

Compact EMC/RFI Filter for Motor Drives



Compact filter solution for single-phase motor drive applications

Industrial grade safety terminal blocks

Designed to meet EN 55011/14/22

Compliant with IEC 60950



Approvals & Compliances



Performance indicators

Attenuation performance



Features and benefits

High component values optimized for common and differential-mode attenuation in the lower frequency range makes this filter ideal for a large variety of single-phase motor drive applications

Supplied in a relatively small housing design with safety terminal blocks for fast and easy installation in primarily industrial environments

FN 350 also meets IEC 60950 requirements, thus providing additional application flexibility

Typical applications

- Single-phase motor drives
- Automation equipment
- Power supplies, SMPS
- Office equipment
- Testing and measurements equipment

Technical specifications

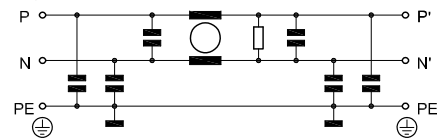
- Maximum continuous operating voltage**
- Operating frequency**
- Rated currents**
- High potential test voltage**

- Protection category**
- Overload capability**



- Temperature range (operation and storage)**
- Flammability corresponding to**
- Design corresponding to**
- MTBF @ 40°C/230 V (Mil-HB-217F)**

- 1x 250 VAC
- DC to 400 Hz
- 8 to 55 A @ 40°C max.
- P → E 2000 VAC for 2 sec
- P → N 1100 VDC for 2 sec
- IP 20
- 4x rated current at switch on, 1.5x rated current for 1 minute, once per hour
- 25°C to +100°C (25/100/21)
- UL 94 V-2 or better
- UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939
- 420,000 hours

Typical electrical schematic



Filter selection table

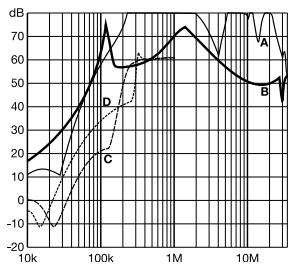
Filter	Rated current	Leakage current*	Power loss	Input/Output connections		Weight
	@ 40°C (25°C)	@ 230 VAC/50 Hz	@ 25°C/50 Hz			[kg]
	[A]	[mA]	[W]			
FN 350-8-29	8 (9.0)	4.9	5.2	-29		0.7
FN 350-12-29	12 (13.5)	4.9	5.7	-29		0.7
FN 350-20-29	20 (22.4)	4.9	6.1	-29		0.7
FN 350-30-33	30 (33.6)	5.4	6.1	-33		0.7
FN 350-55-..	55 (61.5)	11.0	9.9	-33	-24	1.2

* Maximum leakage under normal operating conditions. Note: if the neutral line is interrupted, worst case leakage could reach twice this level.

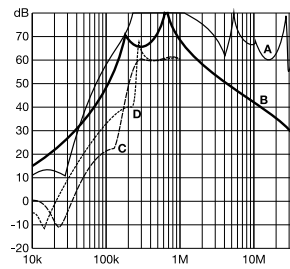
Typical filter attenuation

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

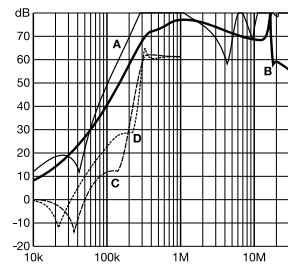
8 A types



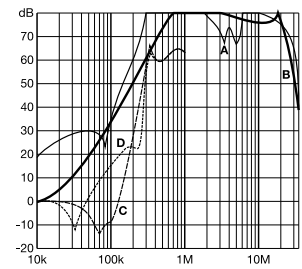
12 A types

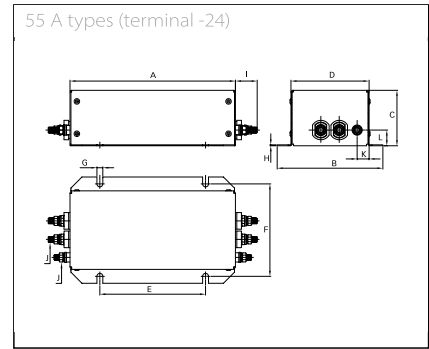
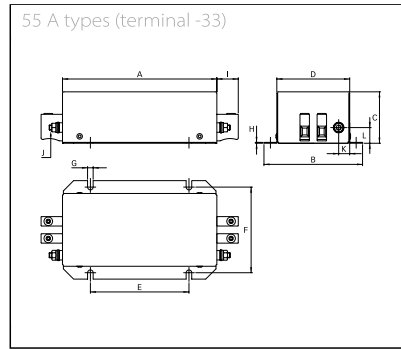
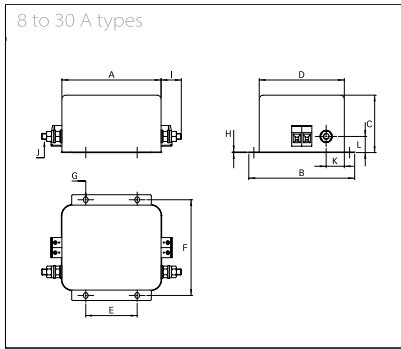


20 and 30 A types



55 A types



Mechanical data**Dimensions**

	8 A	12 A	20 A	30 A	55 A (-33)	55 A (-24)
A	99.5	99.5	99.5	99.5	180	180
B	105	105	105	105	115	115
C	57	57	57	57.6	60	60
D	84.4	84.4	84.4	84.4	85	85
E	51	51	51	51	115	115
F	95	95	95	95	100	100
G	6 x 4.4	6 x 4.4	6 x 4.4	6 x 4.4	6.5	6.5
H	0.6	0.6	0.6	1.2	1	1
I	19.5	19.5	19.5	25	25	23.7
J	M6	M6	M6	M6	M6	M6
K	18	18	18	16	12.9	12.9
L	16	16	16	19	18.3	17

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

Filter input/output connector cross sections**Solid wire****Flex wire****AWG type wire****Recommended torque****-29**6 mm²4 mm²

AWG 10

0.6-0.8 Nm

-3316 mm²10 mm²

AWG 6

1.5-1.8 Nm

-24 (M6)

3.5-4.0 Nm

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



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