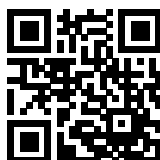


General Purpose EMC Filter



- EMC solution for industrial inverters and motor drives
- Rated currents from 8 to 280 A
- Voltage level up to 520 V
- High differential and common-mode attenuation

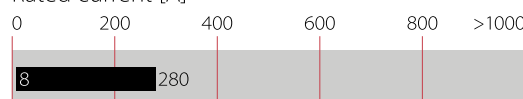


Performance indicators

Attenuation performance



Rated current [A]



Approvals & Compliances



Approvals up to 110 A

Features and Benefits

- Broad range of power ratings for fast and convenient filter selection
- FN351H filters provide a broadband common and differential-mode attenuation performance, which remains available also when high interference levels are present
- Solid, touch-safe filter terminals contribute to overall equipment safety
- Introduced as one of the very first motor drive EMC filters in the market, FN351H and its predecessor FN351 have been widely imitated and has successfully proven its function over more than 10 years

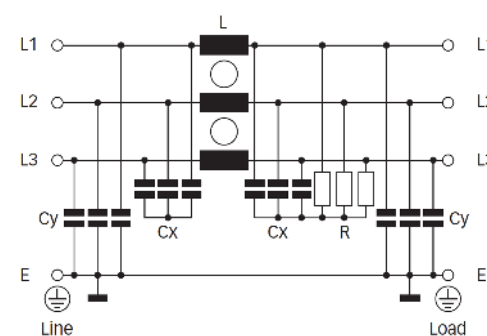
Technical Specifications

Maximum continuous operating voltage	3x 520/300 VAC
Operating frequency	DC to 60 Hz
Protection category	IP 20
Overload capability	4x rated current at switch on, 1.5x rated current for 1 minute, once per hour
Temperature range (operation and storage)	-25°C to +100°C (25/100/21)
Flammability corresponding to	UL 94 V-2 or better
Design corresponding to	UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939
Rated currents	8 to 280 A @ 40°C
High potential test voltage	P → P 2250 VDC for 2 sec P → E 2750 VDC for 2 sec



Typical Applications

- Three-phase motor drives
- Inverters and converters
- Industrial automation equipment
- UPS
- SMPS
- General purpose three-phase filtering

Typical electrical schematic



Filter Selection Table

Filter*	Rated current @ 40°C (25°C)	Typical drive power rating**	Leakage current*** @ 440/520 VAC/50 Hz	Power loss @ 25°C/50 Hz	Input/Output connections		Weight
	[A]	[kW]	[mA]	[W]			[kg]
FN351H-8-29	8 (9.2)	4	0.3	7	-29		1.1
FN351H-16-29	16 (18.5)	7.5	0.3	8	-29		1.3
FN351H-25-33	25 (28.9)	15	3.8	8	-33		1.4
FN351H-36-33	36 (41.6)	18.5	3.8	9	-33		1.5
FN351H-50-..	50 (57.7)	30	3.8	11	-33		1.6
FN351H-64-33	64 (73.9)	37	3.8	15	-33		1.7
FN351H-80-34	80 (92.3)	45	4.4	23	-34		5.6
FN351H-110-35	110 (127)	75	4.4	25	-35		5.8
FN351H-180-36	180 (208)	110	4.4	49	-36		13.0

* To compile a complete part number, please replace the -.. with the required I/O connection style.

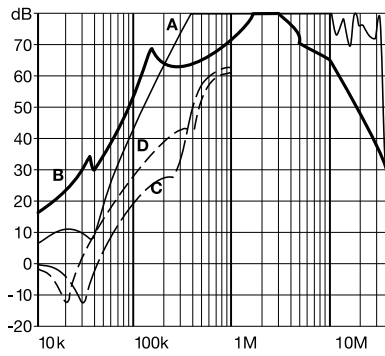
** Calculated at rated current, 480 VAC and cos phi=0.8. The exact value depends upon the efficiency of the drive, the motor and the entire application.

