

240W/48V Industrial DIN Rail Power Supply (GWS-DP240-48)

240W Industrial Power Supply



- Power Input: AC 90~264V
- Support production for short circuit/over current/over voltage
- Wide operation temperature range: -40°C~70°C
- 100% full load aging test
- High efficiency, long life time and high reliability
- Meet EMC Standard

Application

- Industrial Control System
- Semiconductor fabrication equipment
- Factory automation
- Electro-mechanical apparatus

Description

GWS-DP240-48 is one economical slim 240W industrial DIN Rail power supply series, adapting to be installed on TS-35/7.5 or TS-35/15 mounting rails. The entire series adopts the full range AC input from 90VAC to 264VAC and conforms to EN61000-3-2, the norm the European Union regulates for harmonic current.

GWS-DP240-48 is designed with a metal shell, which is easy to increase the heat dissipation of the machine. The working efficiency is as high as 90%. The product can work in -40°C to 70°C ambient temperature under the condition of air circulation. It has a constant current mode overload protection function and is suitable for various Inductive or capacitive load applications, complete protection functions and compliance with industrial control equipment certifications, making GWS-DP240-48 a very competitive power solution for industrial applications.

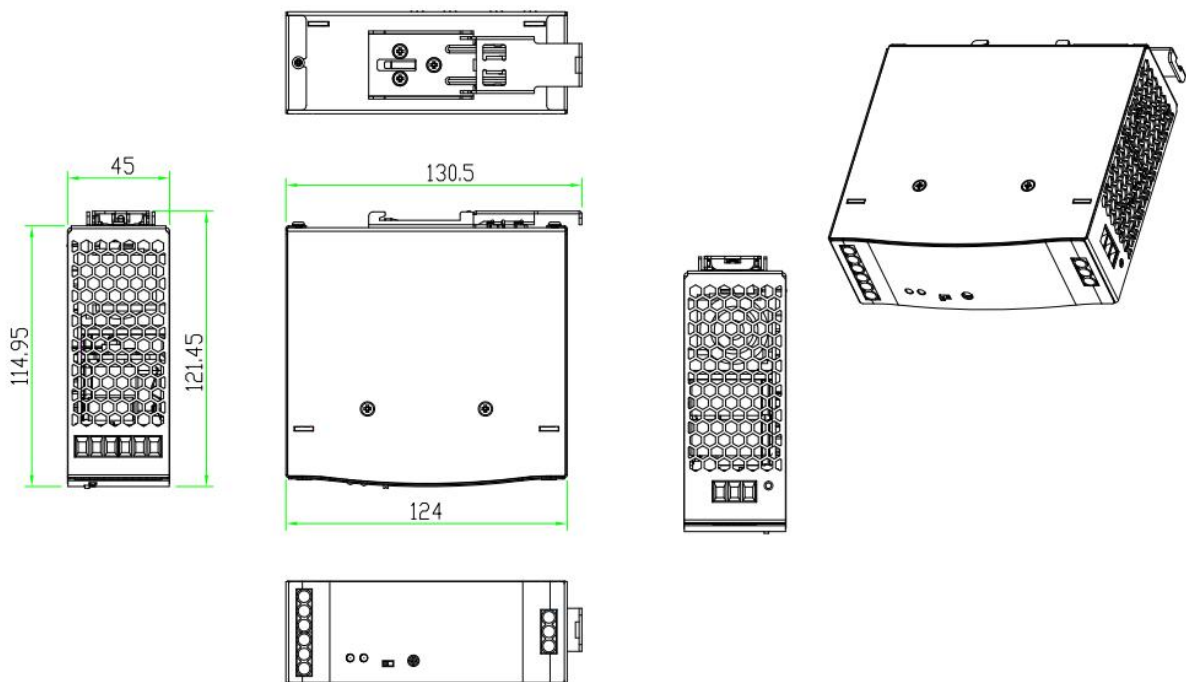
Technical Specification

Model	GWS-DP240-48	
Output	Group of Output	1
	DC Voltage	DC 48V
	Default Output Voltage	48.00-48.2V (VIN: 220VAC / LOAD: 0A)
	Output Rated Current	5A
	Output Current Range	0-5A
	Output Rated Power	240W
	Total Peak Output Power	Up to 360W(Sustainable time 10S/220VAC)
	Peak Output Current	7.5A(Sustainable time 10S/220VAC)
	Ripple noise	Peak - Peak $\leq 100\text{mV}$ (Test Method: The terminal shall be in parallel with capacitance of 0.1uF and 47uF, testing at 20MHz)
	Output Regulation Range	47~56V
	Stabilized Voltage Precision	$\pm 1\%$ (@ 90V-264Vac input, 100% load)
	Line Regulation	$\pm 0.5\%$ (@ 90-264Vac input, 100% load)
	Load Regulation	$\pm 1\%$ (@ 90-264Vac input, 0-100% load)
	Output Start Time	< 2S @ nominal input (100% load)
	Output Hold Time	> 20ms @ 115Vac, > 115 ms @ 230Vac (100% load)
Voltage Overshoot	$\leq 5\%$	
Input	Input Voltage Range	90~264VAC
	Input Rated Voltage Range	100~240VAC
	Frequency Range	47~63Hz
	Rated Frequency	50/60Hz
	Starting Voltage	90Vac
	Efficiency	> 90.0% @ 115Vac, > 91.0% @ 230Vac
	Input Current @25°C	< 4.40A @ 115Vac, < 2.20A @ 230Vac
	Inrush Starting Current @25°C	< 35A @ 115Vac & 230Vac
	Power Factor	> 0.99 @ 115Vac, > 0.93 @ 230Vac

