

User's Manual



TPTC004 BS EN/EN62368-1 IEC62368-1

## ■ Features

- Universal AC input / Full range
- Built-in active PFC function
- 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
- 100% full load burn-in test
- 3 years warranty

## ■ Applications

- Industrial control system
- Factory automation
- Electro-mechanical apparatus

## ■ GTIN CODE

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

## ■ Description

NDR-480 is one economical slim 480W Din rail power supply series, adapt to be installed on TS-35/7.5 or TS-35/15 mounting rails. The body is designed 85.5mm in width, which allows space saving inside the cabinets. The entire series adopts the full range AC input from 90VAC to 264VAC and conforms to BS EN/EN61000-3-2, the norm the European Union regulates for harmonic current.

NDR-480 is designed with metal housing that enhances the unit's power dissipation. With working efficiency up to 92.5%, the entire series can operate at the ambient temperature between -20°C and 70°C under air convection. It is equipped with constant current mode for over-load protection, fitting various inductive or capacitive applications. The complete protection functions and relevant certificates for industrial control apparatus (UL508, TUV BS EN/EN62368-1, and etc.) make NDR-480 a very competitive power supply solution for industrial applications.

## ■ Model Encoding

**NDR - 480 - 24**

Output voltage

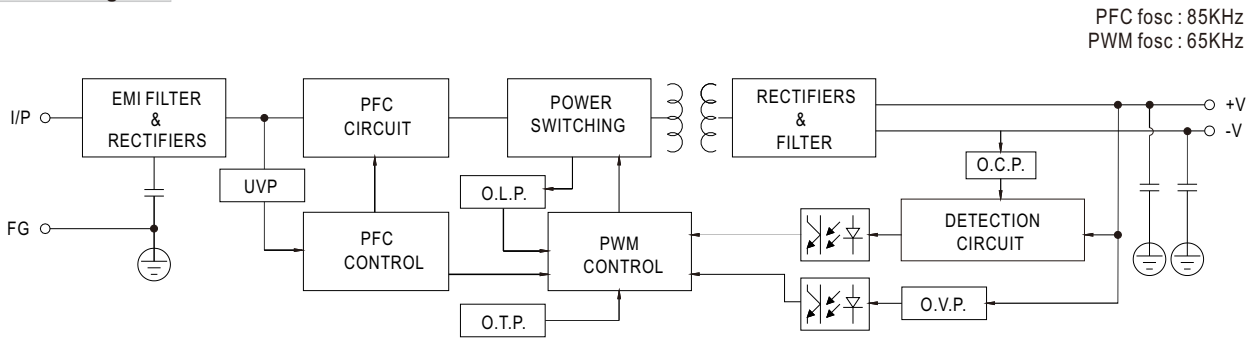
Output wattage

Series name

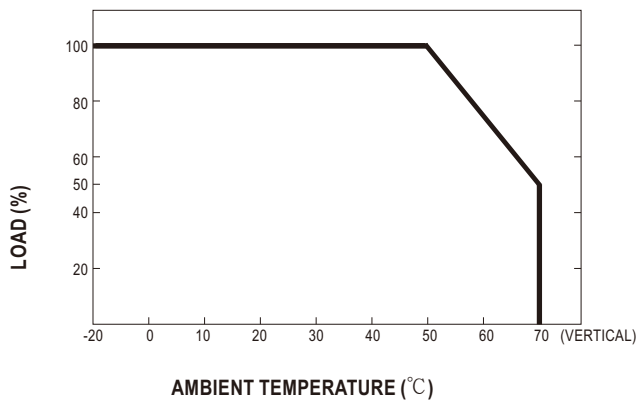
**SPECIFICATION**

| MODEL                 |  | NDR-480-24  | NDR-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   | 150mVp-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   | 1500ms, 100ms/230VAC      3000ms, 100ms/115VAC at full load   |            |
| HOLD UP TIME (Typ.)   | 16ms/230VAC      16ms/115VAC at full load  |   |            |
| INPUT                 | VOLTAGE RANGE Note.4   | 90 ~ 264VAC      127 ~ 370VDC   |            |
|                       | FREQUENCY RANGE  | 47 ~ 63Hz   |            |
|                       | POWER FACTOR (Typ.)  | PF>0.98/115VAC, PF>0.94/230VAC at full load   |            |
|                       | EFFICIENCY (Typ.)  | 92.5%   | 92.5%      |
