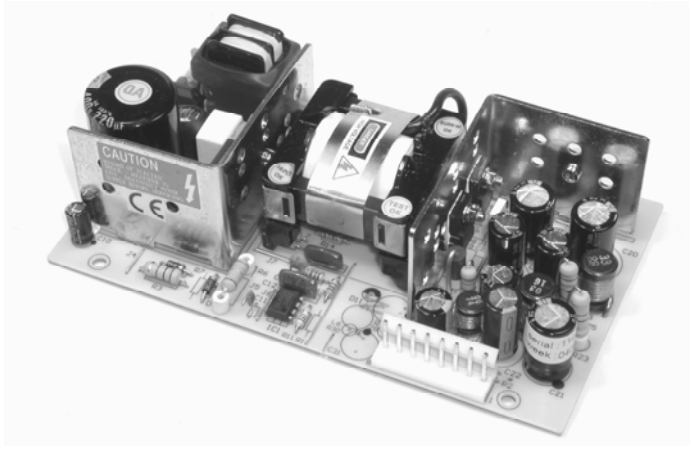
65 WATT MEDICAL POWER SUPPLIES

DESCRIPTION

The PM65 series of compact, open PCB constructed, AC-DC switching power supplies are capable of delivering 50 to 65 watts of continuous power. They are ideally suited for use in medical equipment not for patient contact, and operate at 85 to 264 VAC input voltage without the need of voltage selection. All models meet the safety requirements of UL, CSA and IEC.

PM65 SERIES

CE (MDD)



FEATURES

- **Low safety ground leakage current**
- **Meet EN 55011 and FCC Class B**
- **Small size, light weight**
- **100% burn-in**
- **Wide input range 85 to 264 VAC**
- **Input surge current protection**
- **Overvoltage protection**
- **Overcurrent protection**

Safety Standard Approvals：

UL 2601-1

CSA C22.2 No. 601.1

TÜV EN60601-1

INPUT SPECIFICATIONS

Input voltage：	85 to 264 VAC
Input frequency：	47 to 63 Hz
Input current：	1.60A（rms）for 115VAC 1.00A（rms）for 230VAC
Leakage current：	90uA max. @ 115VAC, 60Hz 150uA max. @ 230VAC, 50Hz

OUTPUT SPECIFICATIONS

Output voltage/current：	See rating chart
Total output power：	65 watts maximum
Ripple and noise：	1% peak to peak maximum
Overvoltage protection：	Provided on output #1 only; set at 112 - 132% of its nominal output voltage
Overcurrent protection：	All outputs protected to short circuit conditions
Temperature coefficient：	All outputs ±0.04% /℃ maximum
Transient response：	Maximum excursion of 4% or better on all models, recovering to 1% of final value within 500us after a 25% step load change

ENVIRONMENTAL SPECIFICATIONS

Operating temperature：	0℃ to +70℃
Storage temperature：	-40℃ to +85℃
Relative humidity：	5% to 95% non-condensing
Derating：	Derate from 100% at +50℃ linearly to 50% at +70℃

GENERAL SPECIFICATIONS

Switching frequency：	32KHz ±5KHz
Efficiency：	70% minimum on single output models with Vo ≧12V, 65% minimum on the others.
Hold-up time：	10 msec minimum at 110VAC
Line regulation：	±0.5% maximum at full load
Inrush current：	15 amps @ 115VAC, or 30 amps @ 230VAC, at 25℃ cold start
Withstand voltage：	4000VAC from input to output 1500VAC from input to ground 500VAC from output to ground
MTBF：	400,000 hours minimum at full load at 25℃ ambient , calculated per MIL-HDBK-217F
EMC PERFORMANCE (EN60601-1-2: 2001)	
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, for 80~2500MHz
EN61000-4-4:	Fast transient/burst, ± 2KV
EN61000-4-5:	Surge, ± 1KV diff., ± 2KV com.
EN61000-4-6:	Conducted immunity, 3Vrms
EN61000-4-8:	Magnetic field immunity, 3A/m
EN61000-4-11:	Voltage dips, 30% reduction for 500ms, 60% reduction for 100ms and >95% reduction for 10ms

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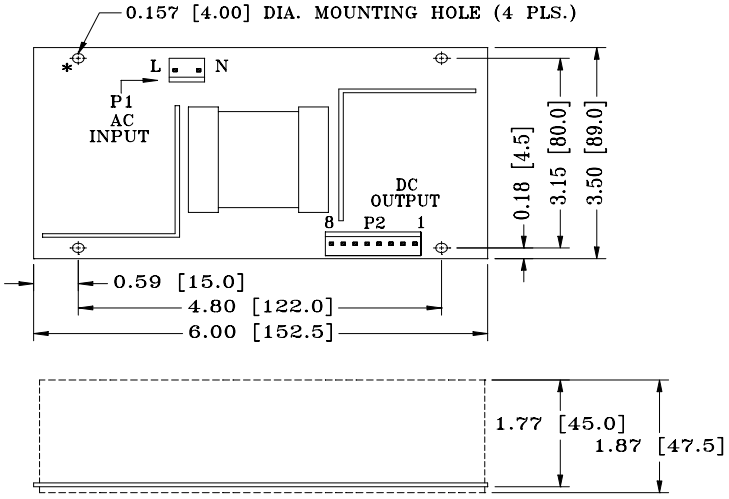
OUTPUT VOLTAGE/CURRENT RATING CHART

