

Medical Grade Adapter

APE-0012

Interchangeable AC blades adapter for medical devices



Highlights:

- n For Medical Application
- n Wall plug-in type
- n Output up to 12W
- n Interchangeable AC blades
- n DOE Level VI
- n Universal 90VAC~264VAC input
- n OCP,OVP
- n >100kHour MTBF
- n 2MOPP Isolation
- n USB port or fixed DC cord



Key Specification

Part number	APE-0012
Output Voltage	5.0V-24.0V
Rated Output Current	1.0-2.4A
Rated Output Power	12W
Output Voltage Regulation	±5%
Ripple & Noise	<2%
Input Type	Interchangeable AC blades
Input Voltage	90VAC~264VAC
Input Current	<0.5A
Average Efficiency	> 80%
Inrush Current	<60A
Touch Current	<100uA @ Normal Condition, <300uA @ Single Fault Condition
Operation Temperature	-10 to +40°C
Life	3 Years
Dimension	57.2x39x34mm

Part number:

APE - 0012 - 123 - AB - BB

Series Rated power Output voltage AC input type Output connector type

Output voltage

123	3 digit numbers between 050-240 ,represents the output voltage 5.0-24.0V.
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AC input type

NA	North America plug
EU	Europe plug
CN	China plug
JP	Japan plug
UK	UK plug
AU	Australia plug
KR	Korea plug
IN	India plug
WW	Interchangeable plug

Output connector type (we offer different type of output connectors)

BB	Connector Type
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Specifications

All specifications are for rated input/output and 25°C unless otherwise specified

Output Characteristics	
Output Voltage Total Regulation	±5%
Turn on delay	<3 second
Rise Time	<150ms
Holdup Time	>8.3ms
Protections	
Over Current Protection (OCP)	<130% Rated output current Auto-restart after fault condition is removed
Short Circuit Protection (SCP)	Auto-restart after fault condition is removed
Over Voltage Protection (OVP)	Auto recovery
Over Temperature Protection (OTP)	(optional)
Environmental	
No Load Power Consumption	Meet DoE level VI
Operation Ambient Temperature	-10°C to 40°C.
Operation Humidity	20%-95% RH non-condensing
Storage Ambient Temperature	-40°C to 85°C
Storage Humidity	10%-95% RH non-condensing
Operating Altitude	0-3,000 meters
Shock (Non-Operation)	50G, 11ms, 3 shocks for each direction
Vibration (Operation)	5-500Hz, 2G _{RMS} , 15 Minutes for each three axis

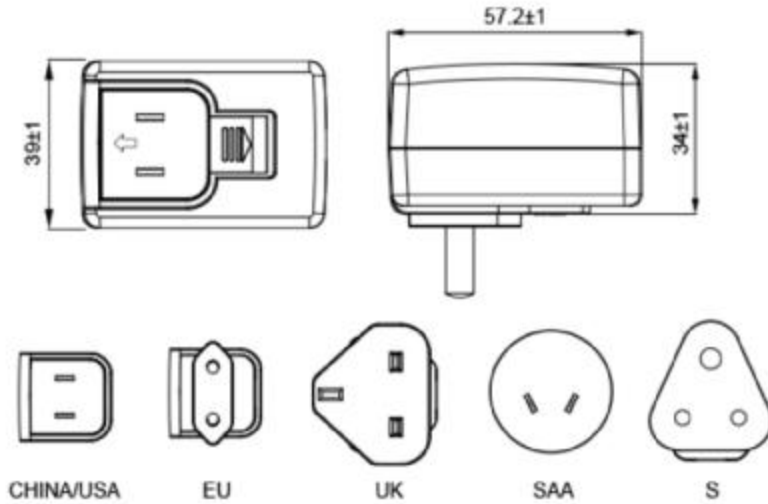
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Reliability	
MTBF	>100k hrs. MIL-HDBK-217F. 25°C
Life	>3 Years
Safety & Directives	
Safety Standards, compliance only	UL60601-1 2 nd edition, UL60601-1 3 rd edition+A1 CB Report TUV EN60601-1:2006, UL60601-1+CAN/CSA60601-1:(Ed.3.2005)
Directives, Compliance only	MDD Directive 93/42/EEC RoHS Directive 2011/65/EU Compliant
Energy Saving	DOE Level VI
Dielectric Voltage	Primary to Secondary (2XMOPP): 4kVAC
Touch Current @264VAC, 60Hz	<100uA @ Normal Condition <300uA @ Single Fault Condition
EMC	
Emissions	EN55011/EN55022, FCC TITLE 47: Class B
Harmonic Current Emissions	IEC61000-3-2, Class D
Voltage Flicker	IEC61000-3-3
Electrostatic Discharge	IEC61000-4-2, Level 4, Criteria A.
Electrical Fast Transient / Burst	IEC61000-4-4, Level 3 Criteria A. 2kV
Surge	IEC61000-4-5, Level 3 Criteria A. Common mode 2kV, Differential Mode 1kV
Conducted Immunity	IEC61000-4-6, Level 2 Criteria A. 150kHz-80MHz, 3Vrms, 6Vrms at ISM Bands and Amateur radio bands
Power Frequency Magnetic Fields	IEC61000-4-8, Criteria A. 30A/m
Voltage Dips	IEC61000-4-11 Criteria A: 30% 10ms Criteria B: 60% 100ms, 100% 5000ms
	IEC60601-1-2 Criteria A: 100% 10ms at step 45° Criteria B: 30% 500ms, 100% 20ms, 100% 5000ms

Mechanical Drawing

All dimensions in mm



Features Descriptions

n Turn on delay time

Turn on delay is the delay time from AC turns on o output reaches regulation.

n Rise time

Rise time is defined as the time that output voltage or current rises from 10% of regulation number to 90% of regulation.

n Ripple & Noise

Ripple & Noise is measured at 20MHz bandwidth, and 12" output cable end, with a 10uF aluminum capacitor and a 0.1uF ceramic capacitor paralleled to the cable end.

n Average Efficiency

Average efficiency is defined as average efficiency of 25%, 50%, 75% and 100% load. The input voltage is 115VAC/60Hz and 230VAC/50Hz