MEAN WELL

75W Single Output Industrial DIN RAIL

# NDR-75 series

User's Manual




TPTC004 BS EN/EN62368-1 IEC62368-1

## Features

- Universal AC input / Full range
- 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
- Semiconductor fabrication equipment
- Factory automation
- Electro-mechanical apparatus

## GTIN CODE

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

## Description

NDR-75 is one economical slim 75W Din rail power supply series, adapt to be installed on TS-35/7.5 or TS-35/15 mounting rails. The body is designed 32mm 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-75 is designed with metal housing that enhances the unit's power dissipation. With working efficiency up to 89%, the entire series can operate at the ambient temperature between -20℃ and 70℃ 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-75 a very competitive power supply solution for industrial applications.

## Model Encoding

NDR - 75 - 12

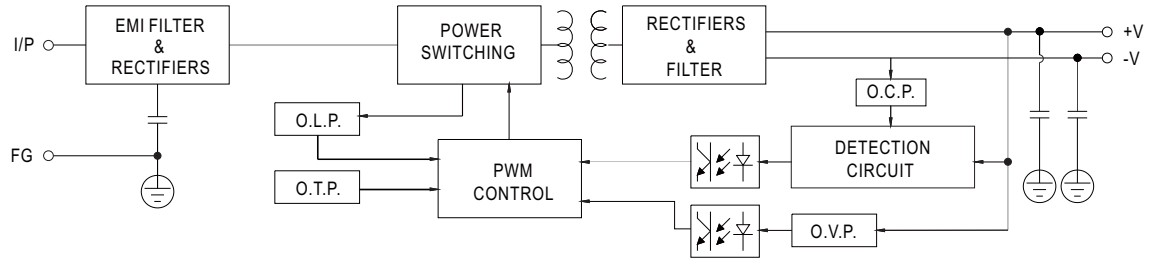
- 12 — Output voltage
- 75 — Output wattage
- NDR — Series name

## SPECIFICATION

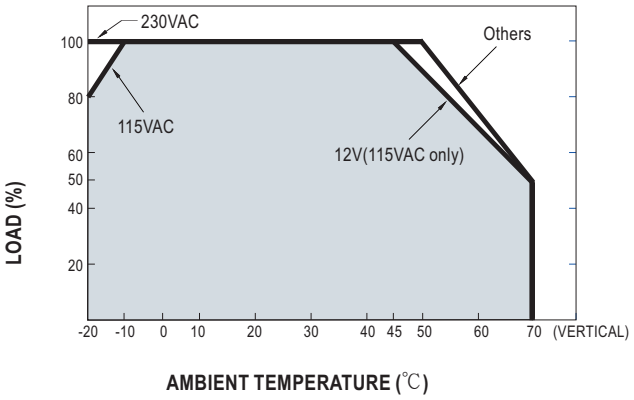
| MODEL | | NDR-75-12 | NDR-75-24 | NDR-75-48 |
|---|---|---|---|---|
| OUTPUT | DC VOLTAGE | 12V | 24V | 48V |
| | RATED CURRENT | 6.3A | 3.2A | 1.6A |
| | CURRENT RANGE | 0 ~ 6.3A | 0 ~ 3.2A | 0 ~ 1.6A |
| | RATED POWER | 75.6W | 76.8W | 76.8W |
| | RIPPLE & NOISE (max.) Note.2 | 80mVp-p | 120mVp-p | 150mVp-p |
| | VOLTAGE ADJ. RANGE | 12 ~ 14V | 24 ~ 28V | 48 ~ 55V |
| | VOLTAGE TOLERANCE Note.3 | ±2.0% | ±1.0% | ±1.0% |
| | LINE REGULATION | ±0.5% | ±0.5% | ±0.5% |
| | LOAD REGULATION | ±1.0% | ±1.0% | ±1.0% |
| | SETUP, RISE TIME | 1200ms, 60ms/230VAC 2000ms, 60ms/115VAC at full load | | |
| | HOLD UP TIME (Typ.) | 60ms/230VAC 12ms/115VAC at full load | | |
| INPUT | VOLTAGE RANGE Note.6 | 90 ~ 264VAC 127 ~ 370VDC [DC input operation possible by connecting AC/L(+), AC/N(-)] | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | |
| | EFFICIENCY (Typ.) | 85.5% | 88% | 89% |
| | AC CURRENT (Typ.) | 1.45A/115VAC 0.9A/230VAC | | |
| | INRUSH CURRENT (Typ.) | 20A/115VAC 35A/230VAC | | |
| | LEAKAGE CURRENT | <1mA / 240VAC | | |
| PROTECTION | OVERLOAD | 105 ~ 130% rated output power | | |
| | | Protection type : Constant current limiting, recovers automatically after fault condition is removed | | |
| | OVER VOLTAGE | 14 ~ 17V | 29 ~ 33V | 56 ~ 65V |
| | | Protection type : Shut down o/p voltage, re-power on to recover | | |
| | OVER TEMPERATURE | Protection type : Shut down o/p voltage, re-power on to recover | | |
| ENVIRONMENT | WORKING TEMP. | -20 ~ +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, TUV BS EN/EN62368-1, EAC TP TC 004 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℃/ 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 | | |
| OTHERS | MTBF | 2757.3K hrs min. Telcordia SR-332 (Bellcore) ; 486.2K hrs min. MIL-HDBK-217F (25℃) | | |
| | DIMENSION | 32*125.2*102mm (W*H*D) | | |
| | PACKING | 0.51Kg; 28pcs/15.3Kg/1.22CUFT | | |
| NOTE | 1. All parameters NOT specially mentioned are measured at 230VAC 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 | | | |

