



CHITEK
I N N O P O W E R

Your best digital energy partner

CHITEK NEW ENERGY POWER QUALITY PRODUCTS

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Shenzhen CHITEK New Energy Technology Co., Ltd



Focusing on low-carbon
transmission and distribution,
empowering digital energy

**BUILDING A HIGH ENERGY
EFFICIENCY GREEN FUTURE**

CHITEK NEW ENERGY

Power electronics core equipment provider

Shenzhen CHITEK New Energy Technology Co., Ltd., founded in 2019 and headquartered in Shenzhen, is a high-tech enterprise specializing in the research, development, manufacturing, and service of power electronic products. Our products are widely applied in various fields, including the power system, industrial manufacturing, transportation, healthcare, and telecommunications, serving numerous customers both at home and abroad.

Relying on a globally leading R&D platform, CHITEK New Energy provides digital energy equipment and solutions, and is committed to building an energy-efficient and green future.

60%

Senior R&D team

60% of the R&D personnel come from international industry giants and domestic prestigious universities



Proprietary core IP

Having independent intellectual property rights throughout the entire process of research and development, design, and production



Product quality control

All products have passed CQC, CE and other standard certifications



Turnkey solution

Provide turnkey solutions and customized solutions for the design, manufacturing, operation, and maintenance phases

APF/SVG INDUSTRIAL MODEL

High-end SiC model – Gen2



Reduced Power Loss

Power loss reduced by at least 1 percentage point
Energy-saving payback is often under one year



Longer Service Life

Internal temperature is 8°C lower than IGBT models
Fault-free operating time improved by over 50%



Higher Temperature Tolerance

No derating below 45°C
No shutdown below 65°C



Even Harmonics

100% elimination of even harmonics
Filters both odd and even harmonics simultaneously



Rigorous Certifications

Power and telecom industry standard test reports
Salt spray test report
CQC certified / CE certified



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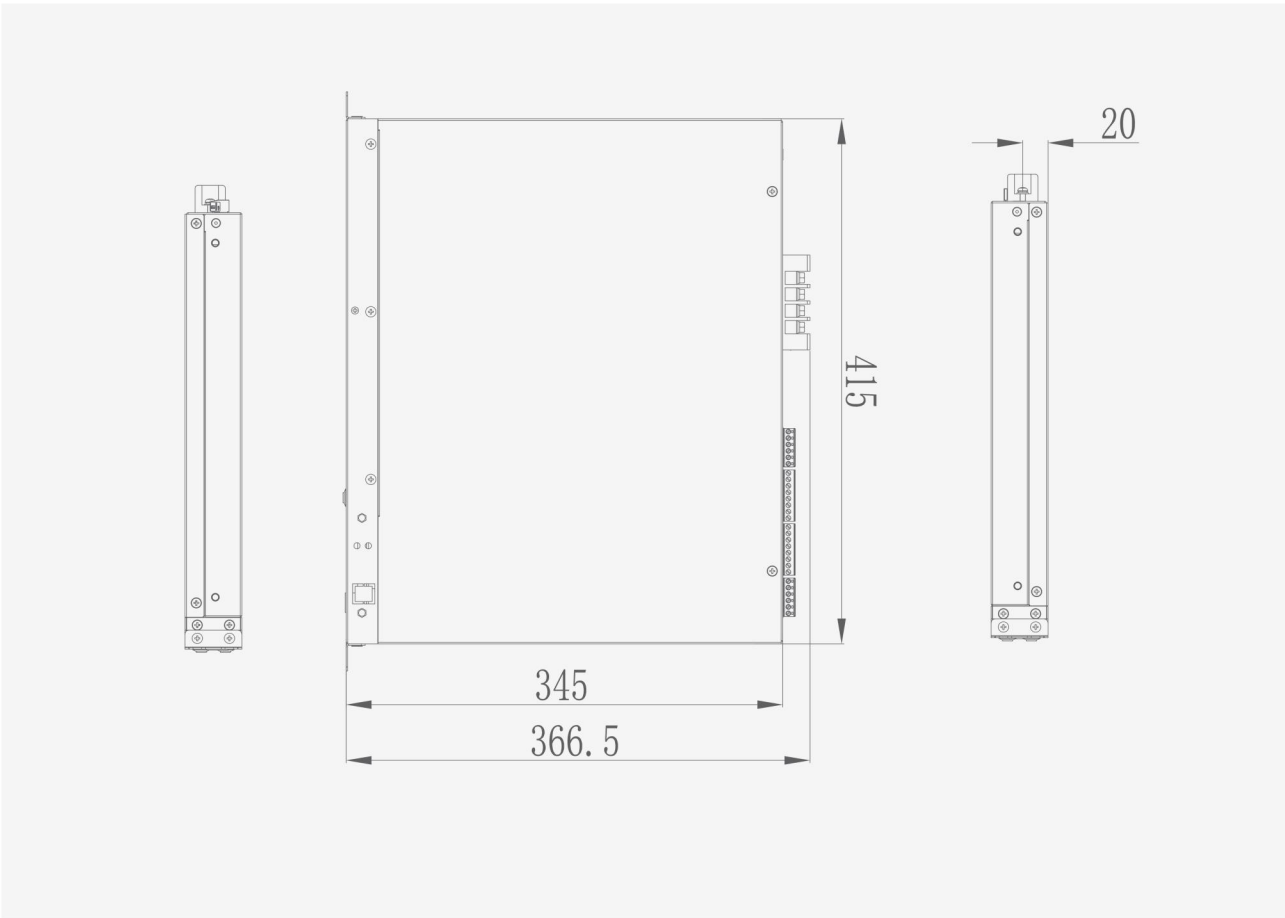
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APF/SVG-ULTRA SLIM MODEL

