

CHAMP-PAK CPMVF(B) Series

Fluorescent & Compact Emergency Fluorescent Luminaires Installation & Maintenance Information

IF 1442

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

APPLICATION

CPMVF(B) Champ-Pak luminaires are suitable for use in the following hazardous (classified) areas as defined by the National Electric Code (NEC®), Canadian Electrical Code (CEC), and International Electrotechnical Commission (IEC):

- Class I Division 2 Groups A, B, C, D;
Class I Zone 2 IIC AEx nR IIC, Ex nR IIC (Suffix S826)
- Zone 2 - Ex nR IIC (Suffix S826)
- Class II Division 1 Groups F & G

Refer to the luminaire nameplate for specific classification information, maximum ambient temperature suitability and corresponding operating temperature (T-Number).

CPMVF(B) luminaire 4X / IP66 construction is designed for use indoors and outdoors in Marine and Wet locations, where moisture, dirt, corrosion, vibration, and rough usage may be present.

CPMVF fluorescent luminaires are supplied with a choice of voltages (120-277V, 50-60 Hz, or 347V, 60 Hz) for use with one or two (2) 26W, 32W, or 42W compact fluorescent lamps. CPMVFB fluorescent luminaires are supplied with a choice of voltages (120-277V, 50-60 Hz, or for Canada - 120V or 347V, 60 Hz) for use with one (1) 26W compact fluorescent lamp.

The CPMVFB series emergency luminaire is also supplied with an emergency ballast. When AC power is interrupted, the luminaire switches to a built-in battery power supply to light one lamp, providing emergency lighting for a minimum of ninety minutes. When AC power is restored the luminaire automatically switches from battery power to AC power. While operating on AC power, the luminaire circuitry recharges the battery.

⚠ WARNING

To avoid the risk of fire, explosion, or electric shock, this product should be installed, inspected, and maintained by a qualified electrician only, in accordance with all applicable electrical codes.

⚠ WARNING

To avoid electric shock:

Be certain electrical power is OFF before and during installation and maintenance.

Luminaire must be supplied by a wiring system with an equipment grounding conductor.

To avoid burning hands:

Make sure refractor and lamp are cool when performing maintenance.

⚠ WARNING

To avoid explosion:

Make sure the supply voltage is the same as the luminaire voltage.

Do not install where the marked operating temperatures exceed the ignition temperature of the hazardous atmosphere.

Do not operate in ambient temperatures above those indicated on the luminaire nameplate.

Install luminaire with lamp base up.

Use only the lamp and wattage specified on the luminaire nameplate.

Use proper supply wiring as specified on the luminaire nameplate.

All gasket seals must be clean.

Before opening, electrical power to the luminaire must be turned off. Keep tightly closed when in operation.

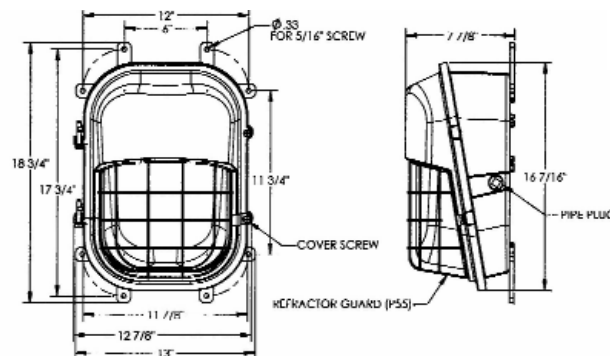


Figure 1

INSTALLATION

Mounting

1. If refractor guard (P55) is required and not factory installed, it may be easier to install now. The guard can be installed anytime during or after the luminaire installation (see REFRACTOR GUARD INSTALLATION section).
2. Attach 4 mounting brackets to back of luminaire with hardware provided. Rotate to desired position and tighten to 45 in.-lbs.
3. Mark and drill desired location on mounting surface.
4. Secure luminaire to surface using 5/16" (8 mm) bolts or lag screws (not included).

