SVGm

STATIC VAR GENERATOR FOR POWER FACTOR CORRECTION





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Partnering with Circutor

Introduction

The most accurate power factor correction solution.

The SVGm static var generator is a device based on power electronics to correct installations with both inductive and capacitive reactive energy consumption. Specially designed to instantly compensate by adjusting demand in milliseconds, both in balanced and unbalanced systems in installations with or without neutral (three or four wires).

This makes the SVGm an ideal solution for networks with fast load variations, where instant correction is required to maintain a target power factor (cos φ) and avoid any penalties on the electricity bill due to inductive or capacitive reactive energy consumption. Additionally, power electronics–based compensation enables unbalance mitigation in four-wire systems. These fast compensation capabilities also help reduce installation flicker by minimizing voltage fluctuations.

The SVGm's power factor correction technology, based on the use of semiconductors, guarantees the device's correct operation regardless of the level of harmonic distortion in the network to which it will be connected, guaranteeing no wear on its components.



SVGm corrects your installation's power factor, helping to save energy in two ways.

30 kvar



75 kvar



100 kvar



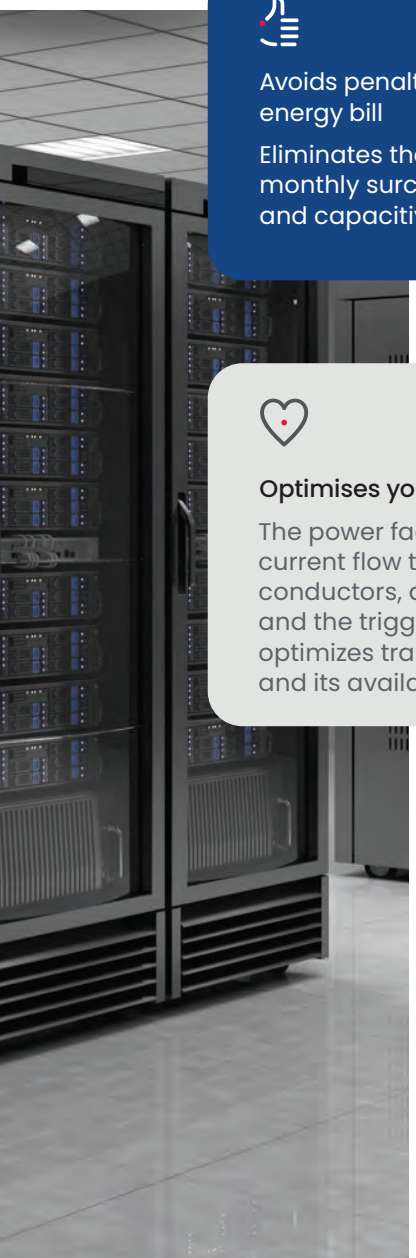


100 kvar

200 kvar

300 kvar

400 kvar



Avoids penalties on the energy bill

Eliminates the utility company's monthly surcharge for both inductive and capacitive energy.

Optimises your installation

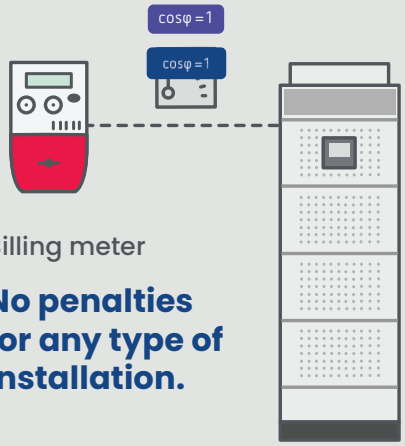
The power factor correction reduces the current flow through the installation's conductors, avoiding any overheating and the triggering of protections. It also optimizes transformer performance and its available power.

A complete product family

Connects up to 100 devices in parallel, using any combination of models, to obtain the power required by the installation. Its modular system allows expansion in a simple, convenient way.

