

Product Datasheet

60W/48V Industrial DIN Rail Power Supply

(GWS-P3000-DP60-48)



OVERVIEW

GWS-P3000-DP60-48 is an economical 60W 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-DP60-48 adopts a metal shell design to improve heat dissipation consumption. The working efficiency is as high as 89%, 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°C-70°C
- 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

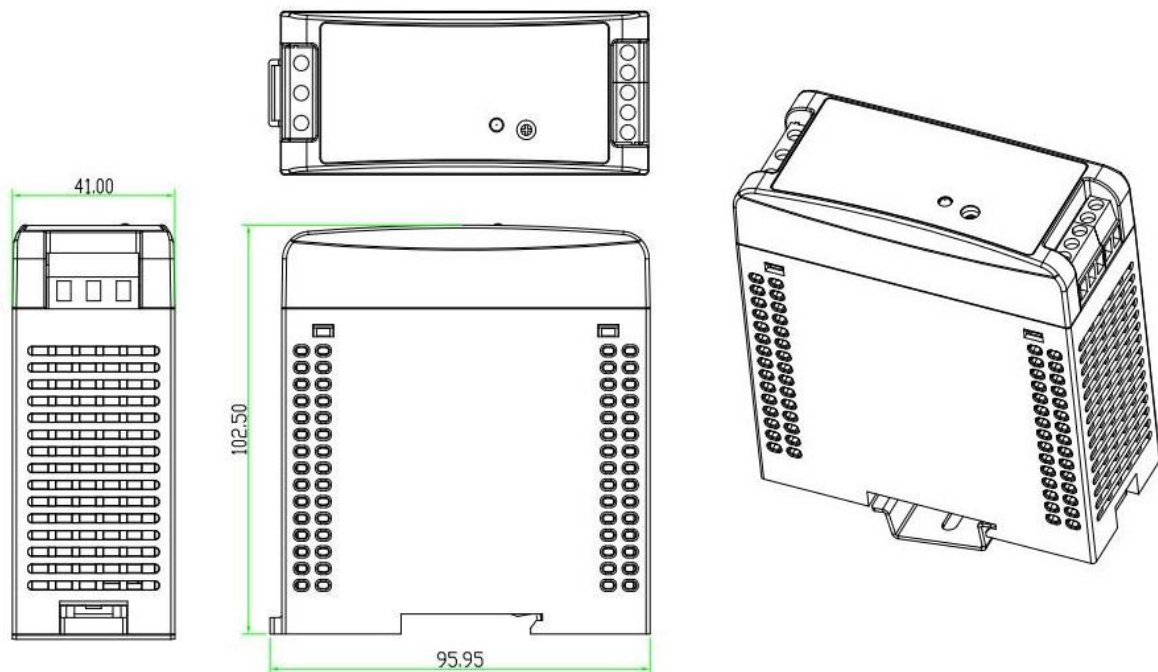
| Model | GWS-P3000-DP60-48 |
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| Output | |
| Group of Output | 1 |
| DC Voltage | 48VDC |
| Output Voltage Factory Setting | 48.00-48.2VDC (Vin: 220Vac / Load: 0A) |
| Output Rated Current | 1.25A |
| Output Current Range | 0-1.25A |
| Rated Output Power | 60W |
| Total Peak Output Power | 90W (sustainable time 10S/220VAC) |
| Peak Output Current | 1.5A (sustainable time 10S/220VAC) |

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| Ripple Noise | Peak-to-peak value $\leq 100\text{mV}$. (Measurement method: The terminal should be connected in parallel with 0.1 μF and 47 μF capacitors, and the measurement should be performed at a bandwidth of 20MHz) |
| Output Voltage Range | 47-56VDC |
| Stabilized Voltage Precision | $\pm 1\%$ (48.48VDC-47.52VDC) |
| Line Regulation | $\pm 0.5\%$ (48.24VDC-47.76VDC), (@ 85-264VAC input, 100% load) |
| Load Regulation | $\pm 1\%$ (48.48V-47.52V), (@ 85-264Vac input, 0-100% load) |
| Output Start Time | $< 1.5\text{S}$ @ nominal input (100% load) |
| Output Hold Time | $> 20\text{ms}$ @ 115VAC, $> 1250\text{ms}$ @ 230VAC (100% load) |
| Voltage Overshoot | $\leq 5.0\%$ |
| Input | |
| Input Voltage Range | 90-264VAC |
| Input Rated Voltage Range | 100-240VAC |
| Frequency Range | 47Hz-63Hz |
| Rated Frequency | 50Hz/60Hz |
| Starting Voltage | 90VAC |
| Efficiency | $> 85.0\%$ @115VAC, $> 89.0\%$ @ 230VAC |
| Input Current | $< 1.40\text{A}$ @115VAC, $< 0.80\text{A}$ @ 230VAC |
| Start Inrush Current | $< 20\text{A}$ @ 115VAC, $< 35\text{A}$ @230VAC |
| Power Factor | PF > 0.6 (at full load) |
| Protection | |
| Output Over Power | 78-97W 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 |

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| | use external voltage. |
| Output Over Current | 1.5-1.875A 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 <input checked="" type="checkbox"/> Reference <input type="checkbox"/> 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 |

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| Harmonic 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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