

# Advanced Static Var Generator (ASVG)

**Reactive Power Compensation**, Harmonic control, Three-phase unbalance control

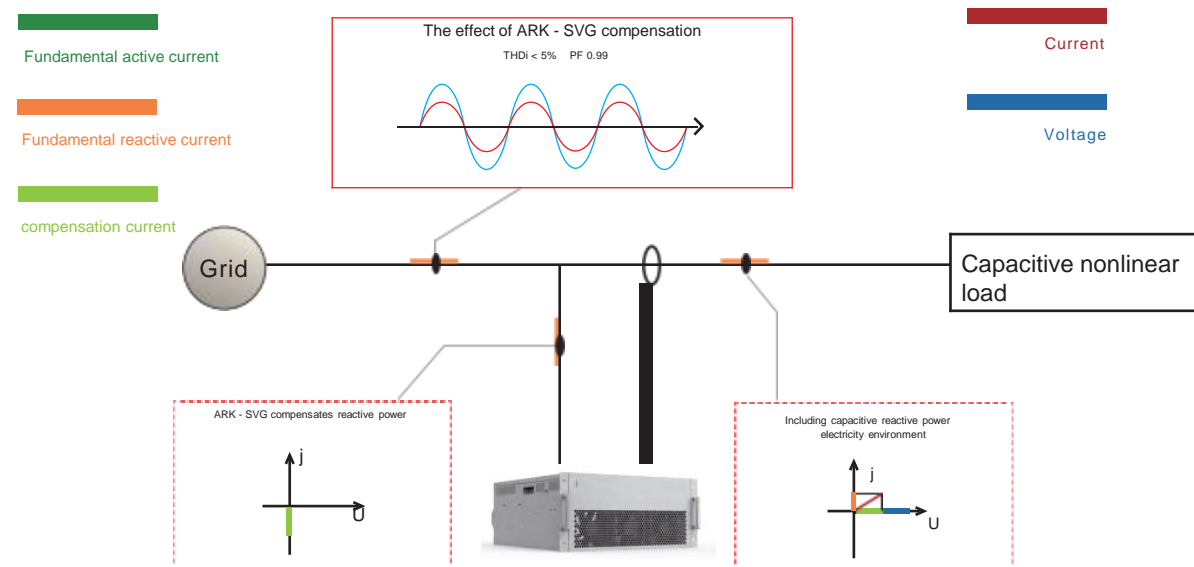
**Advanced Static Var Generator (ASVG)** is a new type of dynamic reactive power compensation product, which is representative of the latest technology application in the field of reactive power compensation. By adjusting the phase and amplitude of the output voltage on the AC side of the inverter, or directly controlling the current on the AC side of the inverter

Amplitude and phase, 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 can the reactive current of the load be tracked and compensated, but also the harmonic current can also be tracked and compensated. Enhanced 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. They improve power quality, extend equipment life and reduce energy losses.

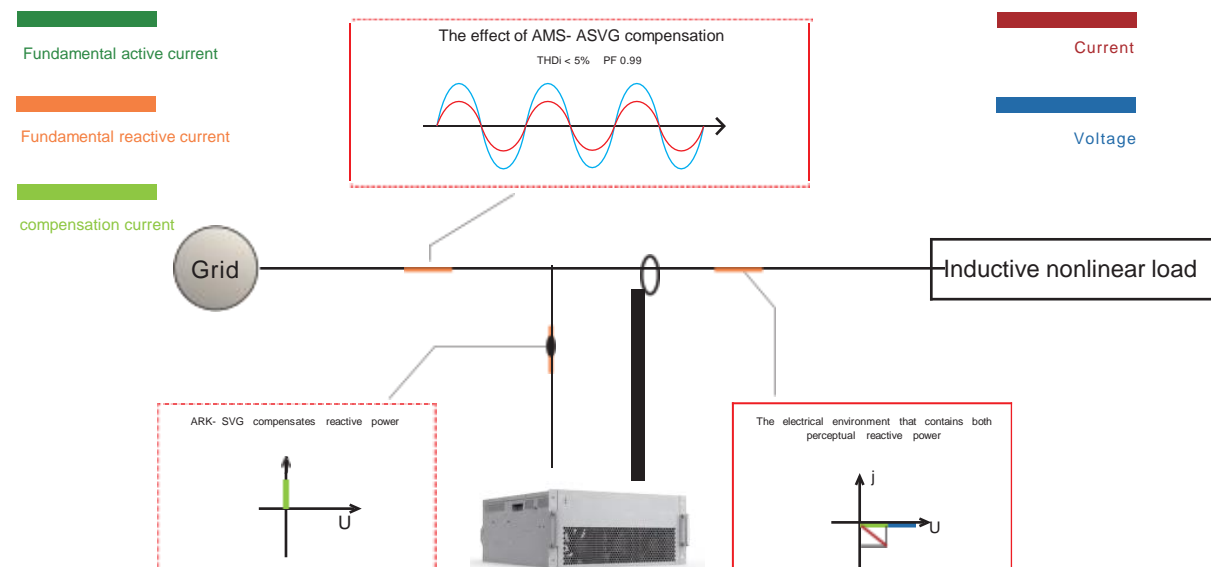
## ASVG Working Principle:

