PRODUCT SPECIFICATION

DPDH960 SERIES | SINGLE PHASE

960W DIN Rail AC-DC Power Supply

MODEL: DPDH960 | CATEGORY: AC-DC | RATED POWER: 960W | FORM: DIN Rail

PRODUCT OVERVIEW

Key Product Features

- High output power up to 960W, with peak power up to 130% (5 seconds)
- Wide input range: 180–264VAC / 254–370VDC
- Parallel operation with current sharing (up to 4 units / 3840W)
- Class I isolation
- Built-in DC OK relay contact for system monitoring
- High efficiency (~93%) with low power dissipation

PRODUCT DESCRIPTION

The DPDH960 is a high-performance 960W DIN rail power supply designed for demanding industrial applications requiring reliability, scalability, and efficiency. Featuring a rugged metal housing, wide operating temperature range, and advanced protection mechanisms, it delivers stable power in harsh environments. With built-in active PFC, DC OK relay signaling, and parallel current sharing capability up to 3840W, the DPDH960 is ideal for mission-critical systems that require both flexibility and high power density.

SAFETY CERTIFICATES

- Designed for industrial measurement and control equipment compliance
- Built for reliable operation in industrial environments with strict safety and EMC requirements
- Meets EMC standards: EN55032 (Emission), EN61000-3-2, -3, EN61000-4 series (Immunity)
- High isolation protection: Input to output: 3KVAC/ Input to ground: 2KVAC

Applications

- Industrial control systems
- Factory automation equipment
- Machine building and robotics
- Machine building and robotics
- Process control and instrumentation
- Distributed power systems

ELECTRICAL SPECIFICATIONS

Model Information

Part number	DC Voltage	Rated Current (max.)	Rated Power	Peak Power	Voltage ADJ. range
DPDH960-24	24V	40A	960W	1248W (5 sec.)	24–28V
DPDH960-48	48V	20A	960W	1248W (5 sec.)	48–55V

Input Specifications

Parameter	Value
Nominal Input Voltage	200–240 VAC
Input Voltage Range	180–264 VAC, 254–370 VDC
Frequency Range	47–63 Hz
Power Factor (Typ.)	0.95 / 230VAC at full load
Efficiency (Typ.)	93%
No Load Power Consumption	6W max.
AC Current (Typ.)	6A / 230VAC
Inrush Current (Typ.)	50A / 230VAC, cold start
Leakage Current	5mA max.
Start-up With Capacition Loads	120000 µF min.

Output Specifications

Parameter	DPDH960-24	DPDH960-48
Ripple & Noise (max.)	180mVp-p	250mVp-p
Voltage Tolerance	±1.0%	
Line Regulation	±0.5%	
Load Regulation	±1.0%	
Set-up, Rise & Hold Up Time	1000ms max. / 100ms max. / 14ms Typ.	

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ELECTRICAL SPECIFICATIONS

Protection

Parameter	Specification
Over Load	105–130% rated output (>5 sec) then shutdown, auto-recovery after 30s; 130–150% constant current limiting then shutdown, re-power to recover
Over Voltage (24V)	29–33V
Over Voltage (48V)	56–65V
Reverse Over Voltage (24V)	24.5–25.5V
Reverse Over Voltage (48V)	48.5–49.5V
Over Temperature	Shutdown, auto-recovery after temperature drops
Internal Fuse	F10A / 250V
DC OK Relay Contact Ratings	60VDC / 0.3A, 30VDC / 1A, 30VAC / 0.5A resistive load
Current Sharing	Refer to Function Manual

Environment

Parameter	Value
Working Temperature	-30 ~ +70°C
Start-up Temperature	-40°C (50% load max.)
Working Humidity	20–95% RH non-condensing
Storage Temperature / Humidity	-40 ~ +85°C, 10–95% RH
MTBF	82K hrs min. MIL-HDBK-217F (25°C)
Temperature Coefficient	±0.03% / °C (0 ~ 50°C)
Vibration	10–500Hz, 2G, IEC60068-2-6 compliant
Over Voltage Category	II
Pollution Degree	2

Safety&EMC

Parameter	Specification
Safety Standards	UL61010-1, UL61010-2-201, EN61010-1, BS EN61010-1
Withstand Voltage	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC O/P-DC OK:0.5KVAC
Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG >100M Ohms / 500VDC / 25°C / 70% RH
EMC Emission	EN55032, EN61000-3-2, -3
EMC Immunity	EN61000-4-2,3,4,5,6,8,11

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ELECTRICAL SPECIFICATIONS

Dimensions and Weight, Packing

Parameter	Value
Inner Box	1pc / box, 41.5 × 33.2 × 20.2 cm
Outer Carton	4pcs / carton
Parameter	Value
Housing Material	Aluminum / Steel
Dimensions (H×W×D)	124.7 × 110 × 150.2 mm (4.91 × 4.33 × 5.91 in)
Weight	2.47 kg
Connection Method	Screw (I/O), Plug-in (DC OK & current sharing)
Terminal	Input 3 pins / Output 6 pins / DC OK & CS 4 pins
Wire	Input: 26–10AWG Output: 30–10AWG DC OK: 26–20AWG
Stripping Length	Input 7–8mm / Output 7.5–8.5mm
Tightening Torque	Input 0.5Nm / Output 0.56Nm
Mounting Rail	TS35 DIN Rail (EN60715)

