

## Installation Instructions

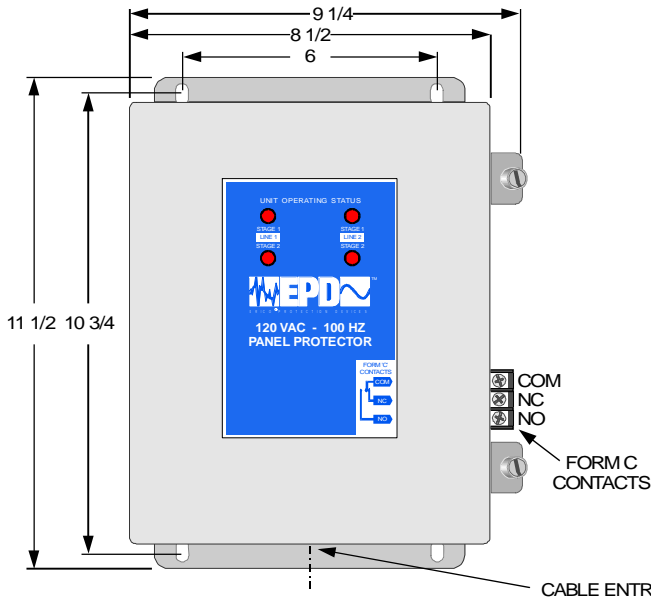


FIG. 1

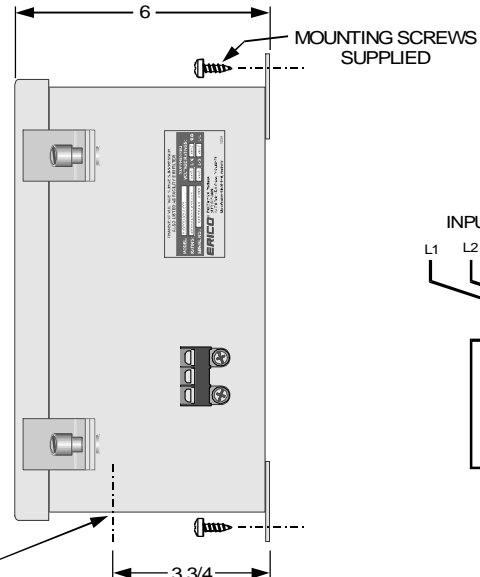


FIG. 2

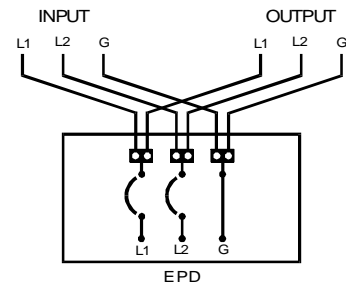


FIG. 3

### PREPARATION



**DANGER:** Electrical shock or burn hazard. Installation of Primary Surge Protector should be made by qualified personnel. Failure to lockout electrical power during installation or maintenance can result in fatal electrocution or severe burns.

1. Disconnect and lockout power to the breaker box (load center) or point where the Primary Surge Protector is to be installed. Follow all applicable electrical codes & procedures.



**CAUTION:** Check to make sure line voltage does not exceed Surge Protector voltage requirement. Note also the AC frequency requirements of these Surge Protectors.

### PROTECTOR MOUNTING AND LOCATION

2. The Surge Protector is to be mounted as close to the power entrance point as possible to maximize performance.
3. The Surge Protector can be attached directly to a wall panel:
  - a) Drill 3/16 diameter pilot hole in the wall panel. See FIG. 1 for mounting hole configuration.
  - b) Mount unit with (4) #12 x 3/4-lg. screws supplied. See FIG. 2

### AC ELECTRICAL CONNECTION

4. The Surge Protector should be wired as shown in FIG. 3 to provide maximum performance. This allows for a “zero” lead length or Kelvin connection to the Surge Protector. When using this recommended method, use the two outer knockouts, so that the input wiring enters on one side, and the output wiring exits on the other side. It is possible to wire the unit parallel to the supply. In this case, tap conductors are run into the unit (the single center knockout may be used), and only one wire lead terminates on each wiring terminal. This method does not provide the optimum surge performance of the recommended Kelvin connection method.

**NOTE:** Where a supply transformer is used, the Surge Protector should be placed on the load side of the supply transformer for optimal performance.

5. The knockouts are sized to fit 1” fittings, but may be enlarged if necessary to take larger fittings. The terminals will accept wiring up to #2 AWG, but the maximum wire size possible will be determined by the type of wire and the fitting size used. **Ensure that the wiring size chosen meets applicable codes.**

**NOTE:** The Surge Protector must be properly and securely connected to the system ground. Note also that there is no neutral connection available on this unit.

