

POWERMMASTER

60J SMPSU 12V DC 5000mA
11-55-21 C-Pos IEC-C14

T1250-021



POWER

FEATURES

In-line Switch Mode Power Supply Units

In-line light weight compact Switch Mode Power Supply Units with a wide 96V-264V AC input voltage range to suit travel product applications. Standard IEC-C6, IEC-C8 or IEC-C14 inlet allows the correct IEC-C5, IEC-C7 or IEC-C13 power cord to be selected for different countries.

Electrical Safety Authority Approved. Popular models are shown in the table below.

Other voltages and choice of output plug can be custom made upon request.

INPUT REQUIREMENT

	MINIMUM	NOMINAL	MAXIMUM
AC Input Voltage	90 VAC	100 - 240 VAC	264 VAC
AC Input Frequency	47 Hz	50 / 60Hz	63 Hz
AC Input Current		1.5 A Maximum	
AC Inrush Current – 230V AC, 50Hz		Shall not exceed 80A. No damage shall occur and the input fuse shall not blow. Peak inrush current is limited to 80A for a cold start.	
Power Consumption at No Load (Maximum)		Input 240V AC 50 Hz - 0.5W max	
Configuration		2-conductors, <Active, Neutral>	

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OUTPUT REQUIREMENT

Normal DC Output Voltage	+12.0V (11.4V min; 12.6V max) Measured at the end of the output cable
Minimum Load Current	0.0 A
Nominal Load Current	5.0 A
Ripple and Noise	120mV Voltage measured P-P at 20MHz and output parallel with a low ESR 0.1uF & 47uF ceramic capacitor to ground at rated input and full load condition. A1100 240V AC 50/60Hz
Efficiency	85% Minimum At normal input voltage and full load
Hold Up Time (min)	10ms At 230V AC Input and Maximum Load
Over-Current Protection	Trip Range $> 6A$ and $\leq 12.5A$ The adaptor shall hiccup and the voltage will drop when an over current is applied to the output. The adaptor shall auto recover to its normal state when the over current condition is removed
Output Overshoot / Undershoot	10% When Power is switched on or off with full load condition
Short Circuit Protection	The adaptor's input power shall decrease when the output is short circuited and it shall withstand this condition without damage. It shall self-recover to the normal state when the fault condition is removed
Turn on Delay Time	Turning on from a cold start and with rated input voltage and a full load, the output voltage of the power supply shall reach the steady state vale within 5 seconds
Output Dynamic Response	The power supply shall maintain an output transient response time within 10ms with a load current change from 20% to 80% of maximum current and 0.5A/ μ s rise up vor drop down tested at the output terminals

RELIABILITY

Dielectric withstanding voltage test (Hi-pot test)	4,242V DC, 10mA, 1 minute for type test (Primary to Secondary) 4,242V DC, 10mA, 3 seconds for production (Primary to Secondary)
Insulation Resistance	$> 10M\Omega$ at 500V DC between input and output
Leakage Current	$< 0.25mA$ at maximum input voltage

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ENVIRONMENTAL SPECIFICATIONS

Cooling	Natural Convection
Operating Temperature	0°C to 40°C
Storage Temperature	-30°C to +70°C
Operating Humidity	10 ~ 90%
Storage Humidity	10 ~ 90%
Operating Altitude	Sea Level to 2,000m
Storage Altitude	Sea Level to 2,000m
Operating Vibration	1.0mm, 10-55Hz, 15 minutes per cycle for each axis (X, Y, Z)
Storage Vibration and Shock	The power supply (packed for shipping) shall withstand normal transportation vibration per MIL-STD-810D, method 514 and procedures X

RELIABILITY

Mean Time Between Failure (MTBF)	The power supply is designed to have a MTBF of at least 50,000 operating hours when operated within the limits of this specification at 25°C ambient temperature (MIL-HDBK-217F)
Burn-In Test	After a minimum of 4 hours burn-in at 35-40°C room temperature, normal input voltage and full load the power supply shall operate normally

