# 50W AC-DC Triple Output Industrial Adaptor

# GP50A series

User's Manual

Video

UL62368-1 BS EN/EN62368-1 (Except for GP50A58F-R1B) TPTC004 IEC62368-1

ECO Household Automate Industrial Security Network Telecom

## Features

- Universal AC input / Full range
- 3 pole AC inlet IEC320-C14, Class I power unit
- No load power consumption < 0.3W
- **Energy efficiency level** VI
- Comply with EISA 2007/DoE
- Protections: Short circuit / Overload / Over voltage
- Fully enclosed plastic case
- -20 ~ +70℃ working temperature
- LED indicator for power on
- Dual output available (optional)
- ± 16V /+48V also available for video system (optional, order NO. : GP50A58F-R1B)
- 3 years warranty

## Applications

- Consumer electronic devices
- Telecommunication devices
- Office facilities
- Industrial equipments

## GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

## Description

GP50A is a 50W triple-output desktop type green adaptor series, complying with the mandatory energy saving standard USA EISA 2007/DoE (Level VI). Adopting Class I design and utilizing the standard inlet IEC320-C14, it is designed with FG and uses the 94V-0 flame retardant plastic enclosure, which can effectively prevent electric shock hazards. This series operates from 90~264VAC and offers three models with the output voltage sets +5V/+12V/-5V, +5V/+12V/-12V, +5V/+15V/-15V and can option +16V/+48V/-16V. Its supreme advantages includes the less-than-0.3W no load power consumption, the capability of working under -20~+70℃ ambient temperature, complete protection functions and three-year warranty and the compliance to the international safety certification such as CB, TUV, UL, CE and FCC. GP50A is a multiple-output green adaptor with high safety, high reliability and high quality.

## Model Encoding

**GP50 A 13A -R1B**

- DC plug type: R1B: Plug for standard model, power DIN 5 pin; Other options available by customer requested (see Page 4)
- Output voltage
- IEC320-C14 3pin AC input
- Rated wattage
- Series name

