8BVF0880H000.000-1

1 General information

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

2 Order data

Model number	Short description	Figure
	Line filters	
8BVF0880H000.000-1	ACOPOSmulti line filter, 90 A, 480 V	
	Required accessories	
	Terminal block sets	
8BZVF088000.000-1A	Screw clamp set for ACOPOSmulti 8BVF0880H000.000-1 modules: 1x 8TB2104.204A-00	
	Optional accessories	
	Terminal blocks	
8TB2104.204A-00	4-pin screw clamp, single row, spacing: 5.08 mm, label 4: T- T + F- F+, A keying: 0000	

Table 1: 8BVF0880H000.000-1 - Order data

3 Technical data

Model number	8BVF0880H000.000-1
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	3x 220 to 3x 480 VAC ±10%
Frequency	50 / 60 Hz ±4%
Allocation to power supply module	8BVP0880HC00.00x-1 8BVP0880HW00.00x-1
Continuous current [2)]	90 A_{eff}
Peak current <10 s	180 A_{eff}
Reduction of continuous current at ambient temperatures starting at 40°C	1 A_{eff} per °C
Reduction of continuous current depending on installation elevation	
Starting at 1000 m above sea level	7.2 A_{eff}
Power dissipation at nominal current	980 W
Integrated line filter per EN 61800-3, category C3 [3)]	Yes
Design	
L1, L2, L3, PE and L1´, L2´, L3´, PE	Feed-through terminals
PE	No
Shield connection	
On mains	No
On device	Yes [4)]

Table 2: 8BVF0880H000.000-1 - Technical data

Model number	8BVF0880H000.000-1
Terminal connection cross section	
Flexible and fine wire lines	
With wire end sleeves	10 to 50 mm²
Approbation data	
UL/C-UL-US	6 to 1/0 AWG
CSA	6 to 1/0 AWG
Terminal cable cross section dimension of shield connection	32 to 50 mm
Fan connection	
Max. power consumption during operation ($P_{Fan8B-VF...}$)	8.25 W
Design	
F+, F-	Male connector
Terminal connection cross section	
Flexible and fine wire lines	
With wire end sleeves	0.25 to 2.5 mm²
Approbation data	
UL/C-UL-US	30 to 12 AWG
CSA	28 to 12 AWG
Temperature sensor connection	
Design	
T+, T-	Male connector
Terminal connection cross section	
Flexible and fine wire lines	
With wire end sleeves	0.25 to 2.5 mm²
Approbation data	
UL/C-UL-US	30 to 12 AWG
CSA	28 to 12 AWG
Electrical characteristics	
Discharge capacitance	14.1 µF
Operating conditions	
Permissible mounting orientations	
Hanging vertically	Yes
Lying horizontally	Yes
Standing horizontally	No
Installation at elevations above sea level	
Nominal	0 to 500 m
Maximum [5]	4000 m
Pollution degree per EN 61800-5-1	2 (non-conductive pollution)
Overvoltage category per EN 61800-5-1	III
Degree of protection per EN 60529	IP20
Environmental conditions	
Temperature	
Operation	
Nominal	5°C to 40°C
Maximum [6]	55°C
Storage	-25°C to 55°C
Transport	-25°C to 70°C
Relative humidity	
Operation	5 to 85%
Storage	5 to 95%
Transport	Max. 95% at 40°C
Mechanical characteristics	
Dimensions	
Width	175 mm
Height	436 mm
Depth	212 mm
Weight	23.5 kg

Table 2: 8BVF0880H000.000-1 - Technical data

1) TT and TN power systems are commonly referred to as "Delta/Wye with grounded wye neutral" in the USA.
2) Valid for the following conditions: 40°C ambient temperature, installation elevation <500 m above sea level.
3) Limit values from EN 61800-3 C3 (second environment). In order to conform to the EMC limit values, the 8BVP power supply module connected to the 8BVF 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 8BVF line filter) is not permitted to exceed 900 m. The cable length between the 8BVF line filter and the 8BVP 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).
4) Cables do not have to be shielded up to a total length of 3 m between the line filter, regeneration choke and power supply module. Please contact B&R when using cable lengths >3 m.
5) Continuous operation at an installation elevation of 500 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.
6) 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

Up to revision E0:

