

High performance dual-stage IEC C14 and C20 inlet filter



- Rated currents up to 20 A
- Excellent performance/size ratio
- IEC C14 or C20 inlet acc. IEC 60320-1
- Medical versions (B type) acc. to IEC/EN 60601-1
- Snap-in and rear mount versions (S and M type)
- Earth line choke version (Refer to FN9255E)
- Safe voltage discharge version (R-type)



Performance indicators Attenuation performance standard high very high Rated current [A] 0 4 8 12 16 20 2 20

Technical Specifications

Maximum continuous operating voltage	250 VAC, 50/60 Hz
Nominal operating voltage	230 VAC
Rated currents	2 to 20 A @ 40°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 760 VAC for 2 sec
Surge pulse protection (Z type)	Helps compliance to IEC61000-4-5 (Differential Mode only)
Temperature range (operation and storage)	-25°C to +85°C (25/85/21)
Protection category	IP 40 according to IEC 60529
Flammability corresponding to	UL 94 V-0
Approvals by rated current	ENEC and CQC: IEC C14 Inlet - 2 to 10 A ENEC and CQC: IEC C20 Inlet - 16 A UL: IEC C14 Inlet - 2 to 15A UL: IEC C20 Inlet - 16 to 20A UL: IEC C14 Inlet - 2 to 15A UL: IEC C20 Inlet - 16 to 20A UL: IEC C20 Inlet - 16 to 20A UL: IEC C20 Inlet - 16 to 20A UL: IEC C14 Inlet - 2 to 15A UL: IEC C20 Inlet - 16 to 20A
Design corresponding to	UL 60939-3, CSA Std C22.2 No. 8, IEC/EN 60939-3, GB/T 15287, GB/T 15288
MTBF (Mil-HB-217F)	>1,000,000 h @ 40°C/230 V

Approvals & Compliances





The FN9255 IEC inlet filter incorporates a dual stage filter into an IEC inlet that offers excellent filter attenuation in a compact housing. Using an IEC inlet, at the point of entry offers an optimized position and practical solution for integrating an EMC filter into any system. A wide selection of current ratings, output connections and mounting possibilities are available. The filter family also offers options that comply to medical application requirements and the entire family complies to all necessary safety approvals.

Features and Benefits

- Exceptional attenuation performance from 150kHz to 300MHz due to dual-stage design
- High saturation resistance and excellent thermal behavior
- Rear and Front flange or snap-in mounting options
- FN 9255 B versions comply with the requirements of 1MOP acc. to IEC/EN 60601-1 for creepage and clearance, leakage current and high potential testing
- Optional earth line choke see FN 9255 E versions
- All versions according IEC/EN 62368-1

Typical Applications

- Medical devices (MDD)
- In-vitro diagnostic medical devices (IVDD)
- Computing & accessories
- LCD and OLED Displays
- Test and measurement equipment
- Household and similar products as per IEC/ EN55014
- Portable electrical and electronic equipment
- Small to medium-sized machines
- Single-phase power supplies, switch-mode power supplies (SMPS)

