



CE Report EN62368-1  
UK RoHS GB4943.1 BS EN 62368-1

Size: 8in x 4in x 1.6in  
(203.1mm x 101.6mm x 40.6mm)

**FEATURES**

- Universal 80-277VAC or 110~390VDC Input Voltage Range
- Accepts AC or DC Input (Dual-Use of Same Terminal)
- Low Standby Power Consumption
- High Efficiency
- Remote Sense Compensation
- Remote ON/OFF Function
- DC\_OK Function
- Active PFC
- Output Short Circuit, Over Current, Over Voltage, and Over Temperature Protection
- Base Plate Conformal Coating
- High I/O Isolation Test Voltage Up to 4000VAC
- 5V/1A Standby Power
- Safety According to IEC62368, EN60335, and EN61558

**APPLICATIONS**

- Industrial
- LED
- Street Light Control
- Security
- Telecommunications
- Smart Home

**DESCRIPTION**

The PSEW600 series of AC/DC switching power supplies offers 600 watts of output power in an enclosed 8" x 4" x 1.6" package. This series consists of single output models with an input voltage range of 80~277VAC or 110~390VAC as this series accepts AC or DC input. Each model features active PFC function, low standby power consumption, remote sense compensation, and remote ON/OFF. This series has short circuit, over current, over voltage, and over temperature protection, is RoHS compliant, and has safety according to IEC62368, EN60335, and EN61558.

**MODEL SELECTION TABLE**

Model Number <sup>(1)</sup>	Input Voltage Range	Nominal Output Voltage	Nominal Output Current <sup>(1)</sup>	Output Voltage Adjustable Range	Typ. Efficiency	Max. Capacitive Load	Output Power	Certification	Remote Sense Compensation	Standby (Vo/Io) <sup>(2)</sup>
PSEW600-12S	80-277VAC (110-390VDC)	12V	50A	11.8-12.6V	92%	50000µF	600W	UL/EN/CCC /IEC/BS	500mV	5V/1A
PSEW600-15S		15V	40A	14.7-15.8V	92%	50000µF	600W			
PSEW600-24S		24V	25A	23.5-25.2V	94%	50000µF	600W			
PSEW600-27S		27V	22.3A	26.4-28.4V	94%	50000µF	600W			
PSEW600-36S		36V	16.7A	35.3-37.8V	94%	50000µF	600W			
PSEW600-48S		48V	12.6A	47-50.4V	94%	50000µF	600W			

**SPECIFICATIONS**

All specifications are based on 25°C, Humidity <75%RH, Nominal Input Voltage, and Rated Output Load unless otherwise noted. We reserve the right to change specifications based on technological advances.

SPECIFICATION	EST CONDITIONS		Min	Typ	Max	Unit
<b>INPUT SPECIFICATIONS</b>						
Input Voltage Range	AC Input		80		277	VAC
	DC Input		110		390	VDC
Input Voltage Frequency			47		63	Hz
Input Current	115VAC				7.5	A
	230VAC				3.5	
Inrush Current	Cold Start	115VAC/230VAC			15	A
		Full Load	115VAC	0.99		
Power Factor		230VAC		0.99		
Leakage Current	240VAC				0.1	mA
Hot Plug			Unavailable			
<b>OUTPUT SPECIFICATIONS</b>						
Output Voltage			See Table			
Voltage Accuracy	Full Load Range	12V/15V/24V/27V/36V/48V		±1		%
		5V Standby		±2		
Line Regulation	Rated Load	12V/15V/24V/27V/36V/48V		±0.3		%
		5V Standby		±0.5		
Load Regulation	0%-100% Load	12V/15V/24V/27V/36V/48V		±0.5		%
		5V Standby		±2		
Output Voltage Adjustable Range			See Table			
Output Power			See Table			
Output Current			See Table			
Minimum Load			0			%
Maximum Capacitive Load			See Table			
Ripple & Noise <sup>(3)</sup>	20MHz bandwidth, (peak-to-peak value)	12V/15V		150		mV
		24V/27V/36V/48V		200		
Hold-Up Time	230VAC		15			ms
Stand-by Power Consumption	Room temperature, 230VAC, RC+/RC- add +5V Signal			0.5		W

