

8B0F0300H000.000-1

1 General information

- Wide mains input voltage range
- Optimally suited for ACOPOSmulti 8B0P power supply modules
- Compliance with limit values per CISPR11, group 2, class A

Information:

In order to conform to the EMC limit values, all 8BVI inverter modules in the drive system connected to the 8B0F line filter must be operated at the nominal switching frequency (5 kHz). The total length of all motor cables on each drive system (and for each 8B0F line filter) is not permitted to exceed 250 m. The cable length between the 8B0F line filter and the 8B0P power supply module is not permitted to exceed 5 m. The maximum permissible motor cable length per motor connection must also be taken into consideration (see 8BVI inverter modules).

2 Order data


Model number	Short description	Figure
	Line filters passive	
8B0F0300H000.000-1	Passive line filter, 30 A, 3x 520 VAC, 50/60 Hz, IP20	

Table 1: 8B0F0300H000.000-1 - Order data

Allocation to power supply module

	8B0F0160H000.A00-1	8B0F0300H000.000-1	8B0F0550H000.000-1
8B0P0220Hx00.00x-1	X	X	
8B0P0440Hx00.00x-1			X

Table 2: Allocation to power supply module

3 Technical data

Model number	8B0F0300H000.000-1
General information	
Cooling and mounting method	Wall mounting
Certifications	
CE	Yes
KC	Yes
UL	cULus E225616 Power conversion equipment
Mains connection	
Permissible network configurations	TT, TN ¹⁾
Mains input voltage	Max. 3x 520 VAC ±10%
Frequency	0 to 60 Hz
Continuous current	30 A _{eff} ²⁾
Peak current	45 A _{eff} (<1 min), 1x/h
Reduction of continuous current at ambient temperatures starting at 40°C	In preparation
Reduction of continuous current depending on installation elevation	
Starting at 1000 m above sea level	1.5 A _{eff} per 1000 m

Table 3: 8B0F0300H000.000-1 - Technical data

Model number	8B0F0300H000.000-1
Power dissipation ³⁾	11.8 W
Line filter per EN 61800-3, category C3 ⁴⁾	Yes
Design	
L1, L2, L3 and L1', L2', L3'	Terminals
PE	M5 threaded bolt
Shield connection	
On mains	No
On device	No
Terminal connection cross section	
Flexible and fine wire lines	
With wire end sleeves	Max. 10 mm ²
Approbation data	
UL/C-UL-US	8 AWG
CSA	8 AWG
Electrical characteristics	
Discharge capacitance	0.4 µF
Discharge current ⁵⁾	33 mA
Operating conditions	
Permissible mounting orientations	
Hanging vertically	Yes
Lying horizontally	Yes
Standing horizontally	No
Installation at elevations above sea level	
Nominal	0 to 1000 m
Maximum ⁶⁾	4000 m
Pollution degree per EN 61800-5-1	In preparation
Overvoltage category per IEC 60950	II
Degree of protection per EN 60529	IP20
Environmental conditions	
Temperature	
Operation	
Nominal	5 to 40°C
Maximum ⁷⁾	55°C
Storage	-25 to 55°C
Transport	-25 to 70°C
Relative humidity	
Operation	5 to 85%
Storage	5 to 95%
Transport	Max. 95% at 40°C
Mechanical characteristics	
Dimensions	
Width	50 mm
Height	270 mm
Depth	85 mm
Weight	1.2 kg

Table 3: 8B0F0300H000.000-1 - Technical data

- 1) TT and TN power systems are commonly referred to as "Delta/Wye with grounded wye neutral" in the USA.
- 2) Valid under the following conditions: 3x 480 VAC mains input voltage, 50°C ambient temperature, cos phi = 0.8.
The exact value depends on the respective application.
- 3) Valid under the following conditions: 25°C ambient temperature, 50 Hz frequency.
- 4) Limit values from EN 61800-3 C3 (second environment).
- 5) Valid under the following conditions: 400 VAC mains input voltage, 50 Hz frequency
Note: If two phases are interrupted, the discharge current can be up to 5.4 times higher in extreme cases.
- 6) Continuous operation at an installation elevation of 1000 m to 4,000 m above sea level is possible taking the specified reduction of continuous current into account. Requirements that go beyond this must be arranged with B&R.
- 7) Continuous operation at an ambient temperature of 40°C to max. 55°C is possible taking the specified reduction of continuous torque into account, but this results in premature aging of components.

