## FEATURES :

- Universal Input 85~305VAC
- High Efficiency Up to 80%
- Protection: Short Circuit / Over Load
- Ultra Small Size
- 3 Years Warranty
- ROHS Compliant

YUAN DEAN SCIENTIFIC

# AC-DC Converter

# GS3 SERIES

## 3Watt

## 3KVac Isolated

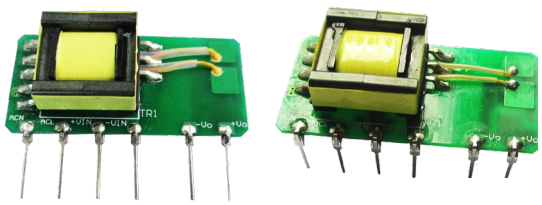
## Single Output

## Open Frame

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

| Part Number | Output Wattage | Output Voltage | Output Current | Efficiency | Max. Capacitive Load |
|---|---|---|---|---|---|
| | (W) | (VDC) | (mA) | (TYP %) | (μF) |
| GS3-S03(F) | 1.65 | 3.3 | 500 | 67 | 800 |
| GS3-S05(F) | 2.5 | 5 | 500 | 68 | 800 |
| GS3-S09(F) | 3 | 9 | 333 | 75 | 600 |
| GS3-S12(F) | 3 | 12 | 250 | 77 | 470 |
| GS3-S15(F) | 3 | 15 | 200 | 78 | 470 |
| GS3-S24(F) | 3 | 24 | 125 | 80 | 120 |

**Note:**
add suffix"F"for 90°bending Products. For example: GS3-S05F, GS3-S12F



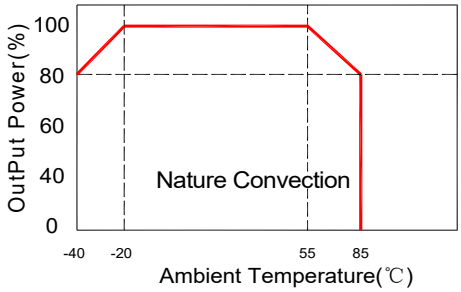
## Input Specifications

| Parameters | Conditions | | Min | Typ | Max | Units |
|---|---|---|---|---|---|---|
| Rated Input Voltage | Vo,Io nom | | | 100~277 | | Vac |
| Voltage Range | Vo, Io nom | AC in | 85 | | 305 | Vac |
| | | DC in | 70 | | 430 | Vdc |
| Line frequency | Vi nom, Io nom | | 47 | | 63 | Hz |
| Input Current | Io nom | Vi:115VAC | | | 0.10 | A |
| | | Vi:230VAC | | | 0.05 | A |
| Inrush Current | Io nom | Vi:115VAC | | 10 | | A |
| | | Vi:230VAC | | 15 | | A |

## Output Specifications

| Parameters | Conditions | Min | Typ | Max | Units |
|---|---|---|---|---|---|
| Output Voltage Accuracy | Vi nom, Io nom | | | ±5 | % |
| Minimum Load | Vi nom | 0 | | | % |
| Line Regulation | Io nom, Vi min...Vi max | | ±1.5 | | % |
| Load Regulation | 5%~100% Load | | ±3.5 | | % |
| No Load | | | | 0.5 | W |
| Ripple & Noise | Vi nom, Io nom, BW=20MHz(3.3-5V) | | 50 | 150 | mVp-p |
| Ripple & Noise | Vi nom, Io nom, BW=20MHz(9-24V) | | 80 | 150 | mVp-p |
| 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 | | | |

## Temperature Derating Graph

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E-MAIL：ydsweb@yds.com.tw
Rev:2 2018/09/11

## General Specifications

| Parameters | Conditions | Min | Typ | Max | Units |
|---|---|---|---|---|---|
| Switching Frequency | Vi nom, Io nom | | | 60 | KHz |
| Isolation Voltage | Input / Output | | 3KVac/ 5mA/5Secs | | |
| Isolation Resistance | Input / Output,@500 Vdc | 100 | | | MΩ |
| Operating Temperature | Refer to Temperature Derating Graph | -40 | | +85 | ℃ |
| Storage Temperature | Non Operational | -40 | | +105 | ℃ |
| Relative Humidity | Vi nom, Io nom | | | 85 | % RH |
| Safety Standards | Design refer to UL60950-1,IEC60950-1 | | | | |
| EMI Conduction & Radiation | EN55032,CLASS B(See Fig. 1 for recommended circuit) | | | | |
| EMS Immunity | EN61000 (See Fig. 1 for recommended circuit) | | | | |
| Dimension | L35.0 x W11.0 x H18.0 mm | | | | |
| Cooling | Free air convection | | | | |

