Symmetricom

GPS In-Line Lightning Arrestor

KEY FEATURES

- Industry's best RF Performance
- Low throughput energy
- Multi-strike capability

Lightning damages communications sites all over the world every day. Lightning does not have to strike the antenna to significantly damage the antenna or the GPS receiver. GPS antenna damage is usually due to the effects of a lightning strike on a nearby structure, not the result of a direct lightning strike. Since lightning strikes may induce damaging voltages in the antenna system when striking nearby objects, attempt to locate the antenna at least 15 meters away from lightning rods, towers, or structures that attract lightning. Also, locate the GPS antenna lower than any structures that will attract a strike.

Lightning arrestors will protect your systems from lightning damage. In-line lightning arrestors are mounted on a low impedance ground between the antenna and the point where the cable enters the building. This is a commonly used configuration since there is often a good earth ground nearby to connect to. The lightning arrestors require no additional power or wiring except the ground lead.

If the cable between this lightning arrestor and the GPS receiver is longer than four meters, consider placing a second lightning arrestor within four meters of the GPS receiver. The second arrestor reduces any lightning-induced voltages in the cable to the receiver.

These units use separate RF (DC-Blocked) and dc paths through the protector. This design results in low throughput voltage and energy.

GPS In-line Lightning Arrestor

GPS In-line Lightning Arrestor Specifications

DATA AND RF SPECIFICATIONS

- Frequency range: 800 to 2500MHz
- Insertion loss: ≥0.1dB over frequency range
- Voltage standing wave ratio: 1.1 : 1

ELECTRICAL SPECIFICATIONS

- Current: 4Adc
- Power: 2.25 Watts RMS average
- Turn on: +16.5V dc
- Turn on time: 4ns for 2 kV / ns
- Operating voltage: +15V
- Usage current: ≥4.0 mA continuous
- Unit impedance: 50Ω
- Polarity: +

INTERFACE SPECIFICATIONS

- Mounting: Bulkhead or flange
- Protected side connector: TNC Female 50Ω
- Surge side connector: TNC Female 50Ω

PRODUCT INCLUDES

- Lightning arrestor, 25' or 50' Beldon 9104 cable with TNC terminations

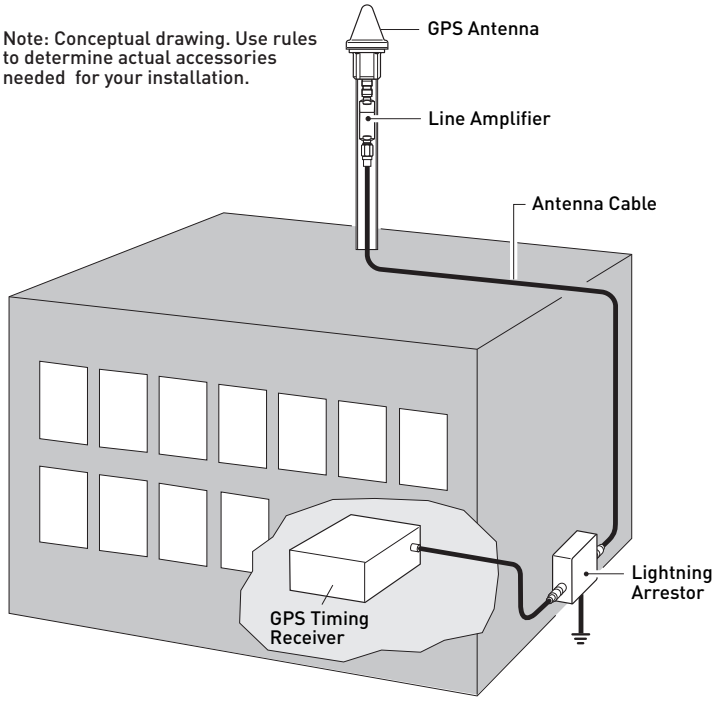
ENVIRONMENTAL SPECIFICATIONS

- Relative humidity: to 95%
- Temperature range: -50°C to +85°C storage/operating
- Weatherization: Meets 60529 IPC67
  Meets Bellcore #TA-NWT-000487
  Procedure 4.11, wind driven (120 mph)
  rain intrusion test
- Maximum surge: 20kA IEC 61000-4-5
  8 / 20 microsecond waveform
- Throughput energy: ≥500µJ @ 8/20µs Waveform

OPTIONS	Part No.
• GPS Lightning arrestor kit w/25 ft. (7.5 m) cable	150-709
• GPS Lightning arrestor kit w/50 ft. (15 m) cable	150-710

Lightning Arrestor Kit (shown with 25' cable)

Note: Conceptual drawing. Use rules to determine actual accessories needed for your installation.



Common GPS Antenna Equipment Placement

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