

5000W Programmable DC Power Supply

**MADE IN
INDIA**



Technical Specifications

Parameter	PS16-312	PS20-250	PS32-156	PS40-125	PS60-83	PS80-62	PS100-50	PS120-41	PS160-31	PS300-16	PS400-12	PS600-8	PS800-6	PS1000-5
Output Voltage (V)	16	20	32	40	60	80	100	120	160	300	400	600	800	1000
Output Current (A)	312.5	250	156.3	125	83.3	62.5	50	41.6	31.25	16.6	12.5	8.33	6.25	5
Rated Power (W)	5000W													
Efficiency at 230V, full load (%)	78	78	80	80	83	83	84	84	84	84	84	85	85	85
Constant Voltage Mode														
Load regulation 0 ~ 100% (mV)	7	7	8	9	11	13	15	17	21	35	45	65	85	105
Line Regulation (mV)	2	2	3	4	6	8	10	12	16	30	40	60	80	100
Ripple at full load	BW=300 kHz (mVrms)													
	8	10	12	12	12	15	15	18	20	60	80	100	150	180
BW=20 MHz (mpp)														
75	75	75	75	75	75	80	90	100	120	200	400	180	600	800
Constant Current Mode														
Load regulation 0 ~ 100% (mA)	250	200	125	100	66	50	40	33	25	13	10	6	5	4
Line Regulation (mA)	156	125	78	63	42	31	25	21	16	8	6	4	3	3

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Ripple (At full load) BW=300 kHz (mArms)		1000	600	300	150	100	70	45	45	45	15	12	10	8	8
Remote sense drop (V)		2	2	5	5	5	5	5	5	5	5	5	5	5	5
Programming Speed (into resistive load)															
Rise time (10% to 90%)	100% load (ms)	30	30	30	30	50	50	50	50	50	50	100	100	100	150
Fall time (90% to 10%)	100% load (ms)	50	50	80	80	80	100	100	100	100	100	150	200	250	300
	No load (ms)	300	600	800	900	1000	1200	1900	2000	2000	3000	4000	4000	5000	5000
Temperature Coefficients	CV	100 ppm/°C (after warm up of 30 min and during 8 Hrs)													
	CC														
Output Stability	CV	100 ppm (after warm up of 30 min and during 8 Hrs)													
	CC														
Analog Programing (Standard)															
Programing	Voltage	0 ~ 5 V / 0 ~ 10V (User selectable), Accuracy: $\pm 0.5\%$ of Vrated, Input Impedance: 1 M Ω													
	Current	0 ~ 5 V / 0 ~ 10V (User selectable), Accuracy: $\pm 1\%$ of Irated, Input Impedance: 1 M Ω													
Monitoring	Voltage	0 ~ 5 V / 0 ~ 10V (User selectable), Accuracy: $\pm 1\%$ of Vrated, Output Impedance: <150 Ω / 4 mA max													
	Current	0 ~ 5 V / 0 ~ 10V (User selectable), Accuracy: $\pm 1\%$ of Irated, Output Impedance: <150 Ω / 4 mA max													
Isolated Analog Programing (Optional)															
Programing	Voltage	0 ~ 10 V, Accuracy: $\pm 1\%$ of Vout rated, Input impedance: 1 M Ω													
	Current	0 ~ 10 V, Accuracy: $\pm 1\%$ of Iout rated, Input impedance: 1 M Ω													
Monitoring	Voltage	0 ~ 10 V, Accuracy: $\pm 1\%$ of Vout rated, Output impedance: 150 Ω / 4 mA max													
	Current	0 ~ 10 V, Accuracy: $\pm 1\%$ of Iout rated, Output impedance: 150 Ω / 4 mA max													
V reference		5.1 V \pm 15 mV													
Status outputs		Power Supply: OK = Logic 1 (High), AC Fail = Logic 0 (Low), DC Fail: Logic 0 (low) for DC fail by $\pm 5\%$ of set value, CV / CC Status: CV = Logic 0 / CC = Logic 1 Interlock: Short = Power Supply Enabled, Open = Power Supply Disabled DC ON Status: ON = Logic 1, OFF= Logic 0, OVP Status: Fault = Logic 0, OK = Logic 1, OTP Status: Fault = Logic 0, OK = Logic 1, Remote Status: Remote = Logic 1, Local = Logic 0													
Remote shutdown		+5 V													

