EleQtra Energy

Active Harmonic Filter / Static Var Generator / Active Voltage Conditioner

EleQtra Energy Brings Light to the World!

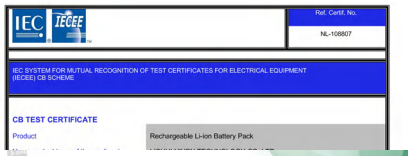
ELEQTRA ENERGY (PTY) LTD

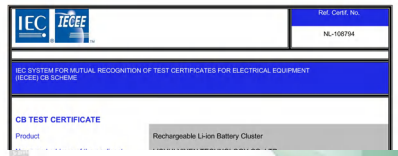
ELEQTRA ENERGY (PTY) LTD is a comprehensive energy solutions provider. Provide comprehensive energy storage system solutions for all applications. Provide professional power energy solutions for education systems, telecommunications, power systems, transportation, government agencies, banking security, scientific research, medical institutions, military, and large industrial and mining enterprises. Eleqtra Energy originated in China and is now rooted on the African continent. We collaborate with ambitious young people in Africa to promote world leading solar energy storage technology to the continent. Green energy will illuminate Africa, create partnerships, and create value!

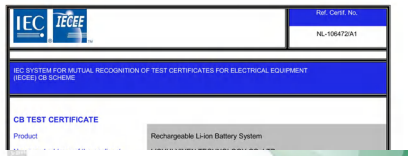
Numbers Speak For Themselves!

120+	Long-Term Partner
100+	Countries and regions
200+	Product Category
15Y	Time in the industry

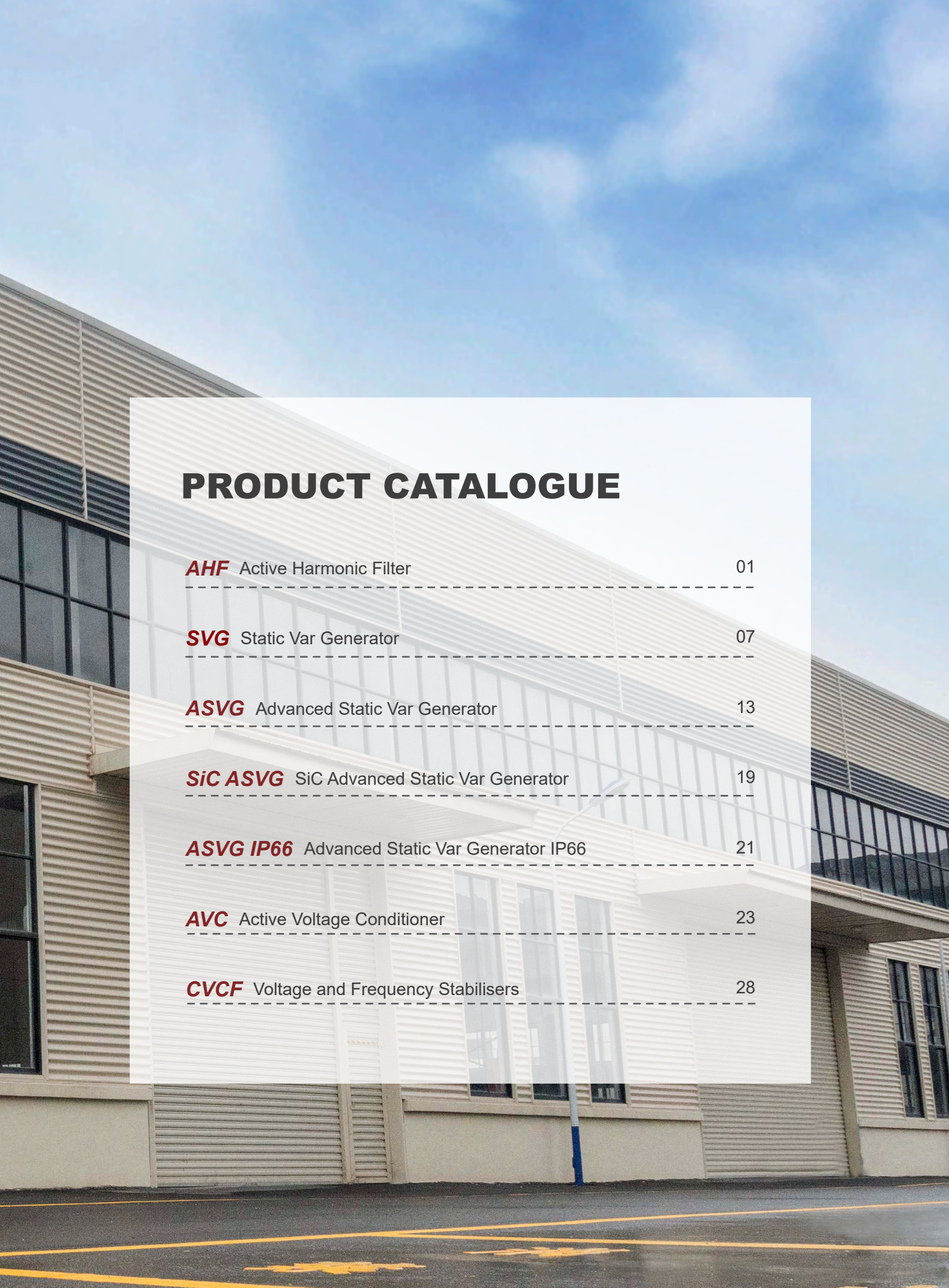
Qualification Certification







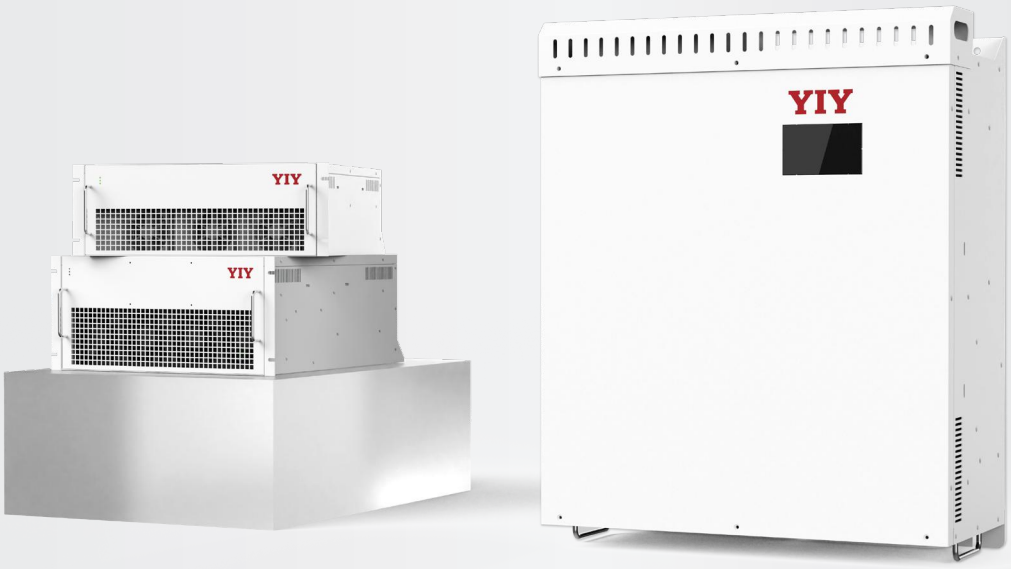

YIY



PRODUCT CATALOGUE

AHF

Active Harmonic Filters



Active Harmonic Filter (AHF) An active harmonic filter is a type of electronic device that is used to mitigate or eliminate harmonic distortions in electrical power systems. Harmonic distortion refers to the presence of unwanted frequencies in the power system that can lead to issues such as increased heating of equipment, reduced system efficiency, and even equipment failure.

AHF operates by sensing the harmonic currents in the system and generating a counter-current of the same magnitude and opposite phase. This counter-current cancels out the harmonic current and prevents it from being fed back into the power system. Active harmonic filters are designed to be fast and accurate in their response to changing harmonic conditions in the power system.

Active harmonic filters are commonly used in industrial and commercial settings where there are high levels of non-linear loads, such as variable frequency drives, uninterruptible power supplies, and computer equipment. They are also used in power quality improvement applications in residential and commercial buildings.

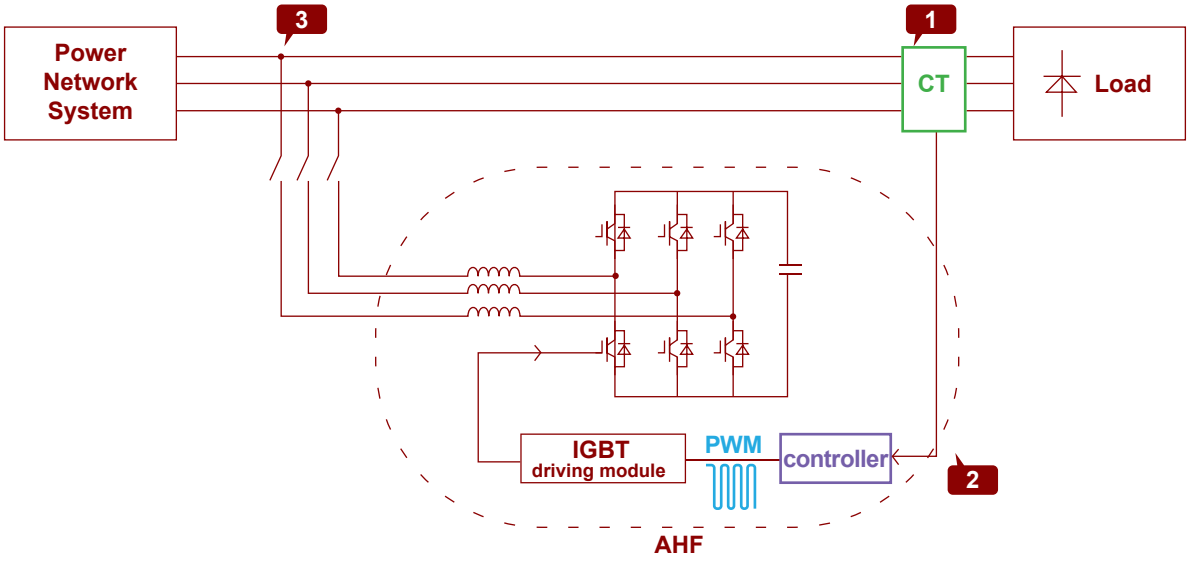
• Product Features

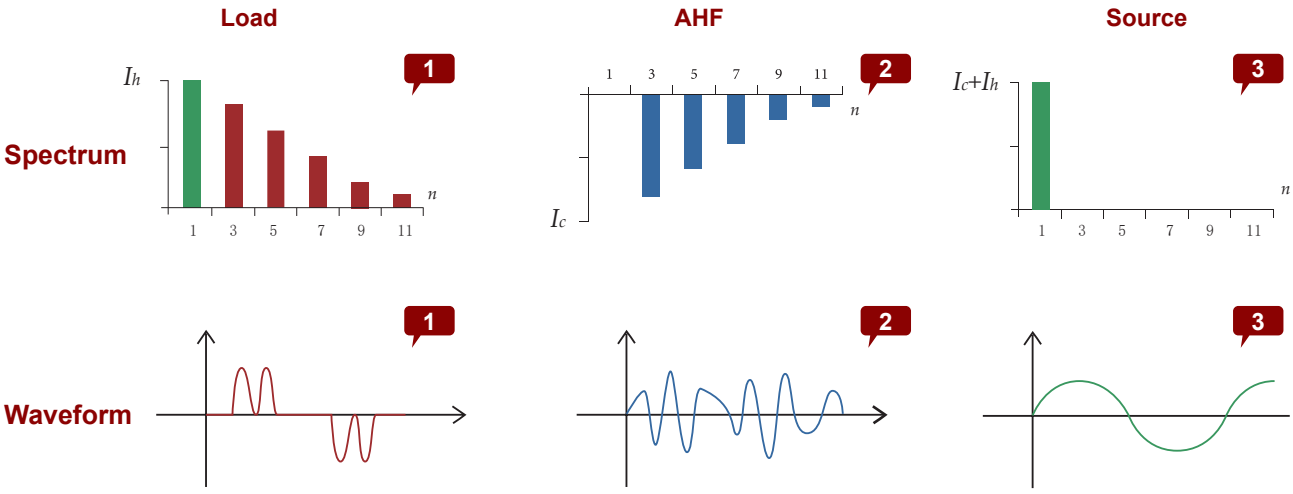
- 2nd to 50th harmonic mitigation
- Real-time compensation
- Modular design
- Protect equipment from being over heated or failure
- Improve working efficiency of equipment