- Simpler button control design.
- Minimum internal cable, optimal air duct layout ensure better heat dissipation; working under environment temp up to 55°C;
- PWM fan speed control and intelligent algorithms ensure high efficiency under low load and increase the fan service life



Rackmount



SPECIFICATION

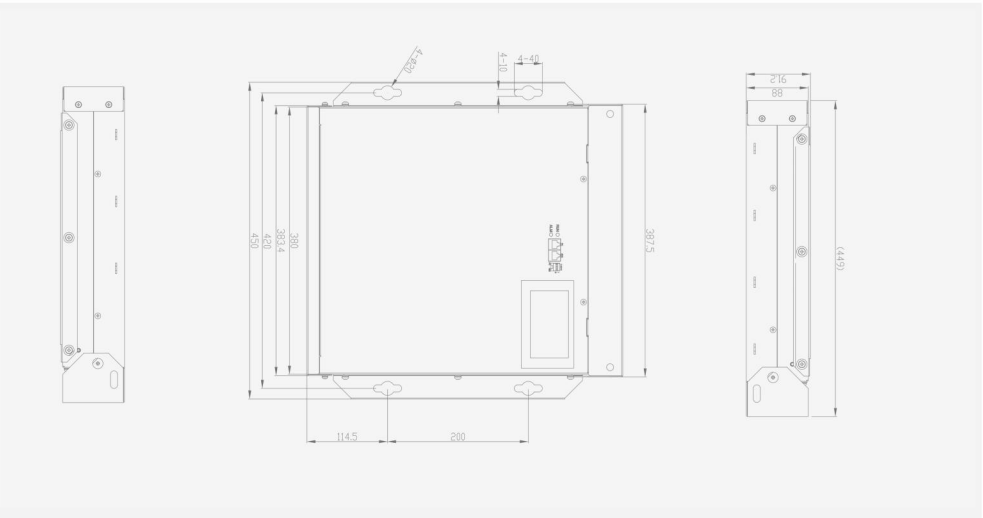
Module Parameters			
Rated Voltage	400VAC (208VAC 480VAC)		
Power Capacity	APF 8A,ASVG 5Kvar	APF 15A,ASVG 10Kvar	APF 8A,ASVG 14Kvar
System Parameter			
Rated input voltage	400Vac (-20%~+15%)		
Rated operating frequency	50Hz/60Hz (-3Hz~+3Hz)		
Number of parallel connections	1		
Efficiency & Losses	Efficiency ≥97% (3ph), ≤15 W/A Loss		
Grid structure	Three-phase four-wire or three-phase three-wire		
Current transformer	50:5~10,000:5		
Performance Indicators			
Full response time	< 5ms		
Target power factor	-1~+1, capacitive inductive continuously adjustable		
Compensation mode	Harmonic suppression / reactive power compensation / unbalance compensation, 11 modes in any combination		
Noise indicator	< 60dB		
Communications Monitoring			
Communications interface	RS485, Network Port		
Communications protocol	Modbus, TCP/IP, CAN		
Module display interface	Mechanical Keys, LED Indicators, Separate Touch Screen		
Mechanical Property			
Mounting Options	rackmount		
W×D×H(mm)	340×410×45		
Net weight	7.5kg		
Chassis height	45mm		
Enclosure	Galvanized Steel, RAL7035 Coating, customized on request		
CT position	Grid sense (at main) or Load sense		
Environmental Requirements			
Altitude	≤1500m; between 1500m~3000m, according to GB/T3859.2, the power will be reduced by 1% for every 100m increase.		
Operating temperature	-40℃~+65℃		
Equipment storage and transportation temperature	-45℃~+70℃		
Relative humidity	0~95%, No condensation		
Class of pollution	Pollution Level III		
Related Qualifications and Standards			
Standards compliance	IEEE519、IEC6100-3-6、ER G5/4、CE、EMC Compliance: EN 61000-6-4 Class A		

