

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 |
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