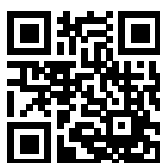


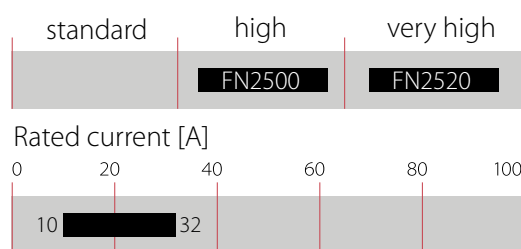
# Low Profile - High performance, EMC/EMI filter



- 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



### Performance indicators



### Approvals & Compliances



Certifications FN2520 pending

### Features and Benefits

- FN2500 / FN2520 series fits perfectly within 1HU height for rack mount
- 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

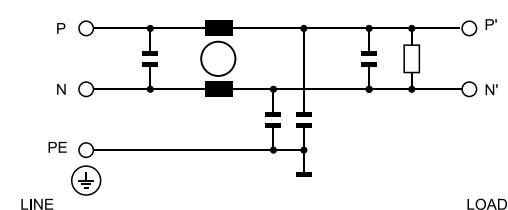
- Datacenter (at 400 VDC)
- Building technology with DC power distribution
- Robotics, collaborative robots, autonomous machines
- Audio and video equipment
- UPS - Uninterruptible power supplies

## 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>Flammability corresponding to</b>	Plastic material: UL 94 V0 Laces for -07 version: UL 94 VW1
<b>Rated currents</b>	10 to 32 A @ 50°C
<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>Overload capability</b>	1.5 x rated current for 1 minute once per hour
<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)
<b>Cooling</b>	Natural cooling AN
<b>Climatic category</b>	FN2500: 40/100/21 acc. IEC60068-1 FN2520: 40/085/21 acc. IEC60068-1 FN2520: 40/085/21 acc. IEC60068-1

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

### Typical electrical schematic



### 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	Cx1	Cx2	Cy1	R	line side/load side				[kg]
	[A]	[mA]	[W]	[mH]	[μF]	[μF]	[nF]	[kΩ]					[kg]
<b>Single-stage</b>													
<b>FN2500-10-yy-C13</b>	10 (11)	0.87 (0.45)	5.4	8.3	1	0.47	10	680	-05	-07	-08	-103	0.3
<b>FN2500-15-yy-C13</b>	15 (17)	0.87 (0.45)	6.4	4.0	1	0.47	10	680	-05	-07	-08	-103	0.3
<b>FN2500-20-yy-C13</b>	20 (22)	0.87 (0.45)	6.2	2.4	1	0.47	10	680	-05	-07	-08	-103	0.3
<b>FN2500-25-yy-C13</b>	25 (27)	0.87 (0.45)	8.0	1.5	1	0.47	10	680	n.a	-07	-08	-103	0.3
<b>FN2500-32-yy-C13</b>	32 (35)	0.87 (0.45)	11.6	1.5	1	0.47	10	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.

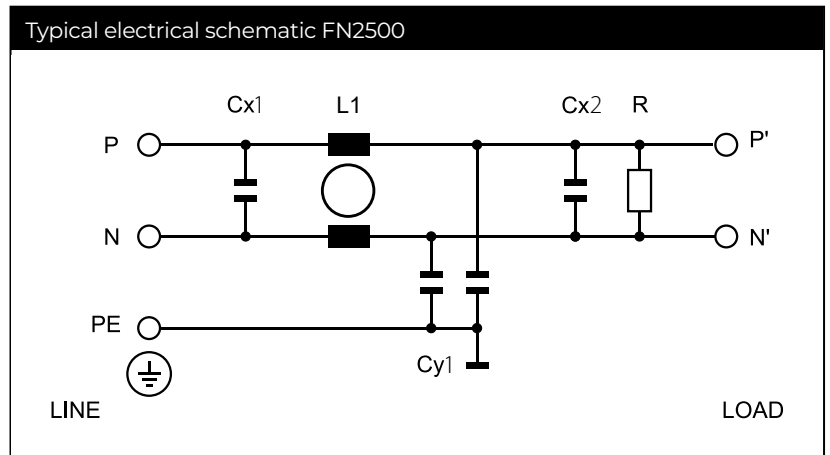
\*\*\*\*Weight depending on choice of connectors.

