

FEATURES :

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

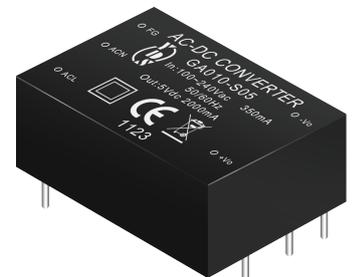
YUAN DEAN SCIENTIFIC



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 | | 74 |
| GA010-D0515 | 10.0 | Vo1=+5, Vo2=+15 | Io1=1400, Io2=200 | 100(Vo1) 150(Vo2) | 74 |
| GA010-D0524 | 10.0 | Vo1=+5, Vo2=+24 | Io1=1200, Io2=200 | | 75 |

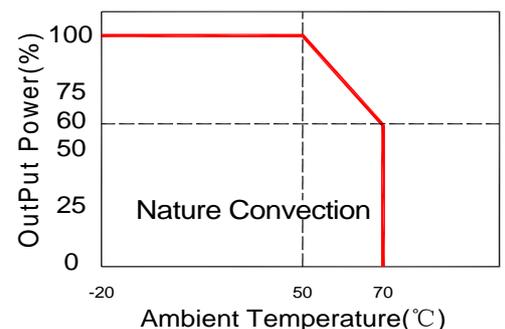
AC-DC Converter
GA010 SERIES
 10Watt
 3KV Isolated
 Single & Dual Output
 Module



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) | | | |

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~ | Single Output Models | | ±2 | % |
| | Io nom | 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

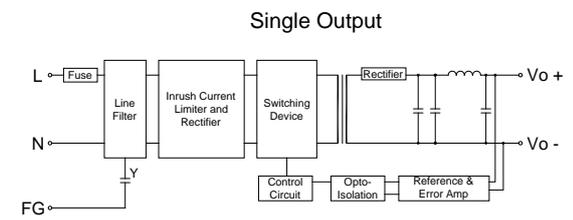
| Parameters | Conditions | Min | Typ | Max | Units |
|----------------------------|--------------------------------|-----------------------|------------------|-------|--------|
| Switching Frequency | Vi nom, Io nom | | 65 | | KHz |
| Isolation Voltage | Input / Output | | 3KVac/ 5mA/5Secs | | |
| Isolation Resistance | Input / Output, @500 Vdc | 100 | | | MΩ |
| Operating Temperature | Operating at Vi nom, Io nom | -20 | | +70 | °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 | L63.50x W44.45 x H19.05mm | L2.5x | W1.75 x | H0.75 | inches |
| Cooling | | Free air convection | | | |

Part Number

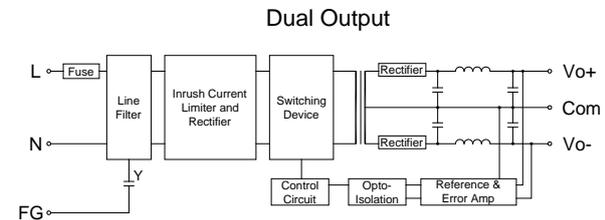
G A 010 - S 03
A B C D E

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

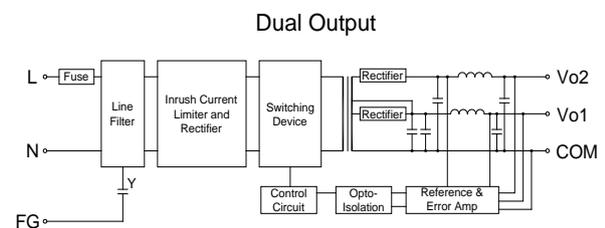
Circuit Schematic(1)



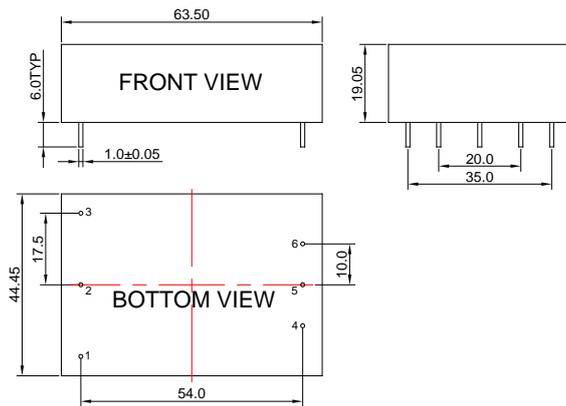
Circuit Schematic(2)



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 ± 0.50