TECHNICAL SPECIFICATION

PRODUCT	Medical Power Supplies	SERIES	XH-PG600A-E

Picture



Dimension 157*86*43mm

Features

- 600W power supply
- Meet **IEC/EN60601-1** medical safety certification
- Protection EMC **IEC/EN60601-1-2** Class II power
- Wide operating voltage range
- Perfect Protections: Short circuit/Overload/Over voltage/Over current
- Highest Efficiency ≥94%
- 3 years product warranty
- **Customization: Open frame, Cooling option , Enclosure option**

*** Application：** Standard active medical equipment

■ Model Selector

Models	Output Voltage	Output Current AC100-240V	Ripple & Noise (MAX)	MAX Total Regulation
PG600A-E-12	12V	38.7A-48.3A	120mV	±2%
PG600A-E-13.2	13.2V	35.2A~43.9A	132mV	±2%
PG600A-E-15	15V	30.9A-38.7A	150mV	±2%
PG600A-E-19	19V	25.3A-31.6A	190mV	±2%
PG600A-E-24	24V	20.0A-25.0A	240mV	±2%
PG600A-E-28	28V	17.1A-21.4A	280mV	±2%
PG600A-E-32	32V	15.0-18.75A	320mV	±2%
PG600A-E-36	36V	13.3A-16.7A	360mV	±2%
PG600A-E-48	48V	10.0A-12.5A	480mV	±2%

■ Description

PG600A-E series is 600w highly reliable green medical power supply which complies with latest medical safety standards IEC/EN60601-1 and 2 x MOPP. The series has ultra-low leakage current, suitable for BF rated patient contact medical equipment. The efficiency of PG600A series is up to 94%, lower than the ultra-low no-load power consumption of 0.5W.

It offers ultra-wide input voltage range and operating temperature rang, include different output voltages between 12V and 48V. The perfect protection management ensure the safety and high reliability of the products. With addition of compact structure, small size, natural heat dissipation, easy to carry and so on, which makes the product an ideal solution for a wide range of medical devices.

■ Safety Approvals

CB	CB certification	Medical	Medical grade, Safety Approvals
ROHS	RoHS Compliant	2×MOPP	2 x MOPP Input to Output Isolation
ECO	Eco-Design	BF rated	Type BF Rated Power Supplies

- Safety approval: IEC/EN60601-1. 3.1 version
  GB9706.1-2016
- EMC：IEC/EN60601-1-2 4.0 version
  YY0505-2012

■ Input Specifications

Input Voltage Range	100 ~ 240 Vac	
Start-up Voltage Range	90 ~ 264 Vac	
Input Frequency Range	50~ 60 Hz	
AC Current	AC100-240V: 6. 2A-2.8A	Rated load
Inrush Current	35 A	Rated load
Power Factor	0.98	Rated load

■ Output Specifications

Model	PG600A-12	PG600A-13.2	PG600A-15	PG600A-19	PG600A-24	PG600A-28	PG600A-32	PG600A-36	PG600A-48
Output Voltage	12V	13.2V	15V	19V	24V	28V	32V	36V	48V
Voltage Range	11.5～12.5V	12.7～13.7V	14.5～15.5V	18.5～19.5V	23.5～24.5V	27.5～28.5V	31.2～32.8V	35.1～36.9V	46.8-49.2V
Output Current AC100-240V:	38.6～48.3A	35.2～43.9A	30.9～38.67A	25.3～31.6A	20.0～25.0A	17.1～21.4A	15～18.7A	13.3～16.7A	10.0～12.5A
Output Power AC100-240V:	464W-580W			480W-600W					
Output Ripple	⩽300mV						⩽ 320mV	⩽ 360mV	⩽ 480mV
Efficiency	⩾93%				⩾94%				
Load Regulation	±2.0%								
Line Regulati	±1.0%								

on	
Setup / Rise Time	2000ms， 30ms/230VAC 2000ms， 30ms/115VAC at full load

■ Other Specifications

Output Efficiency	93%~94% at 220Aac input/ full load
Standby Power Consumption	3W at 220Aac input/ full load
Power-on Output Delay	15mS / 30mS(MAX) at 220Aac input/ full load
Power On/Off Overshoot	5% / Rated input voltage, rated load

