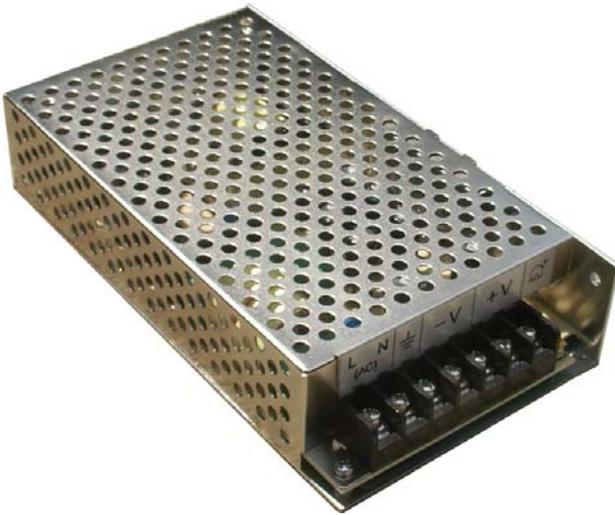


Wall Industries, Inc.

PSGE150 SERIES

88~132VAC / 176~264VAC (248~373VDC) Input
Single Outputs
Up to 158.4 Watts Output Power
AC/DC Switching Power Supplies



FEATURES

- Single Output
- RoHS Compliant
- Input Selected by Switch
- High Efficiency, Long Life, and High Reliability
- $\pm 10\%$ Output Voltage Adjustability
- Green Design, No-load Power Consumption $< 1W$
- Energy Star Compliant
- Cooling by Free Air Convection
- Power ON with LED Indicator
- All Using 105°C Long Life Electrolytic Capacitors
- Wide Operating Temperature Range: $-25^{\circ}C$ to $+70^{\circ}C$
- 100% Full Load Burn-In Tested
- Withstand 2G Vibration Test
- Brown-out (Low AC Input Voltage) Protection
- Over Voltage, Over Load, and Short Circuit Protection



DESCRIPTION

The PSGE150 series of AC/DC switching power supplies offers up to 158.4 Watts of output power in a 7.05" x 3.86" x 1.50" enclosed case. This series has an 88~132VAC / 176~264VAC input voltage range (selected by switch) and single outputs of 5, 12, 15, 24, and 48VDC. Some features include high efficiency up to 90%, $\pm 10\%$ output adjustability, no-load power consumption $< 1W$, and a high operating temperature range of $-25^{\circ}C$ to $+70^{\circ}C$. This series also has over voltage, short circuit, over load, and brown-out (low AC input voltage) protection. All models have been 100% full load burn-in tested and are RoHS and Energy Star compliant. This series also has UL 60950-1, TUV EN60950-1, and CE safety approvals.