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SPECIFICATION	EST CONDITIONS		Min	Typ	Max	Unit
<b>PROTECTION</b>						
Short Circuit Protection	Recovery time 10s after the short circuit disappears		Hiccup Mode, Constant current works 1s turn off 10s, continuous, self-recovery			
Over Current Protection	The output turned off after working normally for 1s, self-recovery		110		250	%Io
Over Voltage Protection	Hiccup, Self-Recovery	12V		≤16		V
		15V		≤20		
		24V		≤32		
		27V		≤35		
		36V		≤47		
		48V		≤60		
Over Temperature Protection	Output voltage turn-off, self-recovery after temperature drops					
<b>ENVIRONMENTAL SPECIFICATIONS</b>						
Operating Temperature			-40		+70	°C
Storage Temperature			-40		+85	°C
Operating Humidity	Non-Condensing		20		95	%RH
Storage Humidity	Non-Condensing		10		95	%RH
Power Derating	Operating Temperature Derating	50°C to 70°C	2.5			%/°C
	Input Voltage Derating	80VAC-85VAC	2.0			%/VAC
		85VAC-100VAC	1.33			
MTBF	MIL-HDBK-217F@25°C		300,000			H
<b>GENERAL SPECIFICATIONS</b>						
Efficiency	230VAC		See Table			
Isolation Test	Electric Strength Test for 1min., leakage current <5mA		Input – Output	4000		VAC
			Input - $\perp$	1500		
			Output - $\perp$	1500		
Insulation Resistance	Environment Temperature: 25 ±5°C Relative Humidity: <95%RH, Non-Condensing Testing Voltage: 500VDC		Input – Output	50		MΩ
			Input - $\perp$	50		
			Output - $\perp$	50		
Isolation Level	Input-Output		2xMOPP			
	Input - $\perp$		1xMOPP			
<b>PHYSICAL SPECIFICATIONS</b>						
Weight			2.09lbs (950g)			
Dimensions (L x W x H)			8in x 4in x 1.6in (203.1mm x 101.6mm x 40.6mm)			
Case Material			Metal (AL1100. SGCC)			
Cooling			Forced Air Convection			
<b>SAFETY CHARACTERISTICS</b>						
Safety Standard <sup>(4)</sup>			UL62368-1, GB4943.1, IEC60601-1 Safety Approved & EN60601-1, EN62368-1, BS EN62368-1 (Report) Design Refers to IEC62368-1, EN61558-2-16, EN61558-1, EN60335-1			
Emissions	CE	CISPR32/EN55032	Class B			
	RE	CISPR32/EN55032	Class B			
	Harmonic Current	IEC/EN61000-3-2	Class A and Class D			
	Voltage Flicker	IEC/EN61000-3-3				
Immunity	ESD	IEC/EN 61000-4-2	Contact ±8KV/Air ±15KV	Perf. Criteria A		
	RS	IEC/EN 61000-4-3	10V/m	Perf. Criteria A		
	EFT	IEC/EN 61000-4-4	±4KV	Perf. Criteria A		
	Surge	IEC/EN 61000-4-5	Line to line ±2KV/line to ground ±4KV	Perf. Criteria A		
	CS	IEC/EN 61000-4-6	10 Vr.m.s	Perf. Criteria A		
	Voltage dips, short interruptions and voltage variations immunity	IEC/EN 61000-4-11	0%, 70%	Perf. Criteria B		

