

Static Var Generator

静止无功发生器

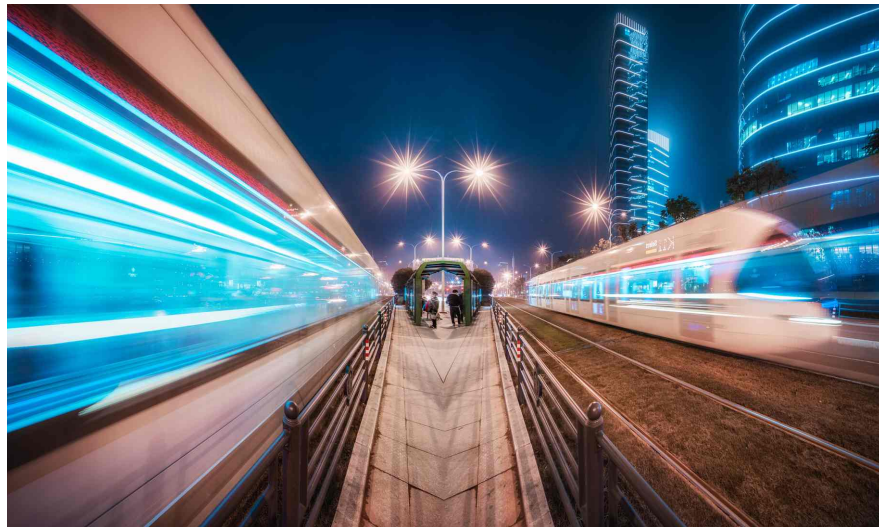
PART / 01

- Low-Voltage
Power Factor Correction
低压功率因数校正

PART / 02

PART / 03

PART / 04



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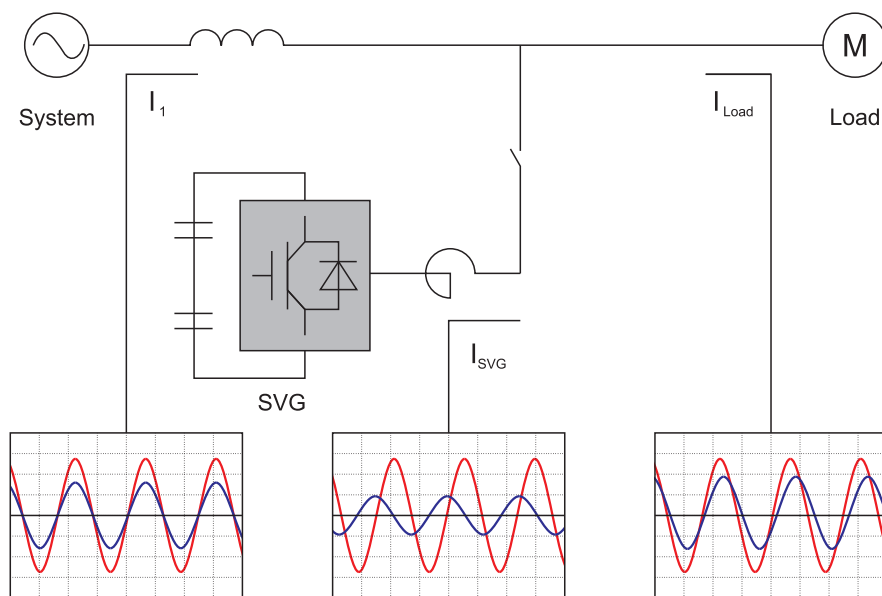


Principle of SVG

Static var generator (SVG) directly connects the self-commutation bridge circuit in parallel to the power grid through electric reactor, and properly regulates the phase position and amplitude of the output voltage at the AC side of the bridge circuit, or directly controls the current of the AC side, to make the circuit to generate a reactive current meeting the requirements, for dynamic reactive compensation.

原理

静止无功发生器（SVG: Static Var Generator）的基本原理是指将自换相桥式电路通过电抗器直接并联在电网上，适当地调节桥式电路交流侧输出电压的相位和幅值或者直接控制其交流侧电流，就可以使该电路发出满足要求的无功电流，实现动态无功补偿的目的。



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Security

SVG is controlled as a current source when it is running, so there is no possibility of resonance with the system impedance, and the security is higher.

