FEATURES :

- Universal Input 90~264VAC
- High Efficiency Up To 82%
- Protection: Short Circuit /Overload/Over Voltage
- Fully Encapsulated Plastic Case
- Internal Input Filter
- 2 Years Warranty
- ROHS Compliant

Volgen

AC-DC Converter

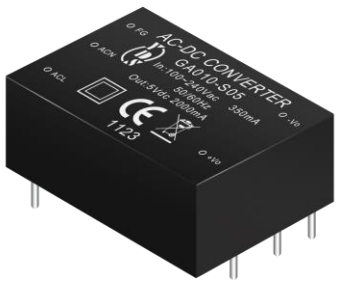
GA010 SERIES

10Watt

3KV Isolated

Single & Dual Output

Module



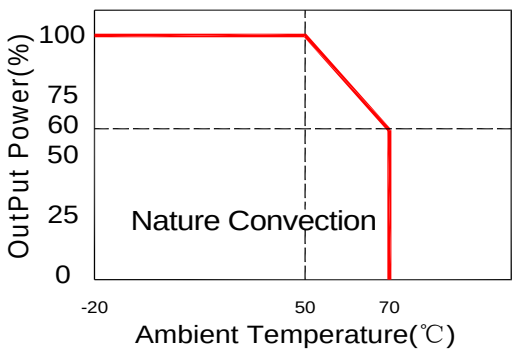
Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified

Part Number	Output Wattage	Output Voltage	Output Current	Ripple & Noise	Efficiency
	(W)	(VDC)	(mA)	(mV) max (Note)	(TYP %)
GA010-S03	10.0	3.3	3000	100	74
GA010-S05	10.0	5	2000	100	76
GA010-S12	12.0	12	1000	150	80
GA010-S15	12.0	15	800	150	80
GA010-S24	12.0	24	500	240	80
GA010-S48	12.0	48	250	240	82
GA010-D05	10.0	±5	±1000	100	75
GA010-D12	12.0	±12	±500	150	75
GA010-D15	12.0	±15	±400	150	75
GA010-D24	12.0	±24	±250	240	77
GA010-D0512	10.0	Vo1=+5, Vo2=+12	Io1=1500, Io2=200	100(Vo1) 150(Vo2)	74
GA010-D0515	10.0	Vo1=+5, Vo2=+15	Io1=1400, Io2=200		74
GA010-D0524	10.0	Vo1=+5, Vo2=+24	Io1=1200, Io2=200		75

Input Specifications

Parameters	Conditions		Min	Typ	Max	Units
Rated Input Voltage	Vo, Io nom			100~240		Vac
Voltage Range	Vo, Io nom	AC in	90		264	Vac
		DC in	120		370	Vdc
Line frequency	Vi nom, Io nom		47	50/60	63	Hz
Inrush Current	Io nom	Vi:115VAC			20	A
		Vi:230VAC			40	A
Input Fuse	VDE/UL/CCC FUSE 2.5A/250V (Slow blow)					

Temperature Derating Graph



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Output Specifications

Parameters	Conditions		Min	Typ	Max	Units
Output Voltage Accuracy	Vi nom, Io nom (Single output)	3.3V,5V Models			±3	%
		12....48V Models			±2	%
	Dual Output				±5	%
Minimum Load	Vi nom	Single Output Models	0			%
		Dual Output Models (each output)	20			%
Line Regulation	Io nom, Vi min...Vi max			±1		%
Load Regulation	Io min~ Io nom	Single Output Models		±2		%
		Dual Output Models		±5		%
Transient Recovery time	Vi nom, Io nom= ←→0.5 Io nom			1000		us
Protection	Over load		Above 110% rated output power			
			Protection type: Recovers automatically after fault condition is removed			
	Short circuit		Recovers automatically after fault condition is removed			
	Over Voltage (Main Output)		120%-150% rated output Voltage			
			Protection type: Zener diode clamp			

Note :

Ripple & noise is measured by using 20 MHz bandwidth, measured with a 47uf paralleled with a high-frequency 0.47uf capacitor across each output by full load.

General Specifications

Parameters	Conditions	Min	Typ	Max	Units
Switching Frequency	Vi nom, Io nom		65		KHz
Isolation Voltage	Input / Output		3KVac/ 5mA/5Secs		
Isolation Resistance	Input / Output, @500 Vdc	100			MΩ
Operating Temperature	Operating at Vi nom, Io nom	-20		+70	℃
Derating	Vi nom, Io nom +51 to 71℃			2	%/℃
Storage Temperature	Non Operational	-40		+85	℃
Relative Humidity	Vi nom, Io nom			95	% RH
Safety Standards	EN62368-1 approved				
EMI Conduction & Radiation	Compliance to EN55032				
EMS Immunity	Compliance to EN55024				
Dimension	L63.50x W44.45 x H19.05mm L2.5x W1.75 x H0.75 inches				
Cooling	Free air convection				

Part Number

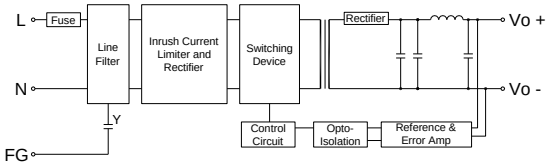
G A 010 - S 03

A B C D E

A: Series
B: Package
C: Output Watt
D: Single (S) Dual (D)
E: Output Voltage

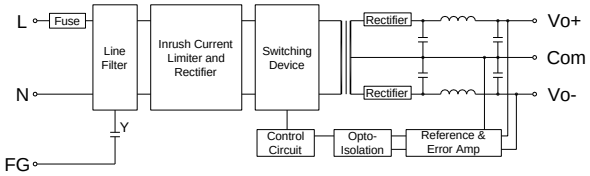
Circuit Schematic(1)

Single Output



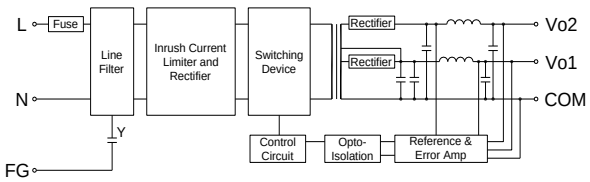
Circuit Schematic(2)

Dual Output



Circuit Schematic(3)

Dual Output



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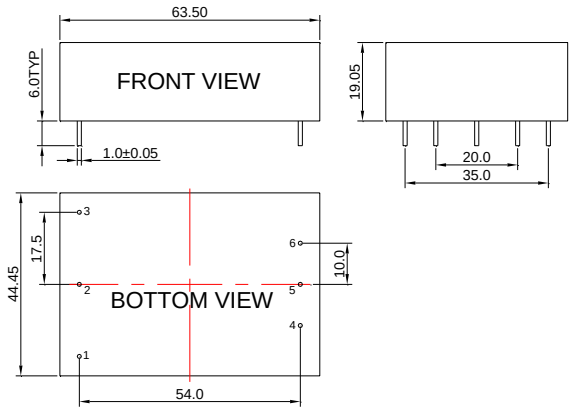
Markings and Dimensions



	Model		
PIN	Single	Dual	Dual
1	FG	FG	FG
2	ACN	ACN	ACN
3	ACL	ACL	ACL
4	-Vo	-Vo	+Vo2
5	NO PIN	COM	COM
6	+Vo	+Vo	+Vo1

Unit : mm Unless otherwise specified, all tolerances are ±0.50

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