

Ultra Compact and Versatile Filtered Power Entry Module



- Single stage filter
- Ultra compact design
- Rated currents up to 10 A
- dual-fuse holder
- Fuses Ø5x20 mm
- 2-pole rocker switch
- Good attenuation performance
- Faston or spring cage terminals



Check the video of our IEC Inlet Filters FN 9280 and FN 9290 on Youtube!

Performance indicators

Attenuation performance



Approvals & Compliances



(CQC except HI-types; Patent US 20110227692/US 8766761; CN ZL201080069589.0)

Choosing FN 9280/90 product line brings you the rapid availability of a standard filter associated with the necessary safety acceptances and a high attenuation performance. For higher attenuation performance the FN 9290 family with a dual stage filter and identical panel cut-out can be used.

Standard IEC connector filters are a practical solution to pass EMI system approval in a short time. A wide selection of amperage ratings, mounting possibilities and also filters for medical applications are designed to offer you the best solution.

Features and benefits

Good conducted attenuation performance, based on chokes with high saturation resistance and excellent thermal behavior

Deep-drawn iron-sheet housing for best possible shielding against magnetic fields

Rear/front flange mounting or snap-in versions

Dual and additional spare fuse holder

2-pole rocker switch

Faston or spring cage terminals

FN 928X B versions comply with the requirements of 1MOP acc. to IEC/EN 60601-1

All versions according IEC/EN 62368-1

Typical applications

Portable electrical and electronic equipment

Consumer goods

EDP and office equipment

Single-phase and switch-mode power supplies

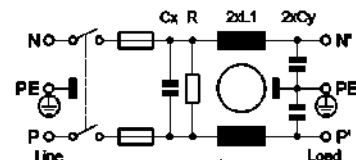
Test and measurement equipment

Medical electrical devices (MD) and *In-Vitro*-Diagnostics (IVD) equipment

Audio/Video, information and communication technologies

Typical electrical schematic

Standard types (see page 3 for all options):



Technical specifications

Maximum continuous operating voltage

Rated currents

Operating frequency

Leakage current

High potential test voltage

Design corresponding to

Flammability corresponding to

Temperature range (operation and storage)

Protection category

Terminals

Spring cage wire range

MTBF @ 40°C/230 V (Mil-HB-217F)

Switch ratings

Rocker switch

USA (UL) and Canada (C-UL)

Europe (ENEC)

Mechanical life

Electrical specifications

Fuse holder

Power acceptance @ amb. temperature

250 VAC, 50/60 Hz

1 to 10 A @ 40°C max.

DC to 400 Hz

Standard: <500 uA at 250 VAC/50 Hz

Medical: <5 uA at 250 VAC/50 Hz

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

UL 1283, CSA 22.2 No. 8 1986, EN 60939, EN 60950, EN 60601-1, UL 544, EN 60320

UL 94 V-2 or better

- 25°C to +85°C (25/85/21)

IP 40 according to IEC 60529 (front side)

IP 20 spring cage safe against finger touch

0.2 - 1.5 mm² / 24 - 16 AWG single or flexible wire

> 1,000,000 hours

2-pole, dark not illuminated, Marking I - 0

10 A, 125 VAC; 10 A, 250 VAC; 1/3 HP

10 A (4 A), 250 VAC**

50,000 cycles

Inrush current 82 A

6,000 on-off operations according to UL 1054



10,000 on-off operations according to ENEC

2 fuses (Ø5 x 20 mm) max. 250 V (certified to IEC 60127-6)

