



## SVGm-3WF-100C-690

SVGm-3WP-100C-690, Static Var Generator with multilevel technology

Code: R4T5F2.

- > EMI filter: 1
- > System: 3 wires, 500 ... 690 V
- > kvar (500 V): 72
- > kvar (690 V): 100
- > Phase current (A): 84
- > Use voltage (V): 690
- > kvar (550 V): 79

### Description

**SVGm** cabinet-type static var generators are the most accurate power factor correction solution in both unbalanced three-phase systems and installations with inductive and capacitive reactive power. They can be used in three-phase industrial, commercial or service installations, and they are not affected by the installation's harmonics. Much safer device with minimal maintenance. This product range features rack assembly in standard cabinets, designed to simplify installation.

The implemented characteristics and functions are as follows:

- Power factor correction (inductive/capacitive) from 30 to 100 kvar (3W) and 20 to 69 kvar (4W) per cabinet.
- The 100 kvar (3W) and 69 kvar (4W) rack-type module's compact dimensions make it easy to install in standard cabinets.
- Multi-range voltage and frequency (50/60 Hz).
- Harmonic current immunity.
- Cos  $\varphi$  range from 0.7 inductive...to...0.7 capacitive.
- Web-based performance monitoring.
- Internal short-circuit protection.

If higher reactive power compensation capacity is required, up to 100 devices can be connected in parallel.

### Application

Ideal solution for individual loads or installations with numerous single-phase and three-phase loads, whether inductive or capacitive. Also, for installations whose load fluctuates over short time frames. Typical loads would be overhead cranes, welding equipment, lifts, drilling/shredding systems, data centres.



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## Specifications

### AC power supply

|                       |                                  |
|-----------------------|----------------------------------|
| Installation category | 6 kV, CAT III Class 1            |
| Consumption           | 2200 W (max.)                    |
| Frequency             | 50 / 60 Hz $\pm$ 5 %             |
| Nominal voltage       | 230 ... 690 V~ F-F ( $\pm$ 10 %) |

### Mechanical characteristics

|                                  |                       |
|----------------------------------|-----------------------|
| Size (mm) width x height x depth | 608 x 1890 x 812 (mm) |
| Noise                            | < 70 dBA              |
| Weight (kg)                      | 190                   |

### Environmental characteristics

|                                          |                                |
|------------------------------------------|--------------------------------|
| Protection class                         | IP 21 / IK10 (IP 41 on demand) |
| Relative humidity (without condensation) | 0 .... 95 %                    |
| Storage temperature                      | -20 ... +50 °C                 |
| Working temperature                      | -10 ... +50 °C                 |

### Electrical characteristics

|                                            |            |
|--------------------------------------------|------------|
| Conditional short-circuit current (Icc)    | 40 kA      |
| Rated peak current Ipk                     | 84 kA pico |
| Maximum phase current                      | 84 A (RMS) |
| Rated diversity factor (RDF), simultaneity | 1          |
| Earthing system                            | TN,TT      |

### Current measurement circuit

|                      |                               |
|----------------------|-------------------------------|
| Consumption          | 1,5 VA/Tr                     |
| Transformation ratio | Transformer: 5/5A ... 5000/5A |

### Communication Network

|                        |                    |
|------------------------|--------------------|
| Protocol               | TCP/IP, Modbus TCP |
| Technology / Interface | Ethernet           |

### Standards

|                                              |                                                                                                          |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Electrical safety, Maximum height (m)        | 5000                                                                                                     |
| Electrical safety, Contamination level/class | Category 2                                                                                               |
| Standards                                    | IEC 61000-6-4, UNE-EN 55011, IEC 61000-6-2, IEC 62477-1, IEC 61439-1, IEC 60721-3-3 (Indoor conditioned) |

### Features / performance



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|                                    |                                                                                         |
|------------------------------------|-----------------------------------------------------------------------------------------|
| Reactive power compensation (Kvar) | Selectable: 0.7 inductive ... 1 ... 0.7 capacitive                                      |
| Filtering / Response time          | < 100 µs                                                                                |
| Parallel assembly/installation     | Up to 100 devices of different caliber. Connection of transformers only in Master unit. |

