



Power Quality Solutions

PQvar Series Static Var Generator (SVG)

Series/Type: PQVM6100V300 / 3P3W module

Ordering code: B44066F6100V300

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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.
- 100 kvar 3P3W (3-phase/3-wire) device for phase current 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
- 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 | PQVM6100V300 |
| Ordering code | B44066F6100V300 (module) |
| System input / number of phases | 3-phase/3-wire |
| Compensation capacity | 100 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. 48 kg |
| Dimensions of a single unit | Approx. 500x520x270 mm (w x d x h) |
| Current transformer | 2 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 405L/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.)

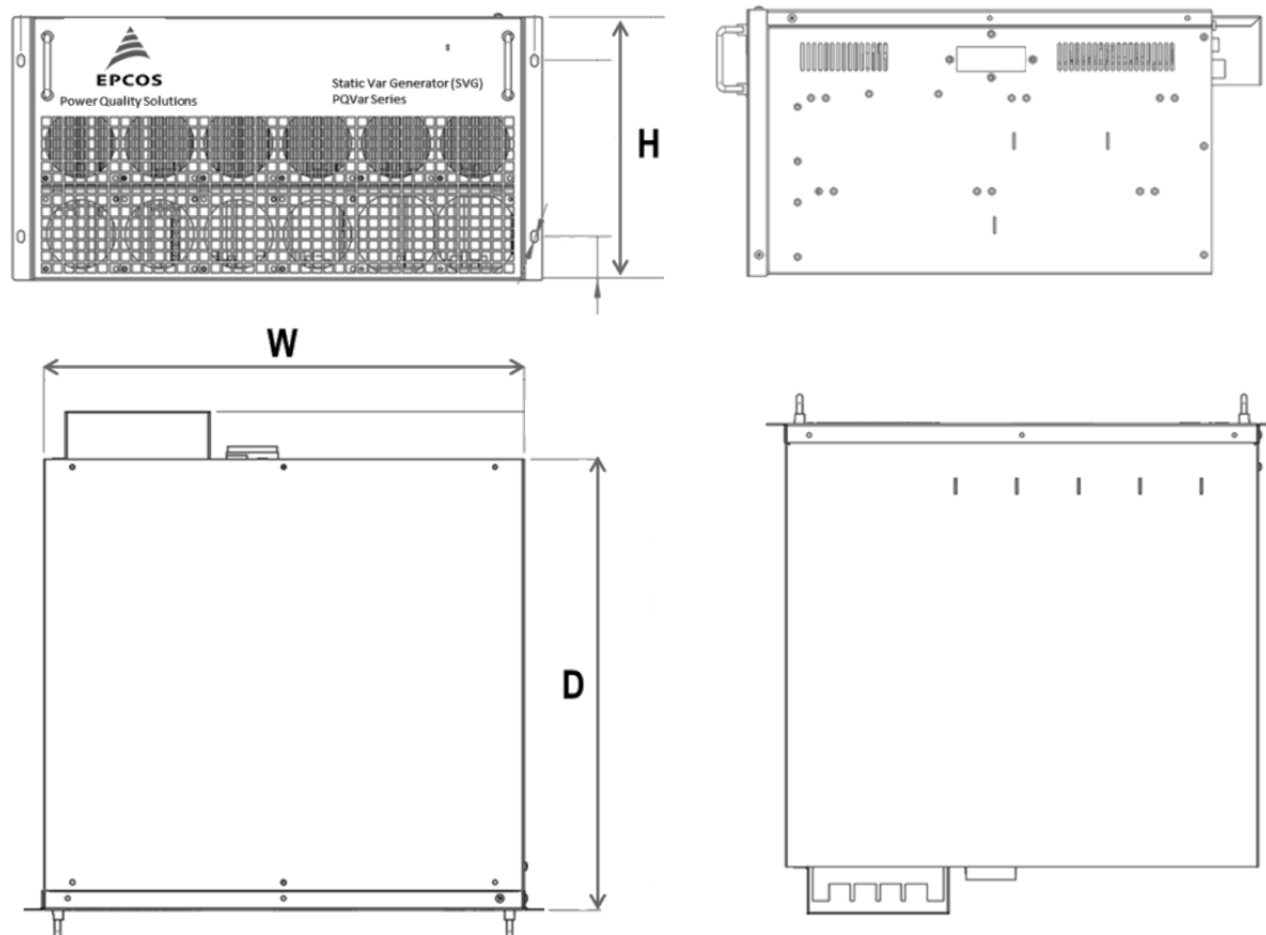
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|--|--|
| Humidity | 5 ... 95%, non-condensing |
| Self-protection | Yes |
| Overheating protection | Yes |
| Overvoltage and undervoltage protection | Yes |
| Typical noise level | < 65 dB (depending on model and load conditions) |
| Altitude | 1% 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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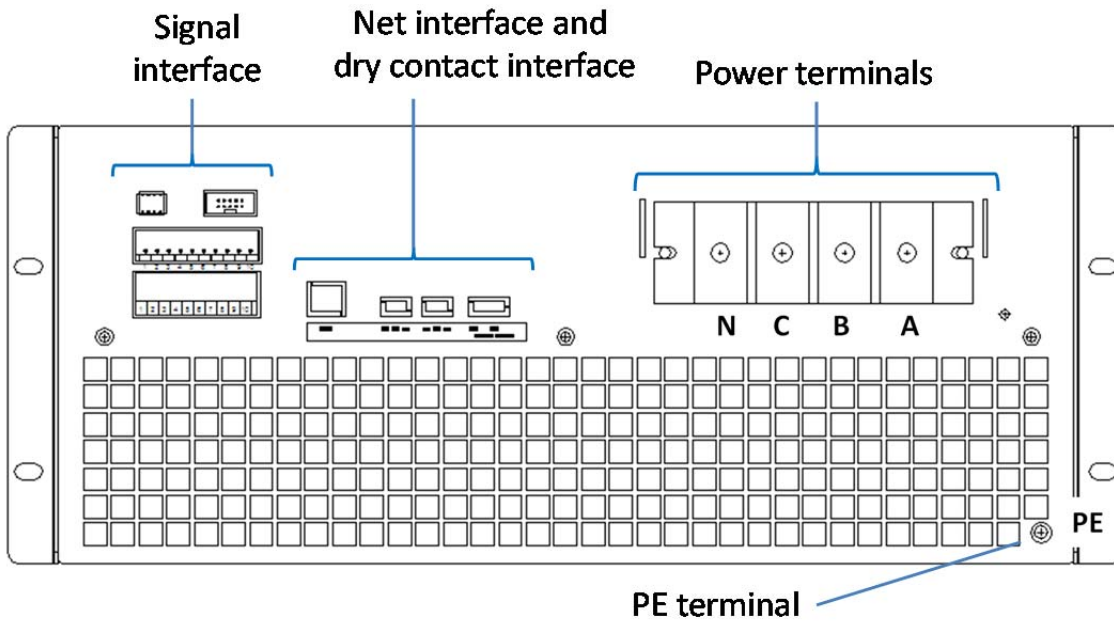
Dimensional drawing – 100 kvar module system