■ Protection specification

Overload Protection	105% ~ 150% rated output power (CC mode, Auto recovery)
Over Voltage Protection	Shut down output voltage, re-power on to recover

■ Environmental indicators

Working Temp.	-10℃ ~ +50 ℃	
Working Humidity	5 ~ 90% RH non-condensing	
Storage Temp.	-20 ~ 80 ℃	
Storage Humidity	5 ~95% RH non-condensing	
Temp. Coefficient	±0.03% (0 ~40℃)	
Vibration Resistance	10 ~ 500Hz， 2G 10 mins/1cycle	X、Y、Z axes/60 mins
Operating Altitude	0 ~ 5000 meters	For operation above 3500m (5000ft), the maximum operating temperature decreases by 2 ℃ for every 305m increase

Seismic Grade	4 Zone
Noise	35 dB

■ Safety & EMC

Safety Standards	IEC 60601-1:2005 + A1:2012 approved IEC 60601-1-6:2010 + A1:2013 approved		
EMC Emission	Project	Test Level / Note	Standard
	Conducted Emission (CE)	CLASS B	EN60601-1-2 IEC60601-1-2
	Radiated Emission (RE)	CLASS B	EN60601-1-2 IEC60601-1-2
	Harmonic Current	CLASS A	EN61000-3-2 IEC61000-3-2
	Voltage Flicker	Pst≤1.0, P1t≤0.65, Steady state voltage change dc<3.3%, Maximum relative voltage change /d max<3.3%, Relative voltage change /d(t)>500mS≤4%	EN61000-3-3 IEC61000-3-3
EMC Immunity	ESD	15KV Air discharge 8KV Contact discharge	EN61000-4-2 IEC61000-4-2
	RF	10V/m (80MHz~2.7GHz) 9~28V/m(385MHz~5.78GHz)	EN61000-4-3
	EFT	±2KV	EN61000-4-4 IEC61000-4-4
	SURGE	±1KV/Line-Line ±2KV/Line-Ground	EN61000-4-5 IEC61000-4-5
	CS	10V	EN61000-4-6 IEC61000-4-6
	MFI	30A/m	IEC6000-4-8
	Voltage DIP & interruption	Dip 100%U,5000ms,250 periods	EN61000-4-11 IEC61000-4-11
		Dip 70%Ut,500ms，25 periods	

		Dip 40%Ut,100ms,5 periods	(Note：240Vac/50Hz test)
		Dip 0%Ut， 10ms,half period	

■ Isolation Level

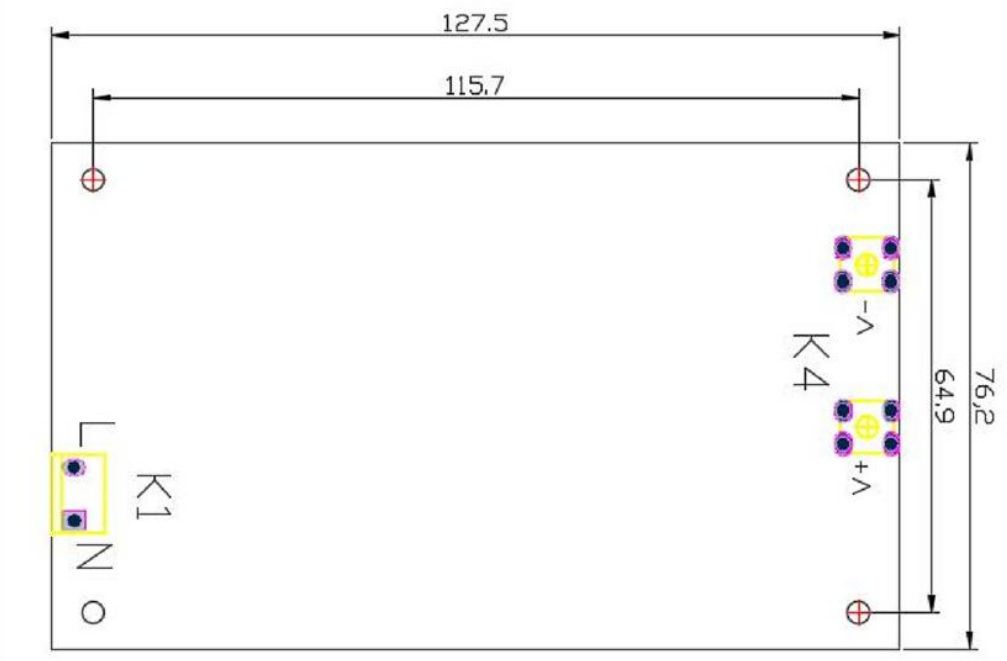
TEST ITEM	Grade	Standard
Input to Output	4000VAC (1×MOPP)	50Hz, 4000V 1 min, Leakage Current≤5mA, No breakdown and flaring.
Input to Ground	1500AC(1×MOPP)	50Hz, 1500V 1 min, Leakage Current≤5mA, No breakdown and flaring.
Output to Ground	500VDC	500V, DC 1 min, Leakage Current≤5mA, No breakdown and flaring.
Isolation Resistance	10MΩ	>10 MΩ & 90% RH & 500 VDC
Earth Leakage Current	264VAC	Leakage Current≤0.5mA
Isolation Level	Primary - secondary:2×MOPP	