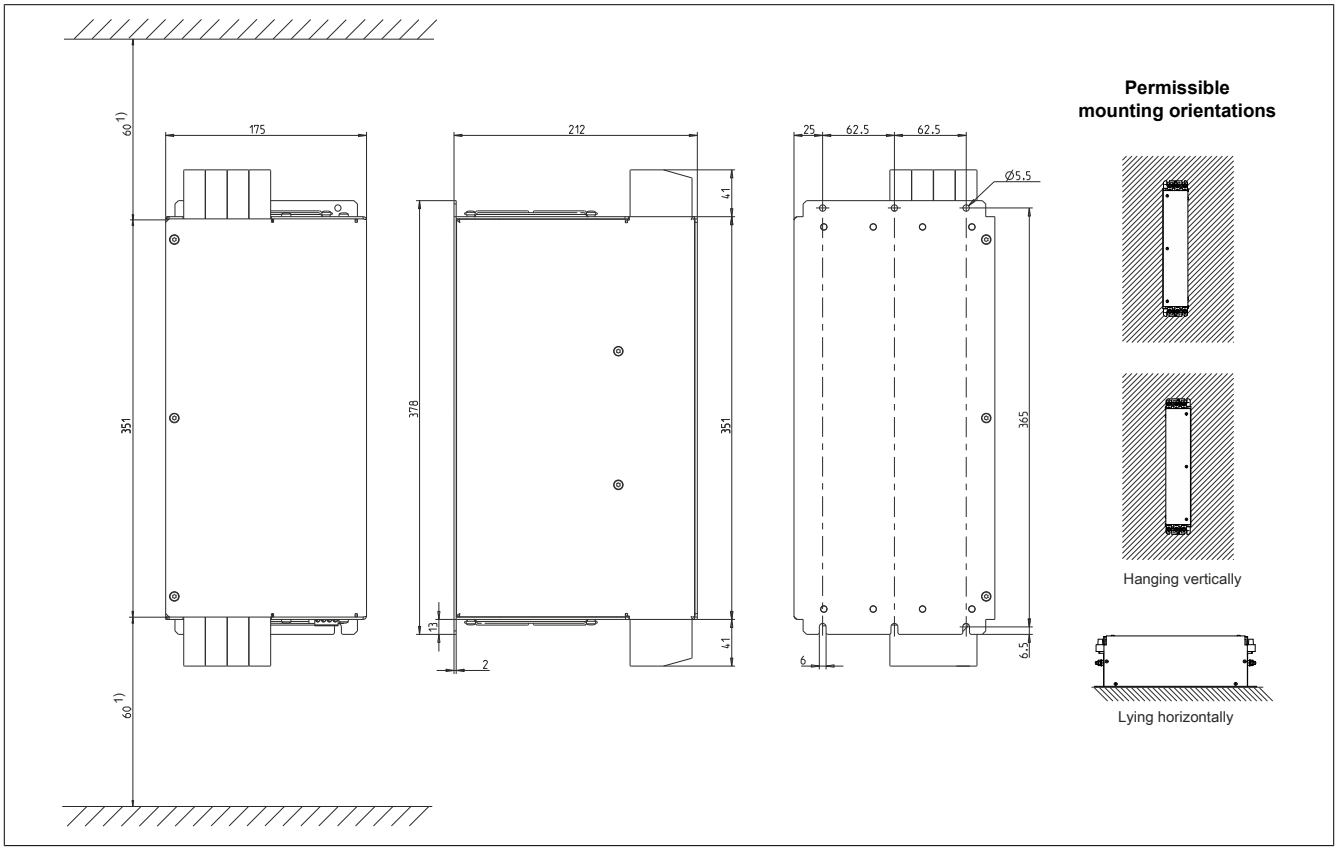


Figure 1: 8BVF0880H000.000-1 - Dimension diagram and installation dimensions (up to revision E0)

1) For sufficient air circulation, a clearance of at least 60 mm must be provided above, below and in front of the module.