Outside cabinet dimensional drawings

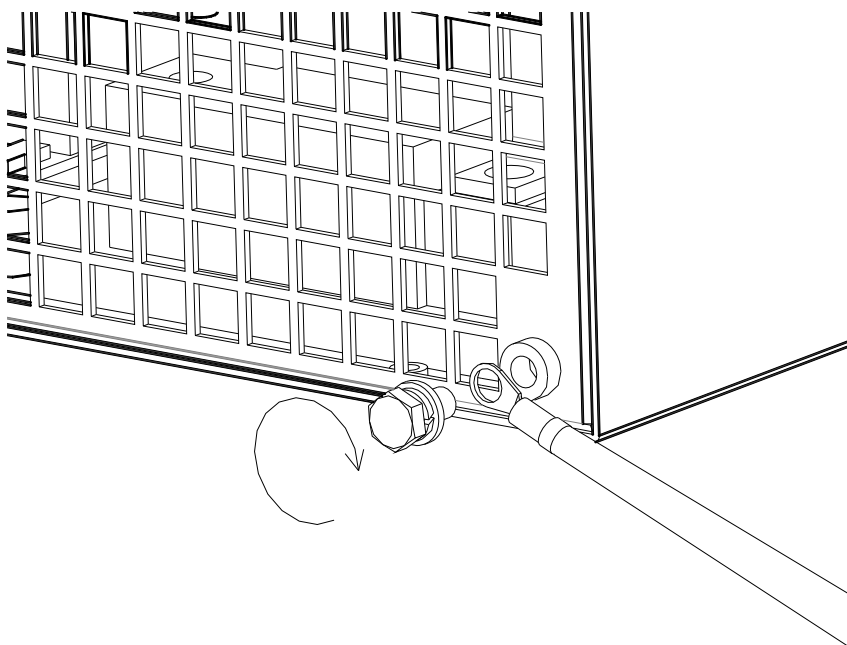


| Model | W (Width) mm | D (Depth) mm | H (High) mm |
|-----------------|--------------|--------------|-------------|
| 100 kvar Module | 500 | 470 | 269 |

AC mains connection



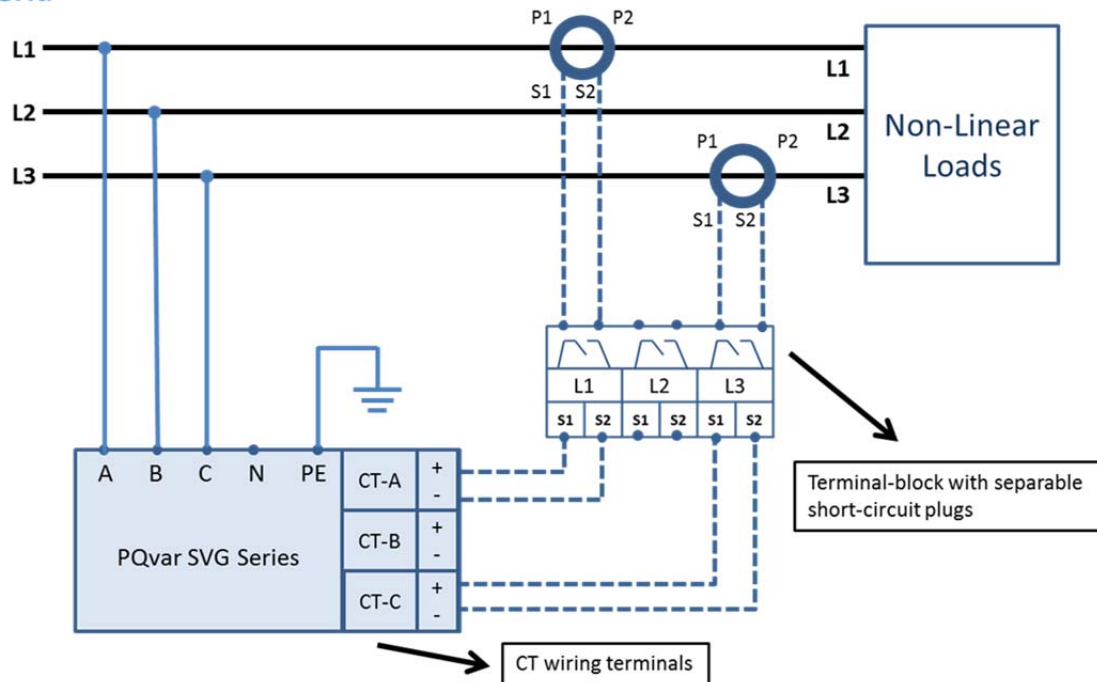
Wiring terminal



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!

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Important notes

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