MECHANICAL SPECIFICATIONS

Dimension	114.5(L) x 51.0(W) x 34.0(H)mm (nominal)
Net Weight	230g ± 10g
240V Mains Inlet	IEC-C6 3-pin 2-conductors, <Active, Neutral>
Output Cord	UL2468, 18AWG, 2 conductor, 1830 +100/-0mm
Output Plug	11(L) x 5.5(D) x 2.1(ID)mm
Impact Test	A sample is to be subjected to a single impact of about 6.78Nm on any surface that may be exposed to a blow during normal use. The impact is produced by dropping a steel 50mm diameter sphere with a mass of 500g ±25g from a height of 1.30m. For surfaces other than the top of the enclosure, the steel sphere is to be suspended by a cord and allowed to swing as a pendulum dropping through a vertical distance of 1.30m. After the test has been completed, the sample shall pass an electrical function test and the case shall not be cracked.

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COMPLIANCE

SAFETY

Safety Certification Standard: AS/NZS60950
Australian Certificate of Approval (Electrical Safety) GMA-102127-EA-002

EMC

EMC Standard: AS/NZS CISPR22

EMS

The power supply shall meet the following EMS Standards:

EN61000-4-2 Electrostatic Discharge (ESD) Immunity
Severity Level: level 3, Air Discharge: $\pm 8\text{KV}$
Severity Level: level 2, Contact Discharge: $\pm 4\text{KV}$
Performance Criterion: B

EN61000-4-3 RF Field Strength Immunity
Radio Frequency Electromagnetic Field Susceptibility
Test (RS), 80-1000MHz
Severity Level: level 2, 3V/M
Performance Criterion: A

EN61000-4-4 Electrical Fast Transient / Burst
(EFT) Immunity
Severity Level: level 2, line to line: 1.0KV
Performance Criterion: B

EN61000-4-5 Surge Immunity
Severity Level: level 2, line to line: 1.0KV
Performance Criterion: B

EN61000-4-6 Conducted Disturbances Immunity
Conducted Radio Frequency Disturbances Test
(CS), 0.15-80MHz
Severity Level: level 2, 3V(rms). Modulation signal
1kHz 80% AM
Performance Criterion: A

EN61000-4-8 Magnetic Field Immunity
Severity Level: level 1, 1A/M
Performance Criterion: A

EN61000-4-11 Voltage Dips and Short Interruption
Immunity
Voltage Dips and Short Interruption: 30%, 60%, > 95%

ENERGY EFFICIENCY

International Efficiency Level: IV
The power supply complies with the following standard:
European ErP Directive 2009/125/EC.
The TM of no load power consumption and average efficiency for external
power supplies is as Regulation 278/2009(stage 2).

HAZARDOUS SUBSTANCES

All components and materials used shall be in compliance with:
EU Directive 2002/95/EC "RoHS"
EU Directive "REACH"

All plastic materials that can be touched by human skin shall be in compliance with:
EU Directive 2005/84/EC "PHTs 16P"
EU Directive "REACH"

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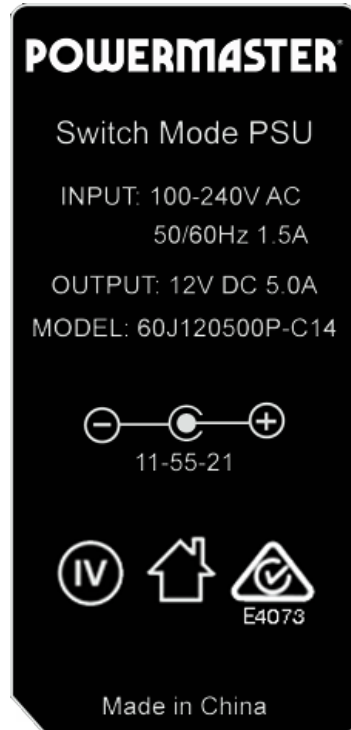
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RATING PLATE

Size: 79.6 x 37.8 x 0.3 +0/-0.2mm

Font: Arial. White words on black background.

Material: P.P Synthesised. Complies with 94V-2. Polished.



PRODUCT OUTLINE DRAWING

