

AC POWER SUPPLY

MODEL PWS1000R



Description

The PWS1000R Series of rackmount power supplies provides 12, 24 or 48 Volts DC at 1000 Watts of continuous power from a 110 or 220 Volt AC source.

Circuit innovations reduce output ripple to levels previously available only from bulky and inefficient linear power supplies. Reliability features include an input fuse, thermal shutdown, current limiting and output short circuit protection with automatic recovery. An Output Over voltage Crowbar circuit protects any powered devices from excessive voltage in the event of a failure of the unit.

Extra features include adjustable output voltage audible and visual indicators for low input voltage, low output voltage, over temperature, overload and output on. Either 110 or 220 VAC input (Field Convertible) is available. The PWS1000R also features a four contact output terminal (two positive and two negative contacts) for easy connection of devices to the supply.

All rackmount units come standard with high quality digital output meters to allow monitoring of output current and output voltage. An optional Battery Back-up is also available.

Benefits

- Ultra-Quiet
- Power sensitive electronics without interference
- Rugged & Reliable
- Ensure years of safe and trouble free operation

Design Features

- Adjustable output voltage
- Extremely rugged and well suited for marine and other demanding environments
- Ultra-quiet low EMI operation
- Audible & visual indicators for output overload, low input voltage, low output voltage & over-temperature
- Over-temperature shutdown
- Current limiting
- Short circuit protection
- Output overvoltage crowbar
- Dry contact output fail relay
- Thermostatically controlled cooling fan
- Standard Digital Volt/Ammeter
- Optional Parallel output diodes available
- Custom output voltages available (8V to 55V)
- 3 year parts and labour warranty
- Battery Charging (Rectifier) models available

Applications

- Telecom Power Plants
- Electric Utilities and Substations
- Marine & other rugged environments
- Base Station Power (Radio & Telecommunications)
- Industrial Controls (OEM Applications)
- Solar / Alternative Power Systems
- Emergency Power Backup (UPS)

