

SINEXCEL ULTRA SVG

Static Var Generator



Sinexcel Electric Co. Ltd



ADDRESS

Building 6, Baiwangxin High-Tech Industrial
Park, No. 1002, Songbai Road,
Nanshan District, Shenzhen, China.



TELEPHONY

Tel: +86 0755-86511588
Fax: +86 0755-86513100



WEBSITE

<https://en.sinexcel.com>

New Beginning, New Power
Quality Compensation Era

Peak efficiency>99%
Precise Reactive Power Control

Performance breakthrough brought by SiC technology




99%

Ultra high efficiency

>24kg

Tiny dimension but huge capacity

Industry application breakthrough brought by Ultra Series

-  Flexible Top-Vent Cabinet
-  Potting Protection
-  Package PQ solution
-  Easy Maintenance



The revolutionary SiC Mosfet technology has driven the design optimization of power quality products, which delivering unparalleled improvements in performance and application of Sinexcel Ultra Series. This transformation has reshaped the business model for power quality solutions, setting a new industry benchmark for excellence.

Ultra Series STATIC VAR GENERATOR

ULTRA HIGH EFFICIENCY

Performance breakthrough brought by SiC technology

Silicon carbide (SiC) MOSFETs achieve ultra-high efficiency primarily due to their wide bandgap, which leads to lower on-state resistance ($R_{ds(on)}$), faster switching speeds, and reduced switching losses. These properties enable SiC MOSFETs to operate at higher frequencies and temperatures with improved overall performance, resulting in more efficient power conversion systems.

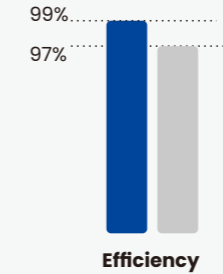
SiC



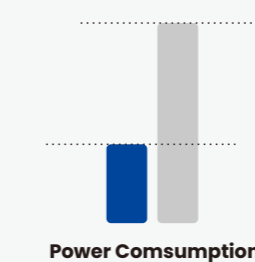
What benefit will be brought to user with 99% ultra high efficiency?

—Electricity bill saving, higher ROI

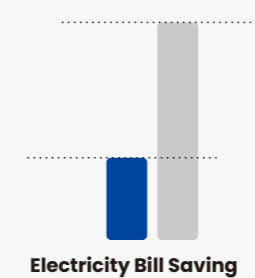
Take 400V 100kVAr SVG as an example



Efficiency Difference
>2%



Energy saving
>18,890
KWH



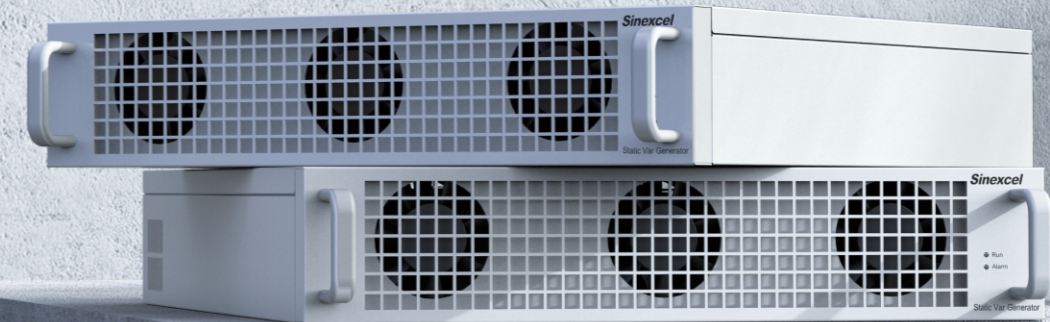
Electricity fee saving
>2.834
USD/year

■ Present the Sinexcel Ultra SVG ■ Present the standard SVG in market

TINY DIMENSION BUT HUGE CAPACITY

Performance breakthrough brought by SiC technology

High heat resistance, high thermal conductivity, and high switching frequency, these advantages of SiC bring lower heat dissipation and less ripple current output to Ultra Series SVG. With the physical upgrade of this key component and the 3-year deep research of the R&D team, Sinexcel realizes the ultra-high integration design in Ultra Series SVG.



