

Medical Power Supply

MANGO240H Series

MEGMEET

240WAC-DC ADAPTER



FEATURES

- 240W Rated Power / 360W Peak Power @ 10s
- Medical IEC60601-1 Safety Approvals
- ITE/AV IEC62368-1 Safety Approvals
- Compact size 173 x 77.5 x 34 mm
- Suitable for Class I and Class II installations
- High Efficiency up to 95% (Not including Output Cable)
- Suitable for Type BF Medical Equipment
- Transient Peak Power up to 480W @ 40ms



GENERAL DESCRIPTION

A workhorse in the desktop adapter family, this 240W design includes a two stage PFC and LLC secondary, yielding up to 95% efficiency in a remarkably small and light weight package considering the power level. The MANGO240H meets all medical compliance requirements including 4th Edition EMC and can be delivered as a Class I or Class II device.

APPLICATIONS



MODELS & RATINGS

MODELS	OUTPUT VOLTAGE	OUTPUT CURRENT	MAX TOTAL REGULATION	PEAK CURRENT	
				@10S	@40mS
MANGO240H-12	12V	17.50A	±5%	25.00A	35.0A
MANGO240H-15	15V	15.00A	±5%	22.00A	30.0A
MANGO240H-19	19V	12.63A	±5%	18.5A	25.0A
MANGO240H-24	24V	10.00A	±5%	15.00A	20.0A
MANGO240H-28	28V	8.57A	±5%	12.85A	17.5A
MANGO240H-32	32V	7.50A	±5%	11.25A	15.0A
MANGO240H-36	36V	6.66A	±5%	10.00A	13.3A
MANGO240H-48	48V	5.00A	±5%	7.5A	10.0A

NOTES

- 1). Derate output power by 2% per VAC for input voltage <90vac.
- 2). Ripple & Noise test : Use a 0.1uF ceramic capacitor in parallel with a 10uF electrolytic capacitor at output connector terminals for ripple & noise measurements. The bandwidth is set to 20MHz.
- 3). The peak current are performed at 100Vac to 264Vac, derated by 2% per VAC for input voltage <100vac, the duty cycle of peak current is 10%Max

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MODEL ENCODING

MANGO240H	-	xx/ xxx	y	z	-	abcd
DESKTOP ADAPTER		OUTPUT VOLTAGE	AC input type	DC output type		CUSTOMER CODE
240 Watts		12: 12V	Class I, A: C14, D: C6	A-Z,0-9		
		125: 12.5V	Class II, B: C8, C: C18	blank: customer identity		

INPUT ELECTRICAL CHARACTERISTICS

Normal voltage range	100-240VAC
Input Voltage Range	90~264Vac (Universal)
Input Frequency	47~63Hz
Input Current	3.0A max. @ full load
Inrush Current (cold start)	60A typical 115Vac; 120A typical, 230Vac
Power Factor	0.98 min. @100Vac 60Hz Full load 0.92 min. @230Vac 50Hz Full load

Standby Power	≤0.15W@230Vac/50Hz
Earth Leakage Current(NC)	<250μA @ 264VAC(Class I)
Earth Leakage Current (SFC)	<500μA @ 264VAC(Class I)
Touch Current (NC)	<100μA @ 264VAC(Class I & Class II)
Touch Current (SFC)	<300μA @ 264VAC(Class I & Class II)
Patient Leakage Current	<100uA @ 264VAC
Input Fuse	T6.3A/250Vac, Both Lines

OUTPUT ELECTRICAL CHARACTERISTICS

Total Regulation	±5%
Line Regulation	±0.5%
Load Regulation	±4%
Minimum Load	None
Transient Response	±5%, 5%-50% or 50%-100%

Ripple & Noise	1% pk-pk Max
Startup Time	≤2.0S, 100Vac input @ 25°C
Ripple / Noise	1% pk-pk Max
Hold-Up Time	>20mS (100Vac, full loaded)
LED Indicator	Power on

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SAFETY & EMC

Safety	IEC60601-1:Edition 3.2(2020)
	ANSI/AAMI ES60601
	CAN/CSA 22.2 No. 60601
	CE
EMC	IEC60601-1-2 Edition 4.1
Conduction Emission	EN55011, FCC Part 15 Subpart B, CLASS B
Radiated Emission	EN55011, 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	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, 10Vrms ,Criterion A
Radiated Immunity	EN61000-4-3, 10V/m, Criterion A
Magnetic Fields Immunity	EN61000-4-8, 30A/m, Criterion A

