



EMC filters

3-line filters

Sine-wave output filters

Rated current 6 to 35 A

Series/Type: **B84143V*R027**

Date: January 2006

Sine-wave output filters

Sine-wave filters for 3-phase systems
Rated voltage 440/250 V AC, 50/60 Hz
Rated current 6 to 35 A



Construction

- 3-line filter
- Metal case

Features

- Easy to install
- Space-saving design
- Degree of protection: IP 20¹⁾
- Motor cables of more than 100 m possible
- Minimized motor noise and eddy current losses in the motor windings

Applications

- Sine-wave output filters for frequency converters in
 - variable speed drivers
 - solar systems
 - UPS

Terminals

- Finger-safe terminal blocks

Marking

Marking on component:

Manufacturer's logo, ordering code, rated voltage, rated current, rated temperature, climatic category, date code, terminal assignment

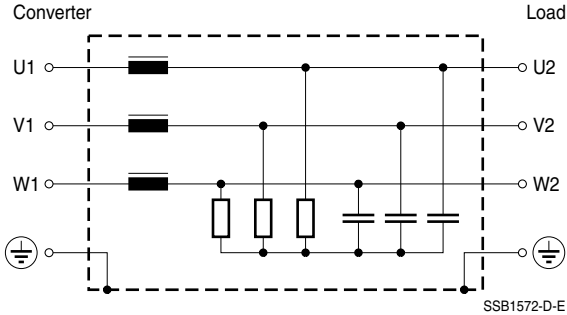
Minimum marking on packaging:

Manufacturer's logo, ordering code

Further versions

- Higher currents for sine-wave output filters on request
- EMC sine-wave filters on request

1) To IEC 60529

Typical circuit diagram

Technical data and measuring conditions

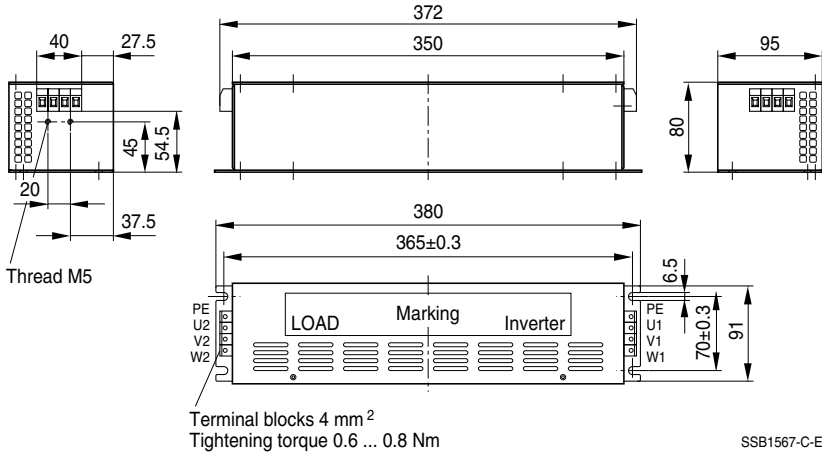
Rated voltage V_R	440/250 V AC, 50/60 Hz
Rated current I_R	Referred to 40 °C ambient temperature
Test voltage V_{test}	1770 V DC, 2 s (line/line) 2700 V DC, 2 s (lines/case)
Overload capability (thermal)	$1.5 \cdot I_R$ for 1 min per hour
Converter output frequency f_M	0 ... 100 Hz
Converter pulse frequency f_P	6 ... 16 kHz
Voltage drop (input to output) ΔV	At I_R and 50 Hz
Capacitive reactive current I_q	At 400/230 V AC, 50 Hz (typical value)
Max. voltage V_{peak} (e.g. overshoot pulse edge max.)	700 V
Max. dv/dt at input	5 kV/ μ s
Climatic category (IEC 60068-1)	25/100/21 (-25 °C/+100 °C/21 days damp heat test)

Characteristics and ordering codes

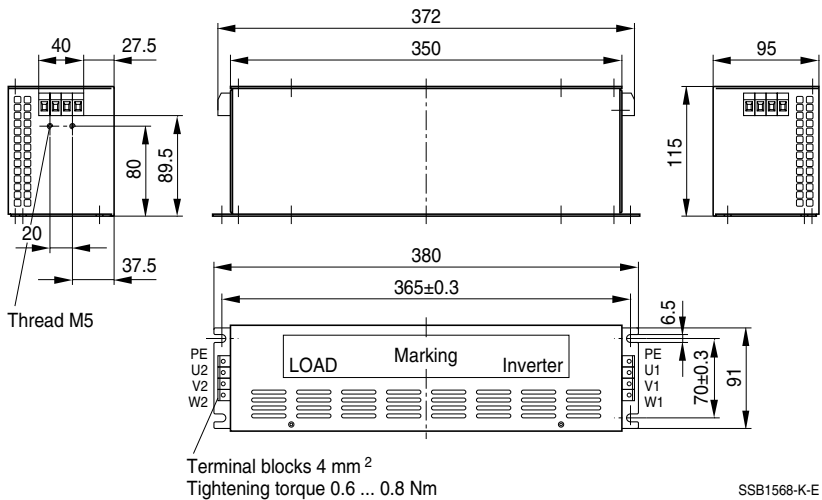
V_R AC V	I_R A	Terminal cross section mm ²	I_q A	ΔV V	R_{typ} m Ω	Approx. weight kg	Ordering code
440/250	6	4	0.24	10	200	5.2	B84143V0006R027
	12	4	0.48	8	66	7.9	B84143V0012R027
	16	4	0.81	8	49	8.3	B84143V0016R027
	25	6	1.20	7	27	11.1	B84143V0025R027
	35	6	1.60	7	15	16.6	B84143V0035R027

