

ELPAC MWA020 SERIES CLASS I

20 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 2.19W/in³
- Lifetime Expectation >5 years
- LED Indicator
- 5-Year Limited Warranty



INPUT	
Input Voltage	85 – 264VAC (100 – 240VAC Nominal)
Input Frequency	47 – 63Hz (50-60Hz Rated)
Input Current	<0.5A rms
Inrush Current	<50A at 230VAC cold start
Power Factor	N/A
Zero Load Power	<0.3W
Earth Leakage Current (Typical)	<60µA @ 132VAC @ 60Hz (typical)
	<120µA @ 264VAC @ 60Hz (typical)
Touch Leakage Current	<50µA @ 132VAC @ 60Hz (typical)
	<100µA @ 264VAC @ 60Hz (typical)

OUTPUT	
Output Voltage	See Table
Total Regulation	±5%
Minimum Load	No minimum load required
Start-Up Delay	<1.5s
Hold-Up Time	>10ms at any input voltage of full load
Ripple & Noise	<1% pk-pk **
Over Voltage Protection	110 – 135%
Over Temperature Protection	N/A
Over Current Protection	108 – 180%
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
MWA020005A-10A	5.0V	4.0A	4.2A	±5%	80%
MWA020009A-10A	9.0V	2.22A	2.3A	±5%	83%
MWA020012A-10A	12.0V	1.67A	1.75A	±5%	84%
MWA020024A-10A	24.0V	0.83A	0.87A	±5%	86%

Notes

1) Maximum peak load (21W) 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 83.4% @ 115VAC; Avg. Efficiency 82.8% @ 230VAC;
MTBF	min. 200,000 hours, SR-332 issue 3
Size	3.45" (87.7mm) x 2.04" (51.8mm) x 1.30" (33.0mm)
Weight	0.3 LBS (0.16 Kg)
Power Density	2.19W/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	6ft
Output Cable Cord Size	2x16awg (5V, 9V) 2x18awg (12V); 2x20awg (24V)
Output Cable Connector	Switchcraft 760 or equivalent
Output Cable Mating Connector	Switchcraft 712A or equivalent

Output Pin Assignments	
Center	+V1
Outside	Return


