GOLDEN PACIFIC ELECTRONICS, INC.
560 South Melrose Street
Placentia, CA 92870
www.gpelectronics.com

Customer:

Customer Model Number:

Product Part Number: **PXX1210AW**

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1. SCOPE:

Purpose of this document is to specify the functional requirements of the 12W wall mounted AC-DC switching power supply with exchangeable AC input prong.

2. INPUT CHARACTERISTICS:

2.1 Input Voltage:

Nominal: 100 to 240 Vac.
Range: 90 to 264 Vac.

2.2 Input Frequency:

Nominal: 50 to 60 Hz.
Range: 47 to 63 Hz.

2.3 Input Current:

500mA rms maximum at the rated input voltage range and rated DC output load.

2.4 Inrush Current:

50Amps maximum at 100-240Vac input, cold start with rated DC output load @ 25 °C ambient temperature.

2.5 Stand By Power

The input power should be less than 0.3W with no load

3. OUTPUT CHARACTERISTICS:

3.1 Power

Voltage	Min.Load	Max.load	Peak	Output Power
12Vdc	0A	1000mA	-	12.0W

3.2 Output Voltage

11.4V~12.6V no load
11.4V~12.6V full load

3.3 Ripple And Noise:

Ripple and noise levels are measured at 20MHz bandwidth limit with parallel capacitors (10uF and 0.1uF) connecting across the output of power supply.

Voltage	**Ripple And Noise (Max.)**
12Vdc	120mVp-p

3.4 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.

3.5 Hold Up Time

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

3.6 Output Transient Response

The power supply shall maintain output transient response time within 800mV with a loading current change from 20% to 80% of maximum current and 0.5A/μs rise up /down test at end of output terminal.

3.7 Efficiency:

77.7% minimum at input (115Vac to 230Vac) and rated output Load.
International Efficiency Level V

3.8 Output connector specification:

Please see our website www.gpelectronics.com

3.9 Hazardous Substances

The components and materials used shall be compliant with EU Directive 2003/95/EC “RoHS”

4. PROTECTION REQUIREMENT:

4.1 Over-Voltage Protection

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

4.2 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.

4.3 Short-Circuit Protection

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

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5. ENVIRONMENTAL REQUIREMENT:

5.1 Operating Temperature:
0 °C to 40 °C, at full load operation

5.2 Storage Temperature:
-10 °C to 60 °C without package

5.3 Relative Humidity:
10% @ 0 °C & 90% @40 °C

5.4 Dropping (packed):
1 corner, 3 edges, and 3 surfaces (Height: 1m)

5.5 Reliability:
When the power supply is operating within the limits of this specification, the MTBF will be approximately 30,000 hours @ 25° C

5.6 Burn In:
The power supply shall withstand a minimum of **4** hours Burn-In test under full load at 35℃ ~40℃ room temperatue, after test, product shall operate normally.

5.7 Component Derating:
Semiconductor junction temperatures shall not exceed the manufacturer's maximum thermal rating

6. SAFETY APPROVAL:

6.1 Item Standard

Item	County	Certified	Standard
UL	USA	MEET	UL60950-1
UL	USA	MEET	UL1310
GS	Europe	MEET	EN60950-1
CE	Europe	MEET	Declared & CE Mark
SAA	AUSTRALIA	MEET	AS/NZS 60950
CCC	China	MEET	GB4943
CUL	Canada	MEET	CSA C22.2 NO.60950-1
PSE	JAPAN	MEET	J60950

6.2 Dielectric Strength (Hi-Pot):

Primary to secondary, 4242 Vac/3.5mA 1 minute for type test, 3 seconds for product.

6.3 Insulation Resistance:

Input to output: 50MOhms min. at 500Vdc

6.4 Leakage Current:

The leakage current shall be less than 0.25mA for Class II when the power supply is operated maximum input voltage and maximum frequency.

7. EMC STANDARDS

7.1 EMI Standards

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

7.2 EMS Standards

The power supply shall meet the following EMS standards

7.2.1 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.

7.2.2 IEC61000-4-3 Radiated Electromagnetic Fields(RS)

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

7.2.3 IEC61000-4-4 Electrical Fast Transient / Burst (EFT)

Power Line to Line: **1KV**
Performance Criterion B.

7.2.4 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: **1KV**
Line to Earth :
Performance Criterion B.

7.2.5 IEC61000-4-6 Conducted Radio Frequecy Disturbances (CS)

Conducted Radio Frequency Disturbances Test, CS, 0.15-80 MHz, 3V/m, 80%AM, 1KHz, Performance Criterion A.