4 Dimension diagram and installation dimensions

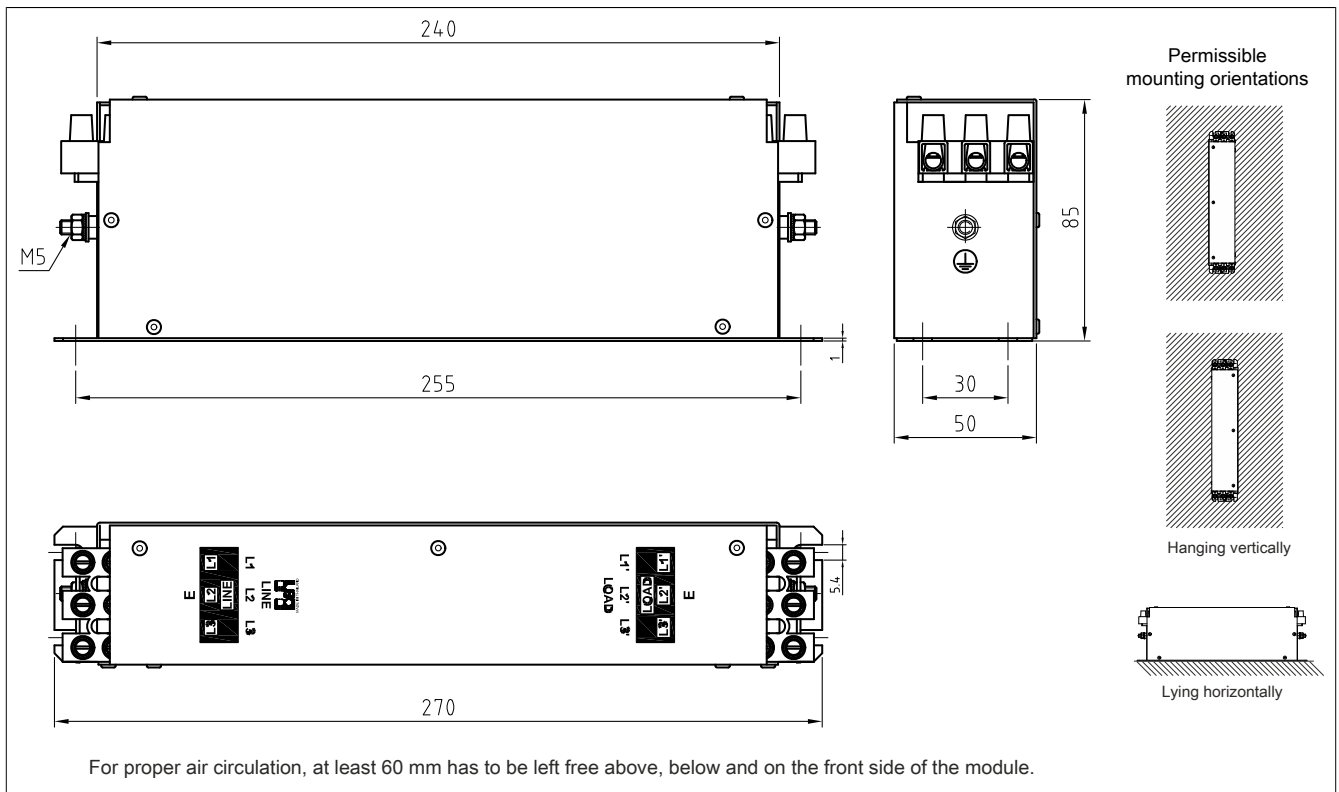


Figure 1: Dimension diagram and installation dimensions

5 Wiring

