

- Excellent EMC filter for robotics, datacenters and a variety of other applications
- Available terminals: Fast-on, wire leads, bolt and clamps
- Voltage rating up to 277 VAC / 400 VDC
- Fits within 1 height unit (HU) of a 19" rack application
- 50 °C operating temperature
- 2-stage filter performance

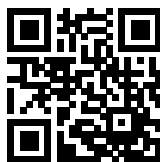


Figure 1 consists of two parts. The top part is a qualitative comparison of the rated current of the FN2500 and FN2520. It shows three categories: standard, high, and very high. The FN2500 is rated as 'high' and the FN2520 as 'very high'. The bottom part is a quantitative comparison on a scale of Rated current [A] from 0 to 100. The FN2500 is rated at 32A and the FN2520 at 10A.

Rated current [A]	FN2500	FN2520
0		
20		
40		
60		
80		
100		

Maximum continuous operating voltage	277 VAC / 400 VDC (CQC: 250 VAC / 250 VDC)
Rated currents	10 to 32 A @ 50°C
Overload capability	1.5 x rated current for 1 minute once per hour
Operating frequency	DC to 60 Hz
High potential test voltage	P(DC+) -> N(DC-) 1500 VDC for 2 sec* P(DC+)/N(DC-) -> PE 2500 VDC for 2 sec*
Overvoltage category	II acc. IEC 60664-1
Pollution degree	2 acc. IEC 60664-1
Surge withstand	2 kV Ph-Ph / 4 kV Ph-PE (Level 4)
Temperature range (operation and storage)	FN2500: -40°C to +100°C (with derating >50°C) FN2520: -40°C to +85°C (with derating >50°C)
Climatic category	FN2500: 40/100/21 acc. IEC60068-1
Cooling	Natural cooling AN
Altitude	Derating above 2000 m
Protection category	IP00 / IP20 for -103 terminals
Flammability corresponding to	Plastic material: UL 94 V0 Laces for -07 version: UL 94 VW1
Vibration and shock	3M12 acc. IEC 60721-3-3
Certified to	UL/IEC 60939-3, CSA 22.2 No. 8-13, GB/T 15287
MTBF (Mil-HB-217F)	>300,000 h @ 50°C/277 V

- FN2520 series fits perfectly within 1HU height for rack mount applications
- The filters are built to perform perfectly in datacenter and audio video equipment
- The shape allows convenient and space-saving installation
- Fulfills the requirements in IEC/EN 62040-1 - Uninterruptible power systems (UPS)
- Fulfills the requirements in IEC 62368-1 - Audio/Video, Information and Communication Technology Equipment
- Fulfills the requirements in IEC/EN 60335-1 - Household and similar appliances

- Datacenter (at 400 VDC)
- Building technology with DC power distribution
- Robotics, collaborative robots, autonomous machines
- Audio and video equipment
- UPS - Uninterruptible power supplies

The diagram shows a power system with three main horizontal lines: P (top), N (middle), and PE (bottom). The P and N lines are connected to a transformer with two stages, L1 and L2. The PE line is connected to a common ground symbol. The transformer has two secondary windings, Cy1 and Cy2, connected to the PE line. The primary windings are connected to the P and N lines. The secondary windings are connected to the P' and N' lines. The P' and N' lines are connected to a load R. The PE line is connected to a common ground symbol. The diagram is labeled 'LINE' on the left and 'LOAD' on the right.

Filter Selection Table

Filter	Rated current	Leakage current*	Power loss	Inductance**		Capacitance**				Resistance**	Connections***				Weight max****
	@ 50°C (@ 40°C)	@ 277 VAC/50 Hz	@ 25°C	L1	L2	Cx1	Cx2	Cy1	Cy2	R	line side/load side				
		(@ 120 VAC/60 Hz)													
	[A]	[mA]	[W]	[mH]	[mH]	[µF]	[µF]	[nF]	[nF]	[kΩ]					[kg]
Two-stage															
FN2520-10-yy-C1111	10 (11)	0.82 (0.43)	8.0	8.3	8.3	1	0.47	4.7	4.7	680	-05	-07	-08	-103	0.4
FN2520-15-yy-C1111	15 (17)	0.82 (0.43)	9.0	4.0	4.0	1	0.47	4.7	4.7	680	-05	-07	-08	-103	0.4
FN2520-20-yy-C1111	20 (22)	0.82 (0.43)	8.4	2.4	2.4	1	0.47	4.7	4.7	680	-05	-07	-08	-103	0.5
FN2520-25-yy-C1111	25 (27)	0.82 (0.43)	11.0	1.5	1.5	1	0.47	4.7	4.7	680	n.a	-07	-08	-103	0.5
FN2520-32-yy-C1111	32 (35)	0.82 (0.43)	13.2	0.9	0.9	1	0.47	4.7	4.7	680	n.a	-07	-08	-103	0.4

* Maximum leakage current under normal operating conditions. Note: if the neutral line is interrupted, worst case leakage current could reach twice this level.

