



Power Quality Solutions

PQvar Series Static Var Generator (SVG)

Series/Type: PQVM8050V300 / 3P4W module

Ordering code: B44066F8050V300

Date: August 2018

Version: 1

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Characteristics

- The SVG PQvar series is a Static Var Generator (SVG) system is designed to eliminate reactive power produced by non-linear loads; it monitors the current permanently and compensates the unwanted elements of the measured current.
- 50 kvar 3P4W (3-phase/4-wire) device for phase current and neutral correction

Features

- User-friendly menu operation via TFT color touch screen
- Ultra-fast reactive power compensation $\cos \varphi \leq 0.99$
- Load balancing between phases and neutral wire
- Power factor correction fully inductive and capacitive current compensation from 0 ... 100%
- High performance and reliability
- Simple installation & commissioning

Typical applications

- Industries having variable frequency drives, inverters UPS, furnaces such as paper, steel rolling mills, textile, garment, software parks, automotive, battery manufacturing, continuous process plants, pharmaceutical industries, etc.
- Green power generation (e.g. photovoltaics and wind turbines)
- Data centers, hotels, hospitals, shopping malls and office buildings

Safety features

- Highest safety and reliability
- Overload protection
- Internal short-circuit protection
- Overheating protection
- Overvoltage and undervoltage protection
- Inverter bridge protection
- Resonance protection
- Fan fault alarm

Technical data and specifications SVG system

Type	PQVM8050V300
Ordering code	B44066F8050V300 (module)
System input / number of phases	3-phase/4-wire
Compensation capacity	50 kvar
Frequency	45 ... 62 Hz
Input voltage (min. / max.)	400V(-40 ... +20%)
Inverter technology	12 IGBT three-level topology
Steady state response time	< 5 ms (steady state response time to full steady state compensation)
Power factor correction	Fully inductive and capacitive current compensation from 0 ... 100%
Weight of a single unit	Approx. 35 kg
Dimensions of a single unit	Approx. 500x520x190 mm (w x d x h)
Current transformer	3 CTs are needed. Source or load-side selectable, primary current range 150 A ... 10000 A, secondary current 5 A (see details of choosing the right CT in the manual) External current transformers are mandatory needed, but not included in the SVG delivery.
Efficiency	> 97%
Cabinet mounting	Rack
Cooling	Smart air cooling 220L/sec
Communication ports	RS485, CAN, and network port
Communication protocols	Modbus and PMBus
Operating temperature	-10 ... +40 °C
Protection class	IP20 (other IP classes are customizable)
Panel color	RAL7035 light grey

Technical data and specifications SVG system (cont.)

