

# **Customer:**

# **Customer Model Number:**

Product Part Number: PXX1317AWPL06

# 1. Input Requirement

## Input Voltage & Frequency

	Minimum	Nominal	Maximum
Input Voltage	90Vac	100-240Vac	264Vac
Input Frequency	47Hz	50/60Hz	63Hz

Input Current: 500mA Max. at 100Vac - 240Vac

### Inrush Current

The inrush current will not exceed 50A at 100-240Vac input and Max load for a cold start at  $25^{\circ}$ C.

## Efficiency

The No-Load power consumption shall be less than 0.1W at input 115/230 Vac.

The average active mode efficiency shall be higher than 86.20% at input 115/230 Vac.

International Efficiency Level VI

# 2. Output Requirement

	Minimum Value	Typical	Maximum Value	Test Condition at 25 °C
Output Voltage	12.83Vdc	13.5Vdc	14.17Vdc	0 $\sim$ 1.78A Loading
Output Load	0A	-	1.78A	
Ripple and Noise	-	-	200mVp-p	20MHz Bandwidth 10uF Elec. Cap.0.1uF Cer. Cap.
Output Overshoot	-	-	10%	MAX. Load & 100- 240Vac

## **Turn On Delay**

During turn on and turn off, no output voltage shall exceed its nominal voltage by more than 10% and no output shall change its polarity with respect to its return line. All outputs shall reach their steady state values within 3 seconds of turn on.

## Hold Up Time

DWG Control Number: Revision: Date: 03/22/2017



10 ms minimum at 115Vac/60Hz input at maximum load, and 20 ms minimum at 230Vac/50Hz input at maximum load.

### **Output Transient Response**

The power supply shall maintain output transient response time within 1500mV with a loading current change from 20% to 80% of maximum current and 0.5A/µs rise up /drop down test at end of output terminal.

# 3. Protection

#### **Over Voltage Protection**

Over voltage protection shall be included in the adaptor circuit. A single component failure must not cause an over voltage.

#### **Over Current Protection**

The adaptor must have a current limiting function on the output voltage. in overload mode, the output must drop to a low voltage. The OCP 4.0A max.

### **Short Circuit Protection**

The adaptor must withstand a continuous short circuit on the output without damage.

# 4. Environmental Requirement

**Operating Temperature**: 0°C ~40°C

Storage Temperature: -10°C  $\sim$  60°C

Operating Humidity:  $10\% \sim 90\%$ 

Storage Humidity:  $5\% \sim 95\%$ 

Attitude: Sea level to 2,000 m.

Cooling Method: Natural convection cooling.

# 5. Reliability and Quality Control

#### MTBF

When the power supply is operating within the limits of this specification the MTBF shall be at least 50000 hours at 25°C (MIL-HDBK-217F).

## Burn-In

The power supply shall withstand a minimum of 4 hours Burn-In test under full load at  $35^{\circ}$ C ~40°C room temperature, after test, product shall operate normally.

## **Component De-rating**

DWG Control Number: Revision: Date: 03/22/2017

Page 2 of 7



Semiconductor junction temperatures shall not exceed the manufacturer's maximum thermal rating.

# 6. Mechanical Requirement

Case Dimension: See Drawing

Cable Type: AWG18#/2C UL2468 BLACK

Cable Length: 1830 +50/-0 mm

Output Connector: 5.5 x 2.5 x 12 mm

# 7. Safety

### Safety Standard

The power supply shall be certified under the following international regulatory standards.

ltem	Country	Certified	Standard	Present
UL	USA	APPROVED	UL60950-1 2 <sup>nd</sup> /UL60065	M
CUL	Canada	APPROVED	CSA C22.2 NO.60950-1/UL60065	A
FCC	USA	APPROVED	PART 15 CLASS B	M
VDE/GS	Europe	APPROVED	EN 60950-1 2 <sup>nd</sup> /EN60065	М
CE	Europe	APPROVED	EN 60950-1 2 <sup>nd</sup> /EN60065	М
BS/UK	Britain		BS EN 60950-1 2 <sup>nd</sup> /EN60065	
SAA	Australia	APPROVED	AS/NZS 60950-1/NZS60065	М
000	China		GB4943	
Ko	Korea		K60950	
PSE	Japan	APPROVED	J60950 (H20)/J60065	
Others				

#### **Insulation Resistance**

Input to output: 10 M $\Omega$  min. at 500 VDC.

