



*Solid State, High Voltage Power Supply For Cold-Cathode (Gas Discharge) Lighting Applications*

**FEATURES:**

- CE Certified & UL2161 Listed
- Operates from low voltage, CLASS 2 source of 12VDC @ 1A with 2.5mm barrel plug (see Specification Power: below)
- IP40 Environmental Rating
- Anti-Mercury Migration
- Open / Short Circuit protected
- Fully Enclosed, Light Weight Low Profile Case
- Suitable for Residential Applications
- Optimized for Ar/Hg loads
- Integral Sleeve GTO Output Leads

**SPECIFICATIONS:**

INPUT

Voltage: 12 VDC Nominal, unregulated  
(10-18 VDC operating range)  
Current: 1.0 Amps maximum  
Power: 12 Watts  
(800-0122 adapter for 120VAC  
800-0168 adapter for 230VAC  
with Euro Plug)

WEIGHT

0.3 Lbs. (136 g.)

OUTPUT

Rated Output: 1.8kV rms  
Short Circuit Current 18 mA rms  
Equivalent Sign Volts: 3.5kV maximum  
Frequency 30-40 kHz

TEMPERATURE

Ambient operating: 104°F (40°C) Maximum (in open air)

**Two Models:**

**800-0121** The standard 224 is intended for use inside a housing, where the threaded bulkhead power connector provides a means of mounting and disconnect.

**800-0140** The 224 with a switch is intended for mounting on a bar frame; where the extra length cable, switch, and shrouded power connector can free hang from the sign.

**Operation Under Fault Conditions:**

Under an open circuit condition, the unit will limit its output below 2kV rms. When a proper load is restored, normal circuit operation will automatically return.

**TABLE 1**

LUMINOUS TUBE LENGTH FEET(METERS)							
Tube Size Diameter [mm]	15	13	12	11	10	9	8
Fill Pressure mm of Hg at 100°C	9	10	11	12	13	15	16
Tube Length - Mercury/Argon *	12(4,0)	11(3,4)	10(3,0)	9(2,7)	8(2,4)	8(2,0)	8(1,5)
* Neon tube lengths are not indicated because of a tendency to bubble							
TUBE LENGTH ADJUSTMENTS: Deduct 1.0 ft (0,3m) for each electrode pair over the first pair. Deduct 2.0 ft (0,6m) for use with sheet metal or large metallized sign frame. Deduct 2.0 feet for each 20°F (11°C) above ambient temperature of 75°F (24°C).							

## 224 Series 120VAC Model 800-0121, 800-0140 (SW)

### INSTALLATION:

#### Mounting (see Figure 1):

- For Indoor Use Only
- Use (2), #8-32 machine screws, at least 5/16" (8mm) longer than the thickness of the mounting surface, and (2) #8 KEPS nuts, or (2) #8 hex nuts with internal tooth lock washers.
- No Earth grounding means is required if the sign has no exposed metallic surfaces.
- If mounting to a metal surface other than a bar frame, a minimum 0.5 in. (13mm) thick non-metallic spacer must be used.
- Proper grounding of a metallic sign frame requires the use of a separate Earth bonding wire sized #18 or larger. A bonding stud or screw must be provided on the sign for attachment of the Earth bonding wire.

- CAUTION -

This device should not be mounted in spaces or near objects that may exceed an ambient temperature of 40°C (104°F).

#### Wiring:

- The molded socket on the power cord must be connected to a Class 2, 12VDC ( 1A. maximum ) power source. A standard 2.5mm barrel plug with positive (+) center hole is required.
- The tube load for each power supply shall not exceed the footage limits specified in Table 1.

- CAUTION -

When two or more power supplies are required on a single neon sign, the output leads from one MUST NOT be wired in series or in parallel with the leads from the other(s).

#### Application Notes:

- The 224 is optimized for the operation of Ar/Hg signs and will not cause mercury migration.

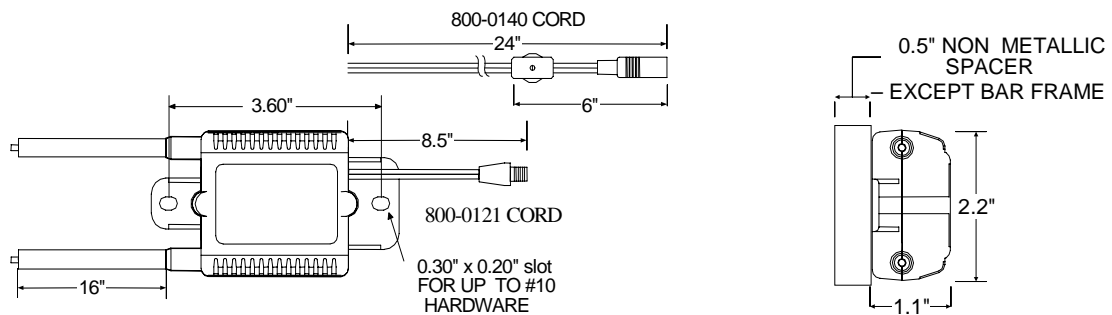


FIGURE 1

#### WARRANTY:

Everbrite Electronics, Inc. warrants to the original purchaser the product described herein to be free from defects in material and workmanship for a period of four years from date of manufacture and will replace or repair, at the discretion of the manufacturer, products found to be defective. The liability of the company is limited to the replacement of the defective product.

No other warranty, whether expressed or implied, including any warranty of merchantability of fitness for a particular purpose, shall exist in connection with sale or use of such products.