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Actual (Vac) 90 - 130 180 - 260					
Actual (Vac) 90 - 130	Electrical (Input)				
Input Amper (max) 132 / 1779 6.6 (1727) 172 /	Nominal Vac (ip)	110	220		
Imput Fise (MDA)	Actual (Vac)	90 – 130	180 - 260		
Input Fequency	Input Amps (max)				
Noise on Input	Input Fuse (MDA)	• • •			
Dutput Nominal (op)	Input Frequency	45-65 Hz			
Output Nominal (op) 12 24 48 Output Nominal (op) 13.6 ± 0.05 27.2 ± 0.05 54.4 ± 0.10 Output Ampas 60 cont / 70 peak 40 cont / 45 peak 20 cont / 22.5 peak Output Adjustment (Vdc) + 1.0V 63.9 ± 2.0V Output Adjustment (Vdc) + 1.0V - 1.0V Transient Response < 50 mV	Noise on Input	< 50 mV			
Output Volts (DC) 13.6 ± 0.05 27.2 ± 0.05 54.4 ± 0.10 Output Amps 60 cont. / 70 peak 40 cont. / 45 peak 20 cont. / 22.5 peak Output Convober 16.0 ± 0.5V 32.0 ± 1.0V 63.9 ± 2.0V Output Adjustment (Vdc) ± 1.0V 20 cont. / 45 peak 20 cont. / 22.5 peak Output Rippile & Noise < 50 mV	Electrical (Output)				
Output Amps 60 cont. / 70 peak 40 cont. / 45 peak 20 cont. / 22.5 peak Output Crowbar 16.0 ± 0.5V 32.0 ± 1.0V 83.9 ± 2.0V Output Alpustment (Vdc) ± 1.0V ± 1.0V ■ 1.0	Output Nominal (op)	12	24	48	
Output Crowbar 16.0 ± 0.5 V 32.0 ± 1.0 V 63.9 ± 2.0 V Output Algistment (Votc) ± 1.0 V	Output Volts (DC)	13.6 ± 0.05	27.2 ± 0.05	54.4 ± 0.10	
Output Adjustment (Vdc) ± 1.0V Output Ripple & Noise < 50 mV	Output Amps	60 cont. / 70 peak	40 cont. / 45 peak	20 cont. / 22.5 peak	
Output Ripple & Noise < 50 mV	Output Crowbar	16.0 ± 0.5V	32.0 ± 1.0V	63.9 ± 2.0V	
Transient Response Regulation (Line & Load) very Cycle Peak 20% for 10 min maximum Continuous 100% for 24 hours per day Efficiency 80% @ Maximum Output Environment Specification Operating Temp. Range -25° to +40°C @ maximum output Derate Linearly 2.5% per °C from 40°C (Optional -40°C extra wide-temp. operation avail.) Humidity Audible Noise NONE 0db @ 3 ft Typical Service Life 10 yrs. (87,600 hrs) Isolation Input-Case & Input-Dutput 1500VDC Output-Case \$ NoVDC (1500VDC @ 48V O/P) Mechanical Specification Mechanical Specification 19" Height 13.5 in 10 yrs. (87,600 hrs) 19" Height 14 yrs. (87,600 hrs) 19 wrs. (87,600 hrs.) 10 yrs. (87,600 hrs.) 10 yrs	Output Adjustment (Vdc)	± 1.0V	± 1.0V		
Regulation (Line & Load) 4/- 0.5% Peak 20% for 10 min maximum Continuous 100% for 24 hours per day Efficiency 80% Maximum Output Environment Specification 2-5° to +40°C @ maximum output Derate Linearly 2.5% per °C from 40°C (Optional -40°C extra wide-temp. operation avail.) Humidity 0 - 95% Relative Humidity (non-condensing) with optional conformal coating Audible Noise NONE 0db @ 3 ft Typical Service Life > 10 yrs. (87,000 hrs) Isolation Bether Condensing With optional conformal coating Mechanical Specification Wight 13.5 in Wight 19" Height 2u (3.5 in.) Clearance 1 inch (2.5 cm) all around Material Material Marine Grade Aluminium Finish Eack Anodize / Powder Epoxy Coat Fastenings All 18-8 Stainless Steel Weight 12 lb / 5.5 kg Connections Four contact output terminals Warranty 3 years	Output Ripple & Noise	< 50 mV	< 50 mV		
Duty Cycle Peak 20% for 10 min maximum Continuous 100% for 24 hours per day Efficiency > 80% @ Maximum Output Environment Specification -25° to +40°C @ maximum output Operating Temp. Range -25° to +40°C @ maximum output Derate Linearly 2.5% per °C from 40°C (Optional -40°C extra wide-temp. operation avail.) -40°C extra wide-temp. operation avail.) Humidity 0 - 95% Relative Humidity (non-condensing) with optional conformal coating Audible Noise NONE Ødb @ 3 ft Typical Service Life > 10 yrs. (87,600 hrs) Isolation Input-Case & Input-Output 1500VDC Output-Case 500VDC (1500VDC @ 48V O/P) Mechanical Specification 2 u (3.5 in.) Width 19° Height 2 u (3.5 in.) Clearance 1 inch (2.5 cm) all around Material Marine Grade Aluminium Finish Black Anodize / Powder Epoxy Coat Fastenings All 18-8 Stainless Steel Weight 12 lb / 5.5 kg Connections Four contact output terminals Warranty 3 years	Transient Response	< 1V for 50% Surge	< 1V for 50% Surge		
