PRODUCT SPECIFICATION

DPDN480 SERIES | METAL CASE

480W DIN Rail AC-DC Power Supply

MODEL: DPDN480 | CATEGORY: AC-DC | RATED POWER: 480W | FORM: DIN Rail

PRODUCT OVERVIEW

Key Product Features

- 480W industrial DIN-rail AC-DC power supply
- Integrated active PFC circuit with high power factor
- Wide input range 90–264VAC / 127–370VDC
- Class I isolation
- High efficiency power conversion
- Built-in protections: overload, over-voltage, and over-temperature
- Hiccup mode overload protection with automatic recovery

PRODUCT DESCRIPTION

The DPDN480 Series is a high-power 480W DIN-rail mounted AC-DC switching power supply designed for demanding industrial automation and control applications. The unit incorporates active power factor correction (PFC), a wide AC input range, and comprehensive protection features to ensure reliable performance in harsh environments.

SAFETY CERTIFICATES

- UL508 certified for industrial control equipment safety
- EN55032 compliant for electromagnetic emission control
- EN61000-4 series compliant for EMC immunity
- High input-output electrical isolation for industrial safety

Applications

- Industrial automation systems
- PLC and factory control panels
- Building automation and HVAC control
- Security and surveillance systems
- Distributed power systems in electrical cabinets
- Industrial networking and communication equipment

ELECTRICAL SPECIFICATIONS

Model Information

Part Number	DC Voltage	Rated Current (Max.)	Rated Power	Voltage Adj. Range
DPDN480-24	24V	20A	480W	24-28V
DPDN480-48	48V	10A	480W	48-55V

Input Specifications

Parameter	Specification
RATED INPUT (Certified Voltage)	100 ~ 240VAC
NOMINAL INPUT VOLTAGE RANGE	90 ~ 264VAC or 127-370VDC DC input by connecting AC/L(+), AC/N(-)
FREQUENCY RANGE	47~63Hz
POWER FACTOR (Typ.)	>0.98 / 115VAC at full load
	>0.95 / 230VAC at full load
EFFICIENCY (Typ.)	90% DPDN480-24
	91% DPDN480-48
AC CURRENT (Typ.)	4.5A / 115VAC
	2.5A / 230VAC
INRUSH CURRENT (Typ.)	30A / 115VAC
	50A / 230VAC
LEAKAGE CURRENT	<1mA / 240VAC

Output Specifications

Parameter	Specification
RIPPLE & NOISE (max.)	200mVp-p
VOLTAGE TOLERANCE	±2.0%
LINE REGULATION	±0.5%
LOAD REGULATION	±1.0%
SETUP, RISE TIME	3000ms / 100ms (115VAC / 60Hz full load)
	1500ms / 100ms (230VAC / 50Hz full load)
HOLD UP TIME (Typ.)	16ms (230VAC / 50Hz full load)
	12ms (115VAC / 60Hz full load)

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ELECTRICAL SPECIFICATIONS

Protection

Parameter	Specification
OVER LOAD	105 ~ 130% rated output power
	Protection type: Hiccup mode recovers automatically after fault condition is removed
OVER VOLTAGE	29 ~ 33V DPDN480-24
	56 ~ 65V DPDN480-48
	Protection type: Shut down o/p voltage re-power on to recover
OVER TEMPERATURE	Shut down o/p voltage recovers automatically after temperature decreases

Environment

Parameter	Specification
WORKING TEMP.	-20 ~ +70°C Refer to “Derating Curve”
WORKING HUMIDITY	20 ~ 95% RH non-condensing
STORAGE TEMP.	-40 ~ +85°C 10 ~ 95% RH
STORAGE HUMIDITY	10 ~ 95% RH
MTBF	200K hrs min. MIL-HDBK-217F (25°C)

Safety&EMC

Parameter	Specification
SAFETY STANDARDS	UL508
WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC
ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG >100M Ohms / 500VDC / 25°C / 70% RH
EMC EMISSION	Compliance to BS EN/EN55032 BS EN/EN61000-3-2,-3
EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11 BS EN/EN55035, BS EN/EN61000-6-2

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ELECTRICAL SPECIFICATIONS

Dimensions and Weight, Packing

Parameter	Specification
Width	85.5mm / 3.37in
Height	125mm / 4.92in
Depth	129mm / 5.08in
Weight	1.6kg
Carton Size	52.5 × 33 × 17.5 CM
Carton Size	20.67 × 12.99 × 6.9 in
Master Carton Quantities	10pcs / Carton

Note

1. All parameters not specially mentioned are measured at 230VAC input, rated load, and 25°C ambient temperature.
2. Ripple & noise measured peak-to-peak with 20MHz bandwidth using 0.1μF and 47μF capacitors.
3. Recommended installation clearance: top 40mm, bottom 20mm, left/right 5mm. Increase spacing if adjacent device is heat source.
4. Output derating may be required under low input voltage; refer to derating curve.
5. Efficiency measurements performed after 30 minutes burn-in.
6. Ambient temperature derating of 3.5°C per 1000m altitude above 2000m.