# 50W AC-DC Triple Output Industrial Adaptor — GP50A series

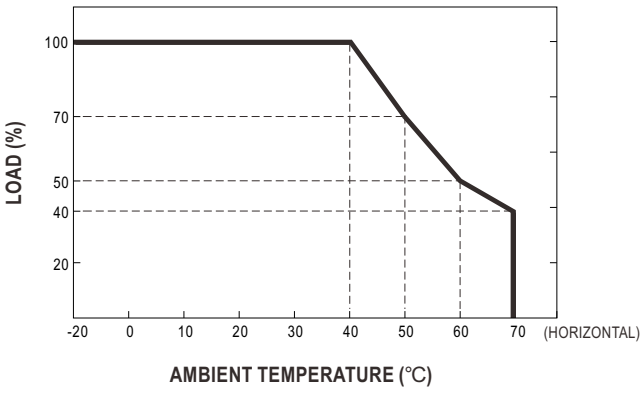
## SPECIFICATION

| ORDER NO. | | GP50A13A-R1B | | | GP50A13D-R1B | | | GP50A14E-R1B | | | GP50A58F-R1B (option) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OUTPUT | SAFETY MODEL NO. | GP50A13A | | | GP50A13D | | | GP50A14E | | | GP50A58F | | |
| | DC VOLTAGE Note.2 | 5V | 12V | -5V | 5V | 12V | -12V | 5V | 15V | -15V | 16V | 48V | -16V |
| | RATED SET CURRENT | 4A | 2A | 0.5A | 4A | 2A | 0.5A | 4A | 1.5A | 0.5A | 2A | 0.15A | 2A |
| | CURRENT RANGE | 0 ~ 4.0A | 0.3 ~ 2.0A | 0.1 ~ 0.5A | 0 ~ 4.0A | 0.3 ~2.0A | 0.1 ~0.5A | 0 ~ 4.0A | 0.3 ~ 1.5A | 0.1 ~0.5A | 0.4 ~ 2.0A | 30mA~ 150mA | 0.4 ~2.0A |
| | RATED POWER | 46.5W | | | 50W | | | 50W | | | 71.2W | | |
| | RIPPLE & NOISE (max.) Note.3 | 50mVp-p | 100mVp-p | 100mVp-p | 50mVp-p | 150mVp-p | 100mVp-p | 50mVp-p | 150mVp-p | 150mVp-p | 180mVp-p | 180mVp-p | 180mVp-p |
| | VOLTAGE TOLERANCE Note.4 | ±5.0% | ±3.0% | -5% ~ +10% | ±5.0% | ±3.0% | -5% ~ +8% | ±5.0% | ±3.0% | -5% ~ +15% | ±5.0% | -5% ~ +10% | -5% ~ +10% |
| | LINE REGULATION Note.5 | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% |
| | LOAD REGULATION Note.6 | ±5.0% | ±3.0% | ±5.0% | ±5.0% | ±3.0% | ±5.0% | ±5.0% | ±3.0% | ±5.0% | ±5.0% | ±5.0% | ±5.0% |
| | SETUP, RISE, HOLD UP TIME | 1500ms, 50ms, 20ms / 230VAC 2500ms, 50ms, 16ms / 115VAC at full load | | | | | | | | | | | |
| INPUT | VOLTAGE RANGE Note.7 | 90 ~ 264VAC 135~ 370VDC | | | | | | | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | | | | | | | |
| | EFFICIENCY (Typ.) | 83.5% | | | 84% | | | 84.5% | | | 86% | | |
| | AC CURRENT | 1.6A / 100VAC 0.8A / 230VAC | | | | | | | | | | | |
| | INRUSH CURRENT (max.) | Cold start 35A/115VAC 65A / 230VAC | | | | | | | | | | | |
| | LEAKAGE CURRENT (max.) | 0.75mA / 240VAC | | | | | | | | | | | |
| PROTECTION | OVERLOAD | 120 ~ 200% rated output power | | | | | | | | | | | |
| | | Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | | | | | | | | | |
| | OVER VOLTAGE | Protection type : Clamp by zener diode, output short | | | | | | | | | | | |
| ENVIRONMENT | WORKING TEMP. | -20 ~ +70℃ (Refer to "Derating Curve") | | | | | | | | | | | |
| | WORKING HUMIDITY | 20% ~ 90% RH non-condensing | | | | | | | | | | | |
| | STORAGE TEMP., HUMIDITY | -20 ~ +85℃, 10 ~ 95% RH non-condensing | | | | | | | | | | | |
| | TEMP. COEFFICIENT | ±0.03% / ℃ (0 ~ 40℃) | | | | | | | | | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes | | | | | | | | | | | |
| SAFETY & EMC (Note. 8) | SAFETY STANDARDS | IEC62368-1, UL62368-1, CSA22.2, BS EN/EN62368-1(Except for GP50A58F-R1B ), EAC TP TC 004 approved | | | | | | | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:4242VDC , I/P-FG:2121VDC | | | | | | | | | | | |
| | ISOLATION RESISTANCE | I/P-O/P,I/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH | | | | | | | | | | | |
| | EMC EMISSION | **Parameter** | **Standard** | **Test Level / Note** | | | | | | | | | |
| | | Conducted emission | BS EN/EN55032(CISPR32),FCC PART 15 / CISPR22, CAN ICES-3(B)/NMB-3(B) | Class B | | | | | | | | | |
| | | Radiated emission | BS EN/EN55032(CISPR32),FCC PART 15 / CISPR22, CAN ICES-3(B)/NMB-3(B) | Class B | | | | | | | | | |
| | | Harmonic current | BS EN/EN61000-3-2 | Class A | | | | | | | | | |
| | | Voltage flicker | BS EN/EN61000-3-3 | ------- | | | | | | | | | |
| | EMC IMMUNITY | **Parameter** | **Standard** | **Test Level /Note** | | | | | | | | | |
| | | ESD | BS EN/EN61000-4-2 | Level 3, 8KV air; Level 2, 4KV contact | | | | | | | | | |
| | | RF field susceptibility | BS EN/EN61000-4-3 | Level 2, 3V/m | | | | | | | | | |
| | | EFT bursts | BS EN/EN61000-4-4 | Level 2, 1KV | | | | | | | | | |
| | | Surge susceptibility | BS EN/EN61000-4-5 | Level 3, 1KV/L-N, 2KV/L,N-PE | | | | | | | | | |
| | | Conducted susceptibility | BS EN/EN61000-4-6 | Level 2, 3V | | | | | | | | | |
| | | Voltage dips , interruption | BS EN/EN61000-4-11 | ＞95% dip 0. 5 periods, 30% dip 25 periods, ＞95% interruptions 250 periods | | | | | | | | | |
| OTHERS | LIFE | 3 years : 100% load 40℃, 8hours / day | | | | | | | | | | | |
| | MTBF | 280K hrs min. MIL-HDBK-217F (25℃) | | | | | | | | | | | |
| | DIMENSION | 146*75.5*43mm (L*W*H) | | | | | | | | | | | |
| | PACKING | 0.55kg; 36pcs / 21kg / CARTON | | | | | | | | | | | |
| CONNECTOR | PLUG | See page 4 | | | | | | | | | | | |
| | CABLE | See page 4 | | | | | | | | | | | |

