ANDELI

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ANDELI

POWER QUALITY MANAGEMENT SELECTION MANUAL

ANDELI GROUP CO.,LTD.

Brief Introduction

www.andeligroup.com

Andeli Group is a professional manufacturer with electrical as its core industry, integrating research and development, production, sales, and service. The company has been awarded multiple honors, including Top 10 Growth Enterprises in China's Electrical Industry, National Customer Satisfaction Enterprise, National High tech Enterprise, National Ministry of Industry and Information Technology Green Factory, National Specialized and Innovative Small Giant Enterprise, and National Ministry of Industry and Information Technology Green Supply Chain Management Enterprise.

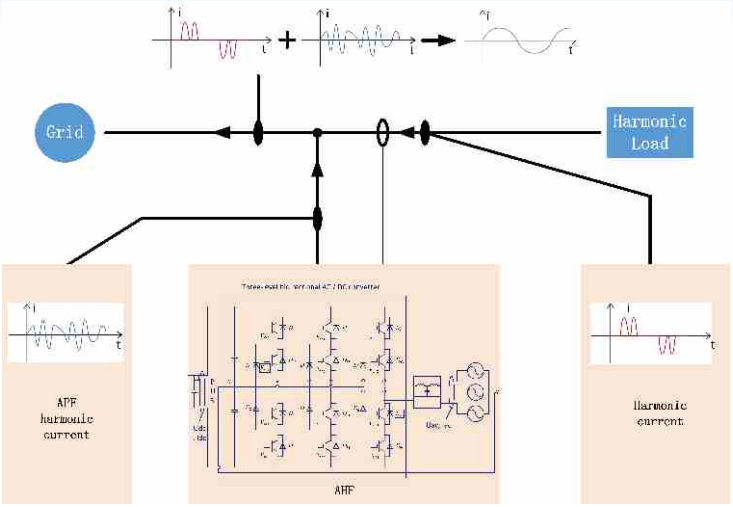
Andeli Group adheres to the mission of providing customers with satisfactory power products and solutions. We mainly research and develop complete sets of transmission and distribution equipment, power transformers, high and low voltage electrical components, instruments and meters, welding equipment, new energy and other series. The product is widely used in many fields such as State Grid, Southern Power Grid, Inner Mongolia Power Grid and rail transit, commercial housing, energy and chemical industry, metal smelting, and power management. Andeli actively implements a globalization strategy and has established branch offices in the United Arab Emirates, Russia, Brazil, Pakistan, Thailand, Saudi Arabia, and other places. Its products are exported to more than 100 countries and regions around the world.

Andeli people, who uphold the principles of honesty and diligence in their work, sincerely work hand in hand with elites from all walks of life to create a better future together.

Low Voltage Active Power Filter

1. Product overview

The working principle of an active harmonic filter is to detect the load current in real time. Based on a specified sub harmonic current detection algorithm, the harmonic current is gradually separated, and a control signal is generated according to the set filtering percentage to drive the IGBT to output a compensation current with the same amplitude and opposite phase as the load harmonic current, achieving the purpose of harmonic cancellation.



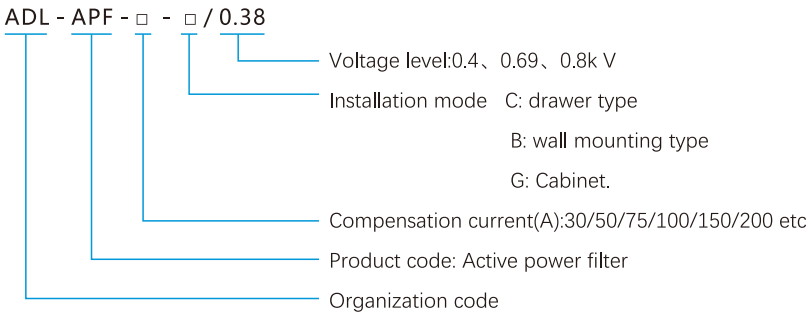
2. Features

- Theory: Adopting a DSP+CPLD full digital control core, three-level topology technology, advanced harmonic detection algorithm, and PWM control strategy to achieve precise compensation of harmonic current.
- Operating frequency: 50Hz.
- Power grid structure: three-phase three-wire, three-phase four-wire.
- External current sampling channel: Two current sampling channel.
- Operation Mode: Harmonic, Unbalance.
- Harmonic current compensation: 2-50 times, Comprehensive harmonic compensation rate>92%.
- Full response time: <40ms.
- Stability: Capacities for 100% current limiting output to ensure long-term stable operation of the equipment.

3. Application

- Residential power distribution system
- Drainage and sewage treatment industry
- Steel industry
- Metallurgical industry
- Distributed photovoltaic industry
- Mining and industrial enterprises
- Petrochemical industry
- Automobile manufacturing industry
- Data centers
- Hospitals
- Pharmaceutical manufacturing industry
- Light and textile industry
- Semiconductor manufacturing industry