Continuous 100% for 24 hours per day Efficiency > 80% @ Maximum Output Environment Specification Operating Temp. Range 25° to +40°C @ maximum output 0erate Linearly 2.5% per °C from 40°C (Optional -40°C extra wide-temp. operation avail.) Humidity 0-95% Relative Humidity (non-condensing) with optional conformal coating Audible Noise NONE Ødb @ 3 ft Typical Service Life > 10 yrs. (87,800 hrs) Isolation Input-Case & Input-Output 1500VDC Output-Case 500VDC (1500VDC @ 48V O/P) Mechanical Specification Depth 13.5 in Width 19° Height 2u (3.5 in.) Clearance 1 inch (2.5 cm) all around Material Marine Grade Aluminium Finish Black Anodize / Powder Epoxy Coat Fastenings All 18-8 Stainless Steel Weight 12 lb / 5.5 kg Connections Four contact output terminals Warranty 3 years	Regulation (Line & Load)	< +/- 0.5%	<+/- 0.5%		
Poperating Temp. Range Operating Temp. Range Operating Temp. Range Operating Temp. Range Operating Temp. Range Operate Linearly 2.5% per °C from 40°C (Optional -40°C extra wide-temp. operation avail.) Humidity O - 95% Relative Humidity (non-condensing) with optional conformal coating Audible Noise NONE Ødb @ 3 ft Typical Service Life > 10 yrs. (87,600 hrs) Input-Case & Input-Output 1500VDC Output-T500VDC Output-Case S00VDC (1500VDC @ 48V 0/P) Mechanical Specification Depth 13.5 in Width 19" Height 2u (3.5 in.) Clearance 1 inch (2.5 cm) all around Material Marine Grade Aluminium Finish Black Anodize / Powder Epoxy Coat Fastenings All 18-8 Stainless Steel Weight Connections Four contact output terminals Warranty 3 years	Duty Cycle				
Operating Temp. Range -25° to +40°C @ maximum output Derate Linearly 2.5% per °C from 40°C (Optional -40°C extra wide-temp. operation avail.) Humidity 0 -95% Relative Humidity (non-condensing) with optional conformal coating Audible Noise NONE Ødb @ 3 ft Typical Service Life > 10 yrs. (87,600 hrs) Input-Case & Input-Output 1500VDC Output-Case & Input-Output 1500VDC @ 48V 0/P) Mechanical Specification Depth 13.5 in Width 19" Height 2u (3.5 in.) Clearance 1 inch (2.5 cm) all around Material Marine Grade Aluminium Finish Black Anodize / Powder Epoxy Coat Fastenings All 18-8 Stainless Steel Weight 12 lb / 5.5 kg Connections Warranty 3 years	Efficiency	> 80% @ Maximum 0	> 80% @ Maximum Output		
Operating Temp. Range Derate Linearly 2.5% per "C from 40 °C (Optional -40°C extra wiide-temp. operation avail.) Humidity 0 - 95% Relative Humidity (non-condensing) with optional conformal coating Audible Noise NONE Ødb @ 3 ft Typical Service Life > 10 yrs. (87,600 hrs) Isolation Input-Case & Input-Output 1500VDC Output-Case 500VDC (1500VDC @ 48V 0/P) Mechanical Specification 19° Width 19° Height 2u (3.5 in.) Clearance 1 inch (2.5 cm) all around Material Marine Grade Aluminium Finish Black Anodize / Powder Epoxy Coat Fastenings All 18-8 Stainless Steel Weight 12 lb / 5.5 kg Connections Four contact output terminals Warranty 3 years	Environment Specification				
Audible Noise NONE Ødb @ 3 ft Typical Service Life > 10 yrs. (87,600 hrs) Isolation Input-Case & Input-Output 1500VDC Output-Case 500VDC (1500VDC @ 48V 0/P) Mechanical Specification Depth 13.5 in Width 19" Height 2u (3.5 in.) Clearance 1 inch (2.5 cm) all around Material Marine Grade Aluminium Finish Black Anodize / Powder Epoxy Coat Fastenings All 18-8 Stainless Steel Weight 12 lb / 5.5 kg Connections Four contact output terminals Warranty 3 years	Operating Temp. Range	Derate Linearly 2.5%	Derate Linearly 2.5% per °C from 40°C		