Revision F0 and later with reinforced housing construction with identical main dimensions:

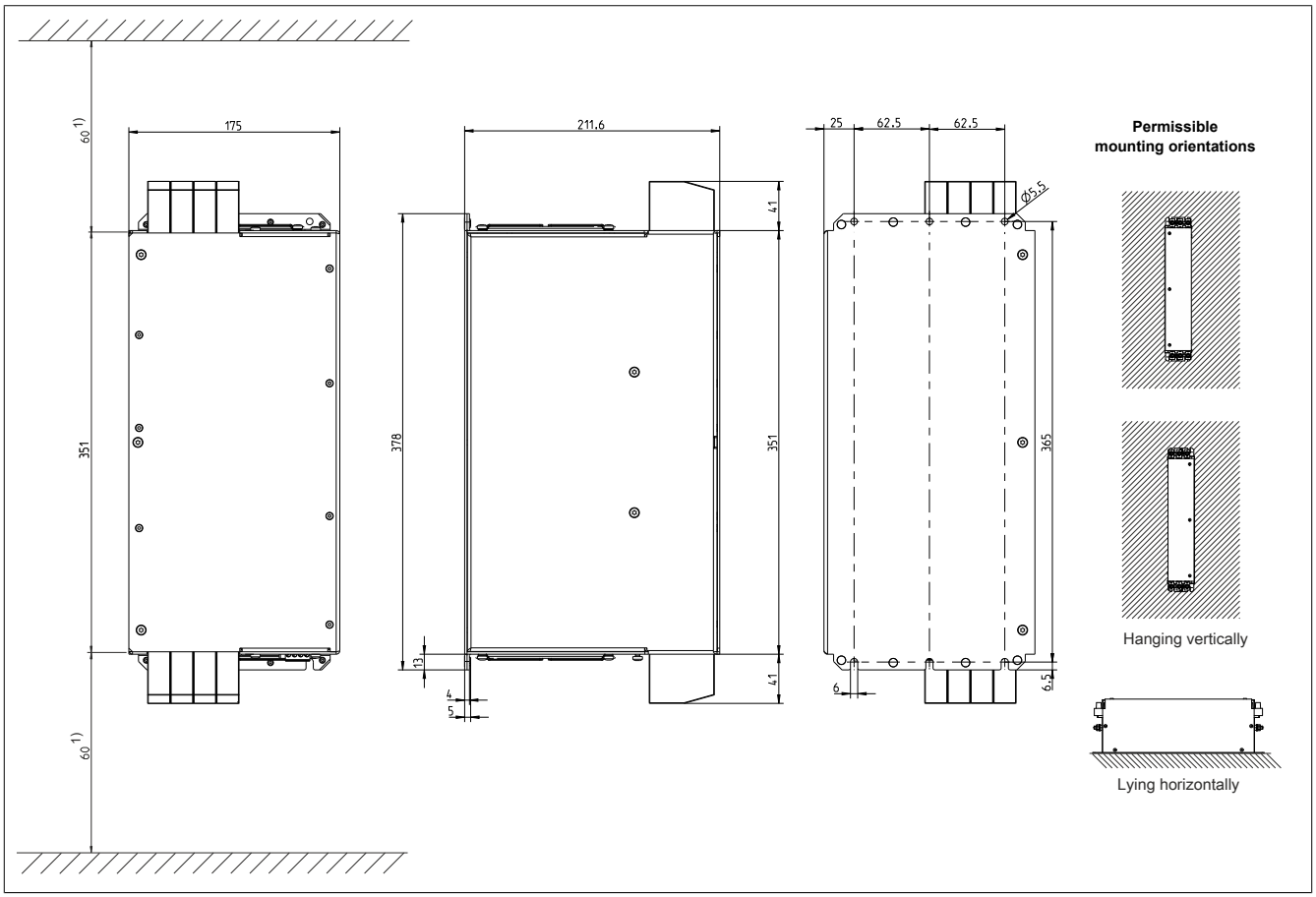


Figure 2: 8BVF0880H000.000-1 - Dimension diagram and installation dimensions (revision F0 and later)

1) For sufficient air circulation, a clearance of at least 60 mm must be provided above, below and in front of the module.

5 Wiring

Warning!

ACOPOSmulti drive systems are only permitted to be used with specially designed line filters. Line filters from third-party manufacturers are not permitted to be used under any circumstances; there is a risk of irreparable damage to these line filters or components of the ACOPOSmulti drive system.