4. Model Definition



Module Model				
Models	Compensation Capacity (kvar)	System Voltage(V)	Dimensions Width*Depth*Height (mm)	Cooling System
ADL APF-0.4-30A/4L-R	30	400	461*430*163	Forced air cooling
ADL APF-0.4-50A/4L-R	50	400	461*430*163	Forced air cooling
ADL APF-0.4-75A/4L-R	75	400	510*430*163	Forced air cooling
ADL APF-0.4-100A/4L-R	100	400	643*496*213	Forced air cooling
ADL APF-0.4-150A/4L-R	150	400	643*496*213	Forced air cooling
ADL APF-0.4-200 A/4L-R	200	400	573*500*280	Forced air cooling
ADL APF-0.69-100A/4L-R	100	690	737*495*275	Forced air cooling
ADL APF-0.8-100A/4L-R	100	800	737*495*275	Forced air cooling
ADL APF-0.4-200A/4L-C	200	400	1000*1000*2200	Forced air cooling
ADL APF-0.4-250A/4L-C	250	400	1000*1000*2200	Forced air cooling
ADL APF-0.4-300A/4L-C	300	400	1000*1000*2200	Forced air cooling
ADL APF-0.4-400A/4L-C	400	400	1000*1000*2200	Forced air cooling
ADL APF-0.4-500A/4L-C	500	400	1000*1000*2200	Forced air cooling
ADL APF-0.4-600A/4L-C	600	400	1000x1000x2200	Forced air cooling
ADL APF-0.69-200A/4L-C	200	690	1000*1000x2200	Forced air cooling
ADL APF-0.69-300A/4L-C	300	690	1000x1000x2200	Forced air cooling
ADL APF-0.69-400A/4L-C	400	690	1000*1000*2200	Forced air cooling
ADL APF-0.8-200A/4L-C	200	800	1000*1000*2200	Forced air cooling
ADL APF-0.8-300A/4L-C	300	800	1000*1000*2200	Forced air cooling
ADL APF-0.8-400A/4L-C	400	800	1000*1000*2200	Forced air cooling

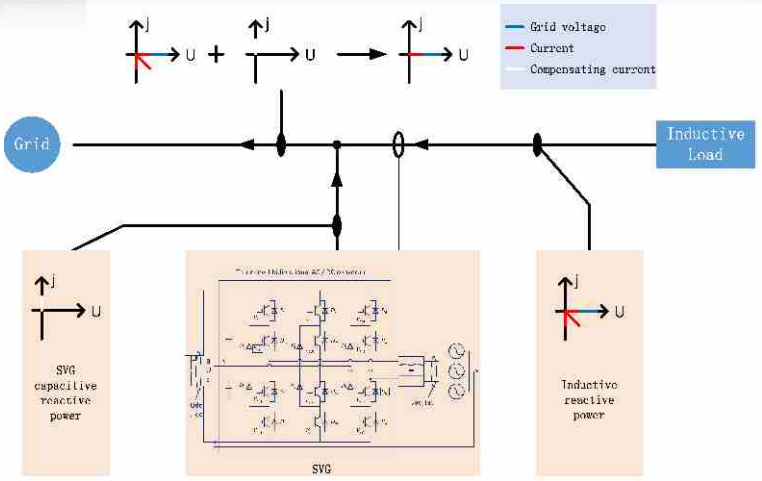
5. Technical Specification

	400V series	690V series	800V series
Altitude	< 2000m, Usage should be de-rated according to the international standard IEC 3859-2 for altitudes above 2000 meters.		
Ambient Temperature	-10~+50 ℃ (derated above 40 ℃)		
Relative Humidity	⩽ 90%, monthly minimum temperature 25 ℃, no condensation on the surface		
Pollution Level	Below Level III		
Operating Voltage	AC400V（-20%~+20%）	AC690V（-20%~+20%）	AC800V（-20%~+15%）
Operating Frequency	50Hz		
Rated Compensation Capacity	30A, 50A, 75A, 100A, 150A,200A	100A	
Power Grid Structure	Three-phase three-wire, Three-phase four-wire		
Numbers in Parallel	Unlimited		
System Efficiency	⩾97%		
Switching Frequency	16kHz	12.8kHz	
Function Selection	Harmonics, Harmonics+Unbalanced		
Compensation Scope	2~50 times, with adjustable compensation rate per time	2-25 times, with adjustable compensation rate per time	
Harmonic Compensation Rate	> 92%		
Full Response Time	<40ms		
Noise	⩽65dB		
Communication	Rs485 Communication Port		
Protection	Overload, software/hardware over current, power grid over voltage/under voltage, power failure, over-temperature, frequency abnormality, short circuit protection	Overload, software/hardware over current, power grid over voltage/under voltage, power grid voltage imbalance, power failure, over-temperature, frequency abnormality, short circuit protection	
Installation	Rack-Mounted, Wall-Mounted	Rack-Mounted	
Entry Line Method	Rear Inlet (rack-mounted), Top Inlet (wall-mounted)	Rear Line	
Protection Level	Ip20		

Low Voltage Static Var Generator Specification

1. Product overview

The Static Var Generator (SVG) is an advanced reactive power compensation device based on a power electronic converter. Its basic principle is to connect a voltage-source converter in parallel with the grid through an inductor, adjusting the phase and amplitude of the converter's AC-side output voltage to absorb or supply the required reactive current. This enables dynamic reactive power compensation and provides an optimal solution in the field of power quality management.



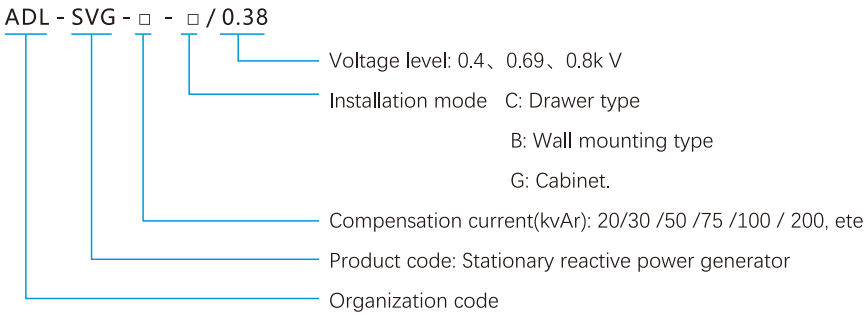
2. Features

- Theory: Use a DSP + CPLD fully digital control core, three-level topology technology, advanced reactive power detection algorithms, and PWM control strategies to achieve dynamic and precise reactive power compensation.
- Operating frequency: 50Hz.
- Power grid structure: three-phase three-wire, three-phase four-wire.
- External current sampling channel: Two current sampling channel.
- Operation Mode: Reactive power, Unbalance
- Compensation mode: Low voltage sampling low voltage compensation, High voltage sampling low voltage compensation, Reactive power component.
- Reactive power compensation: compensation rate>98%
- Full response time: <10ms
- Stability: Capacities for 100% current limiting output to ensure long-term stable operation of the equipment