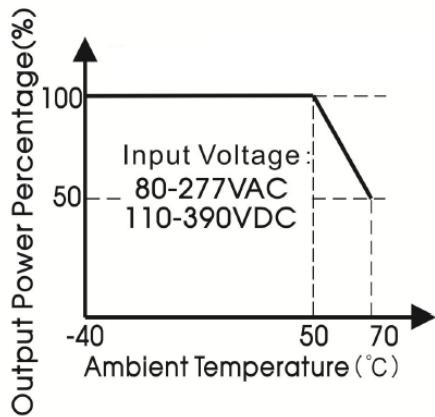
**NOTES**

- Under any conditions, the total power of the product should not exceed 600W rated power, and the output current should not exceed the rated output current.
- Standby power: provides 5V/1A independent output it is recommended to use the main circuit.
- Tip and barrel method is used for ripple and noise test. Output parallel 47uF electrolytic capacitor and 0.1uF ceramic capacitor, contact factory for more information
- This product is Listed to applicable standards and requirements by UL.
- Room temperature derating of 5°C/1000m is needed for operating altitude greater than 2000m
- In order to improve the efficiency at high input voltage, there will be audible noise generated, but does not affect product performance and reliability
- Product customization service is available, please contact factory for more details.
- Out case needs to be connected to PE (≡) of system when terminal equipment in operation.
- Output voltage can be adjusted by the ADJ, clockwise to increase.
- CAUTION: Double pole, neutral fusing. Disconnect mains before servicing.
- Products should be classified according to ISO14001 and related environmental laws and regulations and should be handled by qualified units.
- Power supply is considered a component which will be installed into terminal equipment. All EMC tests should be confirmed with final equipment. Consult factory for EMC test operation instructions.

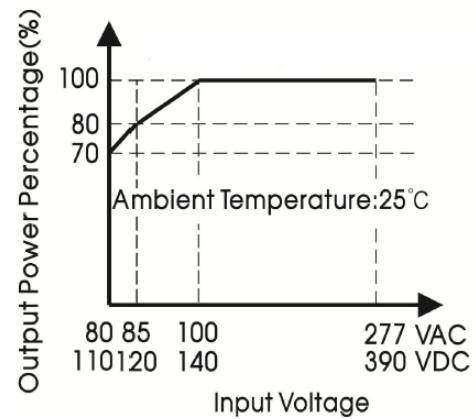
*\*Due to advances in technology, specifications subject to change without notice.*

**DERATING CURVES**

Temperature Derating Curve



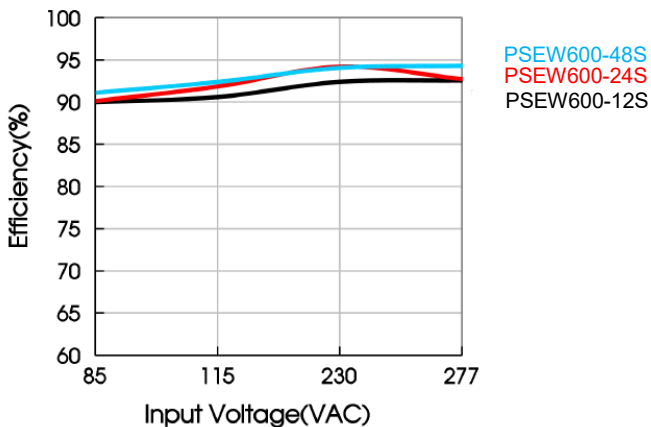
Input Voltage Derating Curve



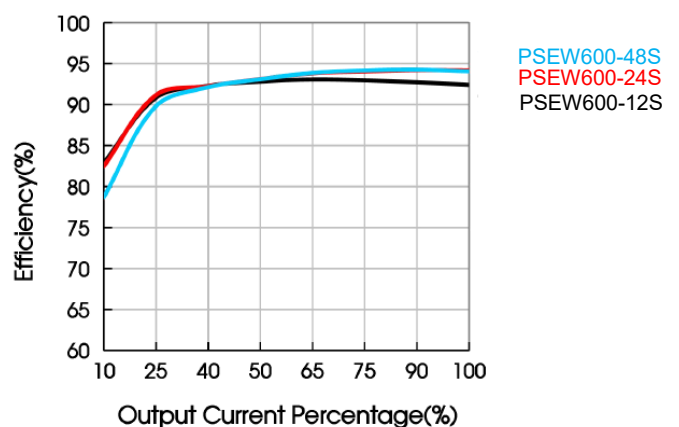
- Note:
- With an AC input voltage between 80-100VAC and a DC input between 110-140VDC the output power must be derated as per the temperature derating curves.
  - The product is suitable for applications using natural air cooling; for applications in an enclosed environment, contact factory.

