Electrical Specifications 1

Output Ratings:	
Output Voltage 2	0-33 V
Output Current 3	0-16 A
Output Power	528 W
Line Regulation: 4	
Voltage (0.01% of Vmax + 2 mV)	3 mV
Current (0.01% of Imax + 1 mA)	2 mA
Load Regulation: 5	
Voltage (0.01% of Vmax + 2 mV)	4 mV
Current (0.01% of Imax + 5 mA)	4 mA
Meter Accuracy:	
Voltage (1% of Vmax + 1 count)	0.5 V
Current (1% of Imax + 1 count)	0.3 A
Output Noise & Ripple:	
Voltage (p-p) (0-20 MHz)	45 mV
Voltage rms	3 mV
Current rms 6	30 mA
Drift (60 minutes): 7	
Voltage (0.15% of Vmax)	49.5 mV
Current (0.3% of Imax)	48 mA
Drift (8 hours): 8	
Voltage (0.03% of Vmax)	9.9 mV
Current (0.05% of Imax)	8 mA
Temperature coefficient: 9	
Voltage (0.015% of Vmax/° C)	5 mV
Current (0.02% of Imax/° C)	3.2 mA
OVP adjustment range: (5% to 110% of Vmax)	1.7-36.3 V
Efficiency: 10	85%

Interface Specifications 11

Program Resolution (16-bit):	
Voltage	0.55 mV
Current	0.27 mA
OVP	0.55 mV
Program Accuracy:	
Voltage (0.2% + 10 mV)	75 mV (+/- 0.12%)
Current (0.3% + 10 mA)	115 mA (+/- 0.15%)
OVP (0.5%) + 100 mV)	330 mV
Readback Resolution (16-bit):	
Voltage	0.55 mV
Current	0.27 mA
Readback Accuracy:	
Voltage (0.2% + 20 mV)	75 mV (+/- 0.2%)
Current (0.3% + 20 mA)	115 mA (+/- 0.15%)

1. All electrial specifications are represented at 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 30 minutes 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.

11. Interface specifications at 25° C +/- 5° C, nominal line input at 120 VAC.
Apply accuracy specifications according to the following voltage program accuracy example:
Set a model 18-30 power supply to 10 volts. The expected result will be within the range of 10 volts +/- 75 mV +/-
0.12% of the set voltage of 10 volts.

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 that 95 V.
Maximum Input Current	7 A maximum at 100 VAC, 6 A maximum at 120 VAC, 3 A maximum at 220 VAC
Power Factor	0.98 minimum for full load at nominal voltage
Input Harmonic Distortion	Current harmonics meet IEC 1000-3-2
Switching Frequency	125 kHz (250kHz output ripple)
Time Delay	3 s maximum, from power on to output stable
Voltage Mode Transient Response Time	1 ms for output voltage to recover within o.5% of its previous level after a step change in load current of up to 50% of rated output
Maximum Voltage Differential	+/-300 VDC from output to safety ground
Remote On/Off and Interlock	5-15 V signal or TTL-compatible input, selectable logic. TTL input impedance: 2 k (in series with one diode drop)
Remote Analog Programming (Full Scale Input)	Voltage and current programming inputs (sources must be floating): 0-10 V (default) voltage sources. Input imedance (V and I): 20 k.
Remote Programming and Monitoring Accuracy	1% of full scale output for the default range
Operating Temperature Range	32° F to 122 ° F (0° C to 50° C)
Storage Temperature Range	-40° F to 185° F (-40° C to 85° C)
Humidity Range	Up to 95% RH, non-condensing
Front Panel Voltage and Current Control	10-turn voltage and current potentiometers
Front Panel Voltage Control Resolution	0.02% of maximum voltage
AC Input Connector Type	IEC 320 connector, appropriate power cord provided for destination country
Main Output Connector	Front panel: 5-way binding posts. Maximum current limit 30 A; Rear Panel: 7.5-18 V models: Bus bars; 33-120 V models: wire clamp connectors.
Weight (one unit)	9.0 lb (4.1 kg)

Dimensions (H x W x D)	5.2 x 4.2 x 13" (134.7 x 109.2 x 330 mm)

Options

GPIB-XPD	GPIB Interface card (16-bit)
RS-232-XPD	RS-232 Interface card (16-bit)
RM-XHS	19-inch rack mount kit for up to four XPD, HPD or XT power supplies

Regulatory 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 subject to change without notice.

To compare models, please download the XPD 500 W Data Sheet.