120W/12V Industrial DIN Rail Power Supply

(GWS-DP120-12)

OVERVIEW

GWS-DP120-12 is one economical slim 120W 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-264VAC or 110-230VAC (Custom) and conforms to EN61000-3-2, the norm the European Union regulates for harmonic current.

GWS-DP120-12 is designed with metal housing that enhances the unit's power dissipation. With working efficiency up to 90%, 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-DP120-12 a very competitive power supply solution for industrial applications.

FEATURES

- Power Input: AC90-264V or 110-230VAC
- Support production for short circuit/over current/over voltage
- Wide operating ambient temp (-40℃~70℃)
- 100% full load aging test
- High efficiency, long life time and high reliability
- No fan, completely tranquil work

APPLICATION

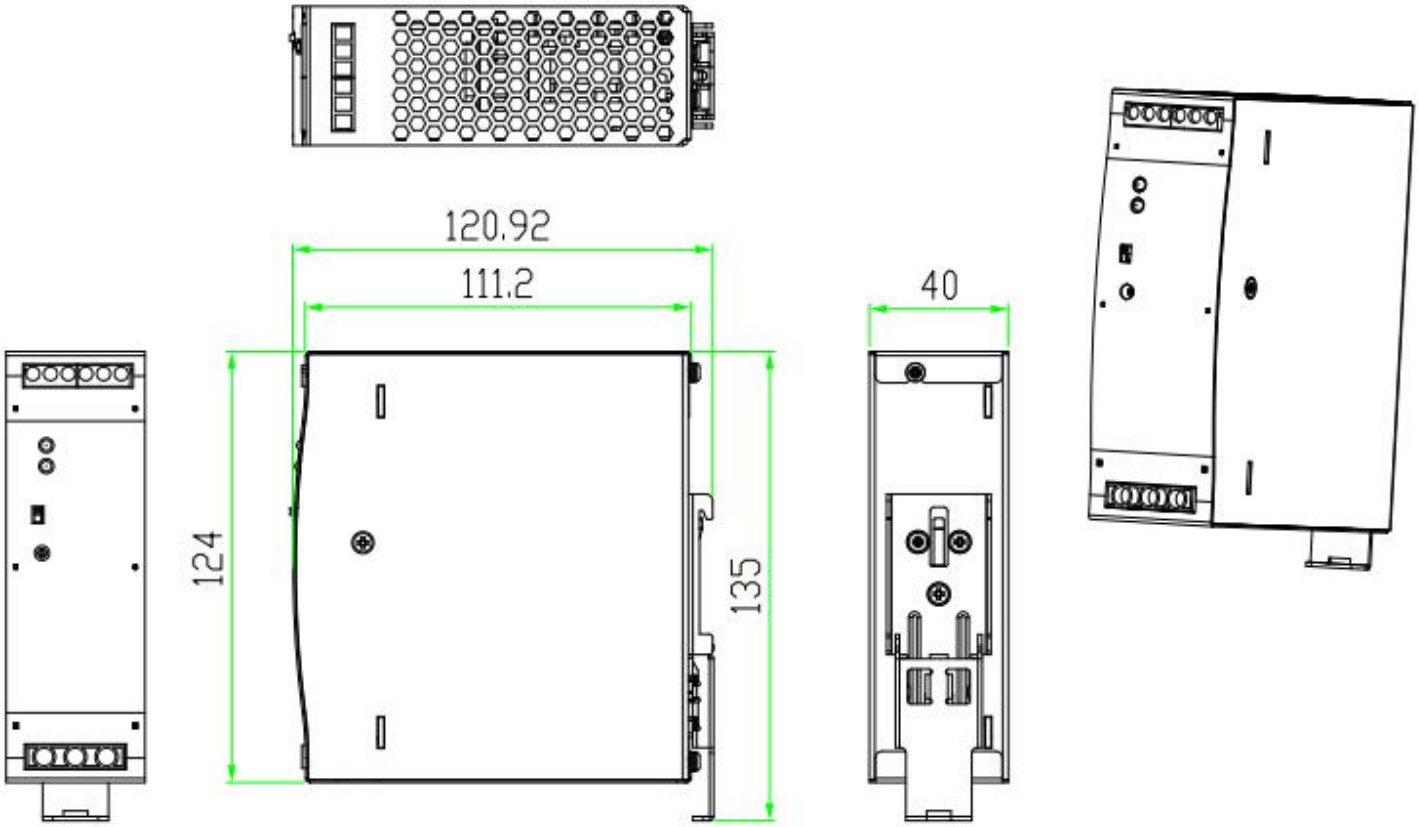
- Industrial Control System
- Semiconductor fabrication equipment
- Factory automation
- Electro-mechanical apparatus