|                       | AC CURRENT (Typ.)  | 4.8A/115VAC      2.4A/230VAC  |            |
|                       | INRUSH CURRENT (Typ.)  | 20A/115VAC      35A/230VAC  |            |
|                       | LEAKAGE CURRENT  | <2mA / 240VAC   |            |
| PROTECTION            | OVERLOAD   | 105 ~ 130% rated output power<br>Protection type : Constant current limiting, unit will shut down after 3 sec., re-power on to recover              |            |
|                       | OVER VOLTAGE   | 29 ~ 33V  | 56 ~ 65V   |
|                       | OVER TEMPERATURE   | Shut down o/p voltage, recovers automatically after temperature goes down   |            |
| ENVIRONMENT           | WORKING TEMP.  | -20 ~ +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, TUV BS EN/EN62368-1, EAC TP TC 004 , BSMI CNS14336-1 approved;(meet BS EN/EN60204-1)   |            |
|                       | 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 (CISPR32),BS EN/EN61204-3 Class B,BS EN/EN61000-3-2,-3,EAC TP TC 020,CNS13438 Class B                                   |            |
|                       | 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/EN50082-2),BS EN/EN61204-3, heavy industry level, EAC TP TC 020 |            |
| OTHERS                | MTBF   | 1041.6K hrs min.    Telcordia SR-332 (Bellcore) ; 146.8K hrs min.    MIL-HDBK-217F (25°C)   |            |
|                       | DIMENSION  | 85.5*125.2*128.5mm (W*H*D)  |            |
|                       | PACKING  | 1.5Kg; 8pcs/13Kg/0.9CUFT  |            |
| NOTE                  | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>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.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. 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.</p> <p>5. Derating may be needed under low input voltage. Please check the derating curve for more details.</p> <p>6. The power supply is considered as an independent unit, but the final equipment still need to re-confirm that the whole system complies with the EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."</p> <p>7. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).<br/>(as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p> |   |            |

