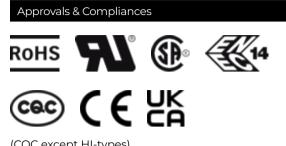


General Performance EMC/RFI Filter with Earth Line Choke



- Rated currents up to 15 AExcellent performance/size ratio
- Integrated earth line choke
- Complies with IEC/EN 60601-1
- Snap-in versions (S and S1 type)
- Optional wide mounting flanges



(CQC except HI-types)

The FN 9222 E IEC inlet filter combines an IEC inlet and mains filter with excellent filter attenuation in a small form factor and integrated earth line choke. Choosing the FN 9222 E product line brings you the rapid availability of a standard filter associated with the necessary safety acceptances. Standard IEC connector filters are a practical solution helping you to pass EMI system approval in a short time. A wide selection on amperage ratings, output connections, mounting possibilities and filters for medical applications are designed to offer you the desired solution.

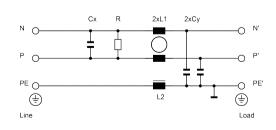
Features and Benefits

- Exceptional conducted attenuation performance, based on chokes with high saturation resistance and excellent thermal behavior
- Rear/front or snap-in mounting
- FN 9222 B versions comply with the requirements of 1MOP acc. to IEC/EN 60601-1 for creepage and clearance, leakage current and high potential testing
- Wide mounting flanges available
- Different output connections offering maximum flexibility for assembly
- Without earth line choke see FN 9222 data sheet
- Custom-specific versions are available on request

Typical Applications

- Portable electrical and electronic equipment
- Small to medium-sized machines and household equipment
- Single-phase power supplies, switch-mode power supplies
- Test and measurement equipment
- Medical equipment
- Rack mounting equipment

Typical electrical schematic



Technical Specifications

Maximum continuous operating voltage	oltage 250 VAC, 50/60 Hz 230 VAC 1 to 15 A @ 50°C dc to 400 Hz DC to 400 Hz	
Nominal operating voltage	230 VAC	
Rated currents	dc to 400 Hz DC to 400 Hz P -> PE 2000 VAC for 2 sec (standard types) P -> PE 2500 VAC for 2 sec (B types)	
Operating frequency		
High potential test voltage		
Temperature range (operation and storage)	-25℃ to +85℃ (25/85/21)	
Protection category	IP 40 according to IEC 60529	
Flammability corresponding to	Plastic Material: UL 94 V-0 Laces for -07 version: UL 94 VW-1	
Approvals by rated current	1 to 10 A (ENEC, CQC) 1 to 15 A (UL, CSA)	
Design corresponding to	UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939	
MTBF (Mil-HB-217F)	>1,610,000 h @ 50°C/230 V	

Filter Selection Table

Filter	Rated current	Leakage current*	Inductance		Capacitance		Resistance	Output connections	Weight
	@ 50°C (5 °C)	@ 250 VAC/50 Hz	L1	L2	Сх	Су	R		
		(@ 120 VAC/60 Hz)							
	[A]	[mA]	[mH]	[mH]	[μF]	[nF]	[kΩ]		[g]
FN9222Ex-1-06	1 (1.2)	0.31 (0.18)	12	0.4	0.1	2.2		-06	46
FN9222Ex-3-06	3 (3.5)	0.31 (0.18)	2.5	0.4	0.1	2.2		-06	46
FN9222Ex-6-06	6 (7.2)	0.31 (0.18)	0.78	0.4	0.1	2.2		-06	46
FN9222Ex-8-06	8 (10.6)	0.31 (0.18)	0.5	0.4	0.1	2.2		-06	46
FN9222Ex-10-06	10 (11.6)	0.31 (0.18)	0.225	0.1	0.1	2.2		-06	46
FN9222Ex-12-06	12 (12)	0.31 (0.18)	0.11	0.1	0.1	2.2		-06	46
FN9222Ex-15-06	15 (15)	0.31 (0.18)	0.075	0.1	0.1	2.2		-06	46
FN9222Ex-12-06HI	12 (12)	0.31 (0.18)	0.11	0.1	0.1	2.2		-06	46
FN9222Ex-15-06HI	15 (15)	0.31 (0.18)	0.075	0.1	0.1	2.2		-06	46
FN9222ExR-1-06	1 (1.2)	0.31 (0.18)	12	0.4	0.1	2.2	1000	-06	46
FN9222ExR-3-06	3 (3.5)	0.31 (0.18)	2.5	0.4	0.1	2.2	1000	-06	46
FN9222ExR-6-06	6 (7.2)	0.31 (0.18)	0.78	0.4	0.1	2.2	1000	-06	46
FN9222ExR-8-06	8 (10.6)	0.31 (0.18)	0.5	0.4	0.1	2.2	1000	-06	46
FN9222ExR-10-06	10 (11.6)	0.31 (0.18)	0.225	0.1	0.1	2.2	1000	-06	46
FN9222ExR-12-06	12 (12)	0.31 (0.18)	0.11	0.1	0.1	2.2	1000	-06	46
FN9222ExR-15-06	15 (15)	0.31 (0.18)	0.075	0.1	0.1	2.2	1000	-06	46
FN9222ExR-12-06HI	12 (12)	0.31 (0.18)	0.11	0.1	0.1	2.2	1000	-06	46
FN9222ExR-15-06HI	15 (15)	0.31 (0.18)	0.075	0.1	0.1	2.2	1000	-06	46
FN9222ExB-1-06	1 (1.2)	0.00	12	0.4	0.1		1000	-06	46
FN9222ExB-3-06	3 (3.5)	0.00	2.5	0.4	0.1		1000	-06	46
FN9222ExB-6-06	6 (7.2)	0.00	0.78	0.4	0.1		1000	-06	46
FN9222ExB-8-06	8 (10.6)	0.00	0.5	0.4	0.1		1000	-06	46
FN9222ExB-10-06	10 (11.6)	0.00	0.225	0.1	0.1		1000	-06	46
FN9222ExB-12-06	12 (12)	0.00	0.11	O.1	0.1		1000	-06	46
FN9222ExB-15-06	15 (15)	0.00	0.075	0.1	0.1		1000	-06	46
FN9222ExB-12-06HI	12 (12)	0.00	0.11	O.1	0.1		1000	-06	46
FN9222ExB-15-06HI	15 (15)	0.00	0.075	0.1	0.1		1000	-06	46

