UNIpower CORPORATION

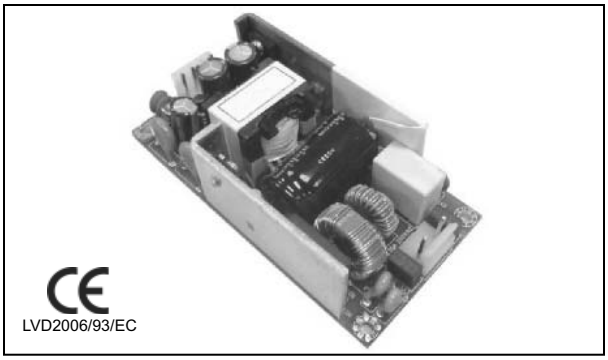
Fit Power Limited

BA SERIES SINGLE OUTPUT MEDICAL SWITCHERS

40 to 65 Watts Open Frame, 4” x 2” Footprint

FEATURES

- Compact 4” x 2” Footprint
- Universal AC Input
- Outputs from 5VDC to 48VDC
- Full Medical Aprpovals
- Class B EMI



CE LVD2006/93/EC

STANDARD MODELS

Model Number	Output Voltage	Output Current	Output Power	Total Regulation	Ripple & Noise (Vp-p)
BA2000M	5V	8A	40W	5%	50mV
BA3000M	12V	5A	60W	3%	120mV
BA4000M	15V	4A	60W	3%	150mV
BA4003M	19V	3.43A	65W	3%	190mV
BA5000M	24V	2.71A	65W	3%	240mV
BA8000M	36V	1.81A	65W	2%	360mV
BA7000M	48V	1.35A	65W	2%	480mV

Note: All ratings for convection cooling.

SPECIFICATIONS

Typical at Nominal 115/230VAC Line, Full Load and 25°C Unless Otherwise Noted.

INPUT SPECIFICATIONS

Nominal Input Voltage 100-240VAC
Input Operating Range 90-264VAC
Power Factor .....>0.90
Input Frequency 47-63Hz
Inrush Current .....<80A Peak @ 230VAC, cold start
Leakage Current.....<300µA @ 264VAC
Input EMI Filter .....EN55011 Curve B
FCC20780 pt. 18 Curve B
Input Immunity, Conducted
Fast Transients, Line-Line .....±1kV (EN61000-4-4)
Surges, Line-Line .....±1kV (EN61000-4-5)
Surges, Line-Ground .....±2kV (EN61000-4-5)
Input Protection .....Internal Fuse

OUTPUT SPECIFICATIONS

Total Output Power, Continuous, Max ..... 40-65 Watts
Total Regulation[1], ...see model listing
Ripple & Noise, Pk-Pk[2] .....see model listing
Holdup Time, Full Load @ 115VAC 10mS
Dynamic Response[3] 300µS
Temperature Coefficient ..... ±0.04%/°C
Minimum Load 0A
Overload Protection ..... 180% Full Load, Auto Recovery
Overvoltage Protection ..... 110-130% Rated Output

GENERAL SPECIFICATIONS

Efficiency[4] .....80% at Full Load
Switching Frequency 65kHz
Isolation, Class I, min.[5]
Input-Output 4000VAC/5656VDC
Input-Ground 1500VAC/2121VDC
Output-Ground 50VDC
MTBF (Bellcore) ..... 782,000 Hours
EMI Standards..... EN60601-1-2
Safety Standards UL60601-1, CSA22.2 No.60601-1
..... EN60601-1, IEC60601-1