安全性

SVG运行时被控制为电流源，不存在与系统阻抗发生谐振的可能性，安全性更高。

Flexible Compensation Modes

- Compensate reactive power of the load.
- Filter out 13th harmonics or less.
- Solve three-phase imbalance caused by reactive power.

灵活的补偿方式

- 补偿负载的无功功率
- 滤除13次谐波或更少
- 解决无功功率引起的三相不平衡问题

Small Area

Minimal floor area of products – the volume is half that of conventional compensation equipment under the same compensation capacity.

产品占地少

产品最小占地面积——在相同补偿容量下，体积为常规补偿设备的一半。

Quick Response Time

Svg can complete the mutual conversion from rated capacitive reactive power to rated inductive reactive power in a very short time, and this unparalleled response speed is fully capable of compensating the impact load.

快速响应

SVG可在极短的时间之内完成从额定容性无功功率到额定感性无功功率的相互转换，这种无可比拟的响应速度完全可以胜任对冲击性负荷的补偿。

Standard Modular

A standard modular design is employed for a shorter delivery cycle, higher service reliability and maintainability.

标准化模块

采用标准模块化设计，缩短交付周期，提高服务可靠性和可维护性。

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Features and Technical Details

技术参数

Type / 补偿型号	ESV-04/30	ESV-04/50	ESV-04/75	ESV-04/100	ESV-04/150
Capacity of single module 单机补偿容量 kVAr	30	50	75	100	150
AC Input / 交流输入					
Rated voltage 额定电压	400 × (1±20%)V 6KV 10KVand 35KV				
Rated frequency 额定频率	50 × (1±10%)Hz				
Wiring method 接线方式	Three-phase three-wire 三相三线				
Technical Index / 技术指标					
Number of harmonic compensation 谐波补偿次数	5~13次				
Target power factor 目标功率因数	Up to settings within the capacity range 在容量范围内达到设定要求				
Compensation mode 补偿方式	Reactive compensation based and harmonic compensation selectable 以无功补偿为主，谐波补偿功能可选				
Response time 全响应时间	kVAr 补偿无功 5ms(10%~90%) Within 5 ms Fulling 全补偿 10ms(10%~90%)				
Overload protection 过载保护	Automatically limited to the rated output current 自动限制到额定电流输出				
Active power loss 有功功率损耗	< 3% rated power module <3%额定功率模块				
Noise 噪声	<65dB(A)				
Environment / 环境条件					
Working temperature 工作温度	- 25℃~50℃				
Storage temperature 储藏温度	- 40℃~60℃				
Relative humidity 相对湿度	< 90%（在25℃时）				

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Capacity of single module 单机补偿容量 kVAr	Automatic or manual 自动或手动				
Communication interface 通讯接口	Remote RS485/Ethernet/communication function as options; host computer monitoring software (optional). 远程RS485/RS232/以太网通讯功能可选，上位机通讯软件可选。				
Display function 操作显示	- Power, power factor, voltage and current, total current distortion rate, frequency spectrogram, current waveform. - Load current, filter output current. - Query about settings of operation mode, configuration of dry contact, fault information and operation time. - 功率、功率因数、电压电流、总电流畸变率、频谱图、电流波形 - 负载电流，滤波器输出电流 - 运行方式设置、干接点配置、故障信息、运行时间查询				
Display function 操作显示	Directly parallel machines of the same model, 10 sets at most 可并联运行，满足更大容量场合需求				
Protection mode 保护	Overvoltage/undervoltage of input, phase lack/dislocation of input, overcurrent, over-heating, overvoltage/undervoltage of DC bus, auto current-limiting overload protection. 电网过、欠压、电网错缺位、装置过流、装置过热、直流母线过欠压、过载自动限流保护。				
Protection level 防护等级	IP20/IP52 or higher protection level to be customized IP20（更高防护等级可定制）				
Floor-mount / 机架式					
Dimension(WxHxD) 尺寸（长x高x深）	359x200x535 (mm)	399x200x615 (mm)	485x232x646 (mm)	554x250x656 (mm)	674x250x676 (mm)
Wall-mount 壁挂式					
Dimension(WxDxH) 尺寸（长x宽x高）	378x200x522 (mm)	419x200x545 (mm)	504x232x611 (mm)	574x250x621 (mm)	