** Tolerances apply: Inductance: -30/+50%, Capacitance: ±20%, Resistance: ±10%.

*** Standard parts have same input and output connections. For combinations, please contact your sales representative.

**** Weight depending on choice of connectors.

Product selector

FN2520-xx-yy-C1111

yy – Line / load terminal types

05: fast-on 6.3 x 0.8 mm (up to 20 A only)

07: wire leads

08: M4 screw

103: push-in terminal

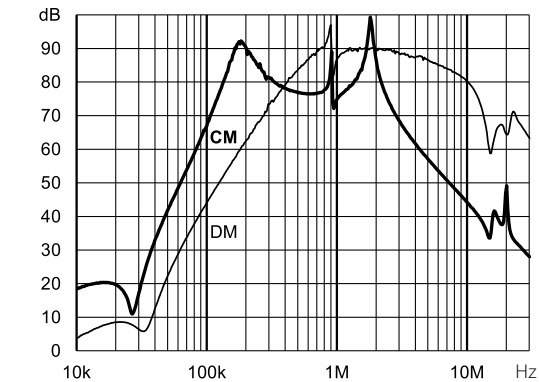
xx – Rated current

10-32: 10 A – 32 A

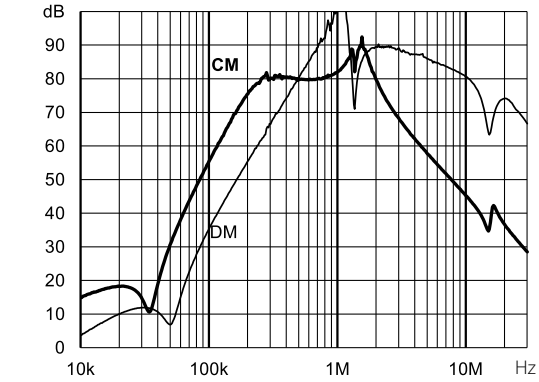
