

# 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.

AC Input	100-240Vac, +/-10%, 47-63 Hz, 1Ø	MTBF	100,000 hours (calculated)
Input Current	100Vac: 0.5A	Hold-up Time	18 ms min. @ 115Vac, 60 ms min. @ 230 Vac
Inrush Current	Inrush limiting provided, 60 A peak	Overload Protection	Hiccup Mode
Input Fuse	Internal Primary Current Fuse provided: 3.15A, 250Vac	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: 5,656VDC, Input-Ground: 1,500Vac, Output-Ground: 500Vdc
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
Transient Response	500 us max, 50% load step	Relative Humidity	5% to 95%, non-condensing
Case Dimensions	84 X 47 X 32mm. See outline drawing	Altitude	0 to 10,000 ft
Case Material	Black 94V0 Polycarbonate	Turn-on Time	2 sec max, 115/230 Vac
Weight	150g	Output Cable	5V – 9V outputs: #18AWG (SPT-1), 1500mm, 2 conductor 12V – 48V outputs: #20AWG (UL1185), 1500mm, 2 conductor
		Output Connector	2.5mm barrel type (Ault #3), center contact (+)

## 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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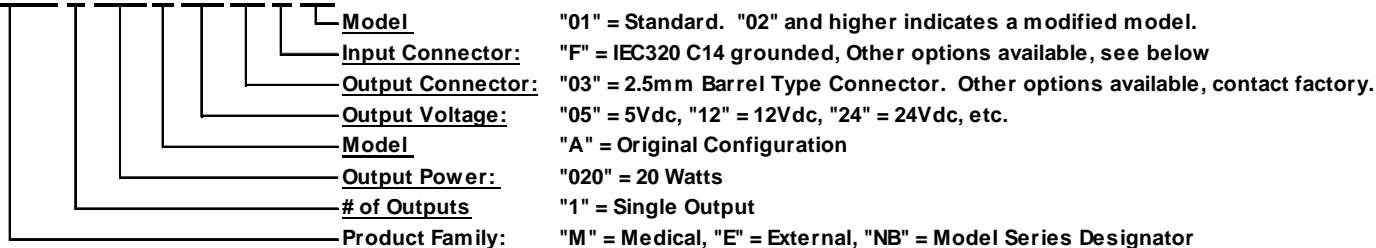
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Model Number	Volts (V)	Output Current (max)	Max Watts	Ripple (Vp-p max)
MENB1020A0303F01	3.3 V	3.00 A	9.9 W	50 mV
MENB1020A0503F01	5 V	3.00 A	15.0 W	50 mV
MENB1020A0603F01	6 V	2.50 A	15.0 W	60 mV
MENB1020A0703F01	7.5 V	2.00 A	15.0 W	75 mV
MENB1020A0903F01	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**



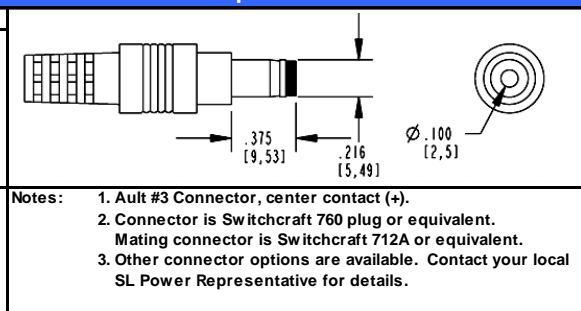
### AC Input Receptacle Options

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)

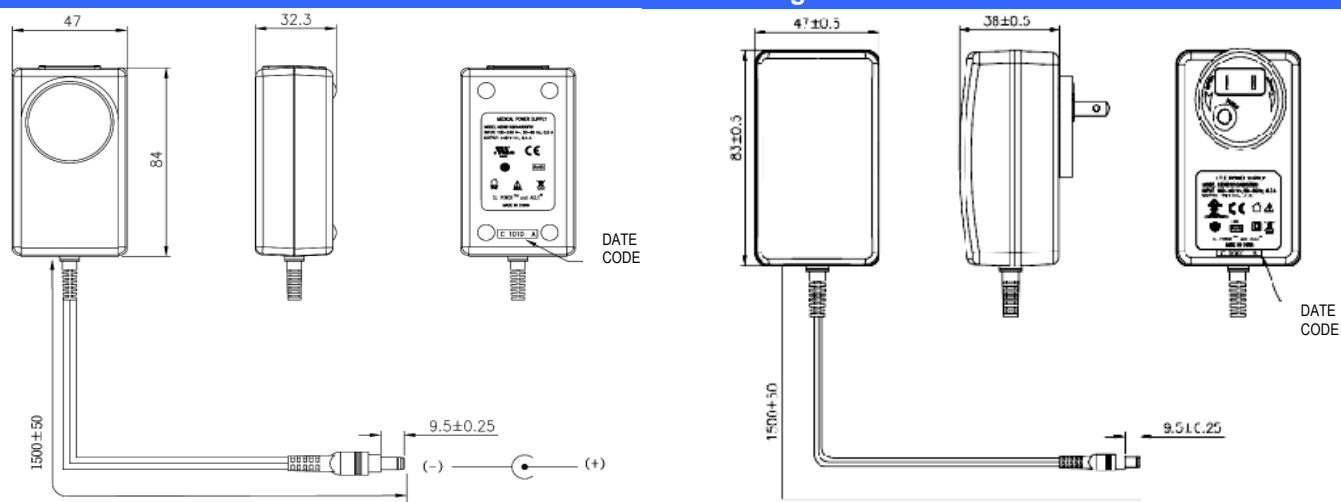
Notes:

- 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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