PROTECTION

Over shoot	5%
Over-Voltage	110-140%, Latch off, Recycle input to recovery
Over-Temperature	Auto Recovery with hysteretic
Over-Load	Hiccup, Auto-Recovery
Short Circuit	Hiccup, Auto-Recovery
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	2.0%/°C, > 50°C, up to 60°C max
Storage Temperature	-40°C to +85°C
Operating Humidity	5% to 95% (non-condensing)
Storage Humidity	0 to 100% (non-condensing)
Operating Altitude	-60 to 5000m
Storage Altitude	up to 5000m
Cooling Method	Convection cooled
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	90%-92% typical@115/230 VAC, Full Load
Isolation	4000 VAC – Input to Output; 2xMOPP
	1500 VAC – Input to Ground; 1xMOPP
	1500 VAC – Output to Ground; 1xMOPP
MTBF	500K Hours, Telecordia SR-332 @ 25 °C
Weight	750g ref
Dimensions	173x77.5x34mm
	6.81x3.05x1.33"inch

(1) Power supply DIP voltage sag requirements table:

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

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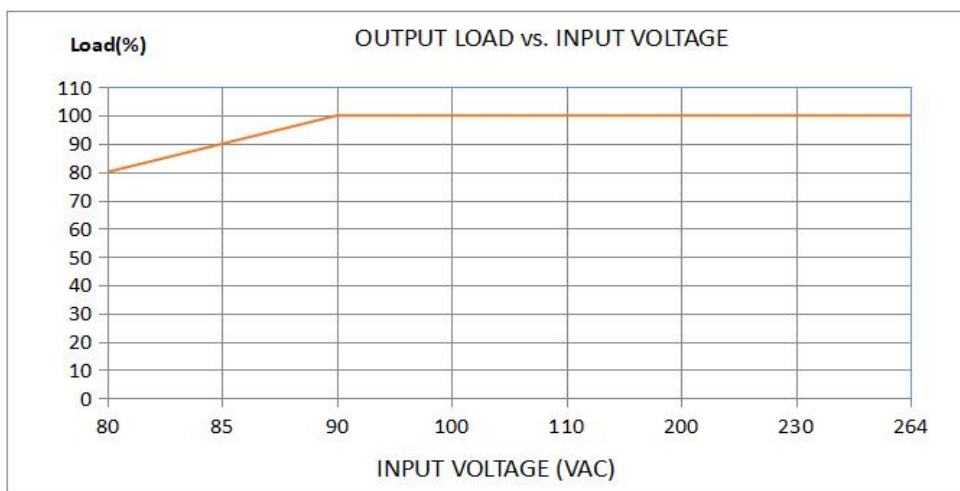
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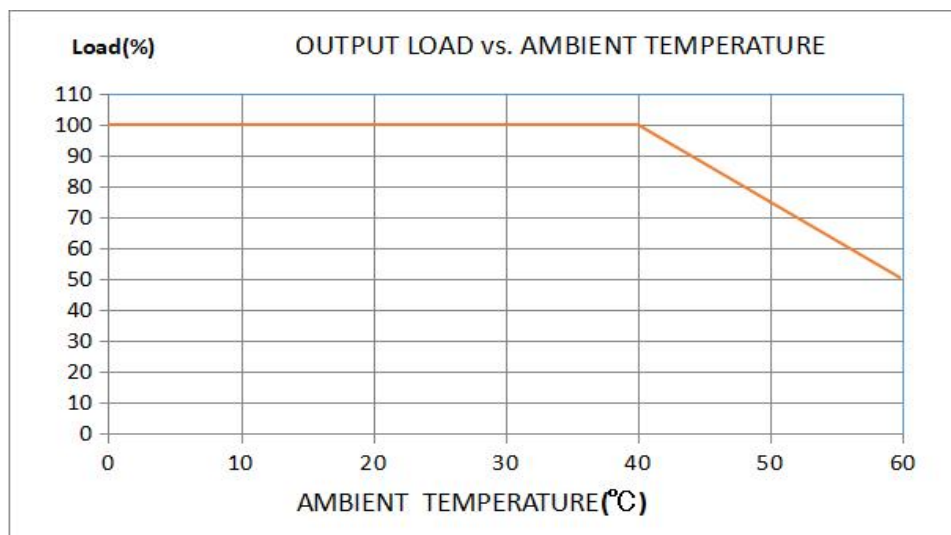
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DERATING CURVE

