# 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 BS EN/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
- BS EN/EN61000-6-2(BS EN/EN50082-2) industrial immunity level
- Built-in DC OK relay contact
- 100% full load burn-in test
- 3 years warranty

User's Manual Click Me

## ■ GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

IS13252 (except for 48V) AS/NZS62368-1 TPTC004 UL508 IEC62368-1

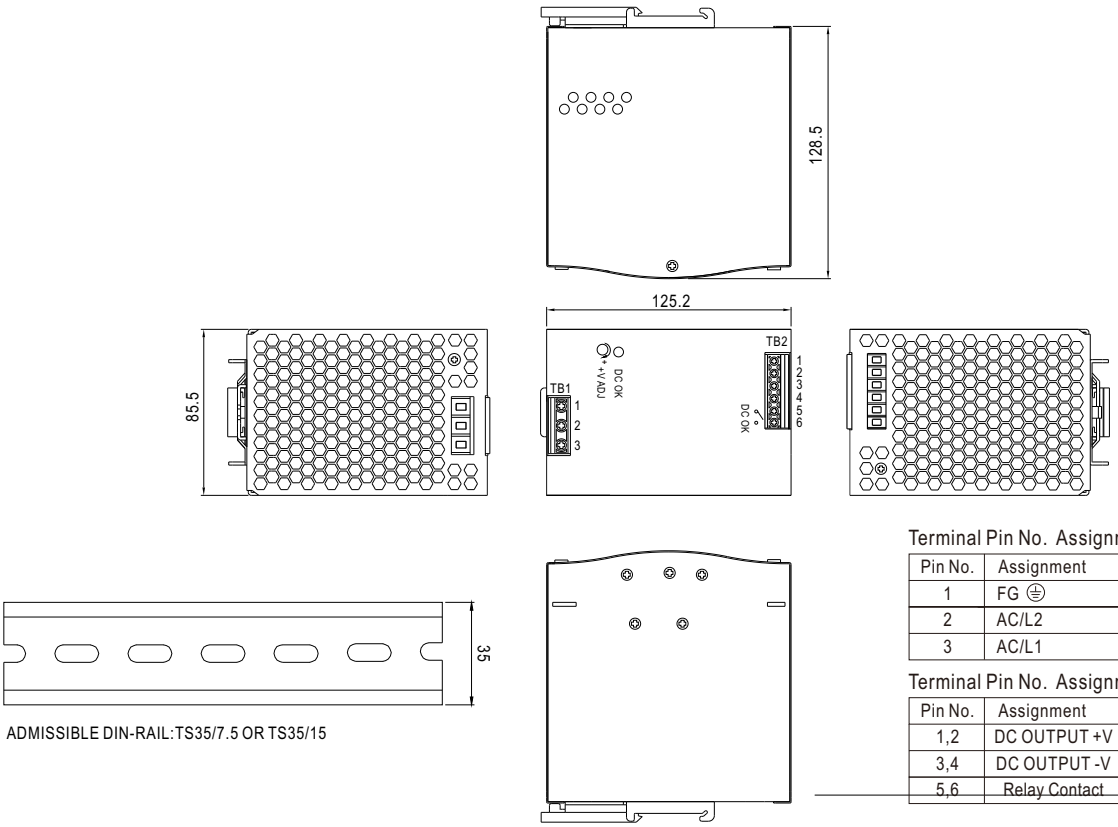
## SPECIFICATION

| 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 |
| | | Protection type : Shut down o/p voltage, auto-recovery after 1 minute if the fault condition is removed | |
| | OVER TEMPERATURE | 95℃±5℃ (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℃ (Refer to "Derating Curve") | |
| | WORKING HUMIDITY | 20 ~ 95% RH non-condensing | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85℃, 10 ~ 95% RH | |
| | TEMP. COEFFICIENT | ±0.03%/℃ (0 ~ 50℃) | |
| | 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,EAC TP TC 004,BIS IS13252(Part1):2010/IEC 609501:2005(except for 48) approved,IEC62368-1 CB approved by SIQ, design refer to BS EN/EN62368-1, AS/NZS 62368.1,GL; (meet BS EN/EN60204-1) | |
| | 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℃/ 70% RH | |
| | EMC EMISSION | Compliance to BS EN/EN55032 (CISPR32), BS EN/EN61204-3 Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020 | |
| | EMC IMMUNITY | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, BS EN/EN61000-6-2 (BS EN/EN50082-2), BS EN/EN61204-3, heavy industry level, EAC TP TC 020 approved | |
| OTHERS | MTBF | 825.4K hrs min. Telcordia SR-332 (Bellcore) ; 112.8K hrs min. MIL-HDBK-217F (25℃) | |
| | DIMENSION | 85.5*125.2*128.5mm (W*H*D) | |
| | PACKING | 1.7Kg; 8pcs/14.6Kg/0.9CUFT | |
| NOTE | 1. All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25℃ of ambient temperature.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μF & 47 μF parallel capacitor.<br>3. Tolerance : includes set up tolerance, line regulation and load regulation.<br>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. (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf )<br>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.<br>6. Derating may be needed under low input voltage. Please check the derating curve for more details.<br>7. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).<br>※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx | |

