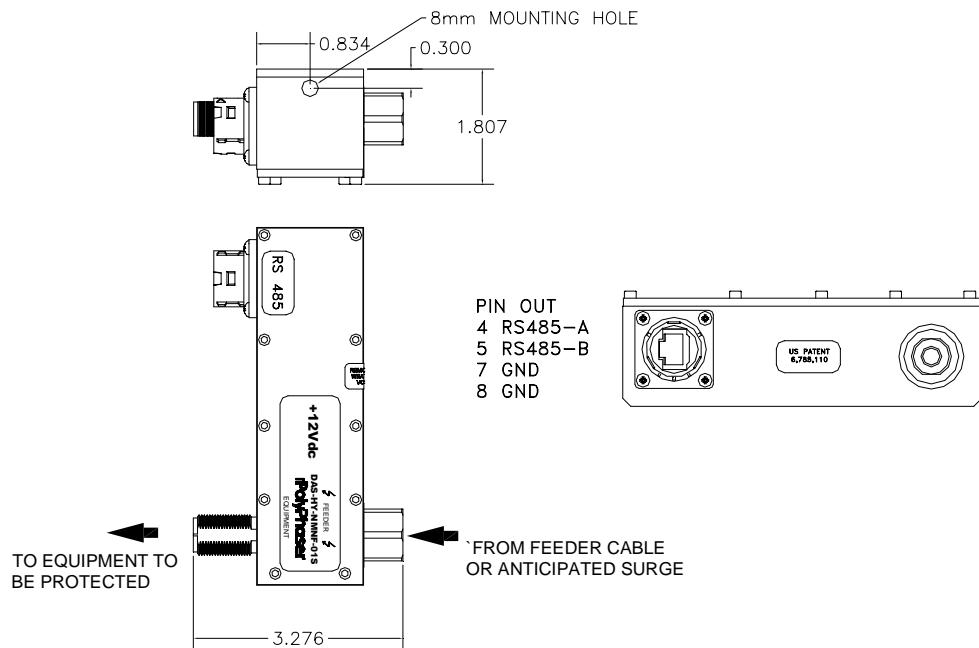


IMPULSE SUPPRESSOR INSTALLATION
PLEASE READ DANGER SHEET BEFORE INSTALLING
DAS-HY-NMNF-01S

The DAS-HY-NMNF-01S is located at the tower base. This unit accepts RF power, RS 485 telemetry, and +12Vdc. Maximum average RF power use is 750 Watts. Connect the Feeder port to the tower coax line. The dc circuit has spike protection to suppress spikes over +14V. This DAS-HY-NMNF-01S is capable of 40,000 Amp maximum surges and has a frequency range of 800MHz to 1.0GHz and 1.6GHz to 2.0GHz. RS 485 telemetry carrier is 2.176MHz.



IT IS VERY IMPORTANT THIS UNIT BE GROUNDED TO A LOW IMPEDANCE (LOW R AND LOW L) GROUND SYSTEM IN ORDER TO WORK PROPERLY. When attaching grounding stud (M8), use maximum of 88.5 lbf-in [10 N-m] of torque. "N" mating connector torque is 15-20 lbf-in [1.70-2.26 N-m]. We strongly recommend this ground be interconnected to the tower ground and power ground to form one system. To minimize the "in-air" interconnect inductance to the ground system since skin effect is present, use as straight and as large a surface area strap as possible. Keep bends to 8.0" [203.2mm] radius or larger.

The transmission line is only one means of having damaging impulse energy enter your equipment. We strongly recommend power line protectors be used on the equipment.

These commodities or technology are exported from the U.S. in accordance with the Export Administration Regulations. Diversion contrary to U.S. law prohibited.

DANGER

PLEASE REVIEW THIS SHEET PRIOR TO ANY INSTALLATIONS.

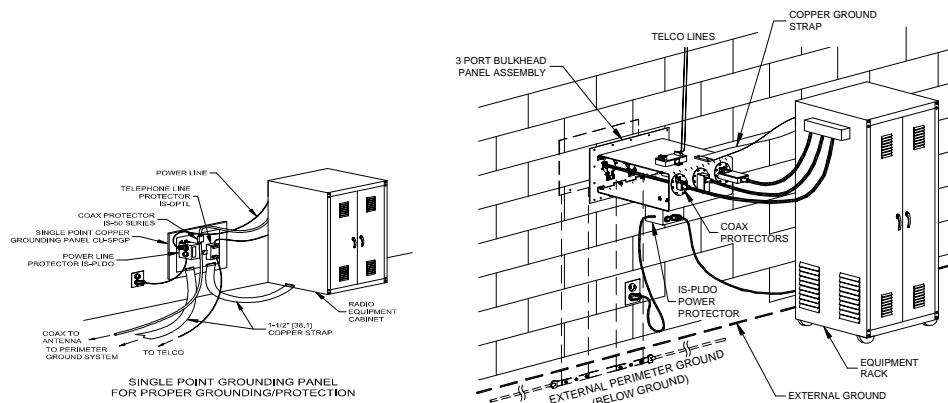
A GOOD GROUND SYSTEM IS REQUIRED FOR PROPER INSTALLATION AND OPERATION. THE IMPULSE SUPPRESSOR IS ONLY AS GOOD AT SUPPRESSING IMPULSES AS THE ELECTRICAL GROUND SYSTEM THAT IS CONNECTED TO THE UNIT.

DO NOT CONNECT WHEN A STORM IS NEAR. DO NOT CONNECT WHEN TRANSMISSIONS ARE OCCURRING.

50% of the time a lightning strike occurs in groups of two or three strokes with the first stroke having 20,000 amps and then less for the following strokes. Each stroke may have a rise time of $2.1\mu\text{s}$ to the peak current and decay between 10 to $40\mu\text{s}$.

Most antenna installations are mounted on a continuously conductive mast or tower which when properly grounded, should conduct the larger share of the strike current, thus leaving only a fraction (50% or less) for the RF transmission line to handle. Therefore, the current capability of the impulse Suppressor should be sufficient for all but the rare percentage of super strike occurrences when properly installed to a good low impedance ground system.

DO NOT STAY AROUND OPERATING EQUIPMENT IN AN ELECTRICAL STORM. THE IMPULSE SUPPRESSOR MAY SAVE THE EQUIPMENT FROM DANGER, BUT CANNOT KEEP PERSONNEL IN THE AREA SAFE.



We recommend the coax, power, and telephone protectors, if used, all be mounted/grounded together on a bulkhead plate or wall and the equipment chassis also be grounded only to this plate. The plate is then grounded to the ground system. Only by using this single point ground system can the equipment really survive a direct lightning strike.

WARNING- Do not connect during a storm! **Do not connect** when transmissions are occurring! **Do not stay** in an area that has operating equipment in an electrical storm!