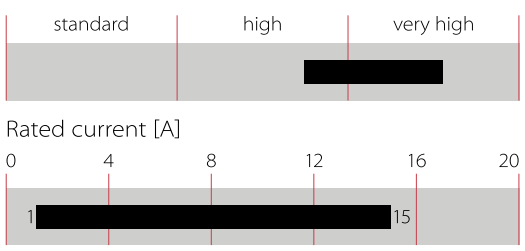
Excellent Performance EMC/RFI Filter with Earth Line Choke



- Rated currents up to 15 A
- Superior attenuation performance
- Integrated earth line choke
- Complies with IEC/EN 60601-1
- Snap-in versions (S and S1 type)
- Hot inlet versions (HI type)

Performance indicators

Attenuation performance



Rated current [A]

Approvals & Compliances

(CQC except HI-types)

The FN 9244 E IEC inlet filter combines an IEC inlet and mains filter with superior filter attenuation in a small form factor. The FN 9244 E high performance power entry module offers additional EMI suppression on the earth line. Choosing the FN 9244 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. For types without additional earth line choke please consult the FN 9244 data sheet.

Technical Specifications

Maximum continuous operating voltage	250 VAC, 50/60 Hz
Nominal operating voltage	230 VAC
Rated currents	1 to 15 A @ 50°C
Operating frequency	DC to 400 Hz
High potential test voltage	P –> PE 2000 VAC for 2 sec (standard types) P –> PE 2500 VAC for 2 sec (B types) P –> N 1000 VAC for 2 sec
Temperature range (operation and storage)	-25°C to +85°C (25/85/21)
Protection category	IP 40 according to IEC 60529
Flammability corresponding to	Plastic material: UL 94 V0
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)	>2,230,000 h @ 50°C/230 V

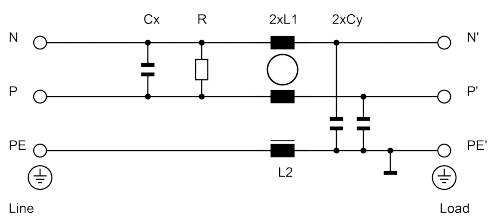
Features and Benefits

- Superior conducted attenuation performance, based on chokes with high saturation resistance and excellent thermal behavior
- Rear/front or snap-in mounting
- Without earth line choke see FN 9244 data sheet
- FN 9244 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
- Custom-specific versions are available on request

Typical Applications

- 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 devices (MDD)
- In-vitro diagnostic medical devices (IVDD)
- Rack mounting equipment

Typical electrical schematic



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Filter Selection Table

Filter	Rated current @ 50°C (25°C) [A]	Leakage current* @ 250 VAC/50 Hz (@ 120 VAC/60 Hz) [mA]	Inductance L1 [mH]	Inductance L2 [mH]	Capacitance Cx [µF]	Capacitance Cy [nF]	Resistance R [kΩ]	Output connections	Weight [g]
FN9244Ex-1-06	1 (1.2)	0.31 (0.18)	59.53	0.4	0.1	2.2		-06	46
FN9244Ex-3-06	3 (3.5)	0.31 (0.18)	13.45	0.4	0.1	2.2		-06	46
FN9244Ex-6-06	6 (7.2)	0.31 (0.18)	4.1	0.4	0.1	2.2		-06	46
FN9244Ex-8-06	8 (10.6)	0.31 (0.18)	2.3	0.4	0.1	2.2		-06	46
FN9244Ex-10-06	10 (11.6)	0.31 (0.18)	1.02	0.4	0.1	2.2		-06	46
FN9244Ex-12-06	12 (12)	0.31 (0.18)	0.58	0.1	0.1	2.2		-06	46
FN9244Ex-15-06	15 (15)	0.31 (0.18)	0.4	0.1	0.1	2.2		-06	46
FN9244Ex-12-06HI	12 (12)	0.31 (0.18)	0.58	0.1	0.1	2.2		-06	46
FN9244Ex-15-06HI	15 (15)	0.31 (0.18)	0.4	0.1	0.1	2.2		-06	46
FN9244ExR-1-06	1 (1.2)	0.31 (0.18)	59.53	0.4	0.1	2.2	1000	-06	46
FN9244ExR-3-06	3 (3.5)	0.31 (0.18)	13.45	0.4	0.1	2.2	1000	-06	46
FN9244ExR-6-06	6 (7.2)	0.31 (0.18)	4.1	0.4	0.1	2.2	1000	-06	46
FN9244ExR-8-06	8 (10.6)	0.31 (0.18)	2.3	0.4	0.1	2.2	1000	-06	46
FN9244ExR-10-06	10 (11.6)	0.31 (0.18)	1.02	0.4	0.1	2.2	1000	-06	46
FN9244ExR-12-06	12 (12)	0.31 (0.18)	0.58	0.1	0.1	2.2	1000	-06	46
FN9244ExR-15-06	15 (15)	0.31 (0.18)	0.4	0.1	0.1	2.2	1000	-06	46
FN9244ExR-12-06HI	12 (12)	0.31 (0.18)	0.58	0.1	0.1	2.2	1000	-06	46
FN9244ExR-15-06HI	15 (15)	0.31 (0.18)	0.4	0.1	0.1	2.2	1000	-06	46
FN9244ExB-1-06	1 (1.2)	0.00	59.53	0.4	0.1		1000	-06	46
FN9244ExB-3-06	3 (3.5)	0.00	13.45	0.4	0.1		1000	-06	46
FN9244ExB-6-06	6 (7.2)	0.00	4.1	0.4	0.1		1000	-06	46
FN9244ExB-8-06	8 (10.6)	0.00	2.3	0.4	0.1		1000	-06	46
FN9244ExB-10-06	10 (11.6)	0.00	1.02	0.4	0.1		1000	-06	46
FN9244ExB-12-06	12 (12)	0.00	0.58	0.1	0.1		1000	-06	46
FN9244ExB-15-06	15 (15)	0.00	0.4	0.1	0.1		1000	-06	46
FN9244ExB-12-06HI	12 (12)	0.00	0.58	0.1	0.1		1000	-06	46
FN9244ExB-15-06HI	15 (15)	0.00	0.4	0.1	0.1		1000	-06	46

