

DESCRIPTION

The PM25 series of compact, open PCB constructed, AC-DC switching power supplies are capable of delivering 25 to 28 watts of continuous output power. They operate at 85-264 VAC input voltage without the need of voltage selection. They are ideally suited for use in medical equipment, safety systems and monitoring equipment, not for life-support equipment.

FEATURES

- Low safety ground leakage current
- 100% burn-in
- Wide input range 85-264 VAC
- Input surge current protection
- Overvoltage protection
- Overcurrent protection
- Open PCB construction
- Compliant with RoHS requirements

INPUT SPECIFICATIONS

Input voltage:	85-264 VAC
Input frequency:	47-63 Hz
Input current:	0.70 A (rms) for 115 VAC 0.40 A (rms) for 230 VAC
Earth leakage current:	220 μ A max. @ 264 VAC, 63 Hz

OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart.
Maximum 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 $\pm 0.04\%$ / $^{\circ}$ C maximum
Transient response:	Maximum excursion of 4% or better on all models, recovering to 1% of final value within 500 μ s after a 25% step load change

ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	0 $^{\circ}$ C to +70 $^{\circ}$ C
Storage temperature:	-40 $^{\circ}$ C to +85 $^{\circ}$ C
Relative humidity:	5% to 95% non-condensing
Derating:	Derate from 100% at +50 $^{\circ}$ C linearly to 50% at +70 $^{\circ}$ C

PM25 SERIES

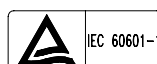


CE (LVD)
RoHS

SAFETY STANDARD APPROVALS



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



TÜV EN 60601-1

GENERAL SPECIFICATIONS

Switching frequency:	42 \pm 5 KHz
Efficiency:	70% minimum on single output model with $V_o \geq 12V$, 68% minimum on the others
Hold-up time:	10 ms minimum at 110 VAC
Line regulation:	$\pm 0.5\%$ maximum at full load
Inrush current:	10 A @ 115 VAC or 25 A @ 230 VAC, at 25 $^{\circ}$ C cold start
Withstand voltage:	4000 VAC from input to output, 1500 VAC from input to ground, 500 VAC from output to ground
MTBF:	500,000 hours at full load at 25 $^{\circ}$ C ambient, calculated per MIL-HDBK-217F
EMC Performance (EN60601-1-2)	
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 and D
EN61000-3-3:	Line flicker
EN61000-4-2:	ESD, ± 8 KV air and ± 6 KV contact
EN61000-4-3:	Radiated immunity, 3 V/m
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 dip immunity, 30% reduction for 500 ms, 60% reduction for 100 ms and >95% reduction for 10 ms

