

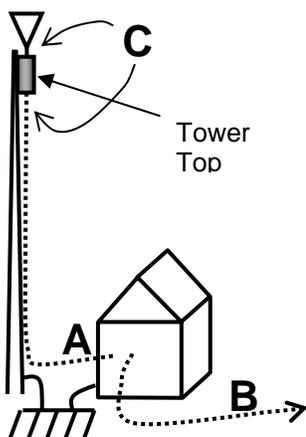
General Mounting and Grounding Instructions for Coaxial Surge Protectors

NexTek Coaxial Surge Protectors provide reliable protection from high voltage surges in coaxial lines. These protectors provide long life protection and are critical components for high reliability and uptime communication systems.

The source of surges usually includes lightning, power line faults and switching, and static discharge. In order to function properly and protect against these surges, the protector must be installed, grounded and maintained properly, and used within specified limits.

General Rules

1. Install within 3' (1m) of the entrance to a protected zone (building, shelter or enclosure).
2. Ground bond wires should be short, avoid bends, and be larger ampacity than the shield.
3. Use a common ground for all suppressors (ac power mains, network and telecom lines).
4. If a unit has a "PROTECTED" side, orient this side toward the protected equipment, away from the exposed lead-in coaxial cable.



Location

Protectors should be installed near the coaxial entry from exposed cable runs. Typical coaxial entries from exposed areas include:

- A. Down leads into a building or cabinet from towers or outdoor antennas.
- B. Cable entry from other buildings or outside networks.
- C. Antenna interface into transmitters or tower top amplifiers, and transmitter or tower top amplifier down leads.

For critical applications, an interior second protector near the equipment to be protected is recommended in addition to A or B.

CAUTION

NexTek lightning protectors are high capacity devices for coaxial lines. The high energy and current associated with the operation of these devices should have expert installation and maintenance.

1. Do not install or repair while there is a threat of thunderstorm activity.
2. Do not replace protective Gas Discharge Tubes while transmitting high RF power.
3. Consult a protection professional for a complete protection design, including protection of personnel and all wiring interfaces, and ground system qualification.
4. Follow electrical, grounding, building and lightning protection codes and practices.
5. Follow RF power handling practices appropriate to the application.

Mounting and Grounding

Ground the protector within 3ft (1m) of entry into the protected area. Ground bond conductors should be less than 3ft (1m) feet long. Ground bond conductors should be 2X the area of the coaxial shield, or a minimum of 6 AWG (15mm²) for a 7-16 or 10 AWG (3.5 mm²) for an N protector.

<p align="center">Through Panel / Bulkhead</p>	<p align="center">To a ground bar or panel surface</p>	<p align="center">Grounded by a wire jumper or strap</p>
<ul style="list-style-type: none"> ✦ Best grounding and shielding ✦ Strain relief loop needed for rigid cable ✦ Mounting hole size for each connector 	<ul style="list-style-type: none"> ✦ Better grounding ✦ Easily installed with simple holes ✦ Cable should include strain and drip loop 	<ul style="list-style-type: none"> ✦ Good ground with a short wire ✦ Accomodates cable movement ✦ Very easy installation

Tightening

Mount the protector and tighten the connector coupling nuts and mounting or grounding nuts to ensure long term reliable operation.

Component	N Mount Nut	N or TNC Coupling Nut	7-16 Mount Nut	7-16 Coupling Nut	M8 (Boss)	M5 (Bracket)
Inch-pounds	80	12	300	200	130	40
N-m	10	1.4	35	22	15	4.5

Other Application Tips

1. Select the protector based on the RF frequency, connector, RF power and dc capability.
2. Limit the unprotected coaxial lead-in into the protected zone to 3' (1m) to reduce high energy into the protected area. For severe exposure locations, use a bulkhead mount to eliminate this risk.
3. Make sure that the mounting surfaces are clean, dry and fully tightened.
4. If a protector is rigidly mounted, install a strain relief bend in large coaxial cables.
5. Allow for access to replaceable components, preferably with access ports oriented down.
6. Use weatherproof mating connectors. Field terminations may need moisture wrap.
7. Do not install during precipitation, as water can enter unmated ends. Use o-rings for bulkheads.
8. Shield protectors from damage, including cable loading, abuse, corrosion, ice or water.
9. Use copper alloy materials (including brass). (Plated aluminum only for dry indoor locations.)