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

Distributor Inventory

Check stock levels at global distributors at
https://products.schaffner.com/stock
(Also available 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)	

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Product selector

FN 9244Exx-yy-..HI-zz

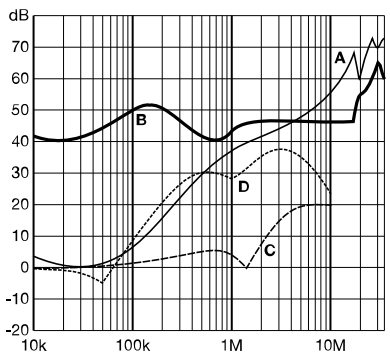
		Snap-in range for S version only
	Blank:	Snap-in range 0.7 to 1.5mm
	20:	Snap-in range 1.5 to 2.2mm
	Blank:	Standard IEC inlet type C14
	HI:	Hot IEC inlet type C16 (12 and 15A types only)
	06:	Faston 6.3 x 0.8mm (spade/soldering)
	1 to 15:	Rated current
	Blank:	Standard version
	R:	Bleed resistor
	B:	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

For example: FN 9244 E-15-06, FN 9244 ES1B-10-06-20, FN 9244 ER-12-06HI, FN 9244 EUB-8-06

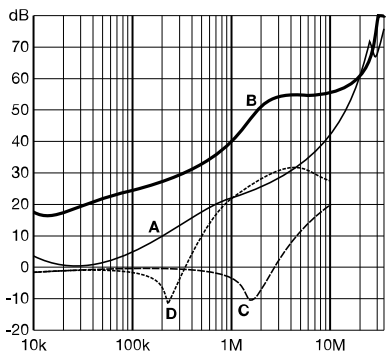
Typical Filter Attenuation

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

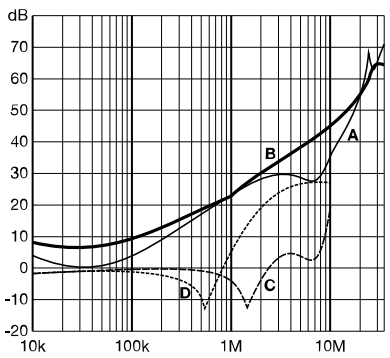
1 and 3 A types



6 to 10 A types



12 and 15 A types



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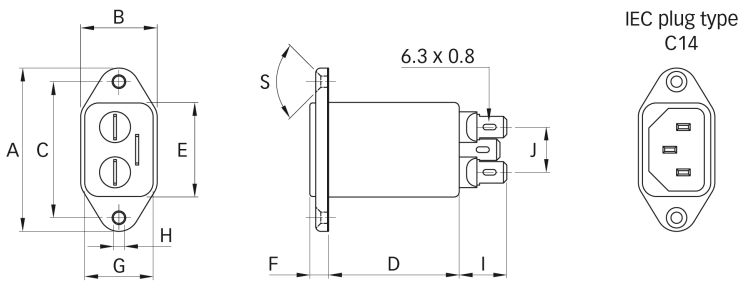
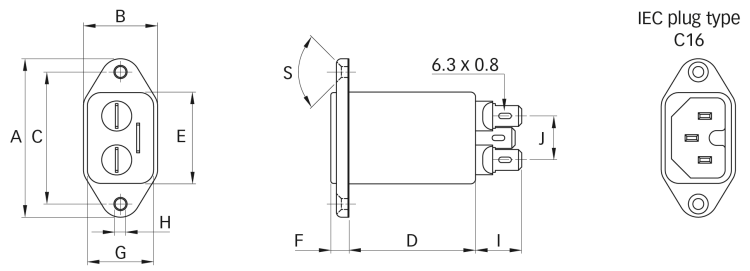
Mechanical Data