Typical Filter Attenuation

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

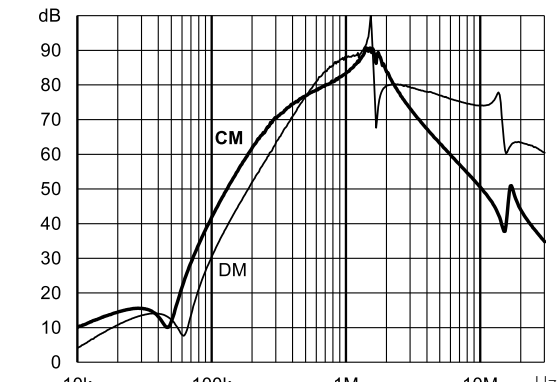
FN2520 - Two-stage filter



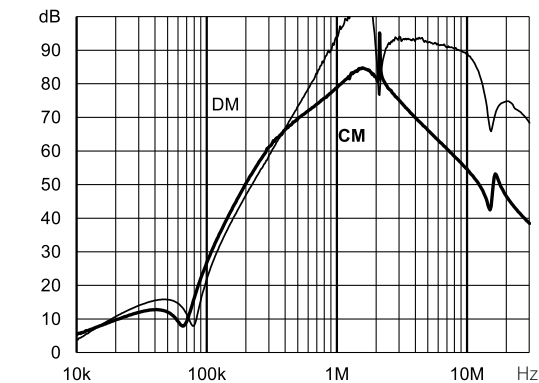
FN2520-10-yy-C1111



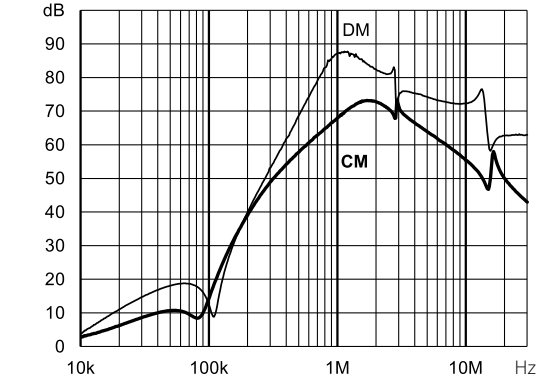
FN2520-15-yy-C1111



FN2520-20-yy-C1111



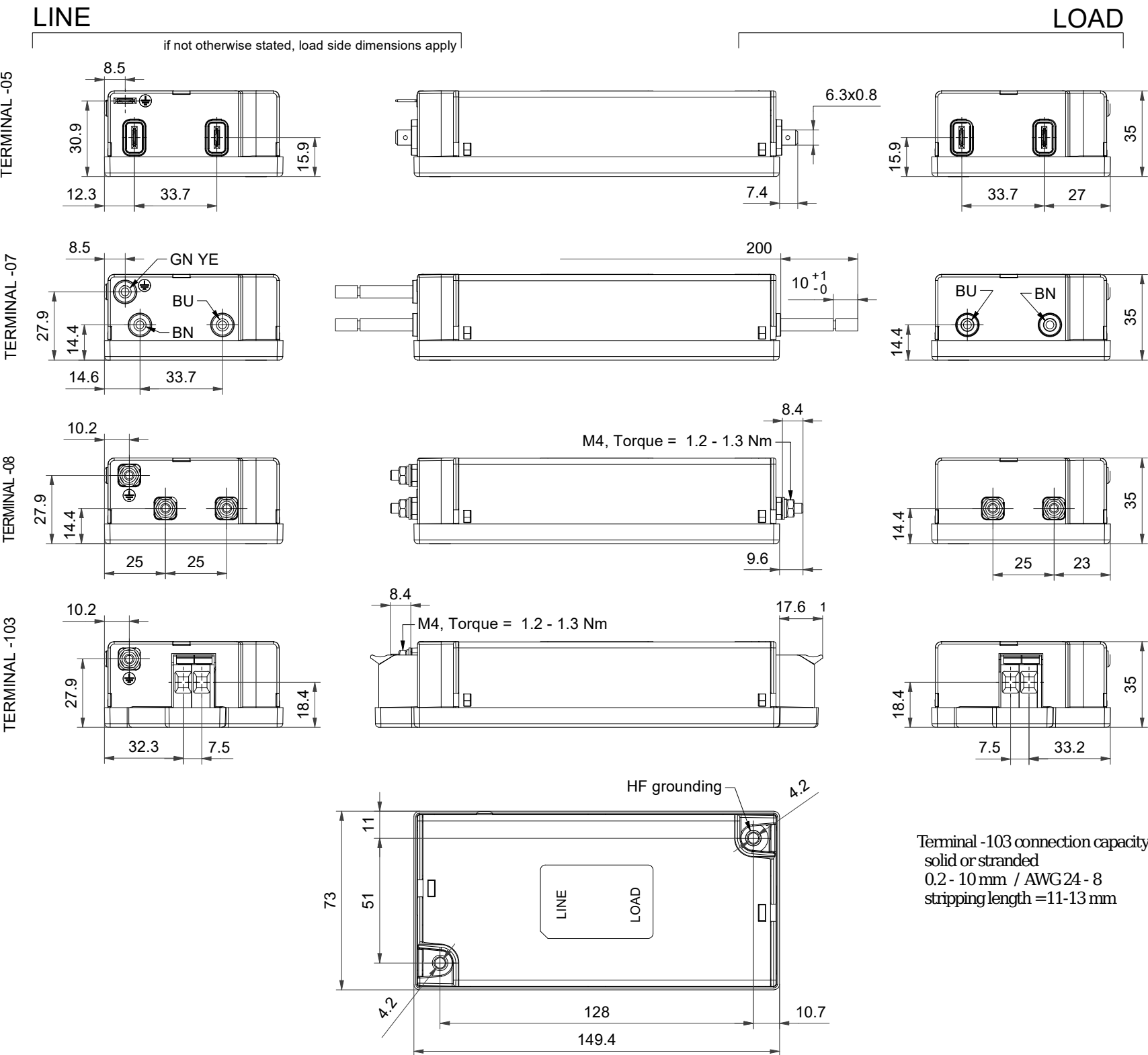
FN2520-25-yy-C1111



FN2520-32-yy-C1111

Dimensions FN2520 - 10 A To 32 A - Two-stage Filter

For dimensions [mm] without tolerances: ISO2768-cL/EN22768-cL applies



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