

ELCO STATIC VAR GENERATOR (SVG)

The Static Var Generator (SVG) uses 3-level IGBT topology to manage current injection to provide reactive power either inductive or capacitive in order to achieve the target cos  $\phi$ .

The SVG has the ability to instantly compensate and adjust current direction according to demand in a matter of milliseconds. It also compensates phase to phase in unbalanced systems. The SVG is the perfect device for installations where there are strict penalties for the consumption of reactive power.

- FEATURES
- Instant Compensation – response time <0.05ms.
  - Improve power transmission stability by reacting to sudden real time changes in reactive currents.
  - Maintain the receiving-end voltage level and strengthen system voltage stability.
  - Compensate reactive power, improve power factor
  - Balance three phases when unbalanced.
  - Respond to and arrests voltage fluctuation and flicker.
  - Minimal maintenance.
  - Allows Compliance to EGAT and PEA Min Power Factor 0.85



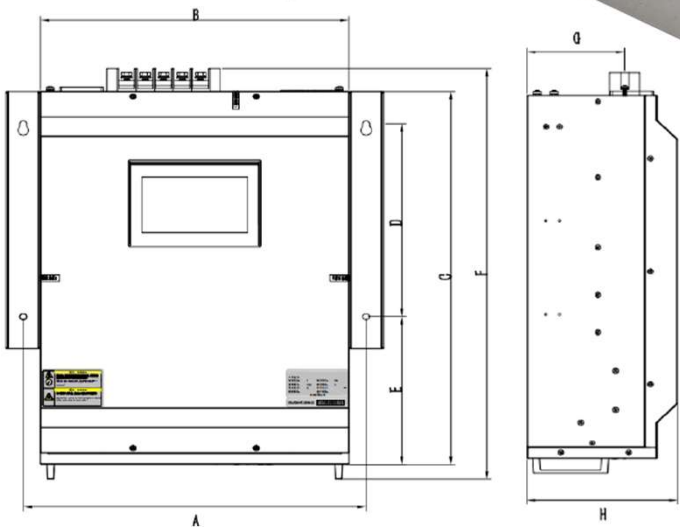
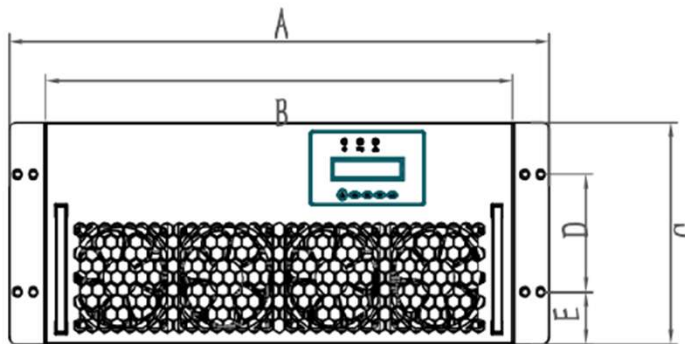
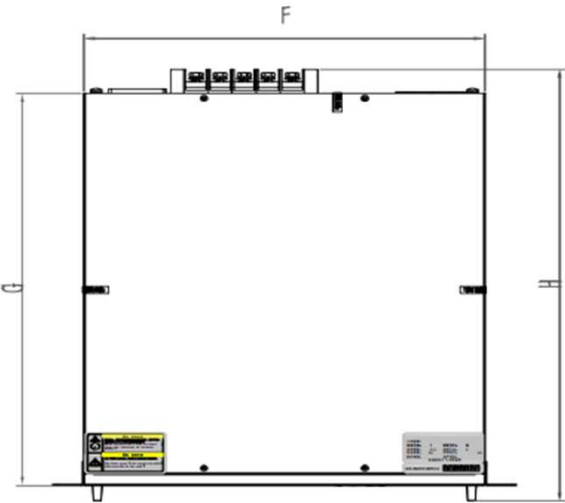
PRODUCT INFORMATION - SVG

