PROTEK POWER

51-65 WATT MEDICAL SWITCHING POWER SUPPLIES

DESCRIPTION

The PM66 series of compact, open PCB constructed, AC-DC switching power supplies are capable of delivering 45 to 65 watts of continuous output power. They operate at 90-264 VAC input voltage without the need of voltage selection. They are ideally suited for use in medical equipment not for life-supporting equipment. All models meet the safety requirements of UL, CSA and IEC.

FEATURES

- Recognized or certified by UL,CSA and TÜV
- Small size
- 100% burn-in
- Wide input range 90-264 VAC
- Input surge current protection
- Overvoltage protection
- Overcurrent protection
- Compliant with RoHS requirements

INPUT SPECIFICATIONS

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

OUTPUT SPECIFICATIONS

Output voltage/current :	See rating chart
Total output power :	See rating chart
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 500 us 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℃

PM66 SERIES

CE (LVD)
RoHS

SAFETY STANDARD APPROVALS

cULus — UL 60601-1, CSA C22.2 No. 601.1
File No. E178020

IEC 60601-1 — TÜV EN60601-1

GENERAL SPECIFICATIONS

Switching frequency :	42±5 KHz
Efficiency :	75% minimum on single output model with Vo □12V, 68% minimum on the others
Hold-up time :	10 msec minimum at 110 VAC
Line regulation :	±0.5% maximum at full load
Inrush current :	17 A @ 115 VAC or 40 A @ 230 VAC, at 25℃ cold start
Withstand voltage :	4000 VAC from input to output 1500 VAC from input to ground 500 VAC from output to ground
MTBF :	400,000 hours 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, ±8 KV air and ±6 KV contact
EN61000-4-3:	Radiated immunity, 3 V/m @ 80-2500 MHz
EN61000-4-4:	Fast transient/burst, ±2 KV
EN61000-4-5:	Surge, ±1 KV diff., ±2 KV com.
EN61000-4-6:	Conducted immunity, 3 Vrms
EN61000-4-8:	Magnetic field immunity, 3 A/m
EN61000-4-11:	Voltage dips, 30% reduction for 500 ms, 60% reduction for 100 ms and >95% reduction for 10 ms

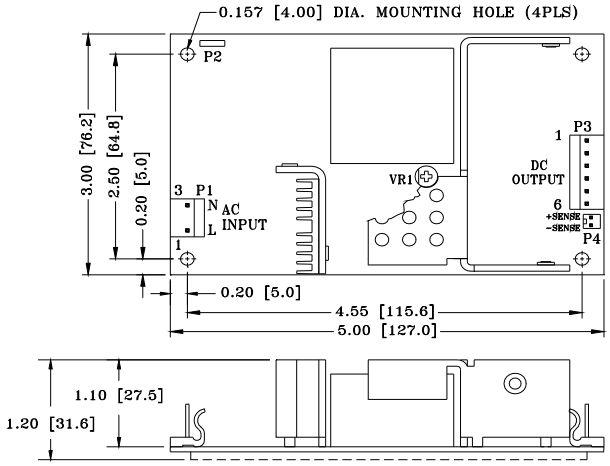
UNIVERSAL INPUT PM66 MEDICAL SERIES

OUTPUT VOLTAGE/CURRENT RATING CHART

MODEL	Vnom.	Output Imin.	Output Imax.	Tol.	Maximum Output Power
PM66-10A	5.1 V	0 A	10.0 A	3%	51 W
PM66-12A	12 V	0 A	5.5 A	2%	65 W
PM66-13A	15 V	0 A	4.4 A	2%	65 W
PM66-13-1A	18 V	0 A	3.7 A	2%	65 W
PM66-14A	24 V	0 A	2.8 A	2%	65 W
PM66-15A	28 V	0 A	2.4 A	2%	65 W

NOTES: Ripple and noise: Peak to peak with 20MHz bandwidth and 10uF in parallel with a 0.1uF capacitor at rated line voltage and load ranges.

MECHANICAL SPECIFICATIONS



NOTES:

1. Dimensions shown in inches [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 09-50-3061 and Molex 2878 series crimp terminal
5. P4 is for ±sense connections and mates with Molex housing 22-01-1023 and Molex 40445 series crimp terminal.
6. Weight : 330 grams (PCB format)
7. VR1 is for output voltage adjustment

PIN CHART

Single Output Models

CONN / PIN / MODEL	P1		P2	P3						P4	
	1	3	1	1	2	3	4	5	6	1	2
PM66-10A PM66-12A PM66-13A PM66-13-1A PM66-14A PM66-15A	AC LIVE	AC NEUTRAL	AC GROUND	OUTPUT #1	OUTPUT #1	OUTPUT #1	RETURN	RETURN	RETURN	+SENSE	-SENSE

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