**EFFICIENCY GRAPHS**

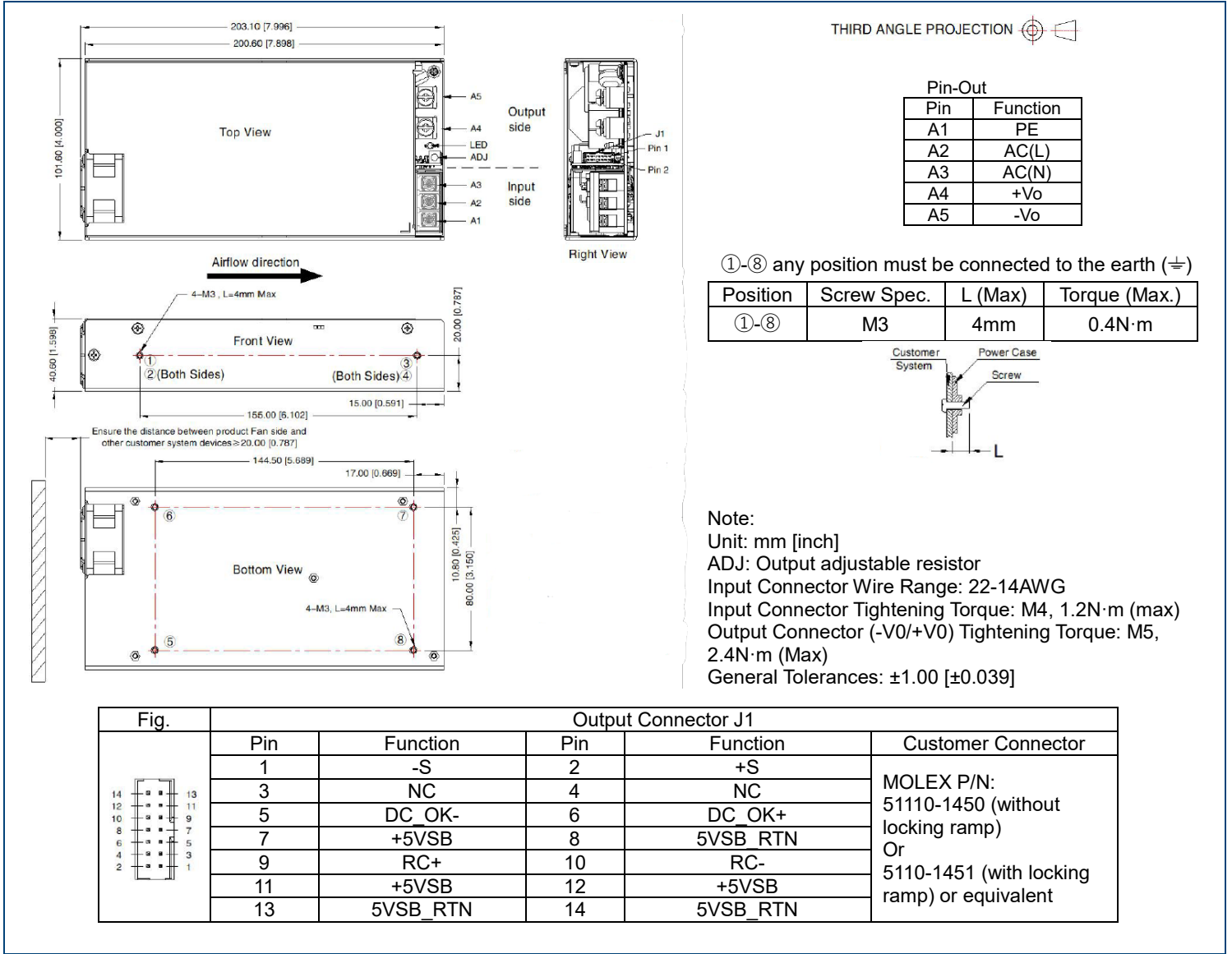
Efficiency vs Input Voltage (Full Load)