APF/SVG DISTRIBUTED MODEL

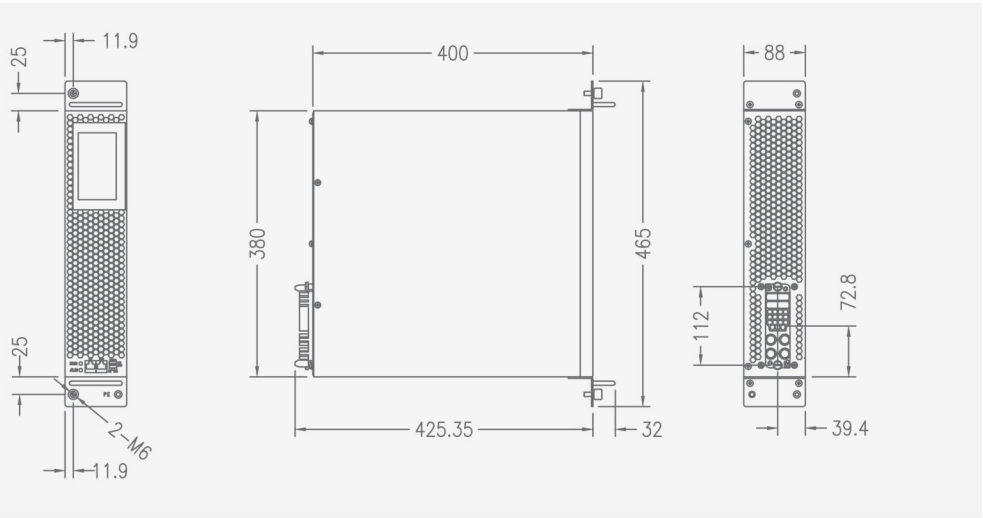
- Equipped with 4.3 Inch touch screen or manual input panel: simple & user friendly HMI
- Minimum internal cable, optimal air duct layout ensure better heat dissipation: working under environment temp up to 55°C;
- PWM fan speed control and intelligent algorithms ensure high efficiency under low load and increase the fan service life



Rackmount



Plug-in



SPECIFICATION

Module Parameters		
Rated Voltage	400VAC	
Power Capacity	APF 30A, 50A; SVG 30Kvar, 35Kvar	
System Parameter		
Rated input voltage	400Vac (-20%~+15%)	
Rated operating frequency	50Hz/60Hz (-3Hz~+3Hz)	
Number of parallel connections	≤8units	
Efficiency & Losses	Efficiency ≥97% (3ph), ≤15 W/A Loss	
Grid structure	Three-phase four-wire or three-phase three-wire	
Current transformer	50:5~10,000:5	
Performance Indicators		
Full response time	< 5ms	
Target power factor	-1~+1, capacitive inductive continuously adjustable	
Compensation mode	Harmonic suppression / reactive power compensation / unbalance compensation, 11 modes in any combination	
Noise indicator	< 60dB	
Communications Monitoring		
Communications interface	RS485, Network Port	
Communications protocol	Modbus, TCP/IP, CAN	
Module display interface	4.3 inch touch screen or 2.5 inch keypad screen, LED indicators	
Mechanical Property		
Mounting Options	rackmount	hot swappable
W×D×H(mm)	380×424×88	380×425×88
Net weight	11.5kg	
Chassis height	2U	
Enclosure	Galvanized Steel, RAL7035 Coating, customized on request	
CT position	Grid sense (at main) or Load sense	
Environmental Requirements		
Altitude	≤1500m; between 1500m~3000m, according to GB/T3859.2, the power will be reduced by 1% for every 100m increase.	
Operating temperature	-40℃~+65℃	
Equipment storage and transportation temperature	-45℃~+70℃	
Relative humidity	0~95%, No condensation	
Class of pollution	Pollution Level III	
Related Qualifications and Standards		
Standards compliance	IEEE519、IEC6100-3-6、ER G5/4、CE、EMC Compliance: EN 61000-6-4 Class A	

