

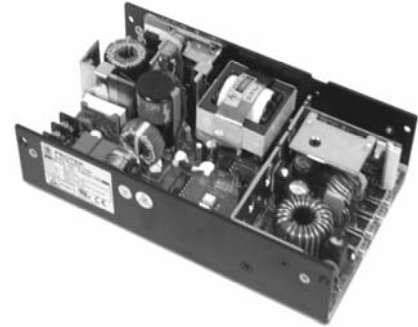


200-300 WATT MEDICAL SWITCHING POWER SUPPLIES

DESCRIPTION

The PM300 series comprising single and multiple output models for 200 to 300 watts of continuous output power is specially designed for medical applications not for life support. They operate at 90 to 264VAC input voltage without the need of a selector strap. All auxiliary outputs are with magnetic amplifier to keep regulation. The units are constructed on a printed circuit board with a U-bracket for mechanical support and heat sinking. A cover-and-fan assembly can be added during manufacturing.

PM300 SERIES



FEATURES

- EN61000-3-2 class A and D compliant
- Power Factor 0.98 typical
- Overvoltage protection
- Short-circuit protection
- Power Fail Detect (PFD)
- 100% burn-in at full rated load
- Remote sense on output #1 and output #2
- Remote inhibit – TTL high disables output
- Compliant with RoHS requirements

New!!

Safety Standard Approvals :



UL60601-1, CSA C22.2 No. 601.1
File No. E178020



TÜV EN60601-1

INPUT SPECIFICATIONS

Input voltage : 90 to 264VAC
 Input frequency: 47 to 63Hz
 Input current : 4.7A (rms) for 115VAC
 2.3A (rms) for 230VAC

Earth leakage current: 100uA max. @115VAC, 60Hz
 220uA max. @ 230VAC, 50Hz

ENVIRONMENTAL SPECIFICATIONS

Operating temperature : 0°C to +70°C
 Storage temperature : -40°C to +85°C
 Relative humidity : 5% to 95% non-condensing
 Derating : Derate from 100% at +50°C
 linearly to 50% at +70°C
 Cooling : 200/250/300 watts continuous
 output power at 35 CFM forced
 air cooling or 100/125/150 watts
 at convention cooling

OUTPUT SPECIFICATIONS

Output voltage/current : See rating chart
 Total output power : See rating chart
 Ripple and Noise : 2% peak to peak maximum
 Overvoltage protection : Provided on output #1 only;
 set at 115–140% of its
 nominal output voltage
 Overcurrent protection : All outputs protected
 to short circuit conditions
 Temperature coefficient : All outputs $\pm 0.04\%$ /°C
 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
 PFD signal : TTL logic high for normal
 operation and TTL logic low
 upon loss of input power.
 This signal appears at least
 1ms prior to master output
 dropping 5% below its
 nominal value. This signal
 also provides a minimum
 delay of 100ms after master
 output is within regulation.
 Remote inhibit : Requires an external TTL
 high level signal to inhibit
 outputs for standard
 models.

GENERAL SPECIFICATIONS

Switching frequency : 70KHz ± 10 KHz
 Power factor : 0.98 typical
 Efficiency : 70% minimum on all models
 Hold-up time : 12 msec minimum at 110VAC
 Line regulation : $\pm 0.2\%$ maximum at full load
 Inrush current : 30 amps @ 115VAC or 60 amps
 @230VAC, at 25°C cold start
 Withstand voltage : 4000VAC from input to output
 1500VAC from input to ground
 500VAC from output to ground
 load at 25°C ambient, calculated
 per MIL-HDBK- 217F
 MTBF :
 EMC Performance (EN60601-1-2: 2001)
 EN55011: 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, 3V/m
 EN61000-4-4: Fast transient/burst, ± 2 KV
 EN61000-4-5: Surge, ± 1 KV diff., ± 2 KV 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

