

Power Supply

Description

12V DC, 3A Regulated AC Power Adapter UL and CSA listed AC to DC switching power supply suitable for a variety of portable electronic devices. Light weight, compact and highly efficient switch mode design incorporates regulated output within 3% of rated output, even with no load.

Electrical Requirement

Input Requirement

Input Voltage

Normal Voltage : 100 to 240Vrms

Voltage Range : 90 to 264Vrms

Input Frequency

From 47Hz to 63Hz

Input Current

<1.2Arms at 100V AC input

<0.6Arms at 240V AC input

Inrush Current

01. 30A max at cold-start at 25°C, DC output full-loading and 115V AC input.

02. 60A max at cold-start at 25°C, DC output full-loading and 230V AC input.

Output Requirement

Output Voltage, Current and Ripple

Output Voltage	Min. Output Voltage	Max. Output Voltage	Output Current	Output Ripple (Vp-p)
12V DC	11.4V DC	12.6V DC	3A	120mV

Output Voltage Regulation

The total output voltage regulation shall meet the above table, including the effects of line voltage variations, load current, ripple and noise, and the AC component of the load current. The effect of dynamic load changes is not included in this limit

Ripple and Noise

Tested ripple voltage is measured using oscilloscope with bandwidth limited to 20MHz. A 47µF electrolytic capacitor and a 0.1µF ceramic capacitor shall be connected to the connector in parallel.

Standby Power

When line input voltage(110V AC or 230V AC), the Standby Power must be less than 0.3W.

Efficiency

When line input voltage(110V AC or 230V AC), the efficiency shall be 80% or better under maximum load.

Start up/rise time

The output voltage should rise from 0 voltage to within regulation in less than 20msec with full loading.

Protection

Short Circuit Protection (Auto recovery)

The power supply shall not be damaged by short between DC output and DC ground.

Environmental Requirements

Temperature

Operation : 0°C to +40°C

Storage : -40°C to 70°C

Power Supply

Humidity

Operation : 20% - 85%
 Storage : 10% - 95%

Reliability

Mean Time between Failures (MTBF)

The power supply shall be designed and produced to have a mean time between failures (MTBF) of 20,000 operating hours

Temperature

Less than 60°C at nominal 100V AC to 240V AC input DC out put full loading and environment temperature 25°C ±1°C on top of plastic case

Burn-in

100% burn-in with 80-100% loading & 25-35°C environment temperature

Mechanical

Plastic Case : PC+ABS GE C2950 material, colour Black
 Physical size : 114mm(L) × 54mm(w) × 34(H)
 AC Cord : Nil (inlet meet to IEC C14)
 DC Cord : UL2464(EMI core) 20Awg, F5.5 × 2.5 × 12mm I plug(Centre+), 1200mm Black

Safety Requirement

Hi-Pot Test

Apply 3000V AC between primary and secondary for 1 minute. The leakage current should be less than 10mA

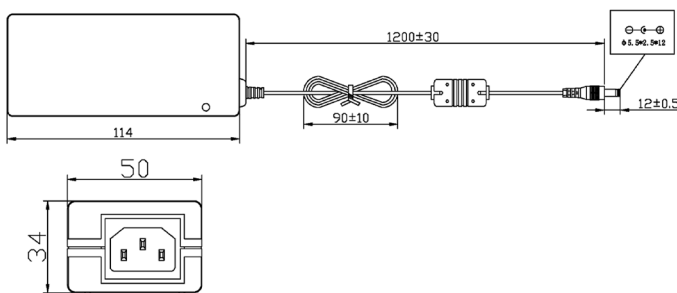
Insulation Resistance Test

Measure the resistance between primary and secondary with a 500V MΩ meter.
 The resistance shall be greater than 100MΩ.

Leakage Current Test

Leakage current shall be less than 0.25mA at 254V AC/50Hz.

Diagram



Dimensions : Millimetres

Part Number Table

Description	Part Number
AC/DC Power Supply, 1 Output, 36W, 12V, 3A	28-19380

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