

XPD 500 W

XPD 500 W Programmable DC Power Supply



Up to 540 Watts in a Quarter Rack Package

The Xantrex XPD Series provides more than 500 watts of reliable DC power in a quarter-rack wide chassis - the highest power density programmable DC power supply available in this power range. The high power density supplies are ideal for benchtop, ATE systems and OEM applications, where wide adjustment of output voltage or current is required in a compact package.

For systems applications, the XPD can be rack mounted in multiple-unit configurations of up to four independent 500 watt outputs. The supplies feature zero voltage or "soft switching" which virtually eliminates switching transients, and Power Factor Correction (PFC) for low current draw and greatly reduced generation of input current harmonics.

Product Features

- ▶ Zero voltage "Soft Switching"
- ▶ Power Factor Correction (PFC)
- ▶ Simultaneous front panel display of output voltage and current
- ▶ Front and rear connectors
- ▶ Ten-turn front panel knobs
- ▶ Remote sense with 5 V line loss compensation
- ▶ LabVIEW® and LabWindows® drivers

Protection Features

- ▶ Over voltage protection
- ▶ Over temperature protection

Options

- ▶ RS-232 interface card
- ▶ GPIB interface card
- ▶ GPIB-multichannel

Xantrex Technology Inc.

Headquarters
8999 Nelson Way
Burnaby, British Columbia
Canada V5A 4B5
800 670 0707 Toll Free
604 420 1591 Fax

5916 195th Street NE
Arlington, Washington
USA 98223
800 446 6180 Toll Free
360 925 5144 Fax

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Electrical Specifications ¹					
Models	7.5-67	18-30	33-16	60-9	120-4.5
Output Ratings					
Output Voltage ²	0-7.5 V	0-18 V	0-33 V	0-60 V	0-120 V
Output Current ³	0-67 A	0-30 A	0-16 A	0-9 A	0-4.5 A
Output Power	502.5 W	540 W	528 W	540 W	540 W
Line Regulation ⁴					
Voltage	2 mV	2 mV	3 mV	3 mV	3 mV
Current	2 mA	2 mA	2 mA	2 mA	2 mA
Load Regulation ⁵					
Voltage	2 mV	4 mV	4 mV	4 mV	5 mV
Current	4 mA	4 mA	4 mA	4 mA	4 mA
Meter Accuracy					
Voltage (1% of Vmax + 1 count)	0.2 V	0.3 V	0.5 V	0.7 V	2.2 V
Current (1% of Imax + 1 count)	0.8 A	0.4 A	0.3 A	0.2 A	0.2 A
Output Noise (90-20 MHz)					
Voltage (p-p)	45 mV	45 mV	45 mV	45 mV	60 mV
Output Ripple					
Voltage	3 mV	3 mV	3 mV	5 mV	10 mV
Current ⁶	150 mV	50 mV	30 mV	30 mV	15 mV
Drift (60 minutes) ⁷					
Voltage (0.15% of Vmax)	11.3 mV	27 mV	49.5 mV	90 mV	180 mV
Current (0.3% of Imax)	201 mA	90 mA	48 mA	27 mA	13.5 mA
Drift (8 hours) ⁸					
Voltage (0.03% of Vmax)	2.3 mV	5.4 mV	9.9 mV	18 mV	36 mV
Current (0.05% of Imax)	34 mA	15 mA	8 mA	4.5 mA	2.3 mA
Temperature Coefficient ⁹					
Voltage (0.015% of Vmax/°C)	1.2 mV	2.7 mV	5 mV	9 mV	18 mV
Current (0.02% of Imax/°C)	13.4 mA	6 mA	3.2 mA	1.8 mA	0.9 mA
OVP Adjustment Range (5% to 110% of Vmax)	0.4-8.3 V	0.9-19.8 V	1.7-36.3 V	3-66 V	6-132 V
Efficiency ¹⁰	81%	83%	85%	85%	84%

1. All electrical specifications are represented at the full operating temperature range for all models, unless otherwise stated.
2. Minimum output voltage is <0.15% of rated voltage at zero output setting.
3. Minimum output current is <0.2% of rated current at zero setting when measured with rated load resistance. Front output current limited to 30 A maximum.
4. For input voltage variation over the AC input voltage range, with constant rated load.
5. For 0-100% load variation, with constant nominal line voltage.
6. Current mode noise is measured from 10% to 100% of rated output voltage, full current.
7. Maximum drift over 60 minutes with constant line, load, and temperature, after power up.
8. Maximum drift over 8 hours with constant line, load, and temperature, after 60 minute warm-up.
9. Change in output per °C change in ambient temperature, with constant line and load.
10. Typical efficiency at 120 V and full output power.

General Specifications

Operational AC Input Voltage	84-264 VAC, 47-63 Hz; power factor corrected. Derate maximum output power to 450 W for AC input less than 95 V
Power Factor	0.98 minimum for full load at nominal voltage
Switching Frequency	125 kHz (250 kHz output ripple)
Remote Analog Programming (Full Scale Input)	Voltage and current programming inputs (source must be floating): 0-10 V voltage sources. Input impedance (V and I): 20 k
Remote Programming and Monitoring Accuracy	1% of full scale output for the default range
Dimensions (HxWxD)	5.2 x 4.2 x 13" (134.7 x 109.2 x 330 mm)
Weight	9.0 lb (4.1 kg)
Warranty	5 years
Approvals	CE-marked units meet; EN61010-1, EN61000-6-2 and EN61000-6-4; CSA C/US certified to UL3111-1 and CSA C22.2 No 1010.1; Meets USA EMC standard: FCC, part 15B, class A; Meets Canadian EMC standard: ICES-001, Class A.

Note: Specifications are subject to change without notice.