Its "Master/Slave" system enables all devices to be directly controlled from the master module, automatically managing all its slaves without the need for configuration.

Avoids any type of penalty for both inductive and capacitive energy



Billing meter

No penalties for any type of installation.

Main features

- Reactive inductive compensation (lagging)
- Reactive capacitive compensation (leading)
- Unbalance mitigation (3 or 4 wires connection)
- Flicker mitigation.

Discover all the advantages of active compensation

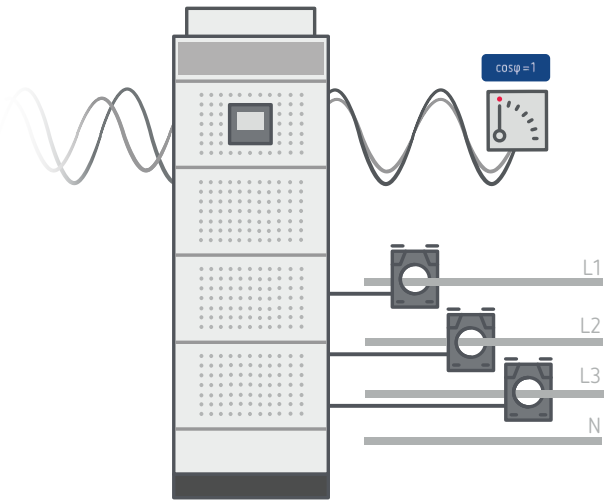
1 CONNECT
2 SET-UP
3 START

Start-up in just 3 steps

Accuracy

Possibility to set a target cos φ in a 0.7 inductive to 0.7 capacitive range. The unit compensates the exact amount of reactive current to achieve the set target value.

Unlike conventional compensation units using contactors, no transients occur as the technology is not based on the connection of capacitors.



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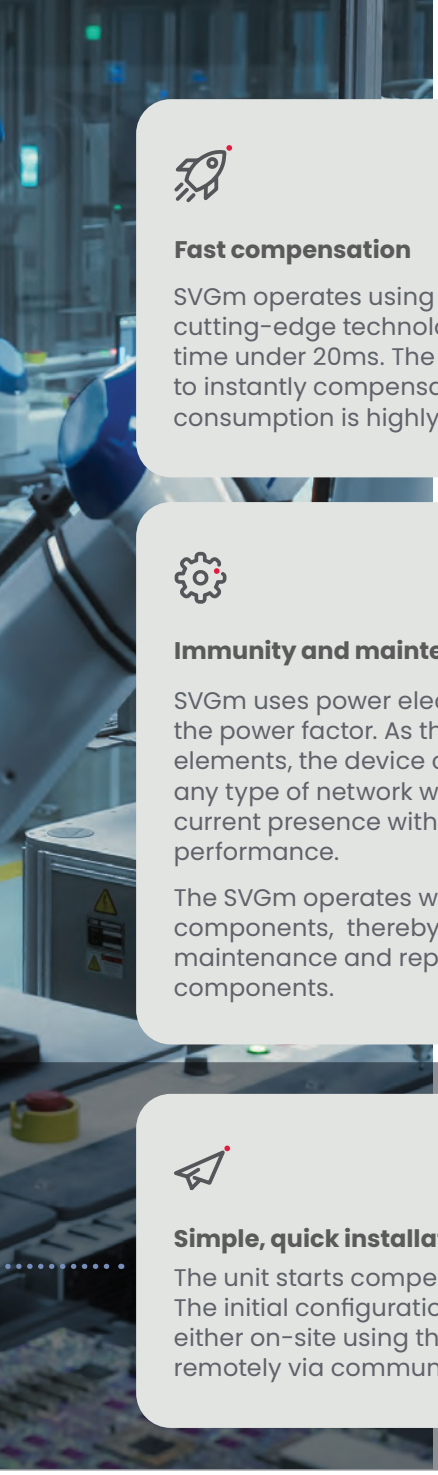
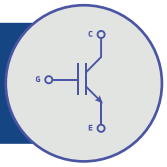


Fast compensation

SVGm operates using the most cutting-edge technology. With a response time under 20ms. The device is designed to instantly compensate networks where consumption is highly variable.

