

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.

Specifications

Data and RF Specifications	
Frequency range	800 to 2500 MHz
Insertion loss	≥0.1 dB over frequency range
Voltage standing wave ratio	1.1 : 1
Electrical Specifications	
Current	4 Adc
Power	2.25 Watts RMS average
Turn on	+16.5 V dc
Turn on time	4 ns for 2 kV / ns
Operating voltage	+15 V
Usage current	≥4.0 mA continuous
Unit impedance	50 W
Polarity	+
Interface Specifications	
Mounting	Bulkhead or flange
Protected side connector	TNC Female 50 W
Surge side connector	TNC Female 50 W
Product Includes	
Lightning arrestor, 25' or 50' Belden 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 drive (120 mph) rain intrusion test
Maximum surge	20 kA IEC 61000-4-5 8 / 20 microsecond waveform
Throughput energy	≥500 μJ @ 8 / 20 μs Waveform

CE Compliance

EN 60950-1 2006/A11:2009/A1:2010 A12:2011
RoHS 2 2011/65/EU

Options and Ordering Information (contact Microsemi for pricing and availability)	Part Number
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)

