

EMC/RFI High Performance Filter



- Rated current 50A to 150A
- Industry standard noise filter for three-phase power drive systems
- Low profile type
- Block terminal with safety cover



Approvals & Compliances



Features and Benefits

Satisfies the low leakage current required for Japanese delta-connected power supplies.

Technical Specifications

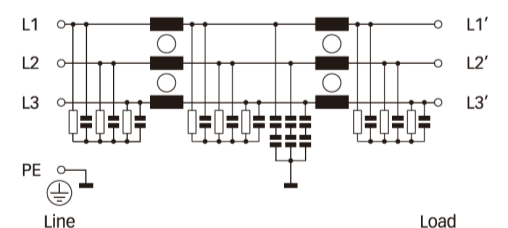
Maximum continuous operating voltage	3x520/300 VAC
Nominal operating voltage	480 VAC
Rated currents	50 to 150 A @ 50°C
Overload capability	4x rated current at switch on, 1.5x rated current for 1 minute, once per hour
Operating frequency	DC to 60 Hz
High potential test voltage	P → E 3000 VAC for 2 sec P → P 2250 VDC for 2 sec
Temperature range (operation and storage)	-25°C to +100°C (25/100/21)
Protection category	IP 00 (acc. IEC 60529-1)
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)	>410,000 h @ 50°C/480 V

- Adopts advanced dual stage circuitry for high attenuation
- Complies with Class A limits
- Low profile design allows for smooth storage in the tight spaces inside machines
- Comes with terminal block with safety covers
- Rated for 520VAC, suitable for a variety of applications around the world

Typical Applications

- Three-phase variable speed drives and power drive systems (PDS)
- Product equipment including energy conversion devices (inverters, converters)
- Process automation equipment
- Three-phase power supplies and uninterruptable power supplies (UPS)
- Applications requiring low leakage current

Typical electrical schematic



Filter Selection Table

Filter	Rated current	Leakage current*	Leakage current	Typical Power loss***	Weight	Input/Output
	@ 50°C	520 V/50 Hz	250V/60Hz** corner grounded	@ 25°C		connections
	[A]	[mA]	[mA]	[W]	[kg]	
Standard Housing						
FN3021-50-55	50	0.06	1.75	28	3.8	-55
FN3021-80-55	80	0.06	1.75	36	4.6	-55
FN3021-100-56	100	0.06	1.75	41	5.9	-56
FN3021-150-56	150	0.06	1.75	68	7.5	-56