External CT detects the load current in real time, internal DSP calculates and abstracts the reactive power and harmonic content of the load current, then send the PWM signal to internal IGBT, adjusts 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. 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 can the reactive current of the load be tracked and compensated, but also the harmonic current can also be tracked and compensated.

ASVG compensates capacitive reactive power and harmonics



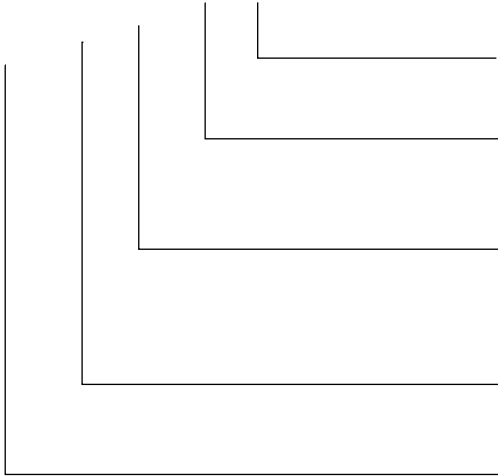
AMS - ASVG compensates inductive reactive power and harmonics



Type	Series 220V	Series 380V	Series 500V	Series 690V
Nominal Voltage	AC220V±20%	AC400V (-20%~+15%)	AC500V±20%	AC690V(-20%~+15%)
Rated Frequency	50Hz/60Hz (45Hz~63Hz)			
Rated Compensation Capacity	5kvar	10kvar, 15kvar, 35kvar, 50kvar, 75kvar, 100kvar	90kvar	120kvar
Grid Structure	L/N	3P3W/3P4W		
Full Response Time	< 40ms			
Numbers in Parallel	No limitation			
Reactive Power Compensation Rate	> 99%	> 95%		
Machine Efficiency	> 97%			
Switching Frequency	32kHz	16kHz	12.8kHz	
Feature Selection	Deal with harmonics/Deal with harmonics and reactive power	Deal with harmonics/Deal with harmonics and reactive power/Deal with harmonics and three-phase unbalance /Three options		
Communication Methods	Two-channel RS485 communication interface (support GPRS/WIFI wireless communication)			
Protection Function	Overload, Software/Hardware Over-current, Grid Over/Under Voltage, Voltage Unbalance, Power Supply Fault, Over-temperature, Frequency Abnormality, Short Circuit Protection, etc.			
Altitude without Derating	< 2000m			
Temperature	-10℃ ~ 50℃(capacity degrade above 40℃)			
Humidity	≤90%, Minimum Monthly Temperature of 25℃ with No Surface Condensation			
Pollution Level	Below level III			
Noise	< 60dB		< 65dB	
Installation	Rack/Wall-mounted		Rack-mounted	
Inlet Way	Back entry (for Rack) / Top entry (for Wall-mounted)			
Protection Grade	IP20			

Code Rule:

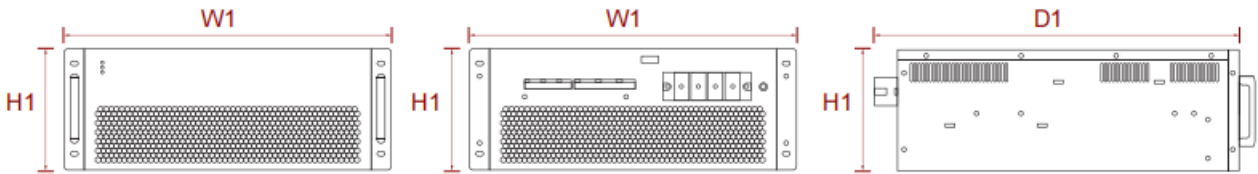
ASVG –0.4 – 50K - 4L - W



- W:Wall-mounted  
R:Rack-mounted  
C:FCL device
- 2L:Single phase  
4L:Three phase four wire system
- 5kvar/10kvar/15kvar/35kvar/50kvar/75kvar/  
100kvar
- Voltage Level:  
0.4:400V voltage class  
0.5:500V voltage class  
0.69:690V voltage class
- Advanced Static Var Generator