7.2.6 IEC61000-4-11 Voltange Dips/Short Interruption/Variaions

Voltage Dips, 30% reduction- 10ms, Performance Criterion B, 60% Reduction – 100ms, Performance Criterion C, Voltage Interruptions>95% Reduction- 5000ms, Performance Criterion C

8. MECHANICAL REQUIREMENT:

8.1 Enclosure:

Adaptor dimension in millimeter (mm):
L: 69 x W: 43.5 x H: 32

8.2 Input Connector:

- Detachable wall mounted input prong
- Four types of interchangeable AC input prong: UL, UK, SAA, VDE
- Refer to section AC Prong Mechanical Drawing for more information

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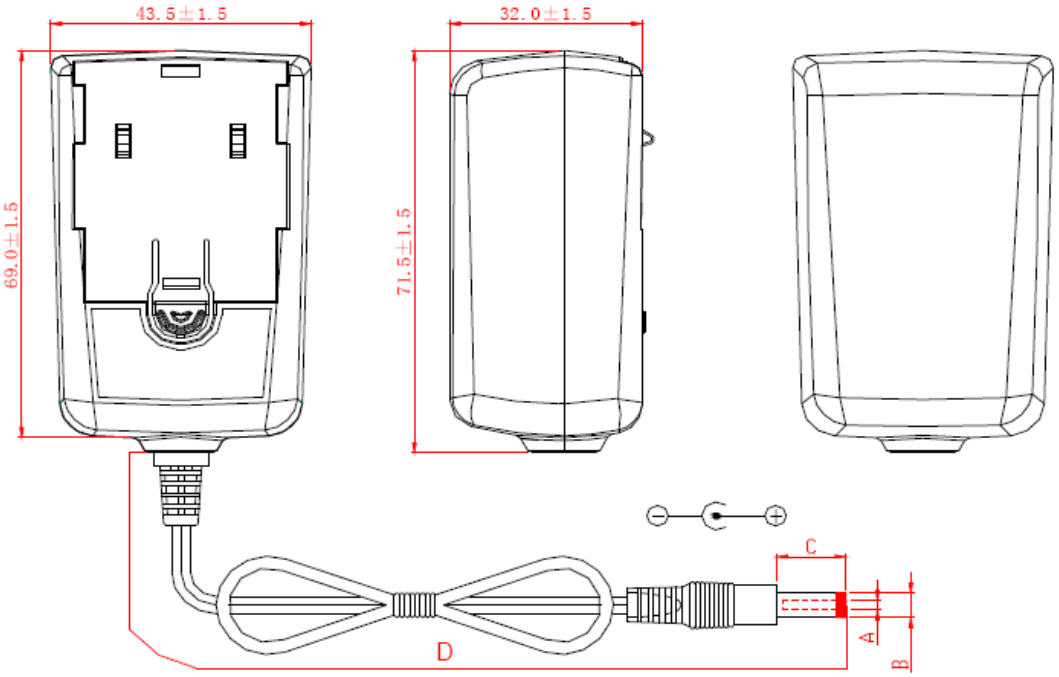
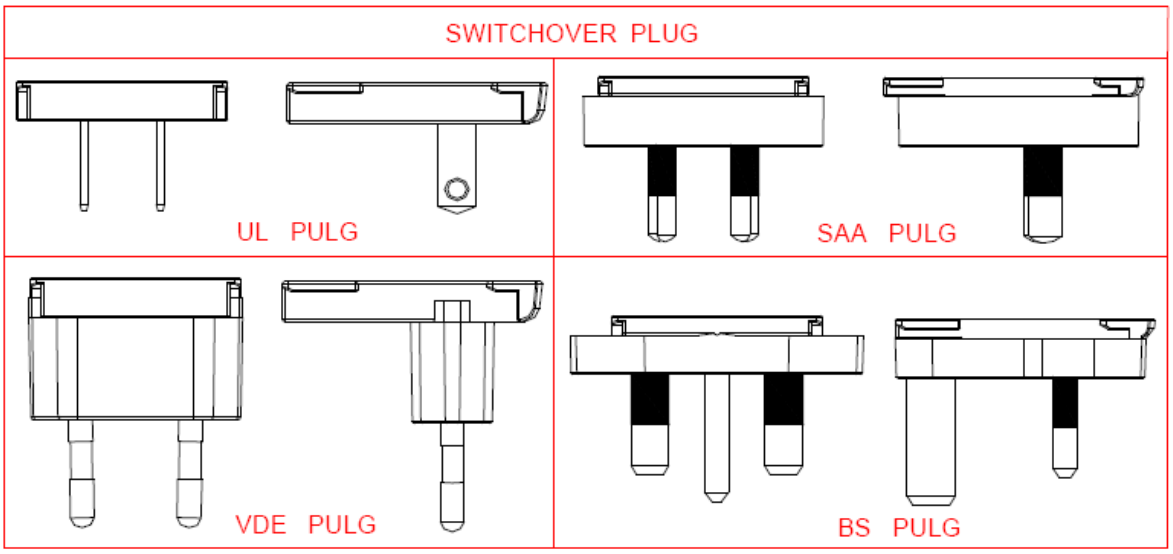
MECHANICAL DRAWING: (Dimensions in mm)





Output cord AWG#20/2C UL2468 BLACK, Length: 1830mm

DWG Control Number: 91-0120XX-19
Revision: 1
Date: 04/01/09