(1) (2) Model	Output #1 Vnom.	Imin.	Imax.	Tol.	Output #2 Vnom.	Imin.	Imax.	Tol.	Output #3 Vnom.	Imin.	Imax.	Tol.	Output #4 Vnom.	Imin.	Imax.	Tol.	Maximum Output Power
PM65-10A	5V	0A	10A	2%	(N/A)				(N/A)				(N/A)				50W
PM65-12A	12V	0A	5.5A	1%	(N/A)				(N/A)				(N/A)				65W
PM65-13A	15V	0A	4.5A	1%	(N/A)				(N/A)				(N/A)				65W
PM65-14A	24V	0A	3.0A	1%	(N/A)				(N/A)				(N/A)				65W
PM65-16A	30V	0A	2.5A	1%	(N/A)				(N/A)				(N/A)				65W
PM65-17A	36V	0A	2.2A	1%	(N/A)				(N/A)				(N/A)				65W
PM65-23A	+5V	1A	6.0A	3%	+12V	0.5A	3.0A	5%	(N/A)				(N/A)				65W
PM65-24A	+5V	1A	6.0A	3%	+15V	0.4A	3.0A	5%	(N/A)				(N/A)				65W
PM65-25A	+5V	1A	6.0A	3%	+24V	0.3A	2.0A	5%	(N/A)				(N/A)				65W
PM65-30A	+5V	1A	6.0A	3%	+12V	0.5A	3.0A	5%	-5V	0.1A	0.5A	10%	(N/A)				65W
PM65-31A	+5V	1A	6.0A	3%	+12V	0.5A	3.0A	5%	-12V	0.1A	0.5A	10%	(N/A)				65W
PM65-32A	+5V	1A	6.0A	3%	+15V	0.4A	3.0A	5%	-15V	0.1A	0.5A	10%	(N/A)				65W
PM65-33A	+5V	1A	6.0A	3%	+15V	0.4A	3.0A	5%	-12V	0.1A	0.5A	10%	(N/A)				65W
PM65-39A	+5V	1A	6.0A	3%	+24V	0.3A	2.0A	5%	-12V	0.1A	0.5A	10%	(N/A)				65W
PM65-40A	+5V	1A	6.0A	3%	+12V	0.5A	3.0A	5%	-12V	0.1A	0.5A	10%	-5V	0.1A	0.5A	10%	65W

Notes: (1) All multiple output models may be operated at no-load without damage. At no-load, output voltage tolerance increases to 10%

(2) Safety agency approvals are for the above listed models in PCB format. To order a model with a metallic L-bracket or box, change suffix "A" to "B" for L-bracket format or to "C" for enclosed format (mechanical details shown in page 7-2), e.g. PM65-25C.

MECHANICAL SPECIFICATIONS



NOTES:
1. Dimensions shown in inch [mm]
2. Tolerance 0.02 [0.5] maximum
3. Input connector mates with Molex housing 09-50-3031 and Molex 2878 series crimp terminal.
4. Output connector mates with Molex housing 09-50-3081 and Molex 2878 series crimp terminal.
5. Weight: 400 grams (PCB format)
6. The "∗" marked mounting hole is for system grounding through a metallic stand-off to the system chassis.

PIN CHART

MODEL \ PIN	1	2	3	4	5	6	7	8
PM65-10A PM65-12A PM65-13A PM65-14A PM65-16A PM65-17A	OUTPUT #1	OUTPUT #1	OUTPUT #1	OUTPUT #1	RETURN	RETURN	RETURN	RETURN
PM65-23A PM65-24A PM65-25A	OUTPUT #1	OUTPUT #1	COMMON RETURN	COMMON RETURN	OUTPUT #2	OUTPUT #2	N.C.	N.C.
PM65-30A PM65-31A PM65-32A PM65-33A PM65-39A	OUTPUT #1	OUTPUT #1	COMMON RETURN	COMMON RETURN	OUTPUT #2	OUTPUT #2	OUTPUT #3	N.C.
PM65-40A	OUTPUT #1	OUTPUT #1	COMMON RETURN	COMMON RETURN	OUTPUT #2	OUTPUT #2	OUTPUT #3	OUTPUT #4