

# MENB1010

Universal 10 Watt Series

Medical Switch-Mode Power Supply



3 Year Warranty

- 100-240Vac Universal Input Range
- Meets EISA2007, CEC Efficiency Level V, EU (EC) No 278/2009 Phase II
- Desktop & Wall Plug Styles
- 5V to 24V Single Output Models, up to 12W
- Modified and Custom Designs Available
- Regulated Output with Low Ripple
- Impact-Resistant Polycarbonate Enclosure
- No load Power Consumption <0.3W
- Limited Power Source
- Certified to UL/EN/IEC60601-1, 3<sup>rd</sup> Edition, 2xMOPP Isolation



## Specifications

All Specifications are typical at nominal input, full load at 25°C unless otherwise stated.

|                                |                                                                      |                           |                                                                                                             |
|--------------------------------|----------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------|
| AC Input                       | 100-240Vac, +/-10%, 47-63 Hz, 1Ø                                     | MTBF                      | >100,000 hours (calculated)                                                                                 |
| Input Current                  | 100Vac: 0.27A                                                        | Hold-up Time              | 18 mS min. @ 115Vac, 60 mS min. @ 230 Vac                                                                   |
| Inrush Current                 | 60 A peak max at 264 Vac                                             | Overload Protection       | Hiccup Mode                                                                                                 |
| Input Fuse                     | Internal Primary Current Fuse provided (1A, 250Vac rated)            | Short Circuit Protection  | Hiccup Mode                                                                                                 |
| Efficiency                     | Meets EISA2007, CEC Efficiency Level V, EU (EC) No 278/2009 Phase II | Topology                  | Switching – Fixed Frequency Flyback                                                                         |
| Output Voltage                 | See chart                                                            | Safety Standards          | EN/IEC/CSA/UL60601-1, 3 <sup>rd</sup> Edition                                                               |
| Output Power                   | See chart                                                            | EMC, Radiated & Conducted | See Chart below                                                                                             |
| Ripple and Noise               | 1% pk-pk max., 20MHz BW                                              | Dielectric Withstand      | Input-Output: 2 MOPP, Input-Ground: 1 MOPP, Output-Ground: 500Vac                                           |
| Line & Load Voltage Regulation | Line: +/- 1%, Load: +/-5%                                            | Operating Temperature     | 0° to 40°C, no derating                                                                                     |
| Minimum Load                   | Not required                                                         | Storage Temperature       | -30 to +85°C                                                                                                |
| Case Material                  | Black 94V-0 Polycarbonate                                            | Relative Humidity         | 5% to 95%, non-condensing                                                                                   |
| Case Dimensions                | 84 x 47 x 32mm. See outline drawing                                  | Operating Altitude        | -500 to 10,000 ft                                                                                           |
| Weight                         | 110g                                                                 | Non-operating Altitude    | -500 to 40,000 ft                                                                                           |
| Output Cable                   | #20AWG (UL2468), 1500mm, 2 conductor                                 | Output Connector          | 2.5mm barrel type (Ault #3), center contact (+)<br>Other options available, contact the factory for details |

## EMC Specifications

|                                         |                                                       |
|-----------------------------------------|-------------------------------------------------------|
| Conducted Emissions                     | EN55011 Class B, FCC Part 15, Class B.                |
| Radiated Emissions                      | EN55011 Class B, FCC Part 15, Class B.                |
| Line Frequency Harmonics                | EN61000-3-2, Class A                                  |
| Voltage Fluctuations/Flicker            | EN61000-3-3                                           |
| Static Discharge Immunity               | EN61000-4-2, 6kV Contact Discharge, 8kV air discharge |
| Radiated RF Immunity                    | EN61000-4-3, 3V/m.                                    |
| EFT/Burst Immunity                      | EN61000-4-4, 2kV/5kHz.                                |
| Line Surge Immunity                     | EN61000-4-5, 1kV differential, 2kV common-mode        |
| Conducted RF Immunity                   | EN61000-4-6, 3Vrms                                    |
| Power Frequency Magnetic Field Immunity | EN61000-4-8, 3A/m                                     |
| Voltage Dip Immunity                    | EN61000-4-11, Criteria A                              |

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| Model Number     | Volts (V) | Output Current (max) | Max Watts | Ripple (Vp-p max) |
|------------------|-----------|----------------------|-----------|-------------------|
| MENB1010A0503F01 | 5 V       | 2.00 A               | 10.0 W    | 50 mV             |
| MENB1010A0603F01 | 6 V       | 2.00 A               | 12.0 W    | 60 mV             |
| MENB1010A0703F01 | 7.5 V     | 1.60 A               | 12.0 W    | 75 mV             |
| MENB1010A0903F01 | 9 V       | 1.10 A               | 10.0 W    | 90 mV             |
| MENB1010A1203F01 | 12 V      | 1.00 A               | 12.0 W    | 120 mV            |
| MENB1010A1503F01 | 15 V      | 0.80 A               | 12.0 W    | 150 mV            |
| MENB1010A1603F01 | 16 V      | 0.75 A               | 12.0 W    | 160 mV            |
| MENB1010A1803F01 | 18 V      | 0.67 A               | 12.0 W    | 180 mV            |
| MENB1010A2403F01 | 24 V      | 0.50 A               | 12.0 W    | 240 mV            |
| MENB1010A4803F01 | 48 V      | 0.25 A               | 12.0 W    | 480 mV            |

Notes: Part numbers above include #3 output connector and IEC320 C14 grounded input receptacle. See below for other options.

