

Section 13

SINGLE OUTPUT SERIES
3.5" X 5" DC TO DC

Pioneer Magnetics, Inc. releases the new DC to DC Product Series providing up to a 1,200 Watt, high density DC-DC converter. Full output is provided over a 36 to 75 VDC input and ambient from 0 to 50 degrees Celsius.

Standard features include over voltage, current and temperature protection; internal input fuse, remote sense, self-contained forced air cooling, and , CSA, TUV safety. Typical options are input line monitor, DC output ok, remote enable/disable, single wire current share, output current monitor and isolation diodes for hot swap

Product Matrix

MODEL	PM3332	PM3334	PM3335	PM3336	PM3337
POWER	500W	750W	875W	1000W	1200W
OUTPUTS	DC CURRENTS				
24V	20A	31A	36A	42A	50A
28V	17A	27A	31A	35A	43A
32V	16A	23A	27A	31A	38A
48V	10A	16A	18A	20A	25A
Non-Plug	3.5"	X	5"	X	11.25"
Hot Plug	3.5"	X	5"	X	12"
DC INPUT	36V to			72V	

Features:

- ◆ 0°C to +50°C at Full Load
- ◆ Standard 5" x 5" Case
- ◆ Outputs Fully Floating
- ◆ Over Current Protection
- ◆ Over Voltage Protection
- ◆ Remote Sense
- ◆ Over Temperature Protection
- ◆ Internal Forced Air Cooling

Options:

- ◆ (-128L) DC OK with LED indicator
- ◆ (-1UL) DC Line Monitor with LED indicator
- ◆ (-2T) Unit enable/disable
- ◆ (-5LO) ±10% Output voltage adjust
- ◆ (-6B) Single wire current sharing
- ◆ (-6D) Slope/Droop current sharing
- ◆ (-20C) Isolation diodes
- ◆ (-25) Constant current limit
- ◆ (-33) Current monitor

Note: Refer to Section 26 for list of all standard options

SPECIFICATION

Inputs

RANGE: 36 TO 75 VDC. 48VDC Nominal
INRUSH CURRENT: Less than 75 amps peak for 5.6ms.
INPUT CURRENT, FULL LOAD: Continuous input current 40 amps DC max at min line
REVERSE POLARITY PROTECTION: Reverse voltage within rating will not damage power supply.

Environmental

AUDIBLE NOISE: 63dBA max at 1 meter
TEMPERATURE: Operating: 0°C to +50°C at full load. Storage: -55°C to +85°C.
HUMIDITY: 20% to 95% non-condensing.
ALTITUDE: Operating: 5,000 feet. De-rates to 70% at 15,000 feet. Non-Operating: To 30,000 feet.
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.
SHOCK: Operating: 5G, half sine, 11msec, 3 axes. Non-Operating: 15G, half sine, 11msec, 3 axes.
COOLING: Forced air, internal fan. Airflow exits at connector end.

Safety

SAFETY: UL1950, CSA22.2 No 950 and TUV to EN60950. CE Mark (LVD)
EMI: Conducted & Radiated: EN55022 Level A

Output

VOLTAGE: See Product Matrix
CURRENT: See Product Matrix
OUTPUT POWER: See Product Matrix
ADJUSTMENT RANGE: $\pm 10\%$ of nominal output voltage.
POLARITY: Output is isolated. It may be referenced plus/minus as required.
REMOTE SENSING: Compensates for up to 0.5V total loop drop in the output line.
STATIC REGULATION:
Line: $\pm 2\%$ over full line range.
Load: $\pm 2\%$ zero load to full load.
VOLTAGE STABILITY: $\pm 0.1\%$ for 24 hour period after 30 minute warm up.
TEMP COEFFICIENT: $\pm 0.02\%/^{\circ}\text{C}$ from 0°C to +50°C.
P-P RIPPLE AND NOISE:
1% (20Hz to 50MHz Bandwidth).
MINIMUM LOAD: Not Required.
TURN ON DELAY: 1 sec. max from application of DC line.
HOLD-UP TIME: 2ms after loss of DC line and before loss of output regulation.

Internal Protection

OVER VOLTAGE PROTECTION: 125% $\pm 5\%$ of nominal. OVP shutdown is latched until the input line is removed for 30 seconds and then reapplied. OVP sensing is done at the output terminals.
OVER CURRENT PROTECTION: Current Limit Point: 110% to 120% of full load.
SHORT CIRCUIT CURRENT: Fold back type to 40%-80% of full rated current. Unit will recover when overload is removed.
REVERSE VOLTAGE PROTECTION: Protected to rated load with the fan running.
OVER TEMPERATURE PROTECTION: The unit automatically shuts down in the event of an over temperature condition. After cool down, power must be recycled to restart unit.

