

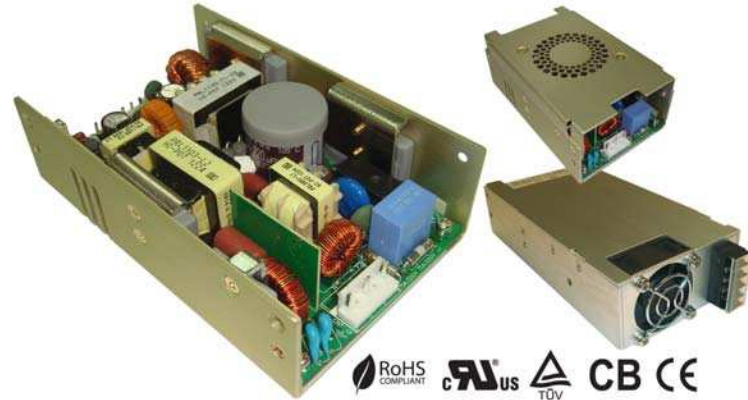
PRL1103 Series

300 Watts

Switching Power Supply

Features:

- * Safety Approved for Medical Applications
- * Compact 5.00 x 3.20 x 1.50" U-Frame Package
- * Optional End-Mount Fan or Top-Mount Fan Packages
- * 600 Watt Peak Power (500uS Duration)
- * High Efficiency Operation - Up to 86%
- * Universal AC Input (90-264 VAC) with Active PFC
- * Variable Fan Speed Control for Low Acoustical Noise
- * Remote On/Off, Power Good and Fan Fail
- * Isolated 12V / 300mA Fan Output
- * 100,000 hours MTBF (MIL-HBK-217F at 30°C)
- * International Safety Approvals & CE Mark
- * Class B Emissions
- * 2 Year Warranty



Input Specifications:

Input Range	Universal VAC (90-264 VAC)
Input Frequency	47-63 Hz
Inrush Current	35A @ 115VAC / 70A @ 230VAC max (cold start)
Input Current	5A @ 90 VAC Maximum
Input Reflected Ripple	EN55022 Class B
Efficiency	86% Typical (depending on output model)
Input Protection	Dual F5A / 250V
Hold-up Time	16ms minimum @ 120VAC / 80% Load
Leakage Current	<300µA maximum @ 264 VAC
Harmonics	Active PFC for EN61000-3-2 Class D

Output Specifications:

Adjustment Range	±5% Minimum
Minimum Load	1% to maintain regulation
Regulation	±1% Maximum (Line, Load & Temp)
Ripple / Noise	50mV or ±1% pk-pk (20MHz), whichever is greater
Transient Response	±5% Deviation / <2.5msec recovery (50% transient)
Set-Point Accuracy	±2%
Short Circuit Protection	Continuous
Over Load Protection	110-140%, automatic recovery
Over Voltage Protection	>130% of Vnom, latching

Emissions Standards

FCC Part 15J, Part 2	Within Class B Limits
EN55022 / CISPR22	Within Class B Limits

Status / Control Signals

Fan Output	12V @ 300mA
Fan Fail	High = Fan Failure, open collector
Remote On/Off	Low Signal to inhibit supply
Power Good	High = Good, open collector
PS ON Indicator	Green LED

Electromagnetic Compatibility:

Electrostatic Discharge	EN61000-4-2, ±4KV Contact / ±8KV Air Discharge
Radiated Susceptibility	EN61000-4-3, 26-1000MHz, 10V/M, 80% AM
EFT / Bursts	EN61000-4-4, ± 2KV
Surges	EN61000-4-5, ±2KV Line-Earth, ±1KV Line-Line
Conducted Immunity	EN61000-4-6, 0.15 - 800MHz, 10V, 80% AM
Voltage Dips	EN61000-4-11, 95% Dip & 10ms, 30% Dip & 500ms
Voltage Interruptions	EN61000-4-11, 95% Reduction, 5s
Radiated Emissions	FCC 68 part 15 Class B
Conducted Emissions	FCC 68 part 15 Class B
Harmonic Current	Active PFC for EN61000-3-2 Class D
Fluctuations & Flicker	EN61000-3-3

