

Medical Power Supply

MANGO60S-USB-PD Series

MEGMEET

60W AC-DC ADAPTER



FEATURES

- Medical 60601-1 Safety Approvals
- Small 4.17 x 2.24 x 1.14" Footprint
- Class I or Class II Construction
- IPX1 Rated Enclosure
- High Efficiency - Level V
- High Power Density - 5.63W/in³
- CEC 2008 / ErP2 / EISA 2007 Compliant
- EN55011 / FCC Part 15J Class B Emissions
- 3-Year Warranty



GENERAL DESCRIPTION

MANGO60S-USB-PDx series is an AC-DC desktop adapter designed for medical applications. This series is a single power supply solution for all USB PD enable products regardless of power and voltage requirements. This series meets all Medical compliance requirements including 4th Edition EMC and Level V Efficiency.

APPLICATIONS



MODELS & RATINGS

MODELS	AC OUTPUT	OUTPUT VOLTAGE	RIPPLE & NOISE(MAX)	MAX TOTAL REGULATION
MANGO60S-USB-PDA	C14	5V/9V/10.4V/15V/20V*	150mV pk-pk max	±5%
MANGO60S-USB-PDB	C8	5V/9V/10.4V/15V/20V*	150mV pk-pk max	±5%
MANGO60S-USB-PDC	C18	5V/9V/10.4V/15V/20V*	150mV pk-pk max	±5%

NOTES

- 1). This power supply series, standard output, unified are one specification, 5 kinds of output voltage, each voltage load current is 3A.
- 2). The difference between a class of products and a class of products is only the difference between the input socket and the label, and there is no difference in other materials.

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MODEL ENCODING

MANGO60S-USB-PD	-	X	-	abc
DESKTOP ADAPTER		A : C14 B : C8		CUSTOMER CODE
60 Watts		C : C18 D : C6		A-Z,0-9

INPUT ELECTRICAL CHARACTERISTICS

Normal Voltage Range	100-240VAC
Input Voltage Range	90~264Vac (Universal)
Input Frequency	47~63Hz
Input Current	1.5A _{RMS} @ 115VAC
Inrush Current	<80A @ 240 VAC, 25°C Cold start
Power Factor	N/A
No Load Input Power	<0.1W @ 240VAC

Earth Leakage Current(NC)	<300μA @ 264VAC
Earth Leakage Current (SFC)	<500μA @ 264VAC
Touch Current (NC)	<100μA @ 264VAC
Touch Current (SFC)	<150μA @ 264VAC
Patient Leakage Current	<100μA @ 264VAC
Input Fuse	T3.15A/250Vac, Both Lines

OUTPUT ELECTRICAL CHARACTERISTICS

Total Regulation	±5%
Line Regulation	±0.5%
Load Regulation	±5%
Minimum Load	0
Transient Response	±5%, 5%-50% or 50%-100% step-load, slew rate 1A/μS

Ripple & Noise	150mV pk-pk max
Turn-On Delay	3 seconds max @ 115VAC
Hold-Up Time	>10ms @ 115VAC, Full Load
LED Indicator	Power on

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SAFETY & EMC

Safety	EN60601-1
	ANSI / AAMI ES60601-1
	CSA 22.2 No. 60601-1
	CE Mark (LVD)
Conduction Emission	CISPR 11, FCC Part 15 Subpart B, Class B
Radiated Emission	CISPR 11, FCC Part 15 Subpart B, Class B
Voltage Fluctuation & Flicker	EN61000-3-3
Harmonic Distortion	EN61000-3-2 Class A
ESD	EN61000-4-2, 8kV contact, 15kV Air Discharge
EFT/Burst	EN61000-4-4, Level 3, Criterion A
SURGE	EN61000-4-5 Installation Class 3, Criterion A
DIP ⁽¹⁾	EN61000-4-11
Conducted Immunity	EN61000-4-6, 3V _{RMS} (10V _{RMS} for ISM and Amateur Band) Criterion A
Radiated Immunity	EN61000-4-3, 10V/m, Criterion A
Proximity Fields Immunity	EN61000-4-3,
Magnetic Fields Immunity	EN61000-4-8, 30A/m, Criterion A

PROTECTION

Over shoot	5%
Over-Voltage	110-140%, Latching
Over-Temperature	Latching, recycle input and cool to reset
Over-Load	Hiccup, Auto-Recovery
Short Circuit	Continuous
Input Brown Out	AC On Voltage ≤80Vac
	AC Off Voltage ≥60Vac
	Minimum Hysteresis 5Vac

