

# V2PC Photocell Kit

## Installation & Maintenance Information

**COOPER** Crouse-Hinds

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

### APPLICATION

The V2PC integral photocell is designed to provide dusk-to-dawn operation of lighting fixtures in Class I, Division 2 classified areas or ordinary locations. The V2PC Photocell can be field installed in Crouse-Hinds Champ® Series lighting fixtures. The V2PC provides an energy savings by turning ON selected fixtures when necessary. It's ideal for walkways,

bridges, security lighting, parking areas, outdoor process areas, or any lighting application in a Class I, Division 2 location, wet location, or corrosive environment. V2PC photocells are for use with 35-400 watt maximum H.I.D., Fluorescent or Incandescent lighting fixtures in a maximum 40°C ambient.

**NOTE:** The V2PC photocell has a built-in time delay of 10 seconds. At night the fixture will take 10 seconds to be switched on after the power is supplied. The time delay will prevent nuisance turn offs and turn ons due to external light sources at night or shadows during the day.

### INSTALLATION IN VMV, DMV, N2MV AND LMV CHAMPS

V2PC Photocell Kit includes the photocell, 2 O-ring gaskets, a knurled nut ring, and a #94 washer (not shown).



#### ⚠ WARNING

Be sure electrical power is turned **OFF** before starting installation or maintenance.

1. Remove fixture from mounting, take off cover, and disconnect connections to supply line.
2. Drill an 11/16" diameter hole at the cast spot in top surface of mounting module cover. Make sure opening is clean and smooth with no sharp edges. (See Figure 1)

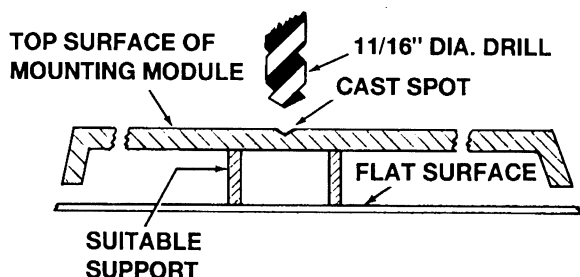


Figure 1

#### ⚠ CAUTION

Provide suitable support underneath cover to prevent distortion.



Mounting Module with 11/16" drilled hole.

3. Place "O" ring over photocell and insert photocell through drilled hole in mounting module from inner side of cover. (See Figure 2)

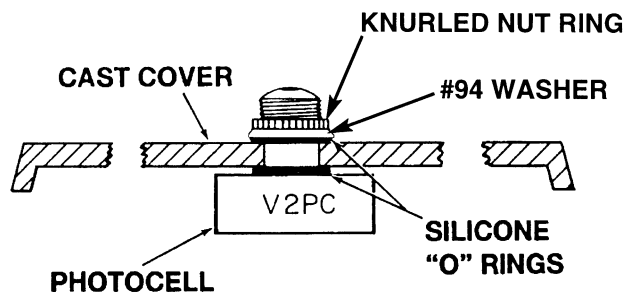


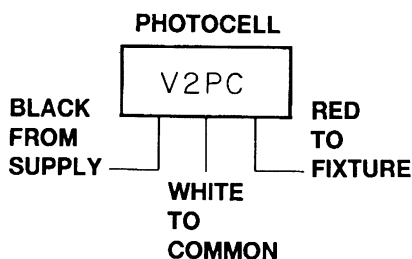
Figure 2

4. Place second "O" ring on photocell then #94 washer and hand-tighten knurled nut ring to prevent moisture from entering fixture.

#### ⚠ CAUTION

**DO NOT** use a wrench to tighten nut ring. The "O" ring will be pushed out of place, allowing water to leak in.

- Replace fixture on mounting module.
- Make connections to supply lines as shown in Figure 3.



**Figure 3**

**For input voltage (50 or 60 Hz):**

| <u>Voltage</u> | <u>Catalog #</u> | <u>Max. Current Rating</u> |
|----------------|------------------|----------------------------|
| 120V           | V2PC20           | 3.3 A                      |
| 208V - 240V    | V2PC22           | 1.8 A                      |
| 277V           | V2PC27           | 1.4 A                      |

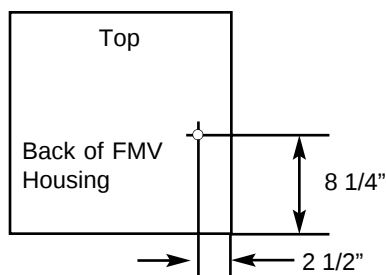
NOTE: The current rating of the fixture should not exceed the current rating of the photocell.

