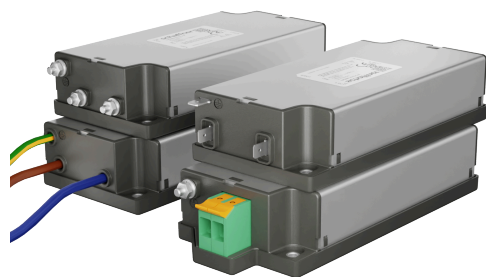


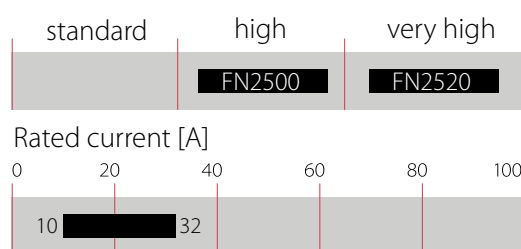
# Low Profile - High performance, EMC/EMI filter



- 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



### Performance indicators



### Approvals & Compliances



### Features and Benefits

- 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

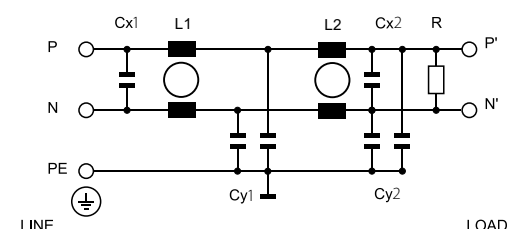
### Typical Applications

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

## Technical Specifications





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

### Typical electrical schematic



\* High potential test voltage: Repetition with max. 80% of specified values

### Filter Selection Table

Filter	Rated current	Leakage current*	Power loss	Inductance**		Capacitance**				Resistance**	Connections***				Weight max****
	@ 50°C (@ 40°C)	@ 277 VAC/50 Hz  (@ 120 VAC/60 Hz)	@ 25°C	L1	L2	Cx1	Cx2	Cy1	Cy2	R	line side/load side				
	[A]	[mA]	[W]	[mH]	[mH]	[μF]	[μF]	[nF]	[nF]	[kΩ]					[kg]
<b>Two-stage</b>															
<b>FN2520-10-yy-C1111</b>	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
<b>FN2520-15-yy-C1111</b>	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
<b>FN2520-20-yy-C1111</b>	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
<b>FN2520-25-yy-C1111</b>	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
<b>FN2520-32-yy-C1111</b>	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