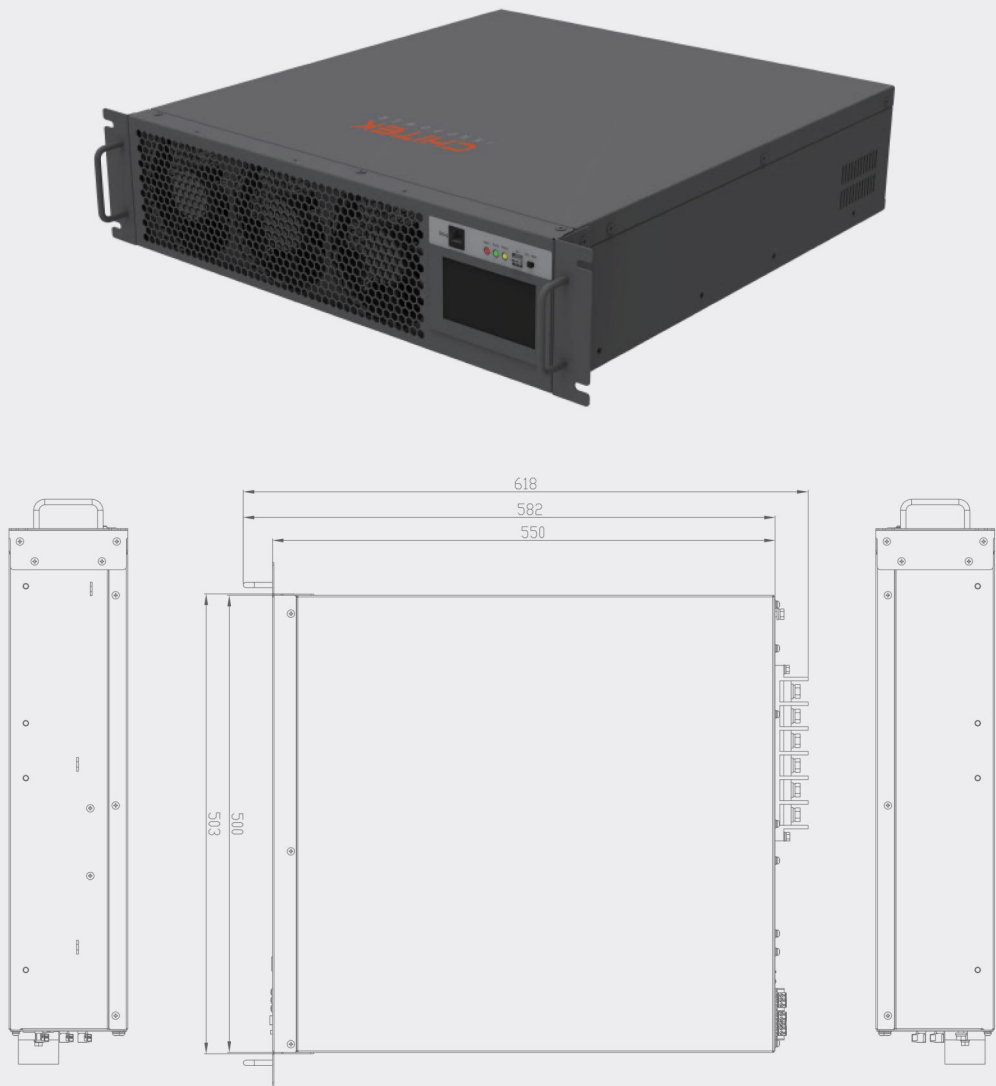
APF/SVG STANDARD ANTI-POLLUTION MODEL

- Resistant to high-pollution, high-dust harsh environments

■ Foolproof wiring design reduces field and service effort

■ Strong heat dissipation, low noise
- Built-in 4G/ Wifi module (optional)