Each cabinet maximum supports 8*Ultra modules inside, maximum capacity up high to **800kVAr (8*100 kVAr)**

Standard IP grade is IP20

(IP grade customized)



400V Ultra SVG 30/50 kVAr

Size is 500*470*88mm (W*D*H)

400V Ultra SVG 100 kVAr

Size is 500*520*100mm (W*D*H)

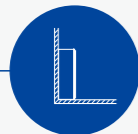
400V Ultra SVG 200 kVAr

Size is 500*646*220mm (W*D*H)

Sinexcel Ultra Series available now

FLEXIBLE TOP-VENT CABINET

_Industry application breakthrough brought by Ultra Series



High power density cabinet that can be installed against the wall, space saving for distribution room



Size optional, cabinet capacity optional and IP class optional

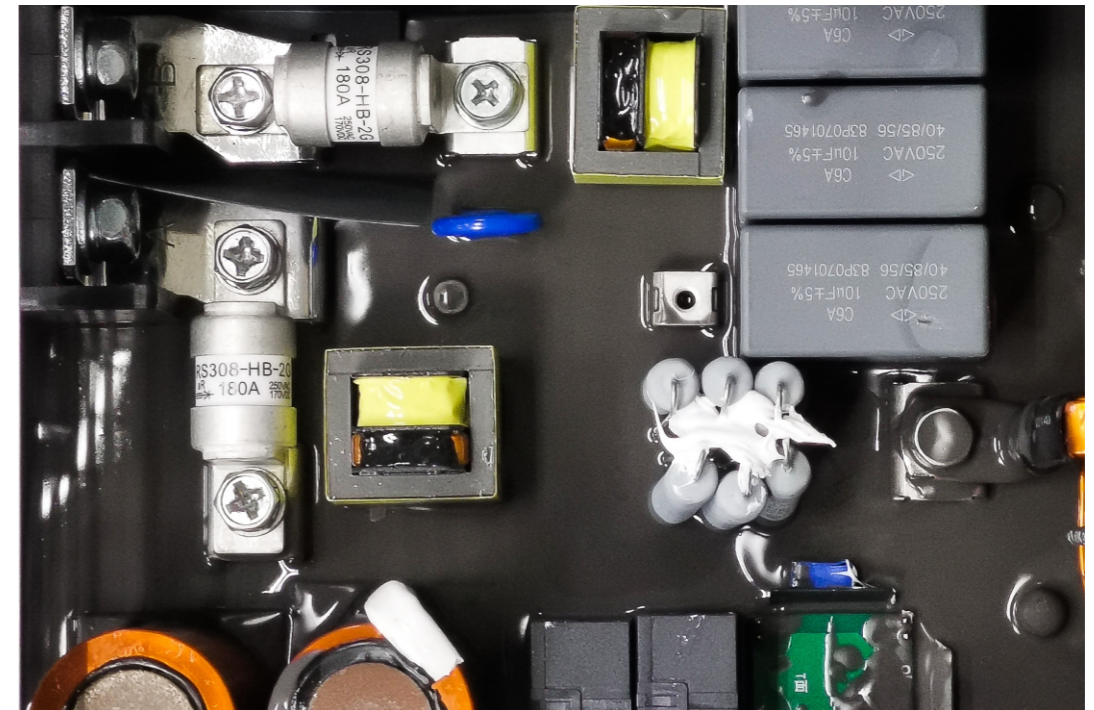


Collapsible design, small packing size, cost-effective for transportation

POTTING PROTECTION

_Industry application breakthrough brought by Ultra Series

Special glue is used inside the Ultra Series SVG, and brings better anti-corrosion and anti-conductive dust performance. This makes the Ultra Series SVG able to survive in harsh environments and increase its lifespan.