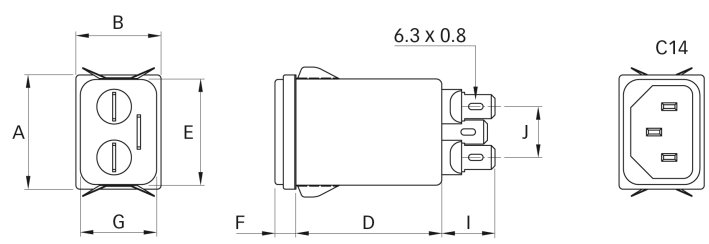
FN 9244 E



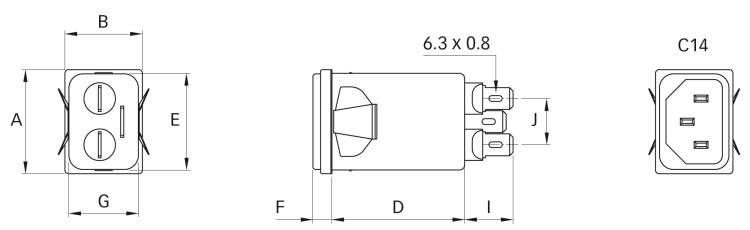
FN 9244 E-HI



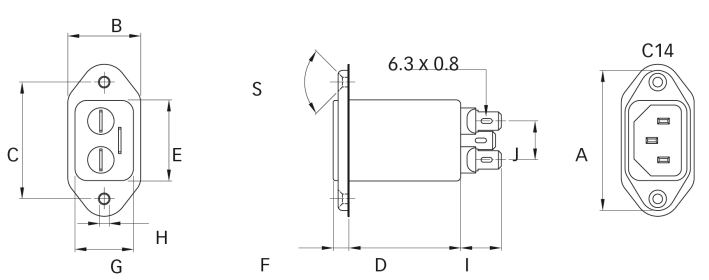
FN 9244 ES



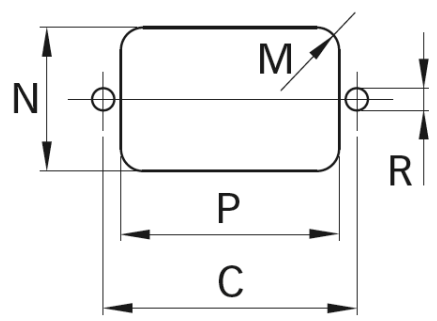
FN 9244 ES1



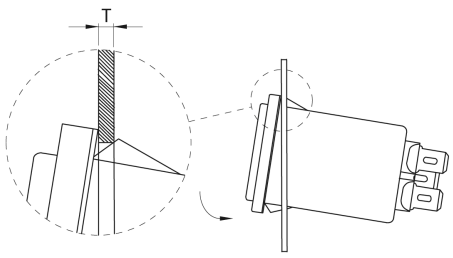
FN 9244EU



Panel cut out



Installation



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Dimensions

	FN 9244 E	FN 9244 EU	FN 9244 ES	FN 9244 ES1	FN 9244 E-HI	Tol.
A	48	48	29.9	29.9	48	
B	22.4	25	22.4	22.4	22.4	
C	40	40			40	±0.2
D	47.1	47.1	47.1	47.1	47.1	
E	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
H	Ø3.3	Ø3.3			Ø3.3	
I	14	14	14	14	14	
J	13.3	13.3	13.3	13.3	13.3	
M	R ≤3	R ≤3	R ≤1.5	R ≤1.5	R ≤3	
N	21.5	21.5	20.8	21.9	21.5	
P	28.5	28.5	29.4	28.5	28.5	
R*	M3	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

** 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 www.schaffner.com to find more details on filter connectors.

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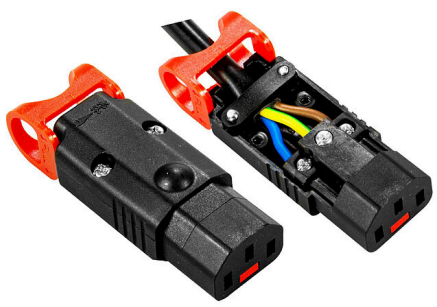
Accessories

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

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