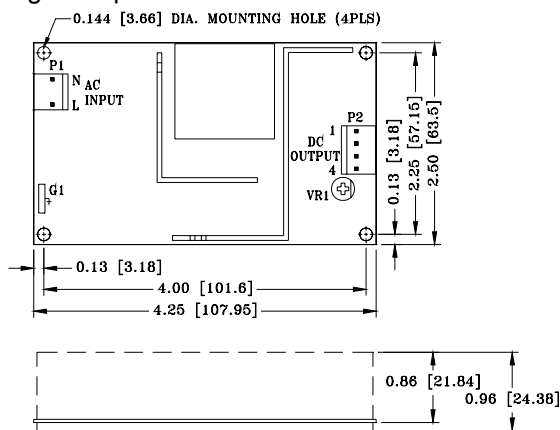
OUTPUT VOLTAGE/CURRENT RATING CHART

Model ⁽¹⁾	Output #1				Output #2				Output #3				Max. Output Power
	V1	Min. Current	Max. Current	Tol.	V2	Min. Current	Max. Current	Tol.	V3	Min. Current	Max. Current	Tol.	
PM25-10A	5.1 V	0 A	5.5 A	±2%	N/A				N/A				28 W
PM25-12A	12 V	0 A	2.3 A	±1%	N/A				N/A				28 W
PM25-13A	15 V	0 A	1.9 A	±1%	N/A				N/A				28 W
PM25-14A	24 V	0 A	1.2 A	±1%	N/A				N/A				28 W
PM25-15A	28 V	0 A	1.0 A	±1%	N/A				N/A				28 W
PM25-23A	+5.1 V	0.4 A	2.5 A	±3%	+12 V	0.2 A	1.5 A	±5%	N/A				25 W
PM25-25A	+5.1 V	0.4 A	2.5 A	±3%	+24 V	0.1 A	0.8 A	±5%	N/A				25 W
PM25-31A	+5.1 V	0.4 A	2.5 A	±3%	+12 V	0.2 A	1.5 A	±5%	-12 V	0.05 A	0.2 A	±4%	25 W
PM25-32A	+5.1 V	0.4 A	2.5 A	±3%	+15 V	0.1 A	1.0 A	±5%	-15 V	0.05 A	0.2 A	±4%	25 W
PM25-39A	+5.1 V	0.4 A	2.5 A	±3%	+24 V	0.1 A	0.8 A	±5%	-12 V	0.05 A	0.2 A	±4%	25 W

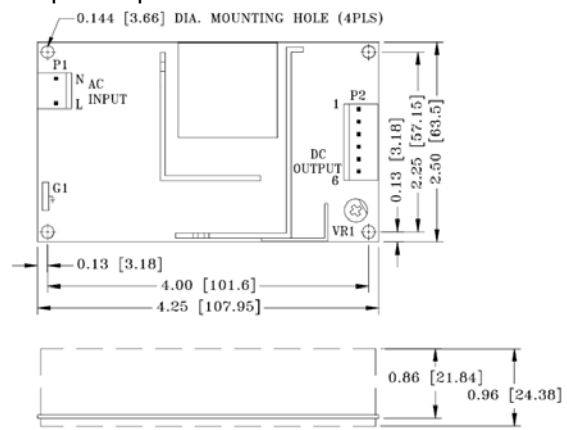
- NOTES:
1. Safety agency approvals are for the above listed models in PCB form. To order a model with a metallic L-bracket or box, change suffix "A" to "B" for L-bracket form, to "C" for enclosed form, e.g. PM25-31C.
 2. All models may be operated at no-load without damage. At no-load, output voltage tolerance increases to ±10%.
 3. 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 SPECIFICATIONS

Single Output Models

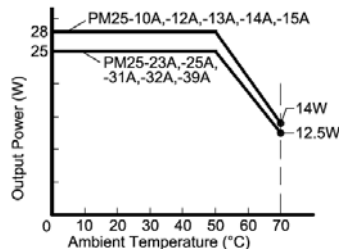


Multiple Output Models



- NOTES:
1. Dimensions shown in inches [mm]
 2. Tolerance 0.03 [0.76] maximum
 3. Input connector P1: Molex header 09-65-2038 or equivalent, mating with Molex housing 09-50-1031 or equivalent.
 4. Output connector P2: Molex header 09-65-2048 or equivalent for single output models, mating with Molex housing 09-50-1041 or equivalent. Molex 09-65-2068 or equivalent for multiple output models, mating with Molex 09-50-1061 or equivalent.
 5. Weight: 163 grams (0.3586 lbs.) approx. for single output models, 175 grams (0.385 lbs.) approx. for multiple output models.

OUTPUT POWER DERATING CURVE



PIN CHART

MODEL	PIN	1	2	3	4	5	6
PM25-10A	PM25-14A	V1 Return	V1 Return	+V1	+V1	N.A.	N.A.
PM25-12A	PM25-15A						
PM25-13A							
PM25-23A	PM25-25A	V2	V1	V1	Common Return		N.C.
PM25-31A	PM25-39A	V2	V1	V1	Common Return		V3
PM25-32A							