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Compact Three-phase and Neutral Line Filter for High Frequency Attenuation



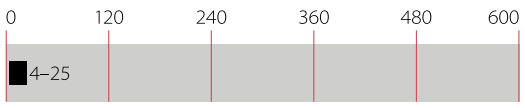
- Compact four-wire filter for applications with limited space
- High attenuation performance up to 300 MHz
- Equally suitable for star and delta power networks

Performance indicators

Attenuation performance



Rated current [A]



Approvals & Compliances

Features and Benefits

- The FN 354 family of filters is intended primarily for applications that require extremely effective interference suppression across a broad frequency spectrum.
- Advanced two-stage filter circuits with highly saturating resistant toroidal inductors, in conjunction with feedthrough capacitors on each of the three phases and the neutral line, ensure that these filters provide very high attenuation in the upper frequency band.
- FN 354 are equally suitable for the operation on star and delta power networks.

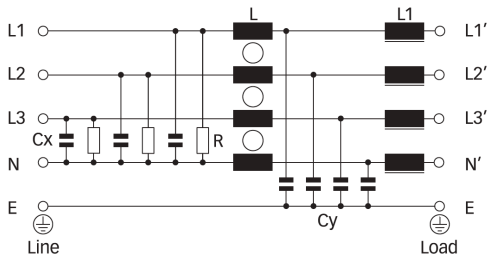
Typical Applications

- Applications requiring high-frequency attenuation
- Power supplies
- Medical equipment
- Office and data processing equipment

Technical Specifications

Maximum continuous operating voltage	3x440/250 VAC
Nominal operating voltage	400 VAC
Rated currents	4 to 25 A @ 40°C
Overload capability	4x rated current at switch on, 1.5x rated current for 1 minute, once per hour
Operating frequency	DC to 60 Hz
High potential test voltage	P/N –> E 2000 VAC for 2 sec P –> P 1900 VDC for 2 sec P -> N 1100 VDC for 2 sec
Temperature range (operation and storage)	-25°C to +100°C (25/100/21)
Protection category	IP 20 (version with -47 connections)
Flammability corresponding to	UL 94 V-0
Design corresponding to	UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939
MTBF (Mil-HB-217F)	>500,000 h @ 40°C/400 V

Typical electrical schematic



Filter Selection Table

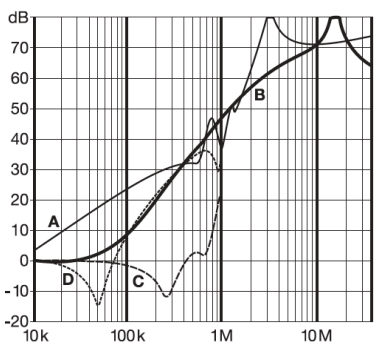
Filter	Rated current @ 40°C (25°C) [A]	Leakage current* @ 440 VAC/50 Hz [mA]	Power loss @ 25°C/50 Hz [W]		Input/Output connections 	Weight [kg]
FN 354-4-05	4 (4.5)	0.1	2.0	-05		0.23
FN 354-6-05	6 (6.7)	0.1	3.9	-05		0.38
FN 354-12-05	12 (13.4)	0.1	7.8	-05		1.1
FN 354-15-47	15 (16.8)	0.1	10.8		-47	4.3
FN 354-25-47	25 (28)	0.2	16.9		-47	4.4

* Standardized calculated leakage current acc. IEC60939 under normal operating conditions.

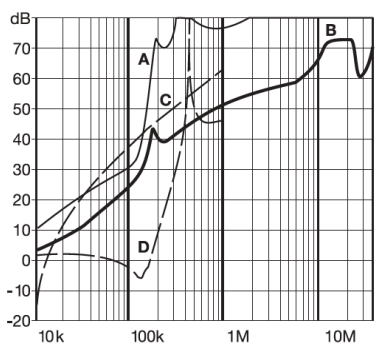
Typical Filter Attenuation

Per CISPR 17; A=50 Ω/50 Ω sym; B=50 Ω/50 Ω asym; C=0.1 Ω/100 Ω sym; D=100 Ω/0.1 Ω sym