3. Application

- Residential power distribution system
- Drainage and sewage treatment industry
- Distributed photovoltaic industry
- Mining and industrial enterprises
- Petrochemical industry
- Automobile manufacturing industry
- Data centers
- Hospitals
- Pharmaceutical manufacturing industry
- Semiconductor manufacturing industry

4. Model Definition

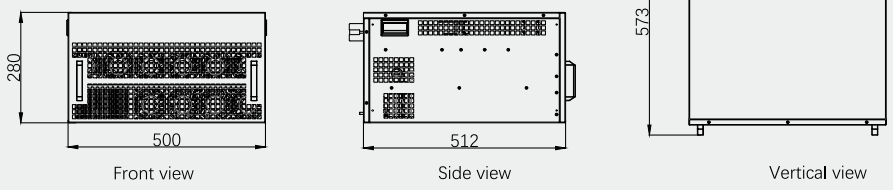


Module Model				
Models	Compensation Capacity (kvar)	System Voltage(V)	Dimensions Width*Depth*Height (mm)	Cooling System
ADL SVG-0.4-20k/4L-R	20	400	461*430*163	Forced air cooling
ADL SVG-0.4-30k/4L-R	30	400	461*430*163	Forced air cooling
ADL SVG-0.4-50k/4L-R	50	400	510*430*163	Forced air cooling
ADL SVG-0.4-75k/4L-R	75	400	643*496*213	Forced air cooling
ADL SVG-0.4-100K/4L-R	100	400	643*496*213	Forced air cooling
ADL SVG-0.4-150k/4L-R	150	400	573*500*280	Forced air cooling
ADL SVG-0.69-120k/4L-R	120	690	737*495*275	Forced air cooling
ADL SVG-0.80-140k/4L-R	140	800	737*495*275	Forced air cooling
ADL SVG-0.4-200k/4L-C	200	400	1000*1000*2200	Forced air cooling
ADL SVG-0.4-250k/4L-C	250	400	1000*1000*2200	Forced air cooling
ADL SVG-0.4-300k/4L-C	300	400	1000*1000*2200	Forced air cooling
ADL SVG-0.4-400k/4L-C	400	400	1000*1000*2200	Forced air cooling
ADL SVG-0.69-240k/4L-C	240	690	1000*1000*2200	Forced air cooling
ADL SVG-0.69-360k/4L-C	360	690	1000*1000*2200	Forced air cooling
ADL SVG-0.69-480k/4L-C	480	690	1000*1000*2200	Forced air cooling
ADL SVG-0.80-280k/4L-C	280	800	1000*1000*2200	Forced air cooling
ADL SVG-0.69-420k/4L-C	420	800	1000*1000*2200	Forced air cooling
ADL SVG-0.69-560k/4L-C	560	800	1000*1000*2200	Forced air cooling

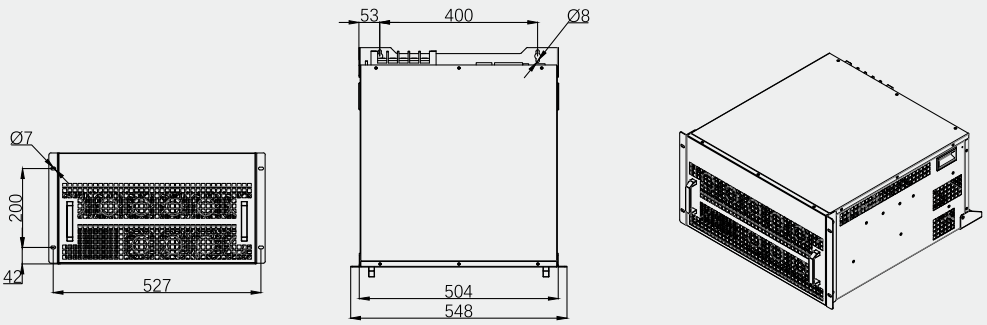
5. Technical Specification

	400V series	690V series	800V series
Altitude	< 2000m, Usage should be de-rated according to the international standard IEC 3859-2 for altitudes above 2000 meters.		
Ambient Temperature	-10~+50 ℃ (derated above 40 ℃)		
Relative Humidity	⩽ 90%, monthly minimum temperature 25 ℃, no condensation on the surface		
Pollution Level	Below Level III		
Operating Voltage	AC400V （-20%~+20%）	AC690V (-20%~+20%)	AC800V （-20%~+15%）
Operating Frequency	50Hz		
Rated Compensation Capacity	30kvar, 50kvar, 75kvar, 100kvar,150 kvar	120 kvar	140kvar
Power Grid Structure	Three-Phase Three-Wire, Three-Phase Four-Wire		
Numbers in Parallel	Unlimited		
System Efficiency	⩾97%		
Switching Frequency	16kHz	12.8kHz	
Function Selection	Reactive Power, Reactive Power + Unbalanced		
Full Response Time	<10ms		
Noise	⩽65dB		
Communication	Rs485 Communication Port		
Protection	Overload, Software/Hardware Overcurrent, Grid Over/Under Voltage, Voltage Imbalance, Power Supply Fault, Overtemperature, Frequency Abnormality, Short Circuit Protection		
Installation	Rack-Mounted, Wall-Mounted	Rack-Mounted	
Entry Line Method	Rear Inlet		
Protection Level	Ip20		