■ Others

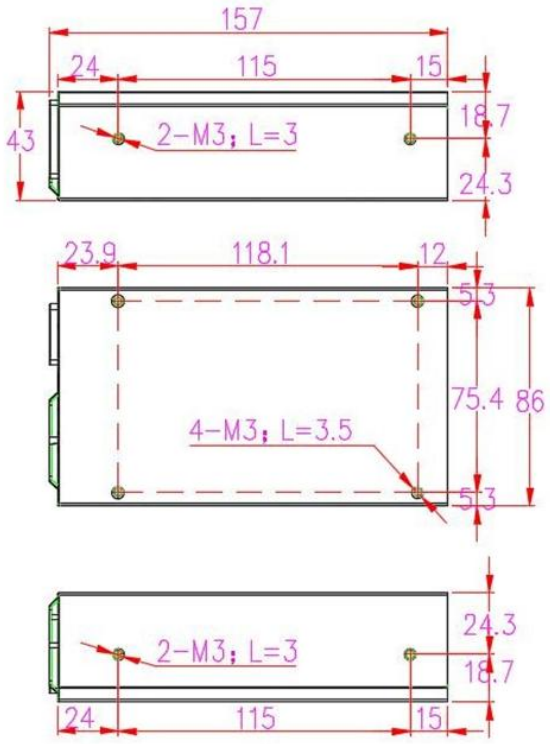
MTBF	720K hrs min. MIL-HDBK-217F (25℃)
External Dimension (mm)	157×86×43mm（L×W×H）
Installation Dimension (mm)	Please check enclosed picture（L×W×H）
Weight (g)	≤815g

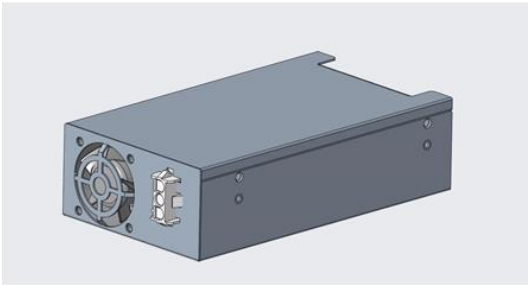
■ Mechanical Specification

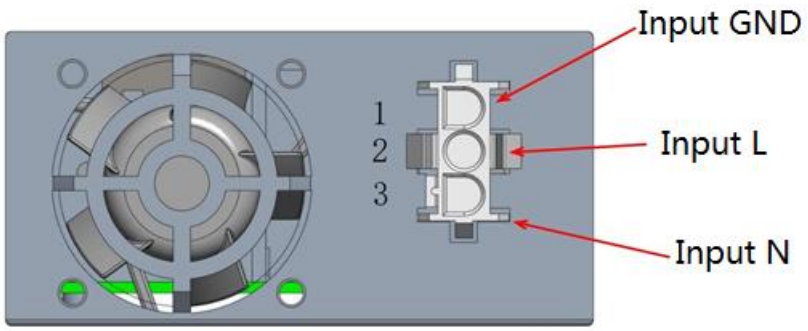
PCB dimension:



Installation picture:







NO.	Connectors	Note
1	Ac input socket adopts 6.35mm terminal socket Input	1: GND、2：AC L、 3: AC N
2	DC output adopts Terminal output	1:V-、 2: V+