Environmental Specifications:

Operating Temp	0 ~50°C Full Load (De-Rate 2.5%/°C up to +70°C)
Storage Temp	-20 ~ +85°C
Cooling	25 cfm airflow required or fan-cover option
Humidity	5 to 95% RH Non-Condensing
Vibration	5 ~ 50 Hz, acceleration 7.35 m/s*s on X,Y and Z Axis
Shock	30G Peak Acceleration
Reliability	>100k hours MTBF (MIL-HBK-217F at 30°C)

International Safety Approvals

Standards	UL/cUL 60601-1 3rd Edition IEC/CB EN 601601-1 CE Mark (LVD)
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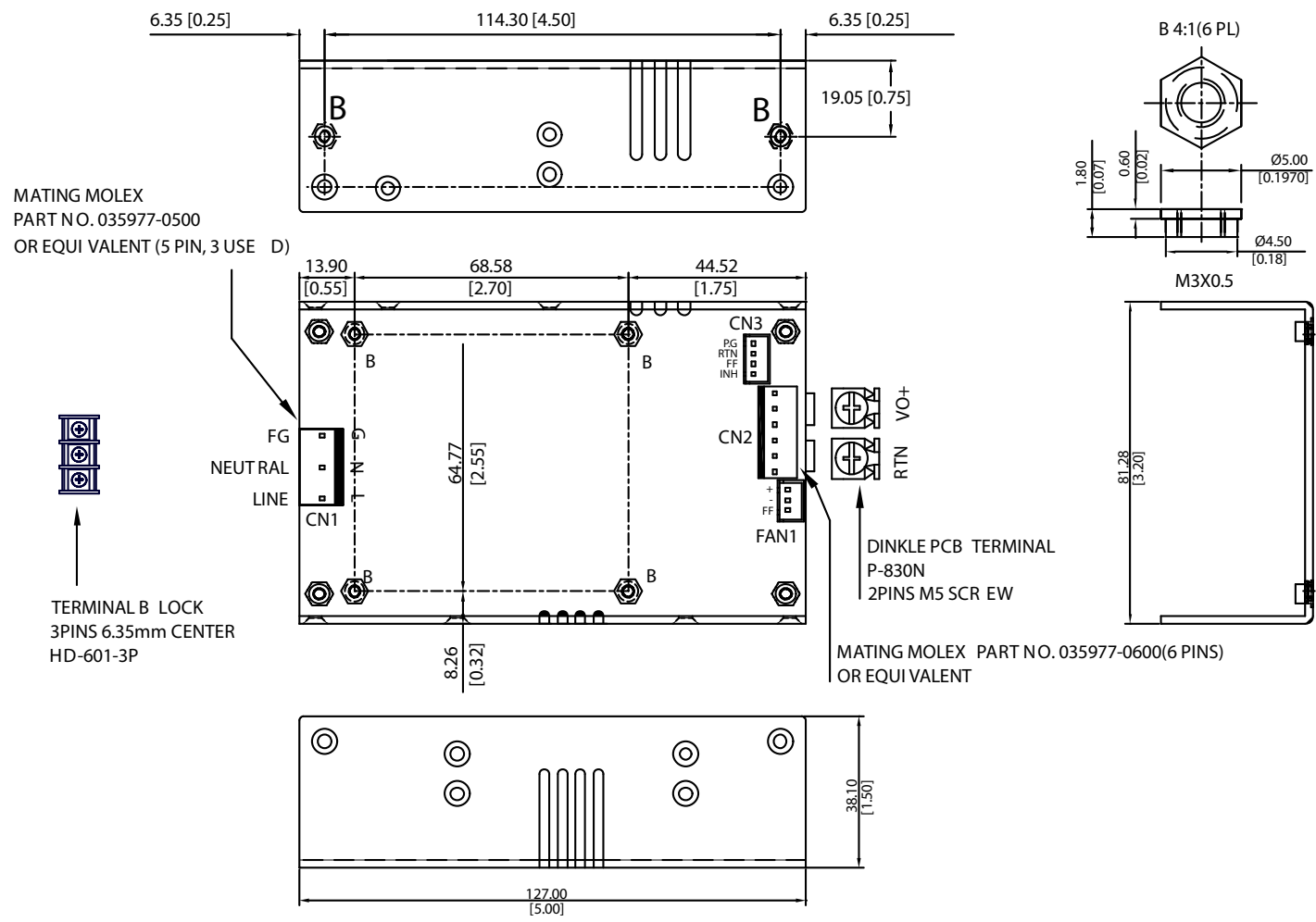
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Output Table:

