HDL3000 Series

AC-DC Power Supplies

XP Power

3000 Watts

- High Efficiency up to 93%
- High Power Density
- Programmable Output Voltage (0-105%)
- Programmable Output Current (0-105%)
- Parallel Operation
- Fully Featured Signals & Controls
- 3 Year Warranty

The HDL3000 series offers users both output voltage and output current programming (0 – 105%) via resistance, voltage or I²C bus in a very high efficiency, high power density 3 kW chassis mount package. Measuring just 6.69" x 2.52" x 11.02", the HDL3000 also features active current sharing, remote on/off, remote sense and a power OK signal. The standby output is available whenever the mains supply is present and can be user selected as either 5 V at 0.5 A or 9V at 0.3 A.

Dimensions:

HDL3000:
6.69 x 2.52 x 12.48" (170.0 x 64.0 x 317.0 mm)
including connectors

Models & Ratings

Output Power		Output Voltage V1	Output Current		Ripple & Noise	Efficiency[1]	Model Number
High Line	Low Line		High Line	Low Line			
2400 W	1600 W	12.0 VDC	200 A	166.6 A	150 mV	88%	HDL3000PS12
2400 W	1600 W	15.0 VDC	160 A	133.3 A	150 mV	89%	HDL3000PS15
3000 W	2000 W	24.0 VDC	125 A	83.3 A	240 mV	91%	HDL3000PS24
3000 W	2000 W	30.0 VDC	100 A	66.6 A	300 mV	91%	HDL3000PS30
3000 W	2000 W	36.0 VDC	83.5 A	55.5 A	360 mV	92%	HDL3000PS36
3000 W	2000 W	48.0 VDC	62.5 A	41.6 A	480 mV	92%	HDL3000PS48
3000 W	2000 W	60.0 VDC	50 A	33.3 A	600 mV	93%	HDL3000PS60

Notes

1. Measured with 230 VAC input and full load.

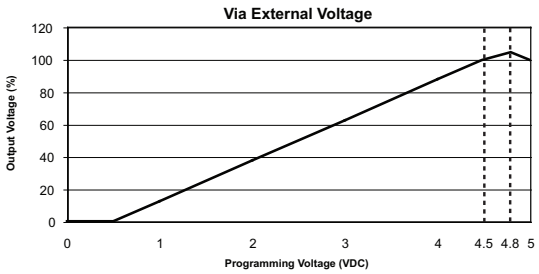
Input

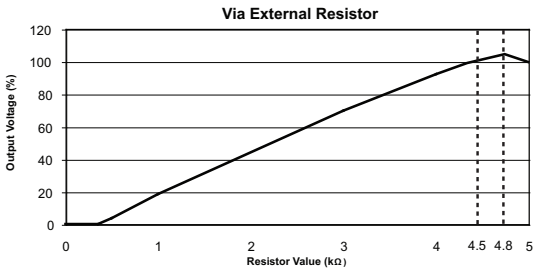
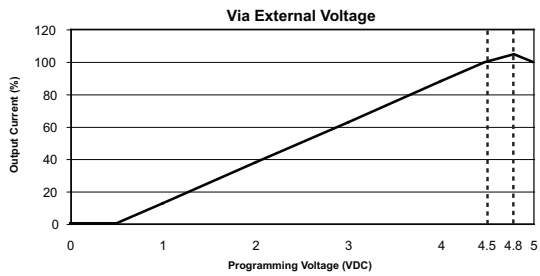
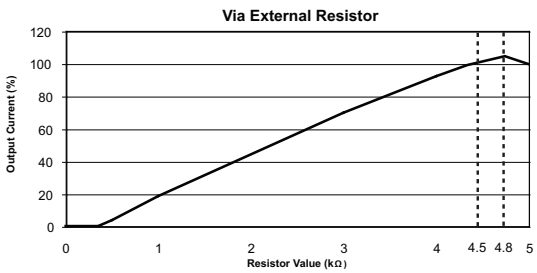
Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage	90		264	VAC	See derating curve
Input Frequency	47		63	Hz	
Power Factor		0.98/0.95			115/230 VAC full load
Input Current			19.7/15.0	A	115 VAC at 2000 W/230 VAC at 3000 W
Inrush Current			45/110	A	115/230 VAC
Earth Leakage Current			3	mA	264 VAC/60 Hz

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage	12		60	VDC	See Models and Ratings table
Output Trim		±5.0		%	By potentionmeter
Output Voltage Program	0		105	%	Of rated output
Output Current Program	0		105	%	Of rated output
Initial Set Accuracy			±1	%	At 50% Load
Minimum Load	0			A	
Start Up Delay			1	s	
Start Up Rise Time			120	ms	At full load
Hold Up Time	10	11		ms	At 230 VAC and full load
Line Regulation			±1.0	%	
Load Regulation			±1 (V1)/±3	%	V1 / 5 V Standby. 0-100% load
Transient Response		<1		%	For a 25% step load change
Ripple & Noise	150		600	mV pk-pk	See models and ratings table. Measured with 20 MHz bandwidth and using 12" twisted pair wire terminated with 0.1 µF ceramic capacitor and 47 µF electrolytic at 25 °C ambient.
Overvoltage Protection					Tracks output voltage, see application notes Recycle AC to reset
Overtemperature Protection					Primary and secondary heatsinks, monitored Output shuts down, auto recovers
Overload Protection		105		%	Rated power, constant current
Short Circuit Protection					Auto recovery
Temperature Coefficient		±0.02		%/°C	0-50 °C
Remote Sense	Compensates for 0.5 V max voltage drop, if remote sense is not required, local sense must be used				
Enable	Output must be enabled, see application notes, power supply is shipped with enable links fitted				
Current Share	5 supplies can share within 5%				
Standby Output	5 V at 0.5 A, present whenever AC is applied (9 V at 0.3 A, user selectable, by connecting 'VSET', Pin 18 of CN2 to GND)				

Output Voltage Programming





Output Current Programming