# 12W/24V Industrial Din Rail Power Supply

# (GWS-DP12-24)

12W Industrial Power Supply

- Power Input: AC 90~264V
- Support production for short circuit/over current/over voltage
- Wide operation temperature range: -40℃~70℃
- 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-DP12-24 is one economical slim 12W industrial DIN Rail power supply , 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-DP12-24 is designed with metal housing that enhances the unit's power dissipation. With working efficiency up to 84%, the entire series can operate at the ambient temperature between -40℃ to 70℃ under air convection. It is equipped with constant current mode for over load protection, fitting various inductive or capacitive applications. The complete protection functions and relevant certificates for industrial control apparatus make GWS-DP12-24 a very competitive power supply solution for industrial applications.

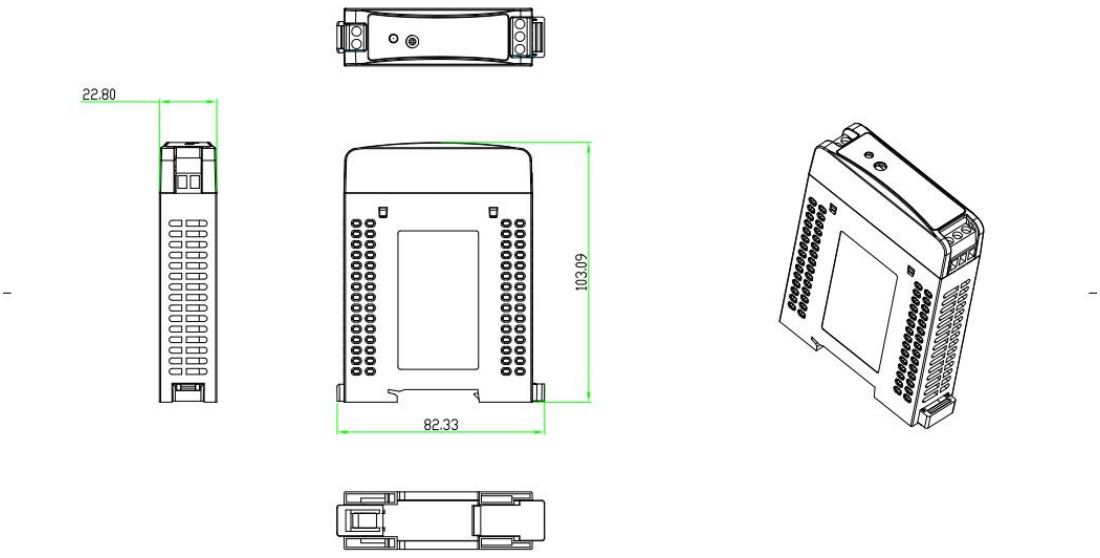
## Technical Specification

| Model | GWS-DP12-24 | |
|---|---|---|
| Output | Group of Output | 1 |
| | DC Voltage | 24V |
| | Default Output Voltage | 24.00-24.2V （Vin: 220VAC / LOAD: 0A） |
| | Output Rated Current | 0.5A |
| | Output Current Range | 0-0.5A |
| | Output Rated Power | 12W |
| | Total Peak Output Power | Up to 18W(Sustainable time 10S/220VAC) |
| | Peak Output Current | 0.75A( Sustainable time 10S/220VAC) |
| | Ripple noise | Peak - Peak ≤100mV (Test Method: The terminal shall be in parallel with capacitance of 0.1uF and 47uF, testing at 20MHz) |
| | Output Regulation Range | 22.5～28.0V |
| | 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) |
| | Temperature Coefficient | ±0.03%/℃ |
| | Output Start Time | < 3S @ 115Vac<br>< 1.6S @ 230Vac (100% load) |
| | Output Hold Time | > 20ms @ 230Vac (100% load) |
| | Voltage Overshoot | ≤5% |
| Input | Input Voltage Range | 90~264VAC |
| | Input Rated Voltage Range | 100~240VAC |
| | Frequency Range | 47~63Hz |
| | Rated Frequency | 50/60Hz |
| | Starting Voltage @-20~65℃ | 90VAC |
| | Efficiency | > 84.0% @ 115VAC<br>,> 83.0% @ 230VAC |