SPECIFICATIONS: PSGE150 SERIES		
All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted. We reserve the right to change specifications based on technological advances.		
INPUT SPECIFICATIONS		
Input Voltage Range	88~132VAC / 176~264VAC selected by switch (withstand 300VAC surge for 5 sec. without damage) 248~373VDC	
Input Frequency	50Hz / 60Hz	
AC Current	3A typ. at 115VAC; 1.5A typ. at 230VAC	
Inrush Current	Cold Start 40A typ. at 230VAC	
OUTPUT SPECIFICATIONS		
Output Voltage	See Table	
Output Power	See Table	
Voltage Adjustment Range	±10%	
Voltage Tolerance	5V Output Model: ±2% 12V, 15V, 24V, and 48V Output Models: ±1%	
Line Regulation (LL to HL at full load)	±0.5%	
Load Regulation (0% to 100% full load)	5V Output Model: ±1.0% 12V, 15V, 24V, and 48V Output Models: ±0.5%	
Output Current	See Table	
Ripple & Noise (max.)	See Table	
Setup, Rise Time (<i>See Note 3</i>)	< 200ms, < 100ms at 115VAC and full load; < 200ms, < 100ms at 230VAC and full load	
Hold-Up Time	> 25ms at 115VAC and full load; > 25ms at 230VAC and full load	
Temperature Coefficient	±0.03% / °C (0~50°C)	
PROTECTION		
Over Voltage Protection	115%~150% rated output voltage Protection Type: Latch-off mode	
Over Load Protection	> 105% rated output power Protection Type: Hiccup mode, recovers automatically after fault condition is removed.	
GENERAL SPECIFICATIONS		
Efficiency (at 230VAC)	See Table	
Withstand Voltage	Input to Output	3000VAC (4242VDC) for 1 minute
	Input to FG	1500VAC (2121VDC) for 1 minute
	Output to FG	500VAC (707VDC) for 1 minute
Isolation Resistance	100MΩ/500VDC (input to output, input to FG, output to FG)	
Leakage Current	< 2mA at 240VAC	
ENVIRONMENTAL SPECIFICATIONS		
Working Temperature	-25°C to +70°C (refer to de-rating curve)	
Storage Temperature	-40°C to +85°C	
Working Humidity	20% to 90% RH (non-condensing)	
Storage Humidity	10% to 95% RH	
Vibration	10 ~ 500Hz, 2G 10min/1cycle, period of 60 min. each along X,Y,Z axis.	
Cooling	Free air convection	
MTBF	620,300 hours Compliance: MIL-HDBK-217F	
PHYSICAL SPECIFICATIONS		
Weight, Packing	19.75oz (560g); 20pcs/13kg	
Dimensions (L x W x H)	7.05 x 3.86 x 1.50 inches (179.00 x 98.00 x 38.00 mm)	
SAFETY & EMC		
Safety Standards	UL 60950-1 2 nd Edition, TUV EN60950-1: 2006+A11 Approved	
EMI Conduction & Radiation	EN55022: 2006 Class B	
Harmonic Current	EN61000-3-2: 2006 Class A, EN61000-3-3: 1995+A1: 2001+A2: 2005	
EMS Immunity	EN61204-3: 2000 EN55024: 1998+A1: 2001+A2: 2003 light industry level, criteria A	

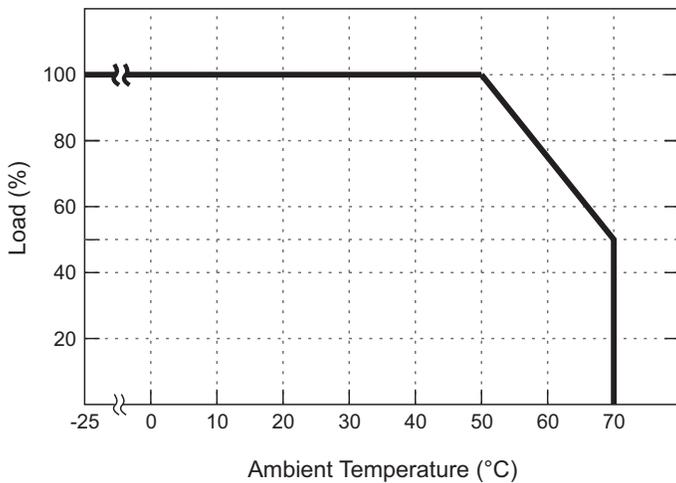
MODEL SELECTION TABLE						
Model Number	Input Voltage Range	Output Voltage	Output Current	Ripple & Noise ⁽¹⁾	Output Power	Efficiency
PSGE-150-5	88~132VAC / 176~264VAC (248 ~ 373VDC)	5 VDC	18A	100mVp-p	90W	83%
PSGE-150-12		12 VDC	12.5A	120mVp-p	150W	88%
PSGE-150-15		15 VDC	10A	120mVp-p	150W	89%
PSGE-150-24		24 VDC	6.5A	120mVp-p	156W	90%
PSGE-150-48		48 VDC	3.3A	200mVp-p	158.4W	90%