• Working Principle

With the load current detected by external CT, DSP as CPU has advanced logic control arithmetic, could quickly track the instruction current, divide the load current into active power and reactive power by using the intelligent FFT, and calculate the harmonic content rapidly and accurately. Then it sends PWM signal to internal IGBT's driver board to control IGBT on and off at 20KHZ frequency. Finally, it generates opposite phase compensation current on inverter induction. In the meanwhile, CT also detects the output current and negative feedback goes to DSP. Then DSP proceeds the next logical control to achieve more accurate and stable system.

Working Principle





• Technical Specifications

TYPE	220V Series	400V/220V Series	500V Series	690V Series	800V Series
Rated Compensation Current	23A	15/25/50/ 75/100/150A	100A	100A	100A
Nominal Voltage	AC220V (-20%~+20%)	AC400V (-20%~+15%) / 220V(-20%~+20%)	AC500V (-20%~+20%)	AC690V (-20%~+15%)	AC800V (-20%~850VAC)
Rated Frequency	50/60Hz(45Hz~63Hz)				
Network	Single phase	3 phase 3 wire/3 phase 4 wire			3 Phase 3 Wire
Response Time	<10ms				
Harmonics Filtering	2nd to 50th Harmonics,The number of compensation can be selected, and the range of single compensation can be adjusted				
Harmonic Compensation Rate	≥95%				
Neutral Line Filtering Capability	/	The filtering capacity of 3 phase 4 wire neutral line is 1.5 times of that of phase filtering(3 times customized)			/
Machine Efficiency	≥97%				
Switching Frequency	32kHz	16kHz	12.8kHz		
Function	Harmonics filter	Harmonics filter / Three phase balance			Harmonics filter
Numbers In Parallel	No limitation. A single centralized monitoring module can be equipped with up to 8 power modules				
Communication Methods	Two-channel RS485 communication interface (support GPRS/WIFI wireless communication)				
Altitude Without Derating	<2000m				
Operating Temperature	-20~+50°C (derating above 40°C)				
Humidity	<90% RH,the average monthly minimum temperature is 25°C without condensation on the surface				
Pollution Level	Below level Ⅲ				
Protection Function	Overload protection, hardware/software over-current protection, over-voltage protection, power failure protection, over-temperature protection, frequency anomaly protection, short circuit protection, etc				
Noise	≤60dB	≤65dB			
Installation	Rack/Wall-mounted				
Wiring	Back entry (rack-mounted type), top entry (wall-mounted type)				
Protection Grade	IP20				

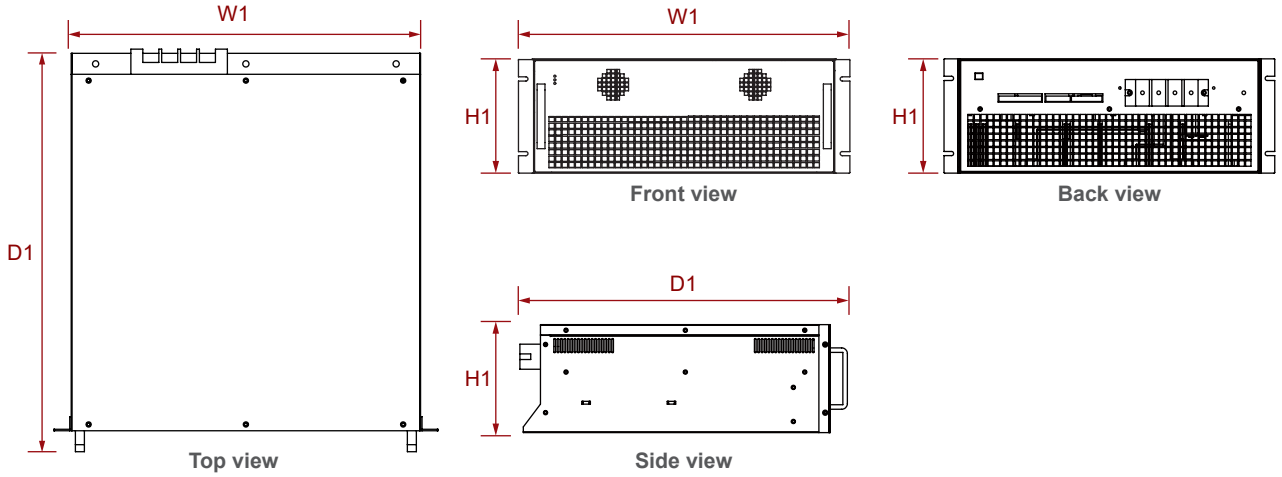
• Type Code

YIY AHF - 75 - 0.4 - 4L -W

- W: Wall-mounted
  R : Rack-mounted
  C : FCL device
- 2L: Single Phase
  3L: 3P3W
  4L: 3P4W
- 0.22 : 220V
  0.4 : 400V
  0.5 : 500V
  0.69 : 690V
  0.8 : 800V
- Nominal Capacity:15/25/50/75/100/150A
- Active Harmonic Filters
- Yiyen Brand Name

• Product Dimensions

Rack-Mount



• Models

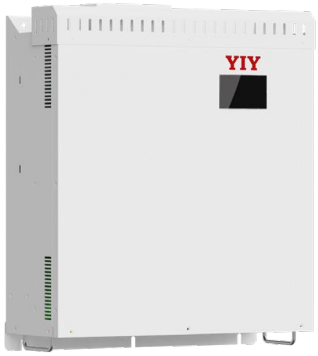
Model	Capacity	System Voltage	Size(W1*D1*H1)	Cooling Mode
YIY AHF-23-0.22-2L-R	23A	220V	220*375*167mm	Forced air cooling
YIY AHF-15-0.4-4L-R	15A	400V	500*535*89mm	Forced air cooling
YIY AHF-25-0.4-4L-R	25A	400V	500*535*89mm	Forced air cooling
YIY AHF-50-0.4-4L-R	50A	400V	500*535*89mm	Forced air cooling
YIY AHF-75-0.4-4L-R	75A	400V	550*584*190mm	Forced air cooling
YIY AHF-100-0.4-4L-R	100A	400V	550*624*240mm	Forced air cooling
YIY AHF-150-0.4-4L-R	150A	400V	550*624*240mm	Forced air cooling
YIY AHF-100-0.5-4L-R	100A	500V	550*722*275mm	Forced air cooling
YIY AHF-100-0.69-4L-R	100A	690V	550*752.5*275mm	Forced air cooling
YIY AHF-100-0.8-3L-R	100A	800V	550*752.5*275mm	Forced air cooling

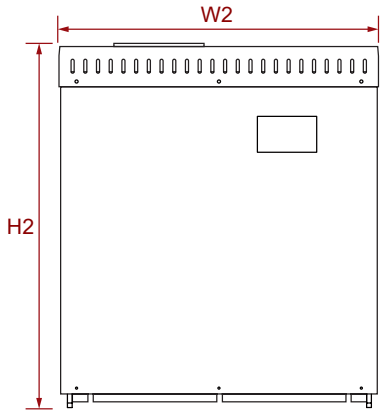
Model	Capacity	System Voltage	Size(W1*D1*H1)	Cooling Mode
YIY AHF-15-0.22-4L-R	15A	220V	500*535*89mm	Forced air cooling
YIY AHF-25-0.22-4L-R	25A	220V	500*535*89mm	Forced air cooling
YIY AHF-50-0.22-4L-R	50A	220V	500*535*89mm	Forced air cooling
YIY AHF-75-0.22-4L-R	75A	220V	550*584*190mm	Forced air cooling
YIY AHF-100-0.22-4L-R	100A	220V	550*624*240mm	Forced air cooling
YIY AHF-150-0.22-4L-R	150A	220V	550*624*240mm	Forced air cooling

*If you need any other sizes, please contact us for customization.

