

# 250W/52V Enclosed Power Supply

## (GWS250-520480)

250W/52V Enclosed Power Supply



- Power Input: AC 90~264V
- PFC Function (Power Factor Correction)
- Support production for short circuit/over current/over voltage
- Wide operation temperature range: -20°C~65°C
- 100% full load aging test
- High efficiency, long life time and high reliability
- Meet EMC Standard

### Application

- Automation machinery
- Control system
- Mechanical and electrical equipment
- Electronic instruments, equipment or apparatus

### : Description

GWS250-520480 series is a 250W single-output enclosed type power supply with a low profile design. Adopting the full range 90-264VAC input.

In addition to the high efficiency up to 93%, the design of metallic mesh case enhances the heat dissipation of the power supply that the whole series operates from -20 °C to 65 °C under air convection. Delivering an extremely low no load power consumption (Less than 0.2W), it allows the end system to easily meet the worldwide energy requirement. It as the complete protection functions and complied with international safety regulations. The series serves as a high price-to-performance power supply solution for various applications.

**Technical Specification**

<b>Model</b>	GWS250-520480	
<b>Output</b>	Group of Output	1
	DC Voltage	52V
	Default Output Voltage @25°C	50.00-53V (Vin: 220VAC / LOAD: 0A)
	Output Rated Current	4.8A
	Output Current Range	0-4.8A
	Output Rated Power	250W
	Total Peak Output Power	Up to 375W(Sustainable time 10S/220VAC)
	Peak Output Current	7.2A( Sustainable time 10S/220VAC)
	Ripple noise	0 < Ta ≤ 65°C; P-P ≤ 100mV
		-20 ≤ Ta ≤ 0°C; P-P ≤ 100mV
	Output Regulation Range @25°C	47~54V
	Stabilized Voltage Precision @-20~65°C	±2% (50.96V-53.04V)
	Line Regulation @-20~65°C	±0.5%
	Load Regulation @-20~65°C	±2% (50.96V-53.04V)
	Temperature Coefficient @-20~65°C	±0.03%/°C
	Output Start Time @25°C	≤2S /220Vac input, Full load)
Output Hold Time @25°C	≥10mS(220Vac input, Full load)	
Voltage Overshoot @-20~65°C	≤5%	
<b>Input</b>	Input Voltage Range	90~264VAC
	Input Rated Voltage Range	100~240VAC
	Frequency Range	47Hz~63Hz
	Starting Voltage @-20~65°C	90Vac
	Efficiency @ 25°C	≥93% (230VAC FULL LOAD)
	Input Current @25°C	<3.5A
	Inrush Starting Current	<50A@220Vac Cold start

	@25°C		
	Power Factor @25°C	PF>0.98/110VAC & PF>0.95/220VAC	
<b>Protection @-20~65°C</b>	Output	Over power	300~375W Swing machine (Testing method: Increase the output current until enabling the protection. Protection mode:Swing machine, Self-recovery after over-power released.)
		Over voltage	57~70V Swing machine (Short circuit the Pin1-2 of U8, swing machine. Output recovery to normal after removing the short circuit) Note: Do not use external voltage.
		Over current	5.7~7.2A Swing machine (Testing method: Increase the output current until enabling the protection. Protection mode:Swing machine, Self-recovery after over-current released.)
		Short circuit	It achieves the long-term short circuit by connecting a sufficient cross-sectional area copper cable (Length at 15cm±5cm) with power output port. Self-recovery to normal after removing the short circuit.
<b>Operation Environment</b>	Operation Temperature and Humidity		-20~65°C; 20%~95%RH
	Storage Temperature and Humidity		-40°C~85°C; 10%~95%RH non-condensing
	Libration		Frequency range: 10 ~ 500Hz, Acceleration: 2G, Each sweep cycle 10min. Six sweeps along the X, Y, and Z axis
	Surge		Acceleration: 20G, Duration time: 11mS, Three shocks along X, Y and Z axis
	Altitude		2000m
<b>Safety and EMC Standard @25°C</b>	Security Standard		GB4943/EN60950 ■Reference □Certification
	Dielectric Strength		Input—Output:3KVac/10mA; Input--Case:1.5KVac/10mA; Output---Case:0.5KVDC/10mA Time for each testing is 1min.
	Grounding Test		Test Condition: 32A/2min; Ground bond: < 0.1 ohms.
	Leakage Current @25°C		Input to GND ≤3.5mA; Input to output ≤0.25mA (Input 264Vac, 63Hz)
	Insulation Resistance		Input-Output: 10M ohms; Input-Case: 10M ohms; Output-Case: 10M ohms;

	EMI	Conducted Interference	EN55022, EN55024, FCC PART 15 CLASS B
		Radiated Interference	EN55022, EN55024, FCC PART 15 CLASS B
	Harmonic current		EN61000-3-2 CLASS D
	EMS	Conducted Emission	EN61000-4-6 Level3
		Radiated Emission	EN61000-4-3 Level3 criterion B
		Power Frequency Emission	EN61000-4-8 Level3
		Electrostatic Emission	EN61000-4-2 Level4 criterion B
		EFT	EN61000-4-4 Level4 criterion B
		Surge	EN61000-4-5 Level4 criterion B
		Dip and Interruption	EN61000-4-11