


Compact 480W 48V DIN RAIL Power Supply  
With Wide Input Range and Single Output

UNIT CODE	DESCRIPTION
C-WDR 480-48	Wide Input Range 480 Watt, 48 Volt, Single Output Compact DIN RAIL Power Supply with PFC

SPECIFICATIONS		
AC Input	Output	Approvals
<b>180 ~ 550VAC</b> <b>Single Phase 230VAC</b> <i>or any two phases from a 330~550VAC three-phase power system</i>	+48VDC @ 0 ~ 10A	

### Features at a Glance:

Single and two phase wide input range 180~550VAC  
Built-in active PFC circuit compliance to EN61000-3-2

High reliability, compact and quiet

High efficiency 92% and low power dissipation

Slim (85mm), Installed on DIN rail TS35 / 7.5 or 15

Low temperature power-on ability at -30°C

Built-in: DC OK relay contact - alarm signal output,  
Front panel DC voltage adjustment (100%~115%),  
LED indicator for power ON

Protections: Short circuit / Over load /  
Over voltage / Over temp.

Cooling by fan-less natural (free air) convection

100% full load burn-in test

Safety standards: UL508 approved, IEC60950-1 CB  
approved by SIQ, design refer to GL (marine  
related)

MTBF hours: 112.8K hrs MIL-HDBK-217F (25°C)

3 year warranty

Case: 984B

Weight: 3.74Lbs. (1.7 Kgs)

Dimensions: 3.4" W x 4.9" H x 5.0" D  
85.5 x 125.2 x 128.5mm (W\*H\*D)



C-WDR480 is a 480W AC/DC slim DIN rail power supply that features a wide input range for both single and two phase power systems. With a 180 to 550VAC wide input range, C-WDR-480 can be used in general power system with single phase 230VAC input or can capture any two phases from a 330~550VAC three-phase power system.

The C-WDR series can be operated in marine related installations and areas normally frozen with a low temperature power-on ability at -30°C. Standard functions include DC OK relay contact alarm signal output, front panel LED indicator, front panel DC voltage adjustment, as well as protection for short-circuit, overload, over voltage, and over temperature. C-WDR-480 series has certificates for compliance with UL/CB/CE and also meet the EMC requirements of heavy industry immunity level (EN61000-6-2).

Pricing	1 ~ 9	\$ 375.00
	10+	\$ 367.50
	25+	\$ 349.50

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# POLLOCK INDUSTRIES



480W Single Output Industrial DIN RAIL Power Supply

## WDR-480 series



### Features :

- Single and two phase wide input range 180~550VAC
- Built-in active PFC circuit compliance to EN61000-3-2
- High efficiency 93% and low power dissipation
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508(industrial control equipment)approved
- EN61000-6-2(EN50082-2) industrial immunity level
- Built-in DC OK relay contact
- 100% full load burn-in test
- 3 years warranty

