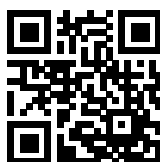


Safe and ergonomic EMC/EMI filter with very low leakage current



- Light weight plastic enclosure design
- Very low filter leakage current
- Hinged safety covers
- Embedded filter terminals
- Different performance levels
- Environmental friendly design without potting compound



Performance indicators

Attenuation performance



Rated current [A]



Approvals & Compliances



(UL up to 300 A)

Features and Benefits

- A plastic housing and a metal ground plate are cleverly combined to get the lowest possible product weight without compromising EMC behaviour
- The embedded terminals from Schaffner guarantee user-friendly handling and reliable, long-lasting electrical connection
- Captive hinged protective covers contribute to overall safety by offering protection against unintended contact with live conductors. They are included in the standard scope of delivery without any extra cost
- Very low leakage current values make the filters suitable for grids with very tough requirements or sensitive GFCIs, and for applications which set value on safety and reliability
- FN 2450 feature an ecologically conscious construction without the use of potting compound or banned substances (RoHS). Used raw materials can be easily separated at the end of the product life time for proper and environmentally safe disposal

Technical Specifications

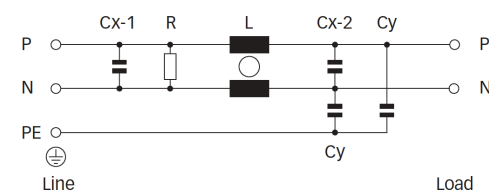
Maximum continuous operating voltage	250 VAC, 50/60 Hz
Rated currents	6 to 20 A @ 55°C
Operating frequency	DC to 400 Hz
High potential test voltage	P/N -> E 2500 VAC for 60 sec * P -> N 1100 VDC for 2 sec
Temperature range (operation and storage)	-25°C to +100°C (25/100/21)
Flammability corresponding to	UL 94 V-0 (safety covers UL 94V-1)
Design corresponding to	UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939, EN 60601-1
MTBF @ 40°C/230 V (Mil-HB-217F)	>180,000 hours

* Type testing only

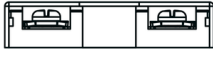
Typical Applications

- Electrical and electronic equipment
- Test and measurement devices
- Medical devices n Industrial automation
- Small machines
- Office automation equipment

Typical electrical schematic



Filter Selection Table

Filter*	Rated current @ 55°C (40°C)	Leakage current** @ 250 VAC /50 Hz (@ 120 VAC /60 Hz)	Inductance L	Capacitance		Resistance R	Input/Output connections	Weight
				Cx	Cy			
	[A]	[mA]	[mH]	[uF]	[nF]	[MΩ]		[g]
FN 2450 G-6-61	6 (6.8)	0.66 (0.38)	10.5	0.47	4.7	1	-61	210
FN 2450 G-10-61	10 (11.4)	0.66 (0.38)	4.9	0.47	4.7	1	-61	210
FN 2450 G-16-61	16 (18.2)	0.66 (0.38)	1.84	0.47	4.7	1	-61	210
FN 2450 G-20-61	20 (22.8)	0.66 (0.38)	0.94	0.47	4.7	1	-61	210
FN 2450 F-6-61	6 (6.8)	0.47 (0.27)	10.5	0.47	3.3	1	-61	210
FN 2450 F-10-61	10 (11.4)	0.47 (0.27)	4.9	0.47	3.3	1	-61	210
FN 2450 F-16-61	16 (18.2)	0.47 (0.27)	1.84	0.47	3.3	1	-61	210
FN 2450 F-20-61	20 (22.8)	0.47 (0.27)	0.94	0.47	3.3	1	-61	210
FN 2450 B-6-61	6 (6.8)	0.00	10.5	0.47		1	-61	210
FN 2450 B-10-61	10 (11.4)	0.00	4.9	0.47		1	-61	210
FN 2450 B-16-61	16 (18.2)	0.00	1.84	0.47		1	-61	210
FN 2450 B-20-61	20 (22.8)	0.00	0.94	0.47		1	-61	210

* The letter following FN2450 represents the value of the Y-capacitor and is directly related to the performance and leakage current of the filter. Other Y-capacitor values are available upon request.

** Maximum leakage current under normal operating conditions (acc. to IEC60939-3). Note: if the neutral line is interrupted, worst case leakage could reach twice this level.