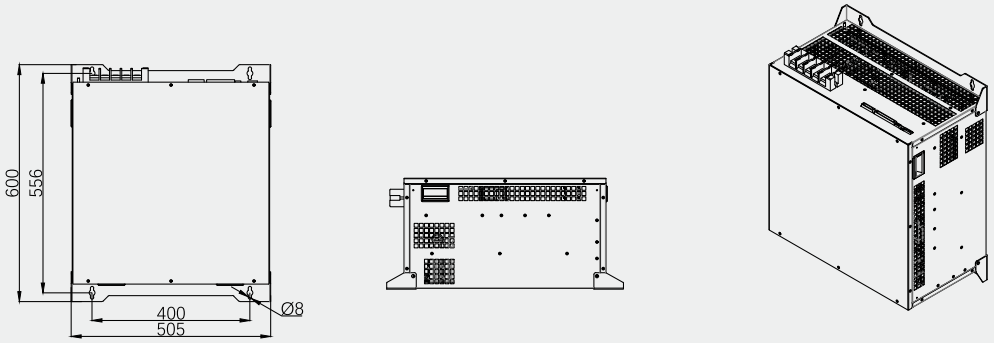
POWER QUALITY MANAGEMENT PRODUCT MODULE SIZE



APF-200A、SVG-150Kvar Module Size

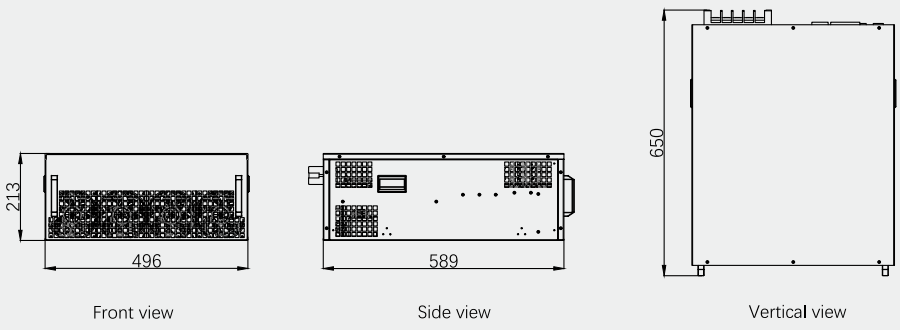


APF-200A、SVG-150Kvar Drawer style installation dimensions

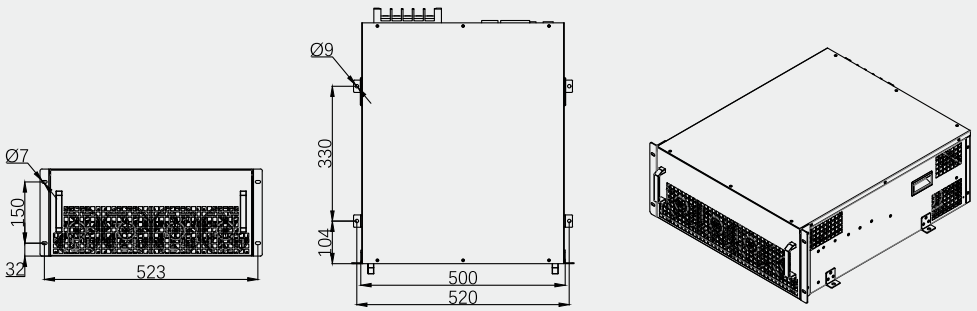


APF-200A、SVG-150Kvar Wall mounted installation size

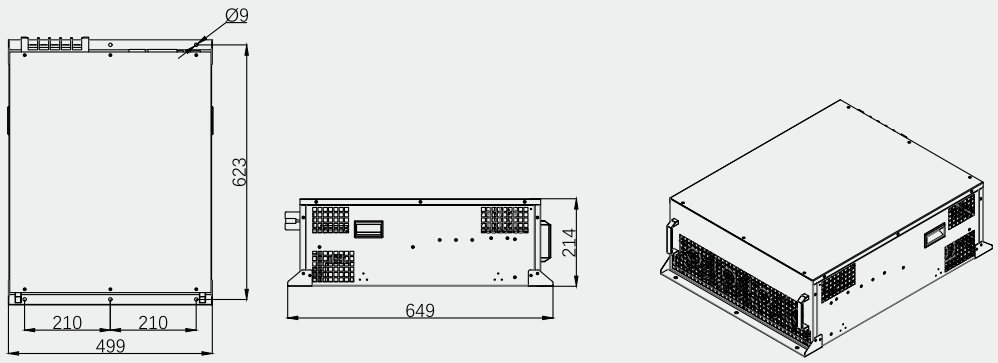
POWER QUALITY MANAGEMENT PRODUCT MODULE SIZE