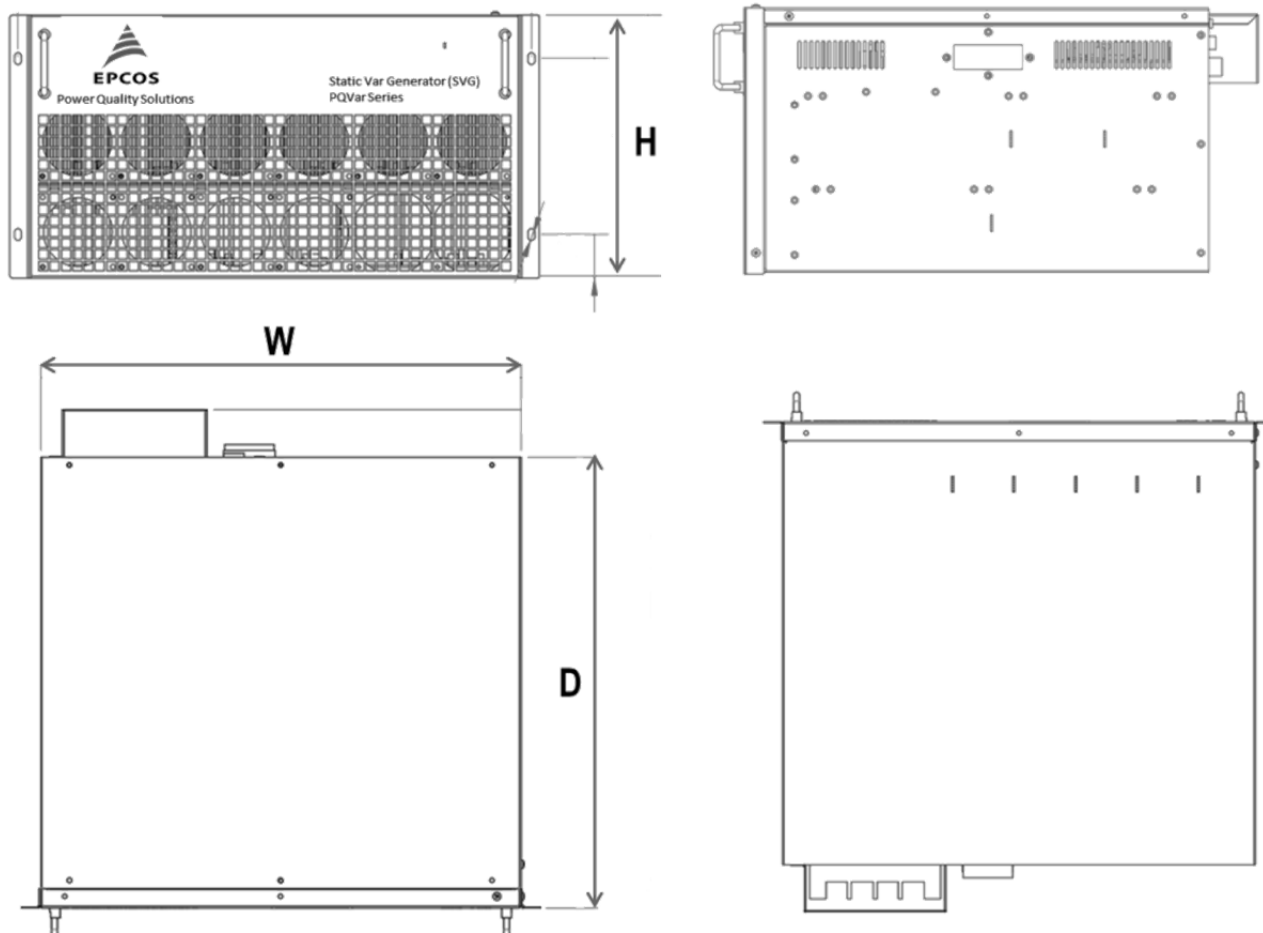
Humidity	5 ... 95%, non-condensing
Self-protection	Yes
Overheating protection	Yes
Overvoltage and undervoltage protection	Yes
Typical noise level	< 65 dB (depending on model and load conditions)
Altitude	1% up 1500 m. Between 1500 m to 4000 m, according to GB/T3859.2, the power decreases by 1% for every additional 100 m.
General safety requirements for SVG use and operation area	EN 50178:1997/IEC 50178:1997
SVG EMC requirements	EN 61000_6_2(2005)/EN55011, GROUP1, CLASS A IEC 61000_6_2(1999)/CISPR11, GROUP1, CLASS A
SVG performance requirements	EN 50091-3/IEC 62040-3/AS 62040-3(VFI SS 111)

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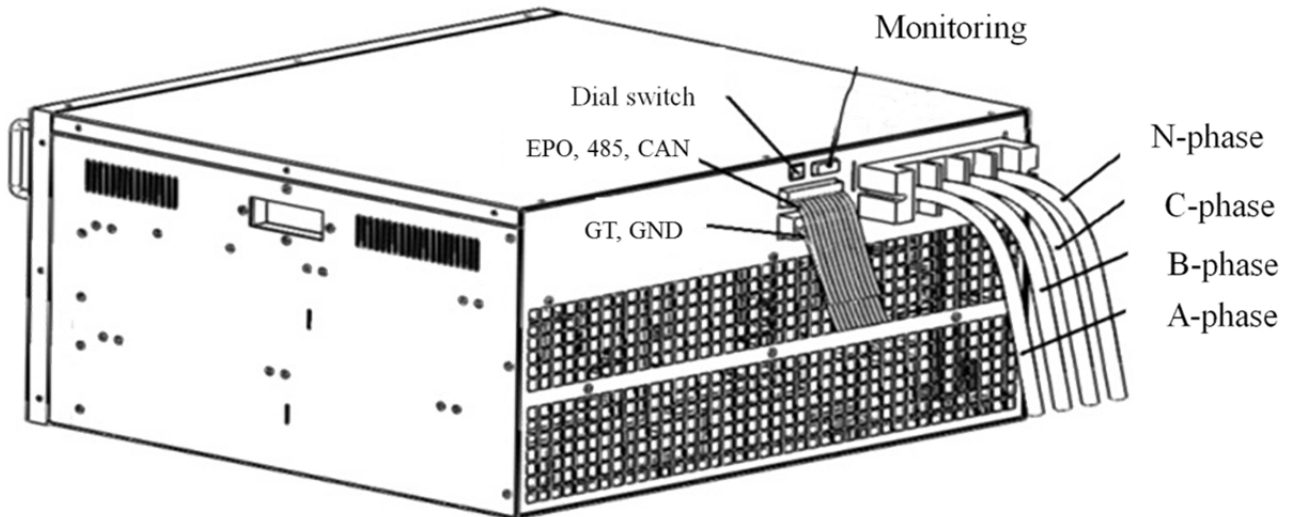
Dimensional drawing – 50 kvar module system