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Remote Programing															
RS232 / USB / RS485	ADC: 16 Bits, DAC: 16 Bits														
Voltage Programing	Resolution: Better than 15 bit, Accuracy: 0.05% Vout + 0.05% Vrated														
Current Programing	Resolution: Better than 15 bit, Accuracy: 0.1% Iout + 0.1% Irated														
Monitor Voltage	Resolution: Better than 15 bit, Accuracy: 0.1% Vout + 0.1% Vrated														
Monitor Current	Resolution: Better than 15 bit, Accuracy: 0.25% Iout + 0.2% Irated														
OVL & UVL Programing	Resolution: Better than 15 bit, Accuracy: 0.05% Vout + 0.05% Vrated														
Front Panel controls:	Mains ON/ OFF, Voltage and Current setting with Encoders, Switch Settings: Set, Over Voltage, Under Voltage, Foldback, Remote & Output														
Indicators:	LEDs for : CV, CC, Over Voltage, Under Voltage, Foldback, Remote & Output ON														
Display:															
Accuracy	Voltage: $\pm (0.5\% + 2D)$, Current : $\pm (0.5\% + 2D)$														
Scale	Voltage (V)	0-16.00	0-20.00	0-32.00	0-40.00	0-60.00	80.00	0-100.0	0-120.0	0-160.0	0-300.0	0-300.0	0-600.0	0-800.0	0-1000
	Current (A)	0-312.5	0-250.0	0-156.2	0-125.0	0-83.33	62.50	0-50.00	0-41.66	0-31.25	0-16.66	0-16.66	0-8.33	0-6.25	0-5.00
Resolution	Voltage	10mV	10mV	10mV	10mV	10mV	10mV	100mV	100mV	100mV	100mV	100mV	100mV	100mV	1V
	Current	100mA	100mA	100mA	10mA	10mA	10mA	10mA	10mA	10mA	10mA	10mA	10mA	10mA	10mA
Protections:	Over voltage, Over current, Short Circuit, Fold Back, Over temperature														
Output Terminals	Bus bar with M5 bolts														
Mains Input	Standard: 207 ~ 270V, 50 / 60Hz (47 ~ 63Hz), Optional: Three phase AC + Neutral, 50 / 60Hz														
Power Factor	0.99 @ full load / 0.98 @ 50% load														
Turn On Delay	600 ms after mains switched ON														
Inrush current	Single Phase: < 50 A, Three Phase: < 32 A per phase														
Hold up Time	20 ms														
Environment Conditions															
Operating Temperature	0 ~ +50°C; with 100% load; derated 75% at 60°C														
Storage	-40 ~ + 85°C														
Humidity	max. 95% non-condensing at 40°C, max. 75% non condensing at 50°C														
Insulation	Insulation: Input to Output: 3750 V for 1 min, Input to case: 2500 Vrms, Output to case: 600 V Insulation resistance: 100 MΩ at 25°C, 70% RH, 500 Vdc														
Safety Standard	EN 60950-1 / IEC61010														

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EMC Standards	ESD: EN 61000-4-2: 2009, Fast Transients: EN 61000-4-4: 2012 Conducted & Radiated Emission: EN 61000-6-3/CISPR 11 Conducted Immunity: EN 61000-4-6, Radiated Immunity: EN 61000-4-3 Voltage dips & Interruption: EN 61000-4-11 Harmonics: EN 61000-3-2, Flicker: EN 61000-3-3													
General Specifications														
Dimensions	W x D x H: 443 x 485 x 130.5 mm (3U, 19" Rack size) excluding connectors, terminals, switches, front and back panel controls, handles etc													
Weight	22kg (approx.)													
Cooling	Forced, variable fan speed													
Interfaces	Standard	Analog Programing, USB / RS232 / RS485												
	Optional	LAN, CAN												
Standard Accessories	Mains Cable, USB Cable, RS485 Cable													

Subject to change without notice

- Notes:
1. Unit warm up time is 30 min.
 2. Sensing at the rear panel of the power supply unit at sense terminals.
 3. Minimum output voltage guaranteed to maximum of 0.2% Vrated.
 4. Minimum output current guaranteed to maximum of 0.4% Irated.

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