120W Single Output Industrial DIN RAIL Power Supply NDR-120 series

Features

- Universal AC input / Full range
- Protection: 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 year warranty**

Applications

- Industrial control systems
- Semiconductor fabrication equipment
- Factory automation and control
- Electro-mechanical apparatus
- Building automation

Description

The NDR-120 is an economical and slim 120W DIN rail power supply, designed to be installed on TS-35/7.5 or TS-35/15 mounting rails. The body is only 40mm wide which provides much space saving inside the electrical cabinet. The unit features a full range AC input capability from 90VAC to 264VAC and conforms to EN61000-3-2, the norm for EU regulations for harmonic current.

The NDR-120 has a metal housing that enhances the unit's power dissipation. With a working efficiency up to 89%, the unit can operate at the ambient temperatures between -20°C and 70°C using air convection cooling only. It is equipped with constant current mode for over-load protection making it ideal for a wide variety of inductive or capacitive load conditions. With all the protection functions and relevant certificates for industrial control apparatus (UL508, TUV EN60950-1 etc.) the NDR-120 provides a very competitive power supply solution for industrial applications. It is particularly suited to replacing other 120 Watt power supplies, such as the DR-120, where smaller size and higher temperature operation is advantageous.

Model Encoding

NDR - 120 - 12

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

120W Single Output Industrial DIN RAIL Power Supply NDR-120 series

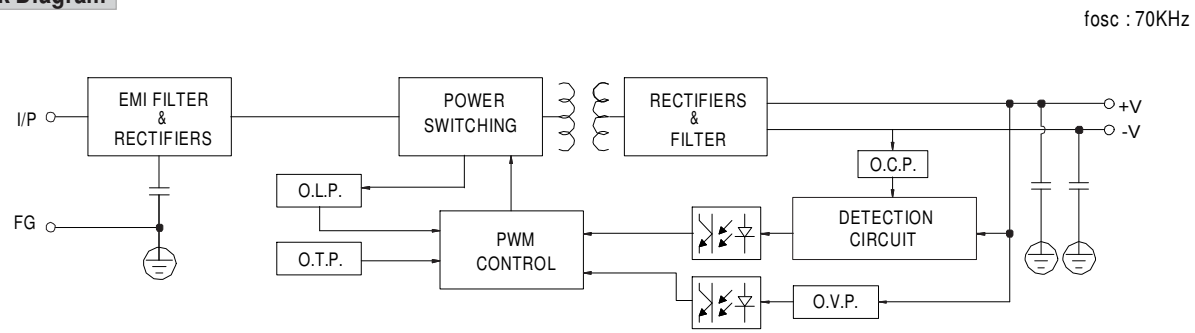
SPECIFICATION

MODEL		NDR-120-12	NDR-120-24	NDR-120-48
OUTPUT	DC VOLTAGE	12V	24V	48V
	RATED CURRENT	10A	5A	2.5A
	CURRENT RANGE	0 ~ 10A	0 ~ 5A	0 ~ 2.5A
	RATED POWER	120W	120W	120W
	RIPPLE & NOISE (max) Note.2	100mVp-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 2500ms, 60ms/115VAC at full load		
	HOLD UP TIME (Typ.)	16ms/230VAC 10ms/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.)	2.25A/115VAC 1.3A/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°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, EAC TP TC 004 approved; (meets 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 EN55032 (CISPR32), EN61204-3 Class B, EN61000-3-2,3, EAC TP TC 020		
	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, EAC TP TC 020		
OTHERS	MTBF	456.3khrs min. MIL-HDBK-217F (25°C)		
	DIMENSIONS (WxHxD)	40x125.2x113.5mm		
	WEIGHT	0.6Kg		