## Model Number Key

**MENB 1 010 A VV 03 F 01**

|                          |                                                                               |
|--------------------------|-------------------------------------------------------------------------------|
| <b>Model</b>             | "01" = Standard. "02" and higher indicates a modified model.                  |
| <b>Input Connector:</b>  | "F" = IEC320 C14 grounded, Other options available, see below                 |
| <b>Output Connector:</b> | "03" = 2.5mm Barrel Type Connector. Other options available, contact factory. |
| <b>Output Voltage:</b>   | "05" = 5Vdc, "12" = 12Vdc, "24" = 24Vdc, etc.                                 |
| <b>Model</b>             | "A" = Original Configuration                                                  |
| <b>Output Power:</b>     | "010" = 10 Watts                                                              |
| <b># of Outputs</b>      | "1" = Single Output                                                           |
| <b>Product Family:</b>   | "M" = Medical, "E" = External, "NB" = Model Series Designator                 |

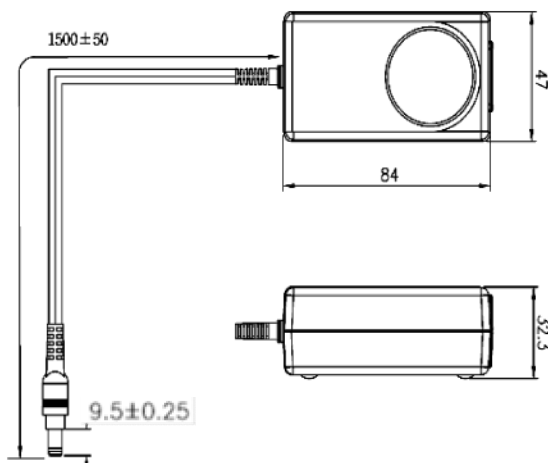
## AC Input Receptacle Options

| Desktop                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |                                            | Wall-Plug                                     |                                     |                        |                                   |                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------|-----------------------------------------------|-------------------------------------|------------------------|-----------------------------------|---------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                               |                                            |                                               |                                     |                        |                                   |                           |
| IEC320 - C14<br>Class I<br>Grounded<br>(F)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | IEC320 - C18<br>Class II<br>Ungrounded<br>(Q) | IEC320 - C8<br>Class II<br>"Shaver"<br>(N) | N. America<br>Japan<br>Interchangeable<br>(B) | N. America<br>Japan<br>Fixed<br>(C) | Europe<br>Fixed<br>(M) | United<br>Kingdom<br>Fixed<br>(G) | Australia<br>Fixed<br>(H) |
| Notes:<br>1. For desktop options, choose applicable letter above.<br>2. For Wall-Plug options, choose the applicable letter above and the unit will be fitted with the receptacle chosen. The N. A. blade version (B) will be an interchangeable blade. The other options (C), (M), (G), and (H) will be fixed blades molded in the case.<br>3. Blade Kit is available which will include one each of a EU, UK, and Australian blade. Kit part # is KT1027K. These can be used with the (B) version, to allow blades to be changed. |                                               |                                            |                                               |                                     |                        |                                   |                           |

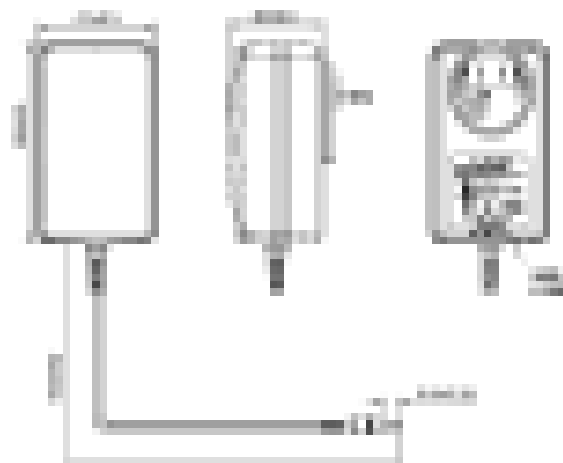
## Output Connector

|                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                     |
| Notes:<br>1. Ault #3 Connector, center contact (+).<br>2. Connector is Switchcraft 760 plug or equivalent. Mating connector is Switchcraft 712A or equivalent.<br>3. Other connector options are available. Contact your local SL Power Representative for details. |

## Outline Drawings



Desktop Style



Wall-Plug Style (Option "B" Shown)

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