**Product selector**

FN2500-xx-yy-C13

**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

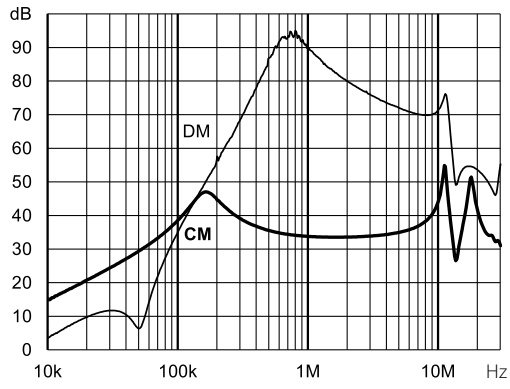
**xx – Rated current**  
 10-32: 10 A – 32 A



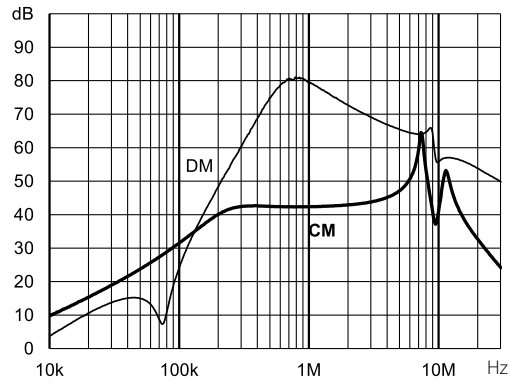
## Typical Filter Attenuation

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

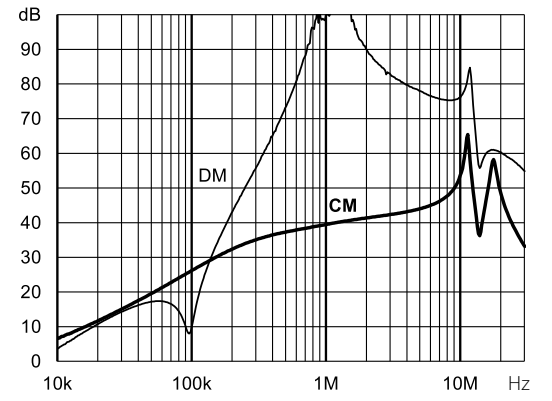
FN2500 - Single-stage filter



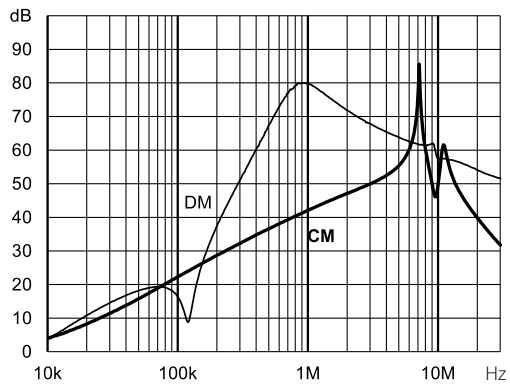
FN2500-10-yy-C13



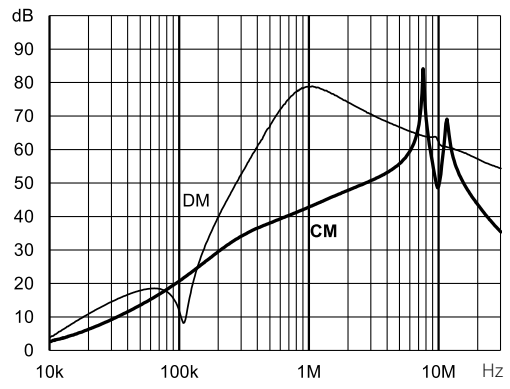
FN2500-15-yy-C13



FN2500-20-yy-C13



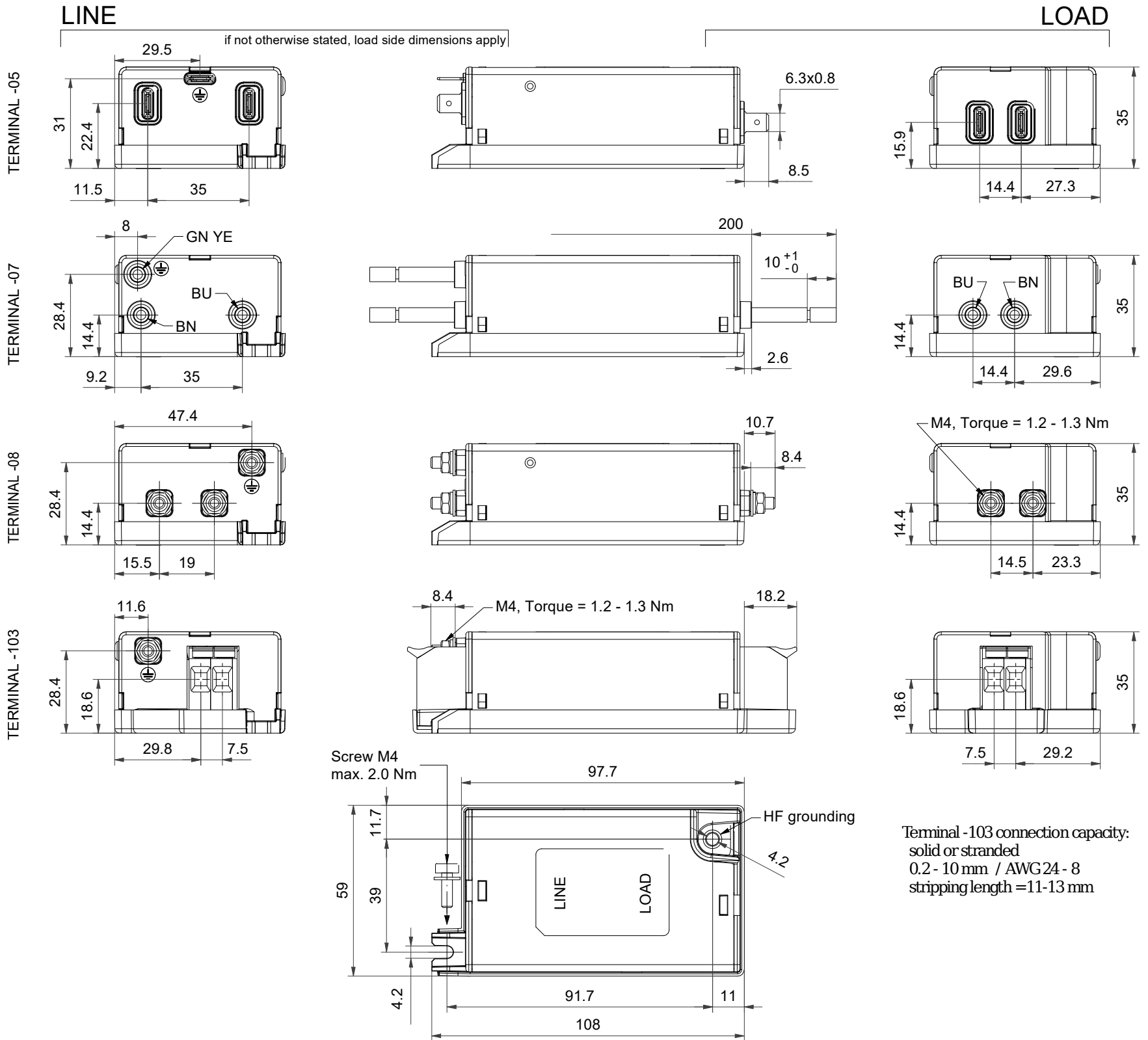
FN2500-25-yy-C13



FN2500-32-yy-C13

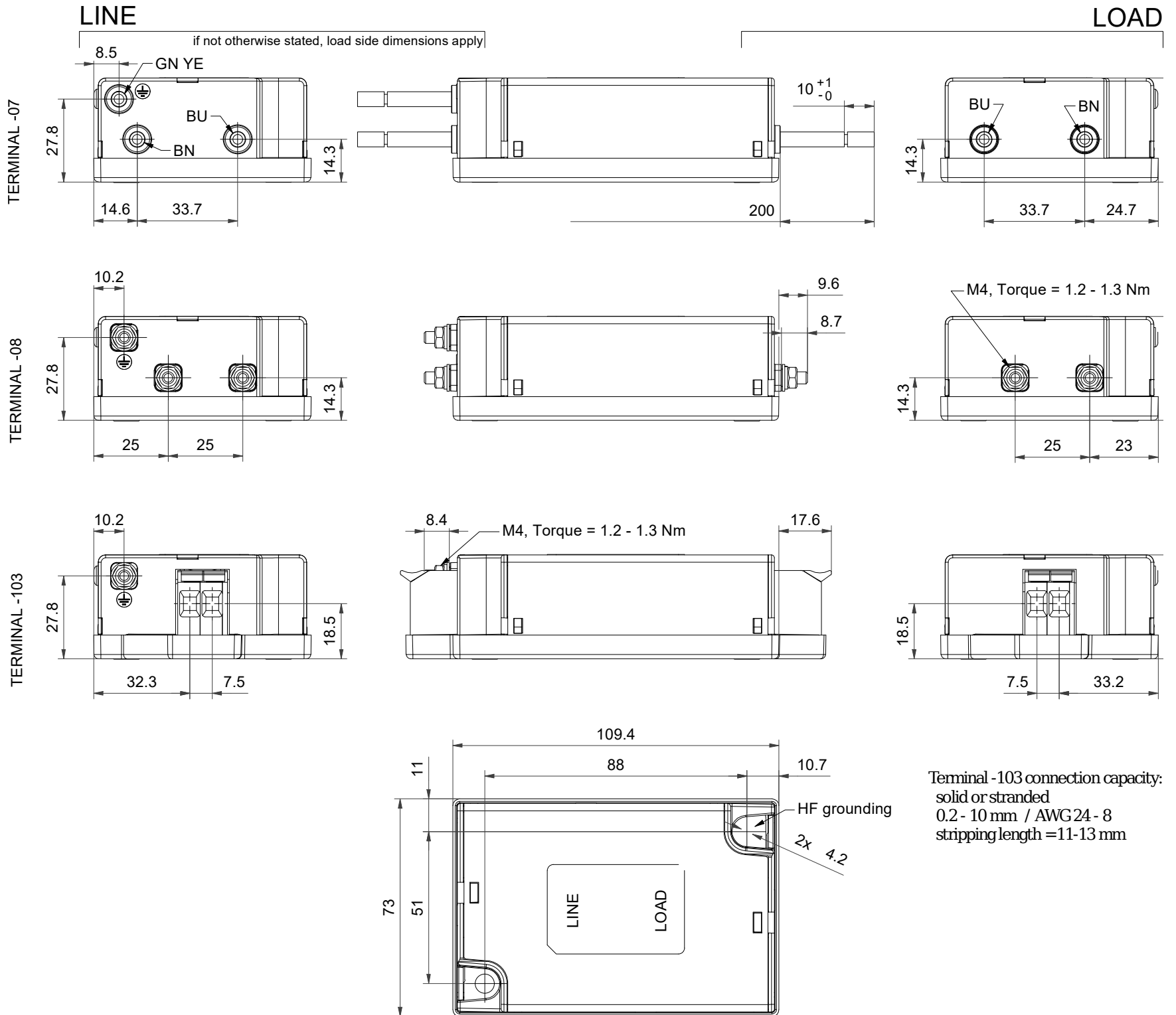
### Dimensions FN2500 - 10 A To 25 A - Single-stage Filter

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



### Dimensions FN2500 - 32 A - Single-stage Filter

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



## Headquarters, Global Innovation and Development

### Switzerland

#### Schaffner Group

Industrie Nord  