### INSTALLATION IN FMV SERIES FLOODLIGHTS

#### **⚠ WARNING**

Be sure electrical power is turned **OFF** before starting installation or maintenance.

- For FMV floodlights the V2PC photocell should be mounted in the location on the back of the FMV housing in the location shown in Figure 4.



**Figure 4**

- Drill an 11/16" diameter hole at the location identified in Figure 4. Make sure opening is clean and smooth with no sharp edges.
- Place "O" ring over photocell and insert photocell through drilled hole from inside of FMV.
- Place second "O" ring on photocell then #94 washer and hand-tighten knurled nut ring to prevent moisture from entering fixture.

- Make connections to supply line as shown in Figure 3 above.

### PHOTOCONTROL TROUBLE-SHOOTING

| PROBLEM                                              | CAUSE                                                                                                                                                                                                                                                                      | SOLUTION                                                                                                                                                                                                                                                                              |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Load stays off.                                      | <ol style="list-style-type: none"> <li>Line voltage too high.</li> <li>Photocell not rated for supply voltage.</li> <li>Incorrect wiring.</li> <li>External lights striking photocell.</li> </ol>                                                                          | <ol style="list-style-type: none"> <li>Correct voltage.</li> <li>Replace control with one having proper rating.</li> <li>Check wiring diagram</li> <li>Reposition photocell.</li> </ol>                                                                                               |
| Load stays on.                                       | <ol style="list-style-type: none"> <li>Line voltage too low.</li> <li>Photocell not rated for supply voltage.</li> <li>Not enough light striking window during daylight.</li> <li>Contacts of photocell welded due to excessive load.</li> <li>Incorrect wiring</li> </ol> | <ol style="list-style-type: none"> <li>Correct voltage.</li> <li>Replace control with one having proper rating.</li> <li>Reposition photo cell in direction of more light.</li> <li>Check that no more than permissible load is controlled.</li> <li>Check wiring diagram.</li> </ol> |
| Load blinks at night and remains off during the day. | <ol style="list-style-type: none"> <li>Light from load is directly or indirectly shining on photocell window.</li> <li>Incorrect wiring.</li> <li>Cycling HPS lamp near end of life.</li> </ol>                                                                            | <ol style="list-style-type: none"> <li>Reposition photocell so that it does not see load.</li> <li>Check wiring diagram.</li> <li>Replace lamp.</li> </ol>                                                                                                                            |
| Load blinks during the day and remains on at night.  | <ol style="list-style-type: none"> <li>Incorrect wiring.</li> <li>Insufficient light on photocell.</li> </ol>                                                                                                                                                              | <ol style="list-style-type: none"> <li>Check wiring diagram.</li> <li>Reposition away from overhangs, trees, etc.</li> </ol>                                                                                                                                                          |
| The fuse blows when power is supplied.               | <ol style="list-style-type: none"> <li>Incorrect wiring.</li> </ol>                                                                                                                                                                                                        | <ol style="list-style-type: none"> <li>Check wiring diagram.</li> </ol>                                                                                                                                                                                                               |

#### **⚠ WARNING**

Always disconnect primary power source before opening fixture for inspection or service.

### MAINTENANCE

- Frequent inspections should be made. A schedule for maintenance checks should be determined by the environment and frequency of use. It is recommended that inspections should be performed at least once a year.
- Visually check for damaged parts and proper lamp operation.
- Mechanically check to make sure that all parts of the fixture are properly assembled and all nuts, bolts and wire connections are tight.
- The photocell window must be clear in order to work properly. To clean, wipe with a clean damp cloth. If this is not sufficient use a mild soap or liquid non-abrasive cleaner which will not scratch the window.

*All statements, technical information and recommendations contained herein are based on information and tests we believe to be reliable. The accuracy or completeness thereof are not guaranteed. In accordance with Crouse-Hinds "Terms and Conditions of Sale", and since conditions of use are outside our control, the purchaser should determine the suitability of the product for his intended use and assumes all risk and liability whatsoever in connection therewith.*