
Features:

- Universal Input 90 – 264 VAC
- Power Density: 12.5 watts/cu in.
- 12V – 52V DC Single Output
- Over-Current Protection
- Over-Voltage Protection
- Compact Size: 1U Height
- 3 Mechanical Options
- UL / EN / IEC 60601-1 3rd Edition
- RoHS Compliant



Input Voltage: 90-264 VAC full range, 47–63Hz.

Input Current: 5 A at 90 VAC full load.

Inrush Current: 70A Max. @ 230 VAC, 35A Max. @ 115VAC, with full load and cold start.

PFC: Power Factor Correction meets EN61000-3-2 class D.

Transient Response: Returns to within 1% in less than 2.5mS for a 50% load change and the peak transient does not exceed 5%.

Overshoot: Turn-on/off not exceed 5% over nominal voltage.

Efficiency: 88% Typical @ 230 VAC at full load.

Turn On Delay: 1 second maximum at 120 VAC.

Hold Up Time: 16mS min. @120 VAC at 80% of full load.

Adjustability: Output user adjustable $\pm 5\%$ minimum.

Fan Drive: 12VDC/300mA is available to drive an external fan.

Fan Fail Alarm: Designated as **FF** on pin 3 of CN3, open collector output rated for 28VDC/5mA sink current max. It will go high when a fan failure is detected.

Remote On-Off: Designated as **INH** on the pin 4 of CN3, requires a low signal to inhibit output.

Power Supply On: Green LED designated as **LED 1** on the PCB.

Power Good: Designated as **PG** on the CN3 will go high 100-500mS after regulation and goes low 1mS before loss of regulation (Open Collector).

Input Circuit Protection (primary): Fuse Protected.

Over-Power Protection: 110-140% and auto-recovery.

Over-Voltage Protection: Latching down will occur when output voltage exceed 130% and recycle AC input to reset.

Short Circuit Protection: Trip without damage and auto-recovery.

Over-Temperature Protection: Protected in the event of excessive operating ambient $110^{\circ}\text{C} \pm 5^{\circ}\text{C}$, and automatic recovery.

Operating Temperature: 0 to 70°C ambient, de-rating at 2.5% per degree from 50°C to 70°C .

Storage Temperature: -20 to 85°C .

Operating Humidity: 5% to 90% RH, Non-condensing.

Storage Humidity: 5% to 95% RH, Non-condensing.

Vibration: Frequency 5 to 50 Hz, acceleration $\pm 7.35 \text{ M}/(\text{SxS})$ on X, Y and Z Axis.

Emc: EN60601-1-2 Class B conducted / Radiated; EN61000-3-2, -3; IEC61000-4-2, -3, -4, -5, -6, -8, -11.

Safety Regulation: EN/ IEC/ UL 60601-1 3rd Edition

Leakage Current: $< 300\mu\text{A}$ @ 264VAC

HI-POT Test: 1500 VAC between input line and chassis (10mA DC cut off current); 4000 VAC between primary and secondary windings; Primary to core 1500 VAC. All for 3 sec.

Grounding Test: Apply 25A from ground pin to the earthed connection point. Maximum allowable resistance is 0.1Ω .

MTBF: 100,000 Hrs (according to MIL-HBK-217F) at 30°C .

Cooling: SMU300T1: U-Chassis @ 300W max. with 25CFM airflow or 150W max. under convection cooling.

SME300T1: Enclosed with side built-in fan @ 300W max.

SMF300T1: U-Chassis with top built-in fan @ 300W max.

Burn in: $45 \pm 5^{\circ}\text{C}$ for 1 hour @ 230 VAC with full load.

Enclosure: SMU300T1: 5(L) x 3.2(W) x 1.5(H) inches.

SME300T1: 6.5(L) x 3.2(W) x 1.6(H) inches.

SMF300T1: 5(L) x 3.2(W) x 2(H) inches.



Output Voltage and Current Chart

Model Number**	Preset Voltage	Output Voltage	Max. Output Power/Current		Ripple & Noise
			Type <u>U</u> , <u>E</u> & <u>F</u> (Forced Air)	Type <u>U</u> (Convection)	
SMY300T1XXR	12 VDC	12 - 13.8 VDC	300W	150W	±1%
SMY300T1XXR	15 VDC	14 - 16 VDC	300W	150W	±1%
SMY300T1XXR	24 VDC	13 - 28 VDC	300W	150W	±1%
SMY300T1XXR	36 VDC	35 - 43 VDC	300W	150W	±1%
SMY300T1XXR	48 VDC	44 - 52 VDC	300W	150W	±1%