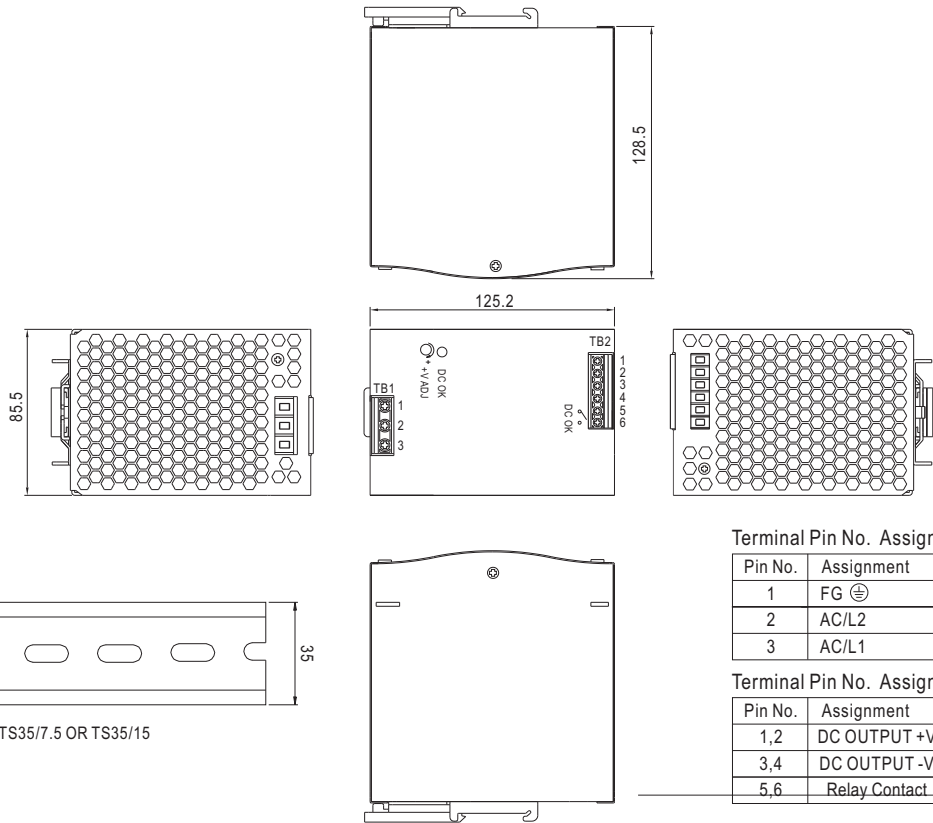


### SPECIFICATION

MODEL	WDR-480-24	WDR-480-48	
OUTPUT	DC VOLTAGE	24V	48V
	RATED CURRENT	20A	10A
	CURRENT RANGE	0 ~ 20A	0 ~ 10A
	RATED POWER	480W	480W
	RIPPLE & NOISE (max.) Note.2	100mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	24 ~ 28V	48 ~ 55V
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%
	SETUP, RISE TIME	800ms, 150ms/400VAC    2000ms, 150ms/230VAC at full load	
HOLD UP TIME (Typ.)	18ms / 400VAC    16ms / 230VAC at full load		
INPUT	VOLTAGE RANGE Note.6	180 ~ 550VAC    254 ~ 780VDC	
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR (Typ.)	PF ≥ 0.84/400VAC	PF ≥ 0.84/230VAC
	EFFICIENCY (Typ.)	92%	93%
	AC CURRENT (Typ.)	1.6A/400VAC	4A/230VAC
	INRUSH CURRENT (Typ.)	COLD START 50A	
	LEAKAGE CURRENT	<3.5mA / 530VAC	
PROTECTION	OVERLOAD	105 ~ 130% rated output power Protection type : Constant current limiting, unit will shut down after 3 sec. ,auto-recovery after 1 minute if the fault condition is removed	
	OVER VOLTAGE	29 ~ 33V	56 ~ 65V
	OVER TEMPERATURE	95°C ±5°C (TSW) detect on heatsink of power switch Protection type : Shut down o/p voltage, recovers automatically after temperature goes down	
FUNCTION	DC OK REALY CONTACT RATINGS (max.)	60Vdc/0.3A, 30Vdc/1A, 30Vac/0.5A resistive load	
ENVIRONMENT	WORKING TEMP. Note.5	-30 ~ +70°C (Refer to "Derating Curve")	
	WORKING HUMIDITY	20 ~ 95% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH	
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)	
	VIBRATION	Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6	
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL508 approved, IEC60950-1 CB approved by SIQ, design refer to GL	
	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 EN55022 (CISPR22), EN61204-3 Class B, EN61000-3-2,-3	
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A approved	
OTHERS	MTBF	112.8K hrs min.    MIL-HDBK-217F (25°C)	
	DIMENSION	85.5*125.2*128.5mm (W*H*D)	
	PACKING	1.7Kg; 8pcs/14.6Kg/0.9CUFT	
NOTE	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</li> <li>5. Installation clearances : 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.</li> <li>6. Derating may be needed under low input voltage. Please check the derating curve for more details.</li> </ol>		

**Mechanical Specification**

Case No.984B Unit:mm



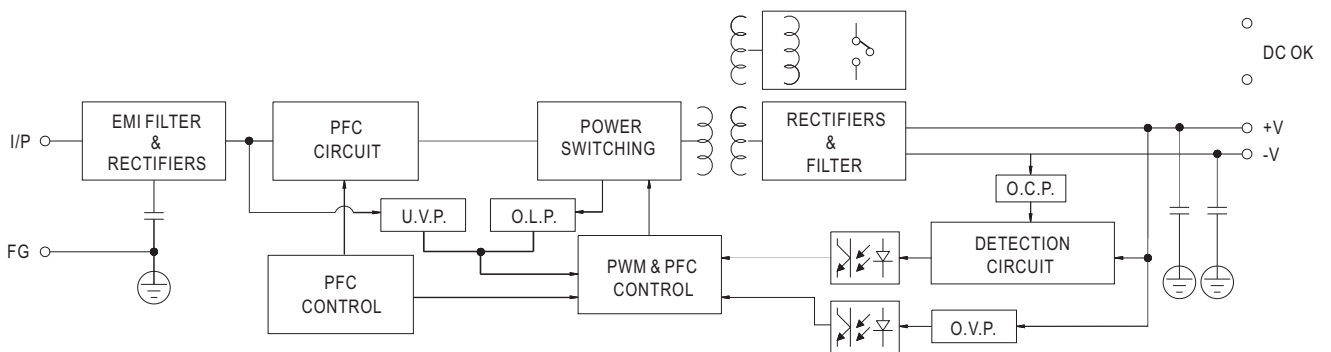
Terminal Pin No. Assignment (TB1)

Pin No.	Assignment
1	FG ⊕
2	AC/L2
3	AC/L1

Terminal Pin No. Assignment (TB2)

Pin No.	Assignment
1,2	DC OUTPUT +V
3,4	DC OUTPUT -V
5,6	Relay Contact

**Block Diagram**

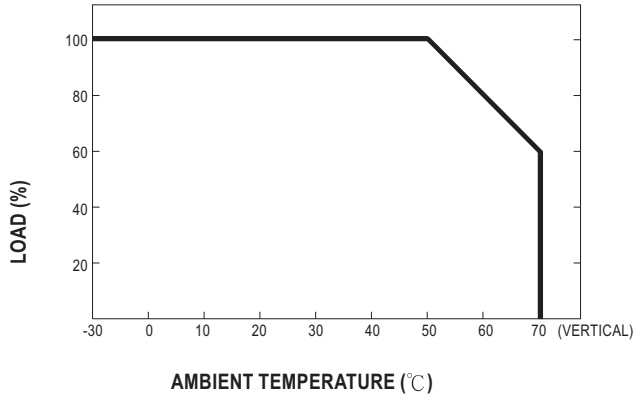


**DC OK Relay Contact**

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



■ Derating Curve



■ Output derating VS input voltage

