FVN Series Battery Unit (S799)
Fluorescent Industrial Lighting Fixtures

APPLICATION

FVN fluorescent lighting fixtures with battery packs are suitable for use in Class I, Division 2; Class II, Division 1, Groups F and G; Class III; and simultaneous presence hazardous (classified) locations as defined by the National Electric Code®. The FVN is also suitable for wet locations.

It is designed for use in industrial locations where moisture, dirt, and vibration may be a problem. The FVN can also be used in areas where simultaneous hazards may be present, such as hazardous gas, combustible dust, moisture and corrosion.

When AC power is interrupted, the fixture switches to a built-in battery power supply to light one lamp, providing emergency lighting for up to 90 minutes. When AC power is reconnected, the fixture automatically switches from battery power to AC power. While operating on AC power, the fixture circuitry recharges the battery.

FVN Series fixtures are constructed with a hinged lens assembly and wireway cover held by chain supports, for ease of lamp replacement and maintenance. Lamps are not furnished with fixtures.

INSTALLATION

**WARNING**
Electrical power must be turned **OFF** and Battery Power Switch on fixture must be in **OFF** position during installation and maintenance.

**CAUTION**
Be sure to select the proper fixture hangers suitable for use in the designated hazardous area that the lighting fixture will be used.

1. Install fixture in its support position and attach to grounded conduit system*. See Dimensions Section.
2. Open lens assembly by first releasing door latches (captive bails) on “hinge” side. Next release and disengage latches on “latch” side.
3. Remove two wing nuts that secure wireway cover. Cover is held by chain support for ease of installation.

* All conduit openings are 1/2” NPT.
4. Pull field wiring into fixture. Combine housing ground wire (green) with wireway cover ground wire (green) and connect to incoming grounded field wire. See wiring section of this instruction sheet.

**CAUTION**

Fixture must be installed on grounded wiring system.

5. Secure wireway cover to mounting brackets using wing nuts removed previously.

6. Install lamps into lamp holders on wireway cover. Use only correct lamps as specified on fixture nameplate.

7. Close lens assembly and secure with door latches (captive bails) beginning with engaging latches on “latch” side followed by (then engaging) “hinge” side.

8. After fixture installation is complete, turn Battery Power Switch ON, turn fixture switch ON, then supply AC power.

**WARNING**

All unused conduit openings must be plugged. Plug must engage a minimum of five full threads. Use plugs supplied with fixture.

**Wiring**

**WARNING**

Electrical power must be turned OFF and Battery Power Switch on fixture must be in OFF position during installation and maintenance.

1. The emergency ballast must be connected to an unswitched 120V or 277V power source. Do not connect to other voltages. On switched fixtures, an additional unswitched hot (120V or 277V) wire must be run and connected to the emergency ballast (see Diagram A). Make all wire connections to fixture leads following wiring Diagram A.

**CAUTION**

Insulation of supply conductors is to be suitable for 90°C.

2. Turn fixture switch (two position, two circuit such as a Crouse-Hinds EFS11272 or equivalent) to OFF position and turn Battery Power Switch to OFF position.

3. Complete wiring per the National Electric Code and all applicable local codes. Do not use on ungrounded circuit.

4. Return to step 5 of Installation Section.

**Lamp Replacement**

**WARNING**

Electrical power must be turned OFF and Battery Power Switch must be in OFF position during installation and maintenance.

1. Turn fixture switch to OFF position and turn Battery Power Switch on fixture to OFF position.

2. Remove old lamp(s) and/or install new lamp(s). Make sure lamp pins are properly seated in sockets. Short life or erratic operation of lamps will result if the lamps are not seated in the lampholders properly. Refer to the fixture nameplate for the correct lamp identification.

3. Close lens assembly. Turn Battery Power Switch ON and turn fixture switch ON, then supply AC power.

**Battery Pack Operation**

To verify that emergency lighting system is operating use the following procedure after the installation is complete.

1. With the Battery Power Switch ON and the fixture switch ON, open branch circuit breakers. A single lamp should light in each two lamp fixture equipped with an emergency lighting ballast.

2. Reset branch breaker and system is ready.

**WARNING**

Emergency ballast will retain electrical energy even with Battery Power Switch in OFF position. Before removing or replacing the emergency ballast, make sure that every wire lead termination is insulated to prevent electrical shock.

**WARNING**

Do not use on ungrounded circuit.

**DIMENSIONS**

![Diagram of the emergency lighting system dimensions]
MAINTENANCE

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

1. 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.
2. Visually check for damaged parts and proper lamp operation.
3. Mechanically check to make sure that all parts of the fixture are properly assembled and all nuts, bolts and door clamps are tight.
4. Clean the lens assembly with a clean, damp, soft cloth. If this is not sufficient, use a mild soap, or a liquid cleaner such as Collonite NCF or Duco #7. Do not use an abrasive, strong alkaline or acid cleaner. Damage to the lens assembly may result.

Battery Pack Maintenance – Important
The emergency ballast must be checked periodically to insure that it is working properly. The following schedule is recommended:

CAUTION
All servicing 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.
2. Test the emergency operation of the fixture at 30 day intervals for a minimum of 30 seconds. Use push to test switch located on side of luminaire and verify that one lamp is operating at reduced intensity.
3. Conduct a 90 minute discharge once a year. One lamp should operate at a reduced intensity for at least 90 minutes.
WIRING DIAGRAMS

S799 Option for (2) 32W, 40W or 60W Lamps

S799 Option for (3) 40W Lamps

S799 Option for (3) 32W Lamps

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