

PR BX

POWERBOX **Medline 100**
 OBL07 Series
 100W
 Single Output
 AC/DC Medical Switch Mode Power Supply

Features

Compliant against IEC60601-1-2:2014 (EMC 4th edition)
 Medical and industrial approvals
 Compact size 2" x 4" x 1.26"
 High power density 10 W /cubic inch
 110 W output with convection cooling up to +40°
 Low earth leakage current
 2 x MOPP
 EN55011/55022 class B emissions
 RoHS compliant
 2 years warranty

Input

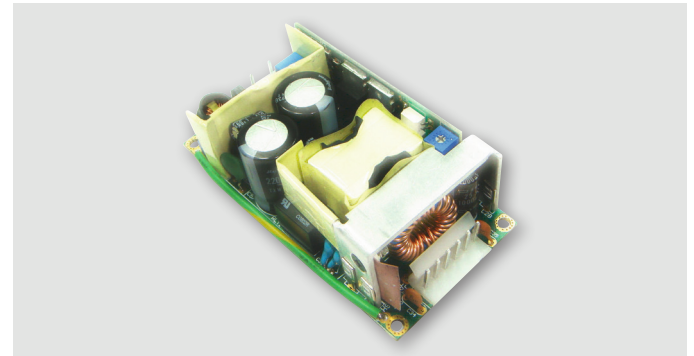
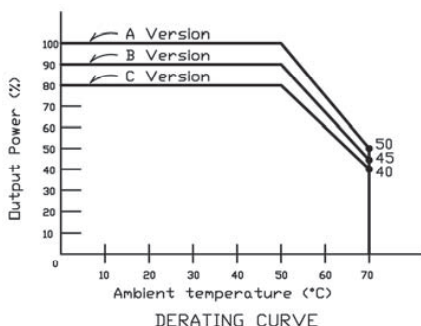
Voltage range	90-132VAC or 180-264VAC, autoranging.
Frequency	47-63Hz.
Current	1.9A (rms) for 100VAC. 1.1A (rms) for 240VAC.
Leakage current	150uA max @ 264VAC, 63Hz.

Output

Power	100W max.
Voltage/current	See table.
Ripple and noise	150mV peak to peak on 5.0V model, 1% peak to peak on other models.
Over voltage protection	Provided on output, set at 110-140% of its nominal output voltage.
Over current protection	All outputs protected to short circuit condition.
Temperature coefficient	All output $\pm 0.04\%/^{\circ}\text{C}$ 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	-10°C to +70°C.
Storage temperature	-40°C to +85°C.
Relative humidity	5-95% non-condensing.
Derating	Derate from 100% at +50°C linearly to 50% at +70°C.



General

Switching frequency	100KHz.
Efficiency	88-90% @ 230VAC full load.
Hold-up time	12msec min at 110VAC.
Line regulation	$\pm 0.2\%$ max at full load.
Inrush current	40A @ 115VAC, or 80A @ 230VAC, at 25°C cold start.
Withstand voltage	5600VAC from input to output. 2100VDC from input to ground. 700VDC from output to ground. (To verify AC strength, get correct test method to avoid power supply damage.)
MTBF	270,000 hours min at full load at 25°C ambient, calculated per MIL-HDBK-217F.

Standards

Safety standards	UL60601-1, CSA C22.2 No 606.1, TUV EN60601-1, UL60950-1, CSA C22.2 No 60950-1, TUV EN60950-1, EN/IEC/UL60601-1 (Edition III).
EMC performance	
EN55011/EN55022	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, $\pm 8\text{KV}$ air and $\pm 6\text{KV}$ contact.
EN61000-4-3	Radiated immunity, 3V/m.
EN61000-4-4	Fast transient/burst, $\pm 2\text{KV}$.
EN61000-4-5	Surge, $\pm 1\text{KV}$ diff., $\pm 2\text{KV}$ com.
EN61000-4-6	Conducted immunity, 3Vrms.
EN6100-4-8	Magnetic field immunity, 3A/m.
EN61000-4-11	Voltage dips, 30% reduction for 500ms 60% reduction for 100ms >95% reduction for 10ms.
	Performance criteria A, B, A @ 230VAC B, B, A @ 100VAC.