Dimensional drawings

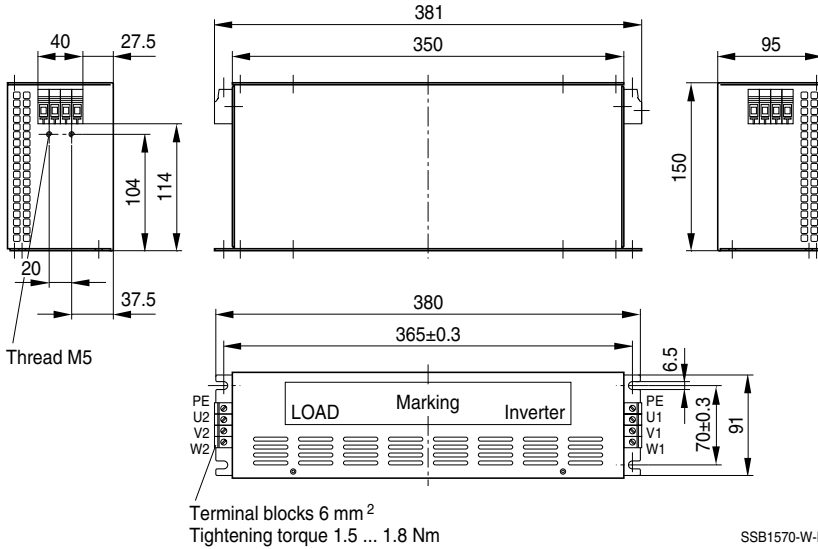
B84143V0006R027 (6 A)



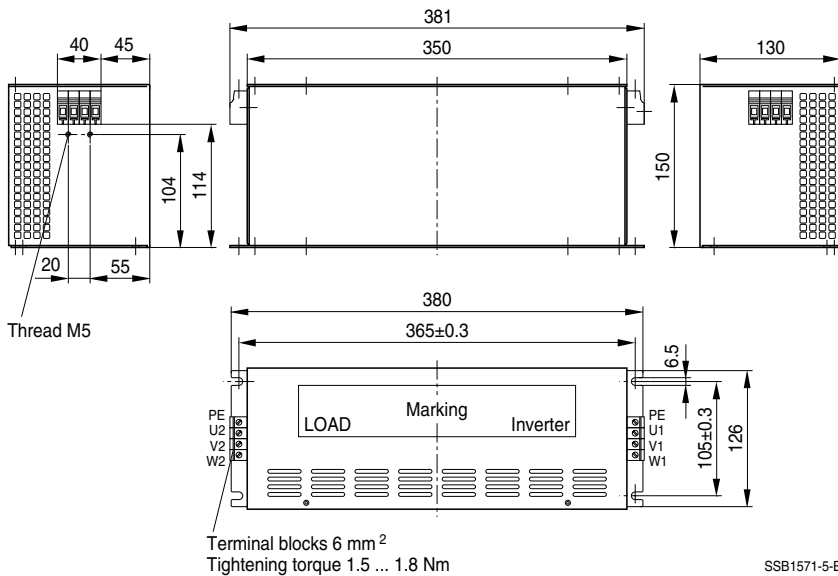
B84143V0012R027, B84143V0016R027 (12 A, 16 A)




B84143V0025R027 (25 A)



B84143V0035R027 (35 A)



Important information

Please read all safety and warning notes carefully before installing the EMC filter and putting it into operation (see ). The same applies to the warning signs on the filter. Please ensure that the signs are not removed nor their legibility impaired by external influences.

Death, serious bodily injury and substantial material damage to equipment may occur if the appropriate safety measures are not carried out or the warnings in the text are not observed.

Using according to the terms

The EMC filters may be used only for their intended application within the specified values in low-voltage networks in compliance with the instructions given in the data sheets and the data book. The conditions at the place of application must comply with all specifications for the filter used.

Warnings

- It shall be ensured that only qualified persons (electricity specialists) are engaged on work such as planning, assembly, installation, operation, repair and maintenance. They must be provided with the corresponding documentation.
- Danger of electric shock. EMC filters contain components that store an electric charge. Dangerous voltages can continue to exist at the filter terminals for longer than five minutes even after the power has been switched off.
- The protective earth connections shall be the first to be made when the EMC filter is installed and the last to be disconnected. Depending on the magnitude of the leakage currents, the particular specifications for making the protective-earth connection must be observed.
- Impermissible overloading of the EMC filter, such as impermissible voltages at higher frequencies that may cause resonances etc. can lead to destruction of the filter housing.
- EMC filters must be protected in the application against impermissible exceeding of the rated currents by suitable overcurrent protective.

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