

# P R B X

POWERBOX **Medline 65**  
 EBK01 Series  
 65W  
 Single Output  
 AC/DC Medical Switch Mode Adaptor, Desktop Style



## Features

|  |
|--|
| Compliant against IEC60601-1-2:2014 (EMC 4th edition)              |
| High efficiency  |
| Altitude <5000m  |
| Low safety ground leakage current                                  |
| Wide input range 85 to 265 VAC                                     |
| 100% burn-in   |
| Overvoltage protection   |
| Short-circuit protection   |
| Overpower protection   |
| Compliant with CEC and Energy Star Efficiency level V requirements |
| - No load power consumption less than 0.5 W                        |
| - Average active efficiency greater than 87%                       |
| Compliant with RoHS requirements                                   |

## Input

|                 |  |
|-----------------|--|
| Voltage range   | 85-265VAC.                                       |
| Frequency       | 47-63Hz.   |
| Current         | 2.0A (rms) for 115VAC.<br>1.0A (rms) for 230VAC. |
| Leakage current | 300µA max @ 264VAC, 63Hz.                        |
| Touch current   | 100µA max @ 264VAC, 63Hz.                        |

## Output

|                         |   |
|-------------------------|---|
| Power                   | See table.  |
| Voltage/current         | See table.  |
| Ripple and noise        | 1% peak to peak maximum.  |
| Over voltage protection | Provided and set at 112-140% of its nominal output voltage.   |
| Over current protection | Protected to short circuit conditions.  |
| Temperature coefficient | ±0.04%/°C max.  |
| Transient response      | Max excursion of 4% or better on all models, recovering to 1% of final value within 500us after a 25% step load change. |

## Environmental

|                       |   |
|-----------------------|---|
| Operating temperature | 0°C to +60°C.                                       |
| Storage temperature   | -40°C to +85°C.                                     |
| Relative humidity     | 5-95% non-condensing.                               |
| Derating              | Derate from 100% at +40°C linearly to 50% at +60°C. |
| Altitude              | <5000m.   |

## General

|                     |   |
|---------------------|---|
| Switching frequency | 75-100KHz.  |
| Efficiency          | 87% min.  |
| Hold-up time        | 10ms min at 110VAC.   |
| Turn on delay time  | 3s max at 115VAC.   |
| Line regulation     | ±0.5% max at full load.   |
| Inrush current      | 40A @ 115VAC, or 80A @ 230VAC, at 25°C cold start.  |
| Withstand voltage   | 4,000VAC from input to output (2MOPP).<br>1,500VAC from input to ground (1MOPP).<br>For class II models, 4,000VAC from input to output. |
| MTBF                | 150,000 hours min at full load at 25°C ambient, calculated per MIL-HDBK-217F.   |

## Standards

|                  |  |
|------------------|--|
| Safety standards | UL ES 60601-1, CSA C22.2 No. 60601-1<br>File No. E242500, TÜV EN 60601-1.                      |
| EMC performance  | (IEC60601-1-2)<br>EN55011 Class B conducted, Class B radiated.                                 |
| FCC              | Class B conducted, Class B radiated.   |
| VCCI             | Class B conducted, Class B radiated.   |
| EN61000-3-2      | Harmonic distortion Class A.   |
| EN61000-3-3      | Line flicker.  |
| EN61000-4-2      | ESD, ±8KV air and ±6KV contact.  |
| EN61000-4-3      | Radiated immunity, 3V/m.   |
| EN61000-4-4      | Fast transient/burst, ±2KV.  |
| EN61000-4-5      | Surge, ±1KV diff., ±2KV com.   |
| EN61000-4-6      | Conducted immunity, 3Vrms.   |
| EN6100-4-8       | Magnetic field immunity, 3A/m.   |
| EN61000-4-11     | Voltage dips, 30% reduction for 500ms,<br>60% reduction for 100ms,<br>>95% reduction for 10ms. |