Outside cabinet dimensional drawings

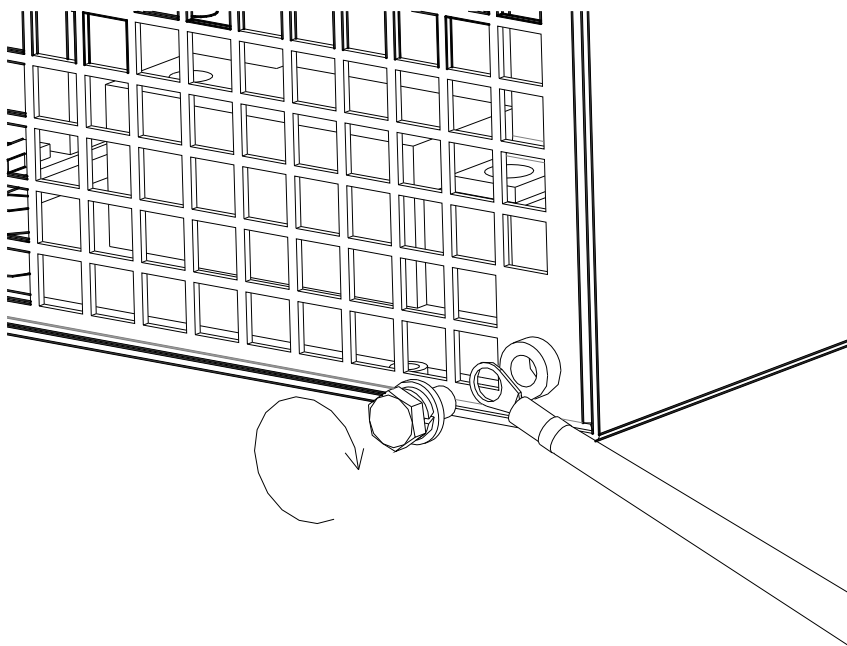


Model	W (Width) mm	D (Depth) mm	H (High) mm
50 kvar Module	500	510	190

AC mains connection



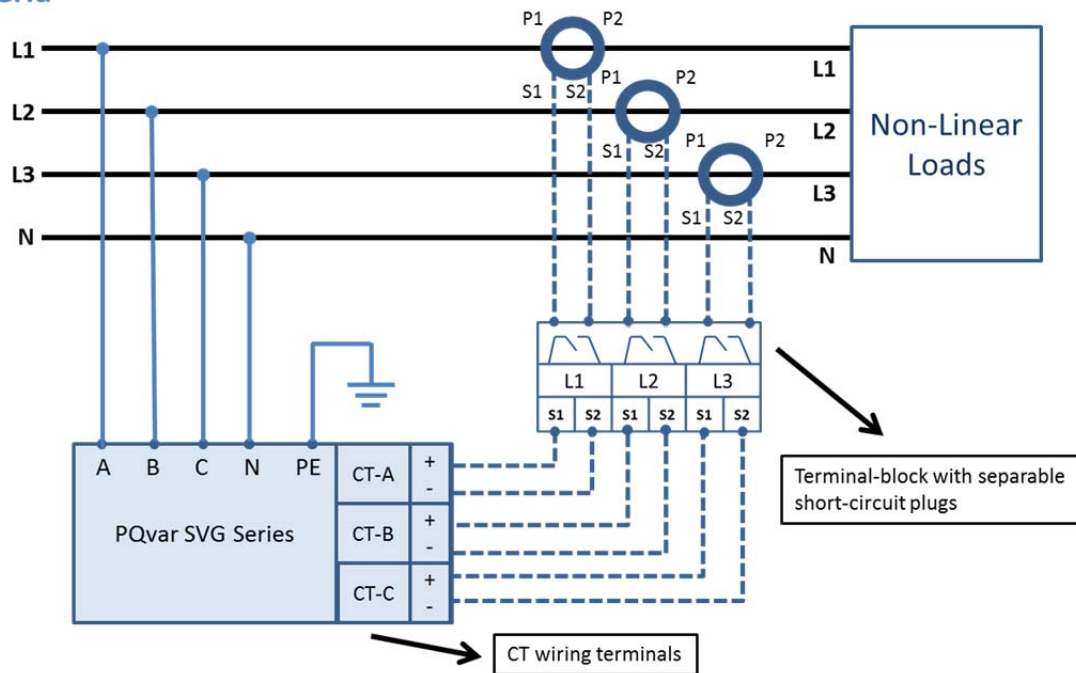
Wiring terminal



Installation of ground wire

Connection Diagram

Grid



Principle of CT connection

Note: Current transformers are not included in the delivery and must be purchased separately.

Please also carefully read the cautions, notes and warnings in the SVG PQVar operating and installation instructions manual!

Important notes

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Important notes

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Release 2018-06