

# Series 3400

## Quarter-Wave Lightning Protectors

### Description

SUHNER quarter-wave lightning protectors offer the best lightning protection available in the market, as they form a short for surge signals basically. They have been established as a worldwide industry standard by HUBER+SUHNER as the original manufacturer.

The products are maintenance-free and feature the best protection performance with both the highest surge-current-handling capability and the

lowest residual pulse amplitude. Also, their RF performance is superior to other designs, including passive intermodulation.

SUHNER lightning protectors series 3400 offer a large variety of products and can be adapted to any application. Besides connectorization and mounting principle, the frequency range has to be selected properly due to their generally limited bandwidth.

### Features

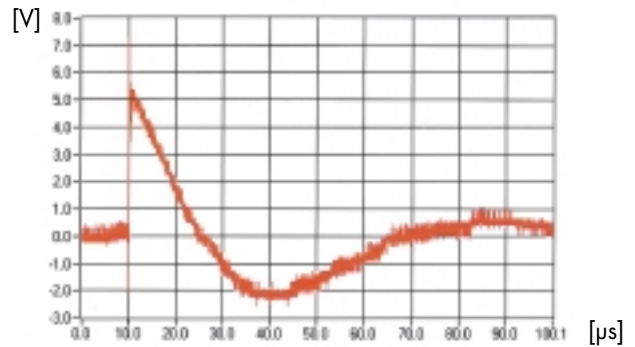
- Narrowband (typically 2 to 20% of centre frequency)
- Available within 60 MHz to 18 GHz max. (N, SMA)
- Best PIM performance
- Highest current-handling capability up to 100 kA max.
- Maintenance-free

### Specification

Electrical data	Requirements
RF:	
Impedance	50 or 75 $\Omega$
Frequency range	according to product specification, basic range from 60 MHz to frequency limit of coaxial interface
RL	20 dB min.
IL	0.1 dB max. (0.2 dB max. for $f \geq 3$ GHz)
PIM	according to product detail specification (specified products $-150$ dBc max.)
RF power transmission	<a href="#">refer to data in Selection Terms «RF Power and DC Ratings»</a>
Protection:	
Surge-current-handling capability	N: 50 kA, DIN 7/16: 100 kA (8/20 $\mu$ s test pulse)
Residual pulse voltage and energy	for typical values refer to the following diagram

Typical residual pulse for series 3400  
(test pulse 4 kV/2 kA, 8/20  $\mu$ s):

Residual pulse voltage: 7.3 V  
Residual pulse energy: 5  $\mu$ J



Mechanical data	Requirements
Coupling nut torque force	<a href="#">according to IEC/MIL</a> 500 min.
Durability (matings)	
Bulkhead mounting torque force:	
Mounting hole diameter	
19 mm/ 3/4" max.	20 Nm/14.7 ft-lb
larger than 19 mm	35 Nm/25.8 ft-lb

Environmental data	Requirements/Test conditions
Operation temperature range	- 40 °C...+ 85 °C/ - 40 °F...+ 185 °F
Waterproof degree (IEC 529)	IP 65 min., refer to product specification, data refer to the coupled state
Temperature shock	MIL-STD-202, Meth. 107 F, Cond. B, - 65 °C/+ 125 °C
Moisture resistance	MIL-STD-202, Meth. 106 D, 10 cycles
Vibration	MIL-STD-202, Meth. 204, Cond. D, 10-2000 Hz

Material data			
Component part	Standard	Material	Plating
Housings	QQ-B-626	brass	SUCOPLATE®
Male contacts	QQ-B-626	brass	gold or silver plating
Female contacts	QQ-C-530	CuBe2	gold or silver plating
Insulators	ASTM-D-1457	PTFE	
Gaskets	ASTM-E-1418 PS 1	silicone rubber	