

Wall Mount Switch Mode Power Supply Unit

T1210-25J - 12J Series



FEATURES

Wall mounted light weight and compact Switch Mode Power Supply Units with a wide 90V-264V AC input voltage range to suit travel product applications. The narrow width allows two adaptors to be used in a standard double power outlet. Insulated active and neutral pins meet AS/NZS3112 for improved electrical safety. Electrical Safety Authority Approved. Other voltages and choice of output plug can be custom made upon request.

OUTPUT

Output Voltage	12.0V DC Nominal (Min. 11.4V DC - Max. 12.6V DC)
Maximum Load Current	1.0A (Max)
Rated Output Power	12W
Ripple and Noise*	120mV
Output overshoot**	10% (Max)
Turn-on Delay (Max)	5 Seconds (Max)
Hold-up Time (Min)***	10mS (Min)
Dynamic Response	The Power Supply shall maintain output transient response time within 10ms with a loading current change from 20% to 80% of maximum current and 0.5A/ μ s rise up or drop down tested at output terminals.
Temperature coefficient	Output voltage temperature coefficient $\pm 0.05\%/^{\circ}\text{C}$
Rise Time	Start-up rise time of 10mS to rise to within regulation limits
Switching Efficiency	70.68% minimum at normal input voltage and output current from 100%, 75%, 50% and 25%.

* Voltage measured p-p with a 20MHz bandwidth oscilloscope. The output is paralleled with a 10uF low ESR electrolytic capacitor & a 0.1uF ceramic capacitor to ground at rated input and full load condition.

** When Power is switch on and off at full load condition

*** At 230V AC 50Hz and maximum load

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INPUT

	MINIMUM	RATED	MAXIMUM
Input Voltage	90V AC	100 – 240V AC	264V AC
Input Frequency	47 Hz	50 / 60 Hz	63 Hz
Input Current*			350mA
At full load cold start	The inrush current will not exceed 60A, do not result any damage & the input fuse shall not be blown up.		

* At 240v ac, maximum load

** At full-load, 25°C, cold start. There shall not be any damage and the input fuse shall not blow

POWER CONSUMPTION AT NO LOAD

Input current	350mA max at 100-240 V AC
Power consumption (no load)	0.5W max at input 230 V AC / 50Hz

PROTECTION

Over-current Protection *	> 1.2A and ≤ 2.5A (Trip Range at 240V AC 50Hz)
Short-circuit Protection	The adaptor's input power shall decrease when the output is short circuited and it shall be able to withstand this condition continuously without damage. There shall be self-recovery to the normal state when the fault condition is removed.

* The output voltage will drop when an over-current condition is applied to the output and there shall be self-recovery to the normal state when the over-current condition is removed (auto recovery)

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ENVIRONMENTAL

Cooling	Natural convection
Operating Temperature	0°C to +40°C
Storage Temperature	-30°C to +70°C
Operating Humidity	10 ~ 90 % Non-condensing
Storage Humidity	10 ~ 90 % Non-condensing
Altitude	Sea Level to 2,000m
Vibration and Shock	1.0mm, 10-55Hz, 15 minutes per cycle for each axis (X, Y, Z) The power supply shall be designed to withstand normal transportation vibration per MIL-STD_810D method 514 and procedures X, as it is mounted in the chassis assembly and packed for shipping.

MECHANICAL

Weight	125g maximum.
Input Plug Type	Wall type, AU-Pin, 2 Conductors, < Active, Neutral >
Output Cord	UL2464, 22AWG * 2C, Black
Output Plug Dimensions	11.0(L) x 5.5(D) x 2.5(ID)mm

RELIABILITY

Mean Time Between Failure (MTBF)	When the power supply is operating within the limits of this specification the MTBF shall be at least 50,000 at 25°C (MIL_HDBK-217F)
Burn-in Test	The power supply shall withstand a minimum of 4 hours burn-in testing under full load at 35°C ~ 40°C + / - 5°C room temperature. After the test, the product shall operate normally.

SAFETY

Compliance Standard	AS / NZS60950
Insulation Resistance	> 10MΩ at 500V DC
Dielectric withstanding voltage test (Hi-pot test) Primary to Secondary	4242V DC 5mA for 1 minute (sample) or for 3 seconds (production)
Leakage Current	< 0.25mA for Class II at maximum input voltage

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ENERGY EFFICIENCY

Compliance	MEPS: AS/NZS 4665.1, AS/NZS 4665.2
International Efficiency Level	V
No Load Power Consumption (230V AC 50Hz)	0.3W Max
Average Active Mode Efficiency*	> 77.8 %

* This measurement should be after the UUT working in a stable state and the average efficiency should be measured at four active loads: 25%, 50%, 75% and 100% of the rated load.