** To Determine Part Number:

- Replace "XX" with Required Output Voltage (12VDC = "12", 48VDC = "48", ect.)
- Replace "Y" with Desired Case Code:
 - Type U: U-Chassis @ 300 Watts Max. Output Power with 25 CFM Airflow or 150 Watts Convection Cooling
 - Type F: U-Chassis with Top built-in fan @ 300W Max.
 - Type E: Enclosed with Side Built-In Fan @ 300 Watts Max. Output Power
- Conformal Coating (Optional): Order as SMY300T1XXCR
- Input Connector: For Enclosure w. Fan (SME300T1XXR): IEC320-C14 Inlet or 3-Position Barrier Strip.
For U-Chassis(SMU300T1XXR) & Top built-in fan (SMF300T1XXR): PCB Header (5-Pin, 3 Used) or 3-Position Barrier Strip.
- Output Connector: 6 Pin PCB Header or 2 Position Barrier Strip
For PCB Header (or IEC320-C14 Input), Order as: SMY300T1XXR (Unchanged)
For 3-Position Barrier Strip, Order as: SMY300T1XXAR
Example: SMEE300T124R indicates a 24VDC Unit with an Enclosed, Side Fan Case and PCB Header
SMF300T148ACR indicates a 48VDC Unit with U-Chassis Case with Top built-in fan, 2-Position Barrier Strip, and Conformal Coating





Pin Connection: SMY300T1XXR

Pin	Input: 5-Pin Crimp Terminal
1	Ground
2	No Pin
3	Neutral
4	No Pin
5	Line
Output: 6-Pin Crimp Terminal	
1 - 3	Return (-)
4 - 6	V Output (+)

Pin Connection: SMY300T1XXAR

Pin	2-Position Barrier Strip
1	Return (-)
2	V Output (+)

Notes:

Input Connector(CN1):

SMY300T1 or SME300T1 Series: Mating Molex Part No. 035977-0590 or equivalent (5 pin, 3 used), or Howder Terminal block Part No. HD-601-3P.

SME300T1 Series: IEC320 or equivalent Snap-in mounting type or Howder Terminal block Part No. HD-602-3P (3 pin).

Output Connector (CN2):

Mating Molex 6 pins (035977-0690), or DINKLE (P830N) M5 Screws.

Output Pin Assignment:

(See table above).

Logic signal connectors (CN3):

Mating JST XHP-4 or equivalent (CHYAO SHIUNN JS-2001-04)

Mating Pins: JST SXH-002T-P0.6 for AWG 30 to 26.

Mounting Inserts:

6 Places M3, maximum penetration 3.8 mm.





SMY300T1 Series 150 - 300 Watts

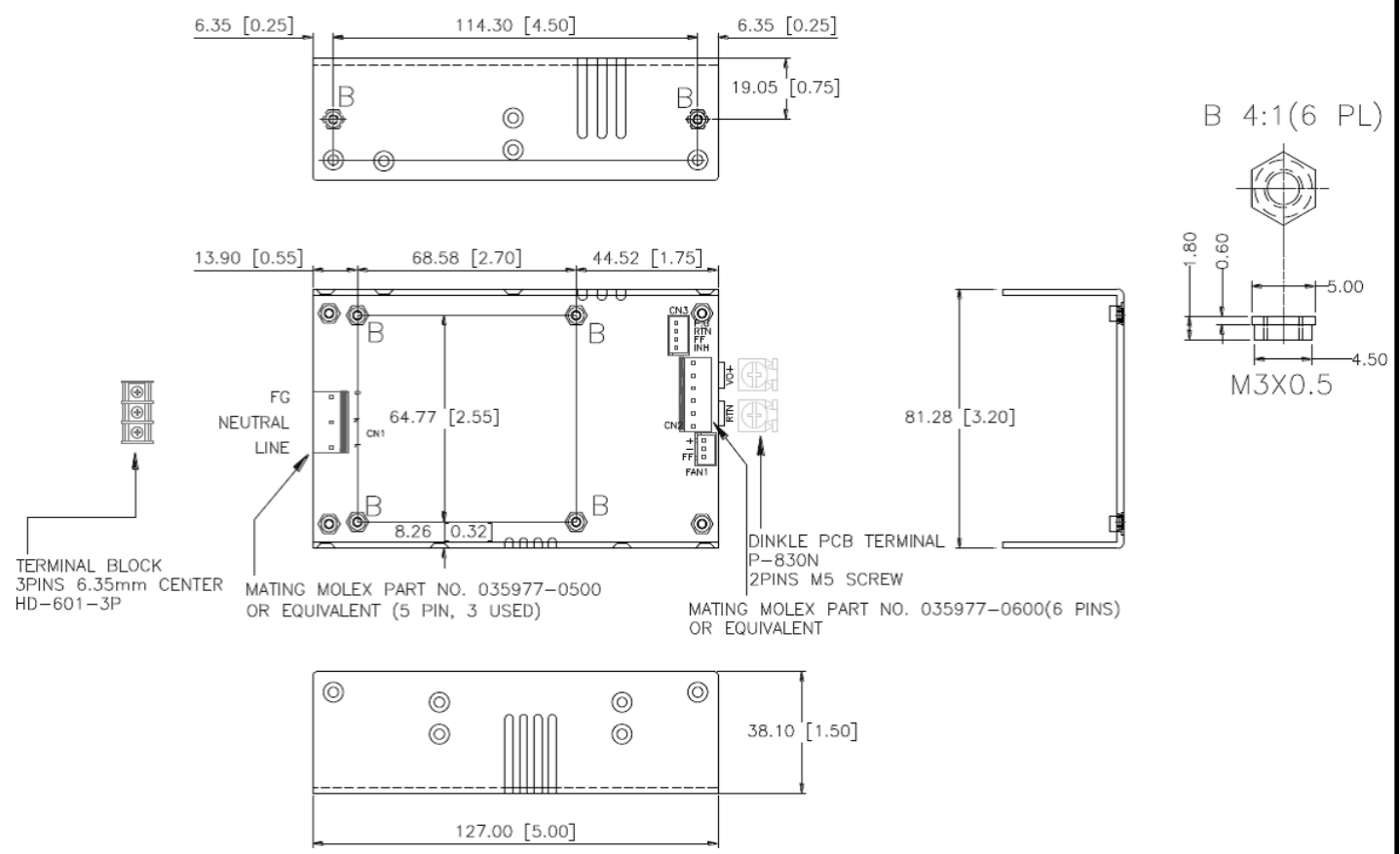
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Switch Mode Open Frame Medical Power Supply
Single Output, UL / EN / IEC 60601-1 3rd Edition

