

# DPDH480 SERIES | SINGLE PHASE

480W DIN Rail AC-DC Power Supply

MODEL: DPDH480 | CATEGORY: AC-DC | RATED POWER: 480W | FORM: DIN Rail

## PRODUCT OVERVIEW



### Key Product Features

- 480W continuous output with up to 720W peak power (3 sec.)
- High efficiency up to 94%
- Class I isolation
- Universal AC input with DC input capability
- Parallel operation support (up to 8 units)
- Built-in DC OK relay contact for monitoring
- Comprehensive protections: overload, overvoltage, overtemperature
- Wide operating temperature range (-25°C to +70°C)

## PRODUCT DESCRIPTION

The DPDH480 Series is a high-performance 480W DIN-rail power supply designed for demanding industrial applications. With a wide universal input range, high efficiency up to 94%, and support for peak power up to 720W, it ensures stable and reliable power delivery under dynamic load conditions.

## SAFETY CERTIFICATES



- Certified to UL61010-1 and UL61010-2-201
- Complies with EN61010-1 safety standard
- Isolation protection up to 3KVAC (I/O) and 2KVAC (I/FG)
- Meets EN55032 for EMC emission
- Meets EN61000-4 series immunity standards
- Designed for heavy industrial environments (EN61000-6-2, EN61204-3)

## Applications

- Industrial automation systems
- PLC and control panels
- Factory machinery
- Process control systems
- Power distribution systems
- Telecom and networking equipment

# ELECTRICAL SPECIFICATIONS

## Model Information

Part Number	DC Voltage	Rated Current (Max.)	Rated Power	Peak Power	Voltage Adj. Range
DPDH480-24	24V	20A	480W	720W (3 sec.)	24-28V
DPDH480-48	48V	10A	480W	720W (3 sec.)	48-55V

## Input Specifications

Parameter	Specification
RATED INPUT (Certified Voltage)	100 ~ 240VAC
NOMINAL INPUT VOLTAGE RANGE	90 ~ 264VAC or 127~370VDC
FREQUENCY RANGE	47 ~ 63Hz
POWER FACTOR (Typ.)	0.94 / 230VAC at full load 0.99 / 115VAC at full load
EFFICIENCY (Typ.)	94%
AC CURRENT (Typ.)	5A / 115VAC 2.5A / 230VAC
INRUSH CURRENT (Typ.)	40A / 115VAC 80A / 230VAC
LEAKAGE CURRENT	<0.6mA / 240VAC

## Output Specifications

Parameter	Specification
RIPPLE & NOISE (max.)	100mVp-p DPDH480-24 120mVp-p DPDH480-48
VOLTAGE TOLERANCE	±2.0%
LINE REGULATION	±0.5%
LOAD REGULATION	±1.0%
SETUP, RISE TIME	1500ms, 150ms / 230VAC at full load 3000ms, 150ms / 115VAC at full load
HOLD UP TIME (Typ.)	14ms / 230VAC at full load

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# ELECTRICAL SPECIFICATIONS

## Protection

Parameter	Specification
OVER LOAD	110 ~ 150% rated output for >5 sec, then shut down with auto-recovery
	>150% constant current limiting, may shut down after 3 sec
OVER VOLTAGE	29 ~ 33V DPDH480-24
	56 ~ 65V DPDH480-48
	Shut down, re-power to recover
OVER TEMPERATURE	105°C ±5°C detection
	Shut down, auto recovery
DC OK RELAY CONTACT RATINGS (max.)	60Vdc/0.3A, 30Vdc/1A, 30Vac/0.5A resistive load

## Environment

Parameter	Specification
WORKING TEMP.	-25 ~ +70°C Refer to derating curve
WORKING HUMIDITY	20 ~ 95% RH non-condensing
STORAGE TEMP.	-40 ~ +85°C
STORAGE HUMIDITY	10 ~ 95% RH
COLD START	-40°C
MTBF	100K hrs min. MIL-HDBK-217F (25°C)
TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)
VIBRATION	10~500Hz, 2G IEC60068-2-6 compliant

## Safety&EMC

Parameter	Specification
SAFETY STANDARDS	UL61010-1, UL61010-2-201, BS EN/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	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/EN55024, BS EN/EN61000-6-2, BS EN/EN61204-3

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# ELECTRICAL SPECIFICATIONS

## Dimensions and Weight, Packing

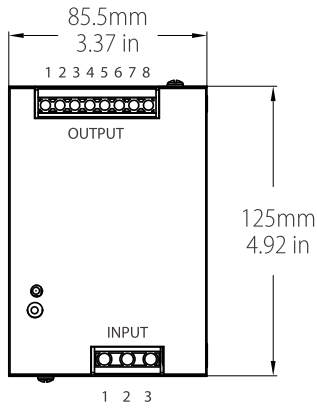
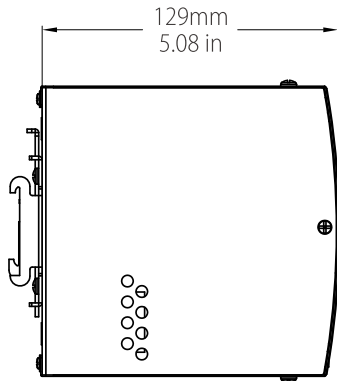
Parameter	Value
Width	85.5mm / 3.37in
Height	125mm / 4.92in
Depth	129mm / 5.08in
Weight	1.6kg
Carton Size	49 × 34.5 × 16.5 CM
Carton Size (inch)	19.29 × 13.58 × 6.50 in
Master Carton Quantities	8pcs / Carton

