



Wall Industries, Inc.

PS2K4 Series
With PFC
2400 Watt Single Output
AC/DC Switching Power Supply

FEATURES

- 3 Year Warranty
- Power Good Signal
- PF > 0.98 @ 230VAC
- Case Coating with Paint
- Remote ON/OFF Control
- With Parallel Function (N+1)
- Built-in Remote Sense Option
- Forced Air Cooling by Built-in DC Fan
- AC Input Voltage 180 ~ 260VAC, 3Ø3 Wire
- AC 220VAC, 1Ø or 380VAC, 3Ø4 Wire (Option)
- Input Voltage: 90~260VAC (90 ~ 170VAC Reduced Power)
- Short Circuit/ Overload/ Over Voltage/ Over Temperature Protection
- Can Adjust from 20% ~ 100% Output Voltage by External Control 1-5VDC



SPECIFICATIONS: PS2K4 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	90 ~ 260VAC ** (90 ~ 170 VAC reduced power - see "Output Power vs Input Voltage" derating curve)** 180 ~ 260VAC 3Ø3 Wire (other system available)
Input Frequency	47 to 63Hz
Input Current	13.5A / 230VAC
Inrush Current	60A / 230VAC max.
Leakage Current	3.5mA / 240VAC max.
Remote ON/OFF Control	Compatible with a TTL signal to turn ON/OFF

OUTPUT SPECIFICATIONS

Output Voltage	See Table
Output Power Range	2400 Watts max.
Voltage Adjustment Range	±5.0% typical adjustment by potentiometer 20% ~ 100% adjustment by 1-5VDC external control.
Voltage Tolerance (See Note 4)	±2.0% for PS2K4-09, ±1.0% for other models.
Line Regulation	±0.5%
Load Regulation	±1.5% for PS2K4-09, ±0.5% for other models.
Output Current	See Table
Ripple & Noise (See Note 3)	See Table
Setup, Rise, Hold-Up Time	500ms, 50ms, 16ms at full load
Temperature Coefficient	±0.04% / °C (0 ~ 50°C)
Remote Sense	Yes

PROTECTION

Over Voltage Protection	110% ~ 135% Follow to output set up point. Protection Type: Shutdown output voltage, re-power on to recover.
Over Load Protection (See Note 5)	110% ~ 140% rated output power. Protection Type: Current limiting, delay shutdown output voltage, re-power on to recover.
Over Temperature Protection	> 100°C / measure by heat sink, near transformer. Protection Type: Shutdown output voltage, re-power to recover.

GENERAL SPECIFICATIONS

Efficiency	See Table
Withstand Voltage	3KVAC (input to output); 1.5KVAC (input to field ground)
Isolation Resistance	100M ohms / 500VDC (input to output, input to field ground)
Power Factor	0.98 / 230VAC
Power Good Signal	Open Collector of NPN Transistor
Special Function	DC Voltage Adjustment, Remote Sensing, Remote Control, Parallel Operation (refer to control terminal instruction manual).



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SPECIFICATIONS (CONTINUED)	
ENVIRONMENTAL SPECIFICATIONS	
Working Temperature	-20°C to +65°C (refer to "Output Power vs Ambient Temperature" derating curve)
Storage Temperature	-20°C to +85°C
Working Humidity	20% to 90% RH (non-condensing)
Storage Humidity	10% to 95% RH
Vibration	10 ~ 200Hz, 2g 10 min./1cycle, 60 min. each along X, Y, and Z axes.
Cooling	By fan: > 20% load or > 50°C
MTBF	24,900 hours minimum MIL-HDBK-217F (25°C)
PHYSICAL SPECIFICATIONS	
Weight	9.0kg
Dimensions	320(L) x 212(W) x 124(H) mm
Warranty	3 years
SAFETY & EMC (See Note 6)	
Safety Standards	UL60950, TUVEN60950 Approved
EMI Conduction & Radiation	Compliance to EN55022 (CISPR22) class A
Harmonic Current	Compliance to EN61000-3-2,3
EMS Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, Light industry level, criteria A.

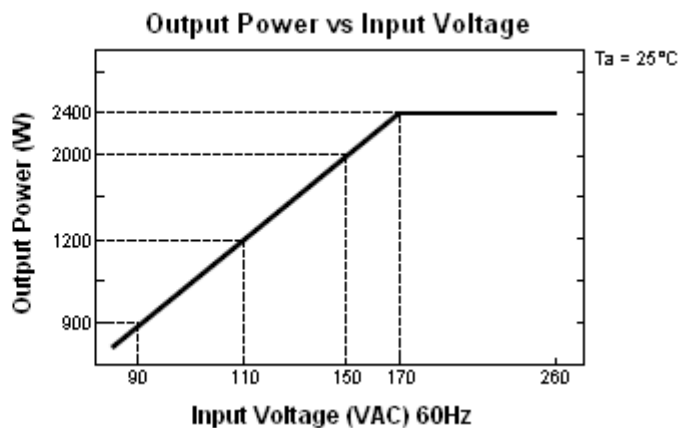
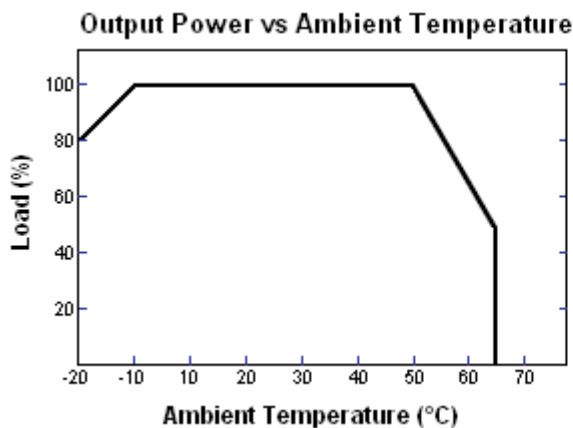
OUTPUT VOLTAGE / CURRENT RATING CHART