* 10 A version is 8 A UL and CSA approved

** Value in () relates to the inductive current charge: cos γ = 0.65

Filter selection table

Filter*	Rated current @ 40°C	Leakage current** @ 250 VAC /50 Hz (@ 120 VAC /60 Hz)	Inductance		Capacitance		Resistance R	Output connections		Weight [g]
			L1	L2	Cx	Cy				
	[A]	[mA]	[mH]	[mH]	[nF]	[nF]	[kOhm]			
FN 9280-1-..	1	0.31 (0.18)	10.9	0	220	2.2	1000	-06	-100	101
FN 9280-2-..	2	0.31 (0.18)	4.4	0	220	2.2	1000	-06	-100	102
FN 9280-4-..	4	0.31 (0.18)	1.7	0	220	2.2	1000	-06	-100	105
FN 9280-6-..	6	0.31 (0.18)	0.78	0	220	2.2	1000	-06	-100	104
FN 9280-10-..	10	0.31 (0.18)	0.32	0	220	2.2	1000	-06	-100	106
FN 9280 B-1-..	1	0.00	10.9	0	220	0	1000	-06	-100	101
FN 9280 B-2-..	2	0.00	4.4	0	220	0	1000	-06	-100	102
FN 9280 B-4-..	4	0.00	1.7	0	220	0	1000	-06	-100	105
FN 9280 B-6-..	6	0.00	0.78	0	220	0	1000	-06	-100	104
FN 9280 B-10-..	10	0.00	0.32	0	220	0	1000	-06	-100	106
FN 9289-1-..	1	0.31 (0.18)	10.9	0	220	2.2	1000	-06	-100	101
FN 9289-2-..	2	0.31 (0.18)	4.4	0	220	2.2	1000	-06	-100	102
FN 9289-4-..	4	0.31 (0.18)	1.7	0	220	2.2	1000	-06	-100	105
FN 9289-6-..	6	0.31 (0.18)	0.78	0	220	2.2	1000	-06	-100	104
FN 9289-10-..	10	0.31 (0.18)	0.32	0	220	2.2	1000	-06	-100	106
FN 9289 B-1-..	1	0.00	10.9	0	220	0	1000	-06	-100	101
FN 9289 B-2-..	2	0.00	4.4	0	220	0	1000	-06	-100	102
FN 9289 B-4-..	4	0.00	1.7	0	220	0	1000	-06	-100	105
FN 9289 B-6-..	6	0.00	0.78	0	220	0	1000	-06	-100	104
FN 9289 B-10-..	10	0.00	0.32	0	220	0	1000	-06	-100	106
FN 9280 E-1-..	1	0.31 (0.18)	10.9	0.4	220	2.2	1000	-06	-100	135
FN 9280 E-2-..	2	0.31 (0.18)	4.4	0.4	220	2.2	1000	-06	-100	136
FN 9280 E-4-..	4	0.31 (0.18)	1.66	0.4	220	2.2	1000	-06	-100	137
FN 9280 E-6-..	6	0.31 (0.18)	0.78	0.4	220	2.2	1000	-06	-100	138
FN 9280 E-10-..	10	0.31 (0.18)	0.32	0.4	220	2.2	1000	-06	-100	139
FN 9280 EB-1-..	1	0.00	10.9	0.4	220	0	1000	-06	-100	135
FN 9280 EB-2-..	2	0.00	4.4	0.4	220	0	1000	-06	-100	136
FN 9280 EB-4-..	4	0.00	1.66	0.4	220	0	1000	-06	-100	137
FN 9280 EB-6-..	6	0.00	0.78	0.4	220	0	1000	-06	-100	138
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FN 9289 EB-1-..	1	0.00	10.9	0.4	220	0	1000	-06	-100	135
FN 9289 EB-2-..	2	0.00	4.4	0.4	220	0	1000	-06	-100	136
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FN 9289 EB-6-..	6	0.00	0.78	0.4	220	0	1000	-06	-100	138
FN 9289 EB-10-..	10	0.00	0.32	0.4	220	0	1000	-06	-100	139

* To compile a complete part number, please replace the .. with the required output connection style (e.g. FN 9289-1-06, FN 9282-4-100)

** Maximum leakage current under normal conditions (according to IEC60939-3)

Product selector

FN 92www-xx-yy-zz

Blank:	Snap in range 1.0 to 2.5 mm
Optional: 30:	Snap in range >2.5 to 3.5 mm
06:	Fast-On 6.3 x 0.8 mm (spade/soldering)
100:	Spring cage
1 to 10:	Rated current [A]
Blank:	Standard version
B:	Medical version (without Y2-capacitor)
Optional: E:	Earth line choke
EB:	Medical version (without YZ-capacitor) with earth line choke
0:	Flange version vertical/horizontal/front/rear mounting set
9:	Snap-in version, snapper on horizontal side (top / bottom)
Optional: 1:	Rear Flange mounting (top / bottom)
2:	Front Flange mounting (top / bottom)
3:	Rear Flange mounting (left / right)
4:	Front Flange mounting (left / right)
8:	Snap-in version, snapper on vertical side (left / right)
8:	Single stage filter

All FN 9280/FN 9290 are equipped with a dual fuse holder with a spare fuse holder.