Typical Service Life > 10 yrs. (87,600 hrs) Isolation Input-Case & Input-Output 1500VDC Output-Case 500VDC (1500VDC @ 48V 0/P) Mechanical Specification Depth 13.5 in Width 19" Height 2u (3.5 in.) Clearance 1 inch (2.5 cm) all around Material Marine Grade Aluminium Finish Black Anodize / Powder Epoxy Coat Fastenings All 18-8 Stainless Steel Weight 12 lb / 5.5 kg Connections Four contact output terminals Warranty 3 years	Humidity				
Isolation Input-Case & Input-Output 1500VDC Output-Case 500VDC (1500VDC @ 48V 0/P) Mechanical Specification Depth 13.5 in Width 19" Height 2u (3.5 in.) Clearance 1 inch (2.5 cm) all around Material Marine Grade Aluminium Finish Black Anodize / Powder Epoxy Coat Fastenings All 18-8 Stainless Steel Weight 12 lb / 5.5 kg Connections Four contact output terminals Warranty 3 years	Audible Noise	NONE Ødb @ 3 ft	NONE Ødb @ 3 ft		
Mechanical Specification Depth 13.5 in Width 19" Height 2u (3.5 in.) Clearance 1 inch (2.5 cm) all around Material Marine Grade Aluminium Finish Black Anodize / Powder Epoxy Coat Fastenings All 18-8 Stainless Steel Weight 12 lb / 5.5 kg Connections Four contact output terminals Warranty 3 years	Typical Service Life	> 10 yrs. (87,600 hrs)	> 10 yrs. (87,600 hrs)		
Depth Width 19" Height 2u (3.5 in.) Clearance 1 inch (2.5 cm) all around Material Marine Grade Aluminium Finish Black Anodize / Powder Epoxy Coat Fastenings All 18-8 Stainless Steel Weight 12 lb / 5.5 kg Connections Four contact output terminals Warranty 3 years	Isolation				
Width 19" Height 2u (3.5 in.) Clearance 1 inch (2.5 cm) all around Material Marine Grade Aluminium Finish Black Anodize / Powder Epoxy Coat Fastenings All 18-8 Stainless Steel Weight 12 lb / 5.5 kg Connections Four contact output terminals Warranty 3 years	Mechanical Specification				
Height 2u (3.5 in.) Clearance 1 inch (2.5 cm) all around Material Marine Grade Aluminium Finish Black Anodize / Powder Epoxy Coat Fastenings All 18-8 Stainless Steel Weight 12 lb / 5.5 kg Connections Four contact output terminals Warranty 3 years	Depth	13.5 in	13.5 in		
Clearance1 inch (2.5 cm) all aroundMaterialMarine Grade AluminiumFinishBlack Anodize / Powder Epoxy CoatFasteningsAll 18-8 Stainless SteelWeight12 lb / 5.5 kgConnectionsFour contact output terminalsWarranty3 years	Width	19"	19"		
MaterialMarine Grade AluminiumFinishBlack Anodize / Powder Epoxy CoatFasteningsAll 18-8 Stainless SteelWeight12 lb / 5.5 kgConnectionsFour contact output terminalsWarranty3 years	Height	2u (3.5 in.)	2u (3.5 in.)		
Finish Black Anodize / Powder Epoxy Coat Fastenings All 18-8 Stainless Steel Weight 12 lb / 5.5 kg Connections Four contact output terminals Warranty 3 years	Clearance	1 inch (2.5 cm) all arou	1 inch (2.5 cm) all around		
Fastenings All 18-8 Stainless Steel Weight 12 lb / 5.5 kg Connections Four contact output terminals Warranty 3 years	Material	Marine Grade Alumini	Marine Grade Aluminium		
Weight 12 lb / 5.5 kg Connections Four contact output terminals Warranty 3 years	Finish	Black Anodize / Powdo	Black Anodize / Powder Epoxy Coat		
Connections Four contact output terminals Warranty 3 years	Fastenings	All 18-8 Stainless Ste	All 18-8 Stainless Steel		
Warranty 3 years	Weight	12 lb / 5.5 kg	12 lb / 5.5 kg		
	Connections	Four contact output te	Four contact output terminals		
Safety Designed to meet CSA 22.2.107.1 & UL458	Warranty	3 years	3 years		
	Safety	Designed to meet CSA	Designed to meet CSA 22.2.107.1 & UL458		

Note: Specifications are subject to change without notice.



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