

# MENB1020

Universal 20 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 48V Single Output Models, up to 20W
- 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/EN60601-1, 3<sup>rd</sup> Edition, 2 MOPP Isolation



## Specifications

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

<b>AC Input</b>	100-240Vac, +/-10%, 47-63 Hz, 1Ø	<b>MTBF</b>	100,000 hours (calculated)
<b>Input Current</b>	100Vac: 0.5A	<b>Hold-up Time</b>	18 ms min. @ 115Vac, 60 ms min. @ 230 Vac
<b>Inrush Current</b>	Inrush limiting provided, 60 A peak	<b>Overload Protection</b>	Hiccup Mode
<b>Input Fuse</b>	Internal Primary Current Fuse provided: 3.15A, 250Vac	<b>Short Circuit Protection</b>	Hiccup Mode
<b>Efficiency</b>	Meets EISA2007, CEC Efficiency Level V, EU (EC) No 278/2009 Phase II	<b>Topology</b>	Switching – Fixed Frequency Flyback
<b>Output Voltage</b>	See chart	<b>Safety Standards</b>	EN/IEC/CSA/UL60601-1, 3 <sup>rd</sup> Edition
<b>Output Power</b>	See chart	<b>EMC, Radiated &amp; Conducted</b>	See chart below
<b>Ripple and Noise</b>	1% pk-pk max., 20MHz BW	<b>Dielectric Withstand</b>	Input-Output: 5,656VDC, Input-Ground: 1,500Vac, Output-Ground: 500Vdc
<b>Line &amp; Load Voltage Regulation</b>	Line: +/- 1%, Load: +/-5%	<b>Operating Temperature</b>	0° to 40°C, no derating
<b>Minimum Load</b>	Not required	<b>Storage Temperature</b>	-30 to +85°C
<b>Transient Response</b>	500 us max, 50% load step	<b>Relative Humidity</b>	5% to 95%, non-condensing
<b>Case Dimensions</b>	84 X 47 X 32mm. See outline drawing	<b>Altitude</b>	0 to 10,000 ft
<b>Case Material</b>	Black 94V0 Polycarbonate	<b>Turn-on Time</b>	2 sec max, 115/230 Vac
<b>Weight</b>	150g	<b>Output Cable</b>	5V – 9V outputs: #18AWG (SPT-1), 1500mm, 2 conductor 12V – 48V outputs: #20AWG (UL1185), 1500mm, 2 conductor
		<b>Output Connector</b>	2.5mm barrel type (Ault #3), center contact (+)

## EMC Specifications

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

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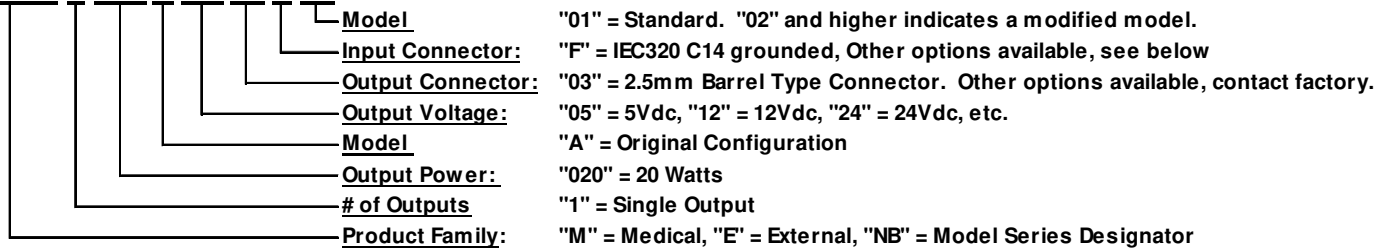
3 Year Warranty