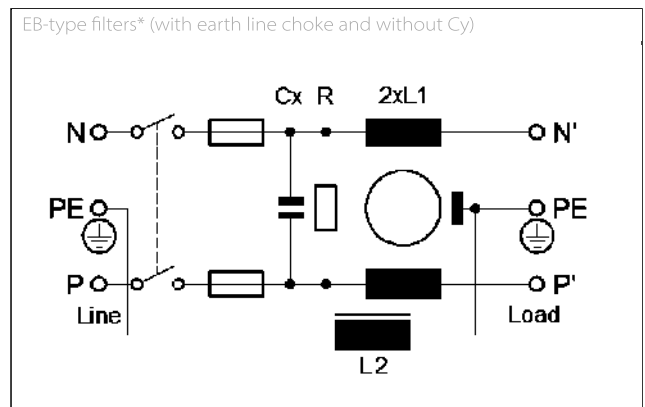
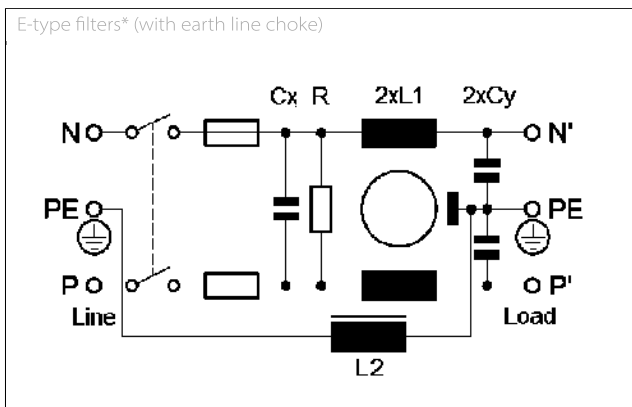
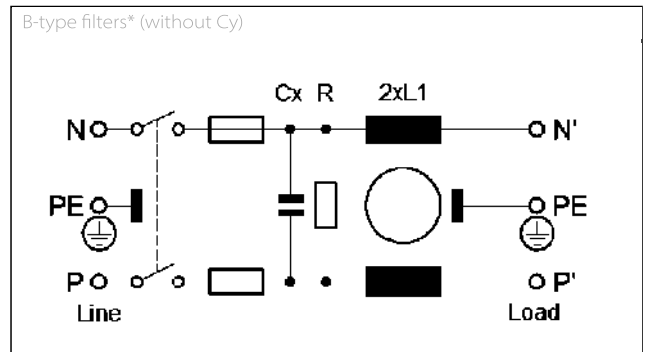
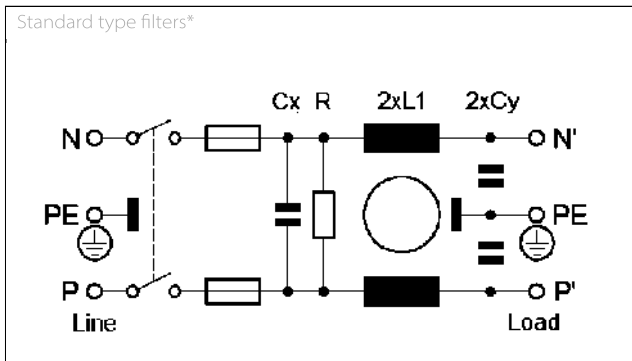
Note: All FN 9280/FN 9280 B/FN 9289/FN 9289 B/FN 9290/FN 9290 B/FN 9299/FN 9299 B are stock types from our distribution partners.

Order Examples:

FN 9280 B-6-100: Medical version of single stage, dual fuse EMC/EMI filter, flange set for vertical/horizontal/front/rear mounting, 6 A, spring cage terminals, from stock available.