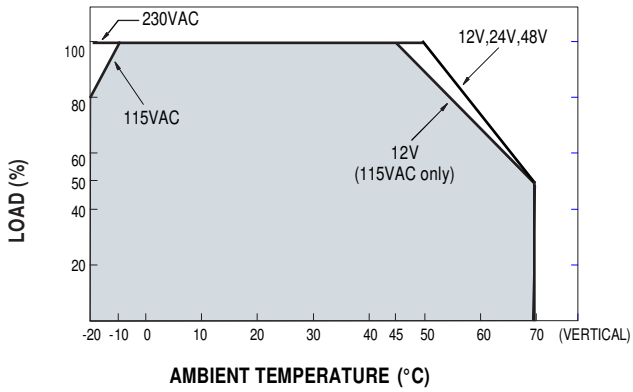
NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance: includes set up tolerance, line regulation and load regulation.
4. The power supply is considered a component which will be installed into O.E.M. equipment. The final equipment must be re-confirmed that it still meets EMC directives.
5. Installation clearances: 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded continuously at full power. In case the adjacent device is a heat source, 15mm clearance is recommended on the sides.
6. Derating may be needed under low input voltage. Please check the derating curve for more details.

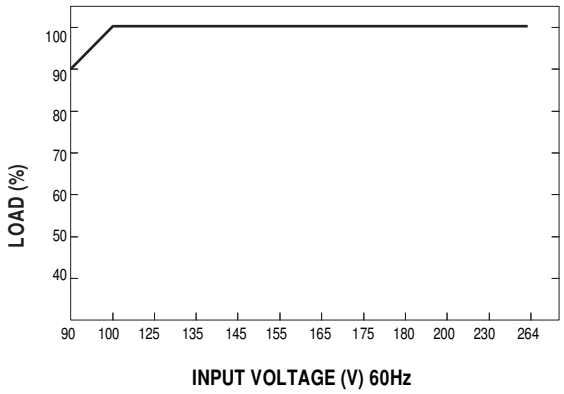
Block Diagram



Derating Curve

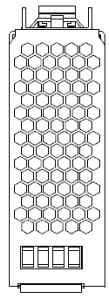


Static Characteristics

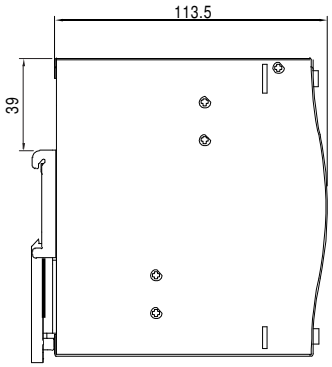


■ Mechanical Specification

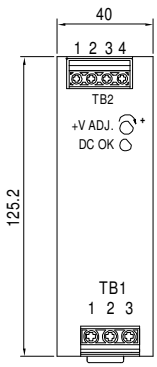
Case No.992D Unit:mm



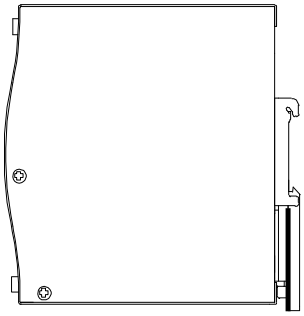
Top View



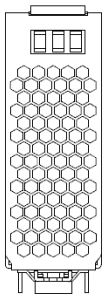
Side View



Front View



Side View



Bottom View

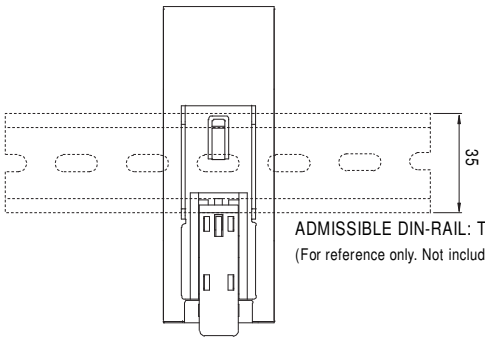
Terminal Pin No. Assignment (TB1)

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 Instructions



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

Rear View

For installation details, please refer to the USER MANUAL
www.procontechnology.com.au/files/mwmanual.pdf
www.meanwell.com/Upload/PDF/NDR-120/NDR%20DIN%20rail.pdf