For electrical schematic refer to page 3

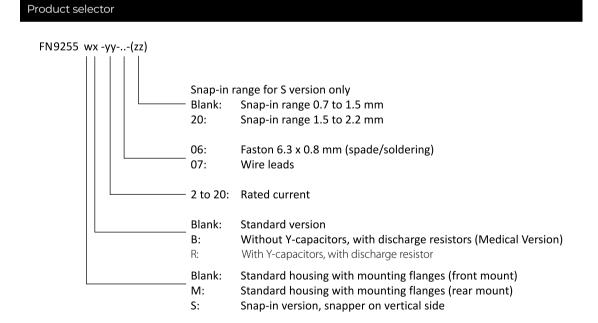
Filter Selection Table

Filter	Rated current	Leakage current*	Indu	ctance	Capacitance		Resistor	Input	Output		Weight	
	@ 40°C	@ 250 VAC/50 Hz	L1	L2	Сх	Cy1	Cy2	R	connections	s connections		,
-	-	(@ 120 VAC/60 Hz)	-	-	-	-	-	-	-	-	**	-
											Į.	
-	[A]	[mA]	[mH]	[μH]	[μF]	[nF]	[nF]	[kΩ]				[g]
FN 9255 x-2	2	0.45 (0.26)	4.8	18	0.1	2.2	1	-	C14	-06	-07	52
FN 9255 x-4	4	0.45 (0.26)	2.1	18	0.1	2.2	1	-	C14	-06	-07	52
FN 9255 x-6	6	0.45 (0.26)	0.9	18	0.1	2.2	1	-	C14	-06	-07	52
FN 9255 x-10	10	0.45 (0.26)	0.2	18	0.1	2.2	1	-	C14	-06	-07	54
FN 9255 x-15	15	0.45 (0.26)	0.13	8	0.1	2.2	1	-	C14	-06	-07	54
FN 9255 x-16	16	0.45 (0.26)	0.3	0.7	0.1	2.2	1	-	C20	-06	-07	130
FN 9255 x-20	20	0.45 (0.26)	0.3	0.7	0.1	2.2	1	-	C20	-06	-07	130
FN 9255 xB-2	2	-	4.8	18	0.1	-		1000	C14	-06	-07	52
FN 9255 xB-4	4	-	2.1	18	0.1	-		1000	C14	-06	-07	52
FN 9255 xB-6	6	-	0.9	18	0.1	-		1000	C14	-06	-07	52
FN 9255 xB-10	10	-	0.2	18	0.1	-		1000	C14	-06	-07	54
FN 9255 xB-15	15	-	0.13	8	0.1	-		1000	C14	-06	-07	54
FN 9255 xB-16	16	-	0.3	0.7	0.1	-		1000	C20	-06	-07	130
FN 9255 xB-20	20	-	0.3	0.7	0.1	-		1000	C20	-06	-07	130
FN 9255 xR-2	2	0.45 (0.26)	4.8	18	0.1	-		1000	C14	-06	-07	52
FN 9255 xR-4	4	0.45 (0.26)	2.1	18	0.1	-		1000	C14	-06	-07	52
FN 9255 xR-6	6	0.45 (0.26)	0.9	18	0.1	-		1000	C14	-06	-07	52
FN 9255 xR-10	10	0.45 (0.26)	0.2	18	0.1	-		1000	C14	-06	-07	54
FN 9255 xR-15	15	0.45 (0.26)	0.13	8	0.1	-		1000	C14	-06	-07	54
FN 9255 xR-16	16	0.45 (0.26)	0.3	0.7	0.1	-		1000	C20	-06	-07	130
FN 9255 xR-20	20	0.45 (0.26)	0.3	0.7	0.1	-		1000	C20	-06	-07	130

Test conditions: 25°C±2°C; Measuring frequency for Inductance: 1 kHz; 50 mV;

Tolerances: Inductance: +50%, -30%; Capacitance: ±25%; Resistor: ±15%; For mechanical tolerances refer to mechanical data section.

^{**} Standard length is 100 mm



For example: FN 9255 MB-15-06 - FN 9255 dual stage IEC inlet with rear mount flanges, medical version, 15A rated current and fast-on terminals

^{*} 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.

Schematic B version (2 to 20A)

Detailed Electrical Schematic

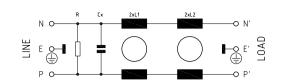
Schematic standard version (2 to 15A)

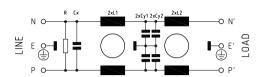
Schematic standard R version (2 to 15A)

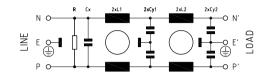


Schematic standard R version (16 to 20A)

Schematic standard version (16 to 20A)

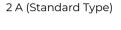


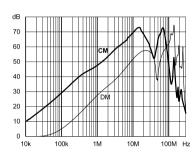




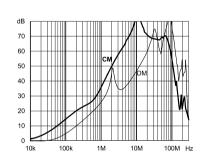
Typical Filter Attenuation

Per CISPR 17 - symmetrical 50 Ω /50 Ω - Differential Mode (DM) - asymmetrical 50 Ω /50 Ω - Common Mode (CM)

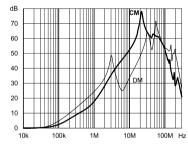




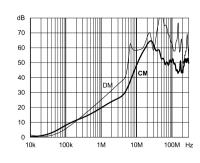
6 A (Standard Type)



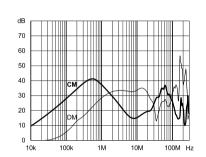
15 A (Standard Type)



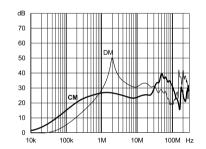
16 A (Standard Type)



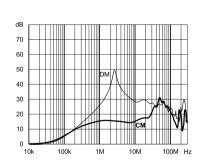
2 A (B Type)



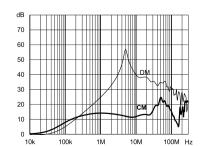
6 A (B Type)

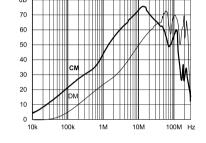


15 A (B Type)



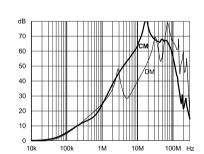
16 A (B Type)



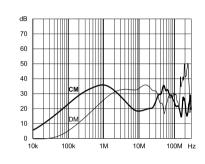


10 A (Standard Type)

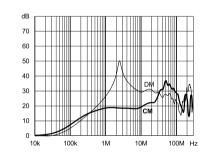
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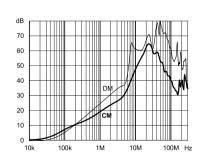
4 A (B Type)