Model Number	Output Voltage	Output Current	Output Power	Ripple & Noise	Efficiency
PS2K4-09	9 VDC	266A	2400W	90mVp-p	83%
PS2K4-12	12 VDC	200A	2400W	120mVp-p	84%
PS2K4-15	15 VDC	160A	2400W	150mVp-p	85%
PS2K4-24	24 VDC	100A	2400W	150mVp-p	88%
PS2K4-48	48 VDC	50A	2400W	200mVp-p	89%

NOTES

1. Input voltage is 90 ~ 260VAC however, the unit does not reach full power until >170VAC. See derating curve below.
2. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25 of ambient temperature.
3. Ripple & noise is measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
4. Tolerance: includes set up tolerance, line regulation and load regulation.
5. Current limiting 3 times (1.5s, 3.0s, 5.0s) then intelligent auto recovery before shut down
6. 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



CONNECTOR PIN-OUT DRAWINGS

FIG. A: 3Ø3W 220VAC SYSTEM

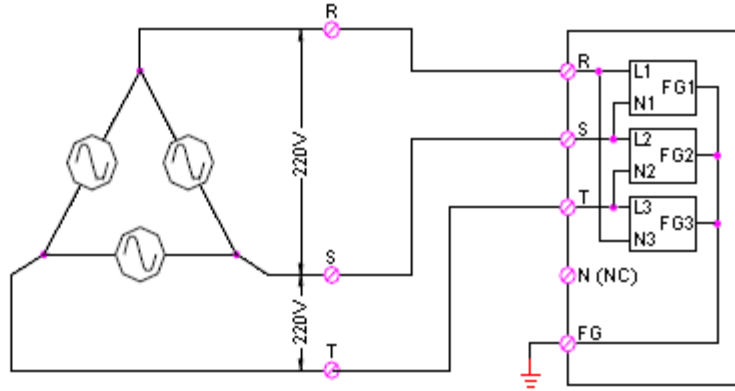


FIG. B: 1Ø220VAC SYSTEM

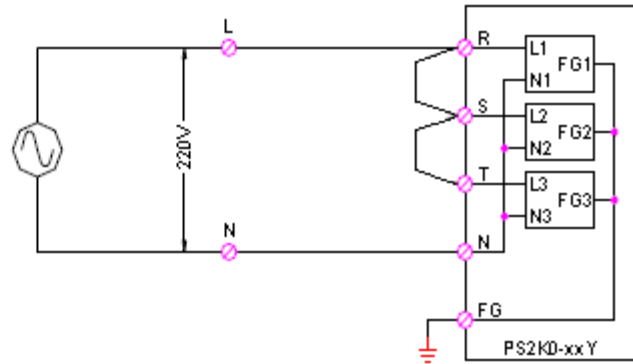


FIG. C: 3Ø4W 220/380VAC SYSTEM

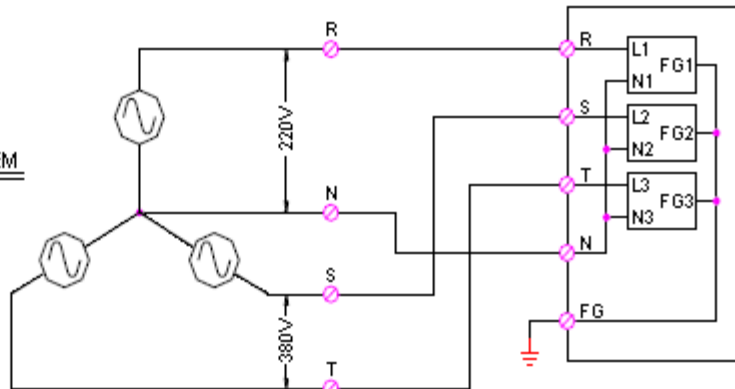
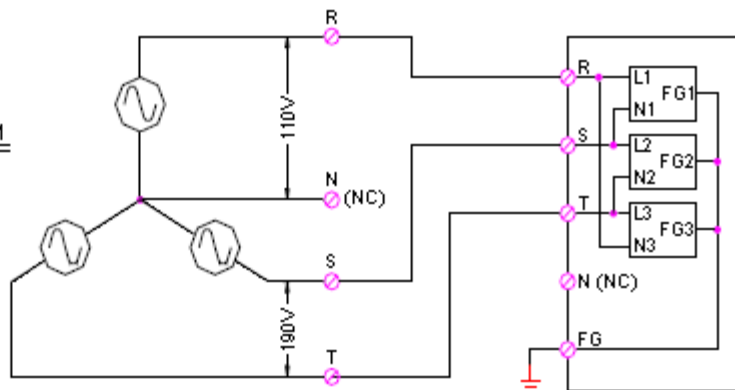


FIG. D: 3Ø4W 110/190VAC SYSTEM





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MECHANICAL DRAWING

