

Medical Power Supply

MEGMEET

MANGO100S-USB-PD Series

100W AC-DC ADAPTER



FEATURES

- Medical 60601-1 Safety Approvals
- Small 5.57 x 2.46 x 1.22" Footprint
- Universal AC Input With Active PFC
- IP22 Rated Enclosure
- Class I and Class II Construction (Class I no certification)
- High Efficiency - DoE EPS - Level VI
- High Power Density - 5.4W/in³
- EN55011 / FCC Part 15 Class B Emissions
- 3 Year Warranty



GENERAL DESCRIPTION

MANGO100S-USB series is an AC-DC desktop adapter designed for medical applications. This series power supply is the single power supply solution for all USB PD enabled products regardless of power and voltage requirements. This series meets all Medical compliance requirements including 4th Edition EMC and Level VI Efficiency.

APPLICATIONS



MODELS & RATINGS

MANGO100S-USB-PD	—	X	—	abc
DESKTOP ADAPTER		A: C14 B: C8		CUSTOMER CODE
100 Watts		C: C18 D: C6		A-Z,0-9

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MODELS & RATINGS

MODELS	AC OUTPUT	OUTPUT VOLTAGE	RIPPLE & NOISE(MAX)	MAX TOTAL REGULATION
MANGO100S-USB-PDA	C14	5V/10.4V/20V*	150mV pk-pk max	±5%
MANGO100S-USB-PDB	C8	5V/10.4V/20V*	150mV pk-pk max	±5%
MANGO100S-USB-PDC	C18	5V/10.4V/20V*	150mV pk-pk max	±5%

INPUT ELECTRICAL CHARACTERISTICS

Normal voltage range	100-240VAC
Input Voltage Range	90~264Vac (Universal)
Input Frequency	47~63Hz
Input Current	2.0A _{RMS} @115VAC
Inrush Current	<120A @ 240 VAC, 25°C Cold start
Power Factor	>0.91
No Load Input Power	<0.15W @ 240VAC
Input Fuse	T3.15A/250Vac, Both Lines

Efficiency	88% typical @ 115/230 VAC, full load
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	<100uA @ 264VAC

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	1.5 seconds max @ 115VAC
Hold-Up Time	>20ms @ 115VAC, Full Load
Over shoot	5%
LED Indicator	Power on

NOTES

1). Total Regulation: includes line regulation and load regulation.

2). The output voltages are TYPE-C standard PD outputs, with 3A load current for the first two voltages and 5A load current for 20V voltage.

3). 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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EMC & SAFETY

EMC	IEC 60601-1-2	
EMI	Conducted Emission	CISPR 11 Class B
	Radiated Emission	CISPR 11 Class B
	Harmonic Current	IEC 61000-3-2 Class A
	Voltage Flicker	IEC 61000-3-3 Class A
EMS	ESD	IEC 61000-4-2, Criterion A 8kV contact, 15kV Air Discharge
	Radiated Immunity	IEC 61000-4-3, 10V/m, 80% Am at 1kHz Criterion A
	EFT/Burst	IEC 61000-4-4, 2kV, Criterion A
	Surge	IEC 61000-4-5 Installation Class 3, Criterion A
	Conducted Immunity	IEC 61000-4-6, 10V, Criterion A
	Magnetic Field	IEC 61000-4-8, 30A/m, Criterion A
	Dips & Interruption ⁽¹⁾	IEC 61000-4-11
CB	IEC 60601-1, IEC 62368-1	
cTUVus	ANSI/AAMI ES 60601-1	
	CSA C22.2 No.60601-1	
CE, UKCA	EMC	EN 55032
		EN IEC 61000-3-2
		EN 61000-3-3
		EN 55035
	LVD	EN 62368-1, BS EN 62368-1

PROTECTION

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

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)
Operating Altitude	4000m
Storage Altitude	up to 5000m
Shock	294m/s ² (30G), 11ms, 6 directions, 3 axis
Vibration	10-500Hz, 19.6m/s ² (2G), 20minutes each along X, Y and Z axis

RELIABILITY & DIMENSION

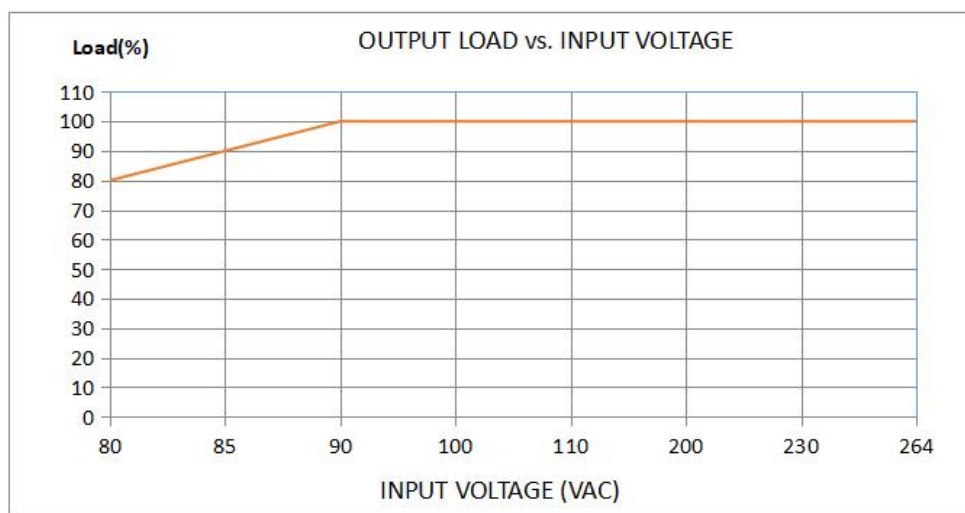
Isolation	4000 VAC – Input to Output;
MTBF	500K Hours, Telecordia SR-332 @115Vac, Full Load, 25°C
Weight	500g ref
Dimensions	141.5×62.5×31.1 mm
	5.57×2.46×1.22" inch