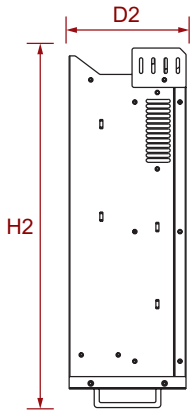
• Product Dimensions

Wall-Mounted

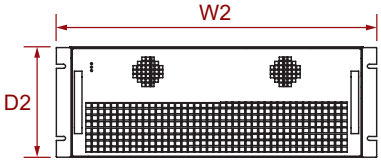




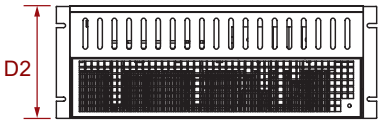
Top view



Side view



Front view



Back view

• Models

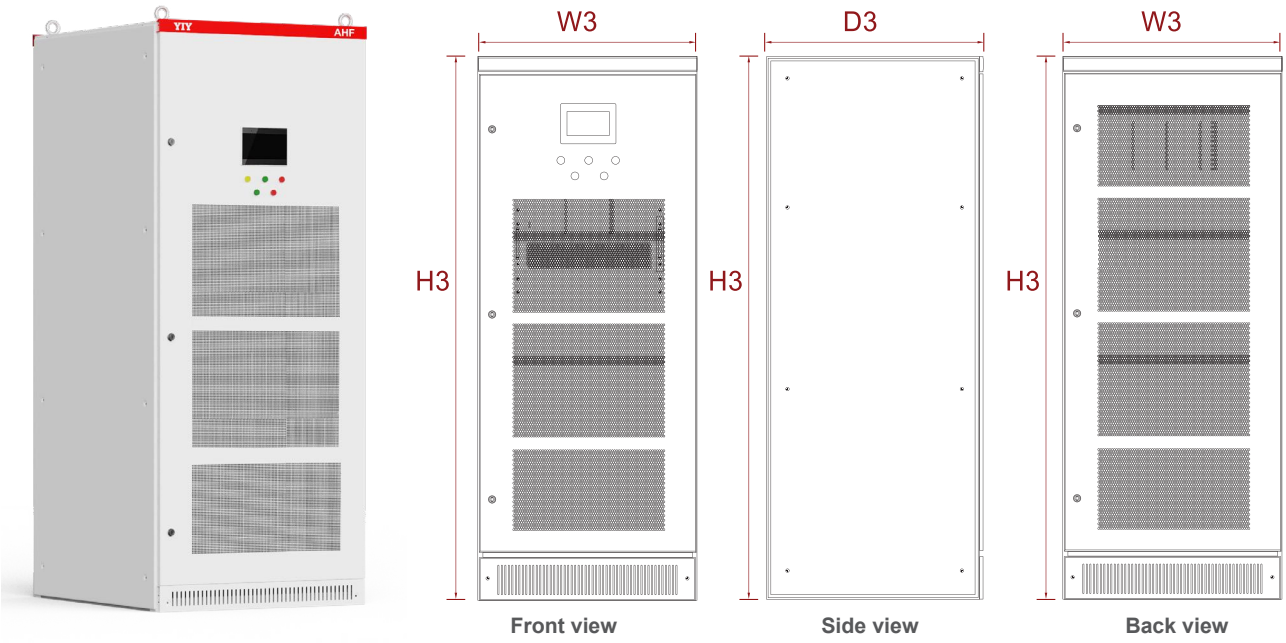
Model	Capacity	System Voltage	Size(W2*D2*H2)	Cooling Mode
YIY AHF-23-0.22-2L-W	23A	220V	220*167*375mm	Forced air cooling
YIY AHF-15-0.4-4L-W	15A	400V	500*89*535mm	Forced air cooling
YIY AHF-25-0.4-4L-W	25A	400V	500*89*535mm	Forced air cooling
YIY AHF-50-0.4-4L-W	50A	400V	500*89*535mm	Forced air cooling
YIY AHF-75-0.4-4L-W	75A	400V	550*190*584mm	Forced air cooling
YIY AHF-100-0.4-4L-W	100A	400V	550*240*624mm	Forced air cooling
YIY AHF-150-0.4-4L-W	150A	400V	550*240*624mm	Forced air cooling
YIY AHF-100-0.5-4L-W	100A	500V	550*275*722mm	Forced air cooling
YIY AHF-100-0.69-4L-W	100A	690V	550*275*752.5mm	Forced air cooling
YIY AHF-100-0.8-3L-W	100A	800V	550*275*752.5mm	Forced air cooling

Model	Capacity	System Voltage	Size(W2*D2*H2)	Cooling Mode
YIY AHF-15-0.22-4L-W	15A	220V	500*89*535mm	Forced air cooling
YIY AHF-25-0.22-4L-W	25A	220V	500*89*535mm	Forced air cooling
YIY AHF-50-0.22-4L-W	50A	220V	500*89*535mm	Forced air cooling
YIY AHF-75-0.22-4L-W	75A	220V	550*190*584mm	Forced air cooling
YIY AHF-100-0.22-4L-W	100A	220V	550*240*624mm	Forced air cooling
YIY AHF-150-0.22-4L-W	150A	220V	550*240*624mm	Forced air cooling

*If you need any other sizes, please contact us for customization.

• Product Dimensions

FCL



• Models

Model	Capacity	System Voltage	Size(W3*D3*H3)	Cooling Mode
YIY AHF-100-0.4-4L-C	100A	400V	800*1000*2200mm 800*1000*1600mm optional	Forced air cooling
YIY AHF-150-0.4-4L-C	150A	400V	800*1000*2200mm 800*1000*1600mm optional	Forced air cooling
YIY AHF-200-0.4-4L-C	200A	400V	800*1000*2200mm 800*1000*1600mm optional	Forced air cooling
YIY AHF-250-0.4-4L-C	250A	400V	800*1000*2200mm 800*1000*1600mm optional	Forced air cooling
YIY AHF-300-0.4-4L-C	300A	400V	800*1000*2200mm 800*1000*1600mm optional	Forced air cooling
YIY AHF-400-0.4-4L-C	400A	400V	800*1000*2200mm 800*1000*1600mm optional	Forced air cooling
YIY AHF-300-0.5-4L-C	300A	500V	800*1000*2200mm	Forced air cooling
YIY AHF-300-0.69-4L-C	300A	690V	800*1000*2200mm	Forced air cooling
YIY AHF-300-0.8-3L-C	300A	800V	800*1000*2200mm	Forced air cooling

*Cabinet 1 can accommodate 5 modules. Cabinet 2 can accommodate 3 modules.

*If you need any other sizes, please contact us for customization.

SVG

Static Var Generator

Static Var Generator(SVG) Static Var Generators (SVGs) are devices used in electrical power systems to control voltage, power factor and stabilize the system. They are a type of Static Synchronous Compensator (STATCOM) that use a voltage source converter to inject reactive power into the grid. SVGs are able to provide fast-acting reactive power compensation, which improve power quality and help to prevent voltage instability. SVGs are commonly used in industrial plants, wind farms and other applications where reactive power compensation is required. It is a reliable and efficient solution for maintaining the stability and quality of electrical power systems.

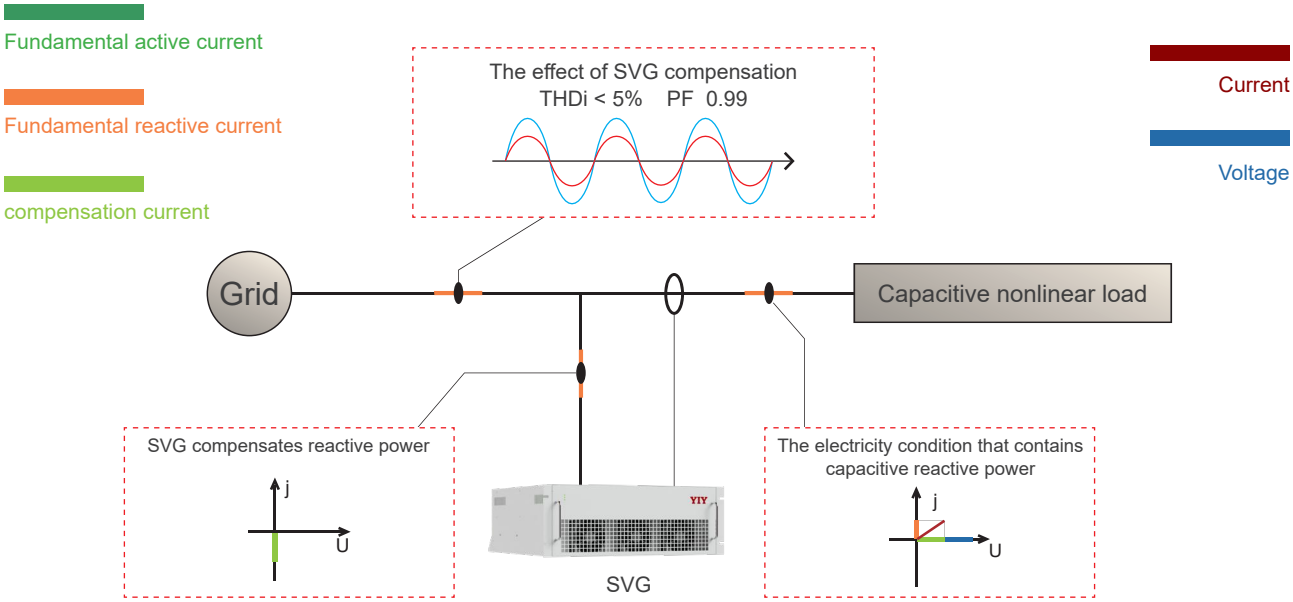
• Product Features

- No over compensation, no under compensation, no resonance
- Reactive power compensation effect
- PF0.99 level reactive power compensation
- Three-phase unbalance compensation
- Capacitive inductive load-1~1
- Real-time compensation
- Dynamic response time less than 50us
- Modular design

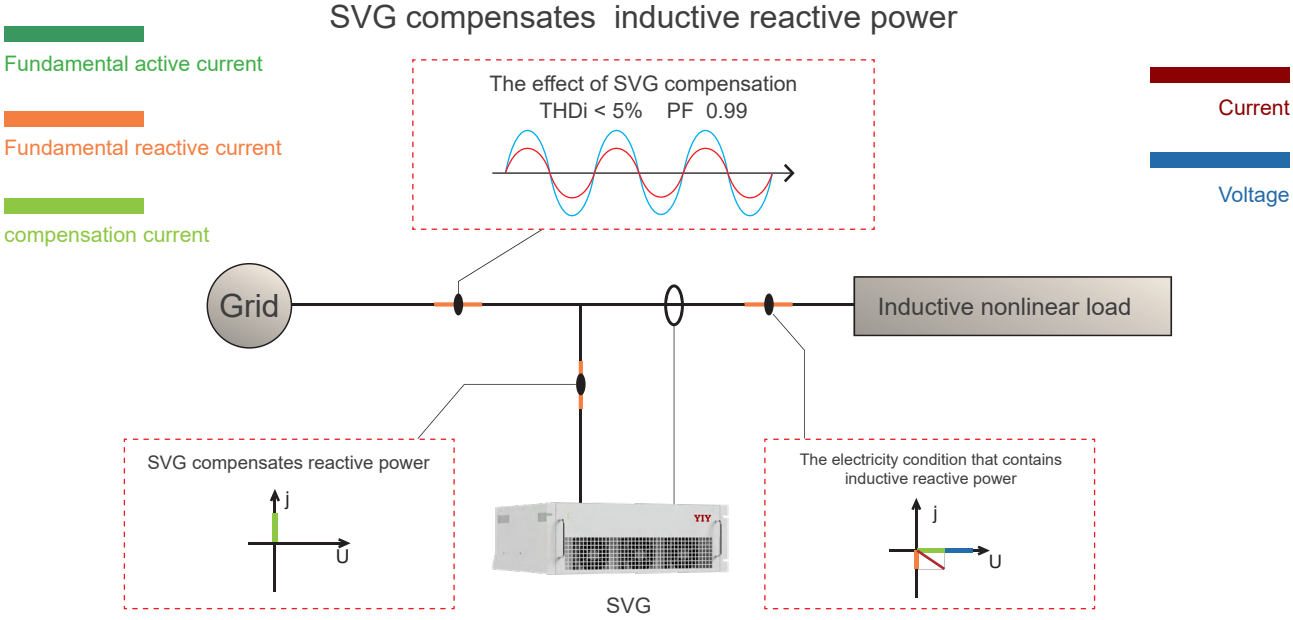
• Working Principle

The principle of the SVG is very similar to that of Active harmonic Filter, When the load is generating inductive or capacitive current, it makes load current lagging or leading the voltage. SVG detects the phase angle difference and generates leading or lagging current into the grid, making the phase angle of current almost the same as that of voltage on the transformer side, which means fundamental power factor is unit. YIY-SVG is also capable of correcting load imbalance.