TECHNICAL SPECIFICATION

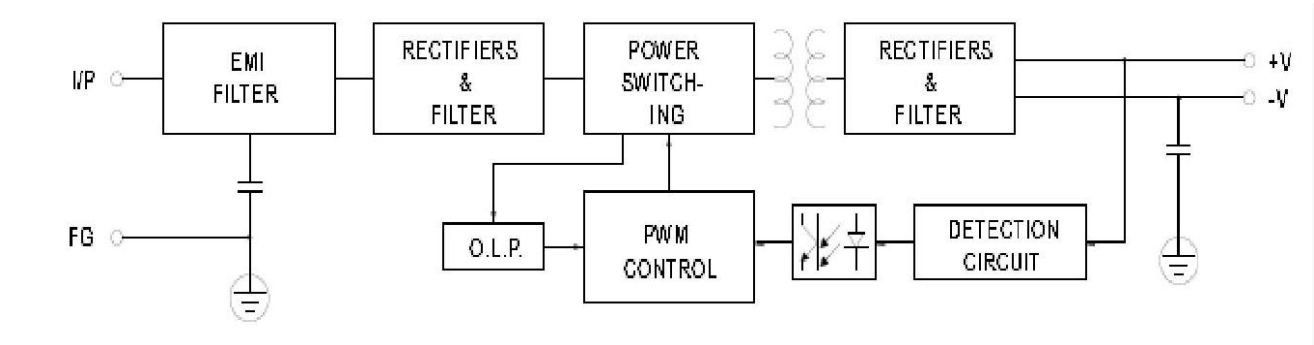
Model	GWS-DP120-12
Output	
Group Of Output	1
DC Voltage	12VDC
Output Voltage	10A
Ripple Noise: 0<Ta≤55℃	≤50mVp-p
Ripple Noise: -15≤Ta≤0℃	≤100mVp-p
Stabilized Voltage Precision	±1%
Line Regulation	±1%
Load Regulation	±1%
Temperature Coefficient	±0.03%/℃
Output Start Time	≤3.0S (120Vac input, Full load), ≤2.0S (220Vac input, Full load)
Output Hold Time	≥10mS(120Vac input, Full load), ≥20mS(220Vac input, Full load)
Voltage Overshoot	<5.0%
Input	
Input Voltage Range	90VAC~264VAC or 110~230VAC (Custom)
Input Rated Voltage Range	100VAC~240VAC or 110~230VAC (Custom)
Frequency Range	47Hz~63Hz or 50Hz~60Hz (Custom)
Efficiency	90%
Input Current	<1A
Inrush Starting Current	<40A@300Vac Cold start
Leakage Current	input to output less than 0.25mA
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	15-16V 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	12~15A 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	It can be short circuited for a long time and automatically recover after the short circuit is eliminated.
Operation Environment	
Operation TEMP / Humidity	-40℃~70℃, 20%~90%RH No condensing
Storage TEMP / Humidity	-40℃~85℃, 5%~95%RH No condensing
Safety And EMC Standard	
Security Standard	GB4943/EN62368-1
Dielectric Strength	Input—Output: 3KVac/10mA, Input--Case: 1.5KVac/10mA Output---Case: 0.5KVDC/10mA, Time for each testing is 1min.
Insulation Resistance	Input-Output: 100M ohms, Input-Case: 100M ohms Output-Case: 100M ohms
Electromagnetic Interference	EN55022 Class A
Harmaonic Current	IEC61000-3-2 class A equipment requirements
Electromagnetic interference Immunity	EN61000-4-2,4,5,6,8,11 ENV50204, class A heavy industry standard
Others	
Design MTBF	100,000Hrs AT 25℃, MIL-217 Method 2 Components Stress Method
Product size(L*W*H)	135*121*40mm
Notes	If the specification is not specified, all specifications and parameters shall be measured at rated input, rated load and 25 C ambient temperature. Ripple noise test method: the use of a 12# twisted pair, while the terminal to parallel capacitance of 0.1uF and 10uF, measured at the scope of the oscilloscope 20MHz bandwidth. The power supply will be installed on the final equipment as a component, and the final equipment will still have to meet the EMC condition.

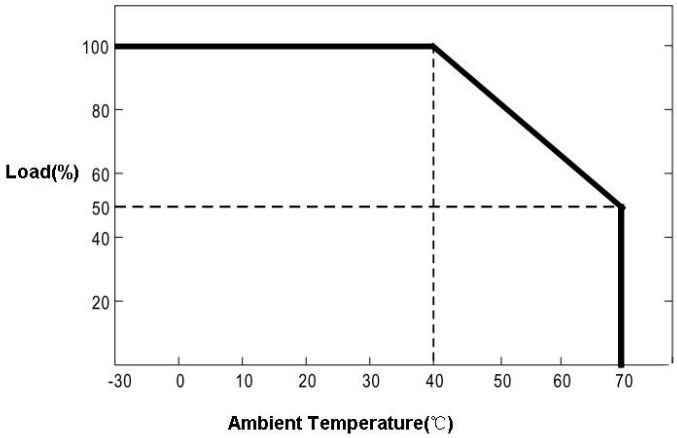
DIMENSION



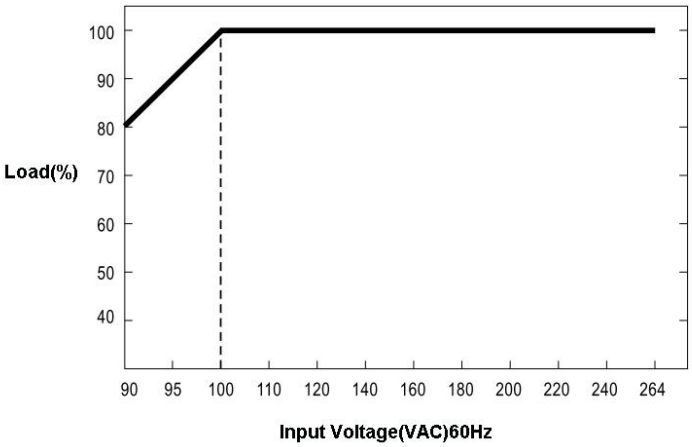
BLOCK DIAGRAM



Derating Curve



Static Characteristic Curve



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