Nordstrasse 11e  
4542  
Luterbach  
+41 32 681 66 26  
[info@schaffner.com](mailto:info@schaffner.com)

## Sales and Application Centers

### Finland

#### Schaffner Oy

Sauvonrinne 19 H  
8500  
Lohja  
+358 50 468 7284  
[finlandsales@schaffner.com](mailto: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](mailto:francesales@schaffner.com)

### Germany

#### Schaffner Deutschland GmbH

Schoemperlenstrasse 12B  
76185  
Karlsruhe  
+49 721 56910  
[germanysales@schaffner.com](mailto: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  
+91 8067935355  
[indiasales@schaffner.com](mailto:indiasales@schaffner.com)

### United Kingdom

#### Schaffner Ltd.

Suite 1 Oakmede Place  
Terrace Road  
RG42 4JF  
Binfield  
+44 118 9770070  
[uksales@schaffner.com](mailto:uksales@schaffner.com)

### United States

#### Schaffner EMC Inc.

52 Mayfield Avenue  
Edison, New Jersey  
+1 732 225 9533  
[usasales@schaffner.com](mailto:usasales@schaffner.com)

### Sweden

#### Schaffner EMC AB

Östermalmstrorg 1  
114 42  
Stockholm  
+46 8 5050 2425  
[swedensales@schaffner.com](mailto:swedensales@schaffner.com)

### Switzerland

#### Schaffner EMV AG

Industrie Nord  
Nordstrasse 11e  
4542  
Luterbach  
+41 32 681 66 26  
[switzerlandsales@schaffner.com](mailto:switzerlandsales@schaffner.com)

### Taiwan

#### Schaffner EMV Ltd.

U-Town  
20 Floor-2 No 97 Section 1 XinTai 5th Road  
XiZhi District  
22175  
New Taipei City  
+886 226975500  
[taiwansales@schaffner.com](mailto:taiwansales@schaffner.com)

### Italy

#### Schaffner EMC S.r.l.

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

### Japan

#### Schaffner EMC K.K.

ISM Sangenjaya  
7F 1-32-12 Kamiyama Setagaya-ku  
154-0011  
Tokyo  
+81 3 5712 3650  
[japansales@schaffner.com](mailto: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](mailto:singaporesales@schaffner.com)

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