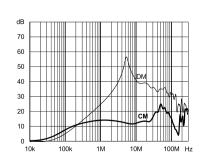
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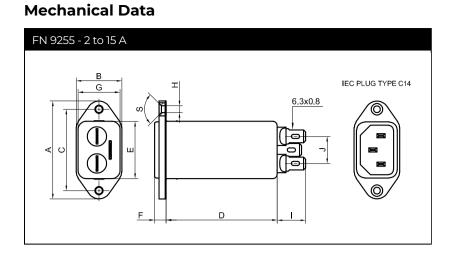


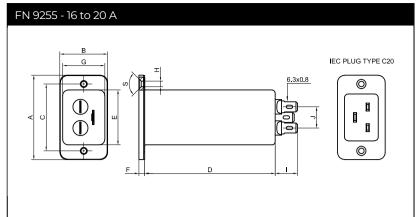
20 A (Standard Type)

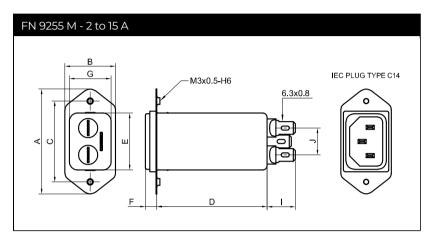


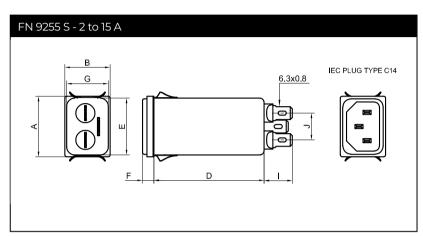
20 A (B Type)







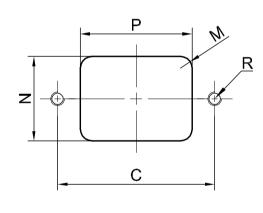


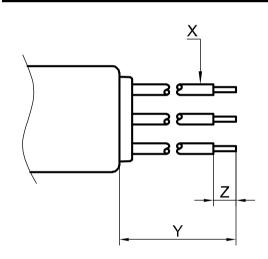


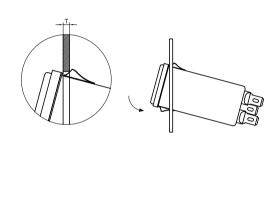
Panel cut out

-07 connection style

Installation







5 IEC Inlet Filters | Schaffner Group | DATA | SHEET | 29. Jan 2025

Dimensions

		FN 9255	FN 9255 M	FN 9255 S
	2 to 15A	16 to 20A		
Α	48	53	51.85	29.9
В	22.4	30	25	22.4
С	40±0.2	42±0.2	40±0.2	-
D	-06: 54.5, -07: 52.5	82	-06: 54.5, -07: 52.5	-06: 54.5, -07: 52.5
E	28.1±0.3	34.6±0.3	28.1±0.3	28.1±0.3
F	5.8±0.2	3.9±0.2	5.8±0.2	5.8±0.2
G	20.6±0.3	26.7±0.3	20.6±0.3	20.6±0.3
Н	Ø3.3	Ø3.5	M3	M3
1	14±0.5	14±0.5	14±0.5	14±0.5
J	13.3	13.3	13.3	13.3
М	R ≤ 3	R ≤ 3	R ≤ 1	R ≤ 1
N	21.5 +0.5/-0	27.1 +0.2/-0	22.9 +0.2/-0	21.0 +0.1/-0
P	28.5 +0.5/-0	34.9 +0.2/-0	30.4 +0.2/-0	29.5 +0.1/-0
R*	M3	M3	Ø3.4	Ø3.4
S	90°	90°		
Т				1.5 - 2.2
X	AWG 18 (>6A: AWG 16)	AWG 14	AWG 18 (>6A: AWG 16)	AWG 18 (>6A: AWG 16)
Υ	100±5	100±5	100±5	100±5
Z	6	6	6	6

^{**}Recommended torque for M3 (90° countersunk flat head) is 0.5 Nm $\,$

All dimensions in mm; 1 inch = 25.4 mm For values without dedicated tolerances ISO 2768-m/EN 22768-m applies.

Please visit $\underline{www.schaffner.com}$ to find more details on connectors.

Accessories

Power Cord with Locking System for Inlet Filters IL 13, IL 13 P, IL 19



- Locking system for standardized IEC C14/C20 inlet filter
- No accidental disconnection
- Rated current up to 10 A (C13 plug), up to 15 A (C13P plug), and up to 20 A (C19 plug)
- Fits any Schaffner IEC C14/C20 inlet filter
- Retrofit for any IEC C14/C20 inlet
- Various power line plugs for international usage

Technical Data Sheet >

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
- 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>

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Sales and Application Centers

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

Janan

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

 $\underline{switzerlandsales@schaffner.com}$

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

Mouser Electronics

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