CONTACTORS > THYRISTORS > IGBT



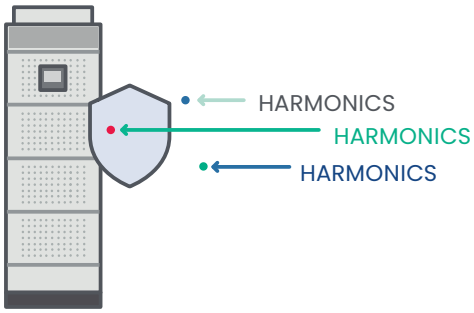
Built-in IGBT technology for fast power factor correction

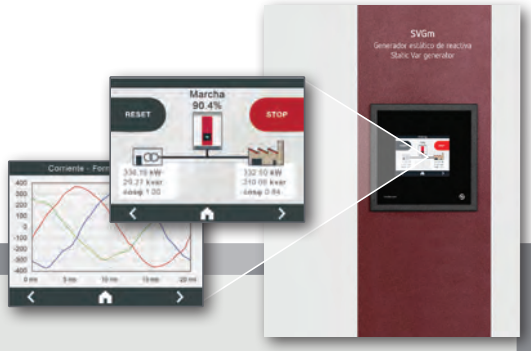
Immunity and maintenance

SVGm uses power electronics to correct the power factor. As there are no passive elements, the device can be installed in any type of network with a high harmonic current presence without affecting its performance.

The SVGm operates without mechanical components, thereby avoiding maintenance and replacement of components.

Totally immune to harmonics





Simple, quick installation

The unit starts compensating in just 3 steps. The initial configuration can be carried out either on-site using the touchscreen or remotely via communications.

Interaction with the device via touch screen

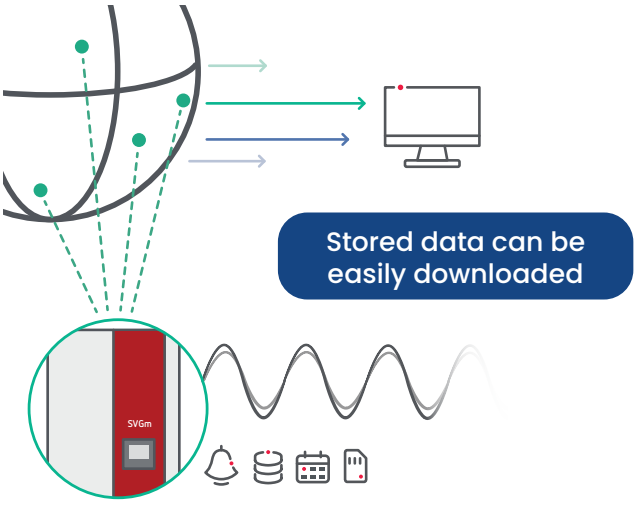
The status of the compensation and the electrical parameters can be displayed on the screen, using colour diagrams and graphs for a simplified interpretation and an instantaneous reading of the unit's operating condition.

Remote management via web server

SVGm includes a datalogger for alarm logging and storage of basic electrical parameter readouts.

Up to 7 years of data logging stored in its 2 Gb memory, ready for download via integrated web server.

It features Ethernet connectivity for a comprehensive management of the unit, whether locally or remotely; to access logs stored on the memory; and to configure it and start it up. The web server is accessed from any browser, via a mobile device or PC.