FN 9298-6-06-30: Dual stage, dual fuse EMC/EMI filter, snap-in version, snappers for snap-in panel thickness range >2.5 to 3.5 mm, snapper on vertical side, 6 A, fast-on terminals, non-stock order type

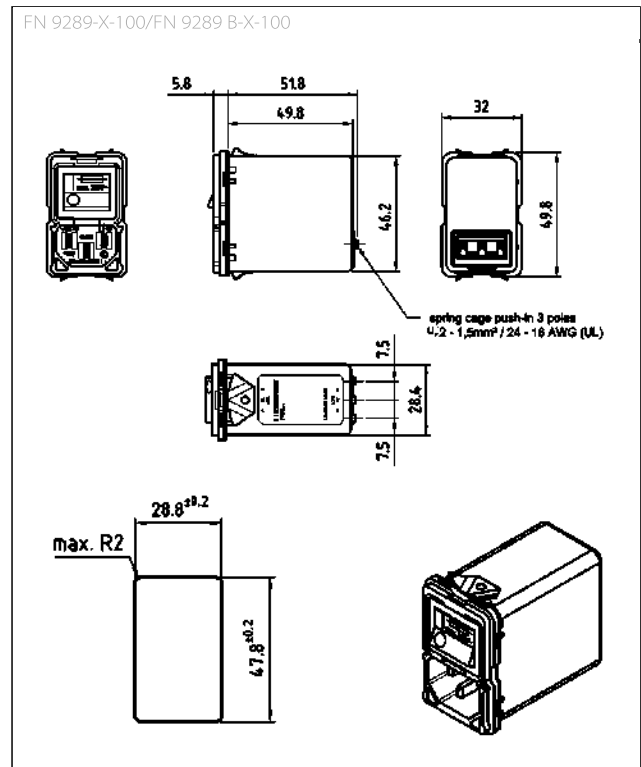
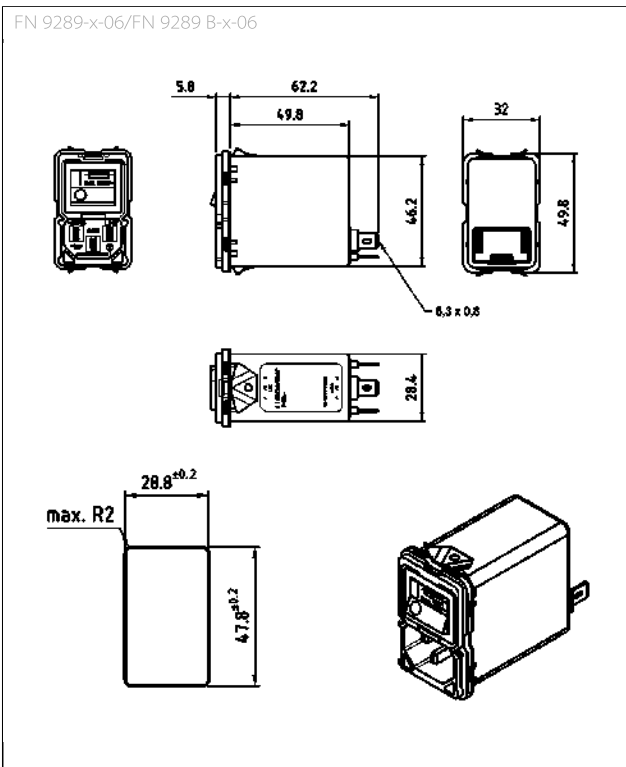
