Switching Mode Power Supply

pro-POWER

RoHS Compliant

Description

This is a SMPS Adapter (Interchangeable). The input voltage is from 90V AC to 264V AC with a single phase.

Input Features

Input Voltage and Frequency

The range of input voltage is from 90V AC to 264V AC with a single phase.

	Minimum	Nominal	Maximum
Input Voltage	90V AC	100V AC to 240V AC	264V AC
Input Frequency	47Hz	60Hz / 50Hz	63Hz

Input AC Current

0.4A max. @ 100 to 240V AC Input and Full load

Inrush Current (cold start)

The inrush current will not exceed 60A at 100 to 240V AC input and Max load for a cold start at 25°C

Average Efficiency

While input 115V AC and 230V AC, the average efficiency is more than 78.7%. The test point is at 25%, 50%, 75% and 100% of max load respectively.

Energy Consumption

While input 115V AC or 230V AC and the output is no load,the input power loss must be less than 0.1W

Output Features

Static Output Characteristics

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	Rated Load		Output Range	Ripple & Noise
Rate	Min.	Max.	4.7V to 5.3V	100m Vpp
5V	0A	2A		

Ripple & Noise: Measurement is done by 20MHz bandwidth oscilloscope and the output paralleled a 0.1μF ceramic capacitor and a 10μF electrolysis capacitor. (Test under the condition of rated input and rated output)

Line/ Load Regulation

Output	Load Condition		Line Regulation	Load Regulation
Rate	Min.	Max.		
+5V	0A	2A	±3%	±5%

Turn - on Delay Time

3S max. @ 100V AC to 240V AC input & Full load

Hold-up Time

5mS min. @ Full load & 100V AC /60Hz input turn off at worst case

Capacitance Load

While input 100V AC to 240V AC and capacitance load is 470µF, the adapter can turn on normally and the output is in the rated range.

Output Overshoot / Undershoot

10% max. When the power on or off

Output Load Transient Response

The output shall not exceed 10% of the nominal output voltage, load fluctuation: from 20% to 80%, R/S: 0.5A/uS, frequency: 100Hz duration and 8mS at 80%.

Environmental Conditions

Temperature

Operating Temperature	: 0°C to 40°C
Storage Temperature	: -20°C to 60°C

Humidity

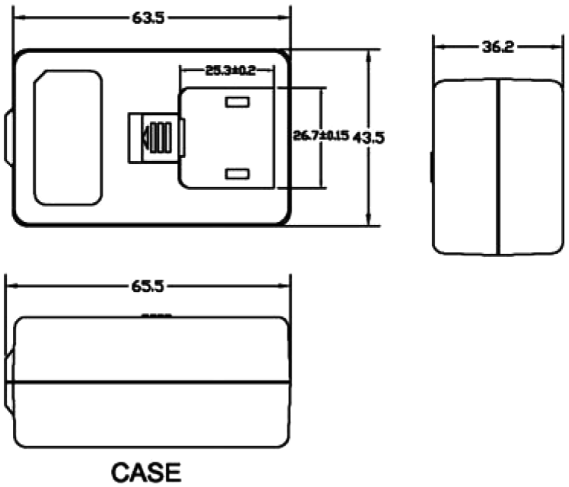
Operating Humidity	: 10% RH to 90% RH
Relative Humidity	: 5% RH to 95% RH

Safety Standards

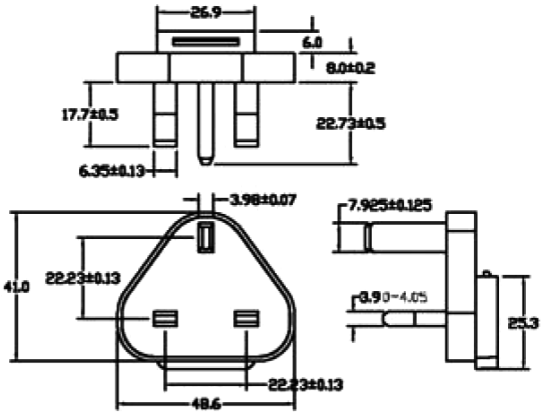
Dielectric Strength (HI-POT)

Primary to Secondary	: 4242V DC / 5mAMax / 60second (3 seconds for mass production)
Leakage Current	: 0.25mA max. at 264V AC / 50Hz
Insulation Resistance	: 50MΩ min. at primary to secondary add 500V DC test voltage