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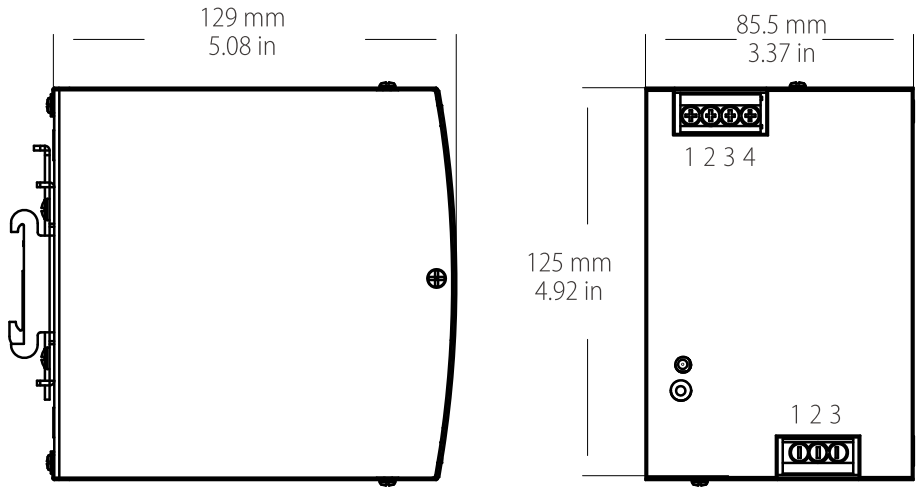
MECHANICAL SPECIFICATIONS



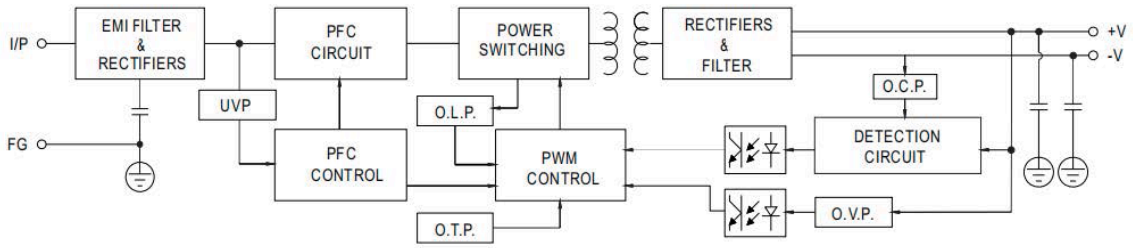
Input

Pin No.	Description
1	FG ⏚
2	AC/N or DC -
3	AC/L or DC +

Output

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

Block Diagram



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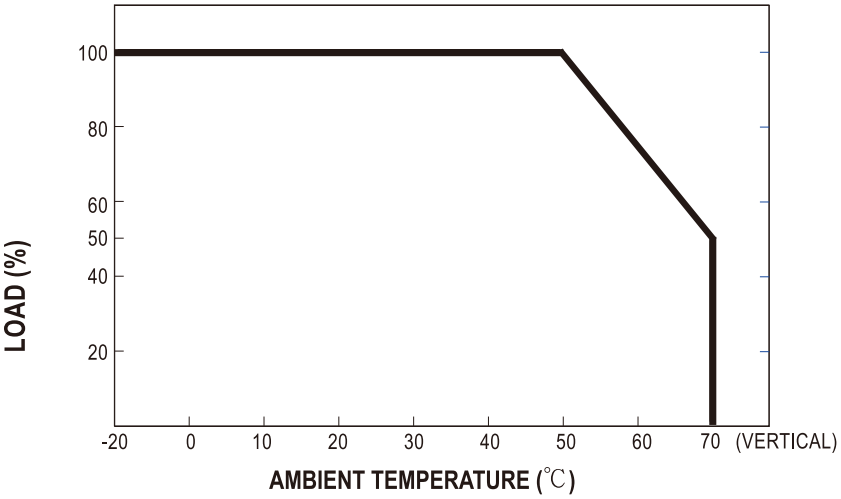
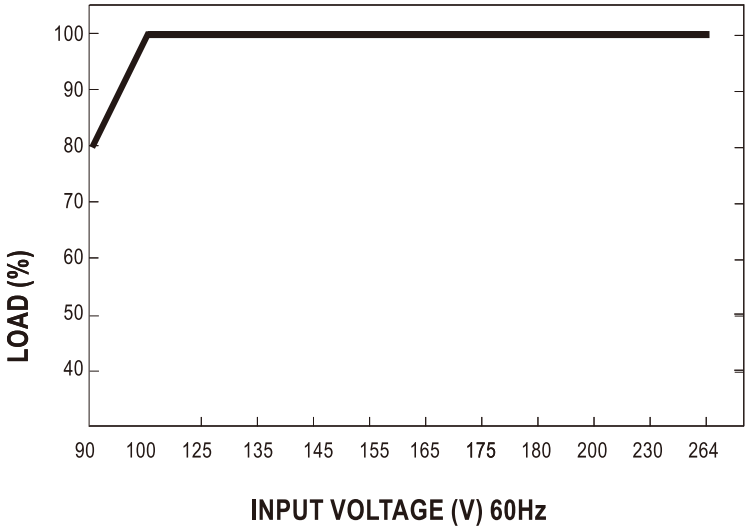
MECHANICAL SPECIFICATIONS

Deduction Curve and Temperature



Minus Output and Input Voltage Curves



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