ENVIRONMENTAL SPECIFICATIONS

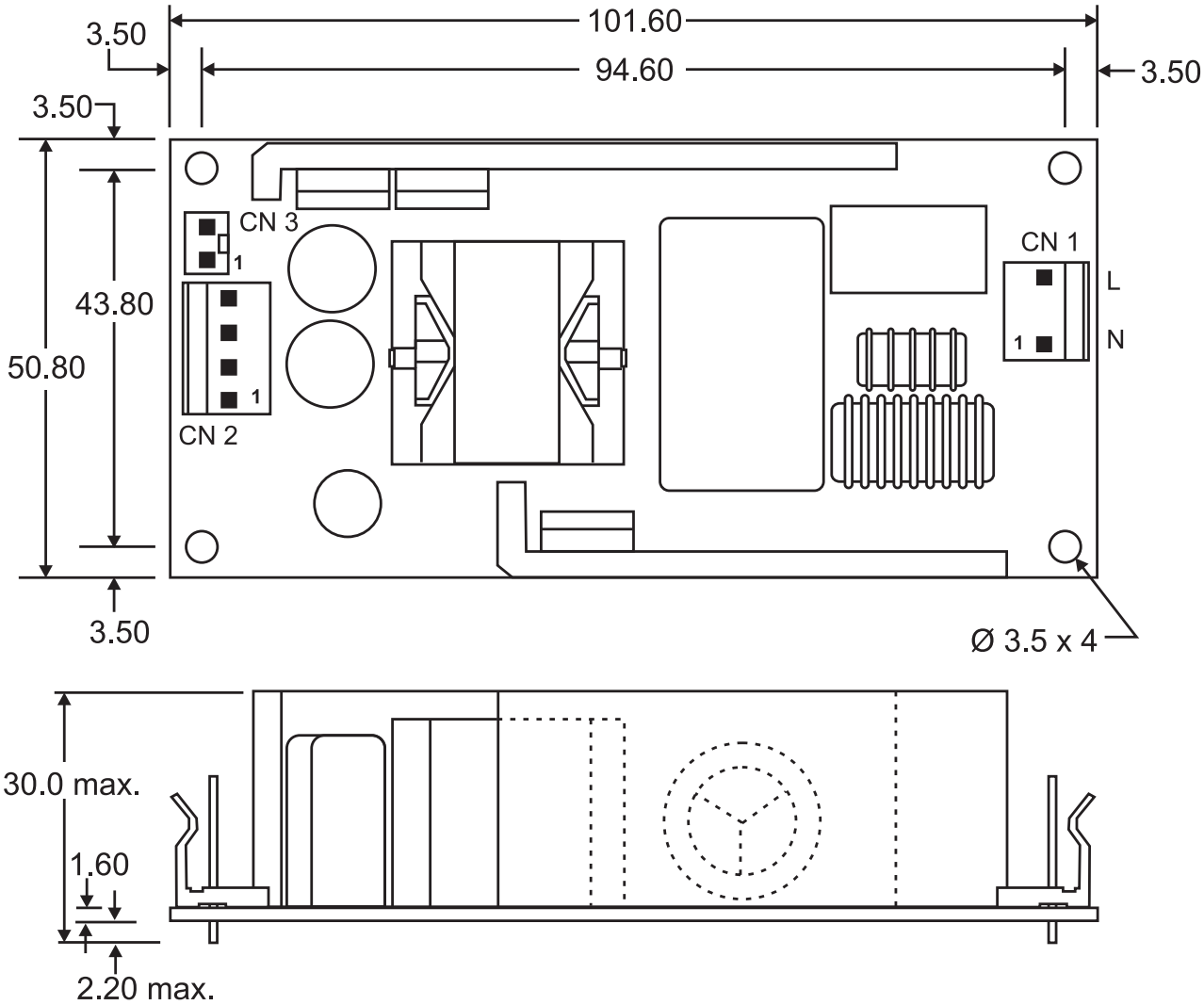
Operating Temperature .....0°C to 70°C Ambient
Derating..... 2.5% / °C, 50°C to 70°C
Storage Temperature.....-10°C to +85°C
Cooling .....Natural Convection

PHYSICAL SPECIFICATIONS

Format ..... Open PCB
Dimensions, Inches(mm)..... 1.02 H x 2.0 W x 4.0 D
(26 x 50.8 x 101.6)
Weight .....0.44 lbs. (0.2 kg.)

NOTES:
1. No load to full load, including line regulation and load regulation.
2. 20MHz bandwidth. Measure with 0.1µF ceramic and 10µF tantalum capacitors in parallel across the output.
3. <4% deviation recovering to within 1% for 25% load change.
4. Typical efficiency is at low end of range for 5V output and at high end of range for 48V output.
5. Input-output isolation figure is for isolation components only. 100% production Hipot tested.

MECHANICAL SPECIFICATIONS & CONNECTION DETAILS



CONNECTOR PINOUTS	
CN1	See outline drawing
CN2	Pin 1: Output -Ve Pin 2: Output -Ve Pin 3: Output +Ve Pin 4: Output +Ve
CN3	Pin 1: Sense -Ve Pin 2: Sense +Ve

Note: Use of the sense connections is optional.

MATING CONNECTORS	
CN1	Housing: Molex 09-76-1020 or equivalent Pins (2): Molex 08-70-0012 or equivalent
CN2	Housing: Molex 09-52-4044 or equivalent Pins (4): Molex 08-70-0012 or equivalent
CN3	Housing: JST XHP-2 or equivalent Pins (2): JST SXH-001T-P0.6(N) or equivalent

A kit containing one each housing and indicated number of pins is supplied with each unit as standard.