



## 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
- EN61000-6-2(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

## 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 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°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 EN60950-1, and etc.) make NDR-75 a very competitive power supply solution for industrial applications.

## Model Encoding

**NDR - 75 - 12**

Output voltage

Output wattage

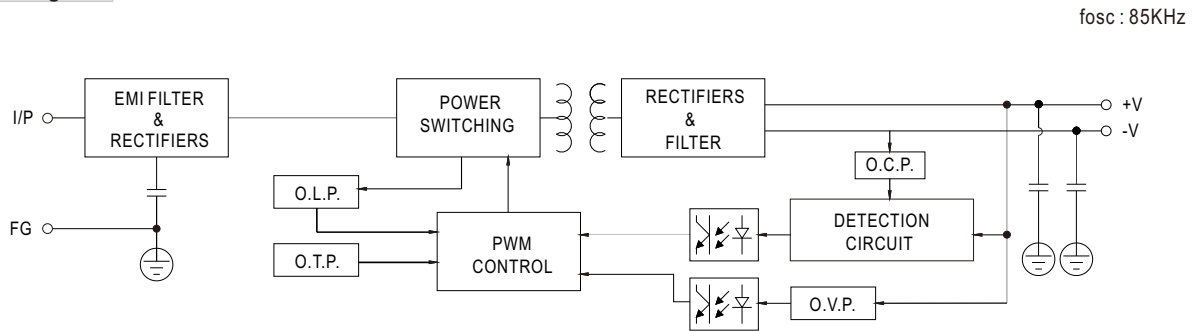
Series name



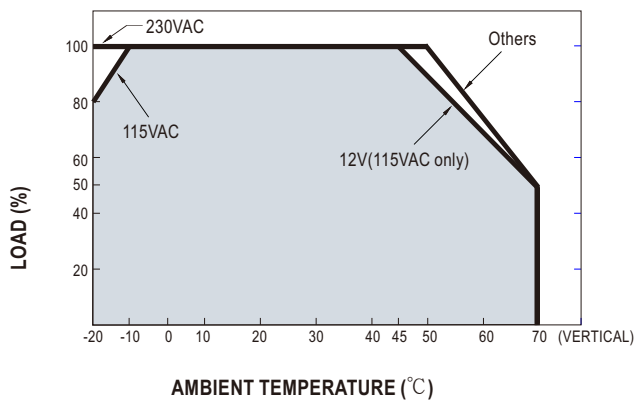
## SPECIFICATION

| 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<br>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°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 EN60950-1 approved                                                                                                         |                                                                                                 |           |          |           |          |  |
|                       | 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 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                 |                                                                                                 |           |          |           |          |  |
| OTHERS                | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 486.2K hrs min.      MIL-HDBK-217F (25°C)                                                                                             |                                                                                                 |           |          |           |          |  |
|                       | 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°C of ambient temperature.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf 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.<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. |                                                                                                                                       |                                                                                                 |           |          |           |          |  |

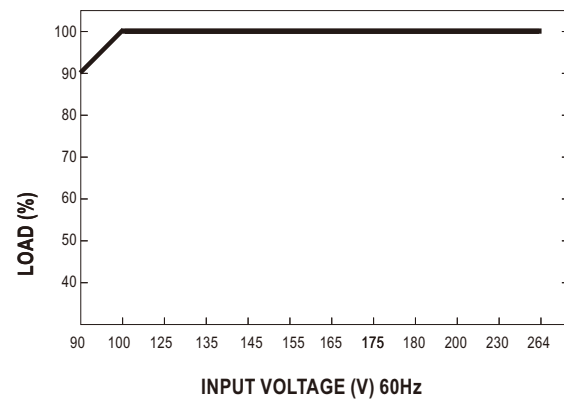
## ■ Block Diagram



## ■ Derating Curve



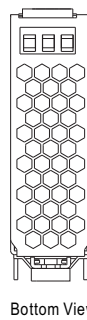
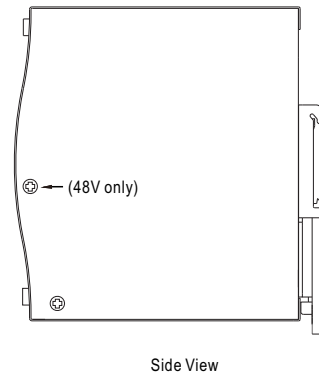
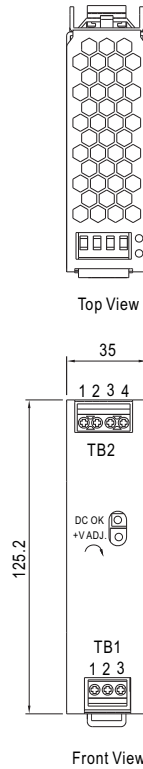
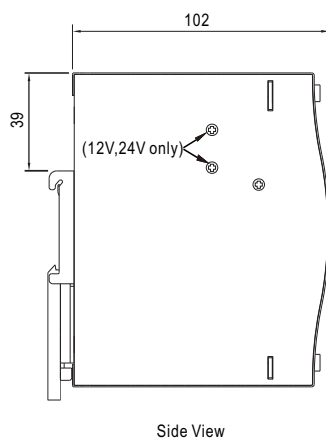
## ■ Static Characteristics



## Mechanical Specification

Case No.221B

Unit:mm



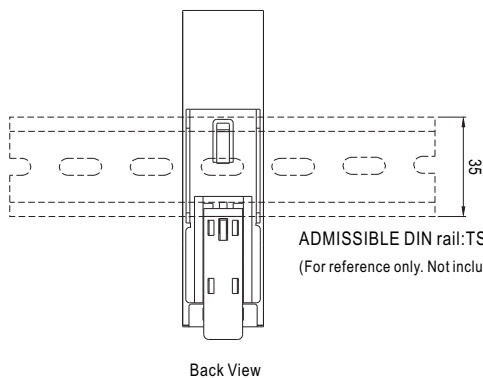
### Terminal Pin No. Assignment (TB1)

| 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.)

This series fits DIN rail TS35/7.5 or TS35/15.  
For installation details, please refer to the USER MANUAL on  
[http://www.meanwell.com/search/NDR-75/NDR\\_manual.pdf](http://www.meanwell.com/search/NDR-75/NDR_manual.pdf)