Wiring

5. Completely loosen the 2 captive cover screws and swing open the cover.
6. For a restricted breathing installation, seal per the RESTRICTED BREATHING SEALING section. Then continue to step 7.
7. Connect supply wires to luminaire leads per the attached wiring diagrams using methods that comply with all applicable codes. Tighten all electrical connections.
8. Install lamp. See LAMP INSTALLATION AND REPLACEMENT section.
9. For CPMVFB emergency luminaires, connect the emergency ballast connector (white/red wires). This is disconnected to avoid discharging the battery during shipment.
10. Close all unused conduit openings with pipe plugs provided. To prevent galling, lubricate pipe plugs with Crouse-Hinds HTL lubricant before installing. Tighten plugs securely, with at least three threads engaged.
11. Close cover and securely tighten the 2 cover screws. For proper gasket seal, torque the screws to 30 in.-lbs (3.4 N·m).
12. Turn power on.

Restricted breathing sealing (Suffix S826(TB))

Note: Utilizing the Restricted Breathing feature will result in a **cooler** luminaire Maximum Temperature Identification Number or T-Number. See luminaire nameplate for

WARNING

To avoid explosion, the wiring methods used must maintain the integrity of the Restricted Breathing light luminaire.

T-Number information.

A) Threaded Rigid Metal Conduit Wiring Method Requirements for Restricted Breathing

When wiring with conduit, all conduit entries used must be sealed. Use one of the following two sealing methods to maintain the restricted breathing integrity of Crouse-Hinds CPMVF(B) luminaires:

Sealing Method 1: For Conduit. Seal according to NEC 505-15 (c) using Listed Conduit Entrance Seals. Seal all entries used.

Sealing Method 2: For Conduit. Alternate Sealing Method using an Electrical Sealing Putty as follows:

1. A maximum of six (6) #12 AWG conductors can be sealed in each conduit entry.

2. Form the Electrical Sealing Putty into a ball at least 1 inch (25.4 mm) in diameter.
3. Surround each conductor with the Electrical Sealing Putty and form into a ball, making sure the conductors are separated.
4. Carefully push the Electrical Sealing Putty and conductors back into the conduit keeping it flush with the end of the conduit. Make sure the sealing material surrounds all conductors providing a good seal between the conductors and the conduit.
5. Repeat steps 1 through 4 for each entry used.

The Electrical Sealing Putty found to be acceptable for maintaining the restricted breathing characteristics of the CHAMP-PAK series CPMVF(B) luminaire is listed in Table 1.

Manufacturer	Designation
Crouse-Hinds	TSC Epoxy
Panduit	Duct Seal (DS-1)

Table 1

B) Cable and Cable Gland or Fittings Wiring Method Requirements for Restricted Breathing

When wiring with cable, use Cable and Cable Glands or Fittings that are suitable for restricted breathing. Install according to instructions supplied with the gland or fitting. Repeat for each entry used.

- C) **All unused conduit / cable entries must be closed up. Close with pipe plug supplied with unit. To prevent galling, lubricate pipe plugs with Crouse-Hinds HTL Lubricant before installing.**
- D) **If the protection method used requires a test port, an unused conduit opening may be used as a test port. Mark test port by attaching self-adhesive label supplied with luminaire next to the test port.**

CPMVFB SERIES PUSH-TO-TEST SWITCH

A remote push-to-test switch (not supplied) suitable for the classified area must be wired in the supply circuit to periodically test the emergency operation feature (See wiring diagram). Crouse-Hinds recommends a Crouse-Hinds EDSC2192 for Class I, Division 2, Groups B,C,D applications.

REFRACTOR GUARD (P55) INSTALLATION

Note: It is not necessary to open or remove the cover to install the optional refractor guard, catalog number P55. No additional hardware is needed to attach the guard. To install:

1. Remove the bottom cover screw and set aside.
2. Position the guard at the left side of the luminaire, with the hook to the right and the face of the guard toward the wall. Place the hook of the guard on the lower hinge pin, just above the hinge hook. Swing the guard over the refractor.
3. Reinstall the bottom cover screw through the guard screw tab and the housing screw hole.
4. Tighten the cover screw to 30 in.-lb. (3.4 N·m) torque.

LAMP INSTALLATION AND REPLACEMENT

1. Disconnect power to luminaire and allow to cool completely.
2. Completely loosen the 2 captive cover screws and swing open the cover.
3. For CPMVFB emergency luminaires disconnect the emergency ballast connector. This will disconnect the emergency ballast charged battery from the lamp receptacle.
4. Remove lamp.
5. Perform cleaning and inspection as noted in the MAINTENANCE section.
6. Insert new lamp into lampholder. New lamps must be identical type, size, and wattage as marked on the luminaire nameplate.
7. For CPMVFB emergency luminaires re-connect the emergency ballast connector.
8. Close cover and securely tighten the 2 cover screws. For

CAUTION

To avoid shortened lamp life, lampholder failure, wiring faults, or ballast failure, secure lamp firmly and completely.