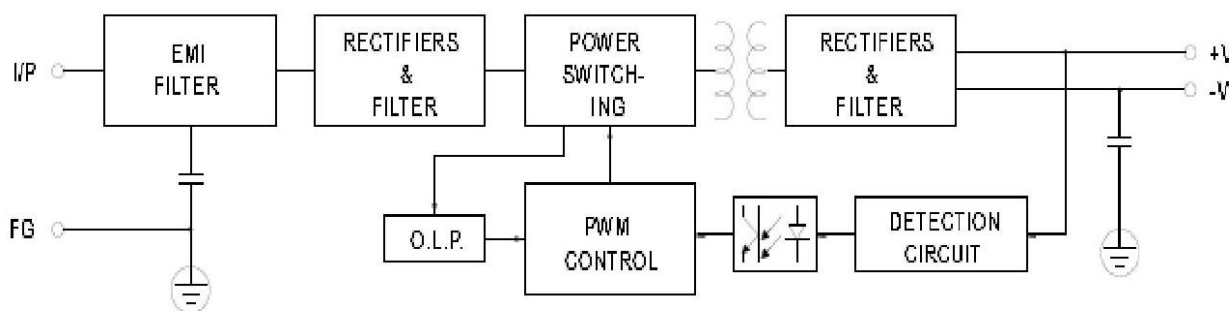
Protection	Output	Over power	288~360W Swing machine (Testing method: Increase the output current until enabling the protection. Protection mode:Swing machine, Self-recovery after over-power released.)
		Over voltage	57~70V Swing machine (Short circuit the Pin1-2 of U8, swing machine. Output recovery to normal after removing the short circuit) Note: Do not use external voltage.
		Over current	6~7.5A 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.
Operation Environment	Operation Temperature and Humidity		-40℃~70℃; 20%~95%RH
	Storage Temperature and Humidity		--40℃~85℃; 10%~95%RH non-condensing
	Temperature Coefficient		±0.03%/℃ (0~50℃)
	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
Safety and EMC Standard @25℃	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℃	Input to GND ≤3.5mA; Input to output ≤0.25mA (Input 264Vac, 63Hz)	
	Insulation Resistance	Input—Output: 10M ohms;	
	EMI	Conducted Interference	EN55022, EN55024, FCC PART 15 CLASS B

EMS	Radiated Interference	EN55022, EN55024, FCC PART 15 CLASS B
	Harmonic current	EN61000-3-2 CLASS D
	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
Dimensions (W*H*D)		130.5*124*45mm

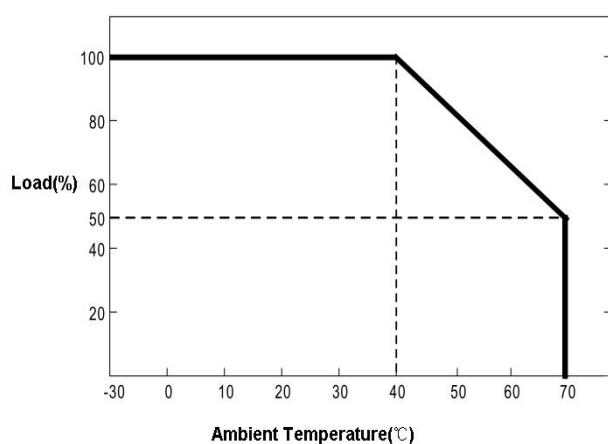
Dimension



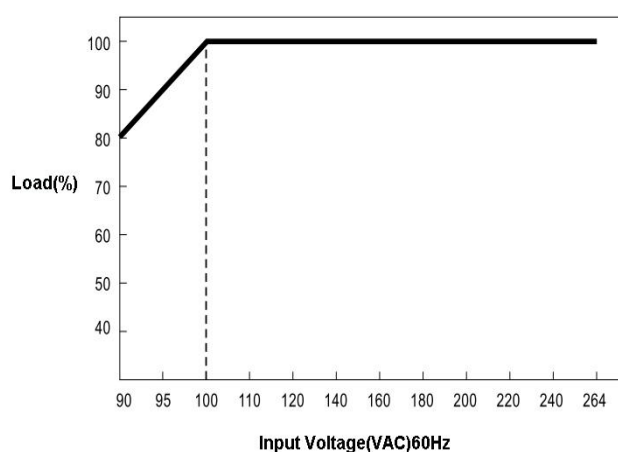
Block Diagram



Derating Curve



Static Characteristic Curve



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