

## C7057 Cadmium Sulfide Photocell

### INSTALLATION INSTRUCTIONS

#### APPLICATION

The C7057 Cadmium Sulfide Photocell is used to sense ambient light levels. It is used as the sensing element for the CR7075A Lighting Controller which can provide on/off control of two separate lighting banks based on user determined ambient light intensity levels. Typical applications include outdoor cosmetic and parking lot lighting in fast food restaurants retail establishments, supermarkets, banks and lighted billboards.

#### INSTALLATION

##### When Installing this Product...

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in the instructions and on the product to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After installation is complete, check out product operation as provided in these instructions.

##### Dimensions (Fig. 1)

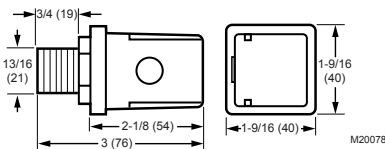


Fig. 1. C7057 approximate dimensions in in. (mm).

#### Before Installation

##### IMPORTANT

*Expose the photocell to light for 16 hours.*

The photocells develop a hysteresis (or "light memory") when packed for shipping. Until the photocell has been exposed to bright light for at least 16 hours, light level setpoints will shift.

#### Location

Locate the photocell sensor so that the lens is exposed to full daylight. (See Fig. 2.)

##### NOTES:

- Select an area which will not become shaded.
- Mount *only* with light entrance facing horizontally.
- Avoid overexposure to direct east/west sunlight.

#### Mounting

##### IMPORTANT

*Mount the photocell sensor to the top of a watertight, outdoor FS junction box.*

1. Use the gasket provided to prevent moisture entry.
2. Screw stem into 1/2-14 threaded knockout.

NOTE: The photocell sensor can be mounted in a 7/8 in. hole (or knockout).

#### Wiring



#### CAUTION

**Electrical Shock or Equipment Damage Hazard.**

**Can shock individuals or short equipment circuitry.**

Disconnect power supply before installation.

##### IMPORTANT

- All wiring must agree with applicable codes, ordinances and regulations.
- When wiring the input power, apply only one source of power to the CR7505A.
- With line-voltage loads, the power and load voltage must be the same.

Refer to chart on the inside of the controller cover or Fig. 3 for locating the power inputs, photocell sensor inputs, TOD and load relay terminals.



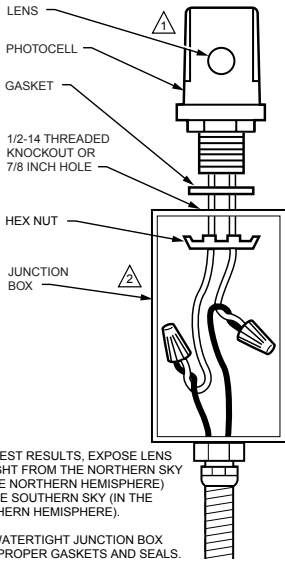


Fig. 2. Vertical mounting configuration.

NOTES:

- The photocell sensor has no polarity.
- Wire to terminal strip T2, terminals 4 and 5.
- Access to terminals can be gained through standard conduit knockouts (A-E) located around the perimeter of the enclosure.
- Use knockout A only for the photocell sensor and TOD wiring.
- Photocell wires should be at least 18 AWG two conductor. If not run in watertight conduit, use suitable outdoor wiring insulation.
- Shielded wiring is not required.

## OPERATION AND CHECKOUT

In the following procedures, refer to the diagram inside the CR7075A cover or Fig. 3. These show locations of all operating controls, LED lights, and wiring connection points.

### Initial Adjustments

1. Adjust both light level potentiometers to the fully clockwise position (#1 index level).
2. Place the SET-RUN switch to the RUN position.

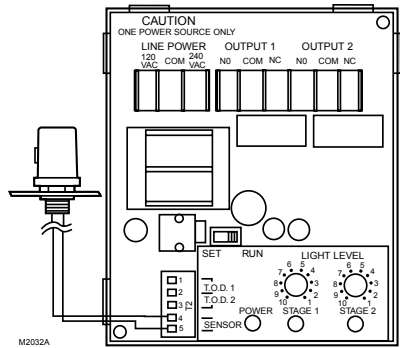


Fig. 3. Wiring for 120 Vac input; 24 Vac load.

### Calibration

After the controller and photocell sensor are installed (with wiring and settings verified), and the photocell has been exposed to light for 16 hours, apply power. The light intensity threshold levels can be calibrated when the desired outdoor light level has occurred.

NOTES:

- Calibration achieves best results when making adjustments at or near the light conditions required for equipment switching.
- Calibrating at extreme light conditions can cause switching to be unachievable.

1. At the desired outdoor light level place SET-RUN switch to the SET position.
2. Slowly rotate stage 1 light level potentiometer counterclockwise until the stage 1 LED lights.
3. Stage 1 is now calibrated to the light level existing at the sensor and the stage 1 load is energized.
4. Return the SET-RUN switch to the RUN position.

NOTE: To calibrate stage 2, repeat this process except adjust the stage 2 light level potentiometer.

### IMPORTANT

After initial setup is complete, make certain the switch is in the RUN position to avoid short cycling the loads.

NOTE: The SET-RUN switch removes the integrating time delay (short-cycle protection) circuitry in the SET position. In the RUN position (normal operation) the calibrated light level must be present for 30 seconds before the load switches.

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