Stored data can be easily downloaded

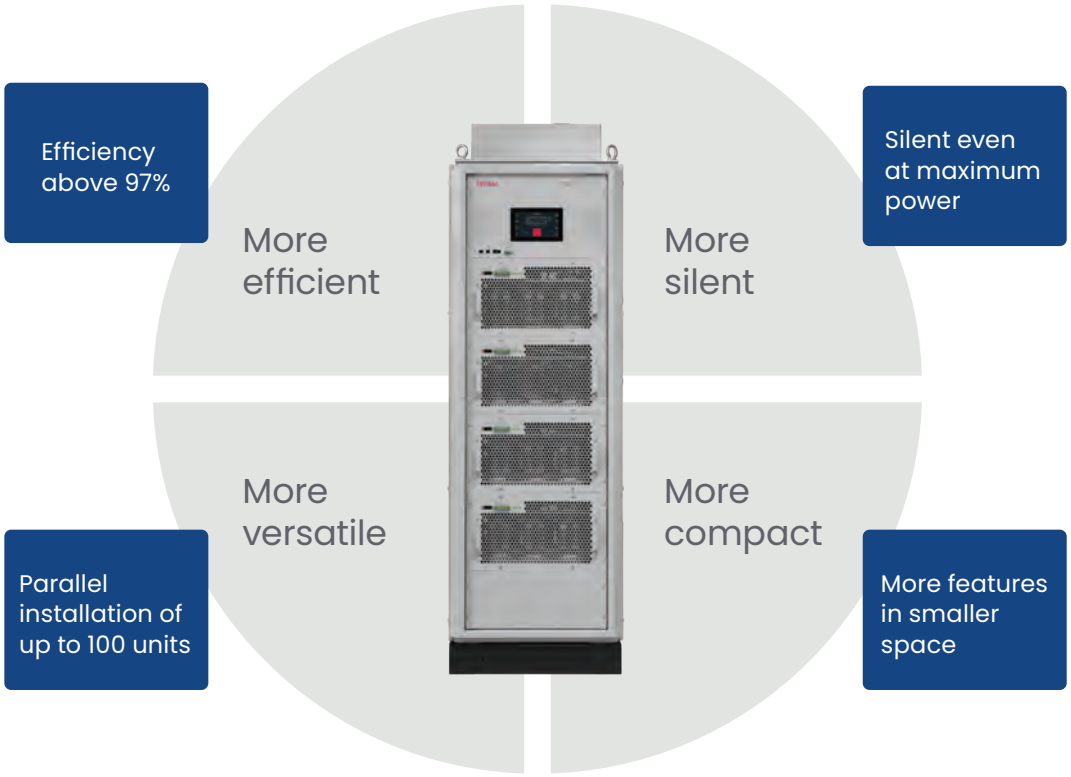


The safety of your installation is paramount

Safety

- Automatic derating system based on real temperature conditions, ensuring reliable protection even under maximum operating conditions.
- Auto-diagnosis system guaranteeing a safe start-up.
- In the event of fault detection, SVGm will switch to safe mode to prevent damage to the device and record the alarm in its memory.
- The ventilation system is adjusted automatically according to the temperature detected by its sensors.
- Comprehensive alarm logging with easy access via the display or communication systems.
- Compliant with standard IEC 63497:2026
  - Shunt-connected active correction devices (ACD).