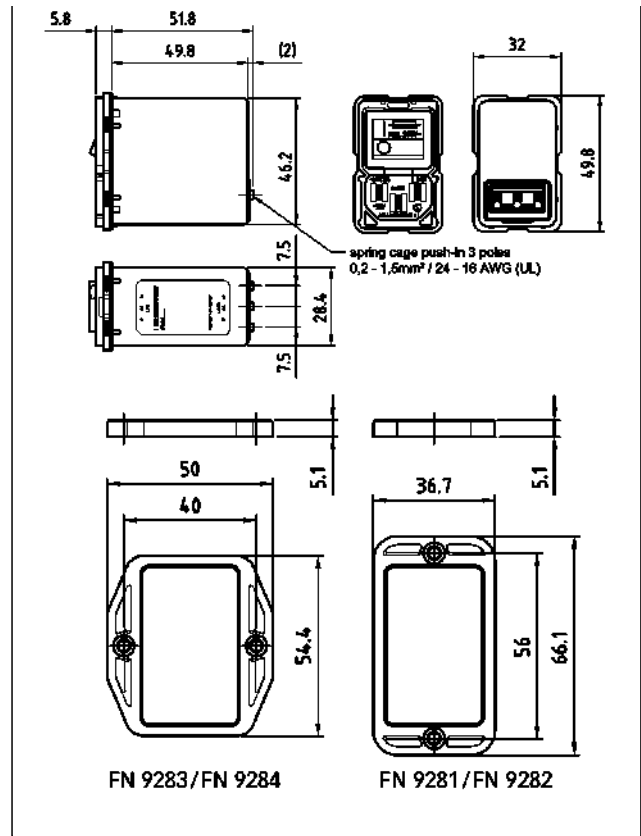
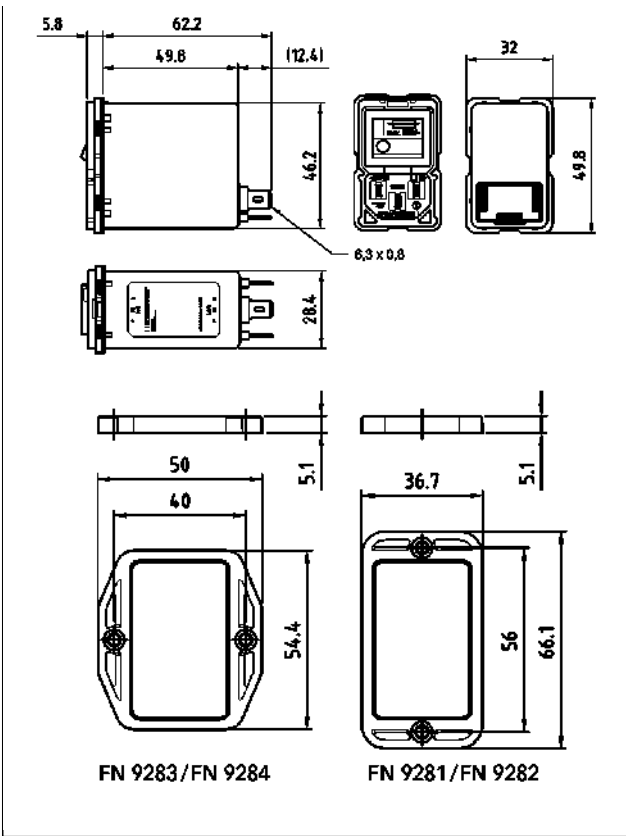
Accessories: The 4D flanges can be ordered separately. The order number is 427532. Please note that the minimum order quantity is one box of 50 pieces. One item includes both type of flanges (vertical and horizontal).