NOTES

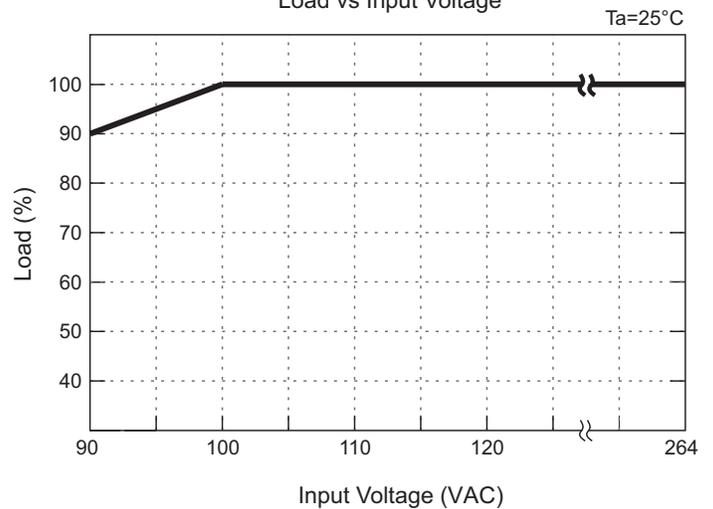
1. Ripple & noise is measured at 20MHz bandwidth by using a 12" twisted pair-wire terminated with a 0.1µF capacitor and a 47µF capacitor in parallel.
2. Tolerances include set up tolerance, line regulation, and load regulation.
3. Length of the setup time is measured at first cold start. Turning the power supply ON and OFF very quickly may lead to an increase in the setup time.
4. The power supply is considered a component, which will be installed into final equipment. The final equipment must be re-confirmed that it still meets EMC directives.

DERATING CURVES

Load vs Temperature



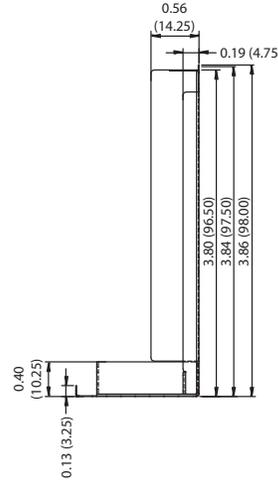
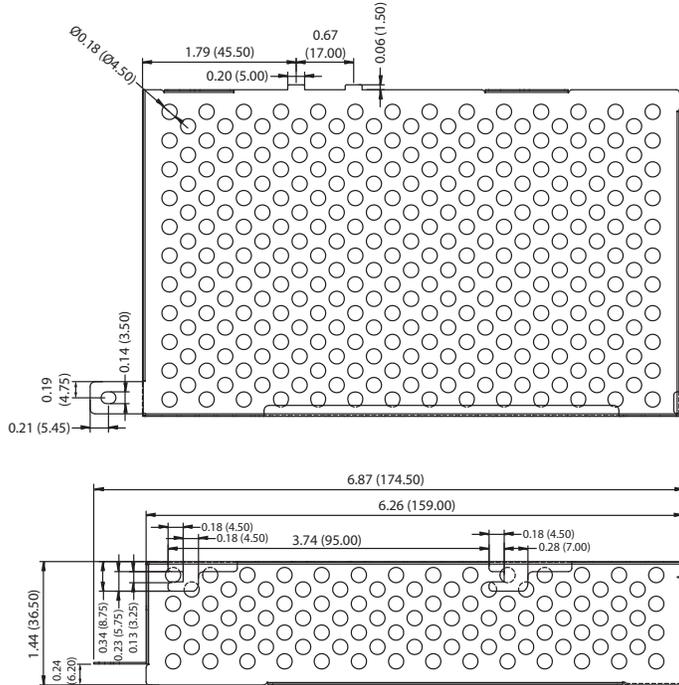
Load vs Input Voltage



MECHANICAL DRAWINGS

TOP OF CASE

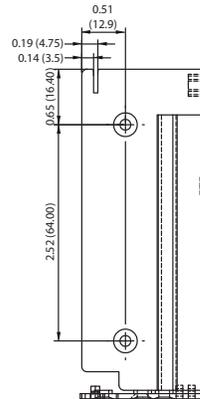
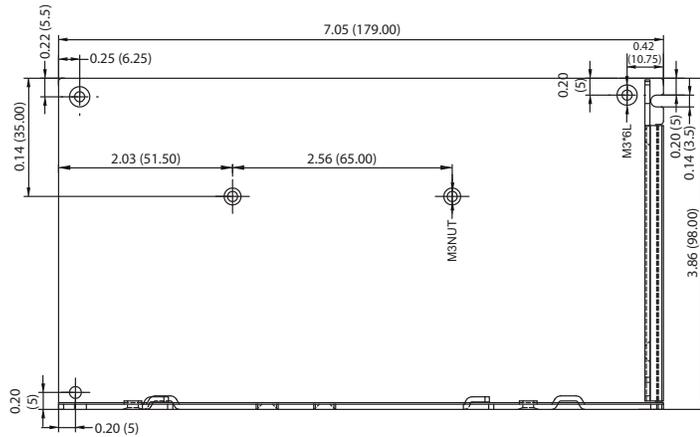
Unit: inches (mm)