To avoid injury, guard against lamp breakage.

proper gasket seal, torque the screws to 30 in.-lbs (3.4 N·m).

COVER REMOVAL & INSTALLATION

Cover removal:

Note: Hinge is designed with a mechanical stop that will prevent the refractor from hitting the wall.

1. Turn off power to branch circuit.
2. Completely loosen the 2 captive cover screws. Swing cover open.

WARNING

To avoid explosion and wire damage, do not support cover by lampholder wire leads.

3. Disconnect wires to lampholder and cover ground connection and wire nuts.
4. Loosen the wire clamp in the housing and pull lamp leads and ground wire free.
5. With cover fully open, close cover very slightly. Lift up along the hinge pin, toward the top of the luminaire, until the hook touches the upper hinge support.
6. Open the cover slightly wider and continue to lift up until hinge stop is clear of hinge pin.

Cover Installation:

1. With cover open, position cover so that the hook is lying on the open end of the hinge pins.
2. Slide cover down until the hinge stop contacts the hinge support on the housing.
3. Close the cover slightly and slide the cover onto the hinge pins.

4. Route the lamp leads and the cover ground connection through the wire clamp in the housing.
5. Reconnect the lamp leads and the ground wire connection. Tighten the wire clamp.
6. Test the wire routing by closing the cover and observing the flexing of the wires. If the wires are being pinched by the cover, loosen and rotate the wire clamp in the housing.

MAINTENANCE

- Perform visual, electrical, and mechanical inspections on a regular basis. The environment and frequency of use should determine this. However, it is recommended that checks be made at least once a year. We recommend an Electrical Preventive Maintenance Program as described in the National Fire Protection Association Bulletin NFPA No. 70B: Recommended Practice For Electrical Equipment Maintenance (www.nfpa.org).
- The refractor should be cleaned periodically to insure continued lighting performance. To clean, wipe the refractor with a clean, damp cloth. If this is not sufficient, use a mild soap or a liquid cleaner such as Collinite NCF or Duco #7. Do not use an abrasive, strong alkaline, or acid cleaner. Damage may result.
- Visually check for undue heating evidenced by discoloration of wires or other components, damaged parts, or leakage evidenced by water or corrosion in the interior. Replace all worn, damaged, or malfunctioning components and clean gasket seals before putting the luminaire back into service.
- Electrically check to make sure that all connections are clean and tight.
- Mechanically check that all parts are properly assembled.

CPMVFB EMERGENCY BALLAST INFORMATION

The emergency ballast must be checked periodically to insure that it is working properly. The following schedule is recommended:

WARNING

CPMVFB luminaire is supplied with an emergency ballast system. Disconnect the emergency ballast connector before and during maintenance. This will disconnect the charged battery from the lamp receptacles.

CAUTION

All service and testing should be done by qualified personnel.

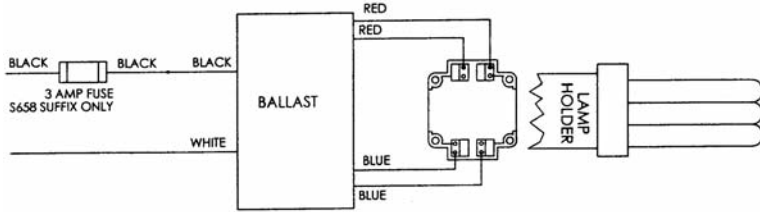
1. Visually inspect the charging indicator light monthly. It should be illuminated at all times. This indicates that the battery is being charged. Test the auxiliary operation of the fixture, at this time, for a minimum of 30 seconds. This can be done by disconnecting the power to the fixture. One lamp should operate with reduced intensity.
2. Conduct a 90 minute discharge one a year. One lamp should operate at a reduced intensity for at least 90 minutes.