Typical Filter Attenuation

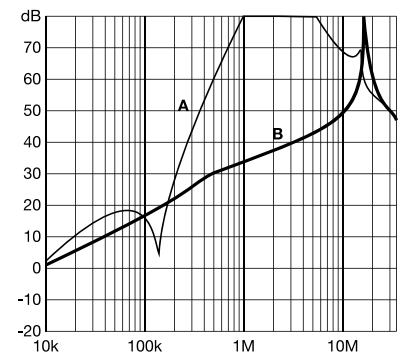
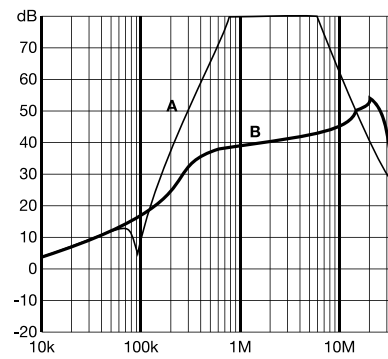
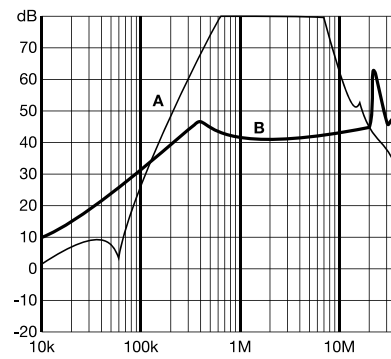
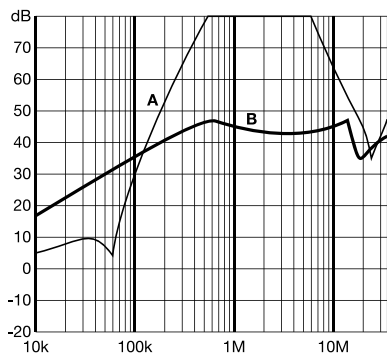
Per CISPR 17; A=50 Ω/50 Ω sym; B=50 Ω/50 Ω asym

6 A types

10 A types

16 A types

20 A types



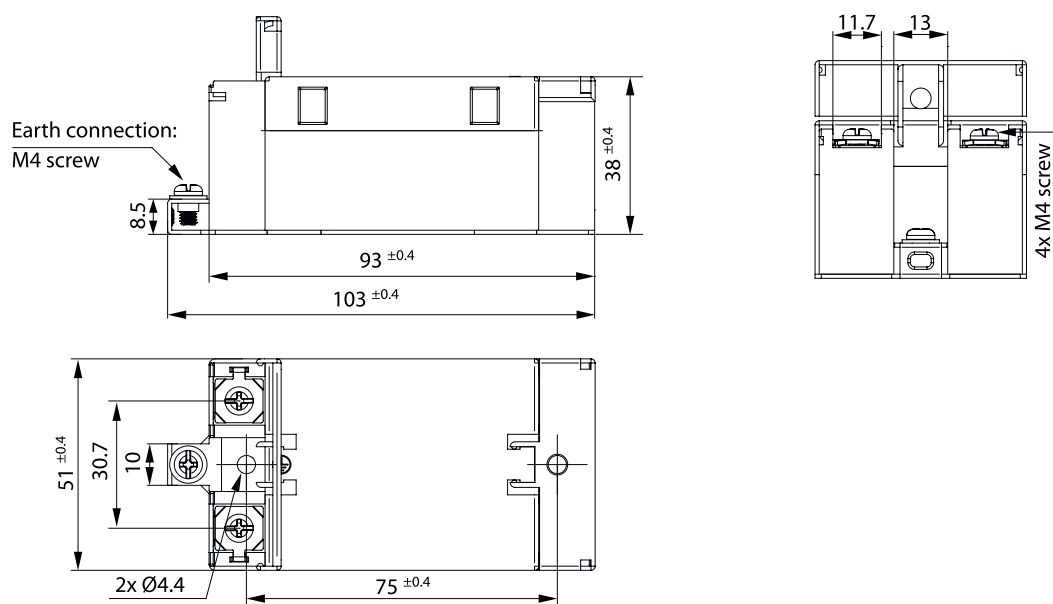


FN 2450 are delivered with closed plastic covers and fastened terminals. To install the filter please proceed as follows:

- Mount the filter on a metal surface with two appropriate bolts
- First connect the green/yellow wire to the earth stud of the filter
- Gently lift the two hinged plastic covers. n Untighten the terminals with an appropriately sized screw driver
- Connect phase and neutral wires with cable lugs by pushing down and tightening the bolts
- Please note the torque recommendation on the next page
- Push the safety covers back into their locked position to finish the filter installaton

Mechanical Data

FN 2450



Filter Input/Output Connector Cross Sections

	-61 (6 A)	-61 (10 A)	-61 (16 A)	-61 (20 A)
Flex wire	1.3 - 2.5 mm ²	1.3 - 2.5 mm ²	4 - 6 mm ²	4 - 6mm ²
AWG type wire	AWG 13 - AWG 16	AWG 13 - AWG 16	AWG 12 - AWG 10	AWG 12 - AWG 10
Ring/fork lug (W/d)*	max. 11 mm/min. Ø 4.3 mm	max. 11 mm/min. Ø 4.3 mm	max. 11 mm/min. Ø 4.3 mm	max. 11 mm/min. Ø4.3mm
Recommended torque	0.8-1 Nm	0.8-1 Nm	0.8-1 Nm	0.8 - 1Nm

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

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

Headquarters, Global Innovation and Development

Switzerland

Schaffner Holding AG

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

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 Malleshwaram (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

United States

Schaffner EMC Inc.

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

Spain

Schaffner EMC España

Calle Caléndula 93, Miniparc III, Edificio E El Soto de Moraleja, Alcobendas
 28109
 Madrid
 +34 917 912 900
spainsales@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.

1, Oakmede Place
 Terrace Road
 RG42 4JF
 Binfield
 +44 118 9770070
uksales@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

© 2022 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.