Product Datasheet

120W/48V Industrial DIN Rail Power Supply

(GWS-P3000-DP120-48)

OVERVIEW

GWS-P3000-DP120-48 is an economical 120W DIN rail power supply that conforms to German industrial standards. It is suitable for installation on TS-35/7.5, or TS-35/15 rails, using 90VAC to 264VAC input, and complies with EN61000-3-2 Standard on Harmonic Current Specifications Specified by the European Union.

GWS-P3000-DP120-48 adopts a metal shell design to improve heat dissipation consumption. The working efficiency is as high as 90%, and the product can work in an ambient temperature of -40 degrees to 70 degrees under the condition of air circulation. It has a constant current mode overload protection function, suitable for a variety of inductive or capacitive load applications, complete protection functions, and compliance with relevant certifications for industrial control equipment, making it a very competitive power supply solution for industrial applications.

FEATURE

- Meet EMC Standard
- 100% full load aging test
- Power Input: AC90-264V
- Wide operation temperature range: -40℃-70℃
- High efficiency, long life time and high reliability
- Support production for short circuit/over current/over voltage

APPLICATION

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

TECHNICAL SPECIFICATION

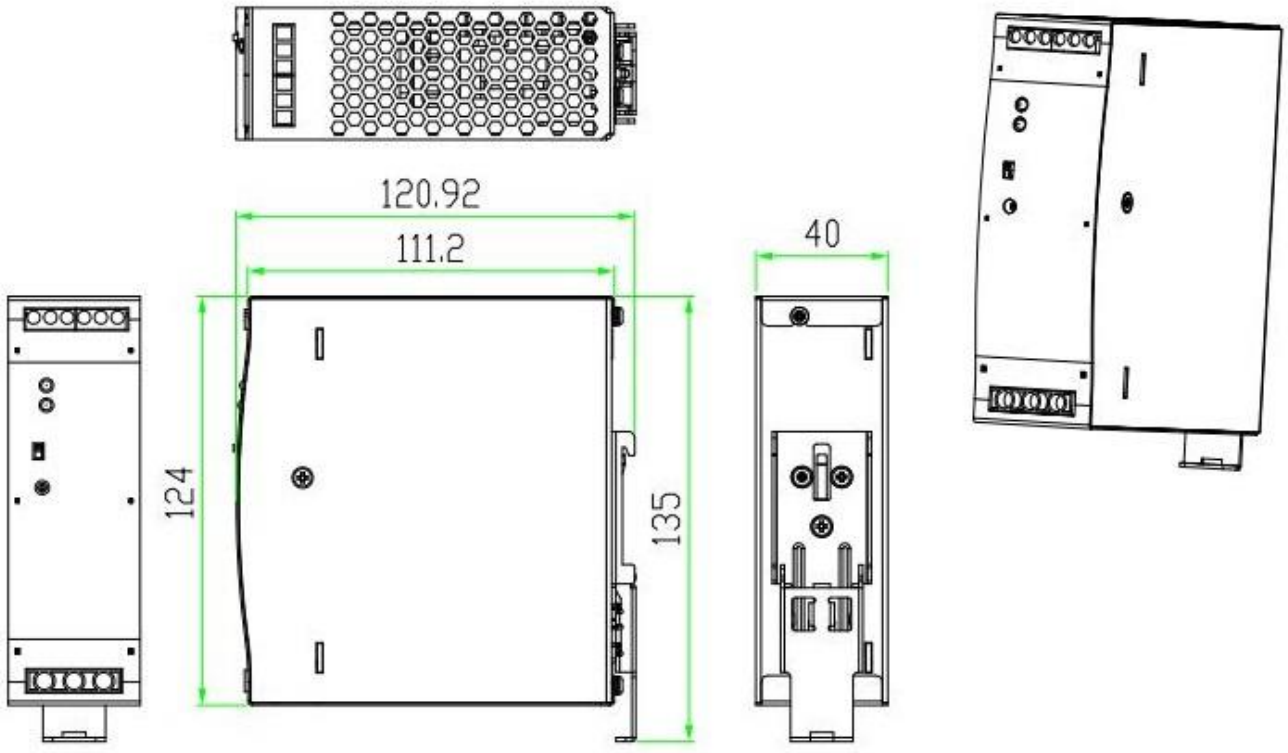
Model	GWS-P3000-DP120-48
Output	
Group of Output	1
DC Voltage	48VDC
Output Voltage Factory Setting	48.00-48.2VDC (Vin: 220VAC / Load: 0A)
Output Rated Current	2.5A
Output Current Range	0-2.5A
Rated Output Power	120W
Total Peak Output Power	180W (sustainable time 10S/220VAC)
Peak Output Current	3.7A (sustainable time 10S/220VAC)
Ripple Noise	Peak-to-peak value ≤100mV. (Measurement method: The terminal should be connected in parallel with 0.1uF and 47uF capacitors, and the