ADDITIONAL MAINTENANCE FOR LUMAIRES WITH A TEST PORT

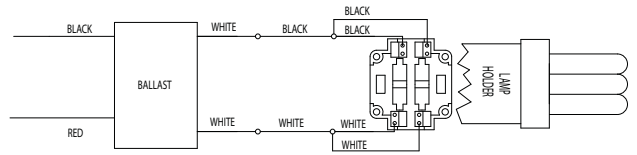
When required, a test port is provided in the luminaire housing. This test port is to be used for checking that the restricted breathing properties of the luminaire are retained. The restricted breathing properties can be verified in accordance with the tests in IEC 60079-15. This opening must be closed with a plug during operation. The restricted breathing properties should be checked only when the surrounding atmosphere is known to be non-hazardous.

WIRING DIAGRAMS

CPMVF026, 032, 042 with 1 lamp
120-277V, 50-60 Hz or 347V, 60Hz

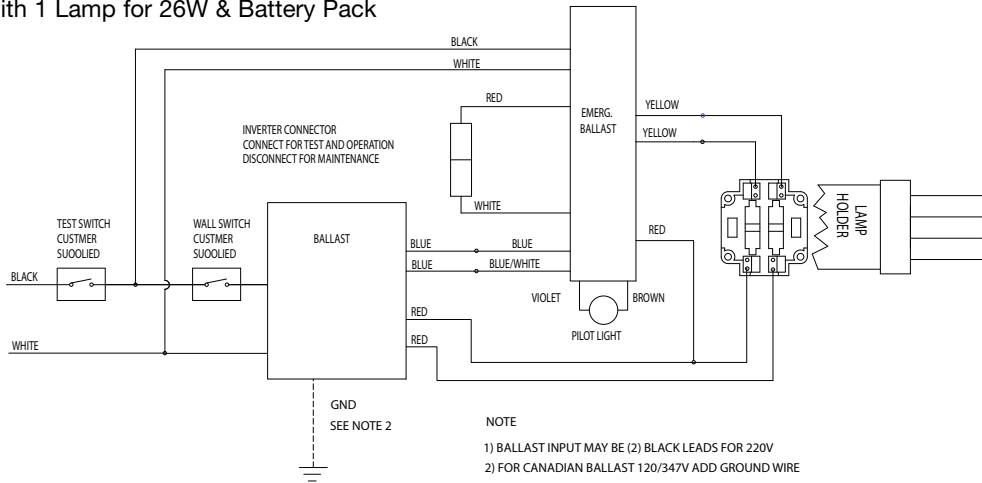


24 Volt DC Wiring with One Ballast for One 26W or 36W Lamp

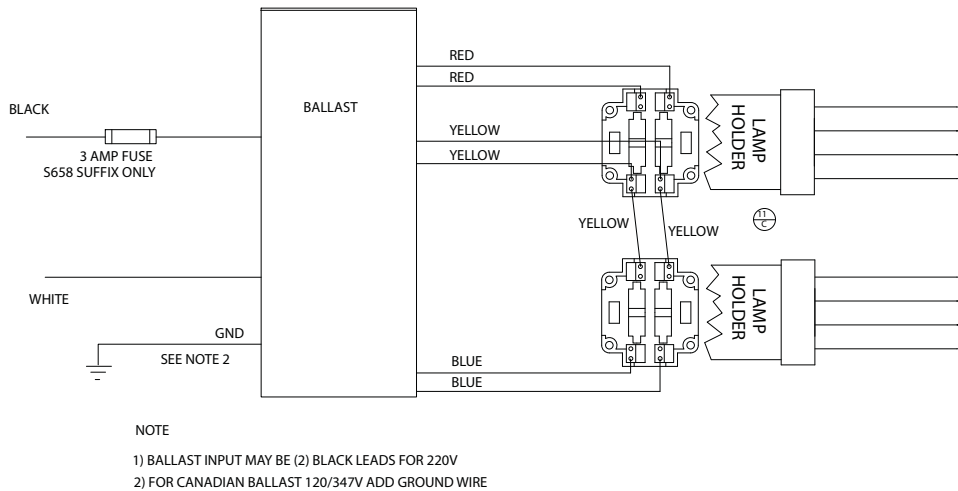


Customer to connect:
Supplied Black wire to the BLACK input lead from the ballast
Supplied White wire to the RED input lead from the ballast

Universal Voltage Wiring
with 1 Lamp for 26W & Battery Pack



120V, 220V, 277V, 347V or Universal
Voltage with 2 Lamps for 52W, 64W or 84W



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.