#### Dielectric Strength (Hi-Pot)

Primary to Secondary DC4242V or AC3000V 10mA 1 minute for type test, 3 seconds for product.

#### Leakage Current

The leakage current shall be less than 5mA for Class II when the power supply is operated maximum input voltage and maximum frequency.

# 8. EMC Standards

DWG Control Number: Revision: Date: 03/22/2017



The power supply shall meet the radiated and conducted emission requirements for EN55022 CLASS B,FCC PART 15 CLASS B.

#### EMS Standards(EN55024)

The power supply shall meet the following EMS standards.

 IEC61000-4-2 Electrostatic Discharge (ESD)
Static – discharge test by contract or air should be conducted with Static – discharge teeter, energy storage capacitance of 150pF, and discharge resistance of 330Ω. 8KV air discharge, 4KV contact discharge, Performance Criterion B.

• IEC61000-4-3 Radiated Electromagnetic Fields(RS) Radio- frequency Electromagnetic Field Susceptibility Test, RS, 80-1000MHz,3V/m, 80%AM(1KHz), Performance Criterion A.

• IEC61000-4-4 Electrical Fast Transient / Burst (EFT) Power Line to Line: 1KV Performance Criterion B.

• IEC61000-4-5 Lightning Surge Attachment Lightning Surge voltage of differential and common modes shall be applied across AC input lines and across input and frame ground. Power Line to Line (Common Mode): 1KV

• IEC61000-4-6 Conducted Radio Frequency Disturbances (CS) Conducted Radio Frequency Disturbances Test, CS, 0.15-80 MHz, 3V/m, 80%AM, 1KHz, Performance Criterion A.

• IEC61000-4-11 Voltage Dips/Short Interruption/Variations Voltage Dips, 30% reduction- 10ms, Performance Criterion B, 60% Reduction – 100ms, Performance Criterion C, Voltage Interruptions>95% Reduction- 5000ms, Performance Criterion C.

# 9. Other Requirement

#### **Hazardous Substances**

The components and used materials shall be in compliance with EU Directive 2011/65/EU "RoHS 2"

#### Energy Efficiency

The power supply shall meet the following EMS standards.

 The No-Load power consumption shall be less than 0.1W at input 115/230 Vac.

DWG Control Number: Revision: Date: 03/22/2017

Page 4 of 7



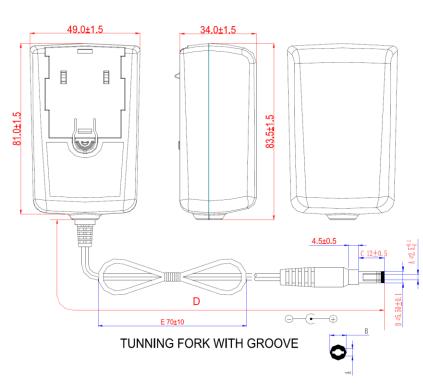
- The average active mode efficiency shall be higher than 86.20% at input 115/230 Vac.
- International Efficiency Level VI
- This power supply is therefore in compliance with the requirements of Energy Star requirements for external power supplies(EPS Version 2.0)

DWG Control Number: Revision: Date: 03/22/2017



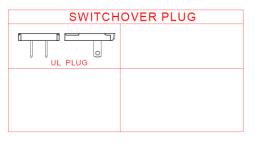
GOLDEN PACIFIC ELECTRONICS, INC. 16800 E. Gale Ave, City of Industry, CA 91745 U.S.A Phone#: 714-993-6970; 626-217-1049 Fax#:626-968-6897 Website: www.gpelectronics.com Email: sales@gpelectronics.com

# 10. Drawing



**External View** 





	$\Phi \mathbf{A}$	Φ <b>Β</b>	C	D
DIMENSION	2.5	5.5	12.0	1830
TOLERANCE	+0.1/-0	± 0.1	± 0.5	+50/-0
REMARK	AWG18#/2C UL2468 BLACK "Tunning fork with groove"			

DWG Control Number: Revision: Date: 03/22/2017

Page 6 of 7



# 11.Nameplate