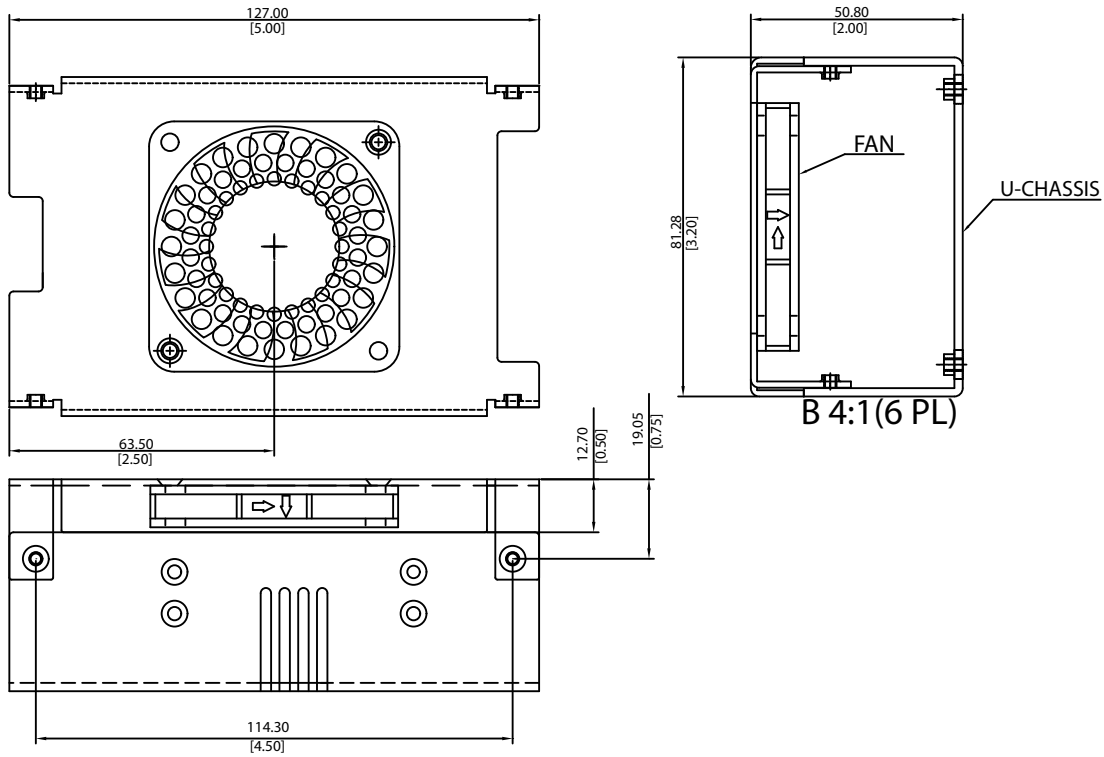
Model Number	Setpoint Range	Vnom	Power with air	Power Convection	Regulation	Ripple
PRL1103x-12	12 ~ 13.8V	12 V	300W	150W	± 1%	1%
PRL1103x-15	14 ~ 16V	15 V	300W	150W	± 1%	1%
PRL1103x-24	23 ~ 28V	24V	300W	150W	± 1%	1%
PRL1103x-36	35 ~ 43V	36V	300W	150W	± 1%	1%
PRL1103x-48	44 ~ 52V	48V	300W	150W	± 1%	1%