	measurement should be performed at a bandwidth of 20MHz)
Output Voltage Range	47-56VDC
Stabilized Voltage Precision	±1% (@ 90-264VAC input, 100% load)
Line Regulation	±0.5% (@ 90-264VAC input, 100% load)
Load Regulation	±1% (@90-264VAC input, 0-100% load)
Output Start Time	<2S @ nominal input (100% load)
Output Hold Time	>20ms @ 115VAC, >50ms @ 230VAC (100% load)
Voltage Overshoot	≤5.0%
Input	
Input Voltage Range	90-264VAC
Input Rated Voltage Range	100-240VAC
Frequency Range	47Hz-63Hz
Rated Frequency	50Hz/60Hz
Starting Voltage	90VAC
Efficiency	>90.0% @115VAC, >91.0% @ 230VAC
Input Current	<2.20A @115VAC, <1.10A @ 230VAC
Start Inrush Current	<35A @ 115VAC& 230VAC
Power Factor	>0.99 @ 115VAC, >0.93 @ 230VAC
Protection	
Output Over Power	144-180W Swing machine (Testing method: Increase the output current until enabling the protection. Protection mode:Swing machine, Self-recovery after over-power released.)
Output 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.
Output Over Current	3-3.75A Swing machine (Testing method: Increase the output current until

	enabling the protection. Protection mode:Swing machine, Self-recovery after over-current released.)
Output Short Circuit	Use a copper wire with a sufficient cross-sectional area and a length of 15cm±5cm to directly short-circuit at the power output port, which can be short-circuited for a long time, and can be automatically restored after the short-circuit is eliminated.
Operation Environment	
Operation TEMP / Humidity	-40℃-70℃, 20%-95%RH No condensing
Storage TEMP / Humidity	-40℃-85℃, 10%-95%RH No condensing
Temperature Coefficient	±0.03%/℃ (0-50℃)
Vibration	Frequency range 10-500Hz, acceleration 2G, each sweep cycle 10min. 6 sweep cycles along the X, Y, and Z axes
Impact	Acceleration 20G, duration 11ms, 3 shocks along X, Y, and Z axis each
Altitude	2000m
Safety and Electromagnetic Compatibility Standard	
Security Standard	GB4943/EN62368-1 ■Reference □Certification
Dielectric Strength	Input—Output: 3KVAC/10mA, Input--Case:1.5KVAC/10mA Output---Case: 0.5KVDC/10mA , Time for each testing is 1min.
Ground Test	Test conditions: 32A/2 minutes, Ground impedance: <0.1 ohms.
leakage Current	Input to ground ≤3.5mA, Input to output ≤0.25mA (Input 264VAC, Frequency 63Hz)
Insulation Resistance	Input-Output: 10M ohms
Conducted Disturbance	EN55022, EN55024, FCC PART 15 Class B
Radiated Interference	EN55022, EN55024, FCC PART 15 Class B
Harmaonic Current	EN61000-3-2 Class D
Conducted Disturbance	EN61000-4-6 Level 3

Radiation Harassment	EN61000-4-3 Level 3 Class B
Power Frequency Harassment	EN61000-4-8 Level 3
Static Harassment	EN61000-4-2 Level 4 Class B
fast Burst	EN61000-4-4 Level 4 Class B
Lightning Strike (Surge)	EN61000-4-5 Level 4 Class B
interrupted Fall	EN61000-4-11
Others	
Dimension	135*121*40mm
Warranty	5 years

DIMENSION



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