RELIABILITY & ENVIRONMENTAL REQUIREMENTS

Operating Temperature	0°C to +40°C
Derating	5%/°C > 40°C, up to 50°C max
Storage Temperature	-40°C to +80°C
Operating Humidity	10% to 95% (non-condensing)
Storage Humidity	0 to 100% (non-condensing)
Operating Altitude	4000m
Storage Altitude	up to 5000m
Vibration	10-500Hz, 19.6m/s ² (2G), 20minutes each along X, Y and Z axis
Shock	294m/s ² (30G), 11ms, 6 directions, 3 axis

DIMENSION & PACKING

Efficiency	87% typical@ 115/230 VAC, 20VDC 80% typical@ 115/230 VAC, 5VDC
Isolation	4000 VAC – Input to Output;
	1500 VAC – Input to Ground;
	500 VAC – Output to Ground;
MTBF	200K Hours, Mil-217F at 25 °C, full load
Weight	300g ref
Dimensions	106x57x29 mm
	4.17 x 2.24 x 1.14" inch

(1) Power supply DIP voltage sag requirements table:

Drop	Time	Criterion
0%Ut	0.5cycle	A
0%Ut	1cycle	B
70%Ut	25/30 cycles	C
0%Ut	250/300 cycles	C

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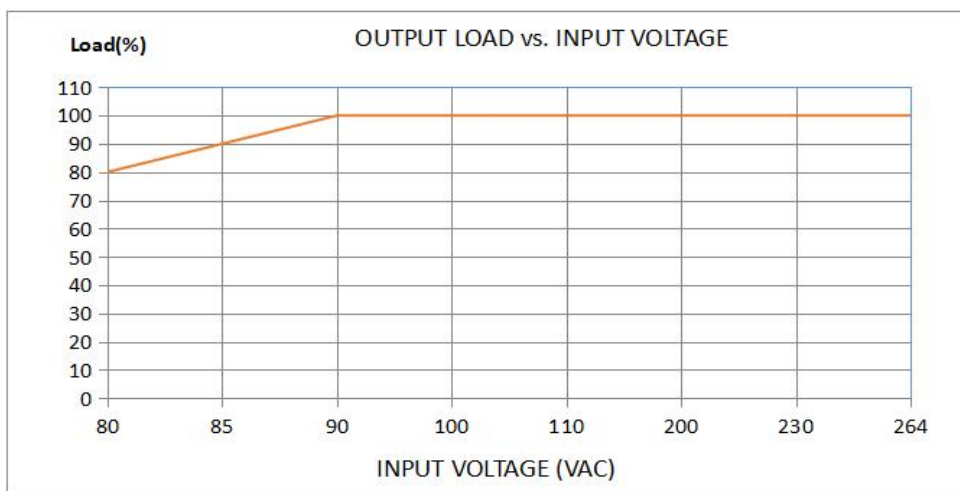
MANGO60S-USB-PD Series

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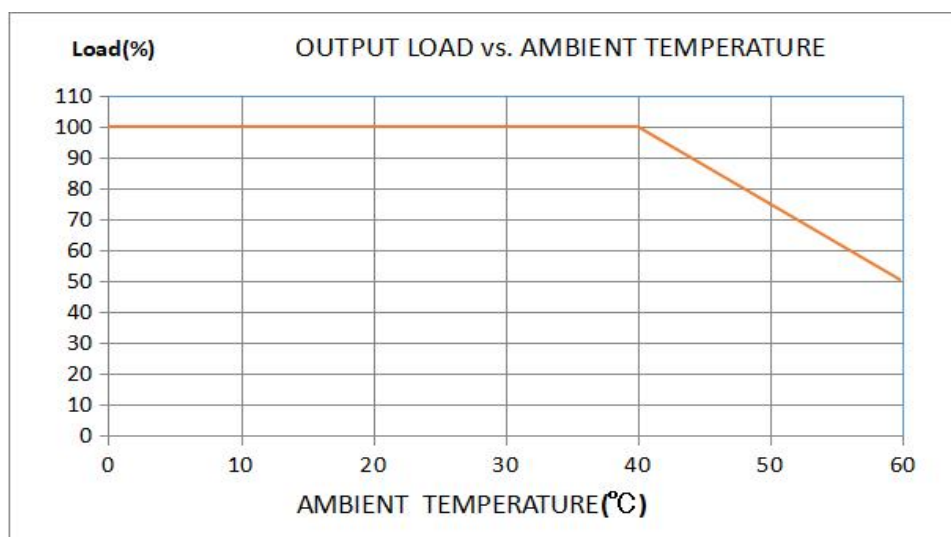
60W AC-DC ADAPTER