* 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.

Product selector**

FN 9222Exx-yy-..HI-zz

	Snap-in ra	nge for S version only
	Blank:	Snap-in range 0.7 to 1.5mm
	20:	Snap-in range 1.5 to 2.2mm
	Blank:	Standard IEC inlet type C14
	HI:	Hot IEC inlet type C16 (12 and 15A types only)
	06:	Faston 6.3 x 0.8mm (spade/soldering)
	1 to 15:	Rated current
	Blank:	Standard version
	R:	Bleed resistor
	B:	Medical version (with bleed resistor and without Y2-capacitor)
 	Blank:	Standard housing with mounting flanges
	€ U:	Housing with wider mounting flanges
	S:	Snap-in version, snapper on vertical side
	S1:	Snap-in version, snapper on horizontal side

Distributor Inventory

Check stock levels at global distributors via the QR code



Stock level per types 1 - 15 A	Link
Standard housing types	¥
Housing with wider mounting flanges (U)	¥
Snap-in housing types (S&S1)	¥
Medical versions (B)	¥
Bleed resistor types (R)	¥
Surge protection types (UZ)	¥

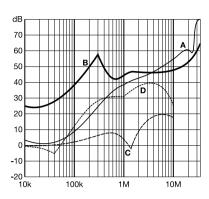
**For example: FN 9222 E-15-06, FN 9222 ES1B-10-06-20, FN 9222 EUB-8-06-20

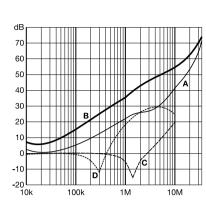
Typical Filter Attenuation

Per CISPR 17; A=50 $\Omega/50~\Omega$ sym; B=50 $\Omega/50~\Omega$ asym; C=0.1 $\Omega/100~\Omega$ sym; D=100 $\Omega/0.1~\Omega$ sym