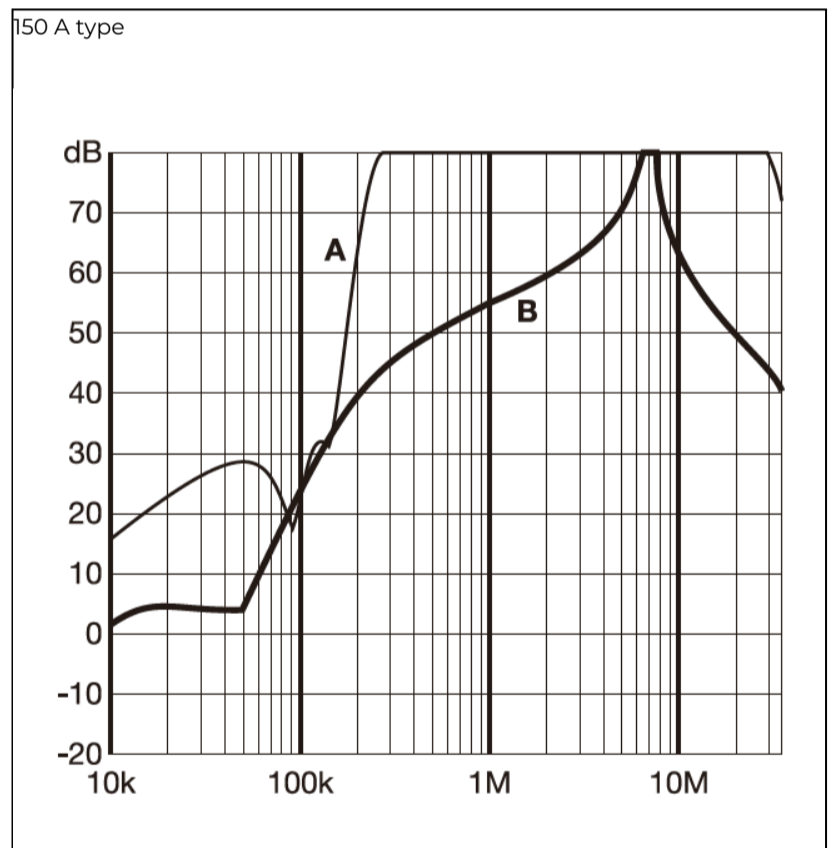
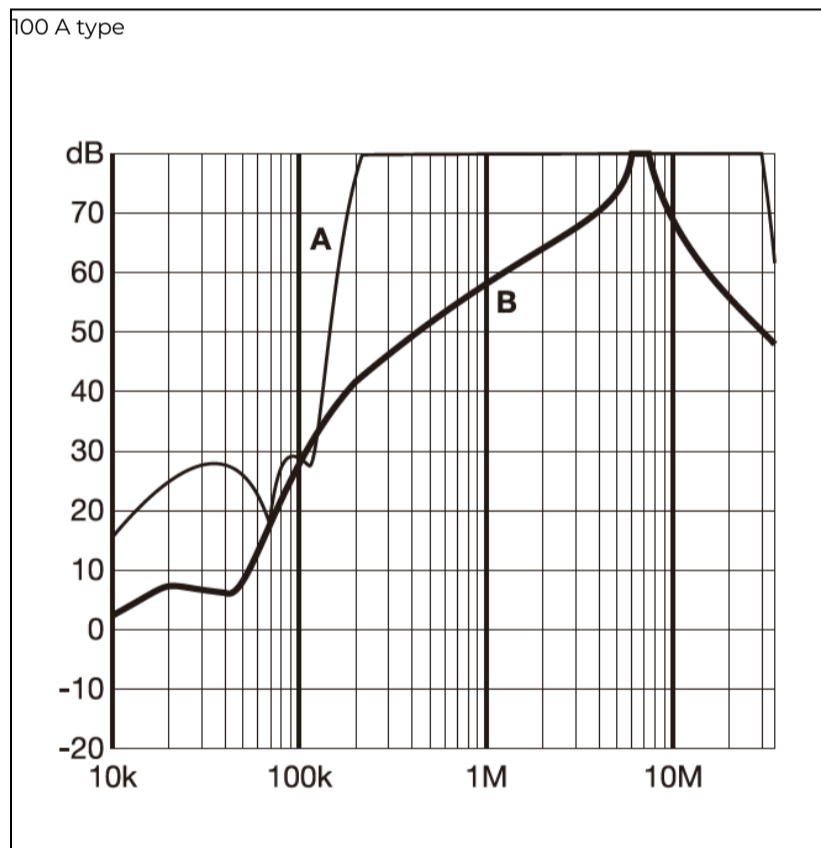
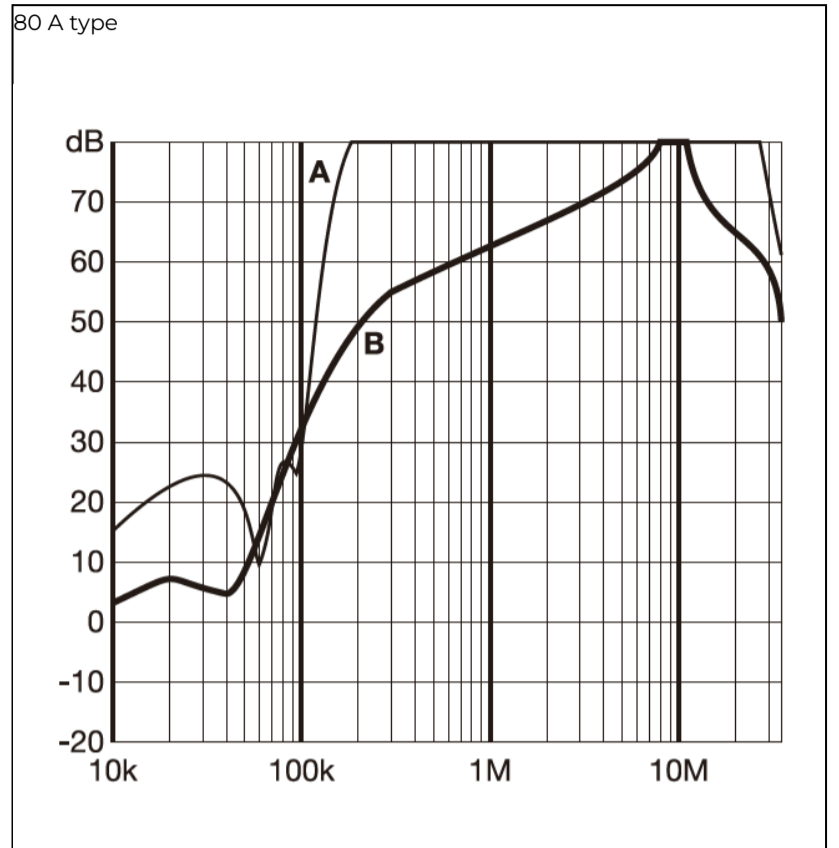