- * PRL1103 series are designated as PRL1103x-y where x can be U = U-Frame Package | E = End Mount Fan Package | F = Top Mount Fan Package
- * End Mount Fan Package models have a terminal block for AC input as the standard. Add the Suffix "I" to designate IEC-320 C14 Inlet option.
- * Outputs can be set at the factory for any nominal voltage within the output range specified in the table above and maintain all agency approvals (consult PowDec for unique set-point)
- * Ripple and noise is measured from 10KHZ to 20MHz bandwidth at output with parallel 0.1μF ceramic and 22μF electrolytic capacitors.
- * Providing peak power to 600W within 500uS for all models, longer duty duration need contact manufacture.
- * 1% minimum load is required to maintain the ripple and regulation.
- * Standard Connectors are Terminal Blocks (M5 Screws), add the Suffix M to designate Molex Type Connections (Mating Molex Part No. 035977-0590 or equivalent)
- * Logic signal connector (CN3): Mating JST XHP-4 or equivalent (CHYAO SHIUNN JS-2001-04); Mating Pins: JST SXH-002T-P0.6 FOR AWG 30 to 26.
- * Fan driver connector (FAN1): Mating connector is JST P/N XHP-3 (3 pins 0.98 pitch) or equivalent (CHYAO SHIUNN JS-2001-03).

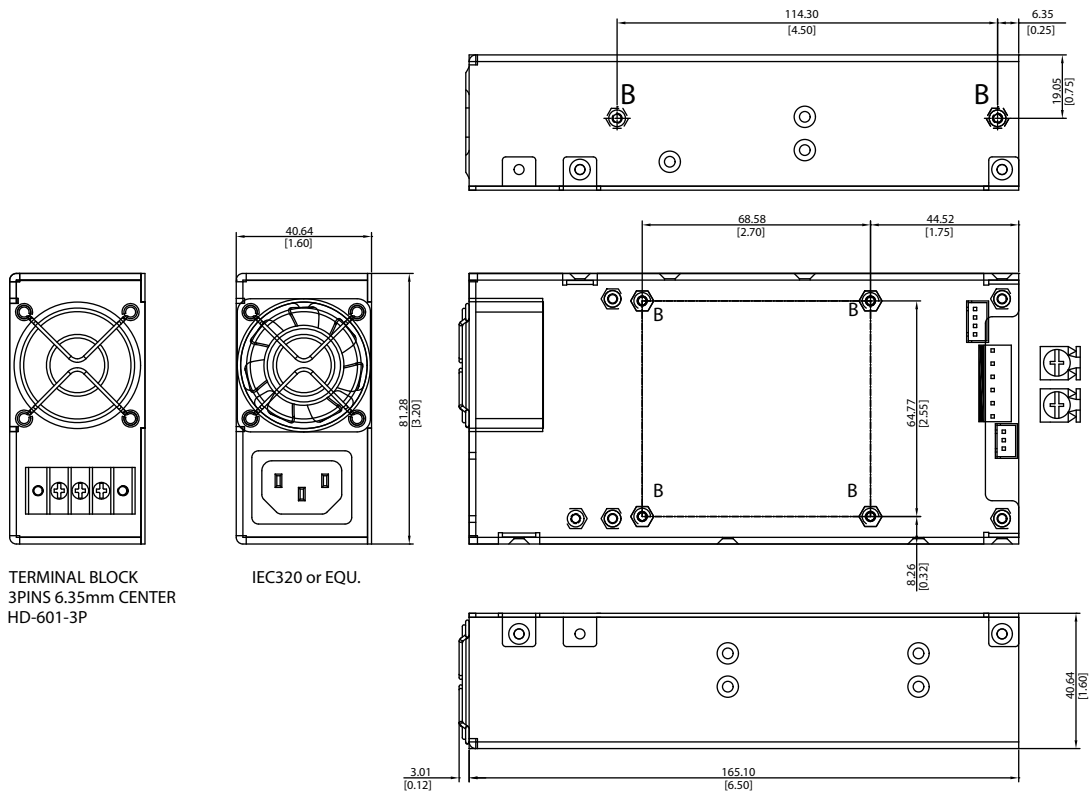
Mechanical Specifications: Construction: U-Frame Weight: 500g



TOP-MOUNT FAN OPTION (SUFFIX F)



END-MOUNT FAN OPTION (SUFFIX E)



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

IEC320 or EQU.