UL60950-1 EN60950-1 IEC60950-1

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

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

GP50A 13A-R1B

- R1B → DC plug type: R1B: Plug for standard model, power DIN 5 pin; Other options available by customer requested (see Page 4)
- 13A → Output voltage
- A → IEC320-C14 3pin AC input
- 50 → Rated wattage
- GP → Series name

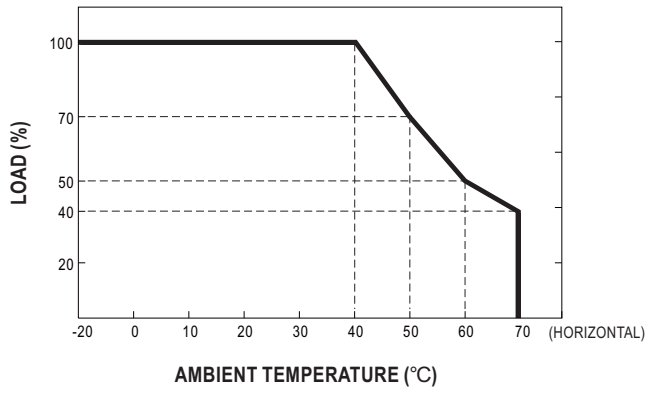
SPECIFICATION

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	1000ms, 50ms, 20ms / 230VAC 1500ms, 50ms, 16ms / 115VAC at full load											
INPUT	VOLTAGE RANGE Note.7	90 ~ 264VAC 135~ 370VDC											
	FREQUENCY RANGE	47 ~ 63Hz											
	EFFICIENCY (Typ.)	84%			84%			84.5%			86%		
	AC CURRENT	1.6A / 100VAC 0.8A / 230VAC											
	INRUSH CURRENT (max.)	Cold start 30A/115VAC 45A / 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	UL60950-1, CSA22.2, EN60950-1, 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	EN55032(CISPR32),FCC PART 15 / CISPR22, CAN ICES-3(B)/NMB-3(B)	Class B									
		Radiated emission	EN55032(CISPR32),FCC PART 15 / CISPR22, CAN ICES-3(B)/NMB-3(B)	Class B									
		Harmonic current	EN61000-3-2	Class A									
		Voltage flicker	EN61000-3-3	-------									
	EMC IMMUNITY	Parameter	Standard	Test Level /Note									
		ESD	EN61000-4-2	Level 3, 8KV air; Level 2, 4KV contact									
		RF field susceptibility	EN61000-4-3	Level 2, 3V/m									
		EFT bursts	EN61000-4-4	Level 2, 1KV									
		Surge susceptibility	EN61000-4-5	Level 3, 1KV/L-N, 2KV/L,N-PE									
		Conducted susceptibility	EN61000-4-6	Level 2, 3V									
		Voltage dips , interruption	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											

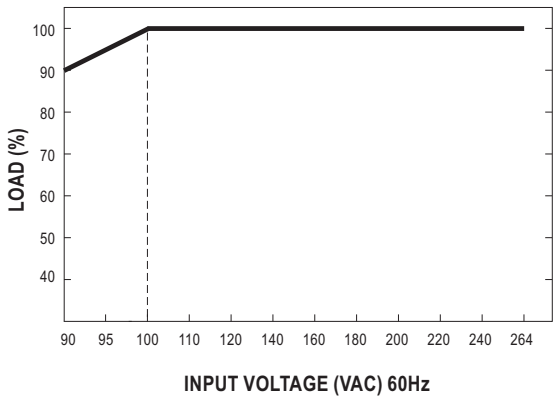
NOTE

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)