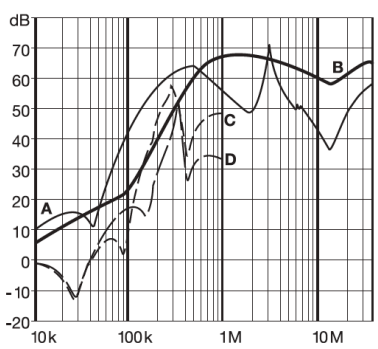
4 and 6 A types



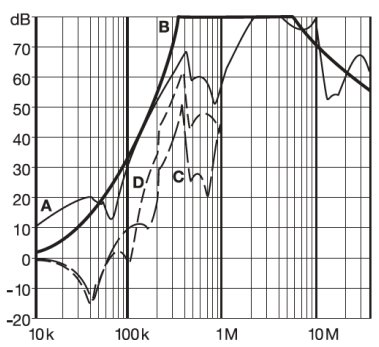
12 A types



15 A types

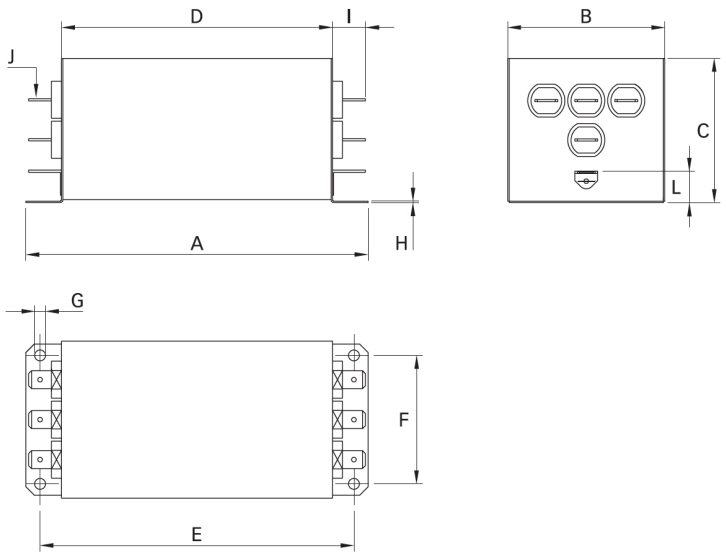


25 A types

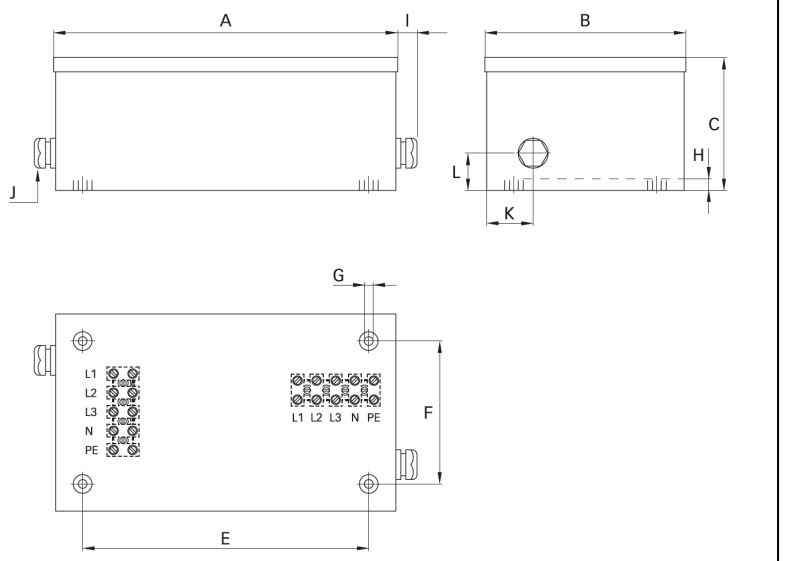


Mechanical Data

4 to 12 A types



15 and 25A types



Dimensions

	4 A	6 A	12 A	15 A	25A
A	103	120	150	273.6	273.6
B	43	55	65	158.6	158.6
C	40.5	50.5	60	107	107
D	80	95	125		
E	95	110	140	230	230
F	35	45	55	115	115
G	Ø3.8	Ø3.8	7.5 x 4.4	M8	M8
H	0.5	0.5	0.75	9.5	9.5
I	11.1	11.1	11.1	~20	~20
J	Faston 6.3 x 0.8	Faston 6.3 x 0.8	Faston 6.3 x 0.8	PG13	PG13
K				35.5	35.5
L	7	11	11	30	30

All dimensionsin mm; 1 inch=25.4 mm
Tolerances according: ISO 2768-m/EN 22768-m

Filter Input/Output Connector Cross Sections

	-05	-47
Solid wire	n/a	16 mm2
Flex wire	n/a	10 mm2
AWG type wire	n/a	AWG 8
Recommended torque	n/a	1.9-2.2 Nm

Please visit www.schaffner.com to find more details on filter connectors.

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