■ Same size design for the whole series



SPECIFICATIONS

Module Parameters					
Rated Voltage	400VAC				
Rated Current	APF 50A	APF 75A	APF 100A	APF 150A	APF 200A
Power Capacity	SVG 35kvar	SVG 50kvar	SVG 75kvar	SVG 100kvar	SVG 150kvar
System Parameter					
Rated input voltage	400Vac (-20%~+15%)				
Grid frequency	50Hz (range: 47Hz-53Hz), 60Hz (range: 57Hz-63Hz)				
Number of parallel connections	≤16units				
Efficiency & Losses	Efficiency ≥97% (3ph), ≤15 W/A Loss。				
Grid structure	Three-phase four-wire or three-phase three-wire				
Current transformer	50/5~30000/5				
Performance Indicators					
Harmonic Compensation Range	2nd~51st Order (Amplitude Adjustable)				
Harmonic Attenuation	THD<3% (Closed Loop)				
Quick response time	< 50μs				
Full response time	< 5ms				
Target PF	-1~+1				
Noise indicator	< 60dB				
Communications Monitoring					
Communication interface	RS485, Network Port				
Communication protocols	Modbus, TCP/IP, CAN				
Module display interface	4.3 inch touch screen LED indicator				
Mechanical Property					
Mounting Options	Wall-mounted / Rail-mounted				
W×D×H(mm)	500X550X130				
Net weight	19kg	24kg	29kg	34 kg	
Enclosure	Galvanized Steel, RAL7035 Coating, customized on request				
CT position	Grid sense (at main) or Load sense				
Environmental Requirements					
Altitude	≤1500m; between 1500m~4000m, according to GB/T3859.2, the power will be reduced by 1% for every 100m increase.				
Operating temperature	-40℃~+65℃				
Relative humidity	5%~95%, No condensation				
Protection level	IP20, Other IP levels can be customized				
Related qualifications and standards					
Standards compliance	IEEE519、IEC6100-3-6、ER G5/4、CE、EMC Compliance: EN 61000-6-4 Class A				

APF/SVG SECOND-GENERATION SILICON CARBIDE MODEL

- Ultra-high efficiency, up to 99% efficiency

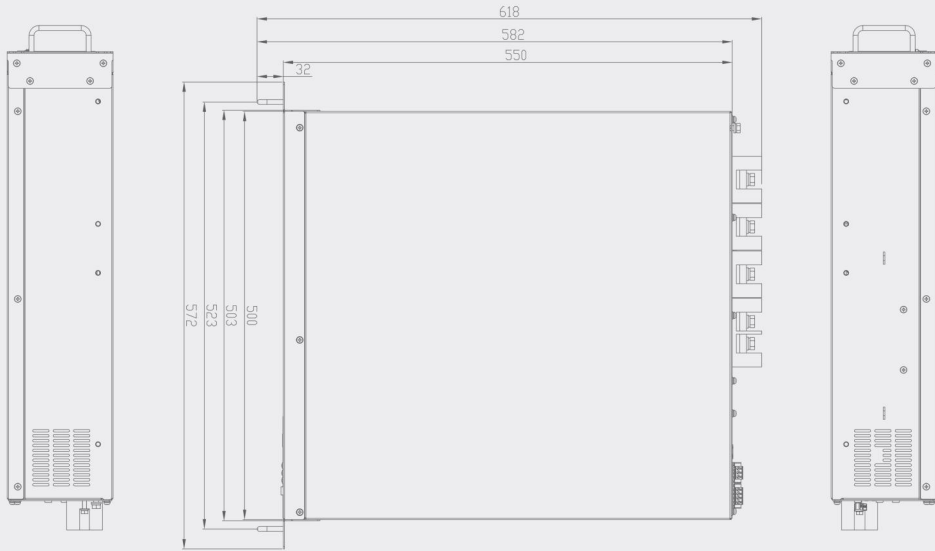
■ Ultra-compact body, same height for all series 100mm

■ Built-in 4G/ Wifi module (optional)
- Resistant to high-pollution high-dust harsh environment