5.1 8B0F line filters - Pinout overview

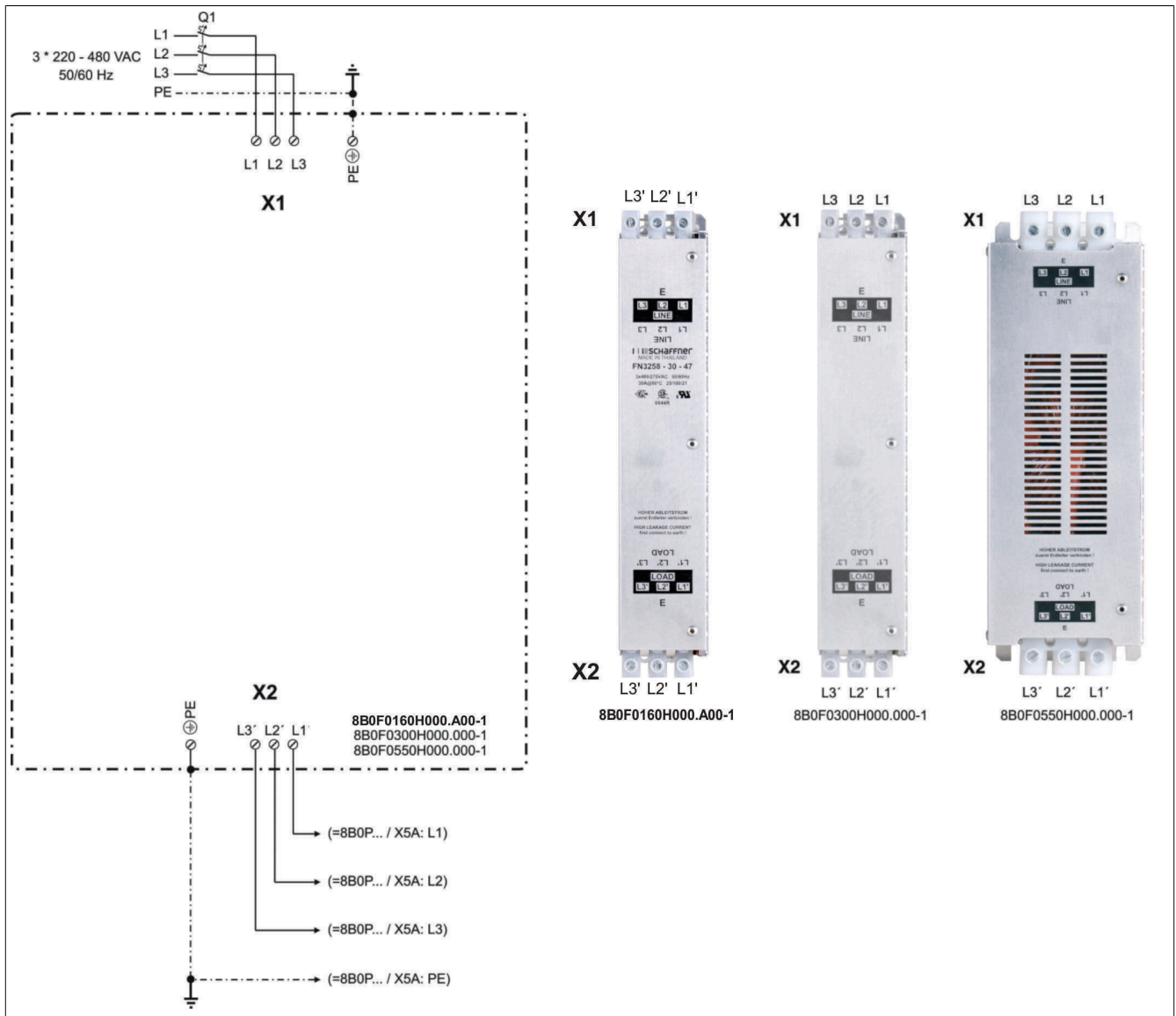


Figure 2: 8B0F0160H000.A00-1, 8B0F0300H000.000-1, 8B0F0550H000.000-1 - Pinout overview