1 Rack-mounted

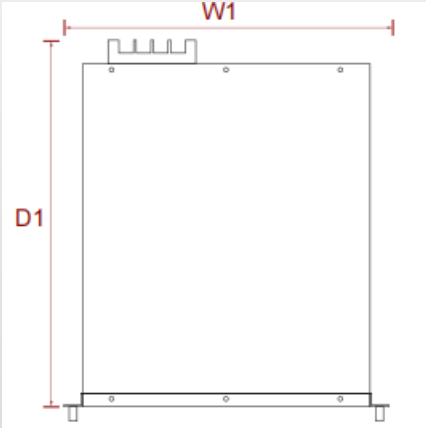
Model	Compensation Capacity (kvar)	System Voltage (V)	Size (W1*D1*H1) (mm)	Cooling Mode
ASVG-0.22-5k/2L-R	5	220	220*330*160	Forced Air Cooling
ASVG-0.4-10k/4L-R	10	400	460*490*89	Forced Air Cooling
ASVG-0.4-15k/4L-R	15	400	460*490*89	Forced Air Cooling
ASVG-0.4-35k/4L-R	35	400	460*490*89	Forced Air Cooling
ASVG-0.4-50k/4L-R	50	400	500*510*190	Forced Air Cooling
ASVG-0.4-75k/4L-R	75	400	500*550*240	Forced Air Cooling
ASVG-0.4-100k/4L-R	100	400	500*550*240	Forced Air Cooling
ASVG-0.5-90k/4L-R	90	500	495*675*275	Forced Air Cooling
ASVG-0.69-120k/4L-R	120	690	495*675*275	Forced Air Cooling



Main View

Back View

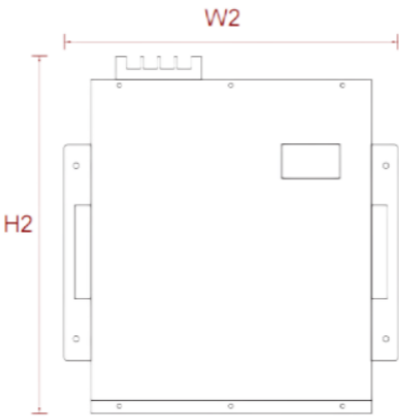
Left View



Vertical View

2 Wall-mounted

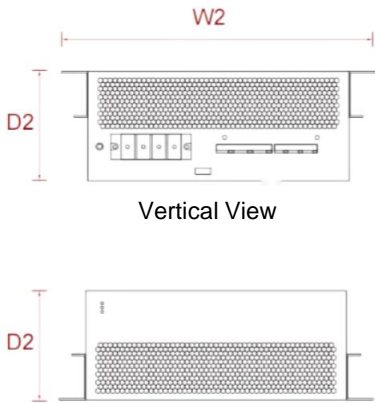
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ASVG-0.22-5k/2L-R	5	220	220*330*160	Forced Air Cooling
ASVG-0.4-10k/4L-R	10	400	460*490*89	Forced Air Cooling
ASVG-0.4-15k/4L-R	15	400	460*490*89	Forced Air Cooling
ASVG-0.4-35k/4L-R	35	400	460*490*89	Forced Air Cooling
ASVG-0.4-50k/4L-R	50	400	500*510*190	Forced Air Cooling
ASVG-0.4-75k/4L-R	75	400	500*550*240	Forced Air Cooling
ASVG-0.4-100k/4L-R	100	400	500*550*240	Forced Air Cooling
ASVG-0.5-90k/4L-R	90	500	495*675*275	Forced Air Cooling
ASVG-0.69-120k/4L-R	120	690	495*675*275	Forced Air Cooling



Main View



Left View



Vertical View

Bottom View

3 Full Cabinet Load

Model	Compensation Capacity (kvar)	System Voltage (V)	Size (W3*D3*H3) (mm)	Cooling Mode
ASVG-0.4-200k/4L-C	200	400	1000*1000*2200	Forced Air Cooling
ASVG-0.4-250k/4L-C	250	400	1000*1000*2200	Forced Air Cooling
ASVG-0.4-300k/4L-C	300	400	1000*1000*2200	Forced Air Cooling
ASVG-0.4-400k-4L-C	400	400	1000*1000*2200	Forced Air Cooling
ASVG-0.5-270k/4L-C	270	500	1000*1000*2200	Forced Air Cooling
ASVG-0.69-360k/4L-C	360	690	1000*1000*2200	Forced Air Cooling