■ Foolproof wiring design reduces field and service workload



Rackmount



SPECIFICATIONS

Module Parameters					
Rated Voltage	400VAC (208V, 480V please contact us)				
Rated Current	APF 50A	APF 75A	APF 100A	APF 150A	APF 200A
Power Capacity	SVG 35kvar	SVG 50kvar	SVG 75kvar	SVG 100kvar	SVG 150kvar
System Parameter					
Rated input voltage	400Vac (-20%~+15%)				
Grid frequency	50Hz (range: 47Hz-53Hz), 60Hz (range: 57Hz-63Hz)				
Number of parallel connections	≤16units				
Efficiencies	Up to 99% / Up to 99%				
Grid structure	Three-phase four-wire or three-phase three-wire				
Current transformer	50/5~30000/5				
Performance Indicators					
Harmonic Compensation Range	2nd-51st Order (Amplitude Adjustable)				
Harmonic Attenuation	THD<3% (Closed Loop)				
Quick response time	< 25μs				
Full response time	< 5ms				
Target PF	-1~+1				
Noise indicator	< 60dB				
Communications Monitoring					
Communication interface	RS485, Network Port				
Communication protocols	Modbus Protocol, TCP/IP, CAN				
Module display interface	4.3 inch touch screen LED indicator				
Mechanical Property					
Mounting Options	Wall-mounted / Rail-mounted				
W×D×H(mm)	500*550*130			500*550*175	
Net weight	19kg	24kg	29kg	34 kg	
Enclosure	Galvanized Steel, RAL7035 Coating, customized on request				
CT position	Grid sense (at main) or Load sense				
Environmental Requirements					
Altitude	≤1500m; between 1500m~4000m, according to GB/T3859.2, the power will be reduced by 1% for every 100m increase.				
Operating temperature	-40℃~+65℃				
Relative humidity	5%~95%, No condensation				
Protection level	IP20, Other IP levels can be customized				
Related qualifications and standards					
Standards compliance	IEEE519、IEC6100-3-6、ER G5/4、CE、EMC Compliance: EN 61000-6-4 Class A				

APF/ SVG 208V STANDARD ANTI-POLLUTION MODEL

- Resistant to high-pollution, high-dust harsh environments

■ Foolproof wiring design reduces field and service effort
- Built-in 4G/ Wifi module (optional)

■ Full-size design, strong heat dissipation, low noise



SPECIFICATIONS

Module Parameters					
Rated Voltage	208VAC				
Rated Current	APF 50A	APF 75A	APF 100A	APF 150A	APF 200A
Power Capacity	SVG 15Kvar	SVG 25Kvar	SVG 35Kvar	SVG 50Kvar	SVG 75Kvar
System Parameter					
Rated input voltage	208V (-20%~+15%)				
Grid frequency	50Hz (range: 47Hz-53Hz), 60Hz (range: 57Hz-63Hz)				
Number of parallel connections	≤16units				
Efficiency & Losses	Efficiency ≥97% (3ph), ≤15 W/A Loss				
Grid structure	Three-phase four-wire or three-phase three-wire				
Current transformer	50/5~30000/5				
Performance Indicators					
Harmonic Compensation Range	2nd~51st Order (Amplitude Adjustable)				
Harmonic Attenuation	THD<3% (Closed Loop)				
Quick response time	< 50μs				
Full response time	< 5ms				
Target PF	-1~+1				
Noise indicator	< 60dB				
Communications Monitoring					
Communication interface	RS485, Network Port				
Communication protocols	Modbus, TCP/IP, CAN				
Module display interface	4.3 inch touch screen LED indicator				
Mechanical Property					
Mounting Options	Wall-mounted / Rail-mounted				
W×D×H(mm)	500X550X130				
Net weight	19kg	24kg	29kg	34 kg	
Enclosure	Galvanized Steel, RAL7035 Coating, customized on request				
CT position	Grid sense (at main) or Load sense				
Environmental Requirements					
Altitude	≤1500m; between 1500m~4000m, according to GB/T3859.2, the power will be reduced by 1% for every 100m increase.				
Operating temperature	-40°C~+65°C				
Relative humidity	5%~95%, No condensation				
Protection level	IP20, Other IP levels can be customized				
Related qualifications and standards					
Standards compliance	IEEE519、IEC6100-3-6、ER G5/4、CE、EMC Compliance: EN 61000-6-4 Class A				

APF/SVG 480V STANDARD ANTI-POLLUTION MODEL

- Resistant to high-pollution, high-dust harsh environments

■ Full-size design, strong heat dissipation, low noise
- Built-in 4G/ Wifi module (optional)