5.2 8BVF0880H000.000-1 - Pinout overview

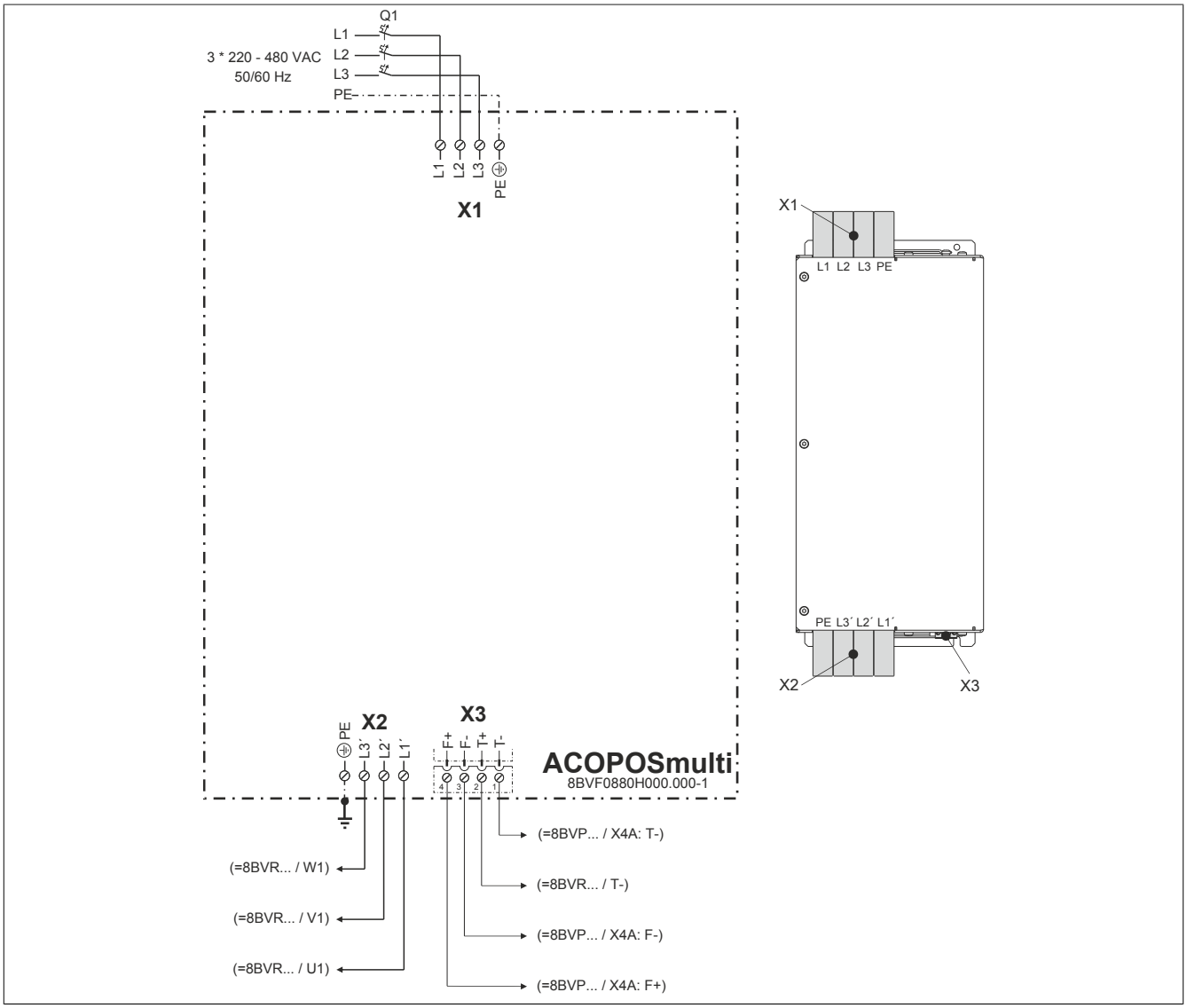


Figure 3: 8BVF0880H000.000-1 - Pinout overview

*** Only relevant for wiring variants in combination with 8BVP1650 power supply modules.
The mains connection for 8BVP1650 power supply modules can have one of two different wiring variations (2x 8BVF0880 + 1x 8BVR1650 or 2x 8BVF0880 + 2x 8BVR0880) depending on the 8BVR regeneration choke used. See section "8BVP1650 mains connection" for more details.

