



Description

This range of filters has been specifically designed for use on 400Hz systems and utilises capacitors with low loss dielectric material to minimise heat dissipation. By using coupled choke designs, it has been possible to provide a good performance with comparatively low capacitance values and hence reactive current. However, it must be noted that at 400Hz, reactive current can be significant and this current has to be supplied by the generator as well as the load current. The filters offer 100dB attenuation against electromagnetic noise present on the power lines from a frequency range of 100kHz to 10GHz.

Many 400Hz supplies have high levels of harmonic content. This can cause additional heating within filters, so if this is known to be the case, it is better to select a filter of higher current rating than would otherwise be required.

Typical Applications

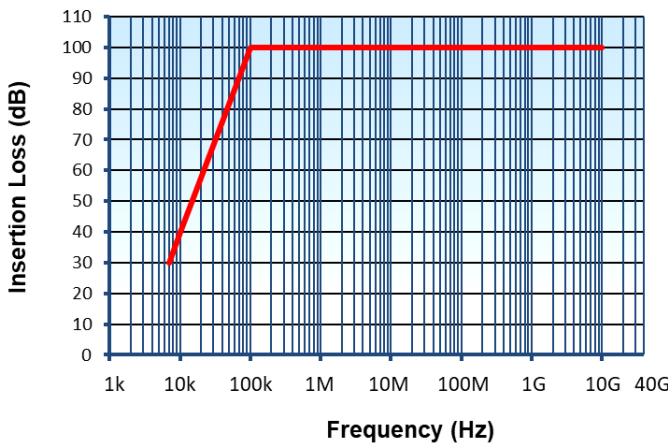
- Military power supplies
- Aircraft ground power supplies
- 400Hz computer power supplies
- Supports compliance to MIL-STD-461 & DEF STAN 59-411



Insertion Loss Performance

Asymmetric attenuation shown as measured in 50Ω system, at all loading conditions, in accordance with CISPR-17.

Performance curve meets 100dB from 100kHz to 10GHz.



Technical Specification

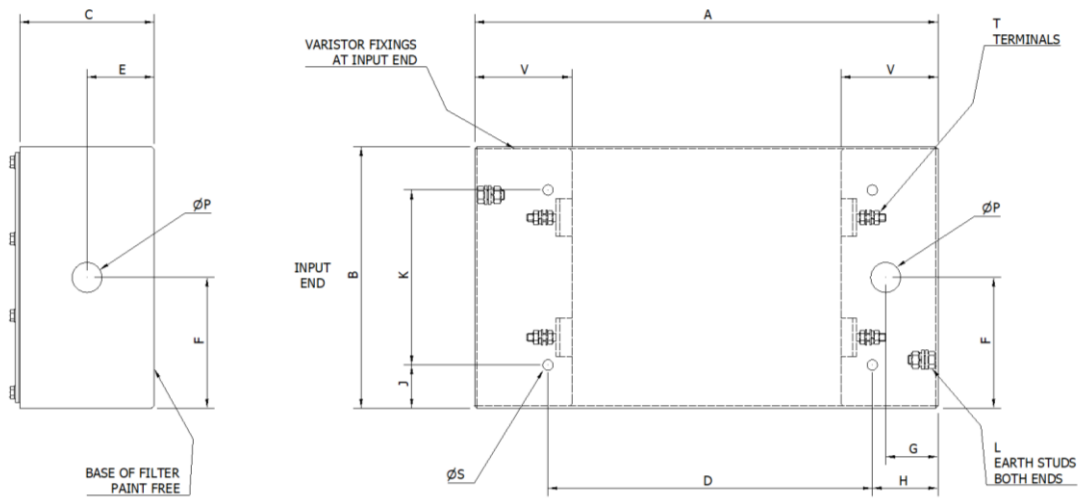
Rated Voltage	SP&N Filters	115VAC 400Hz
	TP&N Filters	200/115VAC 400Hz
Rated Current	6A to 200A (each individual line, see range available)	
Current Overload	10 x maximum rated current for 1 second 1.5 x max rated current for 10 minutes	
Discharge time	Max. 30 seconds to below 34V (filter incorporates discharge resistors)	
Temperature Rise	25°C on filter case at full load	
Storage Temperature Range	-45°C to +85°C	
Operating Temperature Range	-45°C to +50°C	
MTBF	>0.3 million hours (calculated using Mil Hdbk 217F)	
Surge Suppression (optional)	150VAC at 100J (8/20µs) All filters can be supplied with a metal-oxide varistor fitted between the input terminal and earth (case).	

Range Available

Rated Current	Part Number	DC Resistance (mΩ)	Earth Leakage (A)	Major Dimensions			Approximate Weight (kg)
				Length A (mm)	Width B (mm)	Height C (mm)	
Single Phase & Neutral							
6A	DS25900	80	0.4	310	175	90	8
10A	DS25901	50	0.4	310	175	90	8
32A	DS25902	15	1	550	205	95	16
63A	DS25903	10	1	550	205	105	20
100A	DS25904	5	1.8	640	205	120	22
200A	DS25905	2.5	7	660	475	135	60
Three Phase & Neutral							
6A	DS23700	80	1.7	310	350	90	16
10A	DS23605	50	1.7	310	350	90	16
32A	DS23606	15	3.5	550	410	95	22
63A	DS23607	10	3.5	550	410	110	32
100A	DS23608	5	7	660	410	135	45
200A	DS25907	2.5	14	660	575	150	70