SPECIFICATIONS

Module Parameters					
Rated Voltage	480VAC				
Rated Current	APF 50A	APF 75A	APF 100A	APF 150A	APF 200A
Power Capacity	SVG 40Kvar	SVG 60Kvar	SVG 80Kvar	SVG 120Kvar	SVG 180Kvar
System Parameter					
Rated input voltage	480V (−20%~+10%)				
Grid frequency	50Hz (range: 47Hz-53Hz), 60Hz (range: 57Hz-63Hz)				
Number of parallel connections	≤16units				
Efficiency & Losses	Efficiency ≥97% (3ph), ≤15 W/A Loss				
Grid structure	three-phase, three-wire (TCM)				
Current transformer	50/5~30000/5				
Performance Indicators					
Harmonic Compensation Range	2nd-51st Order (Amplitude Adjustable)				
Harmonic Attenuation	THD<3% (Closed Loop)				
Quick response time	< 50μs				
Full response time	< 5ms				
Target PF	-1~+1				
Noise indicator	< 60dB				
Communications Monitoring					
Communication interface	RS485, Network Port				
Communication protocols	Modbus, TCP/IP, CAN				
Module display interface	44.3 inch touch screen LED indicator				
Mechanical Property					
Mounting Options	Wall-mounted / Rail-mounted				
W×D×H(mm)	500X550X130				
Net weight	19kg	24kg	29kg	34 kg	
Enclosure	Galvanized Steel, RAL7035 Coating , customized on request				
CT position	Grid sense (at main) or Load sense				
Environmental Requirements					
Altitude	≤1500m; between 1500m~4000m, according to GB/T3859.2, the power will be reduced by 1% for every 100m increase.				
Operating temperature	-40℃~+65℃				
Relative humidity	5%~95%, No condensation				
Protection level	IP20, Other IP levels can be customized				
Related qualifications and standards					
Standards compliance	IEEE519、IEC6100-3-6、ER G5/4、CE、 EMC Compliance: EN 61000-6-4 Class A				

APF/SVG 800V/690V STANDARD MODEL

- Ultra-high efficiency, up to 98%.

■ Ultra-compact body, same height for all series 175mm
- Resistant to high-pollution, high-dust harsh environments

■ Foolproof wiring design reduces field and service effort



SPECIFICATIONS

Module Parameters		
Rated Voltage	800V	690V
Current / Power Capacity	APF 85A, SVG 120Kvar	APF 100A, SVG 120Kvar
System Parameter		
Rated input voltage	800V/690V (-20%~+10%)	
Grid frequency	50Hz (range: 47Hz-53Hz), 60Hz (range: 57Hz-63Hz)	
Number of parallel connections	≤16units	
Efficiency & Losses	Efficiency ≥97% (3ph), ≤15 W/A Loss	
Grid structure	three-phase, three-wire (TCM)	
Current transformer	150/5~10,000/5	
Performance Indicators		
Harmonic Compensation Range	2nd-51st Order (Amplitude Adjustable)	
Harmonic Attenuation	THD<3% (Closed Loop)	
Quick response time	< 50μs	
Full response time	< 5ms	
Target PF	-1~+1	
Noise indicator	< 60dB	
Communications Monitoring		
Communication interface	RS485, Network Port	
Communication protocols	Modbus, TCP/IP, CAN	
Module display interface	4.3 inch touch screen LED indicator	
Mechanical Property		
Mounting Options	Wall-mounted / Rail-mounted	
W×D×H(mm)	480X600X175	
Net weight	40kg	
Enclosure	Galvanized Steel, RAL7035 Coating, customized on request	
CT position	Grid sense (at main) or Load sense	
Environmental Requirements		
Altitude	≤1500m; between 1500m~4000m, according to GB/T3859.2, the power will be reduced by 1% for every 100m increase.	
Operating temperature	-40℃~+65℃	
Relative humidity	5%~95%, No condensation	
Protection level	IP20, Other IP levels can be customized	
Related qualifications and standards		
Standards compliance	IEEE519、IEC6100-3-6、ER G5/4、CE、EMC Compliance: EN 61000-6-4 Class A	

IP65 SiC Model - Fanless & Low Noise Type

- Natural convection cooling, low-noise operation

■ High efficiency, using silicon carbide power devices, with efficiency up to 99%
- IP65 protection, waterproof, suitable for harsh high-pollution and high-dust environments