### Note

1. All parameters NOT specially mentioned are at 230VAC input, rated load and 25°C ambient temperature.
2. Ripple & noise are measured from peak to peak with bandwidth limit of 20MHz (0.1uF and 47uF/50V parallel capacitor 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 adjacent device is a heat source.
4. Unit can hold up to 3 seconds max at peak power 720W. Refer to peak loading curves.
5. Derating may be required under low input voltage. Refer to derating curve for details.
6. Specifications after 30 minutes of burn-in.
7. Ambient temperature derating is 3.5°C / 1000m for operating altitude above 2000m (6500ft).

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# MECHANICAL SPECIFICATIONS



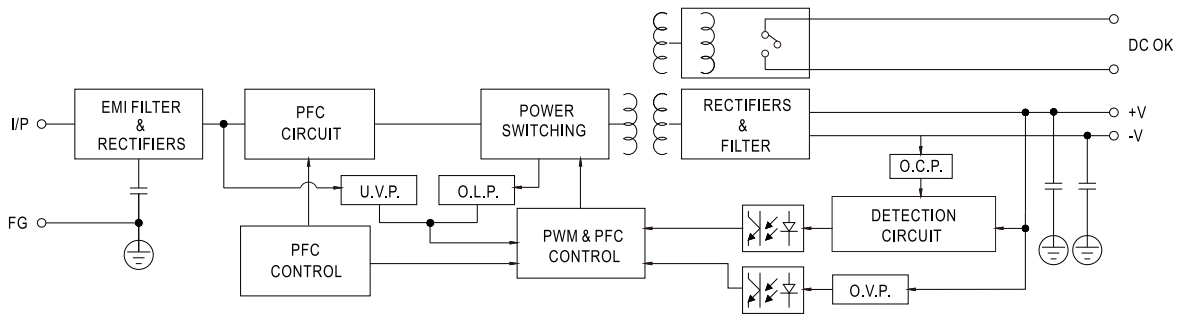
### Input

No.	Description
1	FG (⊖)
2	AC/N
3	AC/L

### Output

No.	Description
1,2	DC OUTPUT +V
3,4	DC OUTPUT -V
5,6	Relay Contact
7	P+ (current share)
8	P- (current share)

## Block Diagram



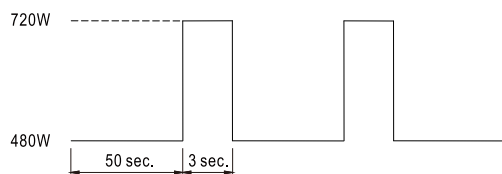
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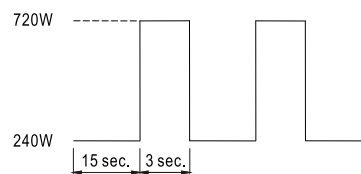
## DC OK Relay Contact

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

## Peak Loading

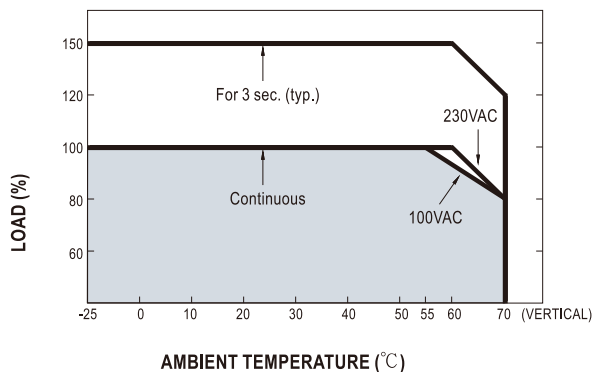


Full Load

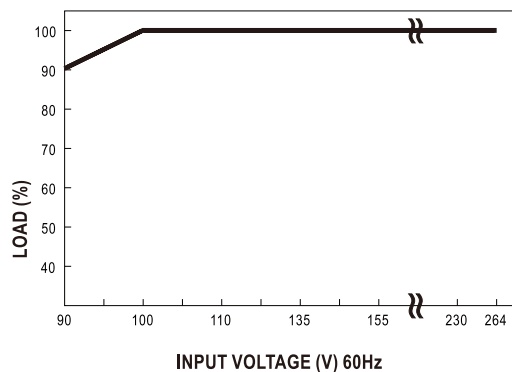


Half Load

## Deduction Curve and Temperature



## Minus Output and Input Voltage Curves



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