⁽¹⁾ Power supply DIP voltage sag requirements table:

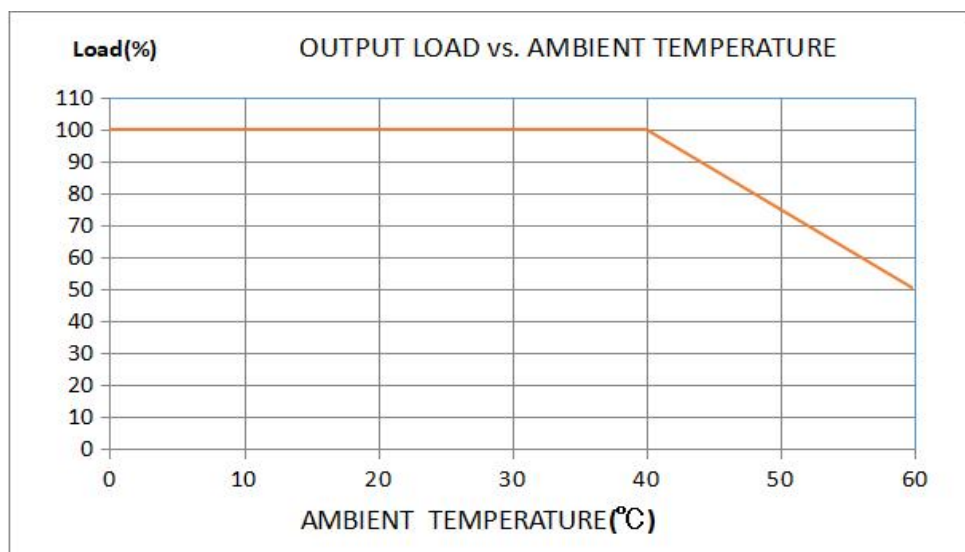
Drop	Time	Criterion
0%Ut	0.5cycle	A
0%Ut	1cycle	B
70%Ut	25/30 cycles	C
0%Ut	300cycles	C

DERATING CURVE

OUTPUT POWER VS INPUT VOLTAGE



OUTPUT POWER VS AMBIENT TEMPERATURE



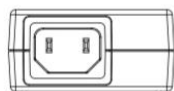
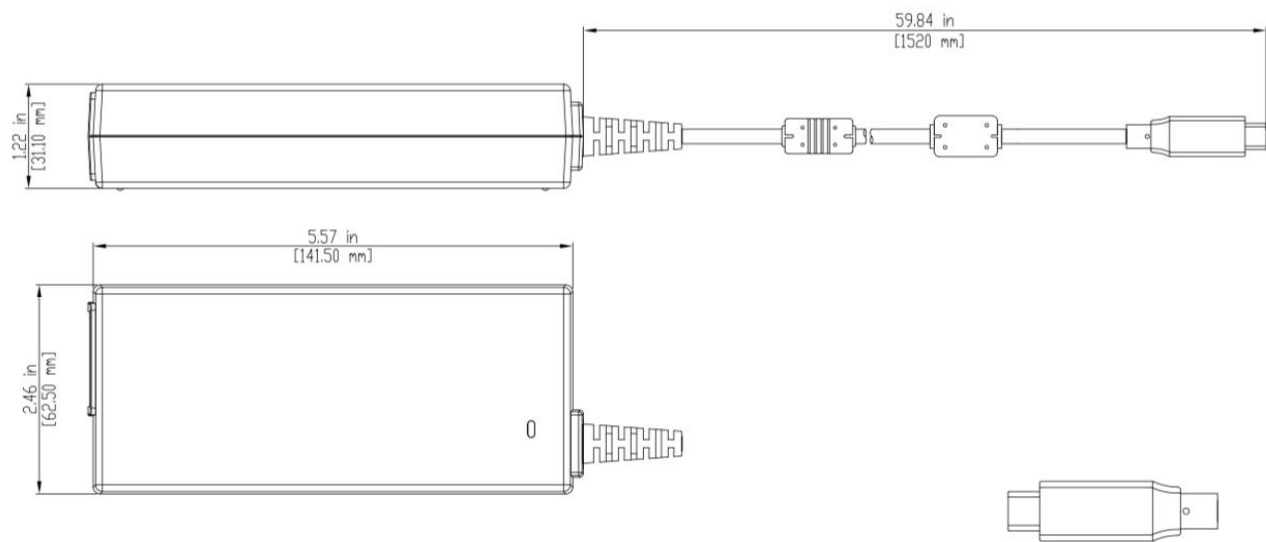
Medical Power Supply