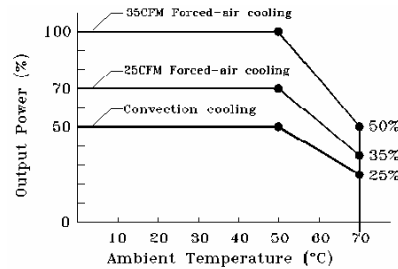
MEDICAL

OUTPUT VOLTAGE/CURRENT RATING CHART

(1) (2) (6) Model	Output # 1 (3)				Output # 2 (3)				Output # 3 (4)				Output # 4 (4)				Maximum Output Power (5)
	Vnom.	Imin.	Imax.	Tol.	Vnom.	Imin.	Imax.	Tol.	Vnom.	Imin.	Imax.	Tol.	Vnom.	Imin.	Imax.	Tol.	
PM300-10-3	3.3V	3.0A	60A	3%													200W
PM300-10	5.1V	3.0A	60A	2%													300W
PM300-12	12V	1.2A	25A	2%													300W
PM300-13	15V	1.0A	20A	2%													300W
PM300-14	24V	0.6A	12.5A	2%													300W
PM300-16	30V	0.5A	10A	2%													300W
PM300-18	48V	0.5A	6.3A	2%													300W
PM300-40-3	3.3V	3.0A	35A	3%	5.1V	2.0A	22A	2%	12V	0A	4A	4%	12V	0A	4A	4%	250W
PM300-40	5.1V	2.0A	35A	2%	12V	1.0A	10A	2%	12V	0A	4A	4%	5.1V	0A	4A	4%	300W
PM300-41	5.1V	2.0A	35A	2%	15V	0.8A	8A	2%	15V	0A	4A	4%	24V	0A	2.5A	4%	300W
PM300-42	5.1V	2.0A	35A	2%	12V	1.0A	10A	2%	12V	0A	4A	4%	12V	0A	4A	4%	300W
PM300-45	5.1V	2.0A	35A	2%	12V	1.0A	10A	2%	12V	0A	4A	4%	24V	0A	2.5A	4%	300W
PM300-46	5.1V	2.0A	35A	2%	12V	1.0A	10A	2%	12V	0A	4A	4%	15V	0A	4A	4%	300W
PM300-47	5.1V	2.0A	35A	2%	24V	0.5A	5A	2%	12V	0A	4A	4%	12V	0A	4A	4%	300W
PM300-48	5.1V	2.0A	35A	2%	24V	0.5A	5A	2%	5.1V	0A	4A	4%	15V	0A	4A	4%	300W
PM300-49	5.1V	2.0A	35A	2%	12V	1.0A	10A	2%	5.1V	0A	4A	4%	24V	0A	2.5A	4%	300W
PM300-410	24V	0.5A	6.3A	2%	12V	1.0A	10A	2%	5.1V	0A	4A	4%	12V	0A	4A	4%	300W
PM300-411	24V	0.5A	6.3A	2%	12V	1.0A	10A	2%	5.1V	0A	4A	4%	24V	0A	2.5A	4%	300W
PM300-412	24V	0.5A	6.3A	2%	12V	1.0A	10A	2%	12V	0A	4A	4%	12V	0A	4A	4%	300W
PM300-413	24V	0.5A	6.3A	2%	24V	0.5A	5A	2%	5.1V	0A	4A	4%	15V	0A	4A	4%	300W
PM300-414	24V	0.5A	6.3A	2%	24V	0.5A	5A	2%	12V	0A	4A	4%	12V	0A	4A	4%	300W

NOTES:

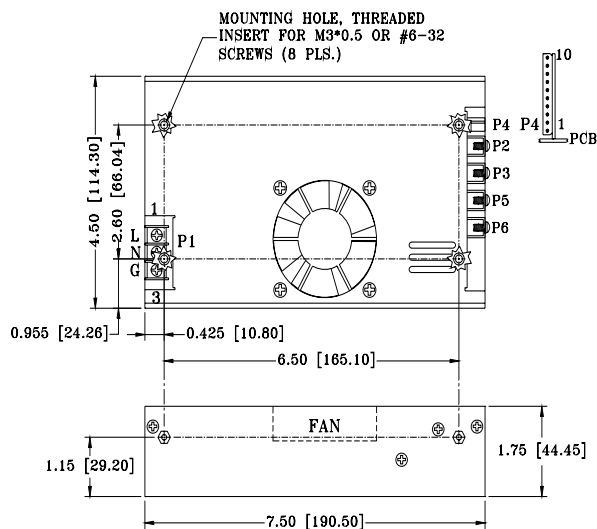
- Add suffix "B" for U-bracket format or "C" for enclosed format with option fan control, e.g. PM300-45C.
- All outputs are floating. It can be connected externally for positive or negative output.
- Output #1 & #2 can be adjusted within $\pm 5\%$ of their nominal voltage.
- Output #3 & #4 can be adjusted within $\pm 15\%$ of their nominal voltage.
- 300 watts for "C" version with cover-and-fan assembly. 150 watts for "B" version without moving air (maximum current of output #1 & #2 derated to 50%), or 300 watts with 35 CFM forced air provided by user.
- PM300-10-3 is rated 200 watts with 35 CFM forced air cooling or 100 watts convection cooled. PM300-40-3 is rated 250 watts with 35 CFM forced air cooling (maximum current of output #1 & #2 derated to 50%) or 125 watts convection cooled.
- Single output models may be operated at no-load. At no-load, output voltage tolerance increases to 10%.