*** Standardized calculated leakage current acc. IEC60939 under normal operating conditions at 520 VAC.

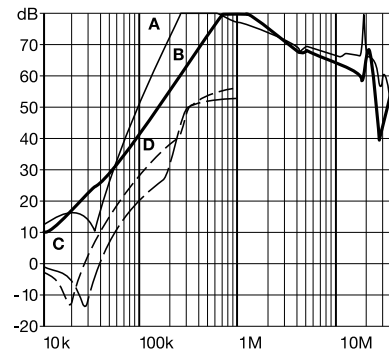
Typical Filter Attenuation

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

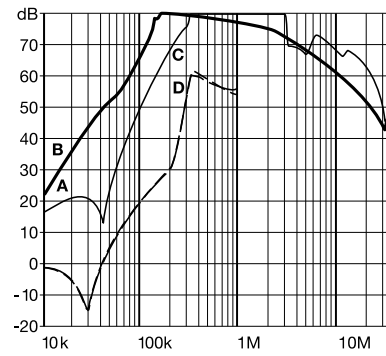
8 A types



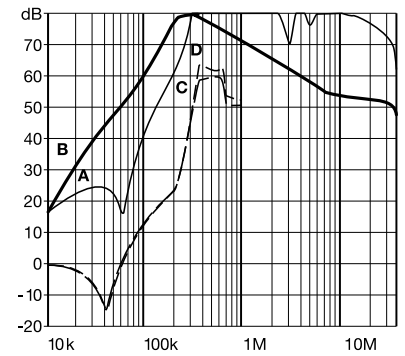
16 A types



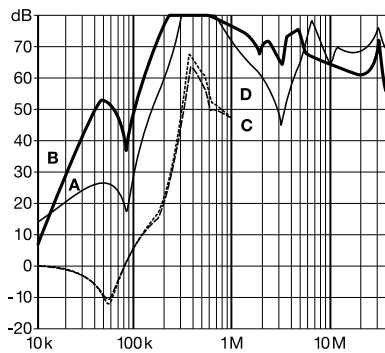
25 A types



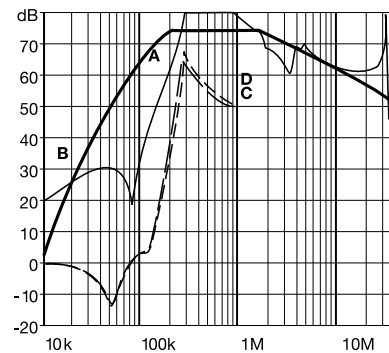
36 and 50 A types



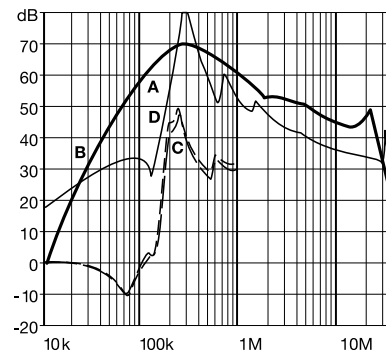
64 A types



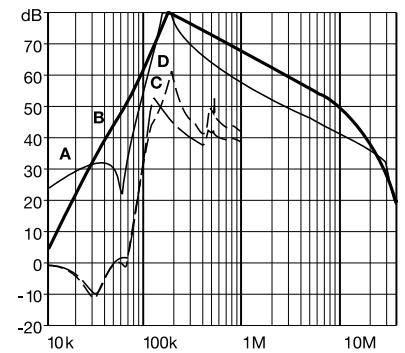
80 and 110 A types



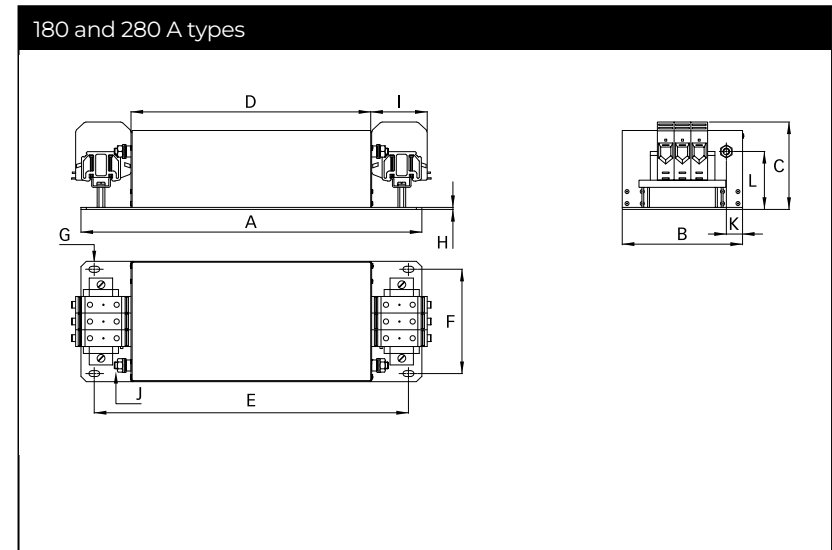
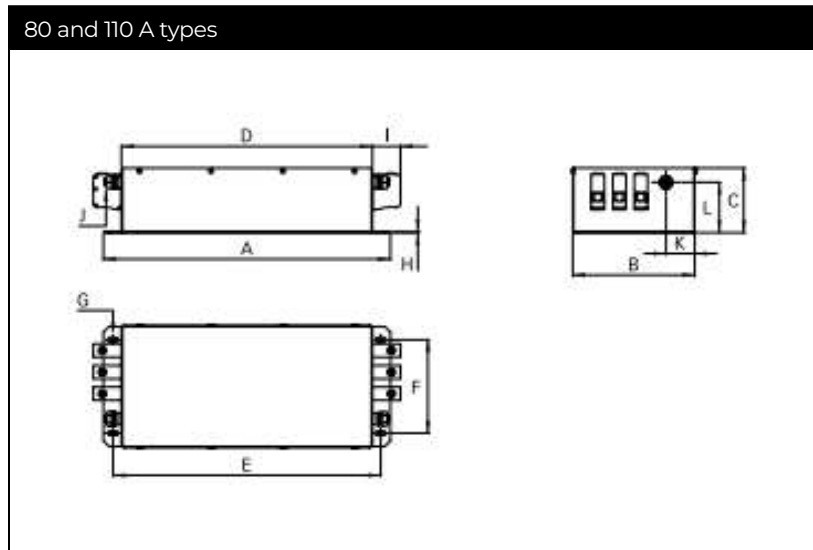
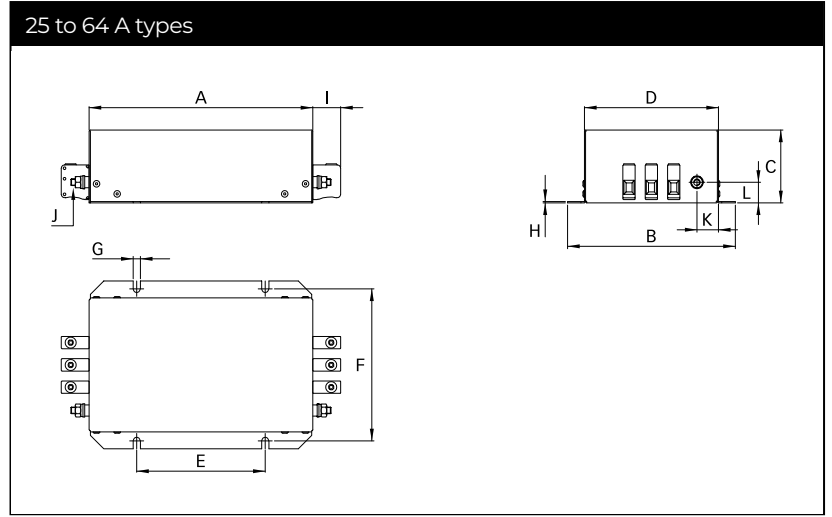
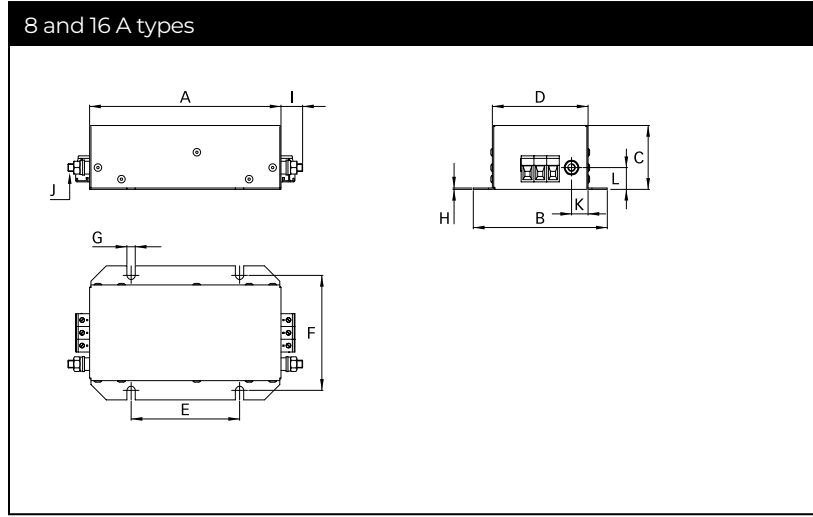
180 A types



280 A types



Mechanical Data









Dimensions

	8 A	16 A	25 A	36 A	50 A (-33)	50 A (-34)	64 A (-33)	64 A (-34)	80 A	110 A	180 A	280 A
A	200	200	200	200	200	200	200	200	400	400	510	700
B	150	150	150	150	150	150	150	150	170	170	180	260
C	65	65	65	65	65	65	65	80	90	90	133	155
D	120	120	120	120	120	120	120	120	350	350	360	530
E	115	115	115	115	115	115	115	115	373	373	470	660
F	136	136	136	136	136	136	136	136	130	130	156	220
G	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	15 x 6.5	15 x 6.5	16 x 9	16 x 9
H	1	1	1	1	1	1	1	1	1	1	4	4
I	17	17	25	25	25	39	25	39	39	45	83	110
J	M6	M6	M6	M6	M6	M6	M6	M6	M10	M10	M10	M10
K	19.25	19.25	19.25	19.25	19.25	18.75	19.25	18.75	40	40	25	30
L	17	17	18.4	18.4	18.4	17	18.4	17	70	70	85	100