Note

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load, and 25°C ambient temperature.
2. Ripple & noise are measured from peak to peak with a bandwidth limit of 20MHz (using 0.1μF and 47μF/50V parallel capacitors under DC output full load, AC nominal input, 25°C ambient temperature).
3. Installation clearances: top 40mm, bottom 20mm, left and right 5mm. Increase spacing to 10–15mm when the adjacent device is a heat source.
4. The unit can hold up to 5 seconds max when reaching peak power (1248W), and the average output power should not exceed the rated power.
5. Derating may be required under low input voltage. Please refer to the derating curve for more details.
6. The ambient temperature derating is 3.5°C per 1000m for operating altitude above 2000m (6500ft).

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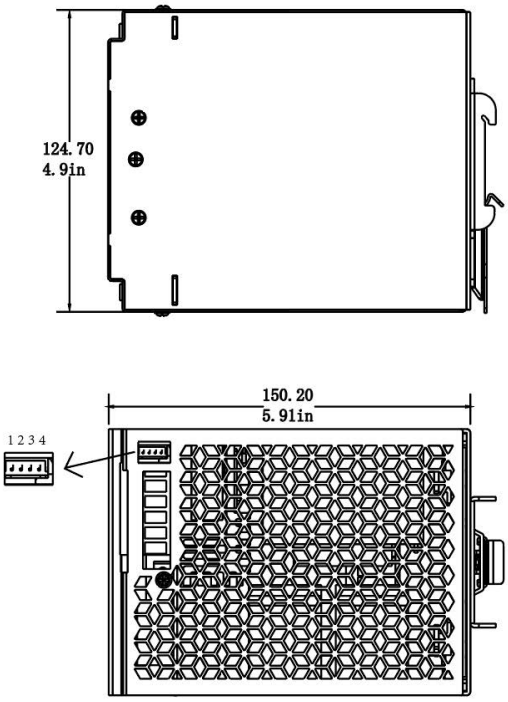
MECHANICAL SPECIFICATIONS



Output

No.	Description
1,2,3	DC OUTPUT +V
4,5,6	DC OUTPUT -V

Input

No.	Description
1	PE
2	AC/N
3	AC/L

Control Pin:WJ15EDGK-2.54-4P or equivalent

Pin No.	Assignment	Mating Housing	Wire Diameter
1	P- (Current Share)	WJ15EDGRC-2.54-04P or equivalent	0.128–0.517 mm² (26–20 AWG)
2	P+ (Current Share)	WJ15EDGRC-2.54-04P or equivalent	0.128–0.517 mm² (26–20 AWG)
3,4	DC OK Relay Contact		

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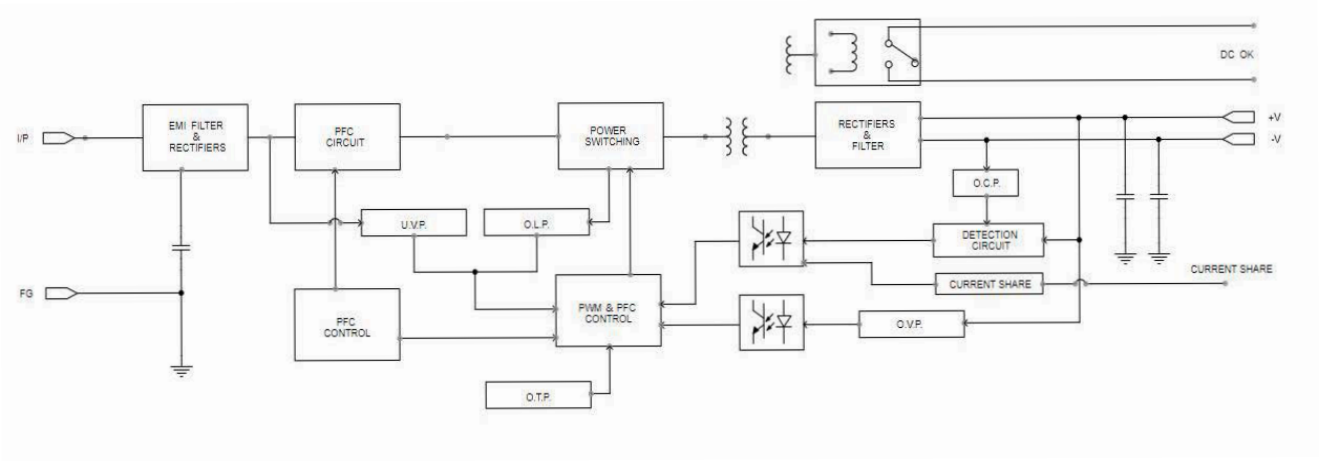
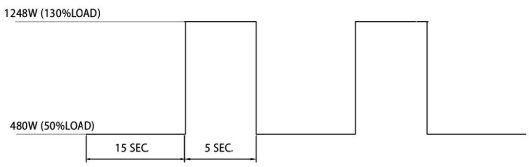
MECHANICAL SPECIFICATIONS