Full Dimensions

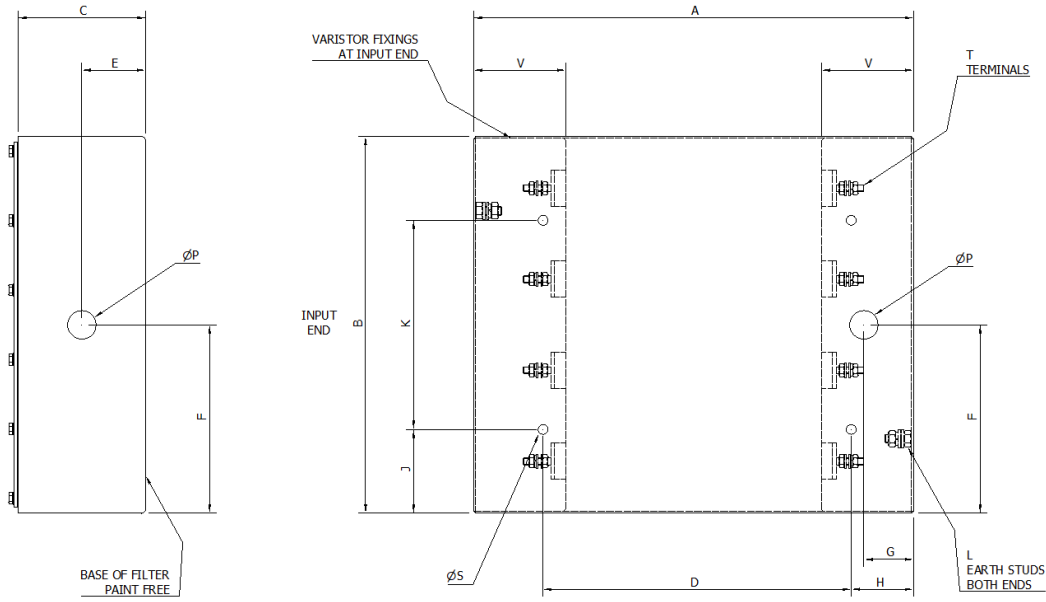
Single Phase & Neutral



Part No.	A	B	C	D	E	F	G	H	J	K	L	P	S	T	V
DS25900	310	175	90	212	45	88	35	49	24	127	M6	20	9	M5	65
DS25901	310	175	90	212	45	88	35	49	24	127	M6	20	9	M5	65
DS25902	550	205	95	487	48	103	45	31	61	83	M10	32	9	M8	85
DS25903	550	205	105	487	48	103	45	31	61	83	M10	32	9	M8	85
DS25904	640	205	120	537	48	103	65	52	61	83	M10	32	9	M8	110
DS25905	660	475	135	537	68	238	60	62	110	255	M12	51	13	M12	120

Full Dimensions

Three Phase & Neutral



Part No.	A	B	C	D	E	F	G	H	J	K	L	P	S	T	V
DS23700	310	350	90	212	45	175	35	49	67	216	M6	25	9	M5	65
DS23605	310	350	90	212	45	175	35	49	67	216	M6	25	9	M5	65
DS23606	550	410	95	487	48	205	45	31	62	286	M10	32	9	M8	85
DS23607	550	410	110	487	48	205	45	31	62	286	M10	32	9	M8	110
DS23608	660	410	135	537	68	205	75	62	62	286	M10	32	9	M8	120
DS25907	660	575	150	537	75	288	60	62	110	355	M12	51	13	M12	120

Mechanical Details

Terminal Conductor	Brass spindles (bright nickel plated)
Enclosure Material	Mild steel (dull tin plated)
Potting Compound	Polyurethane based resin
Potting Compound Flammability Rating	UL94 V-0
Finish	Gloss epoxy paint to DEF-STAN 80-161
Colour	Light admiralty grey BS 381C 697
Enclosure Rating	IP54
Mechanical Fixing	Mounting hole provisions in input and output compartments (Mounting hardware supplied separately – see page 27)

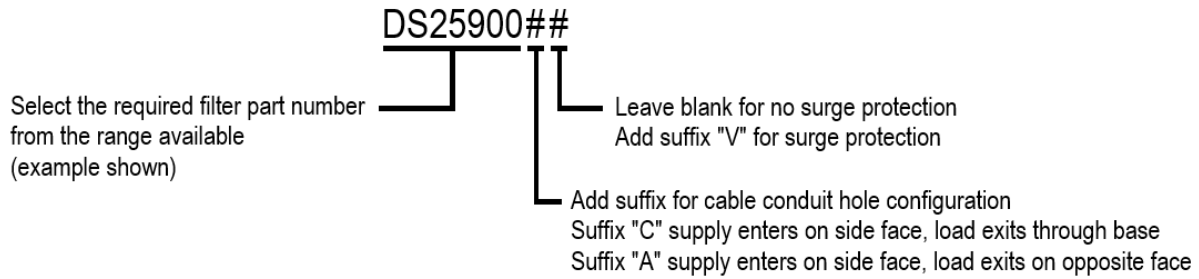
Earth Leakage

Measurement taken from phase to earth at 115V 400Hz.

Important, all filters in this catalogue can NOT be protected by a standard 30mA residual circuit breaker (RCCB). However, a RCCB protection device can be placed down line / load side of filter (see separate application note).

Ordering Code

The filter ordering codes consist of the part number, a conduit hole suffix and an optional surge suppressor suffix.



Installation

Please see page 27 for bulkhead penetration kits and fixing screw kits.
For full installation instructions, please see separate application note.