SVG compensates capacitive reactive power



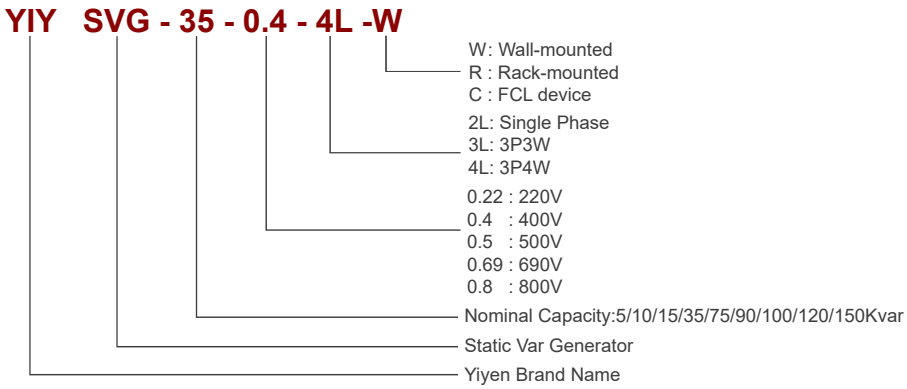
SVG compensates inductive reactive power



• Technical Specifications

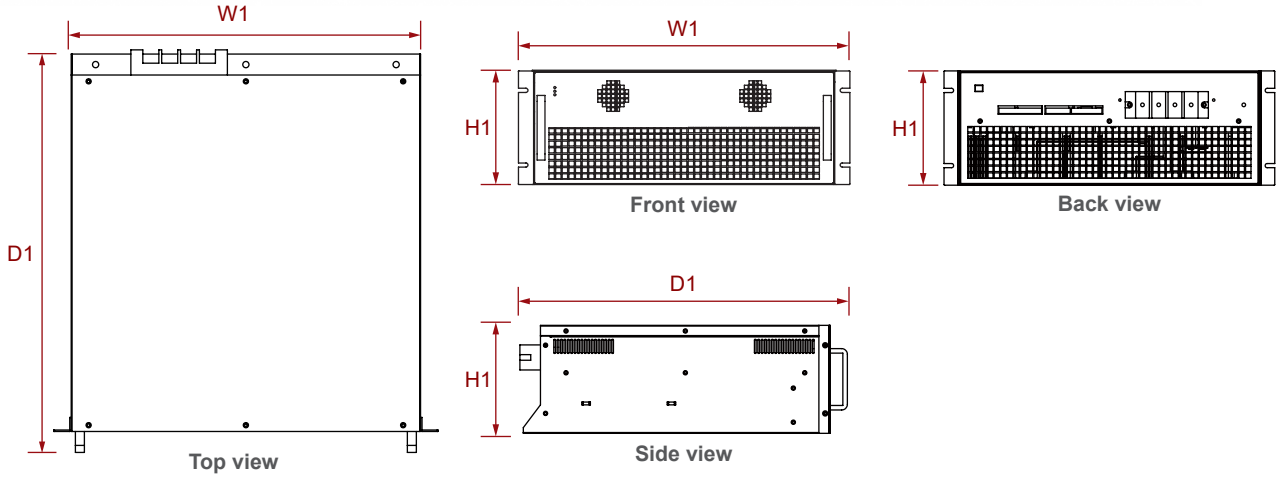
TYPE	220V Series	220V Series	400V Series	500V Series	690V Series	800V Series
Rated Compensation Capacity	5Kvar	5/7/10/17/25/37/50Kvar	10/15/20/35/50/75/100Kvar	90Kvar	100/120Kvar	150Kvar
Nominal Voltage	AC220V (-20%~+20%)	AC220V (-20%~+20%)	AC400V (-20%~+15%)	AC500V (-20%~+20%)	AC690V (-20%~+15%)	AC800V (-20%~850VAC)
Rated Frequency	50/60Hz(45Hz~63Hz)					
Network	Single phase	3 phase 3 wire/3 phase 4 wire				3 Phase 3 Wire
Response Time	<10ms					
Reactive Power Compensation Rate	≥98%					
Machine Efficiency	≥97%					
Switching Frequency	32kHz	16kHz		12.8kHz		
Function	Reactive power compensation	Reactive power compensation / Three phase balance				Reactive power compensation
Numbers In Parallel	No limitation. A single centralized monitoring module can be equipped with up to 8 power modules.					
Communication Methods	Two-channel RS485 communication interface (support GPRS/WIFI wireless communication)					
Altitude Without Derating	<2000m					
Operating Temperature	-20~+50°C (derating above 40°C)					
Humidity	<90% RH, The average monthly minimum temperature is 25°C without condensation on the surface					
Pollution Level	Below level Ⅲ					
Protection Function	Overload protection, hardware/software over-current protection,over-voltage protection,power grid voltage protection, power failure protection,over-temperature protection,frequency anomaly protection, short circuit protection, etc					
Noise	≤60dB	≤65dB				
Installation	Rack/Wall-mounted					
Wiring	Back entry (rack-mounted type), top entry (wall-mounted type)					
Protection Grade	IP20					

• Type Code



• Product Dimensions

Rack-Mount



• Models

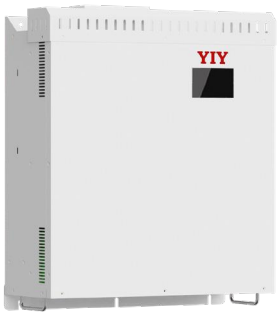
Model	Capacity	System Voltage	Size(W1*D1*H1)	Cooling Mode
YIY SVG-5-0.22-2L-R	5Kvar	220V	220*375*167mm	Forced air cooling
YIY SVG-10-0.4-4L-R	10Kvar	400V	500*535*89mm	Forced air cooling
YIY SVG-15-0.4-4L-R	15Kvar	400V	500*535*89mm	Forced air cooling
YIY SVG-20-0.4-4L-R	20Kvar	400V	500*535*89mm	Forced air cooling
YIY SVG-35-0.4-4L-R	35Kvar	400V	500*535*89mm	Forced air cooling
YIY SVG-50-0.4-4L-R	50Kvar	400V	550*584*190mm	Forced air cooling
YIY SVG-75-0.4-4L-R	75Kvar	400V	550*624*240mm	Forced air cooling
YIY SVG-100-0.4-4L-R	100Kvar	400V	550*624*240mm	Forced air cooling
YIY SVG-90-0.5-4L-R	90Kvar	500V	550*722*275mm	Forced air cooling
YIY SVG-100-0.69-4L-R	100Kvar	690V	550*752.5*275mm	Forced air cooling
YIY SVG-120-0.69-4L-R	120Kvar	690V	550*752.5*275mm	Forced air cooling
YIY SVG-150-0.8-3L-R	150Kvar	800V	550*752.5*275mm	Forced air cooling

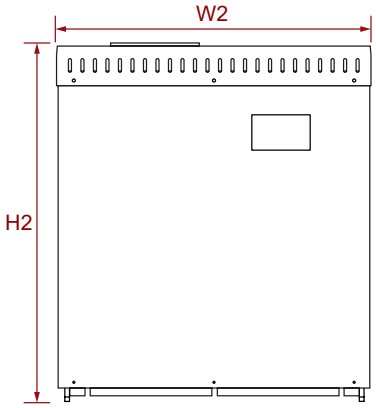
Model	Capacity	System Voltage	Size(W1*D1*H1)	Cooling Mode
YIY SVG-5-0.22-4L-R	5Kvar	220V	500*535*89mm	Forced air cooling
YIY SVG-7-0.22-4L-R	7Kvar	220V	500*535*89mm	Forced air cooling
YIY SVG-10-0.22-4L-R	10Kvar	220V	500*535*89mm	Forced air cooling
YIY SVG-17-0.22-4L-R	17Kvar	220V	500*535*89mm	Forced air cooling
YIY SVG-25-0.22-4L-R	25Kvar	220V	550*584*190mm	Forced air cooling
YIY SVG-37-0.22-4L-R	37Kvar	220V	550*624*240mm	Forced air cooling
YIY SVG-50-0.22-4L-R	50Kvar	220V	550*624*240mm	Forced air cooling

*If you need any other sizes, please contact us for customization.

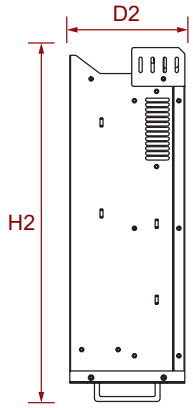
• Product Dimensions

Wall-Mounted

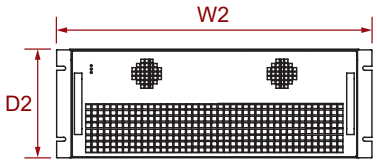




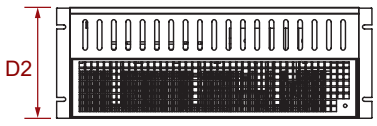
Top view



Side view



Front view



Back view

• Models

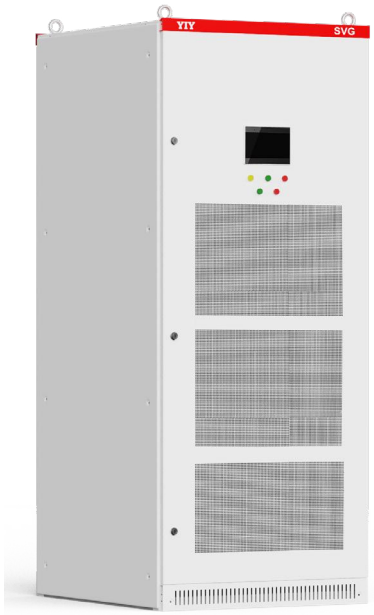
Model	Capacity	System Voltage	Size(W2*D2*H2)	Cooling Mode
YIY SVG-5-0.22-2L-W	5Kvar	220V	220*167*375mm	Forced air cooling
YIY SVG-10-0.4-4L-W	10Kvar	400V	500*89*535mm	Forced air cooling
YIY SVG-15-0.4-4L-W	15Kvar	400V	500*89*535mm	Forced air cooling
YIY SVG-20-0.4-4L-W	20Kvar	400V	500*89*535mm	Forced air cooling
YIY SVG-35-0.4-4L-W	35Kvar	400V	500*89*535mm	Forced air cooling
YIY SVG-50-0.4-4L-W	50Kvar	400V	550*190*584mm	Forced air cooling
YIY SVG-75-0.4-4L-W	75Kvar	400V	550*240*624mm	Forced air cooling
YIY SVG-100-0.4-4L-W	100Kvar	400V	550*240*624mm	Forced air cooling
YIY SVG-90-0.5-4L-W	90Kvar	500V	550*275*722mm	Forced air cooling
YIY SVG-100-0.69-4L-W	100Kvar	690V	550*275*752.5mm	Forced air cooling
YIY SVG-120-0.69-4L-W	120Kvar	690V	550*275*752.5mm	Forced air cooling
YIY SVG-150-0.8-3L-W	150Kvar	800V	550*275*752.5mm	Forced air cooling

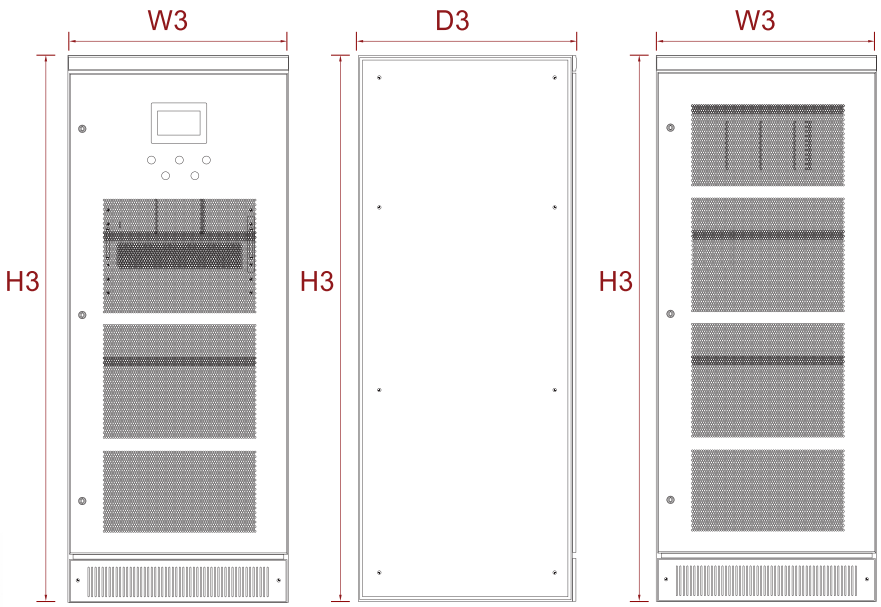
Model	Capacity	System Voltage	Size(W1*D1*H1)	Cooling Mode
YIY SVG-5-0.22-4L-W	5Kvar	220V	500*535*89mm	Forced air cooling
YIY SVG-7-0.22-4L-W	7Kvar	220V	500*535*89mm	Forced air cooling
YIY SVG-10-0.22-4L-W	10Kvar	220V	500*535*89mm	Forced air cooling
YIY SVG-17-0.22-4L-W	17Kvar	220V	500*535*89mm	Forced air cooling
YIY SVG-25-0.22-4L-W	25Kvar	220V	550*584*190mm	Forced air cooling
YIY SVG-37-0.22-4L-W	37Kvar	220V	550*624*240mm	Forced air cooling
YIY SVG-50-0.22-4L-W	50Kvar	220V	550*624*240mm	Forced air cooling

*If you need any other sizes, please contact us for customization.