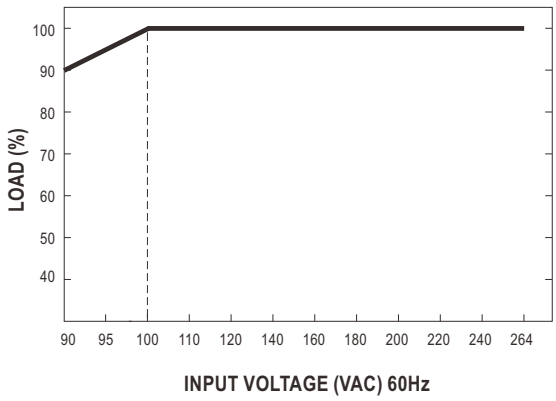
**NOTE**

1.All parameters are specified at 230VAC input, rated load, 25℃ 70% RH ambient.
2.DC voltage: The output voltage set at point measure by plug terminal & 50% load.
3.Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1μf & 47μf capacitor.
4.Tolerence: includes set up tolerance, line regulation, load regulation.
5.Line regulation is measured from low line to high line at rated load.
6.When measured between the light load (20% of rated load) and full load, the load regulation is within ±5% whereas the cross regulation is within ±15%.
7.Derating may be needed under low input voltages. Please check the static characteristics for more details.
8.The power supply is considered as an independent unit, but the final equipment still need to re-confirm that the whole system complies with the EMC directives. For guidance on how to perform these EMC tests, please refer to “EMI testing of component power supplies.” (as available on http://www.meanwell.com)
※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