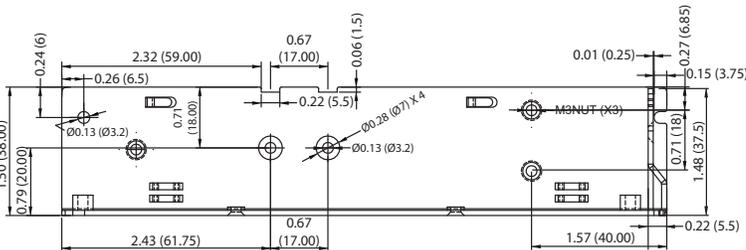
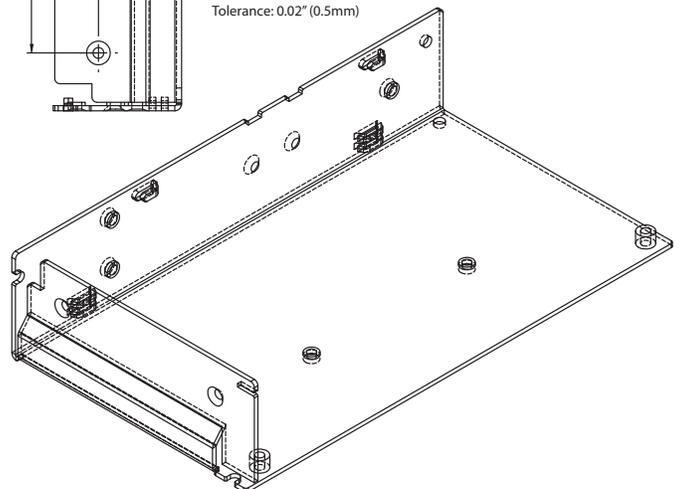
Tolerance: 0.02" (0.5mm)

BOTTOM OF CASE

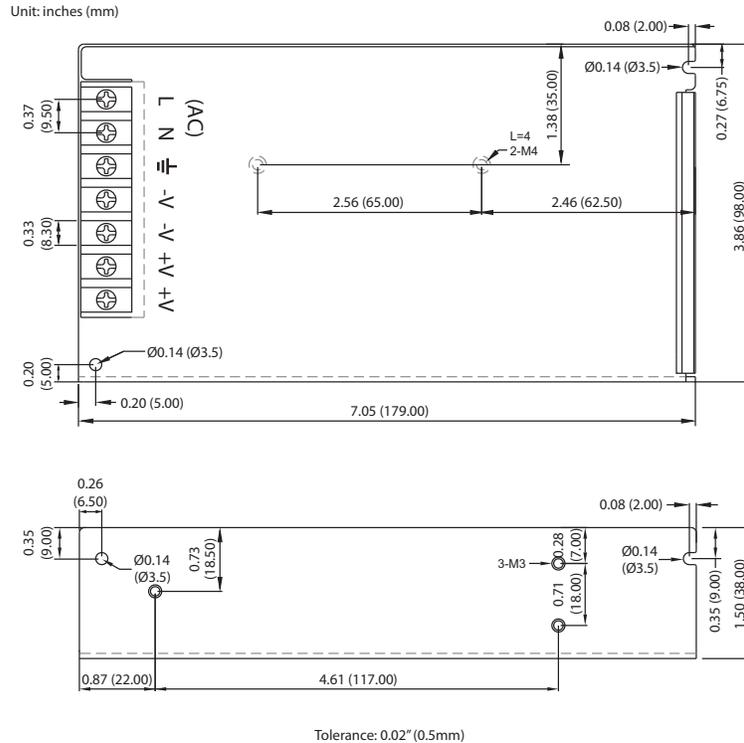
Unit: inches (mm)



Tolerance: 0.02" (0.5mm)



MECHANICAL DRAWING



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 ISO9001-2008 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.

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