All dimensions in mm; 1 inch = 25.4 mm

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

Filter Input/Output Connector Cross Sections

	-29	-33	-34	-35	-36	-37
						
Solid wire	6 mm ²	16 mm ²	35 mm ²	50 mm ²	95 mm ²	150 mm ²
Flex wire	4 mm ²	10 mm ²	25 mm ²	50 mm ²	95 mm ²	150 mm ²
AWG type wire	AWG 10	AWG 6	AWG 2	AWG 1/0	AWG 4/0	AWG 6/0
Recommended torque	0.6-0.8 Nm	1.5-1.8 Nm	4.0-4.5 Nm	7-8 Nm	17-20 Nm	27-30 Nm

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

Headquarters, Global Innovation and Development

Switzerland

Schaffner Group

Industrie Nord
Nordstrasse 11e
4542
Luterbach
+41 32 681 66 26
info@schaffner.com

Sales and Application Centers

China

Schaffner EMC Ltd. Shanghai

T20-3 C No 565 Chuangye Road Pudong district
201201
Shanghai
+86 2138139500
cschina@schaffner.com

Sweden

Schaffner EMC AB

Östermalmstrorg 1
114 42
Stockholm
+46 8 5050 2425
swedensales@schaffner.com

Switzerland

Schaffner EMV AG

Industrie Nord
Nordstrasse 11e
4542
Luterbach
+41 32 681 66 26
switzerlandsales@schaffner.com

Taiwan

Schaffner EMV Ltd.

U-Town
20 Floor-2 No 97 Section 1 XinTai 5th Road
XiZhi District
22175
New Taipei City
+886 226975500
taiwansales@schaffner.com

Thailand

Schaffner EMC Co. Ltd.

Sathorn Square Tower
Room 3780 37FL 98 North-Sathorn Rd Silom
Bangrak
10500
Bangkok
+66 621056397
thailandsales@schaffner.com

United Kingdom

Schaffner Ltd.

Suite 1 Oakmede Place
Terrace Road
RG42 4JF
Binfield
+44 118 9770070
uksales@schaffner.com

United States

Schaffner EMC Inc.

52 Mayfield Avenue
Edison, New Jersey
+1 732 225 9533
usasales@schaffner.com

Finland

Schaffner Oy

Sauvonrinne 19 H
8500
Lohja
+358 50 468 7284
finlandsales@schaffner.com

France

Schaffner EMC S.A.S.

16-20 Rue Louis Rameau
95875
Bezons
+33 1 34 34 30 60
francesales@schaffner.com

Germany

Schaffner Deutschland GmbH

Schoemperlenstrasse 12B
76185
Karlsruhe
+49 721 56910
germanysales@schaffner.com

India

Schaffner India Pvt. Ltd

Regus World Trade Centre
WTC 22nd Floor Unit No 2238 Brigade
Gateway Campus 26/1 Dr. Rajkumar Road
Mallechwaram (W)
560055
Bangalore
+91 8067935355
indiasales@schaffner.com

Italy

Schaffner EMC S.r.l.

Via Ticino, 30
20900
Monza (MB)
+39 039 21 41 070
italysales@schaffner.com

Japan

Schaffner EMC K.K.

ISM Sangenjaya 7F
1-32-12 Kamiyama Setagaya-ku
154-0011
Tokyo
+81 3 5712 3650
japansales@schaffner.com

Singapore

Schaffner EMC Pte Ltd.

Blk 3015A Ubi Road 1 #05-09 Kampong Ubi
Industrial Estate
408705
Singapore
+65 63773283
singaporesales@schaffner.com

To find your local partner within Schaffner's global network schaffner.com

© 2023 Schaffner Group

The content of this document has been carefully checked and understood. However, neither Schaffner nor its subsidiaries assume any liability whatsoever for any errors or inaccuracies of this document and the consequences thereof. Published specifications are subject to change without notice. Product suitability for any area of application must ultimately be determined by the customer. In all cases, products must never be operated outside their published specifications. Schaffner does not guarantee the availability of all published products. This disclaimer shall be governed by substantive Swiss law and resulting disputes shall be settled by the courts at the place of business of Schaffner Holding AG. Latest publications and a complete disclaimer can be downloaded from the Schaffner website. All trademarks recognized.