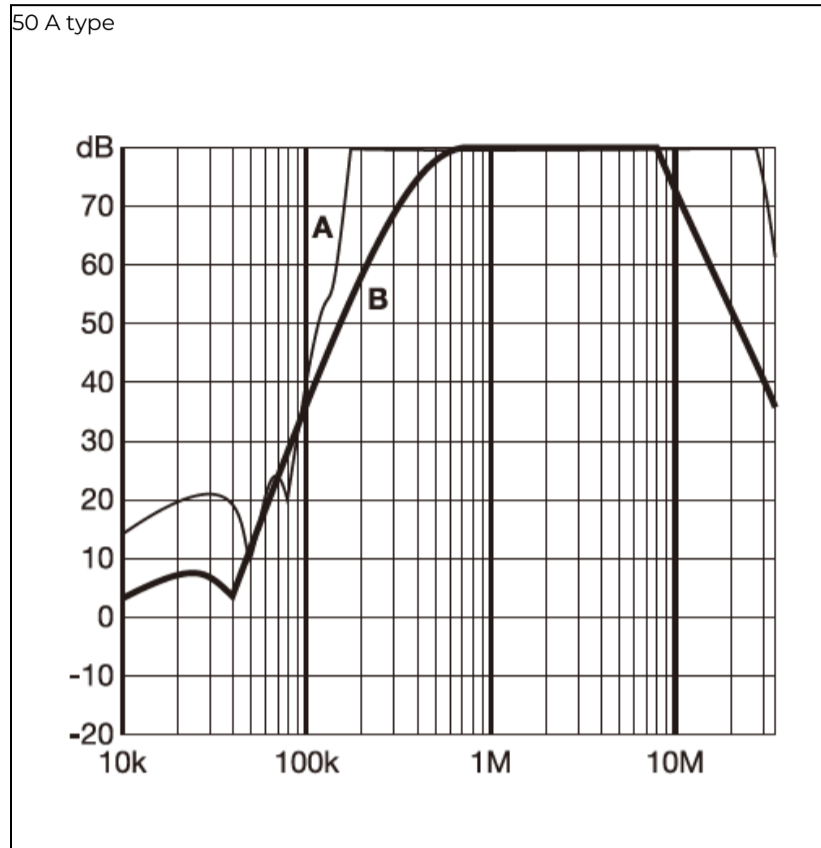
* Maximum leakage current under normal operating conditions (acc. to IEC60939-3).