• Product Dimensions

FCL





Front view　　Side view　　Back view

• Models

Model	Capacity	System Voltage (V)	Size(W3*D3*H3)	Cooling Mode
YIY SVG-50-0.4-4L-C	50Kvar	400V	800*1000*2200mm 800*1000*1600mm optional	Forced air cooling
YIY SVG-100-0.4-4L-C	100Kvar	400V	800*1000*2200mm 800*1000*1600mm optional	Forced air cooling
YIY SVG-200-0.4-4L-C	200Kvar	400V	800*1000*2200mm 800*1000*1600mm optional	Forced air cooling
YIY SVG-250-0.4-4L-C	250Kvar	400V	800*1000*2200mm 800*1000*1600mm optional	Forced air cooling
YIY SVG-300-0.4-4L-C	300Kvar	400V	800*1000*2200mm 800*1000*1600mm optional	Forced air cooling
YIY SVG-400-0.4-4L-C	400Kvar	400V	800*1000*2200mm 800*1000*1600mm optional	Forced air cooling
YIY SVG-270-0.5-4L-C	270Kvar	500V	800*1000*2200mm	Forced air cooling
YIY SVG-360-0.69-4L-C	360Kvar	690V	800*1000*2200mm	Forced air cooling
YIY SVG-450-0.8-3L-C	450Kvar	800V	800*1000*2200mm	Forced air cooling

*Cabinet 1 can accommodate 5 modules. Cabinet 2 can accommodate 3 modules.

*If you need any other sizes, please contact us for customization.

ASVG

Advanced Static Var Generator

Reactive Power Compensation, Harmonic Control, Three Phase Balance

Advanced Static Var Generator (ASVG) is a new type of dynamic reactive power compensation product, combining power factor correction harmonic mitigation and three phase balance in one unit. It provides the same dynamic performance for compensating reactive power as the SVG with the added benefit of combining harmonic mitigation and controlling three phase unbalance. Advanced static var generators (ASVGs) are high-performance, compact, flexible, modular, and cost-effective to provide immediate and efficient responses to power quality problems in high and low voltage power systems.

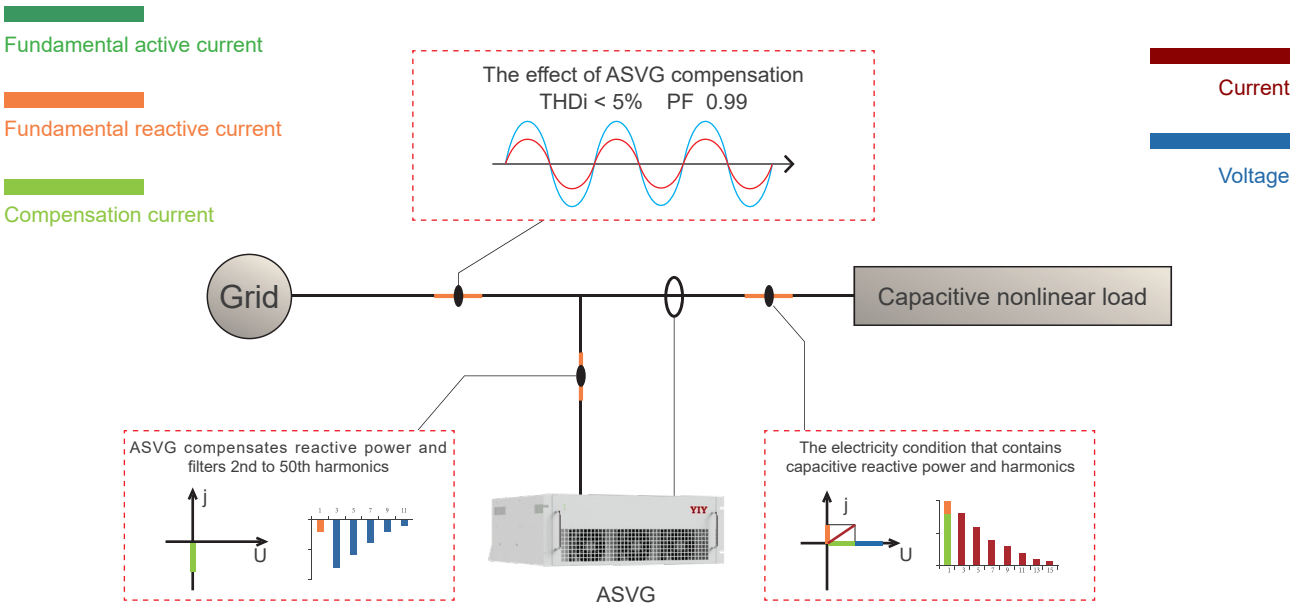
• Product Features

- Reactive power compensation: Cos Ø = 1.00
- Capacitive and Inductive compensation: -1 to +1
- All the features and benefits of the SVG.
- Mitigation of 2nd to 50th harmonic mitigation.
- Unit capacity can be selected in any proportion between power factor correction and harmonics correction.
- Capacitive inductive load-1~1.
- Current unbalance correction can correct for load unbalance across all three phases.

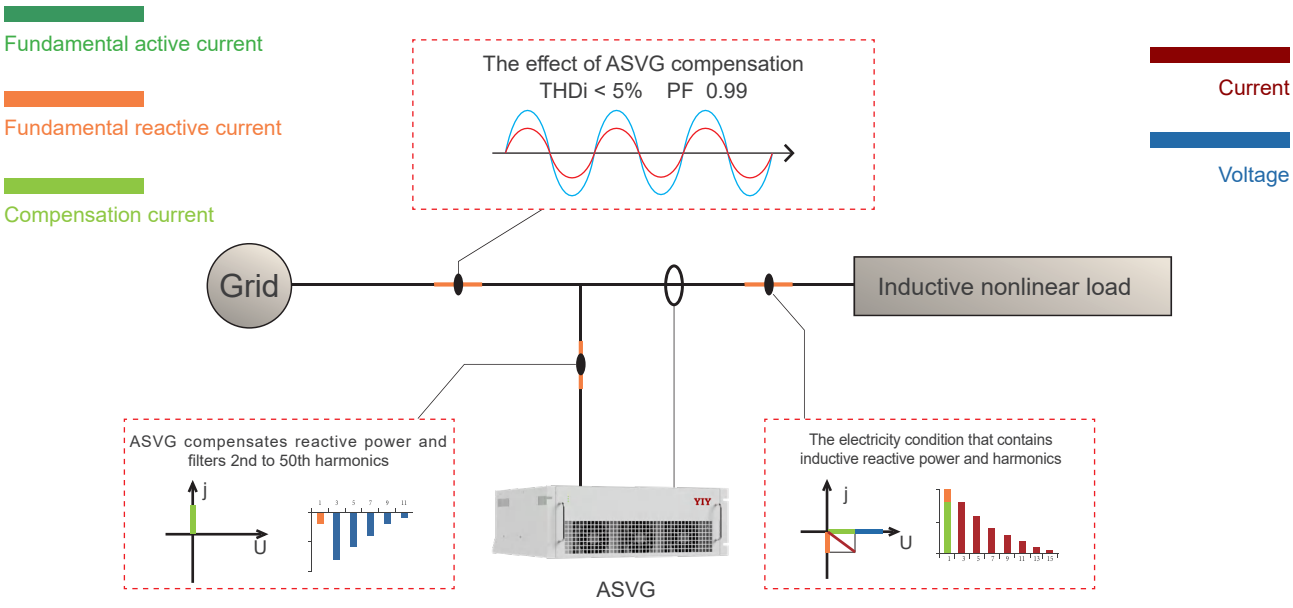
• Working Principle

With external CT detecting the load current in real time, internal DSP calculate and abstract the reactive power and harmonic content of load current, then send the PWM signal to internal IGBT and adjust the phase and amplitude of the output voltage on the AC side of the inverter or directly control the phase and amplitude of the current on the AC side of the inverter, so as to quickly absorb or emit the required reactive power and harmonic current, and realize the purpose of fast dynamic adjustment of reactive power and harmonic compensation. Not only the reactive current of the load , but also the harmonic current can be tracked and compensated.

ASVG Compensates capacitive reactive power and harmonics



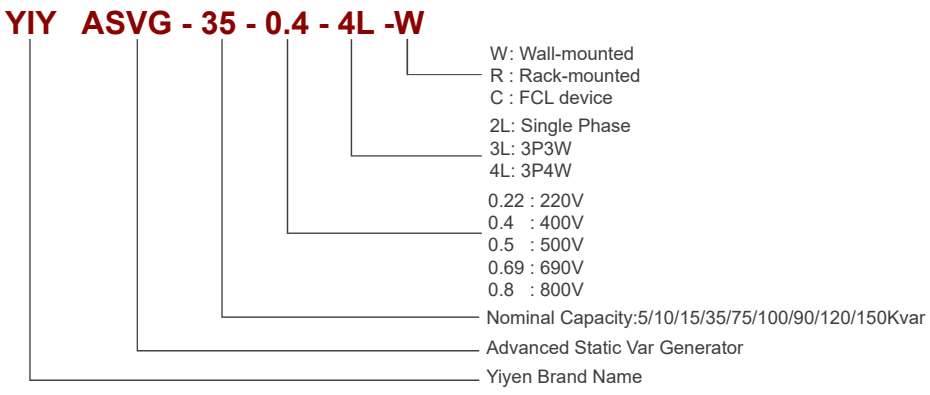
ASVG Compensates inductive reactive power and harmonics



