

MW170KB

Universal 10 – 15 Watt Series

Medical Switch-Mode Power Supply



3 Year Warranty

- 100-240VAC Universal Input
- Desktop and Wall-Plug Style with Interchangeable Blades* (Kit sold separately)
- 3.3V to 24V Single Output Models, up to 15W
- Modified and Custom Designs
- Regulated Output with Low Ripple
- Impact-Resistant Polycarbonate Enclosure
- No load Power Consumption < 0.50W
- Designed to meet EISA Requirements (see page 3 for details).



International Safety Standard Approvals



Specifications

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

Output Specifications

Line and Load Voltage Regulation	Excluding Cord	Line: +/-1% Load: +/-5%
Ripple		1% Vp-p max.
Transient Response		0.5mS for 50% Load Change, typical.
Protection		Overcurrent Protection (Hiccup). Short Circuit Protection

Input Specifications

Input Voltage Range	Universal Input	100-240VAC, -10%, +10%
Line Frequency		47-63Hz
Input Current	90 VAC	0.4A, max.
Protection		Internal Primary Current Fuse, Inrush Limiting

Environmental Specifications

Thermal Performance	Operating Temperature	0° C to 40° C full load, no derating, convection cooling, Non-vented case
Relative Humidity	Non-condensing	5% to 95%
Altitude		0 to 10,000 feet

General Specifications

Topology	Switching - Fixed Frequency Flyback
Efficiency	Designed to meet EISA Requirements - see page 3
Hold-up Time @ 115VAC	18mS, min.
Dielectric Withstand	4,000VAC or 5,656VDC Primary-Secondary; 1,500VAC or 2,150VDC Primary - F.G; 500VDC Secondary - F.G.
Storage Temp.	-30° C to 85° C
Approvals and Safety Standards	UL60601-1 IEC/EN60601-1 EMC: EN60601-1-2/ EN55024
MTBF	100,000 Calculated Hours
Case and Dimensions	Desktop Style: 3.3"L x 1.81"W x 1.26"H 84.6mm L x 46mm W x 33mm H
Case Material	Black 94V0 Polycarbonate
Cord and Connectors	18AWG, 1,800mm 2 conductor. (5V, 6V model: 1,500mm). Ault #3 connector. Other connectors are available.

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OUTPUT PARAMETERS				
Model Number	Volts (V)	Output Current (max)	Max Watts	Ripple (Vp-p max)
MW170KB0503F01	5 V	2.00 A	10.0 W	50mV
MW170KB0603F01	6 V	1.67 A	12.0 W	60mV
MW170KB0903F01	9 V	1.50 A	13.5 W	90mV
MW170KB1203F01	12 V	1.20 A	15.0 W	120mV
MW170KB1503F01	15 V	1.00 A	15.0 W	150mV
MW170KB1803F01	18 V	0.84 A	15.0 W	180mV
MW170KB2403F01	24 V	0.63 A	15.12 W	240mV

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

Model Number Key

MW170 K B 05 03 F 01

Modification Designator. "01" is standard part, "02" and higher denotes a modified model.

Input Receptacle. See Below for options. "F" receptacle (IEC320, C14 type, grounded) is standard.

Output Connector. "03" connector is standard. See below. Other output connectors available. Contact the factory for more details

Output Voltage: 05=5V, 06=6V, 09=9V, 12=12V, 15=15V, 18=18V, 24=24V, 48=48V.

Design Revision Changes

Manufacturing Location

Product Family

Input Receptacle Options

DESKTOP OPTIONS			WALL-PLUG OPTIONS				
IEC320 C14 Grounded (F)	IEC320 C18 Ungrounded (Q)	IEC320 C8 "Shaver" (N)	N. America Japan Interchangeable (B)	N. America Japan Fixed (C)	Europe Fixed (M)	United Kingdom Fixed (G)	Australia Fixed (E)

Notes: 1. For Desktop options, choose the applicable letter above.