APF-150A、SVG-100Kvar Module Size

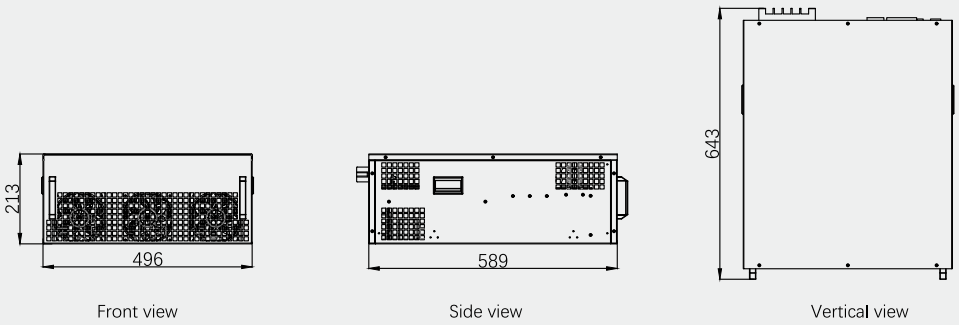


APF-150A、SVG-100Kvar Drawer style installation dimensions

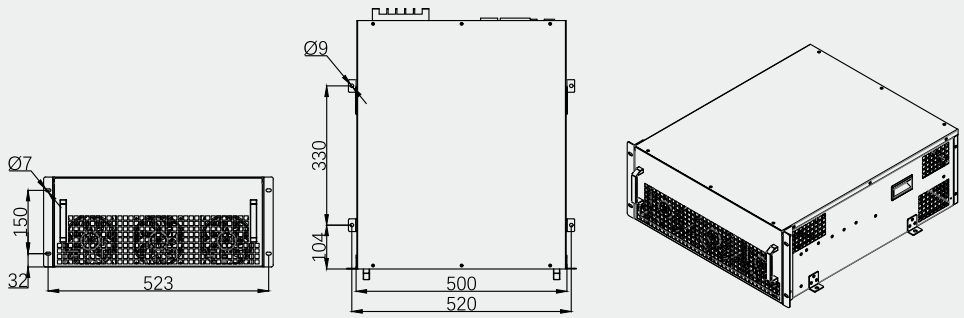


APF-150A、SVG-100Kvar Wall mounted installation size

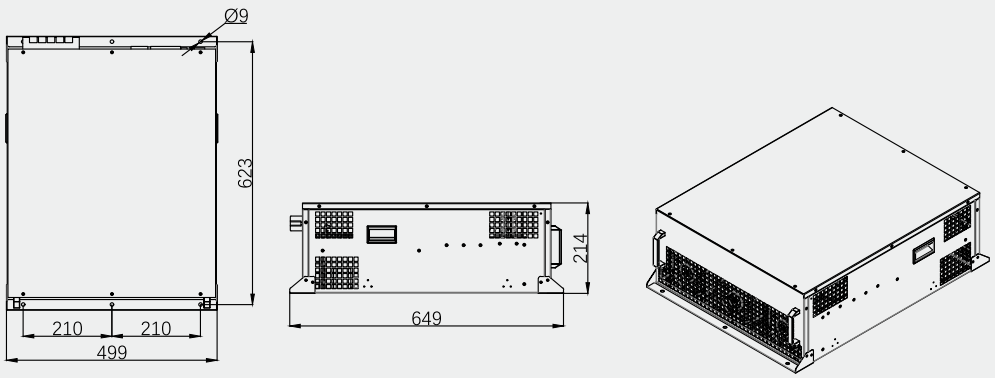
POWER QUALITY MANAGEMENT PRODUCT MODULE SIZE



APF-120A、APF-100A、SVG-80Kvar、SVG-75Kvar Module Size

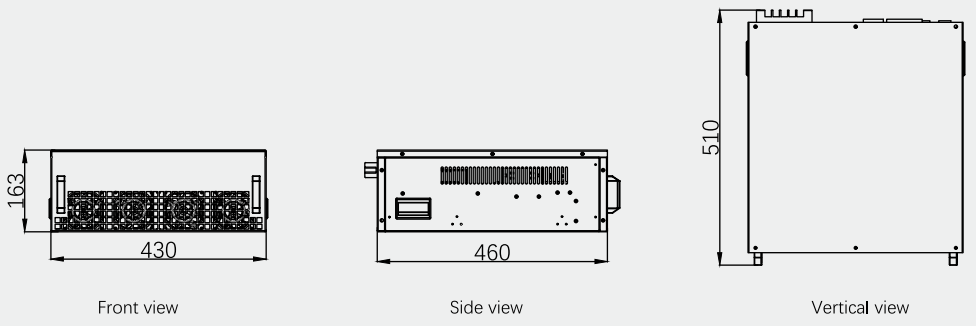


APF-120A、APF-100A、SVG-80Kvar、SVG-75Kvar Drawer style installation dimensions

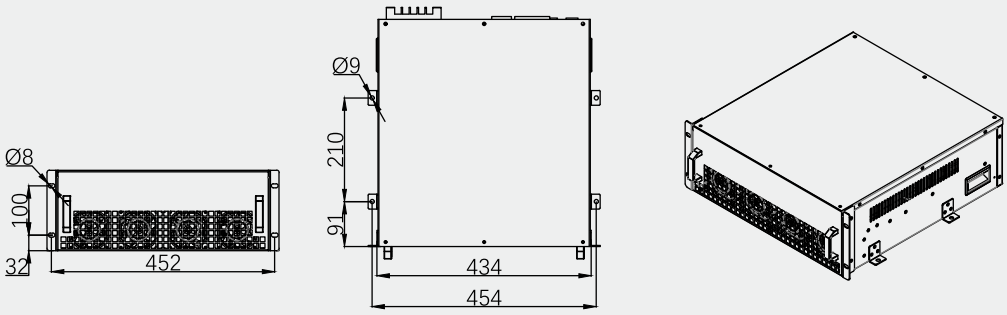


APF-120A、APF-100A、SVG-80Kvar、SVG-75Kvar Wall mounted installation size

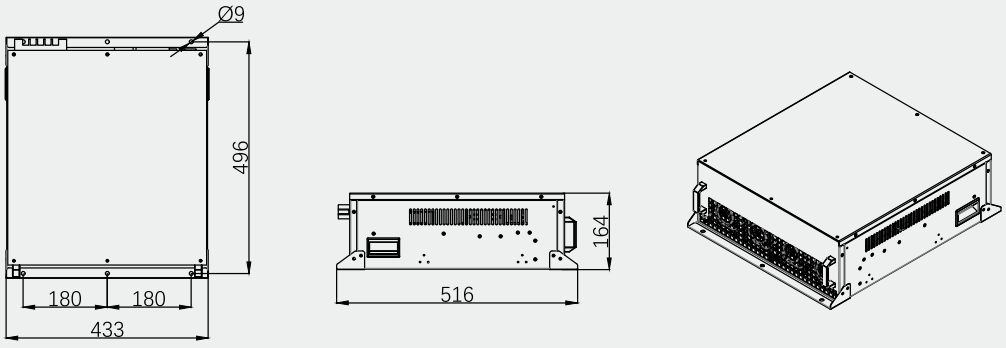
POWER QUALITY MANAGEMENT PRODUCT MODULE SIZE



