Series 3403 Fine Protectors

The Series 3403 Gas Capsule Fine Protectors from Huber+Suhner are a very special group of lightning protectors which provide a very high degree of protection, especially for applications with DC powering via coaxial cable. They offer an extremely effective surge pulse reduction that makes them suitable to protect even very sensitive microelectronic circuits, e.g. GPS timing systems for CDMA mobile communication systems.

Features

- basic principle: lightning protector with gas capsule and secondary protection enhancement circuit
- broadband operation
- essentially increased protection compared to standard gas capsule protectors
- AC/DC powering via coax possible (bypass feature)
- current-handling capability 30 kA once and 20 kA multiple
- residual surge pulse energy reduced by about factor 100 compared to standard gas capsule protectors.
- gas capsule preinstalled (73 Z00548, 90 V)
- waterproof IP 65

Electrical Specifications

Parameter	Requirements
Impedance	50Ω or 75Ω
Frequency Range	650 - 2500 MHz
Return Loss (1)	20,8 dB min.
Insertion Loss (1)	0.5 dB max.
RF power transmission	50W max.
DC bypass current	3 A
DC bypass voltage	15 A
Surge-current-handling capability	30 kA once and 20 kA multiple (8/20 µs test pulse)
Residual pulse voltage and energy	6 µJ typically (test pulse 4 kV 1.2/50 µs / 2 kA 8/20 µs) refer to the following diagram

(1) with gas capsule 73 Z00548 (90 V)

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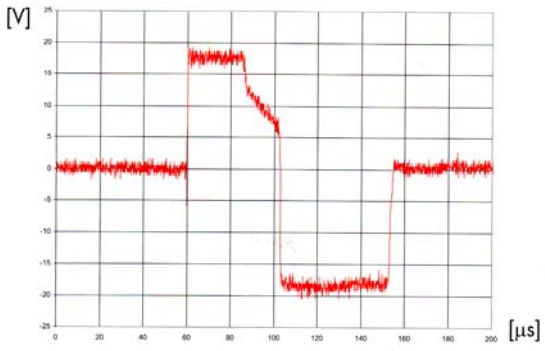
Typical residual pulse for series 3403
(test pulse 4 kV/2 kA, 8/20 µs):

Residual pulse voltage: bypass voltage +20 %
Residual pulse energy: 6 to 12 µJ



Mechanical and Environmental Specifications

Mechanical data	**Requirements**
Weight	330 g
Coupling nut torque force	According to IEC/MIL
Durability (matings)	500 min.
Mounting hole diameter 19mm / ¾" max.	Bulkhead mounting torque force 20 Nm / 14.7 ft-lb
Larger than 19mm	35 Nm / 25.8 ft-lb
Environmental data	
Operating temperature range	- 40°C to + 85°C / - 40°F to + 185°F
Waterproof degree	IP65 (according to IEC60529, data refer to the coupled state)
Temperature shock	MIL-STD-202, Meth. 107, Cond. A, - 55°C / + 85°C
Moisture resistance	MIL-STD-202, Meth. 106, 10 cycles
Vibration	MIL-STD-202, Meth. 204, Cond. A, 10G, 10 - 500 Hz

The product is designed to meet the cited test procedures. Any additional or different requirements arising from specific applications or environmental conditions not covered by the test specifications mentioned above are subject to request and need to be confirmed by the single product detail specification. We recommend additional taping for long term outdoor applications in any case.

Material Specifications

Component part	**Standard**	**Material**	**Plating**
Housing		aluminium	chromatized
Connector bodies	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	