

**FEATURES :**

- Universal Input 90~264VAC
- High Efficiency Up To 85%
- Protection: Short Circuit /Overload/Over Voltage
- Fully Encapsulated Plastic Case
- Internal Input Filter
- 3 Years Warranty
- ROHS Compliant

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 %)
GA015-S03	13.0	3.3	4000	100	72
GA015-S05	15.0	5	3000	100	78
GA015-S12	18.0	12	1500	100	82
GA015-S15	18.0	15	1200	150	82
GA015-S24	19.0	24	800	150	83
GA015-S48	19.0	48	400	240	85
GA015-D05	15.0	±5	±1500	100	75
GA015-D12	15.0	±12	±625	150	79
GA015-D15	15.0	±15	±500	150	80
GA015-D24	15.0	±24	±320	150	80
GA015-D0512	14.8	Vo1=+5, Vo2=+12	Io1=2000, Io2=400		74
GA015-D0515	14.5	Vo1=+5, Vo2=+15	Io1=2000, Io2=300	100(Vo1) 150(Vo2)	74
GA015-D0524	14.8	Vo1=+5, Vo2=+24	Io1=2000, Io2=200		76

**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		10	A
		Vi:230VAC		20	A
Input Fuse	VDE/UL/CCC FUSE 2.5A/250V (Slow blow)				



AC-DC Converter

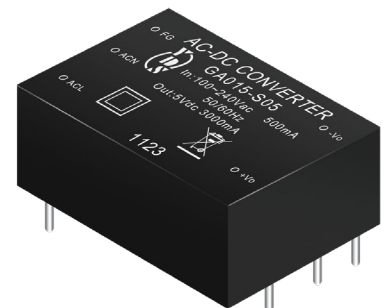
**GA015 SERIES**

13~19Watt

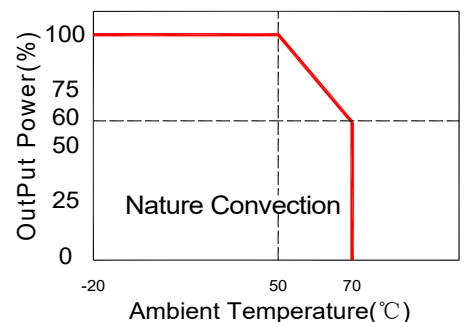
3KV Isolated

Single & Dual Output

Module



**Temperature Derating Graph**



Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Output Voltage Accuracy	Vi nom, Io nom	3.3V,5V Models		±3	%
		12...48V Models		±2	%
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			
		<b>Protection type:</b> 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				
	<b>Protection type:</b> 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

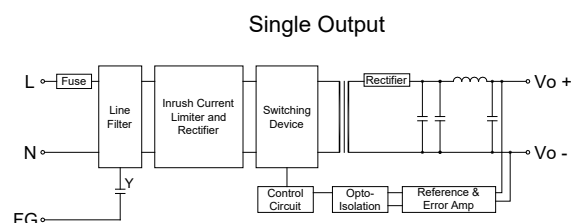
Parameters	Conditions	Min	Typ	Max	Units
Switching Frequency	Vi nom, Io nom		65		KHz
Isolation Voltage	Input / Output		3KVac/ 5mA/5Secs		
Isolation Resistance	Input / Output, @500 Vdc	100			MΩ
Operating Temperature	Operating at Vi nom, Io nom	-20		+70	°C
Derating	Vi nom, Io nom+51 to 71°C			2	%/°C
Storage Temperature	Non Operational	-40		+85	°C
Relative Humidity	Vi nom, Io nom			95	% RH
Safety Standards	EN60950-1 approved				
EMI Conduction & Radiation	Compliance to EN55022				
EMS Immunity	Compliance to EN55024				
Dimension	L69.85x W48.01 x H23.37mm L2.75x W1.89 x H0.92 inches				
Cooling	Free air convection				

Part Number

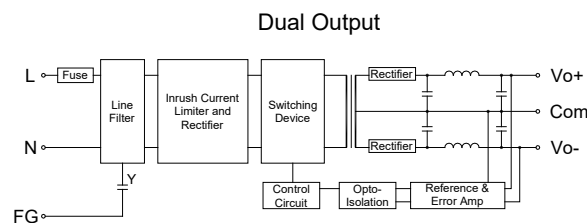
G A 015 - S 03  
A B C D E

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

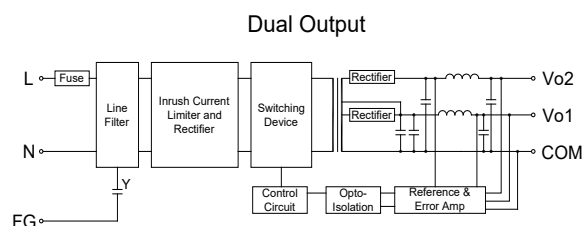
Circuit Schematic(1)



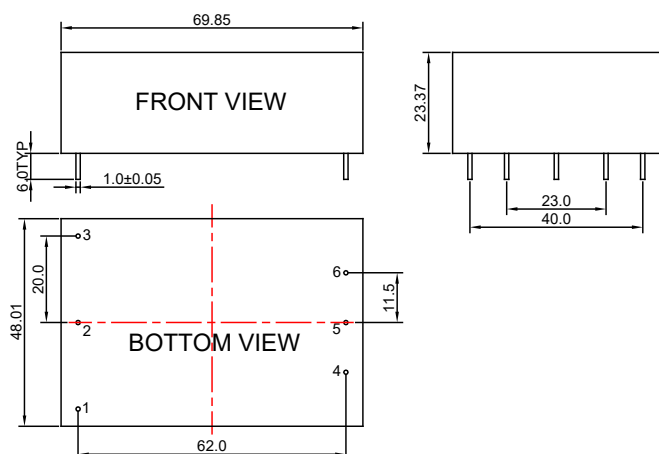
Circuit Schematic(2)



Circuit Schematic(3)



## Markings and Dimensions



PIN	Model		
	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  $\pm 0.50$