ELPAC MWA220 SERIES CLASS I



220 Watt
Medical Desktop Power Supply

- Medical Approval - EN60601-1 Class I 3.1 Edition
- EMC safety - IEC/EN 60601-1-2 4th edition
- Low Leakage Current
- High Efficiency: Level V
- High Power Density 5.9W/in^3
- Lifetime Expectation >5 years
- LED Indicator
- IPX1 rated
- 5-Year Limited Warranty

INPUT	
Input Voltage	85 – 264VAC (100 – 240VAC Nominal)
Input Frequency	47 – 63Hz (50-60Hz Rated)
Input Current	3.0A-1.3A rms
Inrush Current	<37A at 230VAC cold start
Power Factor	>0.97
Zero Load Power	<0.5W
Earth Leakage Current (Typical)	<200µA @ 132VAC @ 60Hz
	<400µA @ 264VAC @ 60Hz
Touch Leakage Current	<50µA @ 132VAC @ 60Hz
	<100µA @ 264VAC @ 60Hz

OUTPUT	
Output Voltage	See Table
Total Regulation	±5%
Minimum Load	No minimum load required
Start-Up Delay	<1.5s
Hold-Up Time	>20ms at any input voltage of full load
Ripple & Noise	<1% pk-pk **
Over Voltage Protection	110 – 135%
Over Temperature Protection	Active - Recoverable; Passive - Non recoverable
Over Current Protection	105 – 110%
Short Circuit Protection	Shutdown, auto-restart (hiccup mode)

Notes
**Ripple and noise measured with 20MHz bandwidth; 10µF tantalum capacitor in parallel with a 0.1µF ceramic capacitor.

Model Number	Output Voltage	Output Current	Peak Current[1]	Total Regulation[2]	Typical Efficiency[3]
MWA220012A-13A	12.0V	18.3A	19.0A	±5%	89%
MWA220015A-13A	15.0V	14.6A	15.2A	±5%	89%
MWA220018A-13A	18.0V	12.2A	12.7A	±5%	90%
MWA220024A-12A	24.0V	9.2A	9.5A	±5%	90%
MWA220028A-12A	28.0V	7.8A	8.0A	±5%	90%
MWA220032A-12A	32.0V	6.8A	7.0A	±5%	91%
MWA220048A-11A	48.0V	4.6A	4.7A	±5%	91%

Notes
1) Maximum peak load (228W) lasting 500ms with a maximum 10% duty cycle.
2) Includes initial setting, line regulation, load regulation, and thermal drift.
3) Typical at 115VAC (including output cable).
4) AC cord not included-AC cord part number 67400-185-EB can be ordered separately.

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General

Efficiency	Avg. Efficiency 90.5% @ 115VAC; Avg. Efficiency 92.5% @ 230VAC;
MTBF	min. 200,000 hours, SR-332 issue 3
Size	8.19" (208.0mm) x 2.88" (73.1mm) x 1.56" (39.5mm)
Weight	2.1 LBS (0.95 Kg)
Power Density	5.9W/in^3

Environmental

Operating Temperature	0–60°C (Full load to 40°C, derate linearly to 50% load at 60°C)
Storage Temperature	-40°C to +85°C
Relative Humidity	5-93%, non-condensing
Cooling	Natural Convection
Vibration	Unites meet MIL-STD-810G Figure 514.6C-1 category 4

EMC & Safety

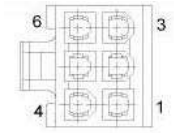
Emissions	FCC class B, CISPR11 class B IEC/EN60601-1-2(Ed.4) EN61000-3-2, -3
Immunity	EN61000-4-2, -3, -4, -5, -6, -11
Certified by TUV to the following:	cTUVus
	ANSI/AAMI ES60601-1:2005+A2+A1
	CAN/CSA-C22.2 No.60601-1:14
	CB per IEC60601-1 3.1 Edition
	CE marked to LVD and CE EMC

Input & Output Configuration

Standard Input Cable	Not Provided Separately (P/N 67400-185-EB)
Connection on Power Supply Body	IEC 320 C14 Receptacle
Standard Output Cable	4ft for 12V 15V, 18V 6ft for 24V, 28V, 32V, 48V
Output Cable Cord Size	4x16awg (12V, 15V, 18V) 6 pin 4x18awg (24V, 28V, 32V) DIN-8 2x16awg (48V) DIN-5
Output Cable Connector	Molex 6 pin P/N 39-01-2065 Switchcraft DIN-8, P/N 15BL8MX Switchcraft DIN-5, P/N 05GM5MX
Output Cable Mating Connector	Molex 39-01-2061 or 26-01-3116 Switchcraft 62GB8FX(8 pin) or equivalent Switchcraft 57GB5FX(5 pin) or equivalent

Output Pin Assignments

Pin 1	Return
Pin 2	Return
Pin 3	Shield
Pin 4	+V1
Pin 5	+V1
Pin 6	Not Used



Output Pin Assignments

Pin 1	Return
Pin 2	Return
Pin 3	+V1
Pin 4	Return
Pin 5	+V1

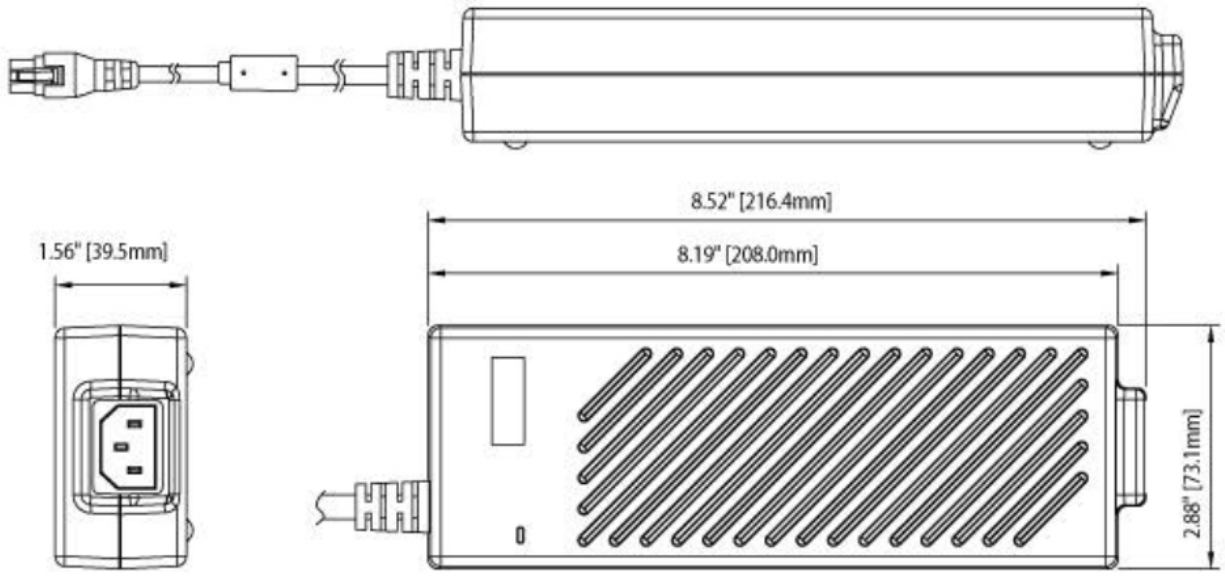


Output Pin Assignments

Pin 1	+V1
Pin 2	+V1
Pin 3	Return
Pin 4	+V1
Pin 5	Return
Pin 6	+V1
Pin 7	Return
Pin 8	Return



Mechanical Drawing



MWA220-DWG

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