## Serial communication

|                   |            |
|-------------------|------------|
| Protocol          | Modbus/RTU |
| Technology / Type | RS-485     |

SVGm  
Static Var Generator with multilevel technology, 50 / 60 Hz.

| CODE                                 | TYPE              | System                 | kvar (230 V) | kvar (400 V) | kvar (440 V) | kvar (480 V) | kvar (500 V) | kvar (690 V) | Phase current | Q (kvar) | Phase current (A) |
|--------------------------------------|-------------------|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|----------|-------------------|
| 3 wires 480 V, Wall-mounted cabinet  |                   |                        |              |              |              |              |              |              |               |          |                   |
| R4P3M0.                              | SVGm-3WF-30M-480  | 3 wires, 230...480 V   | 17,4         | 30           | 30           | 30           | -            | -            | 44            |          |                   |
| R4P3M6.                              | SVGm-3WF-075M-480 | 3 wires, 230...480 V   | 43,1         | 75           | 75           | 75           | -            | -            | 110           |          |                   |
| R4P3M2.                              | SVGm-3WF-100M-480 | 3 wires, 230...480 V   | 57,5         | 100          | 100          | 100          | -            | -            | 145           |          |                   |
| 4 wires 400 V, Wall-mounted cabinet  |                   |                        |              |              |              |              |              |              |               |          |                   |
| R4P4MA.                              | SVGm-4WF-020M-400 | 4 wires, 230...400 V   | 12           | 20,7         | -            | -            | -            | -            | 30            |          |                   |
| R4P4ML.                              | SVGm-4WF-050M-400 | 4 wires, 230...400 V   | 30           | 51,7         | -            | -            | -            | -            | 75            |          |                   |
| R4P4MC.                              | SVGm-4WF-069M-400 | 4 wires, 230...400 V   | 40           | 69           | -            | -            | -            | -            | 100           |          |                   |
| 3 wires 480 V, Floor-mounted cabinet |                   |                        |              |              |              |              |              |              |               |          |                   |
| R4T3F2.                              | SVGm-3WF-100C-480 | 3 wires, 230...480 V   | 57,5         | 100          | 100          | 100          | -            | -            |               | -        | 145               |
| R4T3F3.                              | SVGm-3WF-200C-480 | 3 wires, 230...480 V   | 115          | 200          | 200          | 200          | -            | -            |               | -        | 290               |
| R4T3F4.                              | SVGm-3WF-300C-480 | 3 wires, 230...480 V   | 172,5        | 300          | 300          | 300          | -            | -            |               | -        | 435               |
| R4T3F5.                              | SVGm-3WF-400C-480 | 3 wires, 230...480 V   | 230          | 400          | 400          | 400          | -            | -            |               | -        | 580               |
| 3 wires 690 V, Floor-mounted cabinet |                   |                        |              |              |              |              |              |              |               |          |                   |
| R4T5F2.                              | SVGm-3WF-100C-690 | 3 wires, 500 ... 690 V | -            | -            | -            | -            | 72           | 100          |               | -        | 84                |
| R4T5F3.                              | SVGm-3WF-200C-690 | 3 wires, 500 ... 690 V | -            | -            | -            | -            | 144          | 200          |               | -        | 168               |
| R4P5F4.                              | SVGm-3WF-300C-690 | 3 wires, 500 ... 690 V | -            | -            | -            | -            | 216          | 300          | 210           |          |                   |
| R4T5F4.                              | SVGm-3WF-300C-690 | 3 wires, 500 ... 690 V | -            | -            | -            | -            | 216          | 300          |               | -        | 252               |
| R4P5F5.                              | SVGm-3WF-400C-690 | 3 wires, 500 ... 690 V | -            | -            | -            | -            | 288          | 400          | 280           |          |                   |
| R4T5F5.                              | SVGm-3WF-400C-690 | 3 wires, 500 ... 690 V | -            | -            | -            | -            | 288          | 400          |               | -        | 336               |
| 4 wires 400 V, Floor-mounted cabinet |                   |                        |              |              |              |              |              |              |               |          |                   |
| R4T4FC.                              | SVGm-4WF-069C-400 | 4 wires, 230...400 V   | 40           | 69           | -            | -            | -            | -            |               | -        | 100               |
| R4T4FD.                              | SVGm-4WF-138C-400 | 4 wires, 230...400 V   | 80           | 138          | -            | -            | -            | -            |               | -        | 200               |
| R4T4FE.                              | SVGm-4WF-207C-400 | 4 wires, 230...400 V   | 119,1        | 207          | -            | -            | -            | -            |               | -        | 300               |
| R4T4FF.                              | SVGm-4WF-276C-400 | 4 wires, 230...400 V   | 159          | 276          | -            | -            | -            | -            |               | -        | 400               |
| 4 wires 550 V, Floor-mounted cabinet |                   |                        |              |              |              |              |              |              |               |          |                   |
| R4P6FG.                              | SVGm-4WF-067C-550 | 4 wires, 440 ... 550 V | -            | -            | 53           | 58           | -            | -            | 70            |          |                   |
| R4T6FG.                              | SVGm-4WF-067C-550 | 4 wires, 440 ... 550 V | -            | -            | 53           | 58           | -            | -            |               | -        | 70                |