Case Drawing

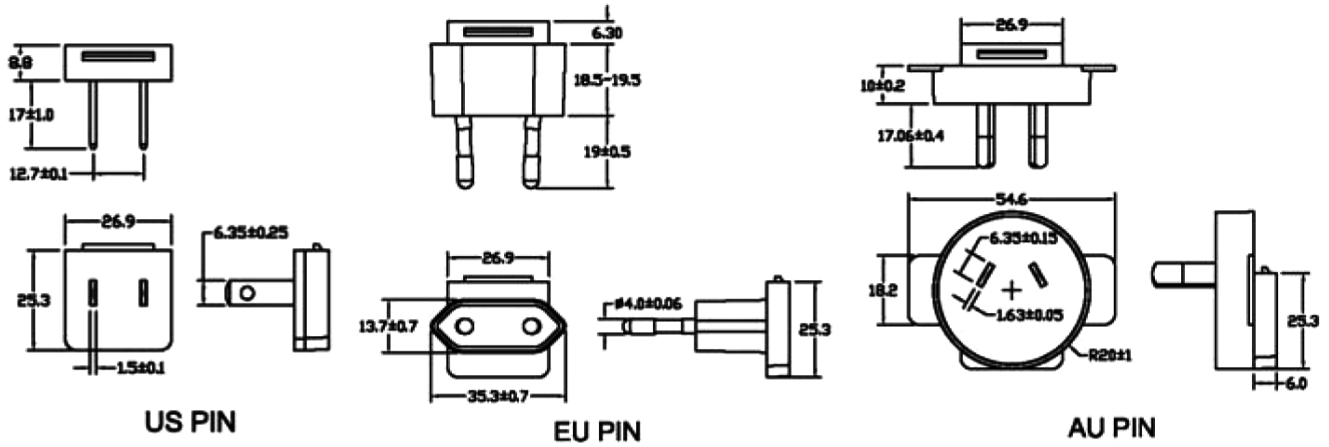


CASE



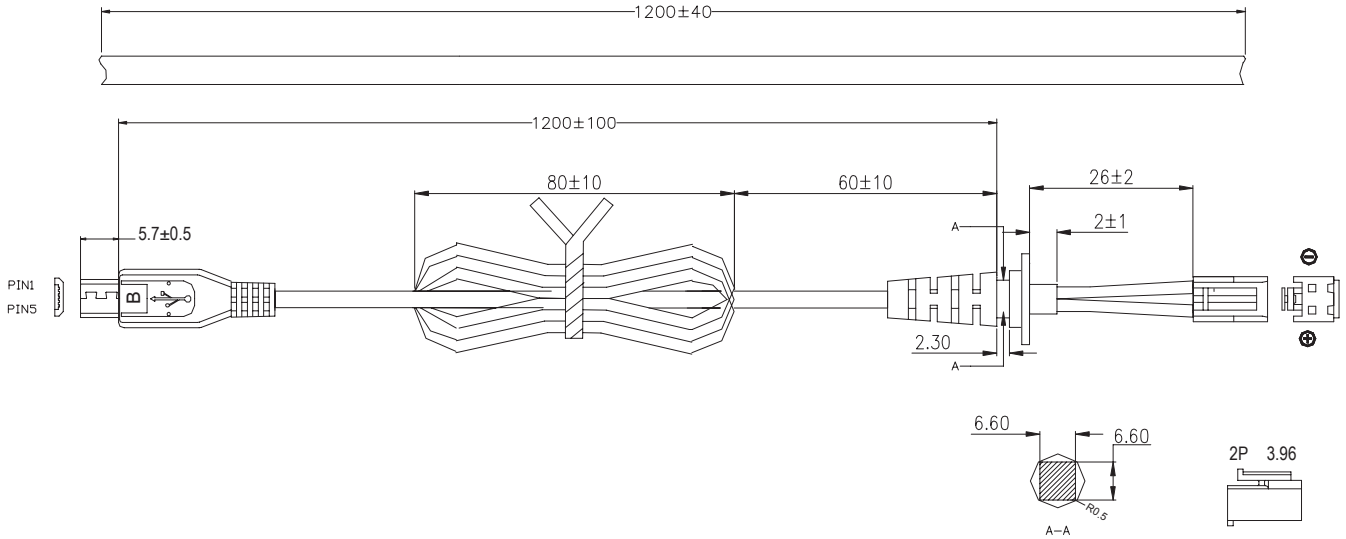
UK PIN

Dimensions : Millimetres



Dimensions : Millimetres

DC Cord Drawing



Dimensions : Millimetres

Part Number Table

Description	Part Number
Switching Mode Power Supply, 100 to 240V AC, 5V, 2A	DYS612-050200-19126C