

RoHS
Compliant



Descriptions:

These are a series of general purpose AC/DC adapters which convert 100V AC to 240V AC to a stabilized DC voltage of 5V with rated output current of 1,000mA. Connect the electrical power first and then add the load when using this SMPS.

Input Feature

Input Voltage and Frequency

The switching mode power supply shall meet all specifications when powered from the following sources.

Rating Voltage	Line Frequency	Minimum Voltage	Maximum Voltage
100-240V AC	50/60Hz	90V AC	264V AC

Efficiency

The minimum efficiency shall be 73.62% under 115V AC/230V AC input and output full load.

Input Current

The maximum input current shall be less than 0.2A.

Input In-rush Current

Peak inrush current shall be limited to 50A.

Input Leakage Current

The leakage current shall not exceed 0.25mA.

Output Feature

Output Voltage and Current

The switching mode power supply shall have one regulated DC output voltage: 5V DC. The table below defines the total regulation banding for the output, which includes line regulation, load regulation, transient response, and effects due to environmental conditions and aging. Voltage shall be measured at its output connector.

Output	Output Current Range		Output Voltage Range		Ripple & Noise
	Min.	Max.	Min.	Max.	Max.
+5V	0A	1A	4.7V	5.3V	150mVpp

Ripple & Noise Test: Add 0.1 μ F/50V ceramic capacitor and 10 μ F/50V aluminium electrolytic capacitor across the output terminal. Measured with 20MHz Bandwidth Oscilloscope.

Dynamic Response

The load current of the output is changed between 20% and 80% under full load at 0.25A/us; the excursion of the output shall not exceed 10% of the nominal output voltage. The output voltage shall be within 10% of the steady state voltage in 1ms.

Startup and Turn- on Delay

The switching mode power supply shall be able to start up into a resistive load up to the maximum rated current with maximum load capacitance of 1,000 μ F. The elapsed time between the application of input power and the attainment of output voltage to the nominal value shall not exceed 3 seconds.

Protection Feature

Over Current Protection

The switching mode power supply shall withstand a continuous over current without damage. It may be applied before power-up, or after power-up. The switching mode power supply shall perform normally again after the over current is removed.

Short Circuit Protection

Short circuit will not cause the switching mode power supply to damage, or any safety hazards. It shall perform normally again after the short circuit is removed.

Safety Standards

Safety

The switching mode power supply has approved by the following safety standards: UL60950

Dielectric Strength (HI-POT)

Input to Output Terminal : 4242V DC 3 Sec \leq 5mA.

Input to Case : 4242V DC 3 Sec \leq 5mA.

When DC voltage of 4.24kV is applied, and the voltage applied to the insulation under test, it gradually rises from zero to the prescribed voltage in 1s, and holds at the value for 3s between the input and output, and between the input and housing, the current sensitivity shall be less than 5mA, after the test, the switching mode power supply shall exhibit no electrical and mechanical abnormalities.

Reliability

Burn-in

The burn-in test will be performed at least 4 hours at 25°C under full load.

MTBF

When the operation is complying with this specification, the MTBF of switching mode power supply will be 25K hours at 25°C.

Mechanical Specifications

Weight	: About 42g
Input socket	: UL USB Plug.
Output Cord	: DCD2157, 22AWG UL2464, 1.5m Black
Output Connector	: Mini USB.

Environmental Conditions

The switching mode power supply shall meet all requirements of this specification on any combination of operation ambient conditions and after exposure to any combination of non-operation ambient conditions specified in this section.

Temperature

Operating Temperature : 0°C to +45°C

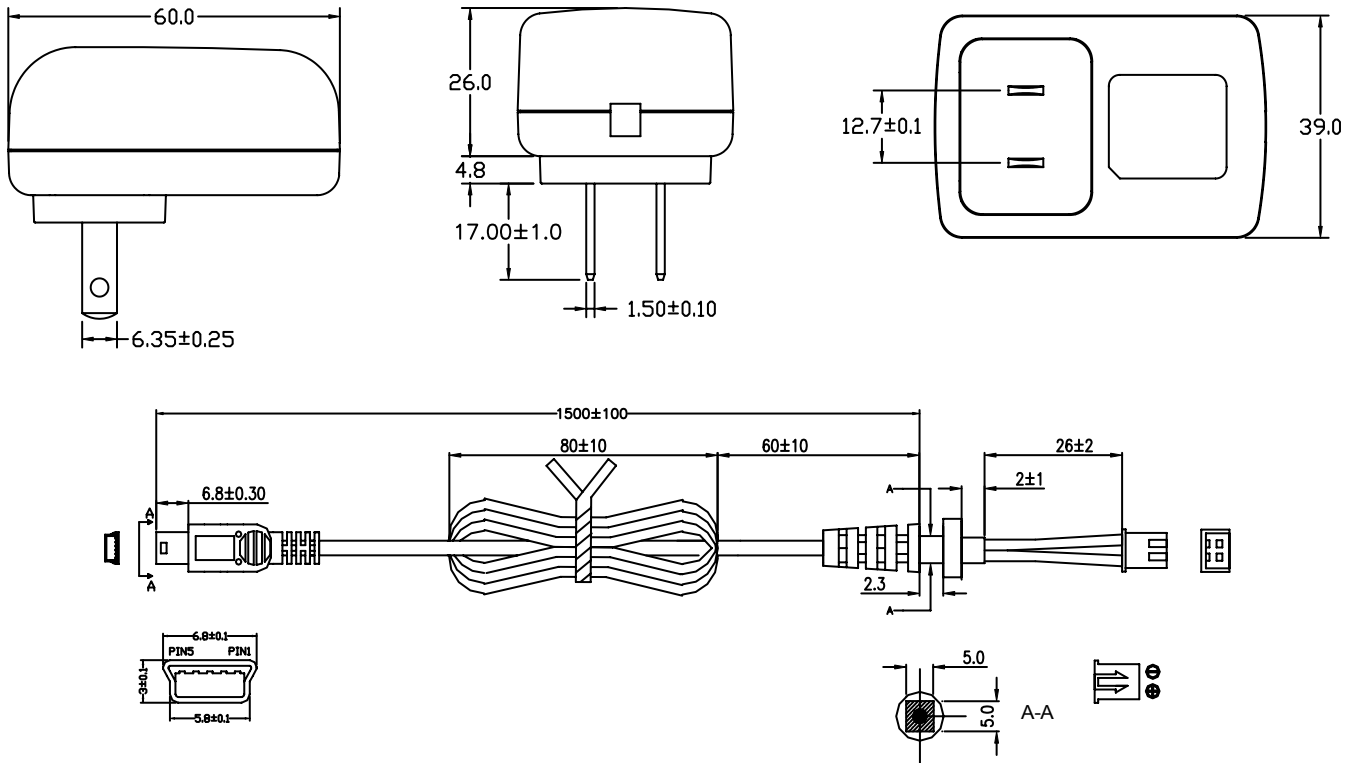
Storage Temperature : -20°C to +80°C

Humidity

Operating Humidity : 10% to 90% (non condensing)

Relative Humidity : 5% to 95% (non condensing)

Diagram



Dimensions : Millimetres

Part Number Table

Description	Part Number
Power Supply, AC/DC, 5W, 5V, 1A	MC141012

Important Notice : This data sheet and its contents (the "Information") belong to the members of the Premier Farnell group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp is the registered trademark of the Group. © Premier Farnell Limited 2016.