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| CODE        | TYPE              | System                 | kvar (230 V) | kvar (400 V) | kvar (440 V) | kvar (480 V) | kvar (500 V) | kvar (690 V) | Phase current | Q (kvar) | Phase current (A) |
|-------------|-------------------|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|----------|-------------------|
| R4P6FH.     | SVGm-4WF-134C-550 | 4 wires, 440 ... 550 V | -            | -            | 106          | 116          | -            | -            | 140           |          |                   |
| R4T6FH.     | SVGm-4WF-134C-550 | 4 wires, 440 ... 550 V | -            | -            | 106          | 116          | -            | -            |               | -        | 140               |
| R4P6FJ.     | SVGm-4WF-201C-550 | 4 wires, 440 ... 550 V | -            | -            | 159          | 174          | -            | -            | 210           |          |                   |
| R4T6FJ.     | SVGm-4WF-201C-550 | 4 wires, 440 ... 550 V | -            | -            | 159          | 174          | -            | -            |               | -        | 210               |
| R4P6FK.     | SVGm-4WF-268C-550 | 4 wires, 440 ... 550 V | -            | -            | 212          | 232          | -            | -            | 280           |          |                   |
| R4T6FK.     | SVGm-4WF-268C-550 | 4 wires, 440 ... 550 V | -            | -            | 212          | 232          | -            | -            |               | -        | 280               |
| Rack module |                   |                        |              |              |              |              |              |              |               |          |                   |
| R4P3R2.     | SVGm-3WF-100R-480 | 3 wires, 230...480 V   | 57,5         | 100          | 100          | 100          | -            | -            | 145           |          |                   |
| R4T3R2.     | SVGm-3WF-100R-480 | 3 wires, 230...480 V   | 57,5         | 100          | 100          | 100          | -            | -            |               | -        | 145               |

All equipment has built-in EMI filters

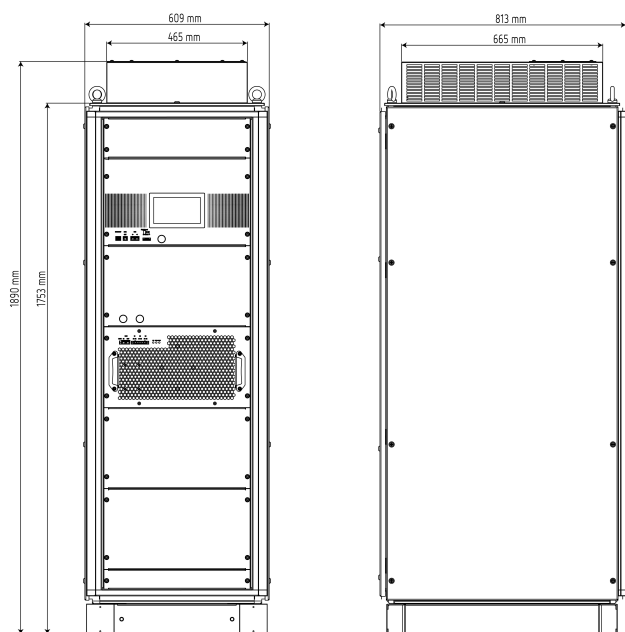


## SVGm-3WF-100C-690

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### Dimensions



### Connections