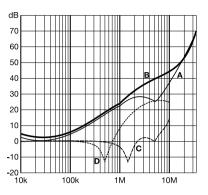
1 and 3 A types

6 to 10 A types





12 and 15 A types



Mechanical Data

FN 9222 EU

С

В

S

F

Φ

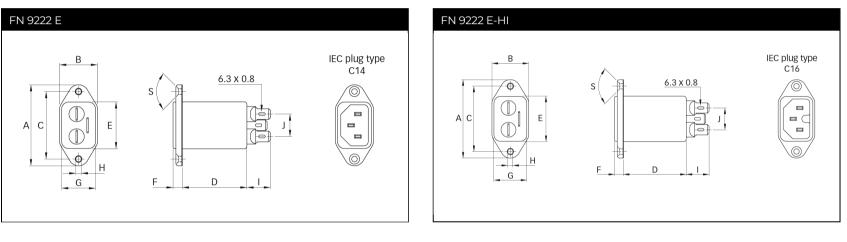
 \bigcirc

 \bigcirc

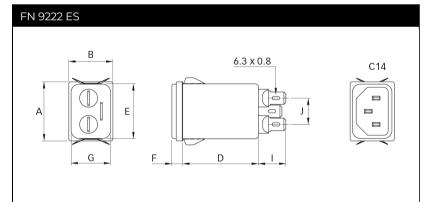
φ

G

Н



C14



6.3<u>x0.8</u>

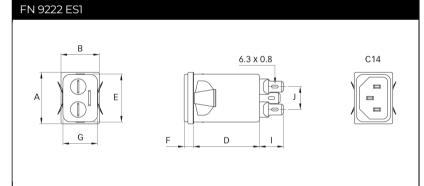
D

ĥ

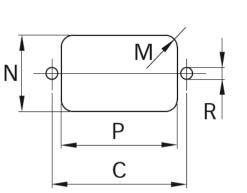
I

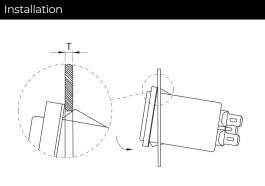
L

A



Panel cut out





Dimensions

	FN 9222 E	FN 9222 EU	FN 9222 ES	FN 9222 ES1	FN 9222 E-HI	Tol.
Α	48	48	29.9	29.9	48	
в	22.4	25	22.4	22.4	22.4	
с	40	40			40	±0.2
D	47.1	47.1	47.1	47.1	47.1	
Е	27.8	27.7	27.8	27.8	27.8	+0.6/-0
F	5.7	5.7	5.7	5.7	5.7	
G	20.1	20.1	20.1	20.1	20.1	+0.6/-0
н	Ø3.3	Ø3.3			Ø3.3	
I.	14	14	14	14	14	
J	13.3	13.3	13.3	13.3	13.3	
м	R ≤3	R ≤3	R ≤1.5	R ≤1.5	R ≤3	
Ν	21.5	21.5	20.8	21.9	21.5	
Р	28.5	28.5	29.4	28.5	28.5	
R*	М3	M3			M3	
s	90°	90°			90°	
T**			0.7 - 1.5	0.7 - 1.5		
T**			1.5 - 2.2	1.5 - 2.2		

 * Recommended torque for M3 (90° countersunk flat head) is 0.5 Nm

 $\ensuremath{^{**}}$ For selecting the panel thickness, please refer to the filter selector table.

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

Please visit <u>www.schaffner.com</u> to find more details on filter connectors.

Accessories

IL 13P IEC C13 Rewireable Connectors with Locking System



The locking system has a tensile force of typical 300N. It is recommended to use it with flange mount filters. For details refer to our Application Note "Using IEC Lock Power Cords with IEC Inlets and Filters".

Schaffner power connector with IEC lock guard against accidental disconnection of all electrical appliances with an IEC inlet. No exchange or modification of the IEC inlet or IEC inlet filter system is needed. Easy retrofit .for all electronic equipments and devices

IL 13P IEC C13 Rewireable Angled Connectors with Locking System



- Protects appliances that are vulnerable to vibration
- Connector cannot be accidentally pulled or vibrated out of the inlet
- Space availability/constraints
- Different angles for ease of access
- Space saving
- Release locking mechanism
- Prevents accidental disconnection

Power Cord with angled Locking System C13



- Protects appliances that are vulnerable to vibration
- Connector cannot be accidentally pulled or vibrated out of the inlet
- Space availability/constraints
- Different angles for ease of access
- Space saving
- Release locking mechanism
- Prevents accidental disconnection

Headquarters, Global Innovation and Development

Switzerland

Schaffner Group Industrie Nord Nordstrasse 5 4542 Luterbach +41 32 681 66 26 info@schaffner.com

To find your local partner within Schaffner's global network <u>schaffner.com</u>

© 2025 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 specifica-tionsw 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 downloa-ded from the Schaffner website. All trademarks recoanized.

Finland

Schaffner Oy Lohjanharjuntie 1109 08500 Lohja + 358 50 468 72 84 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 Ohiostr. 8 76149 Karlsruhe +49 721 56910 germanysales@schaffner.com

Italy

Schaffner EMC S.r.l. Via Ticino, 30 20900 Monza (MB) +39 335 120 44 32 italysales@schaffner.com

Japan

Schaffner EMC K.K. ISM Sangenjaya 7F 1-32-12 Kamiuma 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

Sweden

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

Switzerland

Schaffner EMV AG Industrie Nord Nordstrasse 5 4542 Luterbach +41 32 681 66 26 switzerlandsales@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

United Kingdom

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

United States

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