## ■ Derating Curve

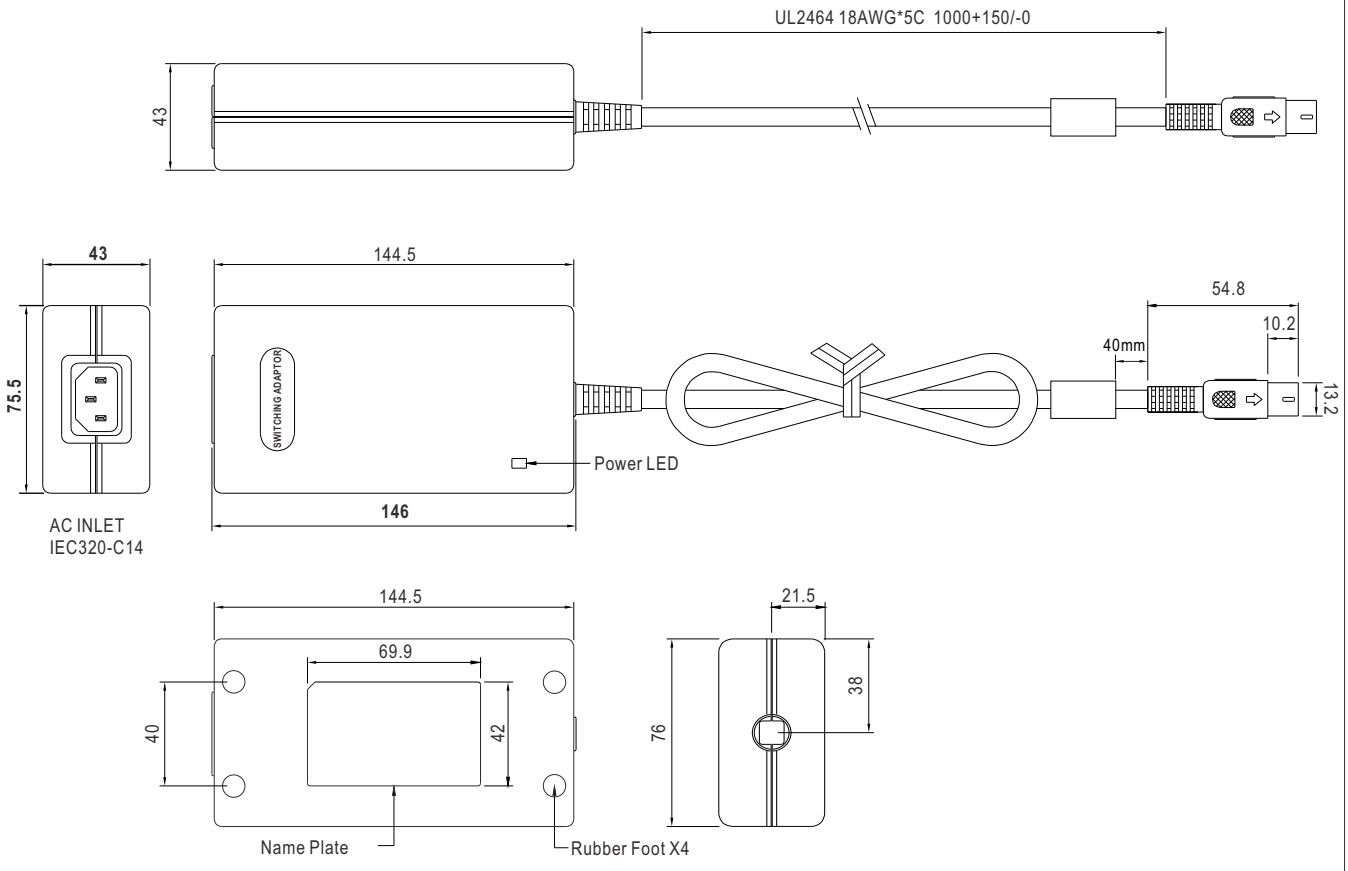



## ■ Static Characteristics



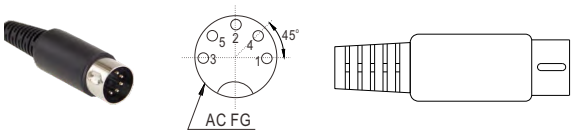

## ■ Mechanical Specification

Unit:mm

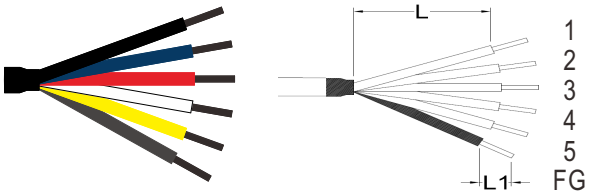


## ■ DC output plug

◎ Standard plug: R1B

| DIN 5 Pin (male) | Type No. | Pin Assignment | |
|---|---|---|---|
| | | PIN No. | Output |
|   | R1B | 1 | COM |
| | | 2 | COM |
| | | 3 | +5VDC |
| | | 4 | -Vout |
| | | 5 | +Vout |

◎ Optional DC plug:

| Stripped and tinned leads | Type No. | Pin Assignment | |
|---|---|---|---|
| | | PIN No. | Output |
|   Length of Land L1 by request (MW's standard length, L: 70 mm, L1: 10 mm) | by customer | 1(Black) | COM |
| | | 2(Blue) | COM |
| | | 3(Red) | +5VDC |
| | | 4(White) | -Vout |
| | | 5(Yellow) | +Vout |
| | | FG(Drain Wire) | FG |

## ■ Installation Manual

Please refer to : http://www.meanwell.com/manual.html