References

Description	Code	System	Q (kvar)	Maximum current (A)	Size mm. (width x height x depth)
Wall-mounted, 3 wires 480V					
SVGm-3WF-030M-480	R4P3M0.	3 wires; 200...480V	30	44	430 x 530 x 178
SVGm-3WF-075M-480	R4P3M6.	3 wires; 200...480V	75	110	439 x 745 x 288
SVGm-3WF-100M-480	R4P3M2.	3 wires; 200...480V	100	145	439 x 745 x 288
Wall-mounted, 4 wires 400V					
SVGm-4WF-020M-400	R4P4MA.	4 wires; 200...400V	20,7	30	430 x 530 x 178
SVGm-4WF-050M-400	R4P4ML.	4 wires; 200...400V	51,7	75	439 x 745 x 288
SVGm-4WF-069M-400	R4P4MC.	4 wires; 200...400V	69	100	439 x 745 x 288
Floor-mounted (cabinet), 3 wires 480V					
SVGm-3WP-100C-480	R4T3F2.	3 wires; 200...480V	100	145	608 x 1890 x 812
SVGm-3WP-200C-480	R4T3F3.	3 wires; 200...480V	200	290	608 x 1890x 812
SVGm-3WP-300C-480	R4T3F4.	3 wires; 200...480V	300	435	608 x 1890 x 812
SVGm-3WP-400C-480	R4T3F5.	3 wires; 200...480V	400	580	608 x 1890 x 812
Floor-mounted (cabinet), 4 wires 400V					
SVGm-4WP-069C-400	R4T4FC.	4 wires; 200...400V	69	100	608 x 1890 x 812
SVGm-4WP-138C-400	R4T4FD.	4 wires; 200...400V	138	200	608 x 1890 x 812
SVGm-4WP-207C-400	R4T4FE.	4 wires; 200...400V	207	300	608 x 1890 x 812
SVGm-4WP-276C-400	R4T4FF.	4 wires; 200...400V	276	400	608 x 1890 x 812
Floor-mounted (cabinet), 3 wires 690V					
SVGm-3WP-100C-690	R4T5F2.	3 wires, 230...690 V	100	84	608 x 1890 x 812
SVGm-3WP-200C-690	R4T5F3.	3 wires, 230...690 V	200	168	608 x 1890 x 812
SVGm-3WP-300C-690	R4T5F4.	3 wires, 230...690 V	300	252	608 x 1890 x 812
SVGm-3WP-400C-690	R4T5F5.	3 wires, 230...690 V	400	336	608 x 1890 x 812
Floor-mounted (cabinet), 4 wires 550V					
SVGm-4WP-067C-550	R4T6FG.	4 wires, 230...550 V	67	70	608 x 1890 x 812
SVGm-4WP-134C-550	R4T6FH.	4 wires, 230...550 V	134	140	608 x 1890 x 812
SVGm-4WP-201C-550	R4T6FJ.	4 wires, 230...550 V	201	210	608 x 1890 x 812
SVGm-4WP-268C-550	R4T6FK.	4 wires, 230...550 V	268	280	608 x 1890 x 812
Rack module for cabinet					
SVGm-3WP-100R-480	R4T3R2.	3 wires; 200...480V	100	145	482.5 x 263 x 714.5
SVGm-4WP-069R-480	R4T4R2.	4 wires; 200...480V	69	100	482.5 x 263 x 714.5
SVGm-4WP-067R-550	R4T6RG.	4 wires, 230...550 V	67	70	482.5 x 263 x 714.5
SVGm-3WP-100R-690	R4T5R2.	3 wires, 230...690 V	100	84	482.5 x 263 x 714.5

Table of additional features

R Code	4	X	X	X	X	0	0	0	X	0	0	0
						Internal code						
Protection degree									Standard IP-20 (wall mounted) / IP-21 (Cabinet)	0		
									IP-41 (Cabinet)	5		
									IP-54 (Cabinet)	7		
									Top cable entry (cabinet mounted except IP-54)		3	
									Circuit breaker for 100 kvar In = 200 A (cabinet mounted except IP-54)		A	
									Circuit breaker for 200 kvar In = 400 A (cabinet mounted except IP-54)		B	
									Circuit breaker for 300 kvar In = 630 A (cabinet mounted except IP-54)		C	
									Extra busbars for connection of modules for Qn = 300 kvar		D	
									Extra busbars for connection of modules for Qn = 400 kvar		E	



Partnering with

Circutor

Leading electrical energy efficiency company, creating innovative technological solutions for our clients, in the field of global energy transition since our foundation in 1973.

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