Model Number	Volts (V)	Output Current (max)	Max Watts	Ripple (Vp-p max)
MENB1020A0303F01	3.3 V	3.00 A	9.9 W	50 mV
MENB1020A0503F01	5 V	3.00 A	15.0 W	50 mV
MENB1020A0603F01	6 V	2.50 A	15.0 W	60 mV
MENB1020A0703F01	7.5 V	2.00 A	15.0 W	75 mV
MENB1020A0903F01	9 V	2.00 A	18.0 W	90mV
MENB1020A1203F01	12 V	1.50 A	18.0 W	120mV
MENB1020A1403F01	14 V	1.20 A	16.8 W	140mV
MENB1020A1503F01	15 V	1.20 A	18.0 W	150mV
MENB1020A1803F01	18 V	1.00 A	18.0 W	180mV
MENB1020A2403F01	24 V	0.75 A	18.0 W	240mV
MENB1020A4803F01	48 V	0.40 A	19.2 W	440mV

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

### Model Number Key

**MENB 1 020 A VV 03 F 01**



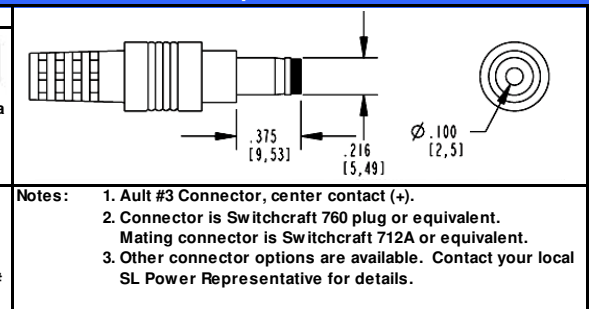
### AC Input Receptacle Options

Desktop			Wall-Plug				
IEC320 - C14 Class I Grounded (F)	IEC320 - C18 Class II Ungrounded (Q)	IEC320 - C8 Class II "Shaver" (N)	N. America Japan Interchangeable (B)	N. America Japan Fixed (C)	Europe Fixed (M)	United Kingdom Fixed (G)	Australia Fixed (H)

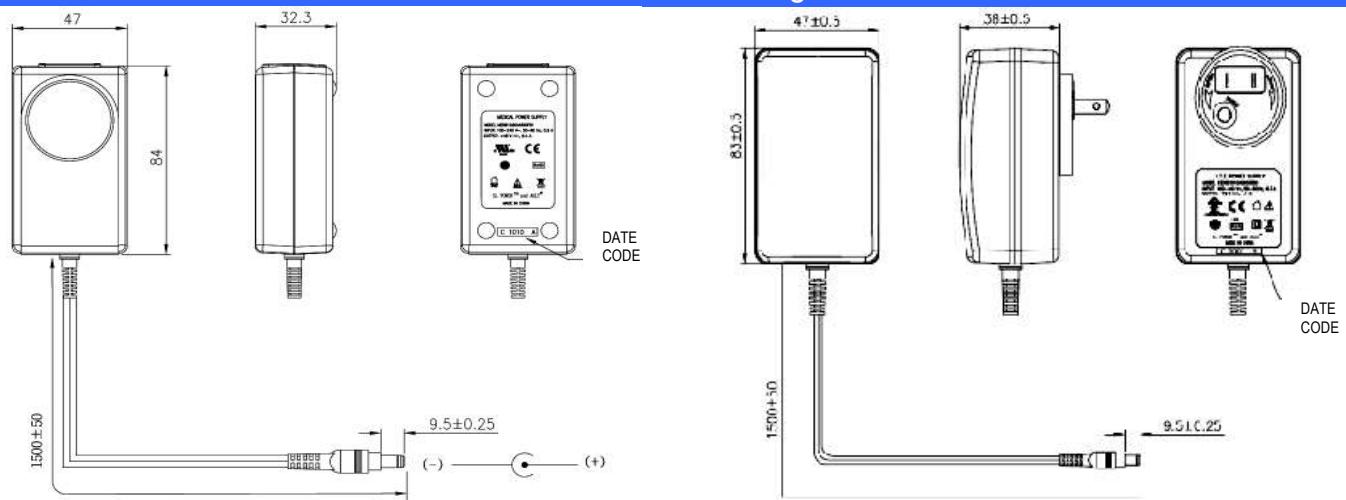
Notes:

- For desktop options, choose applicable letter above.
- 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.
- 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



### Outline Drawing



Desktop Style

Wall-plug Style (Option "B" shown)

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