5.2 X1 - Pinout

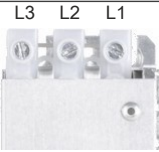
X1	Description	Function
	L1	Mains connection L1 (mains side)
	L2	Mains connection L2 (mains side)
	L3	Mains connection L3 (mains side)
Terminal connection cross section		
Flexible and fine-stranded wires with wire end sleeve UL/cULus CSA		Max. 10 mm ² 8 8
Tightening torque of the terminal screws		1.9 to 2.2 Nm

Table 4: Connector X1 - Pinout

5.3 X2 - Pinout

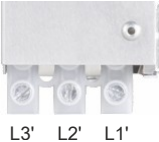
X2	Description	Function
	L1'	Mains connection L1 (load side)
	L2'	Mains connection L2 (load side)
	L3'	Mains connection L3 (load side)
Terminal connection cross section		
Flexible and fine-stranded wires with wire end sleeve		Max. 10 mm ²
UL/cULus		8
CSA		8
Tightening torque of the terminal screws		1.9 to 2.2 Nm

Table 5: Connector X2 - Pinout

5.4 Protective ground connection (PE) (power system and load side)

The protective ground conductor is secured to the M5 threaded bolt provided for this purpose using a cable lug.

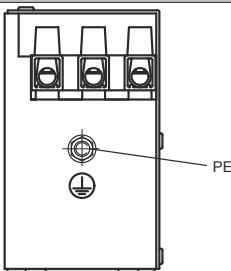
Figure	Pin	Description	Function
	---	PE	Protective ground conductor
	Terminal cross section		
Cable lug for threaded bolt		[mm ²]	AWG
		0.25 - 16	23 - 5
Tightening torque of the terminal screws [Nm]:			2.2 Nm

Table 6: Protective ground connection (PE) 8B0F

Danger!

Before switching on the power supply, it must be ensured that the housing of the line filter is properly connected to ground potential (PE rail). The ground connection must be established even when testing the line filter or operating it for a short time!

5.5 Input/Output circuit diagram

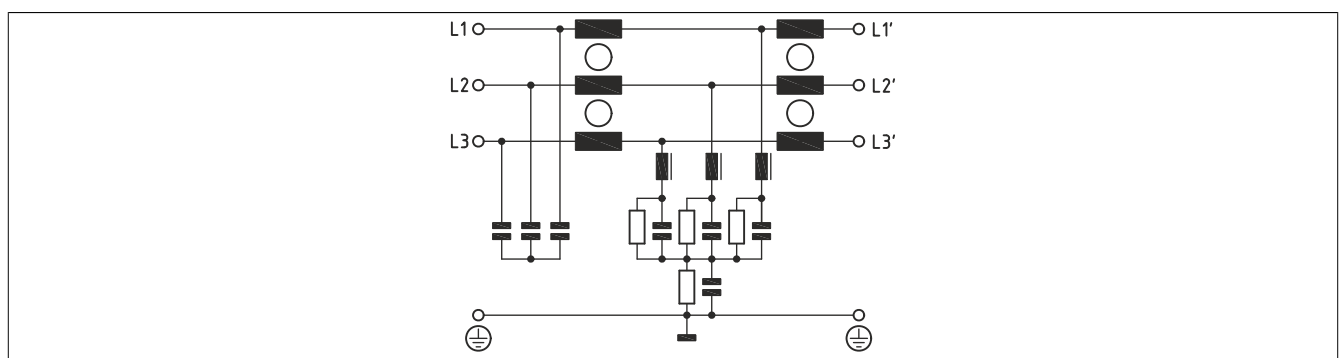


Figure 3: 8B0F - Input/Output circuit diagram