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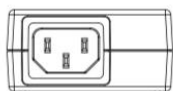
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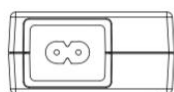
MECHANICAL AND CONNECTOR INFORMATION



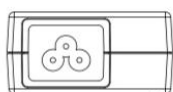
Inlet C16
Class II Safety Approvals



Inlet C14
Class I Safety Approvals



Inlet C8
Class II Safety Approvals



Inlet C6
Class I Safety Approvals

PIN ASSIGNMENT					
P1					P2
A5	CC	BLUE(26AWG)			基板端子
A4	A9	B4	B9	RED(18AWG)	基板端子
				0.01uF	
A1	A12	B1	B12	BLACK(18AWG)	基板端子

Note: This size is recommended

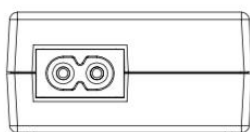
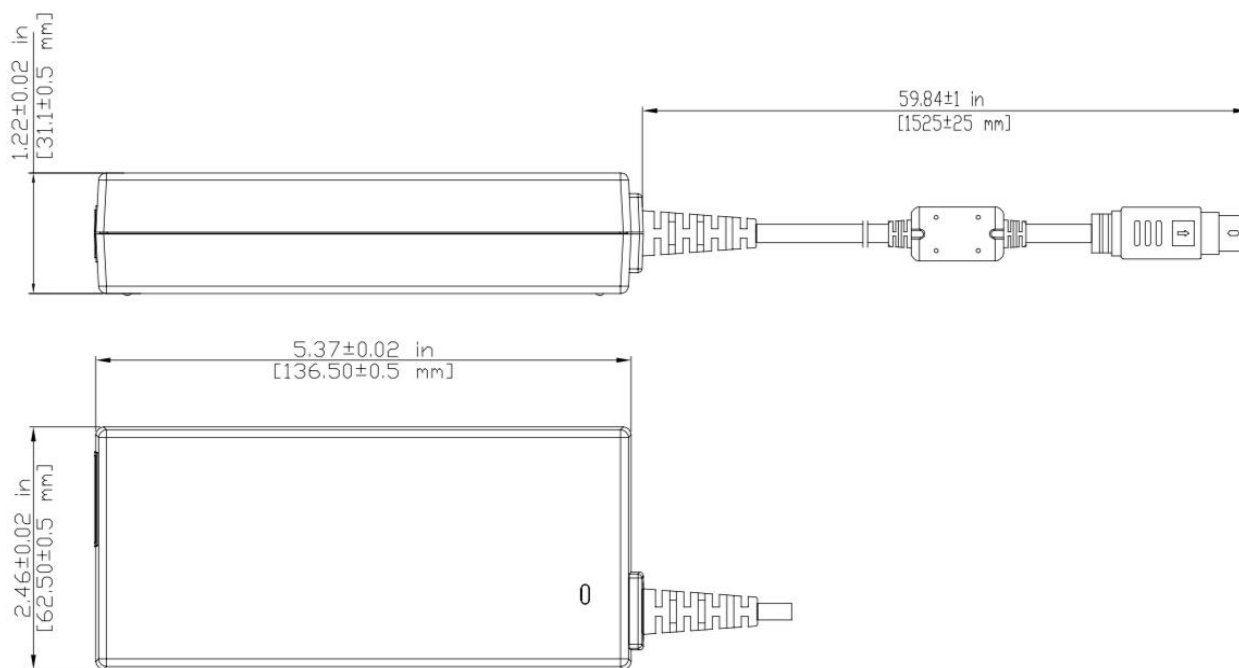
Medical Power Supply

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MECHANICAL AND CONNECTOR INFORMATION



Inlet C8
Class II Safety
Approvals

Medical Power Supply

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GLOBAL OPERATION AND SERVICE



MANUFACTURER

CHINA

ZHUZHOU MEGMEET ELECTRICAL CO., LTD
Add: 1728 Taishan West Rd., Tianyuan Dist.,
Zhuzhou, Hunan, China

THAILAND

MEGMEET (THAILAND) CO., LTD
Add: 7/375 Moo6, Tambon Mabyangporn, Amphur
Pluakdaeng, Rayong 21140, Thailand

TECHNICAL SUPPORT

CHINA

SHENZHEN MEGMEET ELECTRICAL CO., LTD
Add: 3rd Floor, Block B, Unisplendour Information
Harbor, Langshan Rd., Nanshan Dist.,
Shenzhen, Guangdong, China

CHINA

HUNAN MEGMEET ELECTRICAL TECHNOLOGY CO., LTD
Add: No. 76, Hongshupo Rd., Langli St., Changsha Co.,
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