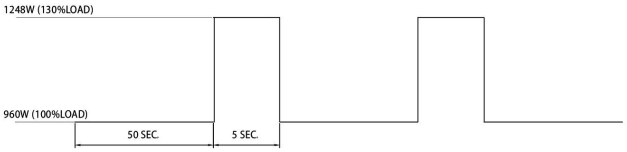
Block Diagram



Peak Loading

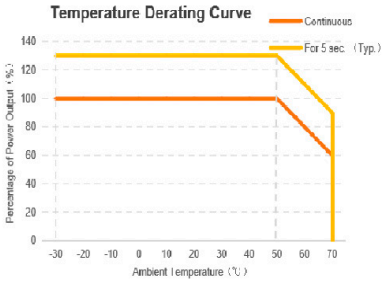


HALF LOAD

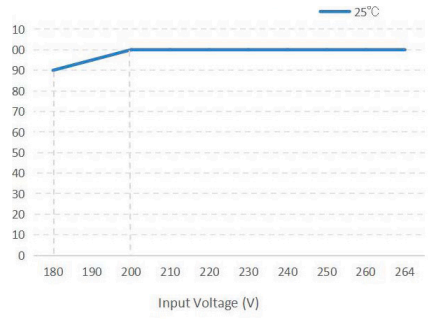


FULL LOAD

Derating Curve



Output Derating VS Input Voltage



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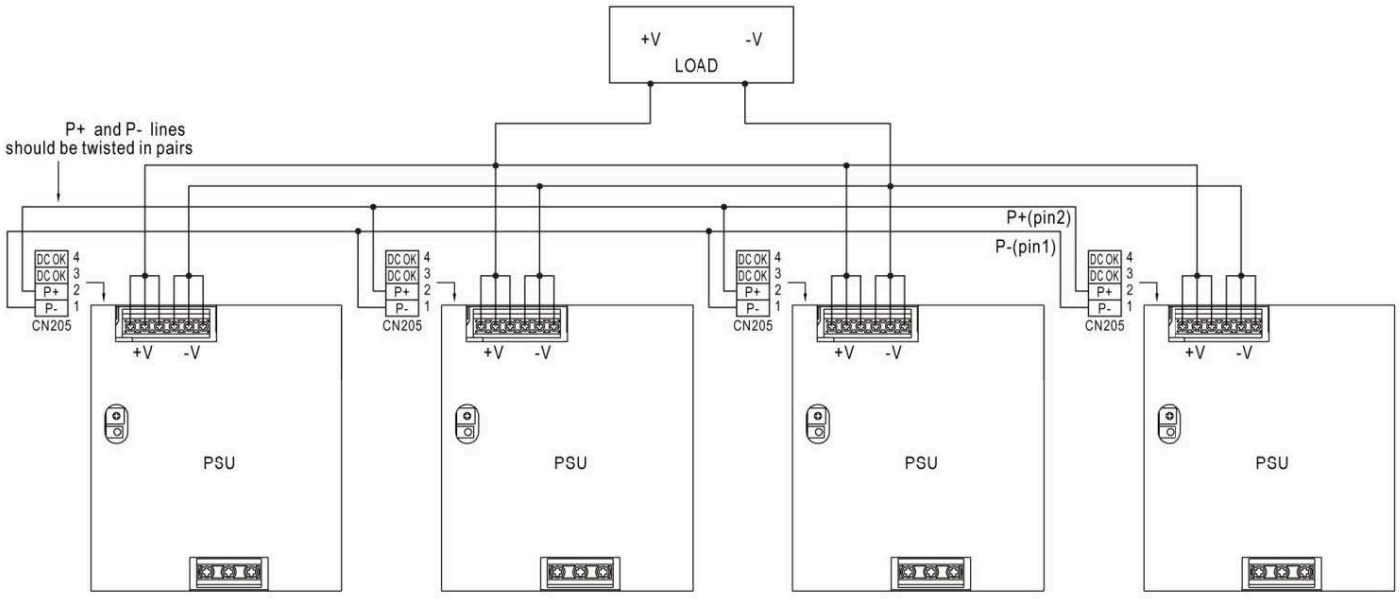
MECHANICAL SPECIFICATIONS

DC OK Relay Contact

Parameter	Description
Contact Close	PSU turns on / DC OK
Contact Open	PSU turns off / DC Fail
Contact Rating (max.)	30V / 1A resistive load

Current Sharing

1. Connection method for parallel operation is shown in the diagram (P+, P- should be connected in parallel). The maximum quantity is 4 units.
2. The difference of output voltage should be less than 0.2V for all PSU units in parallel.
3. The total output current must not exceed the value calculated by:
4. (output current in parallel) = (rated current per unit) × (number of units) × 0.9
5. In parallel connection, the minimum output load should be more than 5% of total output load
6. (Min. load > 5% × rated current per unit × number of units).
7. In parallel operation, use short and large-diameter wires to connect the PSUs to the load.



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