Rev: 080712

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Type U: U-Chassis Case
Order as: SMU300T1XXR





SMY300T1 Series 150 - 300 Watts

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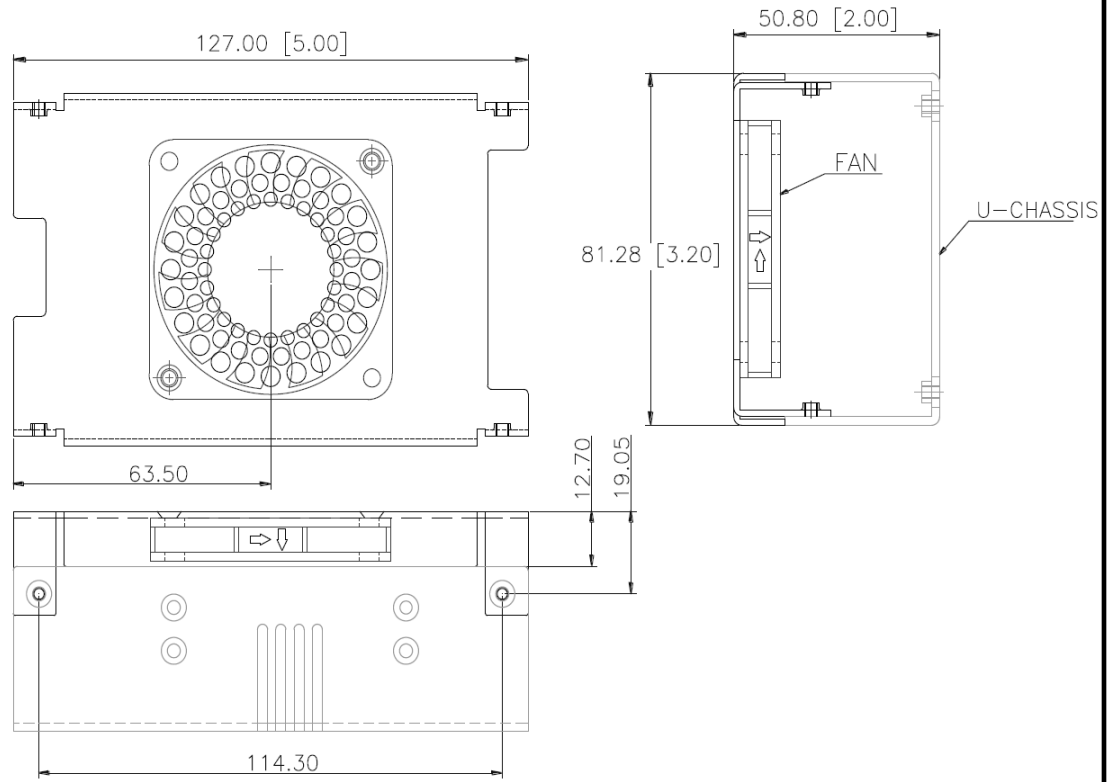
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Type **E**: U-Chassis w/ Top Fan Cover
Order as: SM**E**300T1XXR