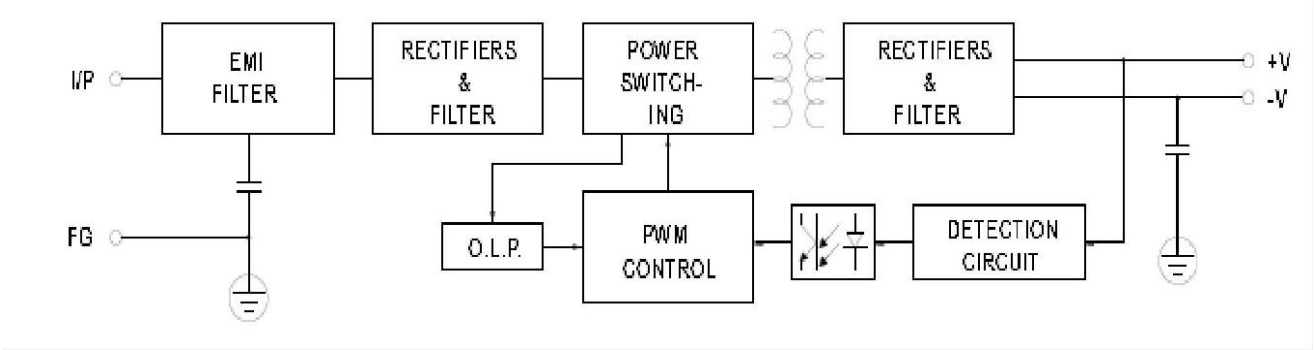
| | | | |
|---|---|---|---|
| | Input Current @25℃ | < 0.30A@115Vac, < 0.15A @ 230Vac | |
| | Inrush Starting Current @25℃ | < 60A @ 230Vac | |
| | Power Factor | PF>0.6 (at full load) | |
| **Protection @-20~65℃** | Output | Over power | 14.4～18W Swing machine (Testing method: Increase the output current until enabling the protection. Protection mode:Swing machine, Self-recovery after over-power released.) |
| | | Over voltage | 28～30V 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 | 0.6～0.75A 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 |
| | Libration | | Frequency range: 10 ~ 500Hz,<br>Acceleration: 2G,<br>Each sweep cycle 10min.<br>Six sweeps along the X, Y, and Z axis |
| | Surge | | Acceleration: 20G,<br>Duration time: 11mS,<br>Three shocks along X, Y and Z axis |
| | Altitude | | 2000m |
| **Safety and EMC Standard @25℃** | Security Standard | | GB4943/EN60950<br>■Reference □Certification |
| | Dielectric Strength | | Input—Output:3KVac/10mA;<br>Input--Case:1.5KVac/10mA;<br>Output---Case:0.5KVDC/10mA<br>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 |
| | | Radiated Interference | EN55022, EN55024, FCC PART 15 CLASS B |
| | Harmaonic current | | EN61000-3-2 CLASS D |
| | EMS | Conducted Emission | EN61000-4-6 Level3 |
| | | Radiated Emission | EN61000-4-3 Leve3 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 |
| **Dimension (L*W*H)** | | | 82.5*103*23mm |

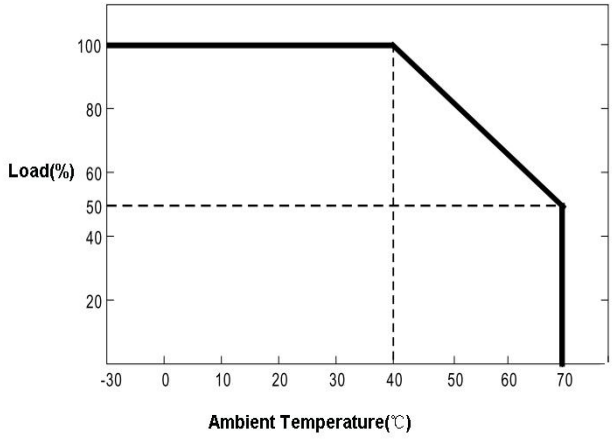
## Dimension



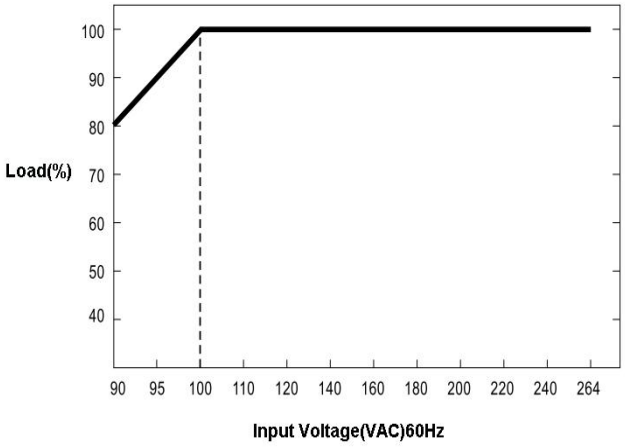

## Block Diagram




## Derating Curve




## Static Characteristic Curve




## Contact Us

Tel: 0086-755-33376606
Fax: 0086-755-33376608
Email: onv@onv.com.cn
Website: www.gwsdz.com/
Zip: 518000
Headquarter Address: Room 1003, Block D, Terra Building, Futian district, Shenzhen,China
Factory Address: The 4-6th Floor, A building, SenYuTai (Science&Technologoy) Park, HuaNing Road, Dalang sub-district, Longhua district , Shenzhen ,China