■ Built-in 4G/WiFi module (optional)



SPECIFICATIONS

Module Parameters		
Rated Voltage	400 VAC (For 208 V or 480 V, please contact us)	
Rated Current	APF 30A	APF 50A
PoweCapactiy	SVG 20Kvar	SVG 35Kvar
System parameter		
Rated input voltage	400VAC (−20%~+15%)	
Grid Frequency	50 Hz (range: 47 Hz–53 Hz), 60 Hz (range: 57 Hz–63 Hz)	
Number of parallel units	≤16 units	
Efficiency	Up to 99%	
Grid Structure	Three-phase four-wire or three-phase three-wire	
Current transformer	50/5~10, 000/5	
Performance indicators		
Compensation range	2 to 50 times	
Harmonic Attenuation	>95% (rated load)	
Quick Response Time	<25 μ s	
Full Response Time	<5ms	
Objective PF	-1 to +1; capacitance and inductance are continuously adjustable	
Compensation Method	Harmonic suppression, reactive power compensation, and imbalance compensation – any combination of 11 modes	
Noise Indicator	<40dB	
Communication Monitoring		
Communication interface	RS485, WiFi, 4G, CAN	
Protocol	Modbus Protocol (RTU or TCP/IP)	
Module Display Interface	LED indicator, independent touchscreen, local WIFI operation interface	
Mechanical properties		
Way to install	Wall mounting type	
Width × Depth × Height (mm)	515×500x185	
Net weight	18kg	
Endosure	Industrial gray (RAL 7035), customizable upon request	
CT mode of connection	Support both the source side and load side	
Environmental Requirements		
Above sea level	≤1500m,between 1500 m and 3000 m, according to GB/T 3859.2, power decreases by 1% for every additional 100 m.	
Running temperature	−40℃~+55℃	
Relative humidity	5% to 95%, without condensation	
Protection Level	IP65	
Relevant Qualifications and S		
Follow Standards	IEC61000–3–6、IEC61000–6–4、ER G5/4, EN 62477–1	
Attestation	CE, CQC	

Testing basis:DL/T 1216-2019 "Technical Specifications for Low-Voltage Stationary Reactive Power Generation Devices"

POWER QUALITY MONITORING UNIT AND HMI



7" / 10" / 4.3" monitoring unit parameters

Display interface	Resistive color touch LCD • Measurements: parameters, waveforms, spectra • Event logging: up to 1000 pieces of data can be logged • Function setting: system setting, compensation function setting ... • Multi-language: Simplified Chinese, English, Polish ...	
(Electrical) contact	2 output dry contacts	2 input dry contacts
Number of controllable modules	7" / 10" screen: control up to 16 modules	4.3" screen: control up to 1 module
Communication method	Serial communication, ethernet communication, 4g/Wifi communication	
Communication protocols	Modbusrtu、 modbustcp/ip	
Shape and mounting dimensions	See instruction manual	

Capacitor bank controller (7" monitor built-in or stand-alone type) parameters

(Electrical) contact	32 dry contact, control up to 32 sets of capacitor banks
Communication method	Serial communication, ethernet communication, 4g/Wifi communication
Communication protocols	Modbusrtu、 modbustcp/ip
Shape and mounting dimensions	See instruction manual

APF/SVG SELECTION TABLE

Model naming rules

M A F 100 3 4 R C

M	A	F	100	3	4	R	C
□ M: Chitek Series	□ A: Anti-pollution type C: Silicon carbide type D: Distributed type L: Standardtype U: Ultra-slim type	□ F: APF, G: SVG, A: ASVG, C: SPC	□ Voltage Rating: 2: 208V, 3: 400V, 4: 480V, 6: 690V, 8: 800V	□ 3: three-phase three-wire system; 4: three-phase four-wire system	□ R: rail mounted; W: wall mounted; F: full cabinet; P: plug-in	□ C: no screen, L: LCD	

For Example

MAF10034RC, indicating Anti-pollution type APF100A, voltage class 400V, three-phase four-wire system, rail mounting, without screen

ABOUT ASVG - ENHANCED STATIC VARIABLE GENERATOR

All SVG products from Chitek can be upgraded to ASVG products

ASVG Product Features:

- Supports up to 13 order harmonic compensation (3, 5, 7, 9, 11, 13)
- User can set capacity split between PF correction and harmonic compensation