5000 Watt Single Output 12V Power Supply

Product Description

This unit is a 5000 watt, single output, commercial grade power supply designed for electronic systems requiring high current 12 volts DC. This supply is a form fit and functional equivalent to Power-One FE5A-12V.

Product Features

- Output: 12.5Vdc @ 400A
- 5” x 5” x 15.5” Envelope
- Optional Hot Swap Version
- 3 Phase, 480Vac Input
- Operating Temperature Range: 0º to +50º C

AC Input

- Voltage Input Range: 480Vac (365 to 528Vac), 3 Phase Delta
- Frequency: 60Hz (47-63z)
- Power factor correction: 0.95 @ Full Load
- Inrush Current: 30A typical over ½ cycle
- Input Protection: Internal fuse, each phase
- Leakage Current: .5mA (all phases connected)

Output Selection Guide

Model #:	Voltage	Max Current	Regulation	Ripple
PM36215	12.5Vdc	400 Amps	±3%	500mV pk-pk

Note: Alternate output voltages are available, consult factory for availability.

DC Output Characteristics (floating)

- Output Power: 5000 Watts (maximum continuous power, may require derating for some low voltage outputs)
- Minimum Load: Not Required
- Line Regulation: ±1.0% Typical
- Load Regulation: ±2.0% Typical (No load to full load; nominal input)
- Output Ripple/Noise: 1% Typical (pk-pk; nominal input; full load; 20-50MHz bandwidth)
- Hold Up Time: 12 mSec after AC is removed
- Set Point Accuracy: ± 1.0% of Output Voltage (Nominal input; full load; 25°C)
- Transient Response: Output voltage returns to within 3% in less than 2.5mS for a 50% load change and the peak transient does not excess 5%.
- Overshoot: Turn-on and turn-off overshoot should not exceed 5% over nominal voltage.

General Electrical Characteristics

- Switching Frequency: 200KHz Fixed
- Efficiency: 85% Typical (Measuring at 480Vac and at full load)
- Turn On Delay: 2.0 second maximum at 480 VAC
- Isolation Voltage: Input to Case: 2120Vdc, Input to Output: 4200Vdc & Output to Case: 500Vdc
- Temperature Regulation: +/-2.0%/ºC (+/-.005%/ ºC max; over operating temp range)

Protection

- Over Current Limit: ~102 to 108% of maximum rating. Hiccup, continuous.
- Over-Voltage Protection: 115% ±5% of nominal. OVP shutdown is latched until the input line is removed for 5 secs and then reapplied. OVP sensing is done at the output terminals.
- Short Circuit: Auto-Recovery after short circuit condition is removed.
- Over Temperature Protection: Automatically latches and shuts off the unit in the event of an over temperature condition. After cool down, power must be recycled to restart unit.

Environmental

- Operating Temperature: 0º to +50º C
- Storage Temperature: -55º to +85º C
- Operating Humidity: 20% to 95% RH, Non-condensing
- Storage Humidity: 5% to 95% RH, Non-condensing
- Operating Altitude: Operating: 5,000 feet. De-rates to 75% at 15,000 feet. Non-Operating: To 30,000 feet.
- Sock: Operating: 5G, half sine, 11msec, 3 axes. Non-Operating: 15G, half sine, 11msec, 3 axes
- Vibration: Operating: From 5 to 27 Hz, 0.02 in double amplitude; from 27 Hz to 500 Hz, 0.75G, 3 Axes, 3 min per octave sweep, dwell 15 min at resonance. Non-operating: From 5 to 17 Hz, 0.10 in double amplitude, from 17 to 500Hz, 1.5G peak; 3 axes, 5 min per octave sweep; dwell 15 min at resonance.
- Conducted EMI: Designed to meet Conducted & Radiated: EN55022 Level A.
- Cooling: Forced air, internal fan. Airflow exits at connector end.

Safety Agencies

- Agency Approvals: UL60950/CSA60950, EN60950 (TUV) & CE Low Voltage Directive

Mechanical

- Outline Dimensions: ~5.0" X 5.0" X 15.5" (H X W X L) – not including I/O connector
- Weight: ~16 lbs.
- AC Input Connector: Barrier Strip
- Output Connector: Bus Bars
- Logic/Controls Connector: 25 pin D-sub

Additional Features, Controls or Alarms

- TTL Logic Inhibit
- AC Power Fail
- DC Power Good
- Constant Current Output

Notes

- Product specifications subject to change without notice. All Rights Reserved.
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Outline Drawing