FLEXIBLE TOP-VENT CABINET

_Industry application breakthrough brought by Ultra Series

—More optional for user; More suitable for reconstruction projects



Module hybrid application

A more economical power quality solution, AHF compensates harmonic, and SVG compensates reactive power at same time

SINEXCEL ULTRA SVG SPECIFICATION

| Items | Sinexcel Ultra Series SVG | | | |
|-------------------------------|---|-------------------|-------------------|-------------------------------|
| Rating | 30K | 50K | 100K | 200K |
| Function | Reactive power and three-phase unbalance compensation | | | |
| System parameters | | | | |
| Nominal voltage | 380/400/415V (228-456V) | | | |
| L-N voltage | 220/230/240V (132-264V) | | | |
| Nominal frequency | 50/60Hz, auto sensing (Range : 45Hz~62.5Hz) | | | |
| Parallel quantities | Unlimited | | | |
| Efficiency | 99% | | | 98.5% |
| Connection type | 3 Phase 3 Wire / 3 Phase 4 Wire | | | |
| CT location | Load / Supply side | | | |
| Performance indicators | | | | |
| Control algorithm | FFT, intelligent FFT, and instantaneous reactive power | | | |
| Fast response Time | < 50us | | | |
| Full response Time | < 15ms | | | |
| Target power factor | Adjustable from -1 to +1 | | | |
| Switching frequency | Average 40kHz, up to 95kHz | | | |
| Cooling air requirement | 180CFM | 240CFM | 480CFM | |
| Noise level | <60dB (Full load) | <65dB (Full load) | <68dB (Full load) | |
| Communications ports | RS485 and Ethernet port(RJ45) | | | |
| Communications protocols | Modbus RTU, TCP/IP | | | |
| Module display interface | 4.3-inch HMI(module), 7-inch HMI(central monitor) and LED | | | |
| Protection functions | Over-voltage protection, under-voltage protection, inverter bridge inverse protection, over-compensation protection and so on | | | |
| Mounting type | Wall-mounted, Rack-mounted and Cabinet | | | Wall-mounted and Rack-mounted |
| Dimensions(W x D x H mm) | 500*470*88 | 500*520*100 | 500*646*220 | |
| Net weight | 24kg | 31kg | 63kg | |
| Storage temperature | -40°C~70°C | | | |
| Operating Ambient temperature | -10°C~40°C (may derate capacity if ambient temperature exceeds 40°C) | | | |
| Relative humidity | 5% to 95%, non-condensing | | | |
| Altitude | ≤1500m, 1500-4000m, capacity is derating 1% for every 100m altitude increased | | | |
| Protection class | IP20 (IP degree can be customizable) | | | |

SINEXCEL SVG 50000KVAR+

_Safeguarding Operations at Texhong Textile Factory in Vietnam



In a textile factory located in Vietnam, Texhong faced a significant challenge when their existing capacitor cabinet, operating in a poor power grid environment that caused exploded. This event not only disrupted operations but also posed a serious safety hazard to the factory workers. Seeking a



Sinexcel SVG stepped in as the perfect replacement for the traditional capacitor cabinet. With its robust design and advanced features, Sinexcel SVG was well-equipped to handle the demanding power grid environment at Texhong. Unlike the capacitor cabinet, Sinexcel SVG could function normally and ensure power factor (PF)



Sinexcel SVG stepped in as the perfect replacement for the traditional capacitor cabinet. With its robust design and advanced features, Sinexcel SVG was well-equipped to handle the demanding power grid environment at Texhong. Unlike the capacitor cabinet, Sinexcel SVG could function normally and ensure power factor (PF) compensation even under adverse conditions.

SINEXCEL SVG 50000KVAR+

_Safeguarding Operations at Texhong Textile Factory in Vietnam

In a textile factory located in Vietnam, Texhong faced a significant challenge when their existing capacitor cabinet, operating in a poor power grid environment that caused exploded. This event not only disrupted operations but also posed a serious safety hazard to the factory workers. Seeking a reliable and efficient solution, Texhong turned to Sinexcel and their cutting-edge SVG technology.



Sinexcel SVG

Technology Boosts Canadian Urbanmine's Non-Ferrous Metal Recycling Plant Efficiency



Sinexcel, a leading provider of power quality solutions, has successfully implemented its Static Var Generator (SVG) technology at the Canadian Urbanmine's non-ferrous metal recycling plant. This innovative solution has significantly improved the plant's Power Factor (PF) to 0.99, helping the company avoid fines

CANADIAN