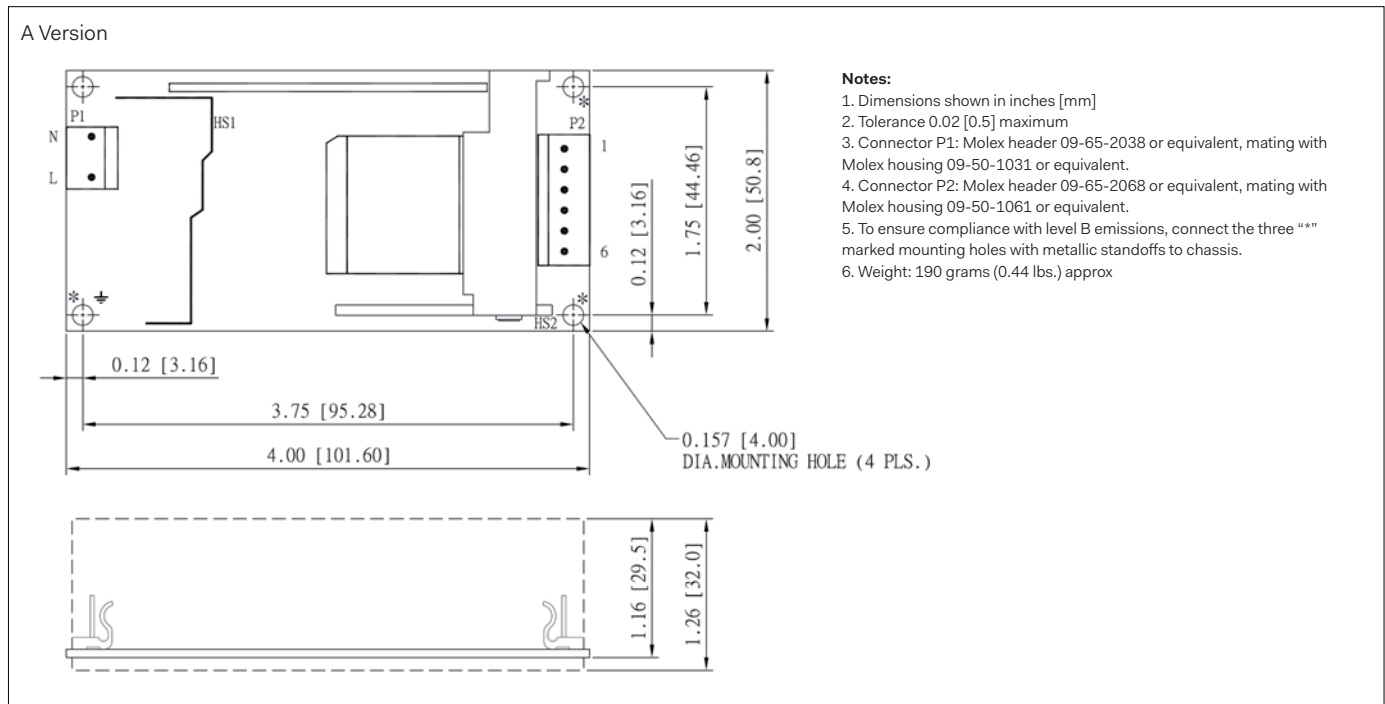
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Model ¹ Number	Output Vnom.	Imin.	I _{max} .	Tol.	Max Output Power
OBL07016	5 V	0 A	20 A	2%	100 W
OBL07031	12 V	0 A	8.34 A	2%	100 W
OBL07037	15 V	0 A	6.7 A	2%	100 W
OBL07038	18 V	0 A	5.56 A	2%	100 W
OBL07046	24 V	0 A	4.2 A	2%	100 W
OBL07050	28 V	0 A	3.58 A	2%	100 W
OBL07057	36 V	0 A	2.78 A	2%	100 W
OBL07070	48 V	0 A	2.1 A	2%	100 W

Notes:

1. Safety approvals are for PCB form only. To order models with metallic L-bracket or box, change suffix "A" to "B" for L-bracket format, to "C" for enclosed format (Outline Drawing of Cased Internal Switchers), e.g. OBL07046A.
2. Ripple and noise: Peak to peak with 20 MHz bandwidth and 10 uF tantalum capacitor in parallel with a 0.1 uF ceramic capacitor at rated line voltage and load ranges.
3. Option available for fixed installations, fuse in Neutral removed, contact Powerbox for details.

