

M O O N R A K E R

Type LPS

Lightning Protection Grounding Rod

Moonraker LPS Rods provide a low impedance path for lightning strikes to ground. They are equally suitable for protecting a large rooftop area of a building or for shipboard use when strategically placed around the upper perimeter of the area to be protected.

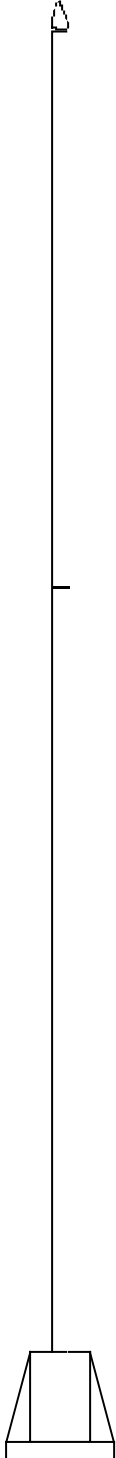
Lightning tends to take the path of least impedance (resistance and inductance). The LPS keeps this impedance to a minimum by the use of tempered marine grade aluminium tube which provides a large low loss surface area minimising the skin effect. Combined with this lowering of inductance from skin effect is the inherent low resistance of aluminium to provide an overall low impedance path. This type of construction keeps the overall weight low, important in modern ship design. The LPS also features a stainless steel tip sharpened to increase the intercept capability of the lightning leader in the charged field below a thunderstorm.

Mounting is via a cast aluminium alloy base flange and support tube integrally connected to the LPS Rod. A stainless steel stud provides direct electrical connection to the earth system or to the metal deck or superstructure of a ship. The base and the rod are fully protected by a high durability epoxy based coating resistant to chemical attack, abrasion and the effects of ozone and ultra-violet radiation.

For ease of transport, the LPS is supplied in two slip together sections, complete with special jointing shroud and conducting grease sealing kit. Standard colour is low reflecting silver grey.

Specifications

Current Capability	Multiple lightning strikes of 250,000 Amperes
Inductance (total)	3.2 micro henries
Resistance (total)	0.7 milli ohms
Overall Height	4m (13.1ft) and 5m (16.4ft) versions
Diameter	Base element: 32mm (1.3 in)
Construction	Aluminium alloy A6063 Temper T81 with stainless steel 316 rod tip
Wind Survival	250km/h (156 mph)
Bending Force	139MPa at rod base including 1.5 safety factor (minimum yield tensile strength for A6063 T81: 205MPa)
Shock	Capable of operation after three successive shocks applied in each direction of three mutually perpendicular axes at : 981m/s for 6mS duration upwards, downwards and horizontally
Vibration	Designed for 10 hours in any of three perpendicular directions: 1.25mm 5-14Hz; 0.45mm 14-23Hz; 0.125mm 23-33Hz
Connection	Stainless steel stud and lock nuts at side
Mounting	Base flange, 152mm (6 in) diameter with 4 x 9mm (0.4 in) diameter holes located equidistant on a 127mm (5 in) circle
Weight	5m version: 7.8kg (17.2 lbs)



Specifications subject to change 11/07

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