## Block Diagram

fosc : 85KHz

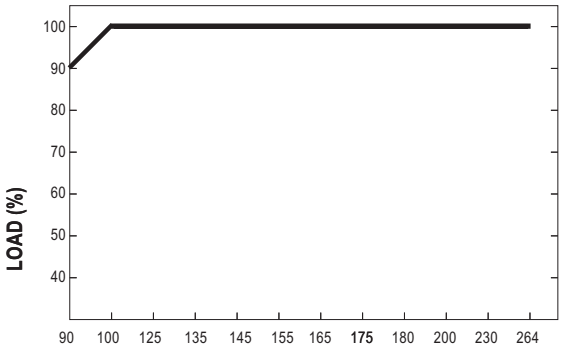



## Derating Curve




AMBIENT TEMPERATURE (℃)

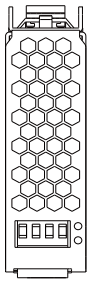
## Static Characteristics



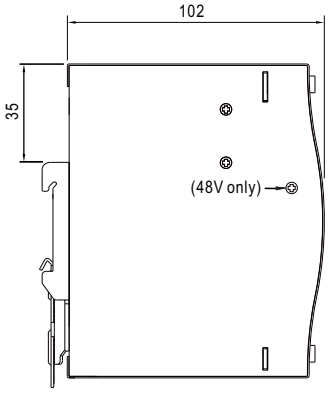

INPUT VOLTAGE (V) 60Hz

## ■ Mechanical Specification

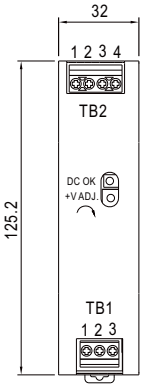
Case No. Unit:mm



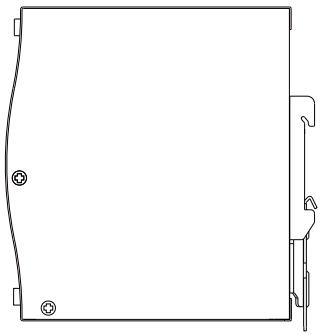
Top View



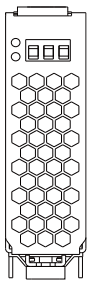

Side View




Front View



Side View



Bottom View

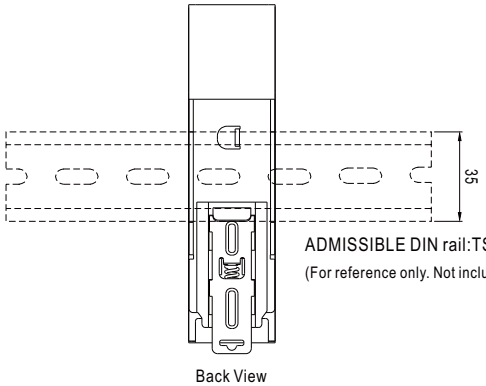
Terminal Pin No. Assignment (TB1)

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

Terminal Pin No. Assignment (TB2)

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

## ■ Installation Instruction




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

Back View

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