• Technical Specifications

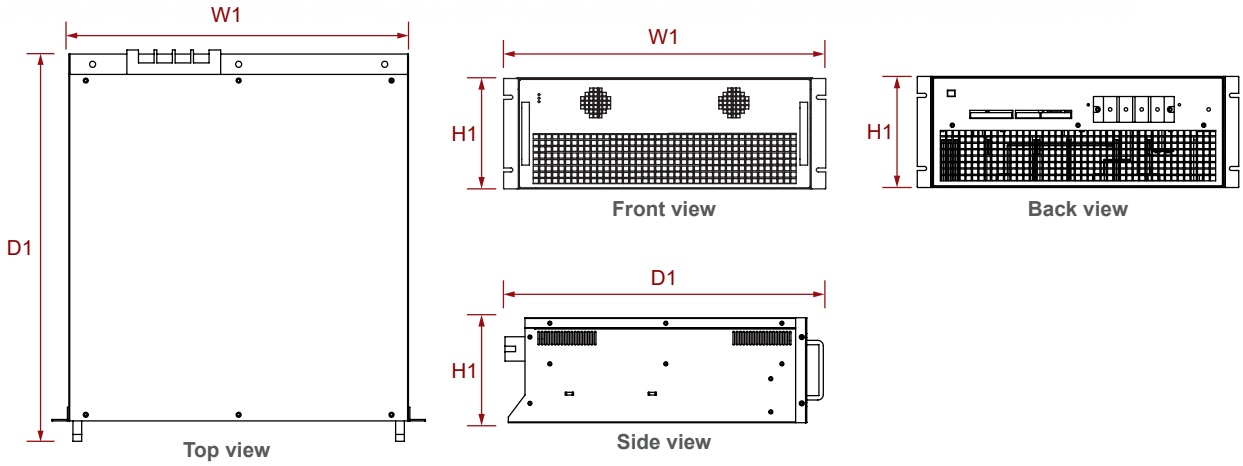
TYPE	220V Series	220V Series	400V Series	500V Series	690V Series	800V Series
Rated Compensation Capacity	5Kvar	3/5/7/10/17/ 25/37/50Kvar	5/10/15/20/35/ 50/75/100Kvar	90Kvar	100/120Kvar	150Kvar
Nominal Voltage	AC220V (-20%~+20%)	AC220V (-20%~+20%)	AC400V (-20%~+15%)	AC500V (-20%~+20%)	AC690V (-20%~+15%)	AC800V (-20%~850VAC)
Rated Frequency	50/60Hz(45Hz~63Hz)					
Grid Structure	Single phase	3 phase 3 wire/3 phase 4 wire				3 Phase 3 Wire
Number Of Parallel	No limitation. A single centralized monitoring module can be equipped with up to 8 power modules.					
Machine Efficiency	>97%					
Switching Efficiency	32kHz	16kHz		12.8kHz		
Function	Reactive power compensation / Harmonics filter	Reactive power compensation / Harmonics filter / Three phase balance				Reactive power compensation / Harmonics filter
Compensation Rate	Reactive power compensation ≥98%,Harmonics filter ≥95%,Three phase balance ≥95%					
Harmonic Compensation Times	2nd to 50th times					
Response Time	<10ms					
Noise	≤60dB	≤65dB				
Communication Method	Two-channel RS485 communication interface (support GPRS/WIFI wireless communication)					
Monitoring Method	4.3 inch LCD small-sized screen / 7 inch LCD centralized monitoring screen					
Protection	Over load protection, hardware/software over current protection, over grid power protection /under grid power protection, grid power voltage imbalance protection, power failure protection, over temperature protection, frequency anomaly protection, short circuit protection, etc					
Altitude Without Derating	<2000m					
Operating Temperature	-20~+50°C (derating above 40°C)					
Relative Humidity	<90% ,The average monthly minimum temperature is 25°C without condensation on the surface					
Pollution Level	Below level Ⅲ					
Installation	Rack/Wall-mounted					
Wiring	Back entry (rack-mounted type),Top entry (wall-ounted type)					
Protection Grade	IP20					

• Type Code



• Product Dimensions

Rack-Mount



• Models

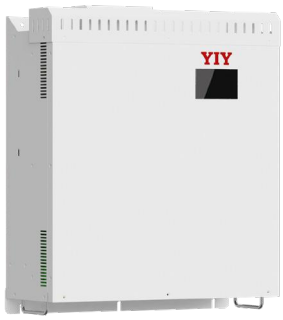
Model	Capacity	System Voltage	Size(W1*D1*H1)	Cooling Mode
YIY ASVG-5-0.22-2L-R	5Kvar	220V	220*375*167mm	Forced air cooling
YIY ASVG-5-0.4-4L-R	5Kvar	400V	500*535*89mm	Forced air cooling
YIY ASVG-10-0.4-4L-R	10Kvar	400V	500*535*89mm	Forced air cooling
YIY ASVG-15-0.4-4L-R	15Kvar	400V	500*535*89mm	Forced air cooling
YIY ASVG-20-0.4-4L-R	20Kvar	400V	500*535*89mm	Forced air cooling
YIY ASVG-35-0.4-4L-R	35Kvar	400V	500*535*89mm	Forced air cooling
YIY ASVG-50-0.4-4L-R	50Kvar	400V	550*584*190mm	Forced air cooling
YIY ASVG-75-0.4-4L-R	75Kvar	400V	550*624*240mm	Forced air cooling
YIY ASVG-100-0.4-4L-R	100Kvar	400V	550*624*240mm	Forced air cooling
YIY ASVG-90-0.5-4L-R	90Kvar	500V	550*722*275mm	Forced air cooling
YIY ASVG-100-0.69-4L-R	100Kvar	690V	550*752.5*275mm	Forced air cooling
YIY ASVG-120-0.69-4L-R	120Kvar	690V	550*752.5*275mm	Forced air cooling
YIY ASVG-150-0.8-3L-R	150Kvar	800V	550*752.5*275mm	Forced air cooling

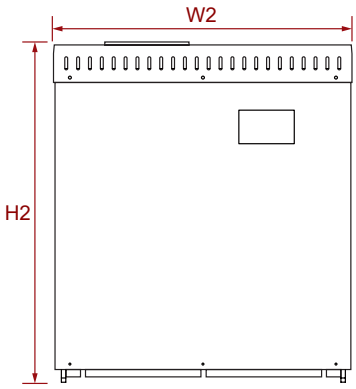
Model	Capacity	System Voltage	Size(W1*D1*H1)	Cooling Mode
YIY ASVG-3-0.22-4L-R	3Kvar	220V	500*535*89mm	Forced air cooling
YIY ASVG-5-0.22-4L-R	5Kvar	220V	500*535*89mm	Forced air cooling
YIY ASVG-7-0.22-4L-R	7Kvar	220V	500*535*89mm	Forced air cooling
YIY ASVG-10-0.22-4L-R	10Kvar	220V	500*535*89mm	Forced air cooling
YIY ASVG-17-0.22-4L-R	17Kvar	220V	500*535*89mm	Forced air cooling
YIY ASVG-25-0.22-4L-R	25Kvar	220V	550*584*190mm	Forced air cooling
YIY ASVG-37-0.22-4L-R	37Kvar	220V	550*624*240mm	Forced air cooling
YIY ASVG-50-0.22-4L-R	50Kvar	220V	550*624*240mm	Forced air cooling

*If you need any other sizes, please contact us for customization.

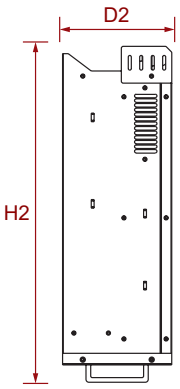
• Product Dimensions

Wall-Mounted

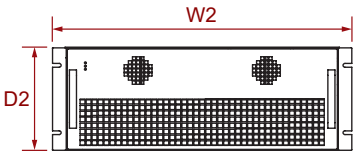




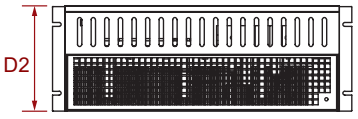
Top view



Side view



Front view



Back view

• Models

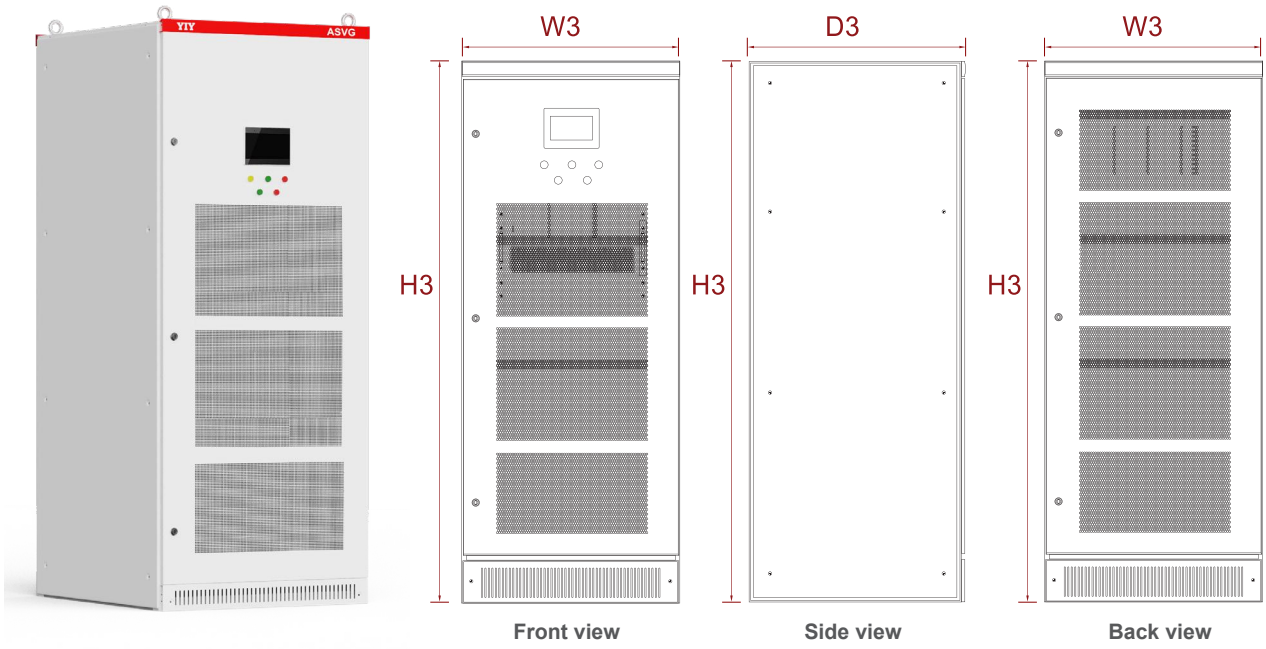
Model	Capacity	System Voltage	Size(W2*D2*H2)	Cooling Mode
YIY ASVG-5-0.22-2L-W	5Kvar	220V	220*167*375mm	Forced air cooling
YIY ASVG-5-0.4-4L-W	5Kvar	400V	500*89*535mm	Forced air cooling
YIY ASVG-10-0.4-4L-W	10Kvar	400V	500*89*535mm	Forced air cooling
YIY ASVG-15-0.4-4L-W	15Kvar	400V	500*89*535mm	Forced air cooling
YIY ASVG-20-0.4-4L-W	20Kvar	400V	500*89*535mm	Forced air cooling
YIY ASVG-35-0.4-4L-W	35Kvar	400V	500*89*535mm	Forced air cooling
YIY ASVG-50-0.4-4L-W	50Kvar	400V	550*190*584mm	Forced air cooling
YIY ASVG-75-0.4-4L-W	75Kvar	400V	550*240*624mm	Forced air cooling
YIY ASVG-100-0.4-4L-W	100Kvar	400V	550*240*624mm	Forced air cooling
YIY ASVG-90-0.5-4L-W	90Kvar	500V	550*275*722mm	Forced air cooling
YIY ASVG-100-0.69-4L-W	100Kvar	690V	550*275*752.5mm	Forced air cooling
YIY ASVG-120-0.69-4L-W	120Kvar	690V	550*275*752.5mm	Forced air cooling
YIY ASVG-150-0.8-3L-W	150Kvar	800V	550*275*752.5mm	Forced air cooling

Model	Capacity	System Voltage	Size(W1*D1*H1)	Cooling Mode
YIY ASVG-3-0.22-4L-W	3Kvar	220V	500*535*89mm	Forced air cooling
YIY ASVG-5-0.22-4L-W	5Kvar	220V	500*535*89mm	Forced air cooling
YIY ASVG-7-0.22-4L-W	7Kvar	220V	500*535*89mm	Forced air cooling
YIY ASVG-10-0.22-4L-W	10Kvar	220V	500*535*89mm	Forced air cooling
YIY ASVG-17-0.22-4L-W	17Kvar	220V	500*535*89mm	Forced air cooling
YIY ASVG-25-0.22-4L-W	25Kvar	220V	550*584*190mm	Forced air cooling
YIY ASVG-37-0.22-4L-W	37Kvar	220V	550*624*240mm	Forced air cooling
YIY ASVG-50-0.22-4L-W	50Kvar	220V	550*624*240mm	Forced air cooling

*If you need any other sizes, please contact us for customization.