Mechanical

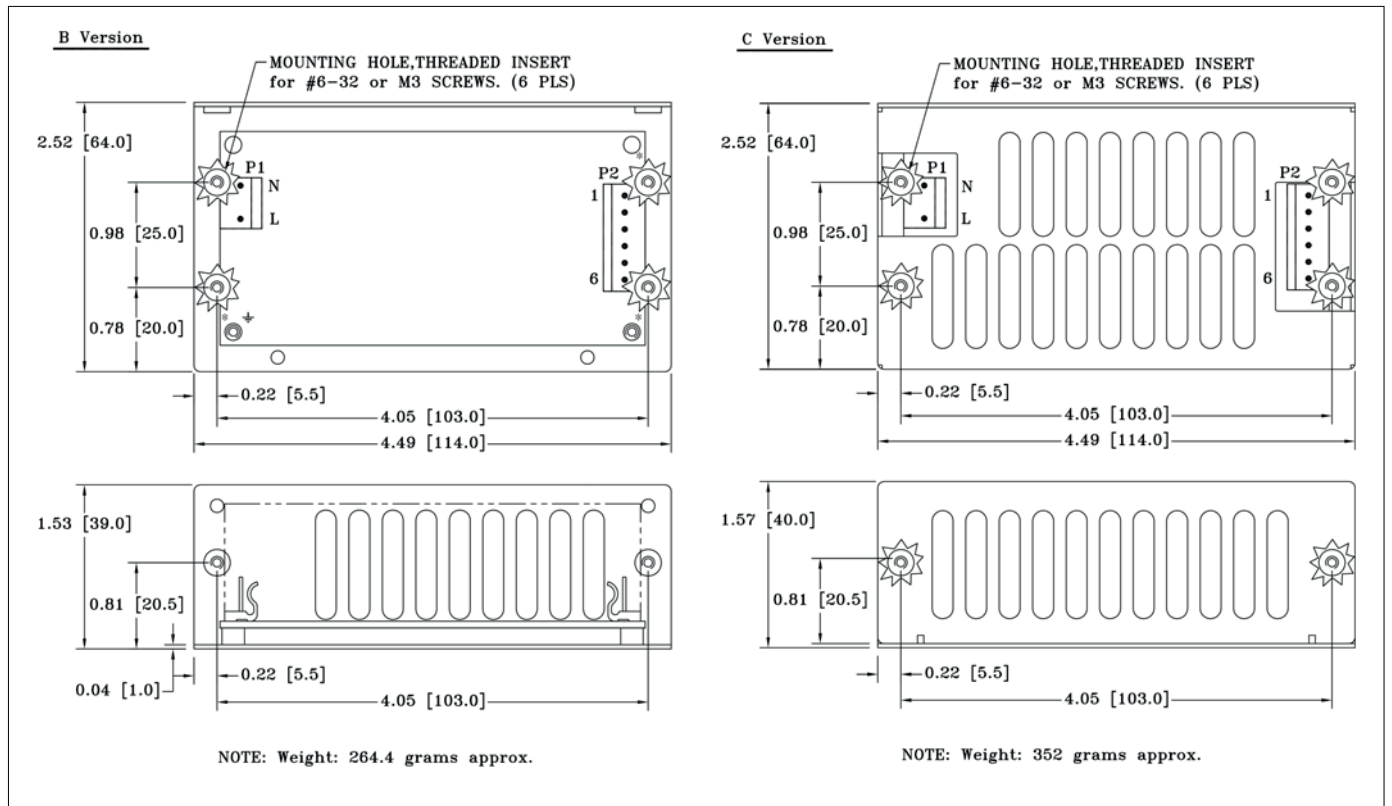


Pin Connection

Pin		1	2	3	4	5	6
OBL07016	OBL07031	RETURN	RETURN	RETURN	OUTPUT	OUTPUT	OUTPUT
OBL07037	OBL07038	RETURN	RETURN	RETURN	OUTPUT	OUTPUT	OUTPUT
OBL07046	OBL07050	RETURN	RETURN	RETURN	OUTPUT	OUTPUT	OUTPUT
OBL07057	OBL07070	RETURN	RETURN	RETURN	OUTPUT	OUTPUT	OUTPUT

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Mechanical



Specifications are subject to change without notice.