DERATING CURVE

OUTPUT POWER VS INPUT VOLTAGE



OUTPUT POWER VS AMBIENT TEMPERATURE



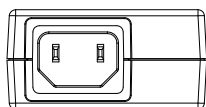
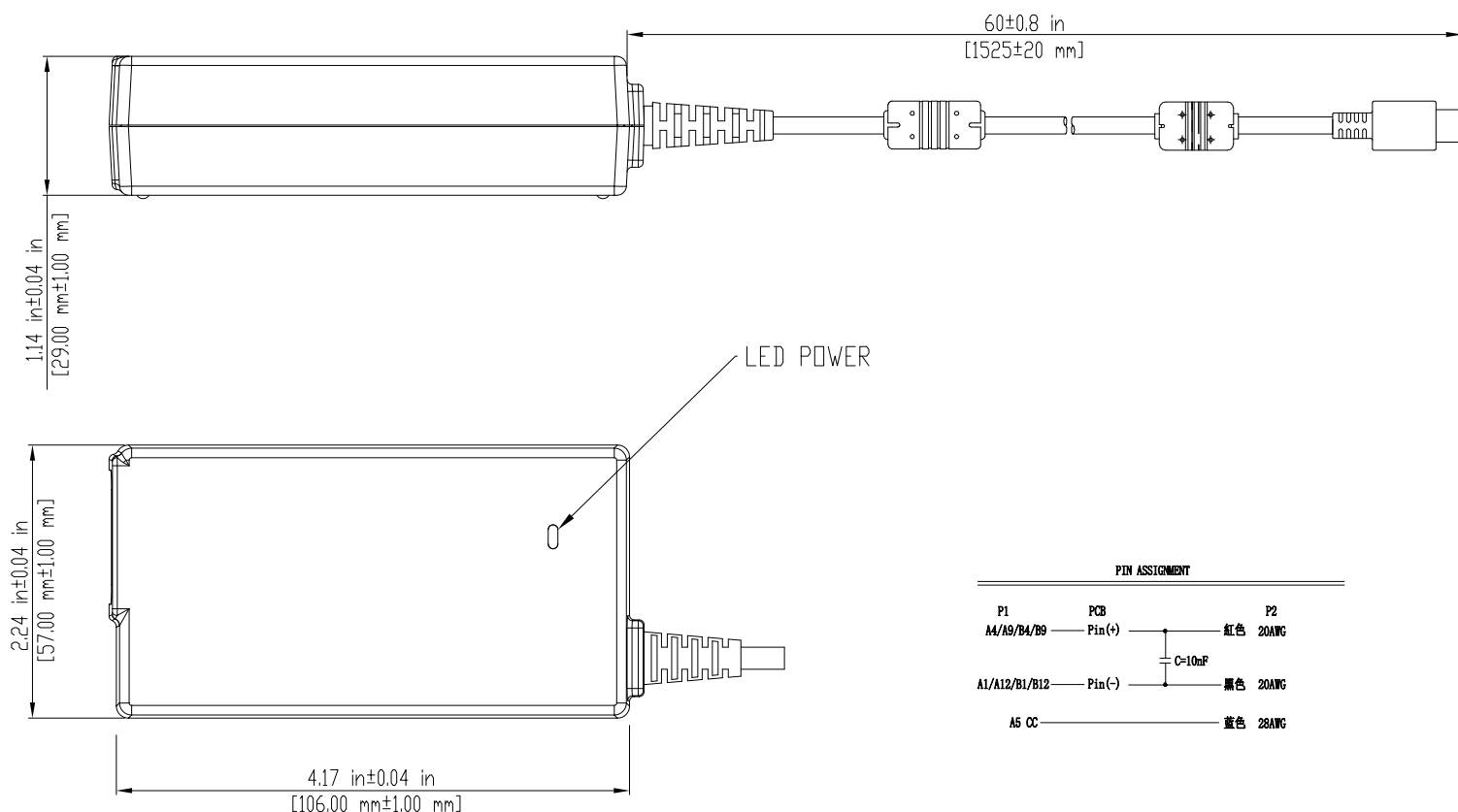
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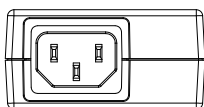
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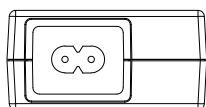
MECHANICAL AND CONNECTOR INFORMATION



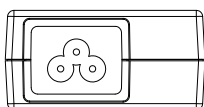
Inlet C18
Class II Safety Approvals



Inlet C14
Class I Safety Approvals



Inlet C8
Class II Safety Approvals



Inlet C6
Class I Safety Approvals

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GLOBAL OPERATION AND SERVICE



MANUFACTURER

CHINA

ZHUZHOU MEGMEET ELECTRICAL CO., LTD

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Zhuzhou, Hunan, China

THAILAND

MEGMEET (THAILAND) CO., LTD

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Pluakdaeng, Rayong 21140, Thailand

TECHNICAL SUPPORT

CHINA

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Shenzhen, Guangdong, China

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HUNAN MEGMEET ELECTRICAL TECHNOLOGY CO., LTD

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