COVER WITH
BUILT-IN DC FAN





SMY300T1 Series 150 - 300 Watts

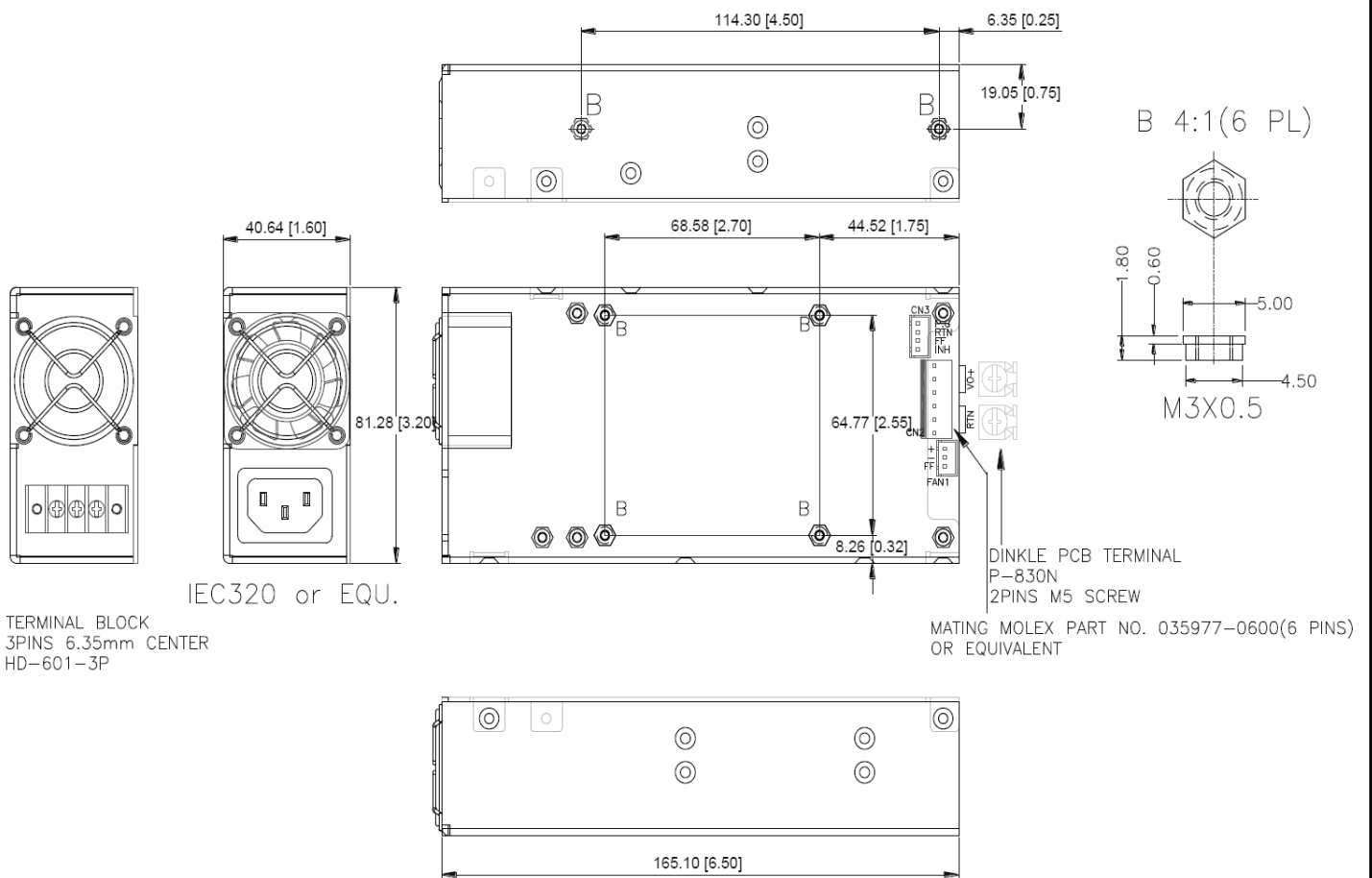
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Type **E**: Enclosed Case w/ Side Fan
Order as: SME300T1XXR



TERMINAL BLOCK
3PINS 6.35mm CENTER
HD-601-3P

DINKLE PCB TERMINAL
P-830N
2PINS M5 SCREW
MATING MOLEX PART NO. 035977-0600(6 PINS)
OR EQUIVALENT



TECHNOLOGIES INC.
HICKSVILLE, NEW YORK

264 Duffy Avenue
Hicksville, NY 11801

Tel: (516) 433-1313
Fax: (516) 433-1457

Web: www.apxonline.com
Email: sales@apxonline.com

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