## ■ Mechanical Specification

(Unit: mm , tolerance ± 1mm)

Case No.984B




ADMISSIBLE DIN-RAIL:TS35/7.5 OR TS35/15

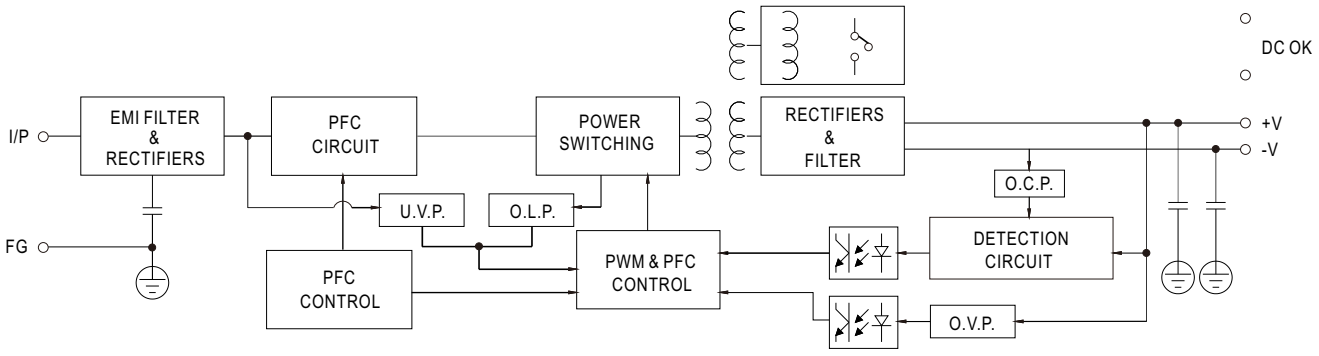
Terminal Pin No. Assignment (TB1)

| 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 |

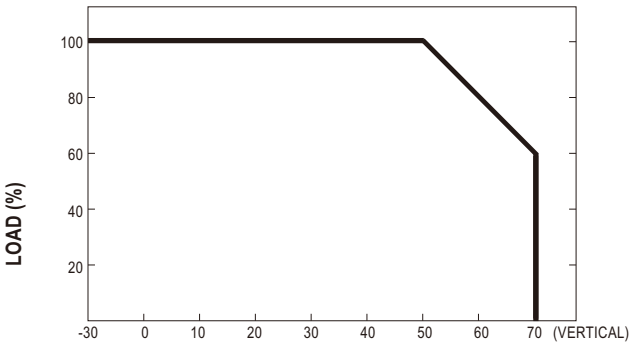
## ■ Block Diagram




## ■ DC OK Relay Contact

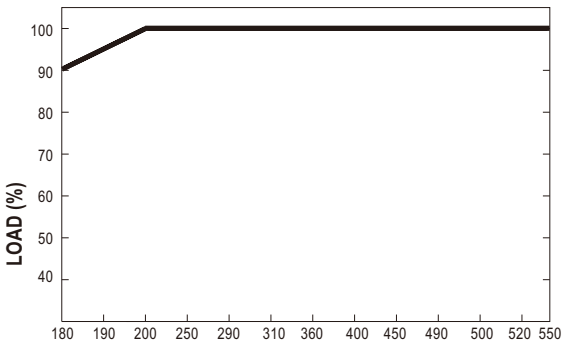
| | |
|---|---|
| Contact Close | PSU turns on / DC OK. |
| Contact Open | PSU turns off / DC Fail. |
| Contact Ratings (max.) | 30V/1A resistive load. |

## ■ Derating Curve




**AMBIENT TEMPERATURE (℃)**

## ■ Output derating VS input voltage




**INPUT VOLTAGE (VAC) 60Hz**