OUTPUT POWER VS INPUT VOLTAGE



OUTPUT POWER VS AMBIENT TEMPERATURE



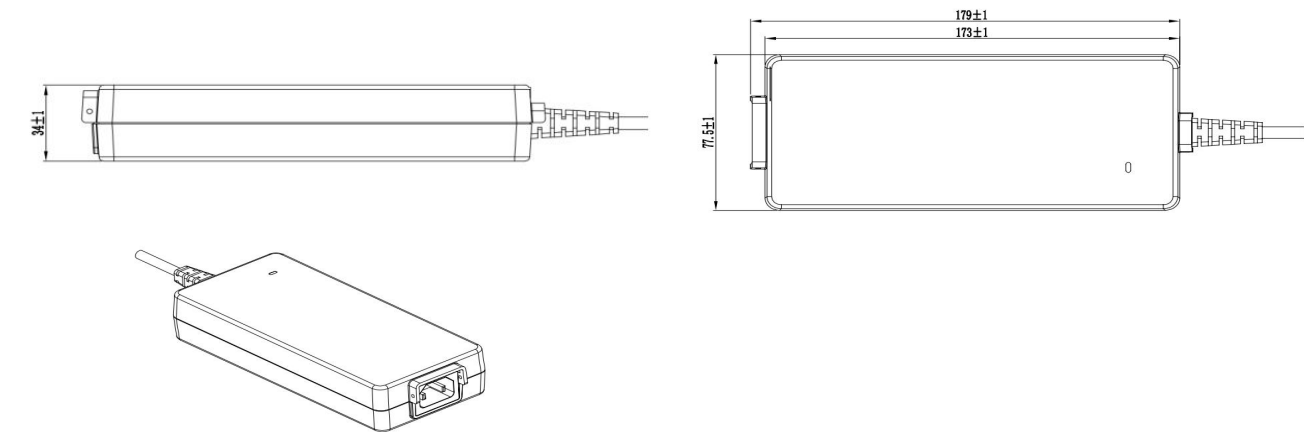
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MECHANICAL AND CONNECTOR INFORMATION

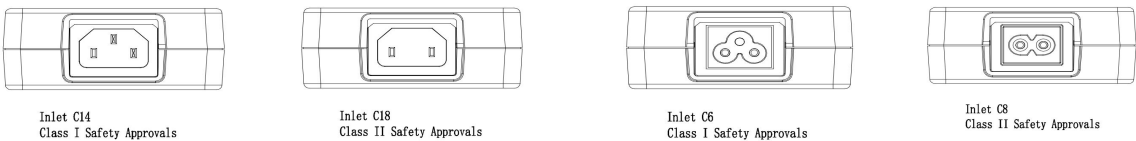


OUTPUT CABLE & PIN CONNECTION

Output Cable

	MANGO 240H-12	MANGO 240H-15	MANGO 240-19	MANGO 240H-24	MANGO 240H-28	MANGO 240H-32	MANGO 240H-36	MANGO 240H-48
Cable Length	1.2M (4ft)	1.2M (4ft)	1.2M (4ft)	1.2M (4ft)	1.2M (4ft)	1.2M (4ft)	1.2M (4ft)	1.2M (4ft)
Wire Gauge	4*16AWG	4*16AWG	4*18AWG	4*18AWG	2*16AWG	2*16AWG	2*16AWG	2*16AWG

Input Inlet



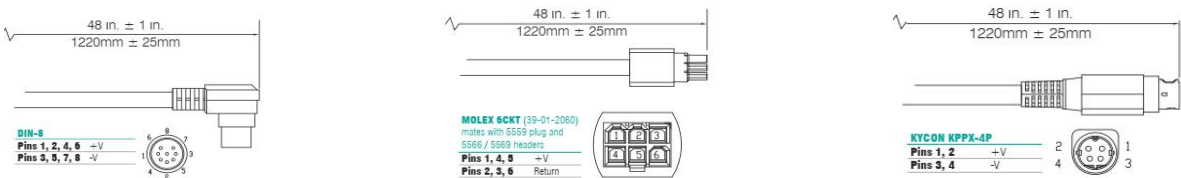
Class I (IEC320-C14, IEC320-C6)

PIN1	Line
PIN2	Neutral
PIN3	FG

Class II (IEC320-C18, IEC320-C8)

PIN1	Line
PIN2	Neutral

Output Plug



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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: 4th Floor, Block C2, Changsha Science & Technology Town,
Junction of Dongliu Rd. & Renmin Rd., Changsha Economic Dev-
elopment Dist., Changsha, Hunan, China

UNITED STATES

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