5.3 X1 - Pinout

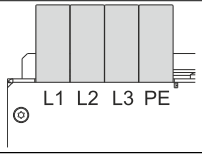
X1	Description	Function
	L1	Mains connection L1 (mains side)
	L2	Mains connection L2 (mains side)
	L3	Mains connection L3 (mains side)
	PE	Protective ground conductor

Table 3: 8BVF0880H000.000-1 - X1 - Pinout

5.4 X2 - Pinout

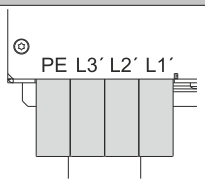
X2	Description	Function
	L1'	Mains connection L1 (mains side)
	L2'	Mains connection L2 (mains side)
	L3'	Mains connection L3 (mains side)
	PE	Protective ground conductor

Table 4: 8BVF0880H000.000-1 - X2 - Pinout

5.5 Connector X3 - Pinout

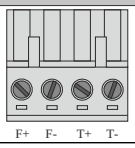
X3	Description	Function
	T-	Load: Temperature sensor -
	T+	Load: Temperature sensor +
	F-	Load: Fan -
	F+	Load: Fan +

Table 5: 8BVF0880H000.000-1 - X3 connector - Pinout

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!

5.6 Input/Output circuit diagram

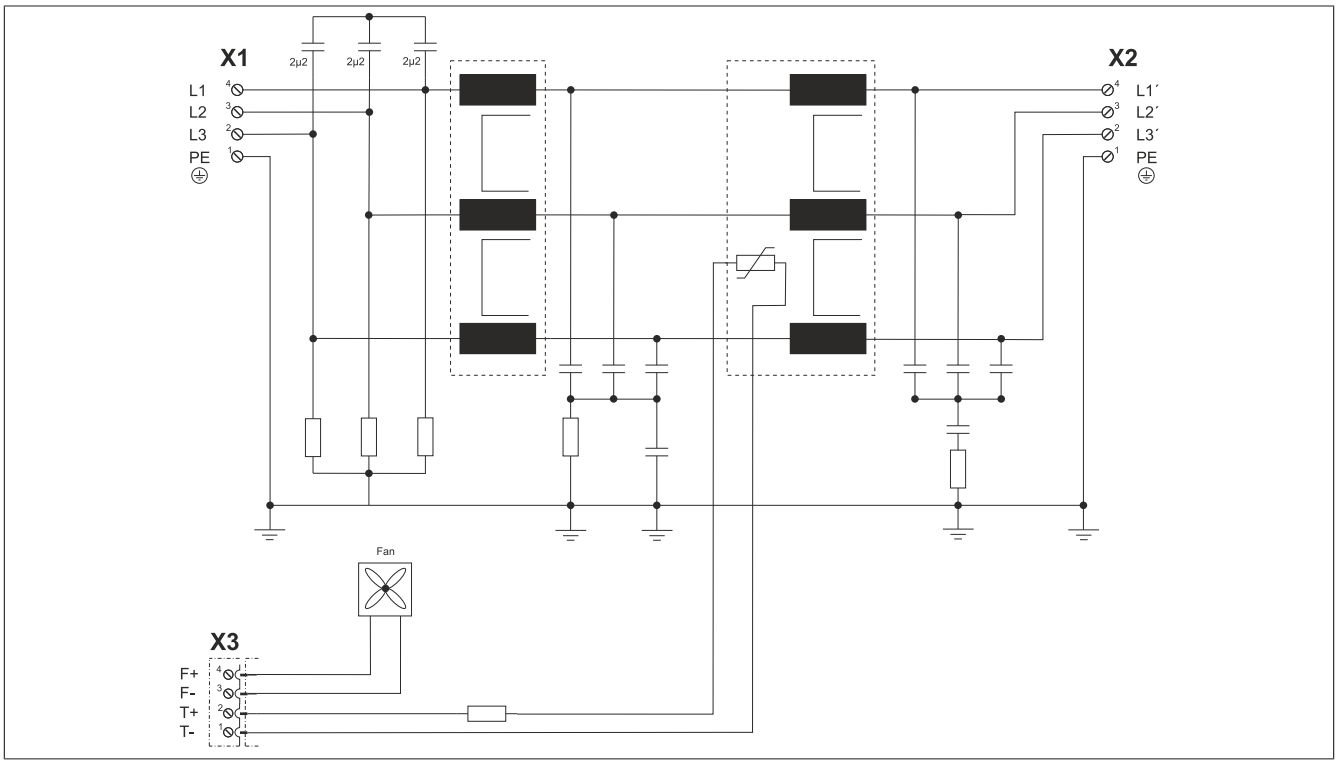


Figure 4: 8BVF0880H000.000-1 - Input/Output circuit diagram