• Product Dimensions

FCL



Front view　　Side view　　Back view

• Models

Model	Capacity	System Voltage (V)	Size(W3*D3*H3)	Cooling Mode
YIY ASVG-50-0.4-4L-C	50Kvar	400V	800*1000*2200mm 800*1000*1600mm optional	Forced air cooling
YIY ASVG-100-0.4-4L-C	100Kvar	400V	800*1000*2200mm 800*1000*1600mm optional	Forced air cooling
YIY ASVG-200-0.4-4L-C	200Kvar	400V	800*1000*2200mm 800*1000*1600mm optional	Forced air cooling
YIY ASVG-250-0.4-4L-C	250Kvar	400V	800*1000*2200mm 800*1000*1600mm optional	Forced air cooling
YIY ASVG-300-0.4-4L-C	300Kvar	400V	800*1000*2200mm 800*1000*1600mm optional	Forced air cooling
YIY ASVG-400-0.4-4L-C	400Kvar	400V	800*1000*2200mm 800*1000*1600mm optional	Forced air cooling
YIY ASVG-270-0.5-4L-C	270Kvar	500V	800*1000*2200mm	Forced air cooling
YIY ASVG-360-0.69-4L-C	360Kvar	690V	800*1000*2200mm	Forced air cooling
YIY ASVG-450-0.8-3L-C	450Kvar	800V	800*1000*2200mm	Forced air cooling

*Cabinet 1 can accommodate 5 modules. Cabinet 2 can accommodate 3 modules.

*If you need any other sizes, please contact us for customization.

SiC ASVG

SiC Advanced Static Var Generator

Reactive Power Compensation, Harmonic Control, Three Phase Balance

Advanced Static VAR Generator (ASVG) with SiC technology offers high-efficiency power factory correction, harmonic mitigation, and three phase balance. Featuring SiC power devices, it achieves over 98.5% efficiency, higher power density, faster dynamic response, and enhanced reliability, ensuring comprehensive power quality management.

• Product Features

- >98.5% peak efficiency with lower losses from SiC.
- Triple neutral-line filtering capacity versus phase lines.
- Compact size enabled by high-density SiC power modules.
- Capacitive and Inductive compensation: -1 to +1
- Mitigation of 2nd to 50th harmonic mitigation.
- Unit capacity can be selected in any proportion between power factor correction and harmonics correction.
- Current unbalance correction can correct for load unbalance across all three phases.

• Technical Specifications

Technical Specification	220V Series	400V Series
Rated Compensation Capacity	37KVar / 50Kvar	75KVar / 100Kvar
Nominal Voltage	AC220V (-20%~+20%)	AC400V (-20%~+20%)
Rated Frequency	50/60Hz (45Hz-63Hz)	
Grid Structure	3 phase 3 wire/3 phase 4 wire	
Number of parallel	No limitation. A single centralized monitoring module can be equipped with up to 8 power modules.	
Machine Efficiency	>98.5%	
Switching Efficiency	30kHz	
Function	Reactive power compensation / Harmonics filter / Three phase balance	
Compensation Rate	Reactive power compensation ≥98%,Harmonics filter ≥95%,Three phase balance ≥95%	
Neutral Line Filtering Capability	The filtering capacity of 3 phase 4 wire neutral line is 3 times of that of phase filtering	
Harmonic Compensation Times	2nd to 50th times	
Response Time	<40ms	
Noise	≤65dB	
Communication Method	Two-channel RS485 communication interface (support GPRS/WIFI wireless communication)	
Monitoring Method	4.3 inch LCD small-sized screen / 7 inch LCD centralized monitoring screen	
Protection	Over load protection, hardware/software over current protection, over grid power protection /under gridpower protection, grid power voltage imbalance protection, power failure protection, over temperature protection, frequency anomaly protection, short circuit protection, etc	
Altitude Without Derating	<2000m	
Operating Temperature	-10°C ~+50°C (derating above 40°C)	
Relative Humidity	<90% ,The average monthly minimum temperature is 25°C without condensation on the surface	
Pollution Level	Below level Ⅲ	
Installation	Rack/Wall-mounted	
Wiring	Back entry (rack-mounted type),Top entry (wall-ounted type)	
Protection Grade	IP20	

• Type Code

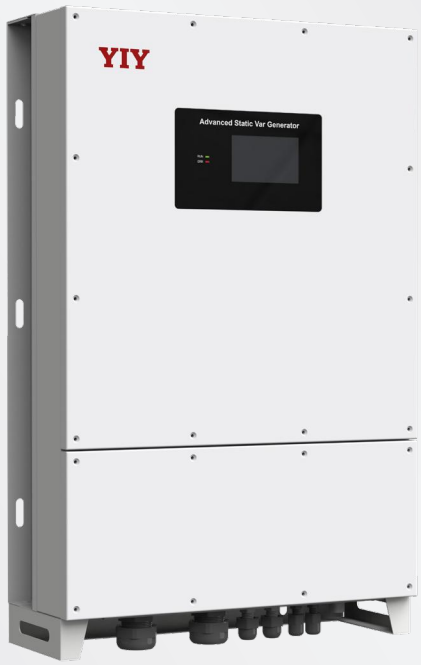
YIY SiC ASVG - 100 - 0.4 - 4L -W

- W: Wall-mounted
  R : Rack-mounted
  C : FCL device
- 2L: Single Phase
  3L: 3P3W
  4L: 3P4W
- 0.22 : 220V
  0.4 : 400V
- Nominal Capacity:37/50/75/100Kvar
- SiC Advanced Static Var Generator
- Yiyen Brand Name

ASVG IP66

Advanced Static Var Generator IP66

Reactive Power Compensation, Harmonic Control, Three Phase Balance



The **Advanced Static VAR Generator (ASVG IP66)** is a new dynamic reactive power compensation product with IP66 protection and a self-cooling system， combining power factor correction, harmonic mitigation and three phase balance in one unit.

• Product Features

- Capacitive and Inductive compensation: -1 to +1
- Mitigation of 2nd to 50th harmonic mitigation
- Three-phase balance
- Built-in a set of grid side CT
- Self-cooling system
- IP66 outdoor

• Technical Specifications

Technical Specification	400V Series
Rated Compensation Capacity	15Kvar
Nominal Voltage	AC400V (-20%~+20%)
Rated Frequency	50Hz/60Hz (45Hz-63Hz)
Grid Structure	3 phase 3 wire/3 phase 4 wire
Number Of Parallel	No limitation. A single centralized monitoring module can be equipped with up to 8 power modules.
Machine Efficiency	>97%
Switching Efficiency	16kHz
Function	Reactive power compensation / Harmonics filter / Three phase balance
Compensation Rate	Reactive power compensation ≥98%,Harmonics filter ≥95%,Three phase balance ≥95%
Harmonic Compensation Times	2nd to 50th times
Response Time	<10ms
Noise	<60dB
Communication Method	Two-channel RS485 communication interface (support GPRS/WIFI wireless communication)
Monitoring Method	4.3 inch LCD small-sized screen / 7 inch LCD centralized monitoring screen
Protection	Over load protection, hardware/software over current protection, over grid power protection /under grid power protection, grid power voltage imbalance protection, power failure protection, over temperature protection, frequency anomaly protection, short circuit protection, etc
Altitude Without Derating	<2000m
Operating Temperature	-20~+50℃ (derating above 40°C)
Cooling Method	Natural convection
Relative Humidity	<90% ,The average monthly minimum temperature is 25℃ without condensation on the surface
Pollution Level	Below level Ⅲ
Installation	Wall-mounted
Wiring	Top entry (wall-ounted type)
Protection Grade	IP66

• Type Code

YIY ASVG IP66 - 15 - 0.4 - 4L -W

- W: Wall-mounted
  R : Rack-mounted
  C : FCL device
- 2L: Single Phase
  3L: 3P3W
  4L: 3P4W
- 0.4 : 400V
- Nominal Capacity:15Kvar
- Advanced Static Var Generator IP66
- Yiyen Brand Name

AVC

Active Voltage Conditioner

Voltage Sag Correction, Surge Correction ,Continuous Voltage Regulation and Load Voltage Compensation.

Active Voltage Conditioner (AVC) is an electronic device that regulates and stabilizes the voltage of an electrical power system. AVC is used to control the reactive power in an electrical system, but it also provides additional functionality to regulate the system's voltage.

AVC uses advanced control algorithms and digital signal processing technology to detect voltage fluctuations and harmonics in the system and respond quickly to correct them. They can also provide voltage regulation and power factor correction, reducing energy consumption and improving the efficiency of the system.

AVC is commonly used in applications where a stable and reliable power supply is critical, such as data centers, hospitals, and industrial facilities. They can also be used in renewable energy systems to improve the stability and efficiency of the power supply.

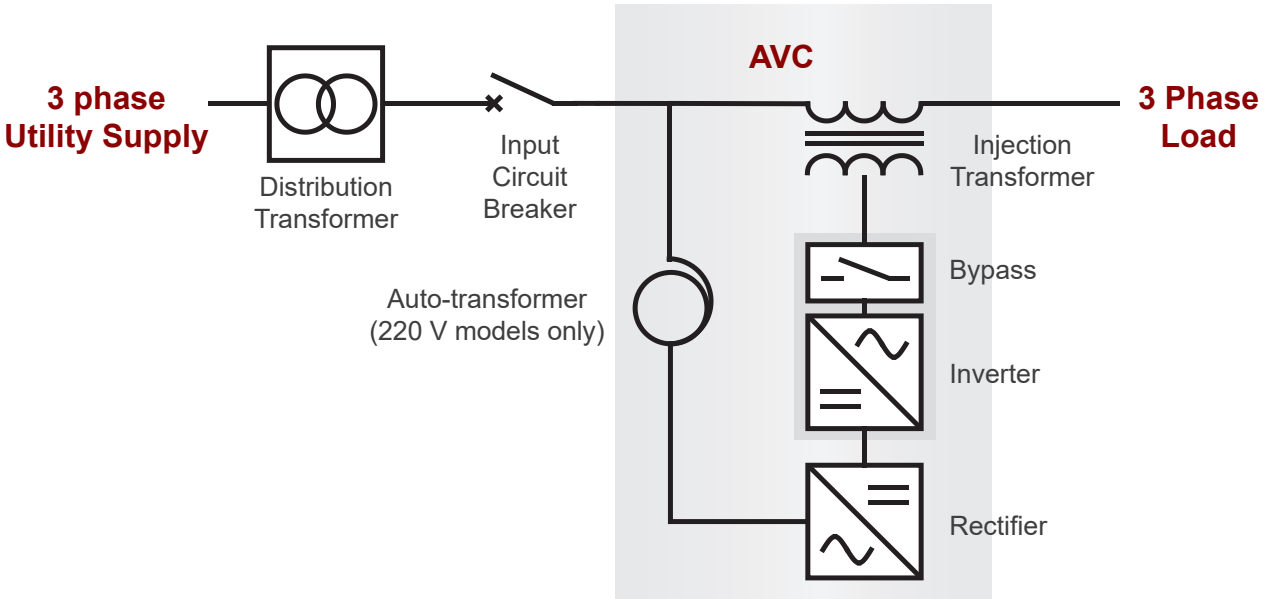
Overall, an Active Voltage Conditioner is a high-performance solution for regulating and stabilizing the voltage of an electrical power system, providing several benefits such as improved voltage stability, reduced power losses, improved power factor, and harmonic filtering.