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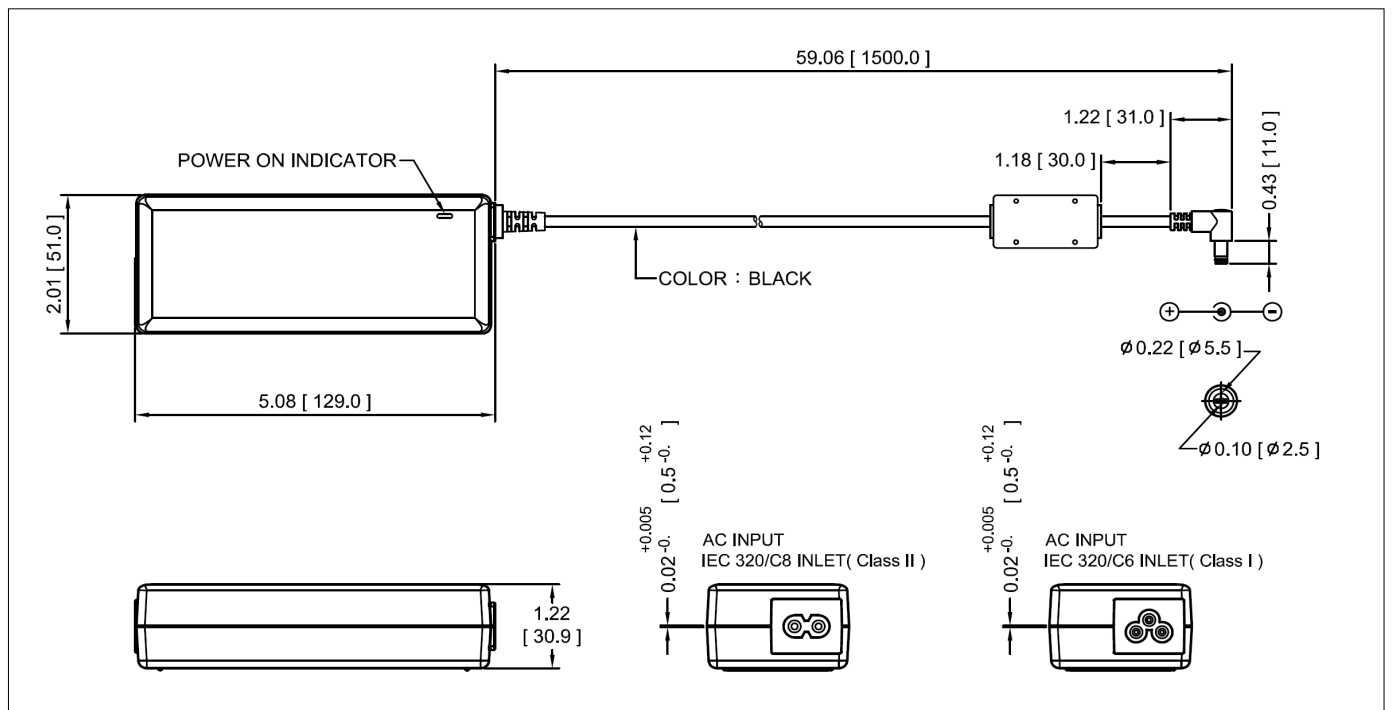
| Model Number <sup>1</sup> |            | Output | Min     | Max     | Tol | Ripple &           | Max Output | Average Active Efficiency |
|---------------------------|------------|--------|---------|---------|-----|--------------------|------------|---------------------------|
| Class I                   | Class II   | V1     | Current | Current |     | Noise <sup>2</sup> | Power      | (typ) @ 115/230VAC        |
| EBK01031S                 | EBK01031SF | 12.0 V | 0 A     | 5.42 A  | ±5% | 120 mV             | 65 W       | 87 /88%                   |
| EBK01037S                 | EBK01037SF | 15.0 V | 0 A     | 4.34 A  | ±5% | 150 mV             | 65 W       | 89 /89%                   |
| EBK01040S                 | EBK01040SF | 18.0 V | 0 A     | 3.62 A  | ±5% | 180 mV             | 65 W       | 87 /88%                   |
| EBK01043S                 | EBK01043SF | 19.0 V | 0 A     | 3.43 A  | ±5% | 190 mV             | 65 W       | 88 /89%                   |
| EBK01044S                 | EBK01044SF | 20.0 V | 0 A     | 3.25 A  | ±5% | 200 mV             | 65 W       | 88 /89%                   |
| EBK01046S                 | EBK01046SF | 24.0 V | 0 A     | 2.71 A  | ±5% | 240 mV             | 65 W       | 88 /90%                   |

Notes:

- Class-I models are equipped with IEC 320/C6 inlet, and Class-II models with IEC 320/C8 inlet
- Ripple and noise is maximum peak to peak voltage value measured at output within 20 MHz

bandwidth, at rated line voltage and output load ranges, and with a 10 µF tantalum capacitor in parallel with a 0.1 µF ceramic capacitor across the output.

Mechanical



Notes:

- Dimensions shown in inches [mm]
- Tolerance 0.02 [0.5] maximum
- Weight: 410 grams (0.906 lbs.) approx.

Specifications are subject to change without notice.