* Fuses are not included

Typical filter attenuation

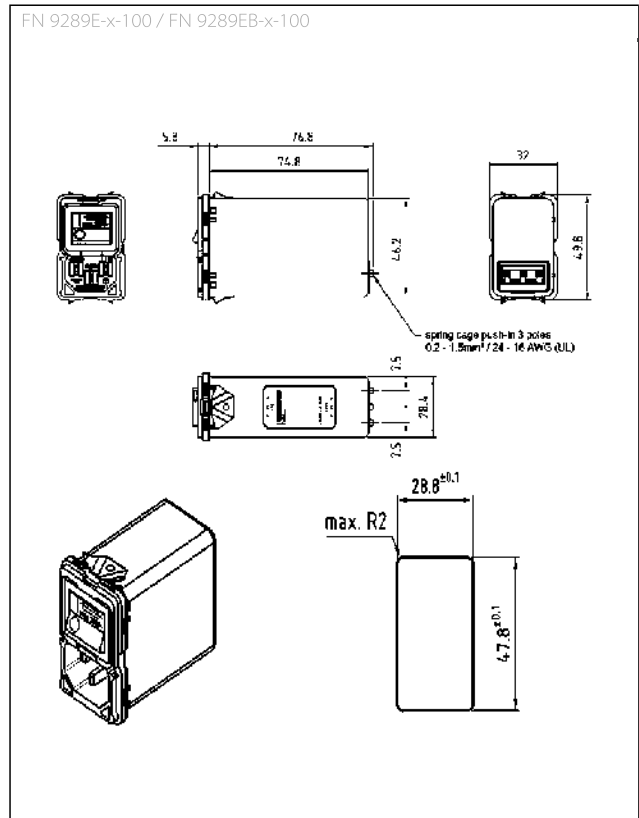
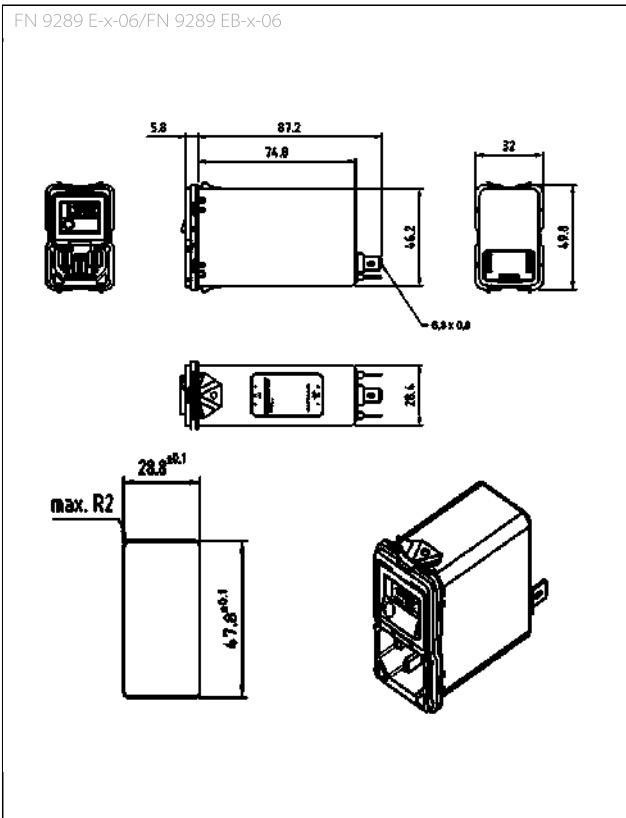
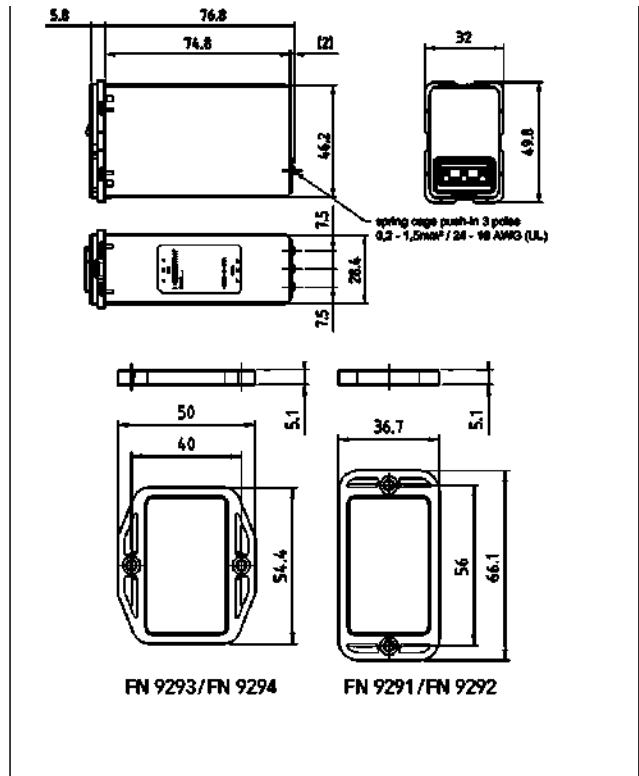
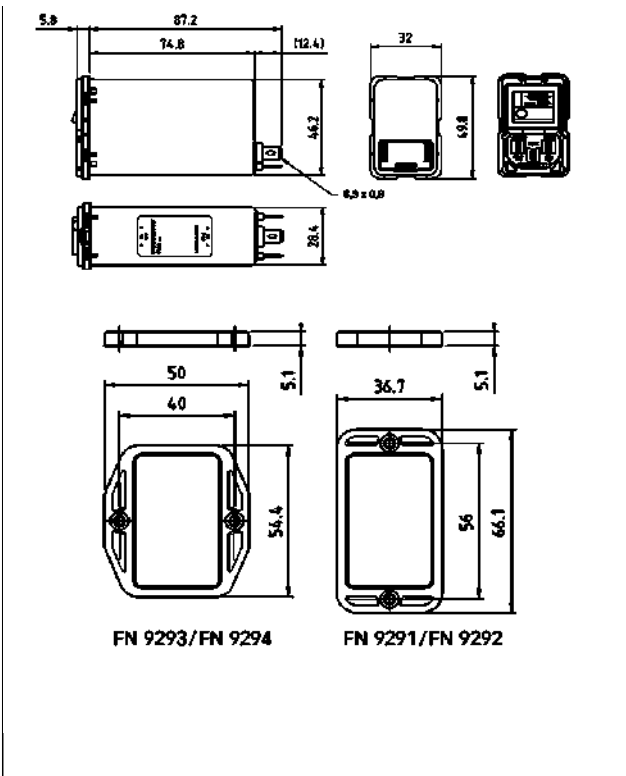
FN 9280 Series | Per CISPR 17; A=50 Ω/50 Ω sym; B=50 Ω/50 Ω asym