• Working Principle

AVC consists of two converters that are not on the current path between the load and the utility. Instead, the corrective voltage injection is achieved by means of a transformer winding between the utility and the sensitive load. This configuration results in a very efficient and effective method to provide voltage correction with reduced risk of negative impacts on the load.

AVC requires no batteries as it draws the additional energy required during sag to make up the correction voltage from the utility supply. With no ongoing maintenance costs typically associated with batteries the cost of ownership for AVC systems is very small.

Furthermore, AVC contains a redundant internal bypass system that, in the event of overload or internal fault condition, ensures that the load is continued to be supplied from the utility.



• Technical Specifications（European Standard）

Item	Specification		
Capacity	Single Phase	15-50KVA	60KVA-1800KVA (RND)
	Three Phase	30KVA-500KVA	600KVA-3600KVA (RND)
Input	Power System	Three Phase 380V+N(3 Phase 4 Wire) Center ground referenced (TN-S)	
	Range	220V-application range 176-264V 380V-application range 304-456V	
	Max Supply Voltage	130%	
	Frequency	50Hz/60Hz ±5Hz	
	Outage-Control Ride Through	10ms	
	Harmonics	THDv<3%	
Output	Voltage	220V/380V	
	Regulation Mode	Contactless	
	Equivalent Impedance	< 4%(model specific)	
	Control Model	independent control on each phase	
	Partial Correction Derating Conditions	1.0 PF at 80% load,0.8 PF at 100% load	
	Power Factor	0 lagging to 0.9 leading	
	Crest Factor	300%	
	Overload Capacity From 100% Supply Voltage	150% for 21s,once every 500s	
Performance	Efficiency	Typically > 95%	
	Sag Correction Response	Initial <250ps Complete <1/2 cycle	
	Voltage Regulation Accuracy	<+0.5% typical,±2% max	
	Sag Correction Accuracy	±4%	
	Continuous Regulation Range	±10%	
	Sag Correction Performance Three Phase Sags Single Phase	60% to 100% for 30s 50% to 90% for 10s 40% to 100% for 10s	
	Partial Correction Derating Conditions	1.0 PF at 80% load / 0.8 PF at 100% load	
	Bypass	Manual bypass，Automatic bypass	
Overload Protection	Capacity	100% of model rating (Kva)	
	Maximum Overload	120% for 60 s 150% for 15 s 1500% for 1s	
	Transfer Time	To Bypass < 0.5 ms / To Bypass < 250 ms	
	Equivalent Series Impedance	Bypass < 2.5% typical	
Injection Transformer	Transformer Type	Dry	
	Insulation	IEC 60085 Thermal class 200	
	Frequency	50Hz / 60Hz	
	Vector Group	Diii (delta + 3 independent windings)	
Protection	Input over/low voltage protection/output over/low voltage protection,input over current protection,TX over heat protection,overload protectcn	Internal	
Display	7 inch Touch Screen	Parameter control, power info,display,fault log, history curve line, etc.	
Environment	Operating Temperature Range	0°C to 50° C (32° F to 122° F)	
	Temperature Derating	Above 40°C, derate at 2% load per °C to a maximum of 50°C	
	Operating Altitude	< 1000 m without derating	
	Derating With Altitude	1% every 100m above 1500m. 2000m max	
	Inverter Cooling	Forced ventilation	
	Transformer Cooling	Natural convection	
	Humidity	<95%, non-condensing	
	Pollution Degree Rating	200%	
	Noise	<75dBA@1 m	
	Working Temperature	-25~+45°C	
	Storage Temperature	-30~+70°C	
	Protection Grade	IP54	

• Technical Specifications（American Standard）

Item	Specification		
Capacity	15KVA-100KVA		
Input	Power System	Single Phase	127V
		Dual Phase	120V/240V
		Three Phase	220V
	Range	±20%	
	Max Supply Voltage	130%	
	Frequency	50Hz/60Hz ±5Hz	
	Response Time	10ms	
	Harmonics	THDv<3%	
Output	Accuracy	±0.5%	
	Regulation Mode	Contactless	
	Equivalent Impedance	< 4%(model specific)	
	Control Model	independent control on each phase	
	Partial Correction Derating conditions	1.0 PF at 80% load,0.8 PF at 100% load	
	Power Factor	0 lagging to 0.9 leading	
	Crest Factor	300%	
	Overload Capacity From 100% Supply Voltage	150% for 21s,once every 500s	
Performance	Efficiency	Typically > 95%	
	Sag Correction Response	Initial <250ps Complete <1/2 cycle	
	Voltage Regulation Accuracy	<+0.5% typical,±2% max	
	Sag Correction Accuracy	±4%	
	Continuous Regulation Range	±10%	
	Sag Correction Performance Three Phase Sags Single Phase	60% to 100% for 30s 50% to 90% for 10s 40% to 100% for 10s	
	Partial Correction Derating Conditions	1.0 PF at 80% load / 0.8 PF at 100% load	
	Bypass	Manual bypass,Automatic bypass	
Overload Protection	Capacity	100% of model rating (Kva)	
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	Transformer Cooling	Natural convection	
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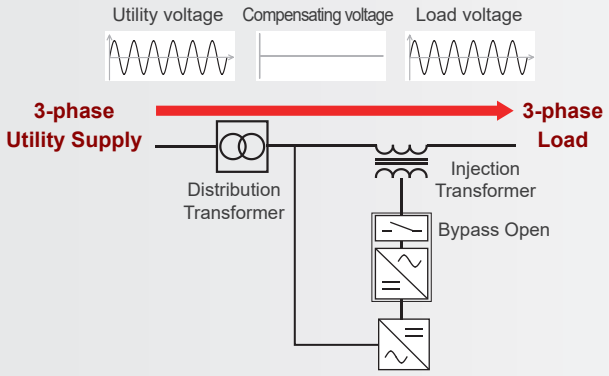
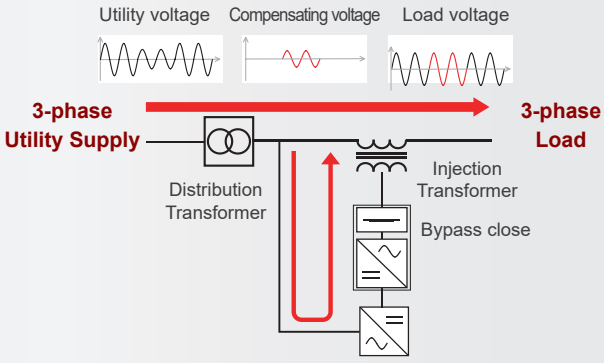
	Noise	<75dBA@1 m	
	Working Temperature	-25~+45°C	
	Storage Temperature	-30~+70°C	
	Protection Grade	IP54	

• Operational Detail

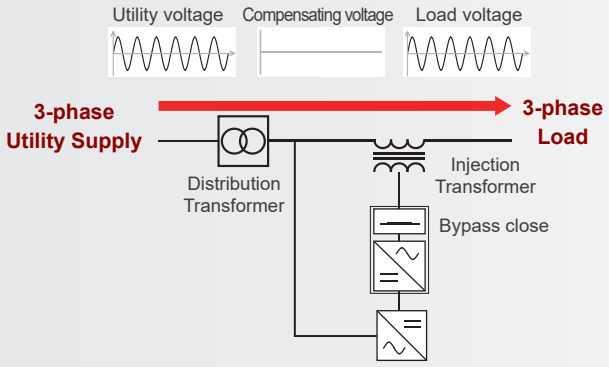
Utility Voltage Close to Nominal Level

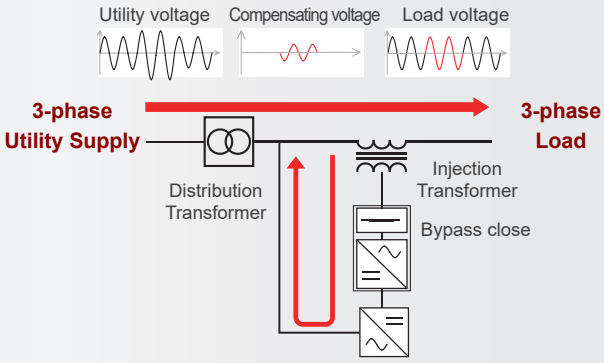


Utility Disturbance Occurs



Internal Bypass Operation





• Applications

- Electronics industry

- Food and beverage

- Automotive

- Continuous process

- Pharmaceutical industry

- Medical industry

CVCF

IGBT Type Single Phase AVR

Voltage and Frequency Stabilisers

Input voltage range:

- 85-270VAC,1Phase, 2Wire,+Earth

Input frequency range:

- 35-70Hz

Features:

- Correction time 10ms
- Output accuracy +/-0.5%
- Output wave form distortion THD<3%
- Effect of Power factor PF>0.99
- Frequency protection
- Compatible with generator

• Technical Parameter

Parameters	Power Rating	5KVA	10KVA
Input Voltage	Nominal Voltage Rating	230VAC 1Phase, 2Wire,+Earth	
	Voltage Range	85-270VAC	
	Frequency	35-70Hz	
Output Voltage	Voltage	220V/230V/240V ± 0.5%	
	Correction Time	10ms	
	Voltage Regulation	±0.5%	
	Output Wave Form Distortion	THD<3%	
	Output Frequency	50/60Hz	
	Power Factor	PF>0.99	
Protection	Automatic Bypass	Yes	
	Manual Bypass	Yes	
	Input Under Voltage	80±1V	
	Input Over Voltage	280±3V	
	Output Under Voltage	184V/@220V 192V/@230,201V/@240V	
	Output Over Voltage	246V/@220V,250V/@230V,260V/@240V	
	Over-temperature	Module: 80℃ Protection/Recovery at 65℃	
	Output Overload	110%>&<120%-5S,(3 times) 120%>&<150%-2S (3 times)	
		>150% cut off immediately	
Display/Indication	Display Mode	LCD/LED	
	Communication	RS485	
Physical Parameter	Efficiency	Better Than 95%	
	Cooling Method	Forced cooling	
	IP	IP20	
	Temperature	0-45℃	
	Humidity	0-95%(RH-Non Condensing)	
	Noise	<60dB	
	Product Size	501*328*128.5 mm	580*358*128.5 mm
	Shipping Size	590*440*240 mm	670*470*240 mm
	Product Weight	10KG	12KG
	Shipping Weight	12KG	14KG

Energy Storage System
&
Power Quality System Provider

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