EMC COMPLIANCE

EN61000-4-2 Electrostatic discharge (ESD) Immunity
Severity Level: Level 3, Air Discharge: ± 8 KV
Severity level 2, Contact Discharge: ± 4 KV
Performance Criterion: B

EN61000-4-3 RF field strength immunity
Radio-frequency Electromagnetic Field Susceptibility Test (RS), 80-1000MHz,
Severity Level: Level2, 3V/M

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
Severity Level: Level 3, line to earth: 2.0KV

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

EN61000-4-11 Voltage Dips and Short Interruption Immunity
Voltage Dips and Short Interruption: 30%, 60%, >95%
Performance Criterion: B & C

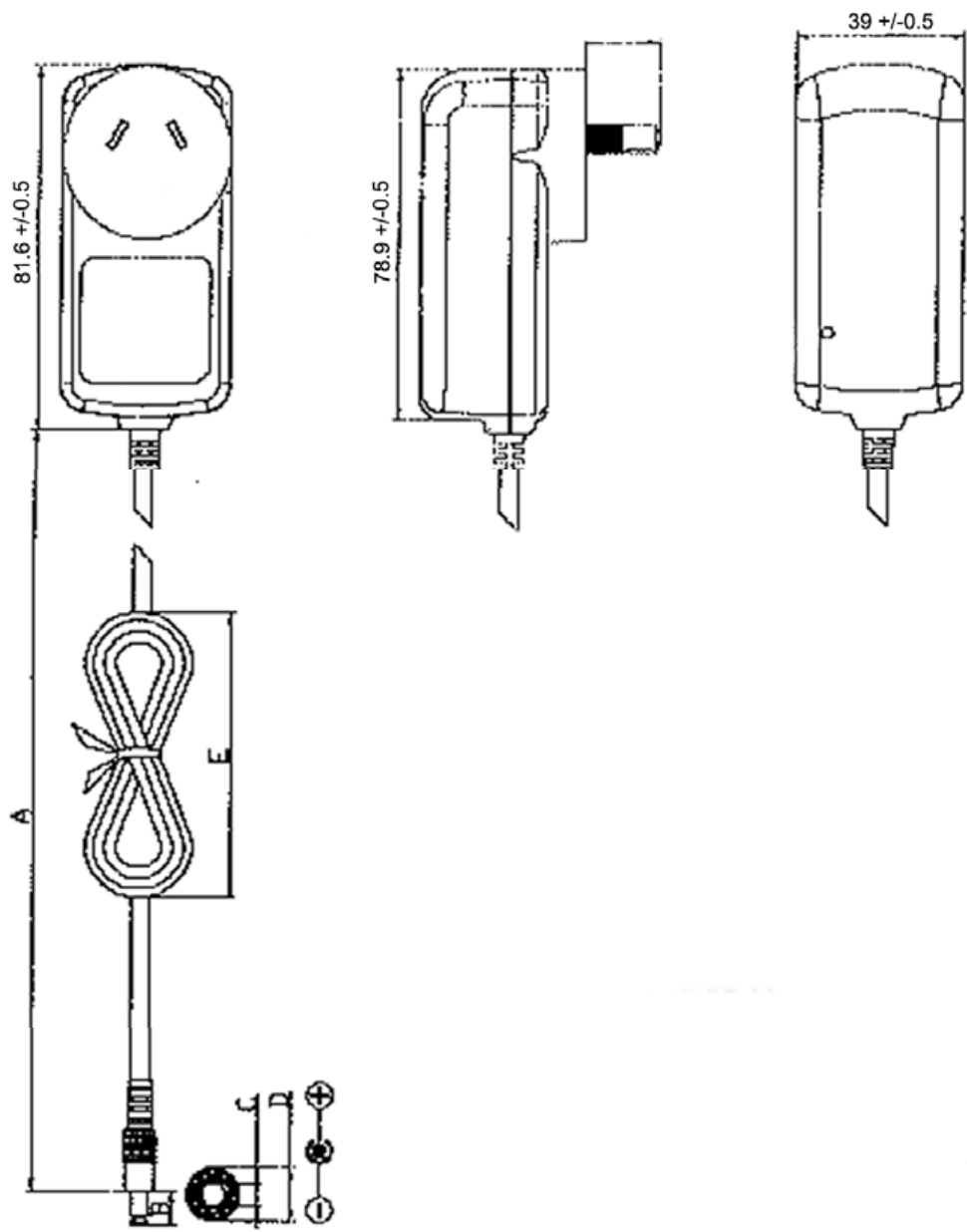
HAZARDOUS SUBSTANCES

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

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PRODUCT DRAWING



	A	B	C	D	E
DIMENSION	1800	11	2.5	5.5	80
TOLERANCE	+ 100 / - 0	± 0.5	± 0.1	± 0.1	± 10
DC CORD SPEC.	22 AWG*2C, Black				

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