APF-75A、SVG-50Kvar Module Size

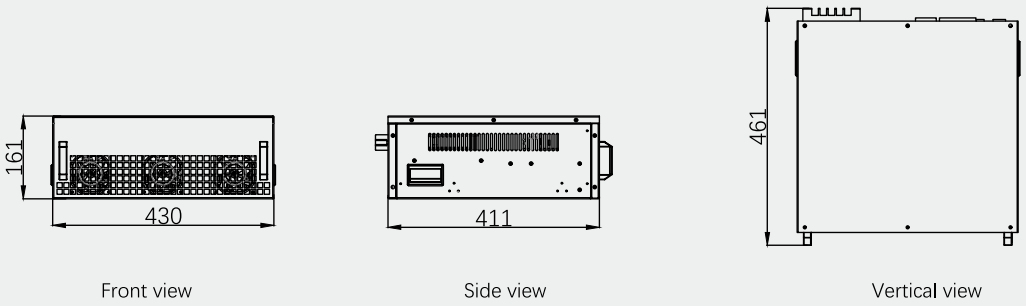


APF-75A、SVG-50Kvar Drawer style installation dimensions



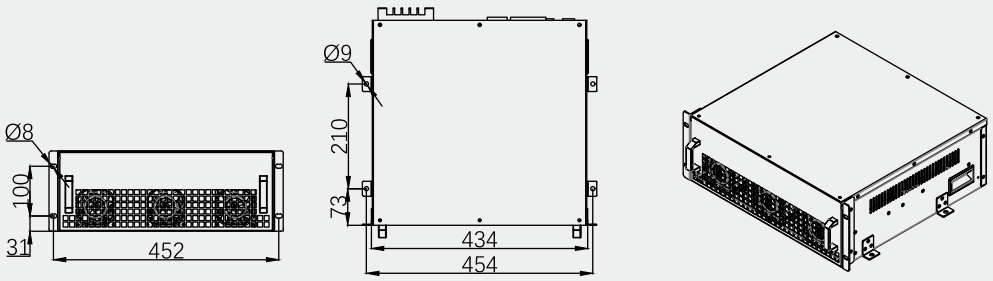
APF-75A、SVG-50Kvar Wall mounted installation size