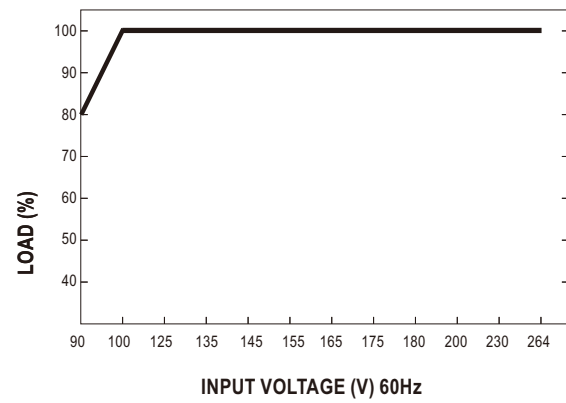
■ Block Diagram



■ Derating Curve

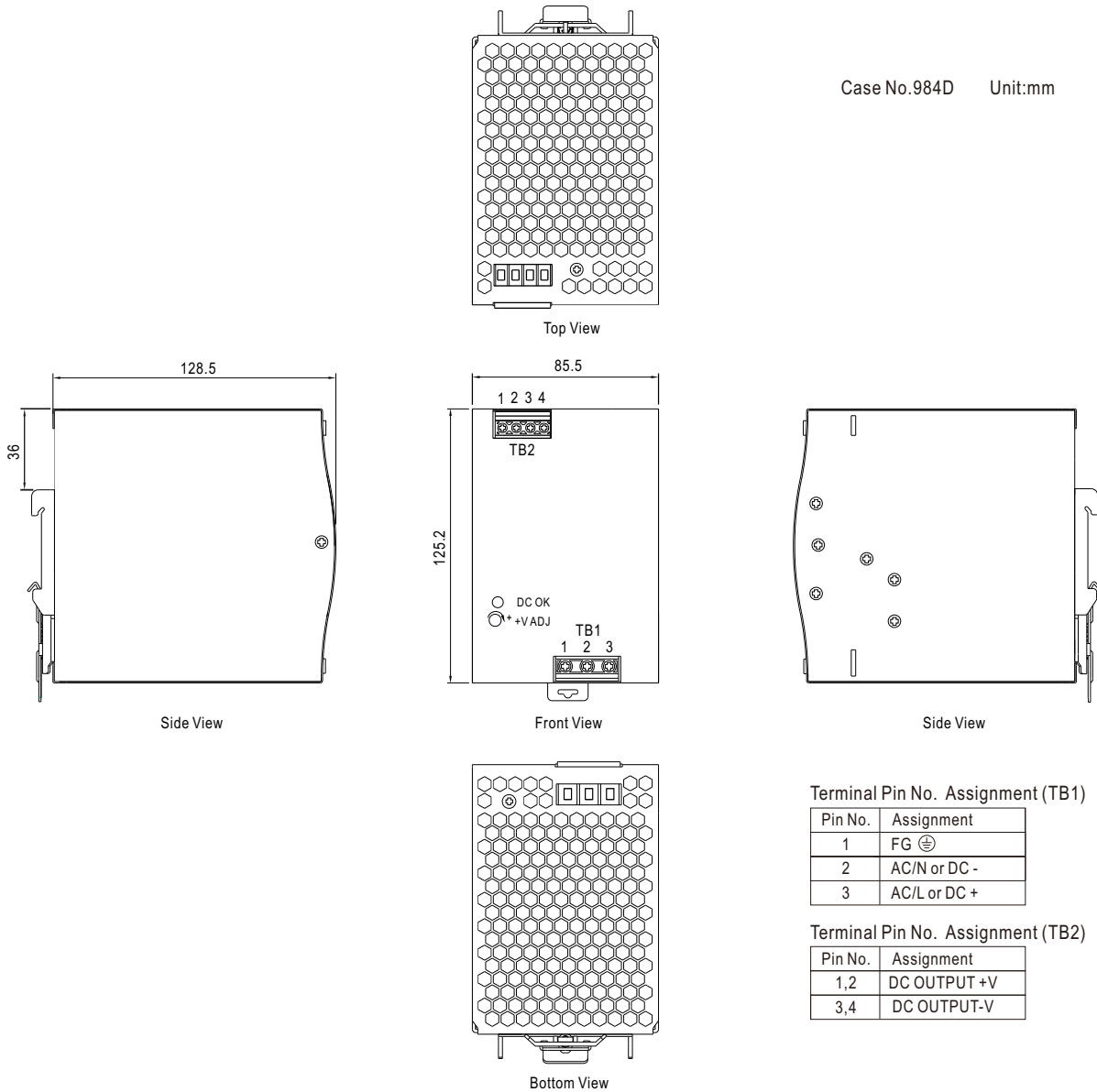


■ Output derating VS input voltage

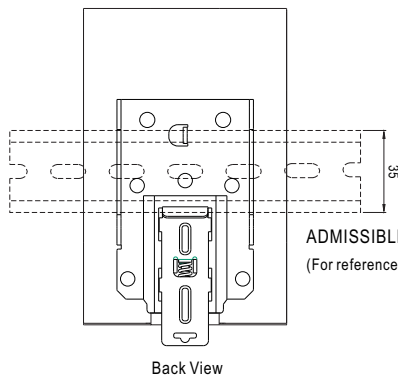


■ Mechanical Specification

Case No.984D Unit:mm



■ Installation Instruction



ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15  
(For reference only. Not included with unit.)

This series fits DIN rail TS35/7.5 or TS35/15.  
For installation details, please refer to the Instruction manual.

■ Installation Manual

Please refer to : <http://www.meanwell.com/manual.html>