

Section 14

**SINGLE OUTPUT SERIES**  
**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 76 VDC input and ambient from 0 to 50 degrees Celsius. Standard outputs are 2 to 48 Volts and up to 240A. This unique power supply is configurable with hot plug connections using Elcon Top Drawer Connector in 5" x 5" x 14" package.

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
<b>POWER</b>	500W	750W	875W	1000W	1200W
<b>OUTPUTS</b>	DC CURRENTS				
<b>2V</b>	100A	150A	175A	200A	240A
<b>3.3V</b>	100A	150A	175A	200A	240A
<b>5V</b>	100A	150A	175A	200A	240A
<b>12V</b>	42A	63A	72A	85A	100A
<b>24V</b>	20A	31A	36A	42A	50A
<b>28V</b>	17A	27A	31A	35A	43A
<b>32V</b>	16A	23A	27A	31A	38A
<b>48V</b>	10A	16A	18A	20A	25A
<b>Non-Plug</b>	5"		5"		11.25"
<b>Hot Plug</b>	5"		5"		14"
<b>DC INPUT</b>	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:** ±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: ±2% over full line range.  
Load: ±2% zero load to full load.  
**VOLTAGE STABILITY:** ±0.1% for 24 hour period after 30 minute warm up.  
**TEMP COEFFICIENT:** ±0.02%/°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% ±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.