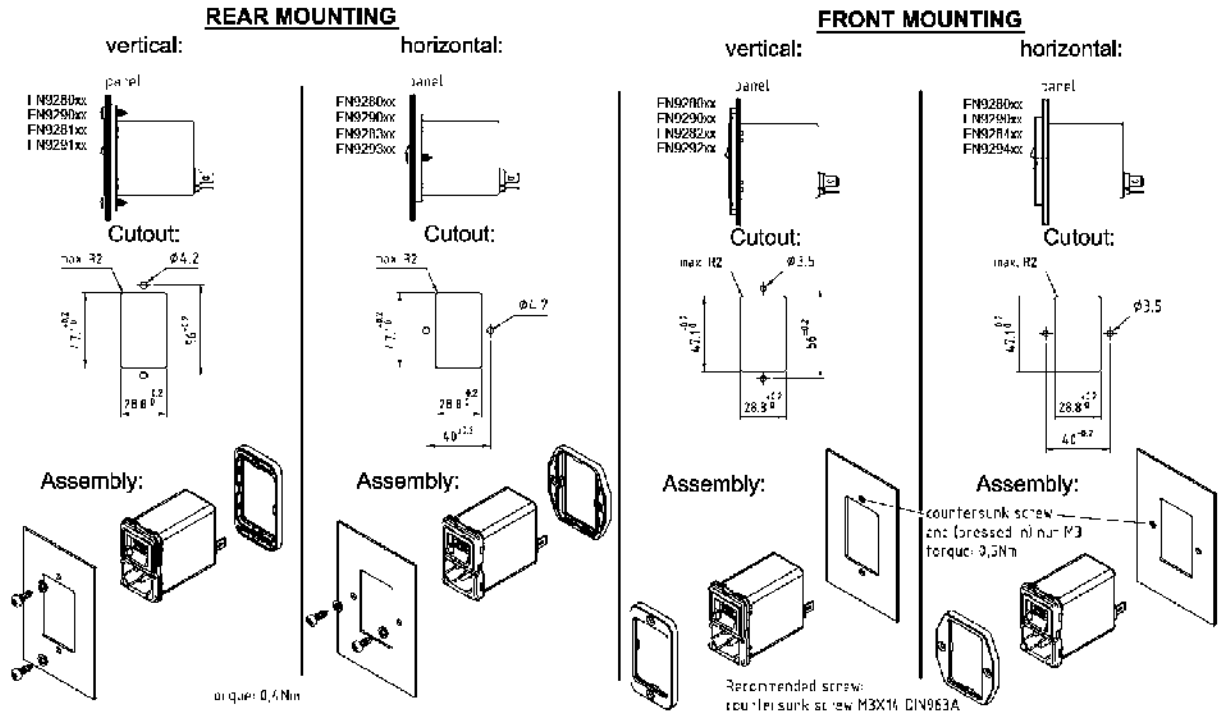


Mechanical Data

FN 9280 E-x-06/FN 9280 EB-x-06

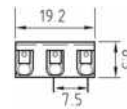
FN 9280 E-x-100/FN 9280 EB-x-100





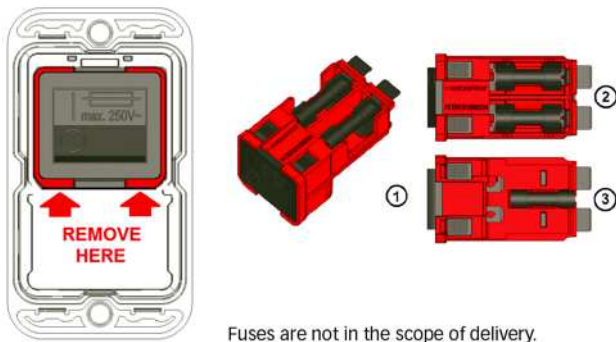
Terminal -100
 clamping range, solid wire / flex wire
 operating force of slider
 recommended stripped length

0,20 mm² – 1,5 mm², AWG24 – AWG16
 max. 40 N
 8 mm



Push the knob above the terminal to insert the wire.