POWER QUALITY MANAGEMENT PRODUCT MODULE SIZE

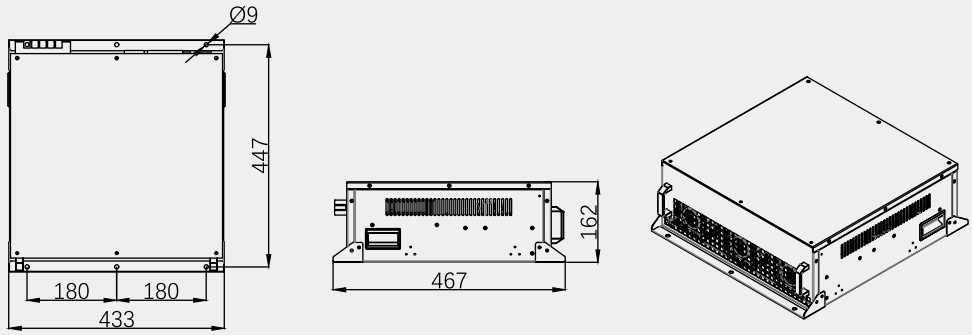


Front view　　Side view　　Vertical view

APF-50A、APF-30A、SVG-30Kvar、SVG-20Kvar Module Size

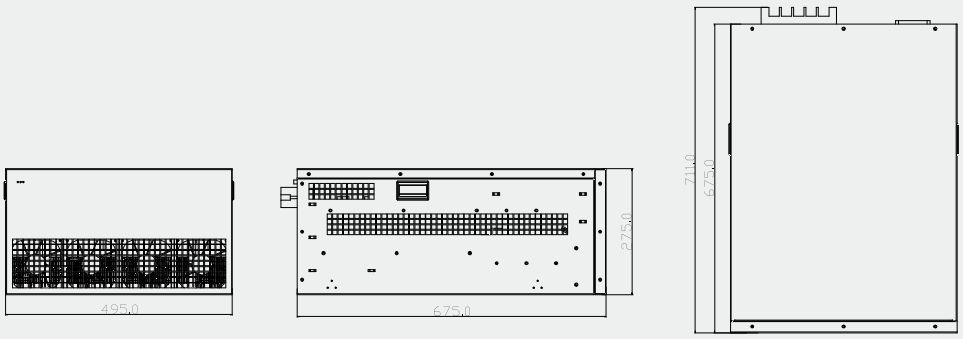


APF-50A、APF-30A、SVG-30Kvar、SVG-20Kvar Drawer style installation dimensions

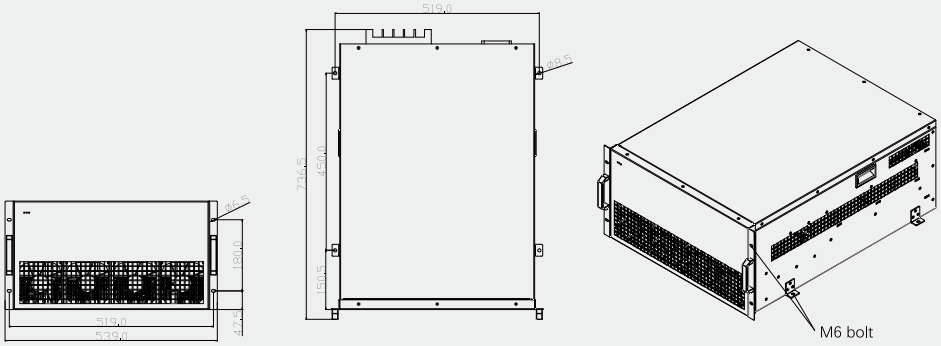


APF-50A、APF-30A、SVG-30Kvar、SVG-20Kvar Wall mounted installation size

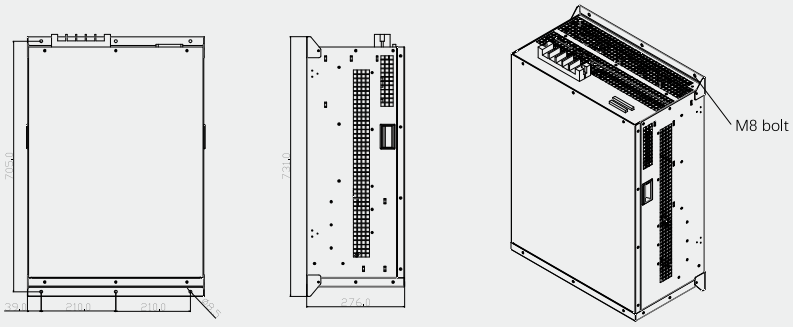
POWER QUALITY MANAGEMENT PRODUCT MODULE SIZE



690V-APF-100A Module Size
690V-SVG-120kvar Module Size

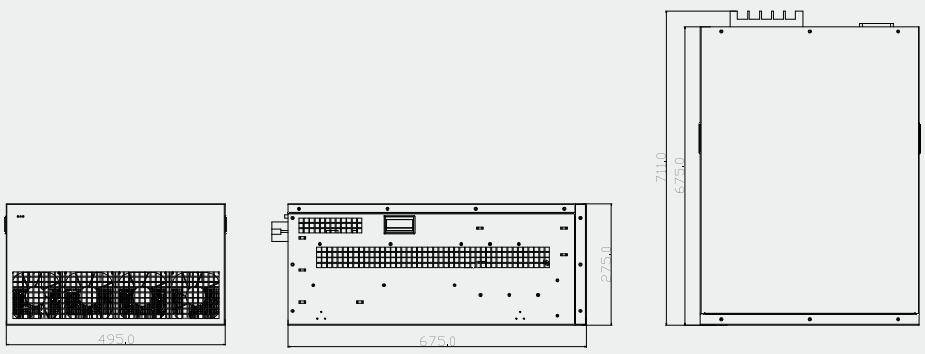


690V-APF-100A Drawer (rack) installation dimensions
690V-SVG-120kvar Drawer (rack) installation dimensions

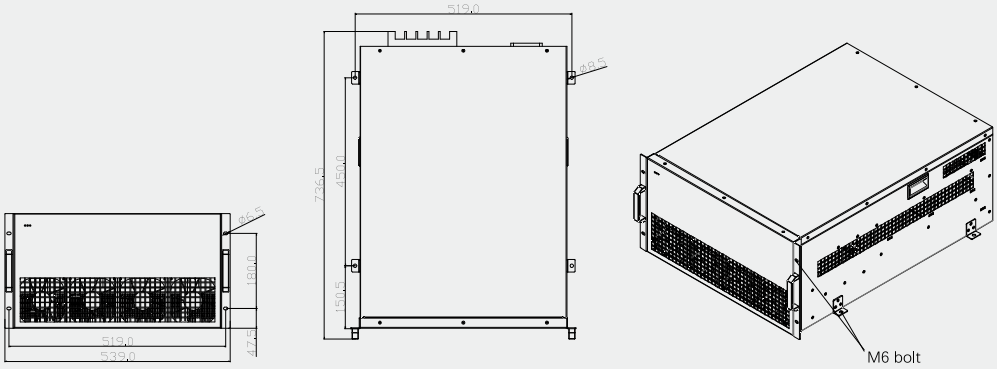


690V-APF-100A Wall mounted installation size
690V-SVG-120kvar Wall mounted installation size

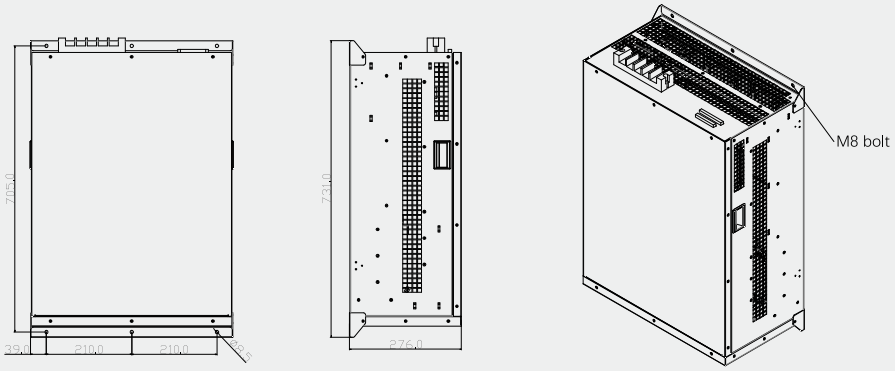
POWER QUALITY MANAGEMENT PRODUCT MODULE SIZE



800V-APF-100A Module Size
800V-SVG-140kvar Module Size



800V-APF-100A Drawer (rack) installation dimensions
800V-SVG-140kvar Drawer (rack) installation dimensions



800V-APF-100A Wall mounted installation size
800V-SVG-140kvar Wall mounted installation size

HYTBB Series Medium And High Voltage Reactive Power Compensation Device-cabinet Type



1. Application

HYTBB reactive power compensation capacitor cabinet is used in rated voltage 1kV~35kV power frequency power system as a parallel capacitor bank to compensate the inductive reactive power in the system to improve the power grid power rate factor, improve the quality of distribution voltage, reduce losses, and increase the supply capacity of power equipment to obtain safe, reliable and economical operation of the power distribution system, and adding reactors in parallel can suppress harmonics function to ensure the safe and reliable operation of the device itself and the connected power grid.