■ Derating Curve

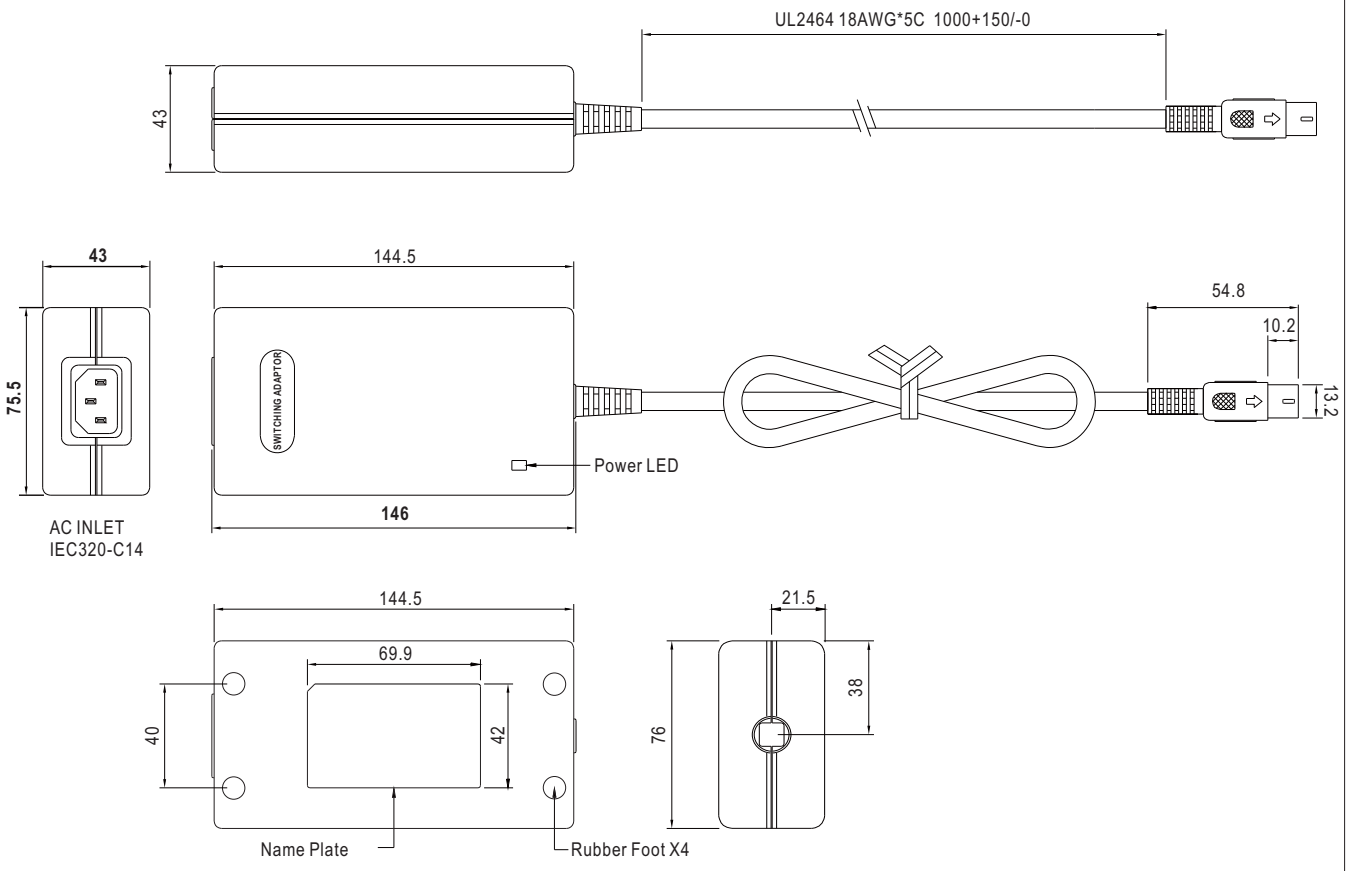


■ Static Characteristics



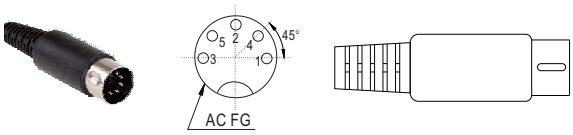
■ Mechanical Specification

Unit:mm

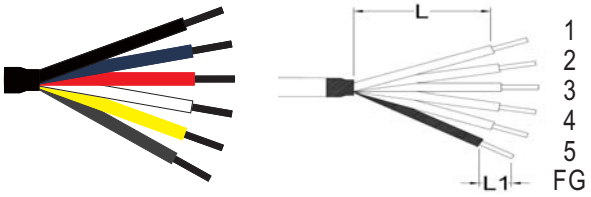


■ DC output plug

◎ 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