

# Delta Lightning Arrestor



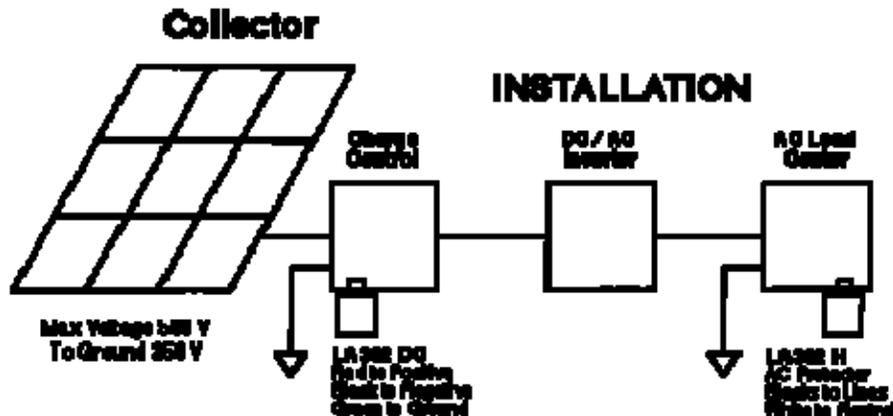
- Protect your sensitive solar or wind energy systems
- Weatherproof Enclosure
- DIMENSIONS: 2-1/4" High, 2-1-4" Diameter
- Current: 60,000A Surge
- Joules: 2,000 per Pole
- Operations: No Limit
- Leak Current: None
- Leads: 18" #12 AWG

## Installation

If there is a surge so strong that something must be damaged, we prefer that it'd be an arrestor rather than your equipment. Since you should expect the arrestor might be damaged, install it in a regular electrical enclosure to protect personnel from accidental contact with live parts. Should the arrestor be damaged, it will not damage other components in the box. If the arrestor cannot be placed in an enclosure, consider using our vent valve model. Its case will not rupture. A small vent on the bottom of the case will open.

To protect a house, the arrestor should be mounted on an outside switch or junction box, or in the breaker box. The black wires should be connected to the circuit. The white wire should be connected to the neutral, the box, and/or a solid ground.

To protect electronic equipment such as computers, transmitters, receivers, etc., connect the black wires to the terminals of the device and the white wire to chassis. Mount the arrestor in the cabinet. Consider using a surge capacitor connected to the breaker feeding them.



To protect a watt-hour meter, connect the black wires to the line terminals, and the white wire to the meter box.

To protect a submersible pump motor, connect the black wires to the line terminals and the white wire to the casing and/or tubing.

To protect an electric motor on machinery, connect the black wires to the motor leads and the white wire to the motor frame.

To protect equipment on a radio tower or a drilling rig, mount the arrestor to a junction box at the bottom of each string of lights going up to the tower. Connect the black leads to the circuit conductors and the white wire to the rig steel. Arrange for the conductors feeding the junction box to be parallel with the earth. Connect an arrestor to the generator leads grounding the white wire to the generator frame. Connect an arrestor to each lighting panel connecting black wires to the circuit conductors, and the white wire to the box and rig frame.

Where the switch and motor are within six feet of each other, one arrestor will protect both provided a solid ground wire is fastened to the switch box, motor frame, and arrestor white wire. However, optimum protection is afforded only when the arrestor is connected directly to the device to be protected.

To protect a motor control switch separately, connect the black wires to the line terminals and the white wire to the box.

In all cases, it is the electrical insulation that is to be protected. Once in the circuit, the high voltage ruptures the insulation of the equipment in its effort to discharge to ground. The arrestor provides a parallel path to ground for the current discharge. Consequently, the black wires need to be connected to the circuit, and the white wires need to be connected to the metal frame of the machine or device to be protected. A mere ground connection will not necessarily provide protection; however, it should be used in addition to the frame connection.

**Caution!** Electrical work can be dangerous and should only be attempted by persons experienced to do so. Accidental contact with electrically charged parts can cause injury or electrocution. Loose connections can cause over heating, damage to equipment, and fire.

The arrestor remains good and functions properly as long as its enclosure is intact. Should the arrestor ever be damaged the enclosure will burst. While it is not possible to achieve one hundred percent protection, the Delta Arrestor will greatly reduce problems due to lightning and power surge. This device is to be installed in accordance with all applicable requirements of the National Electrical Code.

**Warning!** To reduce the risk of fire, electric shock or personal injury, this secondary surge arrestor shall be installed in conjunction with a disconnecting means which shall consist of a manually operable Listed circuit breaker that has an interrupting rating sufficient for the nominal circuit voltage and the current that is available at the line terminals of the secondary surge arrestor. Connect black wires to lines load-side of fuse/breaker. Connect white wire to neutral/ground lines.

## Guarantee

Delta Lightning Arrestors guarantees and warrants to the end user that this arrestor is free from defects in workmanship and material. The arrestor is designed to conduct 60,000 amps of lightning or surge to ground without damage. When lightning or surge is in excess of 60,000 amps, the arrestor is expected to experience damage. In the event the arrestor should damage due to defects, return it to the factory with payment of five dollars to cover shipping and handling and it will be replaced. This guarantee is limited to replacement. There is no other warranty, expressed or implied.

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