The device adopts a fully enclosed cabinet with high protection level. Each set of closed cabinets has live and current display components, which can be installed independently or combined with KYN28/KYN61 switch cabinets .

This device is a fixed compensation method, and manual and automatic group switching can also be used according to user requirements.

2. Technical Parameter

- Rated voltage: 10 (6) 35kV
- Rated frequency: 50Hz
- Rated capacity: 50-20000kvar
- Neutral point wiring: non-effective grounding or neutral point insulation

HYTBBJ Series Low Voltage Static Reactive Power Compensation Device

Product Description

The low-voltage reactive pow er compensat ion cabinet is a device used to compensate the reactive power required by inductive loads .The device plays an important role in improving the power factor of the system, improving the power quality, prolonging the service life of the power equipment, reducing the transmission loss of the power grid, and suppressing the voltage fluctuation. It improves the power factor of the system, reduces the reactive current in the line, and fully responds to the national call for environmental protection and energy conservation; at the same time, it helps users solve the worries of electricity fines.

This product belongs to safety compensation and is suitable for classic loads: annealing furnace, intermediate frequency furnace, high frequency furnace, AC and DC transmission, food processing, ceramic processing, electroplating, electrolysis, subway station, residential area, papermaking, textile, rubber and other industries

HYTBB Series Low Voltage Outdoor Box Reactive Power Compensation

Product Description

HYTBB low-voltage reactive power comprehensive compensation device is suitable for distribution transformers, low-voltage lines, or other outdoor low-voltage power distribution systems to realize automatic reactive power tracking compensation.

The device integrates reactive power compensation optimization and power monitoring, and adopts a combination of fixed compensation and dynamic compensation. It can track the running state of the power grid in real time, with smooth compensation performance and optimal compensation effect. The system can effectively compensate the line reactive power, ensure stable power factor, reduce line loss, improve the utilization rate of transformers and transmission lines, and improve the quality of power supply at the load end .

This device has been widely used in distribution networks such as machinery manufacturing, metallurgy, mining, chemical industry, building materials, oil fields, ports, etc. as well as low-voltage distribution networks such as living quarters, commerce, and schools. The device is especially suitable for working conditions with large reactive power content of inductive loads, large load changes and frequent load fluctuations.

HYS Series Intelligent Energy Saver

Product Description

This product is suitable for inductive load electrical equipment, such as generators, motors, fans, punches,air conditioners, water pumps, refrigerators, cold storage, mining equipment, mechanical equipment, etc .

Applicable places: factories, hotels, shopping malls,mining, residential, residential, fish farms, etc . Install in strict accordance with the scope of use of the product (or be guided by a professional manufacturer approved by the manufacturer)

100 type: 10-30kw 200 type: 30-80kw 300 type: 80-120kw

It is not recommended to install heating wires, frequency converters, and lighting equipment.

2. Technical Parameter

- Ambient temperature: -40℃-+55 ℃
- Ambient humidity: 20%-90% at 40℃
- Incoming line mode: three-phase three-wire (bottom incoming line)
- Rated frequency: 50HZ
- Rated voltage: 380V
- Control mode: automatic

HYTBB Series 35kV High Voltage Reactive Power Compensation Device-outdoor Frame Type

Application

This device is mainly used in 35kV three-phase power system to adjust the balanced network voltage, improve power factor, reduce loss and improve power supply quality.

Technical Parameter

- System rated voltage: 35kV
- Rated frequency: 50~ 60hz
- Rated capacity: 600~20000kvar(35kV)

35kV High Voltage Reactive Power Compensation Device

HYTBB Series 6~10kV High Voltage Reactive Power Compensation Device-outdoor Frame Type

Application

This device is mainly used in 6kV 10kVthree-phase power system to adjust the balanced network voltage, improve power factor, reduce loss and improve power supply quality.

Technical Parameter

- System rated voltage: 6 ~ 10kV
- Rated frequency: 50~60hz
- Rated capacity: 150 ~ 10000kvar (10kV and below)

10kV High Voltage Filter Compensation Device

HYTBB Series Medium And High Voltage Reactive Power Compensation Device-outdoor Box Type

Application

It is used for automatic reactive power compensation of 6kV and 10kV busbars of 220kV and belowdistribution network substations and on-load voltage regulation of substations. To realize the comprehensive control of substation voltage and voltage.

Technical Parameter

- System rated voltage: 6~10kV
- Rated frequency: 50~60Hz
- Number of capacitor groups: equal capacity or unequal capacity switching below 5 groups
- Rated capacity: 100-10000kvar
- Maximum capacity of a single group: 2000kvar
- Control voltage: AC220V or DC220V
- Sampling current:*/5A
- Sampling voltage: 100V
- Compensation capacity can be arbitrarily configured according to user requirements.
- The selection of compensation capacity should reduce the number of circuits as much as possible and adopt the method of constant volume switching as much as possible.
- When on-load voltage regulation is required, the controller can add the switching function according to the principle of voltage priority.
- When the reactor is only used to limit the inrush current, the reactance rate is 0.1%~1.0%; when it is used to suppress the 5th, 7th and above
- harmonics, the reactance rate is 5%~6%; it is used to suppress the 3rd and above harmonics When the reactance rate is 12~13% .
- The switching switch can be selected as a special switching switch for capacitors; jcz8 type high-voltage AC vacuum contactor can also be used .
- When there is no capacitor cabinet feeder switch in the user's power supply system, the incoming switch cabinet can be added .
- When there is a capacitor cabinet feeder switch in the user's power supply system, an isolation switch can be added according to the user's requirements to form an obvious breakpoint for easy maintenance .