2. For Wall-plug options, choose the applicable letter above. The model will then be fitted only with the receptacle chosen. The North American blade version (B) will be an interchangeable blade. The other options (C), (M), (G), and (E), will be fixed blades molded in the case.

3. Blade Kit is available which will include one each of a EU, UK, and Aust blade. Kit part number is KT1027K. Can be used with (B) version only, to allow blades to be interchanged.

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2007 Energy Independence and Security Act - EISA

The Energy Independence and Security Act of 2007 was passed in December of 2007 and addresses minimum efficiency standards and standby levels for Class A external power supplies that are 250 Watts and under. This law stipulates that external power supplies manufactured on July 1, 2008 and beyond meet certain minimum efficiency and standby criteria as defined below.

Minimum Efficiency Criteria:

Active mode is defined as when a power supply's input is connected to a line voltage AC and it's output is connected to a DC or AC load, drawing a portion of the product's power output. Depending upon the power rating for the power supply, it must meet the minimum efficiency criteria outlined below.

Energy-Efficiency Criteria for Active Mode:

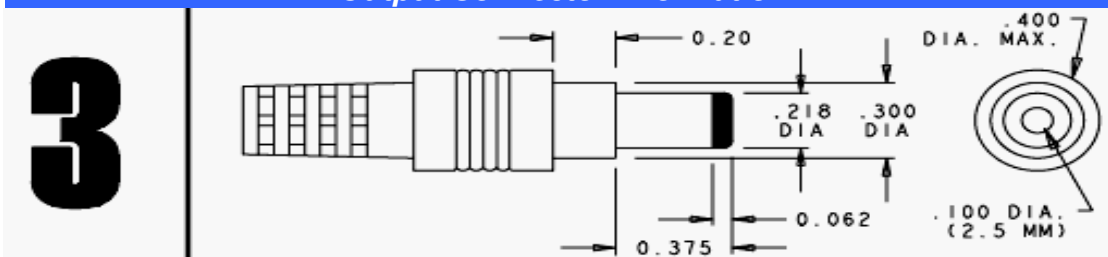
<u>Output Power on Adapter Label</u>	<u>Minimum Average Efficiency Percentage</u>
0 to < 1 Watt	$\geq 0.50 * \text{output power on the label}$
> 1 watt to ≤ 51 watts	$\geq [0.09 * \ln(\text{output power on adapter label})] + 0.50$
> 51 watts	≥ 0.85

Energy Consumption Criteria for No Load Mode:

The power supply must also meet a requirement for when its input is connected to line voltage AC but its output is not connected to a load. Depending upon the power output of the supply, it must keep its energy consumption below the following values:

<u>Output Power on Adapter Label</u>	<u>Maximum Power Consumption in No-Load Mode</u>
0 to < 250 Watts	≤ 0.50 watts

Output Connector Information



Notes:

1. Center Contact = Positive
2. Connector is Switchcraft 760 plug or equivalent.
3. Suggested Mating Connector is Switchcraft 712A jack or equivalent.
4. Other output connector options are available. Contact your local representative for details.

Mouser Electronics

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SL Power:

<u>MW170KB1803F01</u>	<u>MW170KB1203F01</u>	<u>MW170KB1503B01</u>	<u>MW170KB2403F01</u>	<u>MW170KB0603B01</u>
<u>MW170KB1203B01</u>	<u>MW170KB0903B01</u>	<u>MW170KB2403B01</u>	<u>MW170KB0503F01</u>	<u>MW170KB0603F01</u>
<u>MW170KB1503F01</u>	<u>MW170KB0503B01</u>	<u>MW170KB0903F01</u>	<u>MW170KB1803B01</u>	<u>MW170KB1803N01</u>
<u>MW170KB0903N01</u>	<u>MW170KB0603N01</u>	<u>MW170KB2403N01</u>	<u>MW170KB0503N01</u>	<u>MW170KB1503N01</u>
<u>MW170KB1203N01</u>				