the original sensor.
7. CAUTION: Do not plug in the new DC Power Supply at this time. Connect the negative lead from DC Power Supply to LC8 Terminal 4. (See Figure 1)
8. Connect the Sensor Adaptor between LC8 Terminal 4 and LC8 Terminal 1. (See Figure 1)
9. Connect the negative conductor (black) from the new sensor to LC8 Terminal 1. (See Figure 1)
10. Connect +24VDC power supply lead to LC8 Terminal 5. (See Figure 1)
11. Connect the positive conductor (red/marked) from the new sensor to LC8 Terminal 5. (See Figure 1)
12. The new sensor's logic is inverse to that of the PC sensor. If the existing connection to the controlled device is connected to LC8 Terminal 6 and LC8 Terminal 7, remove the conductor from LC8 Terminal 6 and connect it to LC8 Terminal 8. If the existing connection to the controlled device is connected to LC8 Terminal 8 and LC8 Terminal 7, remove the conductor from LC8 Terminal 8 and connect it to LC8 Terminal 6.
13. Supplied with the PCRK is a plastic Placard that fits on the face of the existing LC8. Remove the existing Placard and discard. Install the new Placard in place. Use the markings, as shown in Table 2, to reset the on and off setpoints. For further information on setting the LC8, please refer to the LC8 IMM or consult the factory as listed below.
14. Plug in DC Power Supply.

MARK	MAS/I FC	MAS/O FC	MAS/O/500 FC	MAS/A FC	MAS/S FC
1	N/A	N/A	N/A	N/A	N/A
2	0	0	0	0	10
3	12.5	31.25	62.5	125	625
4	25	62.5	125	251	1250
5	37.5	93.75	187.5	375	1875
6	50	125	250	500	2500
7	62.5	156.25	312.5	625	3125
8	75	187.50	375	750	3750
9	87.5	218.75	437.5	875	4375
10	100	250	500	1000	5000

TABLE 2: VOLTAGE TO FOOT CANDLE

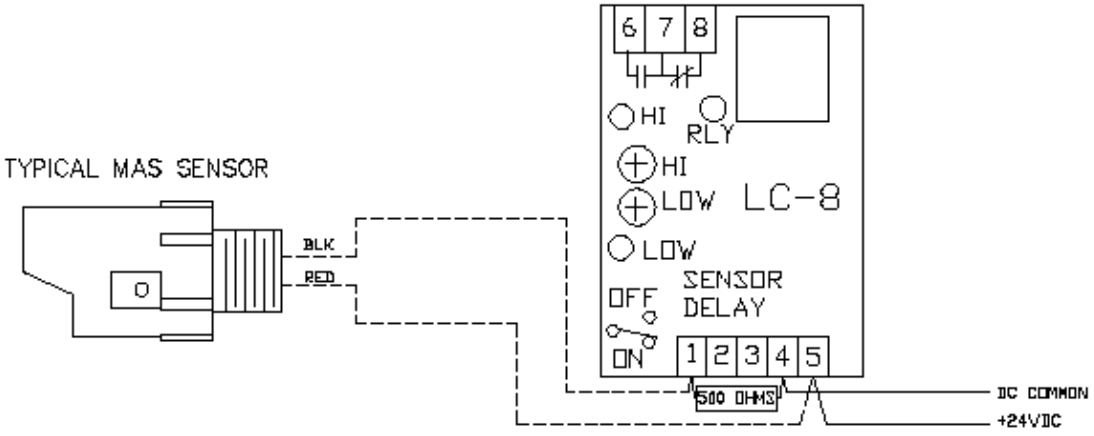

Figure 1: CONNECTION DRAWING