Removal of the combined switch / fuse holder unit



An additional fuse mark on the switch indicates the fuses holders behind the switch. The red frame shows the outline of the removable unit. With a simple tool like a Swiss Army knife or a screwdriver No 1 or smaller the unit (1) can be removed from the filter. On the topside (2) behind the switch there are two fuse holders for each live connection. On the bottom side (3) is a clip to carry an additional spare fuse.

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

Accessories for IEC Inlet Filters and Power Entry Modules

The accessories displayed are a selection of available accessories for IEC Inlet filters and IEC Power entry modules. As they are displayed in a general way there might be variants of the filters where the accessories are not available. For further information please ask your local Schaffner Sales Partner and visit our homepage <https://www.schaffner.com/>.

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

The locking system has a tensile force of typical 200N. It is recommended to use it with flange mount filters. Lock Power Cords with IEC Inlets and Filters" Schaffner power cords with IEC lock

IEC C13 Rewireable Connector for individual Power Cord 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



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.

Link to Datasheet: [Datasheet IEC C13/C19 locking cable](#)



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.

Link to Datasheet: [Datasheet IEC C13 rewireable](#)



Headquarters, global innovation and development

Switzerland

Schaffner Group

Industrie Nord
Nordstrasse 11e
4542 Luterbach
T +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
T +86 21 3813 9500
cschina@schaffner.com
www.schaffner.com.cn

Spain

Schaffner EMC España

Calle Caléndula 93, Miniparc III, Edificio E
El Soto de Moraleja, Alcobendas
28109 Madrid
T +34 917 912 900
F +34 917 912 901
spainsales@schaffner.com

Finland**Schaffner Oy**

Sauvonrinne 19 H
08500 Lohja
T +358 10 567 2855
finlandsales@schaffner.com

France**Schaffner EMC S.A.S.**

16-20 Rue Louis Rameau
95875 Bezons
T +33 1 34 34 30 60
F +33 1 39 47 02 28
francesales@schaffner.com

Germany**Schaffner Deutschland GmbH**

Schoemperlenstrasse 12B
76185 Karlsruhe
T +49 721 56910
F +49 721 569110
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
T +91 80 67935355
indiasales@schaffner.com

Italy**Schaffner EMC S.r.l.**

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

Japan**Schaffner EMC K.K.**

Taiju-Seimei Sangerjaya Bldg.
1-32-12, Kamiyama, Setagaya-ku
154-0011 Tokyo
T +81 3 5712 3650
F +81 3 5712 3651
japansales@schaffner.com
www.schaffner.jp

Singapore**Schaffner EMC Pte Ltd.**

#05-09, Kg Ubi Ind. Estate
408705 Singapore
T +65 6377 3283
F +65 6377 3281
singaporesales@schaffner.com

Sweden**Schaffner EMC AB**

Östermalmstorg 1
114 42 Stockholm
T +46 8 5050 2425
swedensales@schaffner.com
www.schaffner.com

Switzerland**Schaffner EMV AG**

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

Taiwan R.O.C.**Schaffner EMV Ltd.**

20 Floor-2, No 97, Section 1, XinTai 5th Road
22175 XiZhi District New Taipei City 22175
T +886 2 2697 5500
F +886 2 2697 5533
taiwansales@schaffner.com
www.schaffner.com.tw

Thailand**Schaffner EMC Co. Ltd.**

Northern Region Industrial Estate
67 Moo 4 Tambon Ban Klang
Amphur Muang P.O. Box 14
51000 Lamphun
T +66 53 58 11 04
F +66 53 58 10 19
thailandsales@schaffner.com

United Kingdom**Schaffner Ltd.**

1, Oakmede Place
Binfield
RG42 4JF Berkshire
T +44 118 9770070
F +44 118 9792969
uksales@schaffner.com

USA**Schaffner EMC Inc.**

52 Mayfield Avenue
Edison, New Jersey
T +1 732 225 9533
F +1 732 225 4789
usasales@schaffner.com
www.schaffnerusa.com

Schaffner North America

6722 Thirlane Road
24019 Roanoke, Virginia
T +1 276 228 7943
F +1 276 228 7953

Schaffner North America

823 Fairview Road
24382 Wytheville, Virginia
T +1 276 228 7943
F +1 276 228 7258

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