DERATING CURVE

MECHANICAL SPECIFICATIONS

Single Output Models



NOTES:

- Dimensions shown in inch [mm]
- Tolerance 0.02 [0.5] maximum
- Input connector P1 is Dinkle DT-35-B01W-03 screws are M3, Nickel plated.
- Connector P4 mates with Molex housing 50-37-5103 and pins 5263.
- Connectors P2, P3, P5 and P6: M3*0.5 screw connections
- Weight: 1.20 kgs. (2.64 lbs.) approx.
- DC fan on P4 is rated at 12V/0.1A.

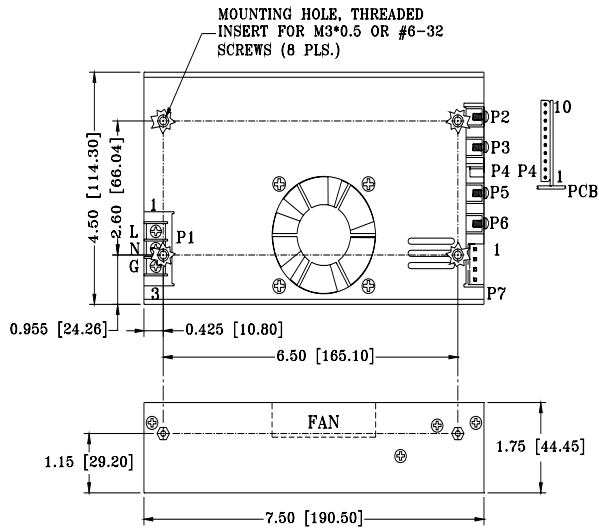
MEMO:

UNIVERSAL INPUT

PM300 SERIES

MECHANICAL SPECIFICATIONS

Multiple Output Models



NOTES:

1. Dimensions shown in inch [mm]
2. Tolerance 0.02 [0.5] maximum
3. Input connector P1 is Dinkle DT-35-B01W-03 screws are M3, Nickel plated.
4. Connector P4 mates with Molex housing 50-37-5103 and pins 5263.
5. Connectors P2, P3, P5 and P6: M3*0.5 screw connections
6. Output connector P7 mates with Molex housing 09-50-3041 and Molex 2878 series crimp terminal.
7. Weight: 1.24 kgs. (2.73 lbs.) approx.
8. DC fan on P4 is rated at 12V/0.1A.

MEMO:

PIN CHART

Single Output Models

MODEL	CONN PIN	P1 (AC)			P2	P3	P4			
		1	2	3			1	2	3	4
PM300-10-3	PM300-10	LIVE	NEUTRAL	GROUND	+VO1	+VO1	SIGNAL GROUND			
PM300-12	PM300-13						+S (VO1)	-S (VO1)	PFD	
PM300-14	PM300-16									(-VO1)
PM300-18										

MODEL	CONN PIN	P4						P5	P6	P7			
		5	6	7	8	9	10			1	2	3	4
PM300-10-3	PM300-10	INHIBIT	N.C.	N.C.	N.C.	0V (FAN)	FAN	-VO1	-VO1	VOID			
PM300-12	PM300-13												
PM300-14	PM300-16												
PM300-18													

Multiple Output Models

MODEL	CONN PIN	P1 (AC)			P2	P3	P4			
		1	2	3			1	2	3	4
PM300-40-3	PM300-40	LIVE	NEUTRAL	GROUND	+VO1	-VO1	SIGNAL GROUND			
PM300-41	PM300-42						+S (VO1)	-S (VO1)	PFD	
PM300-45	PM300-46									(-VO1)
PM300-47	PM300-48									
PM300-49	PM300-410									
PM300-411	PM300-412									
PM300-413	PM300-414									

MODEL	CONN PIN	P4						P5	P6	P7			
		5	6	7	8	9	10			1	2	3	4
PM300-40-3	PM300-40	INHIBIT	N.C.	+S (VO2)	-S (VO2)	0V (FAN)	FAN	+VO2	-VO2	+VO3	-VO3	+VO4	-VO4
PM300-41	PM300-42												
PM300-45	PM300-46												
PM300-47	PM300-48												
PM300-49	PM300-410												
PM300-411	PM300-412												
PM300-413	PM300-414												

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