** Leakage current for delta network grids, with one corner grounded

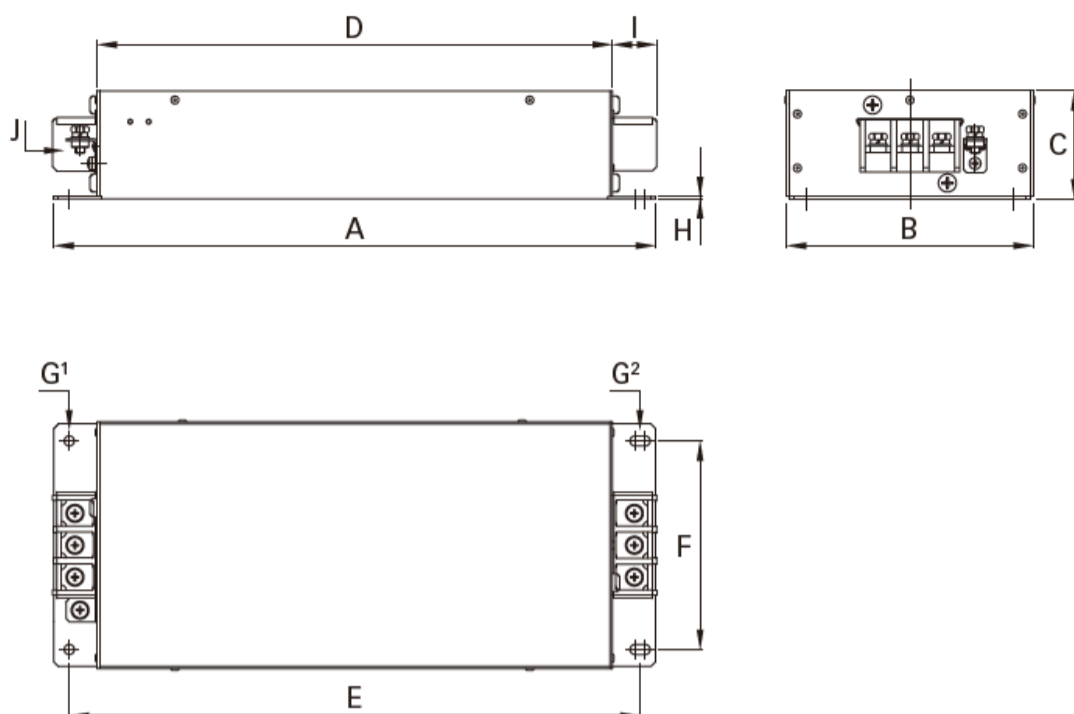
*** Power Loss [W] calculated: $3 \cdot \text{RatedCurrent}^2 \cdot \text{Max.DCRes}$

Typical Filter Attenuation

Per CISPR 17; A=50 Ω/50 Ω sym; B=50 Ω/50 Ω asym



Mechanical Data



Dimensions

	50 A	80 A	100 A	150 A
A	390	445	475	510
B	160	165	170	190
C	70	70	80	90
D	334	389	414	449
E	370	418	450	490
F	135	141	135	160
G1	Ø6.5	Ø6.5	Ø6.5	Ø6.5
G2	13 x 6.5	13 x 6.5	13 x 6.5	13 x 6.5
H	1.5	1.5	1.5	M6
I	30	30	33.5	33.5
J	M6	M6	M8	M8

All dimensions in mm; 1 inch = 25.4 mm

Tolerances according: ISO 2768-m/EN 22768-m

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

Filter Input/Output Connector Cross Sections

	-55 (50 A and 80 A)	-56 (100 A and 150 A)
Ring/fork lug (W/d)*	 max. 16 mm/min. Ø6.3 mm	 max. 20 mm/min. Ø8.3 mm
Recommended torque	5.2 - 5.7 Nm	10 - 11 Nm

*Schaffner recommends the use of insulated and UL-recognized ring lugs or fork lugs of the appropriate size.

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