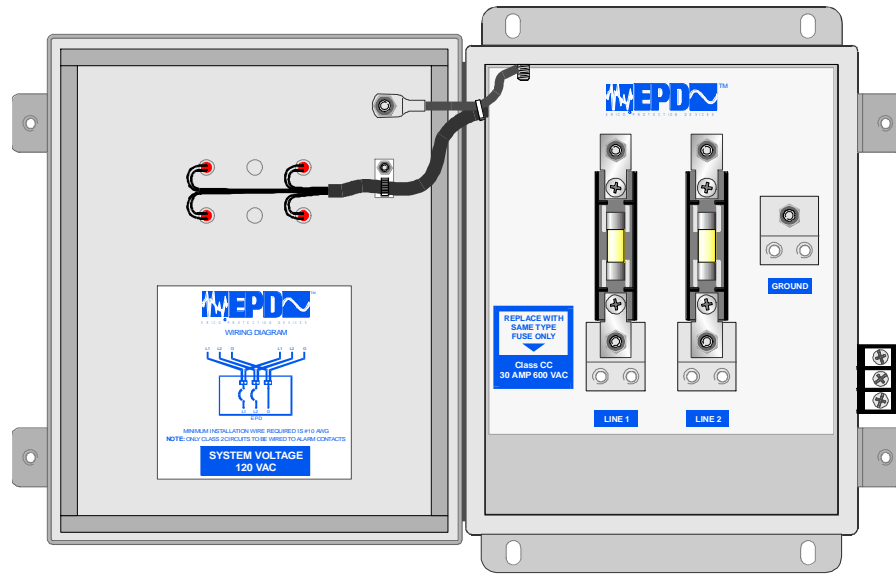


FIG. 4

- Wiring to and from the Surge Protector terminals should have the bend radius kept large where applicable (4"-8" recommended). The wire leads should be kept as short as possible and twisted together for optimal performance. The terminals should be tightened as recommended in the following table:

Wire Size (AWG)	14-10	8	6-4	3-2
Torque (in.lbs)	35	40	45	50

**ALARM RELAY CONNECTION**

- This Surge Protector unit is provided with a set of Form 'C' contacts (FIG. 1) which can be wired to indicate when the Surge Protector has sustained damage. The contacts are rated at 2A 30Vdc, 0.6A 110Vdc, 0.6A 125VAC. By common convention, the NO (normally open) and NC (normally closed) contacts adopt these conditions when the Surge Protector is de-energized. This means that when the Surge Protector is powered on and is fully operational (both status LEDs illuminated), the NC contact will be open, and the NO contact will be closed. Should power be lost to the Surge Protector (this may include one of the fuses blowing – see Maintenance section below), or the protection circuitry fail (one or both of the status LEDs extinguish on any given line), the relay contacts will change state, such that the NC contact will be closed, and the NO contact will be open.



*CAUTION: The relay contact wiring block has exposed terminals, and must not be wired with hazardous voltages.*

**ENGAGING POWER**

- Tighten and verify all connections, close Surge Protector box and engage power to the protector. All Status LEDs should come on, and relay should change state, indicating correct operation. If not, disconnect power, check wiring, check the fuses, rectify any deficiencies, and repower. If still experiencing difficulties, please contact your supplier, or the manufacturer:

ERICO, Inc.  
Rail Electrical Products  
34600 Solon Rd  
Solon OH 44139  
Ph. (800) 447-7245  
Ph. (440) 542-3939

**INDICATORS**

- There are two LEDs on the front panel for each line protected which, when illuminated, indicate that the protection circuitry is operating correctly for that line. If one LED has extinguished, the Surge Protector has sustained a surge beyond its ratings, and the protection has been compromised. While there is still some protection provided, the Surge Protector should be replaced as soon as possible. If both LEDs for one line have extinguished, no protection is being provided. Replace the Surge Protector immediately.

**MAINTENANCE**

- This unit requires no regular preventative maintenance. However, if the unit receives a large surge, one or more of the internal fuses may blow. If this occurs, replace the blown fuse(s) with identical types (Class CC, 30A, 600VAC) and repower. All Status LEDs should come on, and relay should change state, indicating correct operation. If not, the protector has suffered internal



*EPD25HZ120TDF (25Hz, 120 VAC)*  
*EPD100HZ120TDF (100Hz, 120 VAC)*

**Fused Primary Surge Protectors**

**Parallel TVSS Filters**

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damage and should be replaced. Please contact your supplier, or the manufacturer, as listed above.