

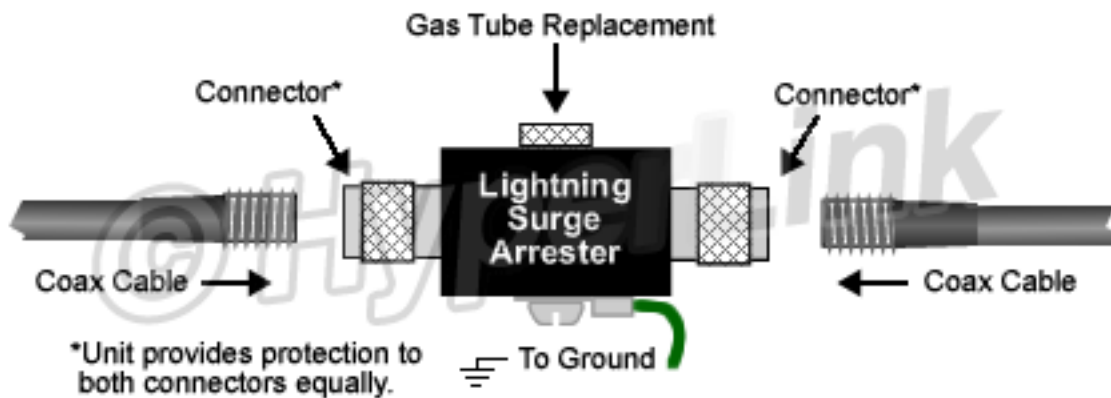
## Description

The Altelicon™ Lightning Protector Model AL-NMNFB is a gas discharge tube suppressor featuring wide-band operation up to 3 GHz. This unit features a N-Male to N-Female Bulkhead connector with a rubber O-ring seal for mounting through an enclosure wall or with the included aluminum mounting bracket.

Due to its low cost and superior RF performance, this unit is ideal for IEEE 802.11b and 802.11g Wireless LAN applications, as well as ISM, MMDS, Cellular, and PCS applications. Since this protector will pass DC, it is suitable for applications where DC is carried through the coax cable, such as remote amplifiers and LNAs.

Both connector ports of this unit are equally protected. This provides protection no matter which way it is installed. Either port can face the antenna and either port can face the equipment.

The unit's replaceable gas tube element, multi-strike capability, and fast response time make it suitable for a wide range of applications. A ground lug and terminal are supplied directly on the lightning protector housing, which provides superior grounding.



## Specifications

Electrical Specifications	
Frequency Range	0 - 3 GHz
Protector Complies With	IEC / IEEE Standard
VSWR	1:1.3 Max (0 - 3 GHz)
Insertion Loss	0.4 dB Max (0 - 3GHz)
Impedance	50 Ohm
Standard Gas Tube Element: DC Breakdown Voltage Indicated	90 V ± 20%
Available Gas Tube Elements: DC Breakdown Voltages Indicated	230 V ± 20% 350 V ± 20% 600 V ± 20%
Gas Tube Impulse Breakdown Voltage	1000 V ± 20%
Gas Tube Insulation Resistance	10,000 MΩ
Maximum Withstand Current	5 KA

RF Power Rating							
Model Suffix	Voltage Rating	DC ~ 30MHz		30–500MHz		500MHz–3GHz	
		PEP <sup>1</sup>	CW <sup>2</sup>	PEP <sup>1</sup>	CW <sup>2</sup>	PEP <sup>1</sup>	CW <sup>2</sup>
-9	90 Volt	110W	55W	65W	32W	20W	10W
-2	230 Volt	280W	140W	110W	55W	40W	20W
-3	350 Volt	650W	325W	260W	130W	100W	50W
-6	600 Volt	2KW	1KW	800W	400W	320W	160W

Mechanical Specifications	
Connectors Comply With	MIL-C-71A, 39012 Standard
Connectors Types	N-Male to N-Female Bulkhead
Connector Body Material	Nickel Plated Brass
Body Material	Aluminum
Pin Material	Gold Plated Brass
O-Ring Material	Rubber
Bracket Material	Aluminum
Ground Lug	10 AWG Max.
Max. Panel Thickness (Bulkhead Connector)	0.312" (7.93 mm) Thick
Dimensions (L x H x W)	3.3 in x 1.6 in x 0.8 in (84 mm x 40 mm x 20 mm)
Weight	3.17oz (89.8g)

Environmental Specifications	
Temperature Range	-67°F to 185°F (-55°C to +85°C)
Dust and Waterproof Rating	IEC 529 / IP65
Moisture Resistance	MIL-STD-202 Method 106D
Salt Fog	MIL-STD-202 101D/B
Temperature Shock	MIL-STD-202 107D/A-1
Vibration	MIL-STD-202 Method 204D/B
Shock	MIL-STD-202 Method 213B/A
RoHS Compliant	Yes

## Notes:

1 - Peak Envelope Power (PEP): The average power supplied to the antenna transmission line by a transmitter during one radio frequency cycle at the crest of the modulation envelope taken under normal operating conditions.

2 - Continuous Wave (CW): A wave of constant amplitude and constant frequency.