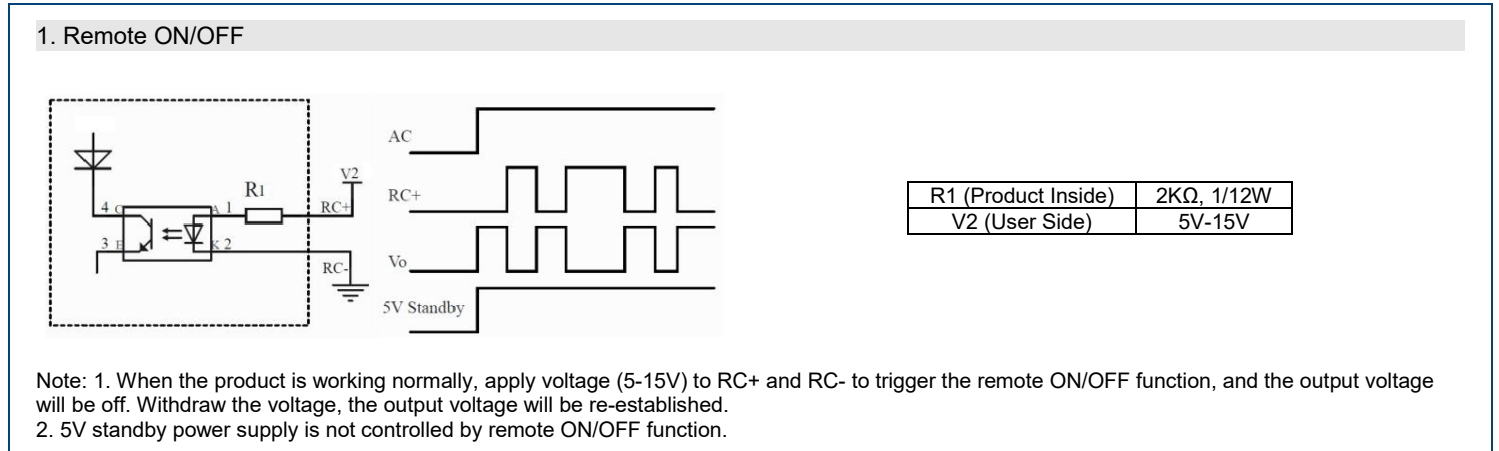
Efficiency vs Output Load (Vin=230VAC)



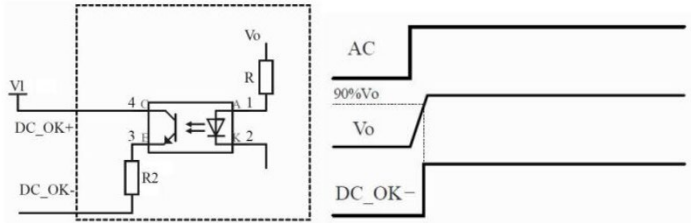
MECHANICAL DRAWINGS



TYPICAL APPLICATION



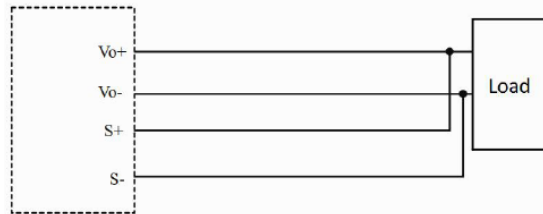
2. DC\_OK



R2 (Product Inside)	1KΩ, 1/12W
V1 (User Side)	5V-15V

Note 1. When the output voltage of the product reaches 90% of the rated value, DC\_OK+ will be connected to DC\_OK-  
2. It is recommended that users apply a certain voltage between DC\_OK+ and DC\_OK- to detect the signal.

3. Remote Sense Compensation



Note: 1. The left side represents the internal schematic diagram of the product, the right side represents the customer system.  
2. Twisted pair wires are needed for S+/S-

COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001: 2015 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

Contact **Wall Industries** for further information:

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