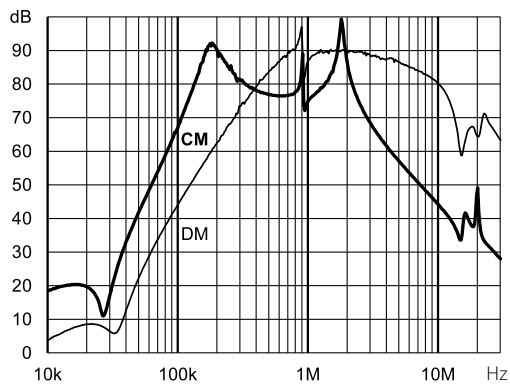
**xx – Rated current**

10-32: 10 A – 32 A

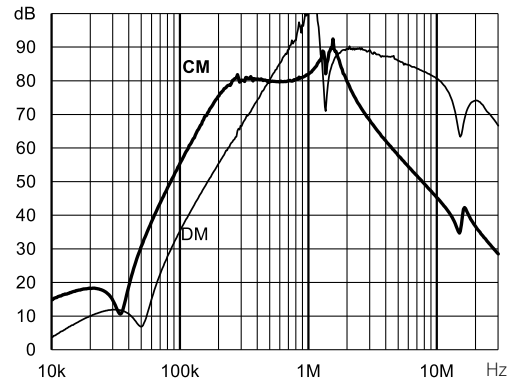
### Typical Filter Attenuation

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

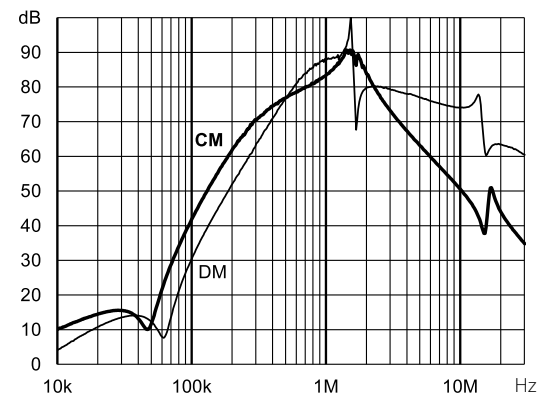
FN2520 - Two-stage filter



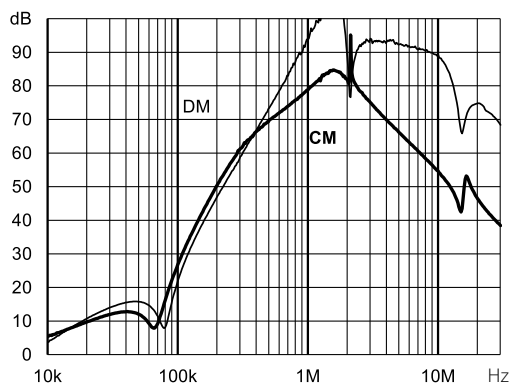
FN2520-10-yy-C1111



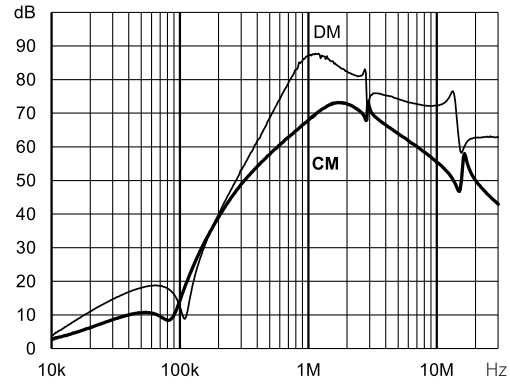
FN2520-15-yy-C1111



FN2520-20-yy-C1111



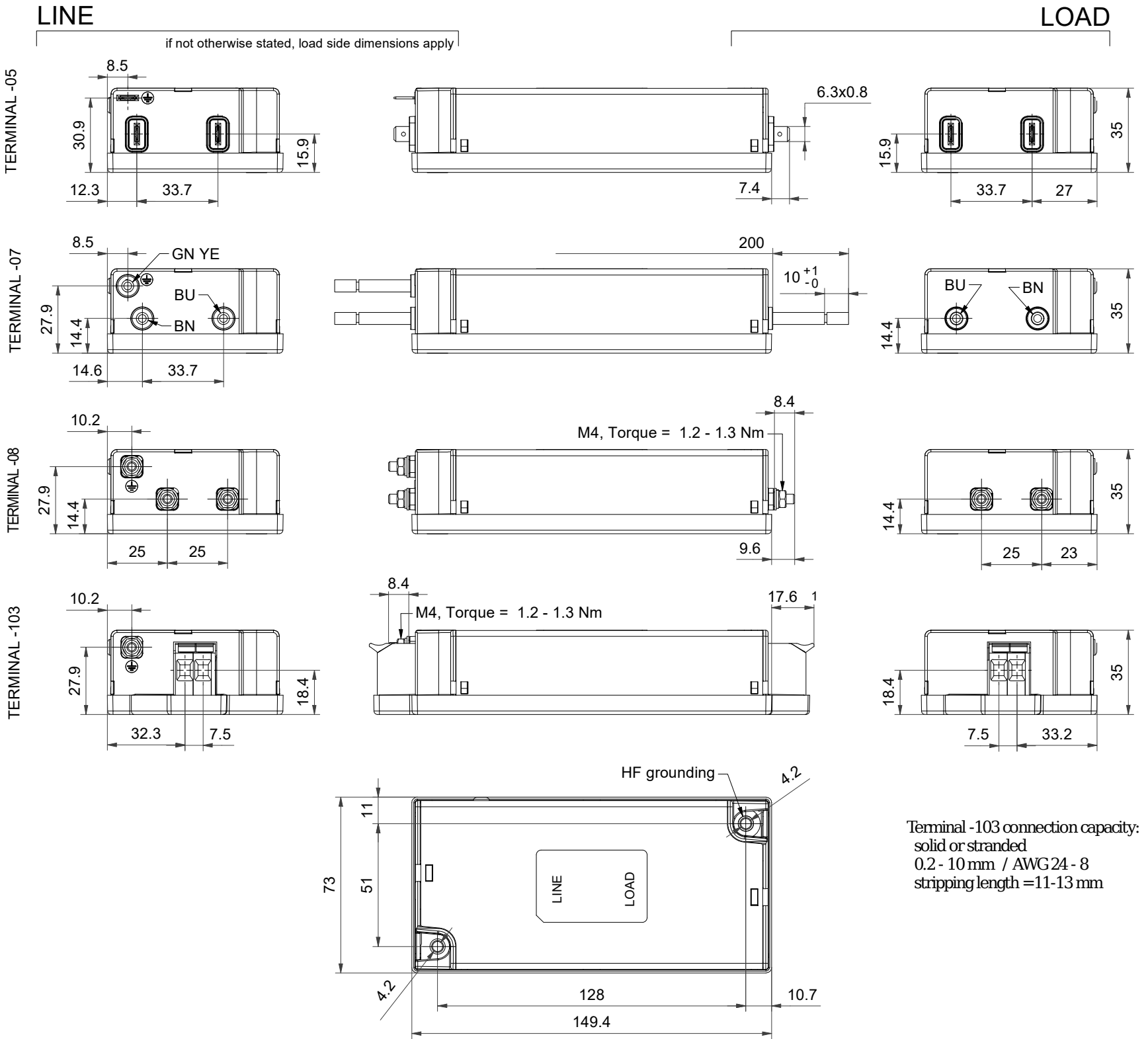
FN2520-25-yy-C1111



FN2520-32-yy-C1111

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

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



Terminal -103 connection capacity:  
 solid or stranded  
 0.2 - 10 mm / AWG 24 - 8  
 stripping length = 11-13 mm