Product Code	Type	kvar	Dimension (mm)							
			A	B	C	D	E	F	G	H
SVG-ELCO0035400D	Drawer Type	35.0	520	450	88	50	19	450	580	643
SVG-ELCO0050400D		50.0	520	450	110	72	19	450	580	643
SVG-ELCO0075400D		75.0	520	450	160	70	45	450	580	639
SVG-ELCO0100400D		100.0	520	450	192	102	45	450	580	639
SVG-ELCO0035400W	Wall Mounted	35.0	500	450	580	300	230	643	63.5	88
SVG-ELCO0050400W		50.0	500	450	580	300	230	643	85.5	130
SVG-ELCO0075400W		75.0	500	450	580	300	230	639	123.5	190
SVG-ELCO0100400W		100.0	500	450	580	300	230	639	148.5	222

PRODUCT DIMENSION



Drawer Type



Wall Mounted Type (35kvar / 50kvar / 70kvar / 100kvar)

PRODUCT INFORMATION - ELCO SYSTEMS - STATIC VAR GENERATORS (SVG)

System Parameter	SVG 35kvar		SVG 50kvar	SVG 75kvar	SVG 100kvar
Rated Voltage	400V/415V ±15%				
Frequency	50Hz -10% +20%				
Parallel	Max 15 for 7"HMI				
Efficiency	Up to 98%				
Wiring	3P4W + PE				
Inverter topology	3-level IGBT Inverter with PWM				
Protection Functions	Over or under -voltage/grid voltage unbalance, over or under-current/over or under-temperature/voltage abnormality/ over or underfrequency, pre-charge fault, IGBT overheat, sequence fault and CT fault				
Heat Loss	< 2.5%				
CT	100/5 ~ 10000/5				
MTBF	Up to 100,000 hours				
Switching Frequency	20kHz				
Unbalanced current compensation	Negative sequence/zero sequence				
Overcurrent	Up to 120%				
Cable Entry	Rear of Module				
Alarm record	Available				
Cooling Direction	Front Entry				
Performance					
Instantaneous response time	<0.05 ms				
Full Response Time	< 5 ms				
Target Power Factor	1.0 or as setting				
Cooling Mode	Fan cooling				
Noise	≤ 55db				
Fixing Type	Drawer and Wall Mounted Type				
Drawer Type Size (WxHxD)	450 x 88 x 580	450 x 110 x 580	450 x 160 x 580	450 x 192 x 580	
Net Weight	18kg	20kg	29kg	35kg	
Key Features					
Reactive Current Compensation	Capacitive / Inductive				
Unbalanced Current Compensation	Negative sequence / zero sequence				
Harmonic Current Compensation	3rd to 13th harmonics (not more than 50% rated current)				
Environment Condition					
Altitude	≤1000m				
Operating Temperature	-10°C~+50°C				
Relative Humidity	5%~95% without condensation				
Communication Function					
RS485 Communication	RS485 parallel communication connection				
Module Display	64.5mm*13.8mm LCD screen				
HMI Monitoring Screen	7-inch LCD touch screen (155mm x 88mm) - with IP65 Display with USB Port for export data Display Function - % working of SVG that compensate to system and internal temperature, Voltage, Current, THDv, THDi, Harmonic Spectrum, Power Factor, Active Power, Reactive Power, Apparent Power in grid and load side.				
	Control Fuction - Current Compensation, Current Vectors, Compensation Priority, change limit temperature of internal IGBT.				
Standards and Certifications					
Electrical Safety	Low Voltage Directive 2014/35/EU, EN 62477-1:2012+A11:2014+A1:2017, EIT022001 IEC 61000-3-2 : 2019, IEC 61000-3-3 : 2019, IEC 61000-6-1:2019, IEC 61000-6-3 : 2007/A1:2011				
Electromagnetic Compatibility	IEC 61000-4-2 , IEC 61000-4-3, IEC 61000-4-4 , IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-11, 2014/30/EU, G 5/4-1, BS EN 61000-6-4, BS EN 61000-6-2				
Third Party Approvals	CE Certificate, CQC, Type Test Report , ISO9001 Certificate				