## Part Number

GS3 - S 05 (F)
A B C D

A : Series
B : Single Output
C : Output Voltage
D : Package

## EMC Solution-Recommended Circuit

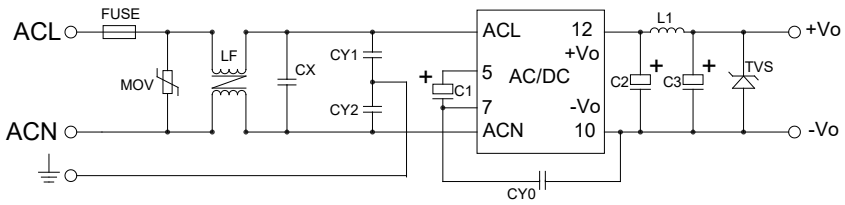


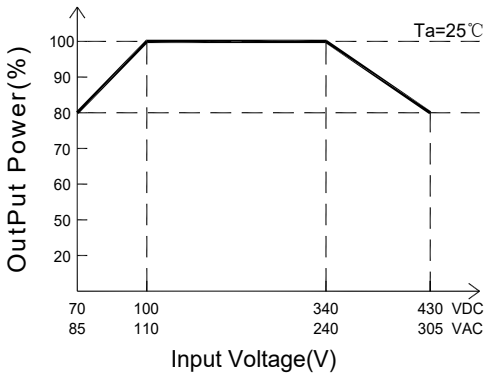

Fig.1

| | 3.3~24V |
|---|---|
| FUSE | 250V/1A |
| MOV | 07D471K |
| LF | UU9.8,30mH Min |
| CX | 0.1uF/275V |
| CY1 | 470pF/250V |
| CY2 | |

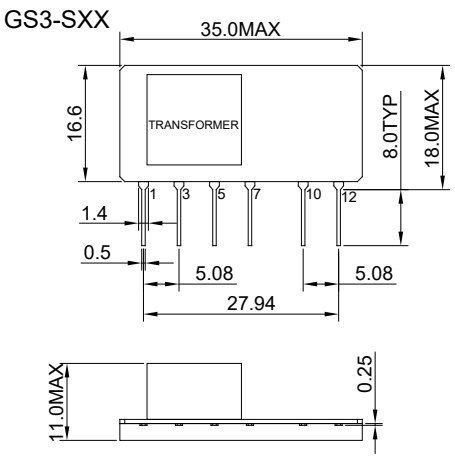
| | 3.3~5V | 9~15V | 24V |
|---|---|---|---|
| C1 | 10uF/400V | | |
| CY0 | 1000pF/250V | | |
| C2 | 330uF/35V | 220uF/35V | 68uF/35V |
| C3 | 220uF/35V | 68uF/35V | |
| L1 | 2.2uH | | |

| | 3.3~5V | 9V | 12V,15V | 24V |
|---|---|---|---|---|
| TVS | SMBJ7.0A | SMBJ12A | SMBJ20A | SMBJ30A |

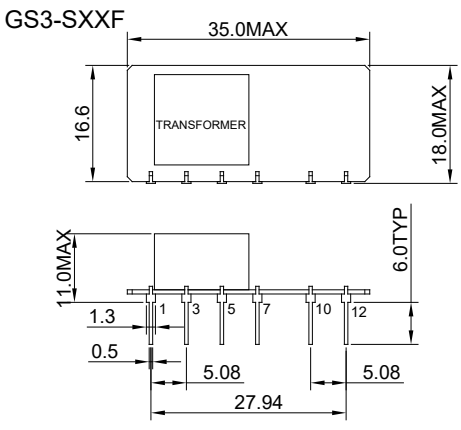
## Input Voltage Derating Graph




## Markings and Dimensions




| | Model |
|---|---|
| PIN | Single |
| 1 | ACN |
| 3 | ACL |
| 5 | +V(cap) |
| 7 | -V(cap) |
| 10 | -Vo |
| 12 | +Vo |




UNIT:mm Unless otherwise specified,all tolerances are ±0.5

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Rev:2 2018/09/11