

# NDR Power Supply Series

120/240 W small form factor power supply for DIN-rail mounted products



## Features and Benefits

- DIN-rail mounted power supply
- Slim form factor that is ideal for cabinet installation
- Universal AC power input
- High power conversion efficiency

## Certifications



## Introduction

The NDR Series of DIN rail power supplies is designed specifically for use in industrial applications. The 40 to 63 mm slim form-factor enables the power supplies to be easily installed in small and confined spaces such as cabinets. The broad operating temperature range of -20 to 70°C means they are capable of operating in harsh environments. The NDR Series has an AC input range from 90 VAC to 264 VAC, and conforms to the EN 61000-3-2 standard. In addition, these power supplies feature constant current mode to provide overload protection.

## Specifications

### Output Power Parameters

Wattage	NDR-120-24: 120 W NDR-120-48: 120 W NDR-240-48: 240 W
Voltage	NDR-120-24: 24 VDC NDR-120-48: 48 VDC NDR-240-48: 48 VDC
Current Rating	NDR-120-24: 0 to 5 A NDR-120-48: 0 to 2.5 A NDR-240-48: 0 to 5 A
Ripple and Noise	NDR-120-24: 120 mVp-p NDR-120-48: 150 mVp-p NDR-240-48: 150 mVp-p
Voltage Adjustment Range	NDR-120-24: 24 to 28 VDC NDR-120-48: 48 to 55 VDC NDR-240-48: 48 to 55 VDC

Setup/Rise Time at Full Load	NDR-120-24: 2500 ms, 60 ms at 115 VAC NDR-120-24: 1200 ms, 60 ms at 230 VAC NDR-120-48: 2500 ms, 60 ms at 115 VAC NDR-120-48: 1200 ms, 60 ms at 230 VAC NDR-240-48: 3000 ms, 100 ms at 115 VAC NDR-240-48: 1500 ms, 100 ms at 230 VAC
Typical Hold Up Time at Full Load	NDR-120-24: 10 ms at 115 VAC NDR-120-24: 16 ms at 230 VAC NDR-120-48: 10 ms at 115 VAC NDR-120-48: 16 ms at 230 VAC NDR-240-48: 22 ms at 115 VAC NDR-240-48: 28 ms at 230 VAC
<b>Input Power Parameters</b>	
Typical Efficiency	NDR-120-24: 88% NDR-120-48: 89% NDR-240-48: 90%
Typical Current	NDR-120-24: 1.3 A @ 230 VAC, 2.25 A @ 115 VAC NDR-120-48: 1.3 A @ 230 VAC, 2.25 A @ 115 VAC NDR-240-48: 1.3 A @ 230 VAC, 2.5 A @ 115 VAC
Voltage Range	90 to 264 VAC (47 to 63 Hz) 127 to 370 VDC
Inrush Current (cold start)	35 A @ 230 VAC, 20 A @ 115 VAC
<b>Overload Protection</b>	
Rated Output Power	105 to 160%
Protection Type	Constant current limiting, recovers automatically after fault condition is removed
<b>Overvoltage Protection</b>	
Over-Voltage Range	NDR-120-24: 29 to 33 V NDR-120-48: 56 to 65 V NDR-240-48: 56 to 65 V
Protection Type	Shut down operating voltage, repower on to recover
<b>Standards and Certifications</b>	
Safety	UL 508, EN 62368-1, IEC 62368-1
EMC	EN 55032/24, EN 61000-3-2 Class A, EN 61000-3-3
EMS	IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 2 kV IEC 61000-4-5 Surge: Power: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF IEC 61000-4-11 DIPs
<b>Physical Characteristics</b>	
Dimensions	NDR-120-24: 123.75 x 125.20 x 40 mm (4.87 x 4.93 x 1.57 in) NDR-120-48: 123.75 x 125.20 x 40 mm (4.87 x 4.93 x 1.57 in) NDR-240-48: 127.81 x 123.75 x 63 mm (5.03 x 4.87 x 2.48 in)
Weight	NDR-120-24: 500 g (1.10 lb) NDR-120-48: 500 g (1.10 lb) NDR-240-48: 900 g (1.98 lb)

## Environmental Limits

Operating Temperature	-20 to 70°C (-4 to 158°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	20 to 95% (non-condensing)
Max. Operating Temperature at Full Load	NDR-120-48: 45°C (113°F) NDR-120-24: 45°C (113°F) NDR-240-48: 50°C (122°F)

## MTBF

Standards	MIL-HDBK-217F
Time	NDR-120-24: 453,334 hrs NDR-120-48: 453,334 hrs NDR-240-48: 230,206 hrs

## Warranty

Warranty Period	3 years
Details	See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a>

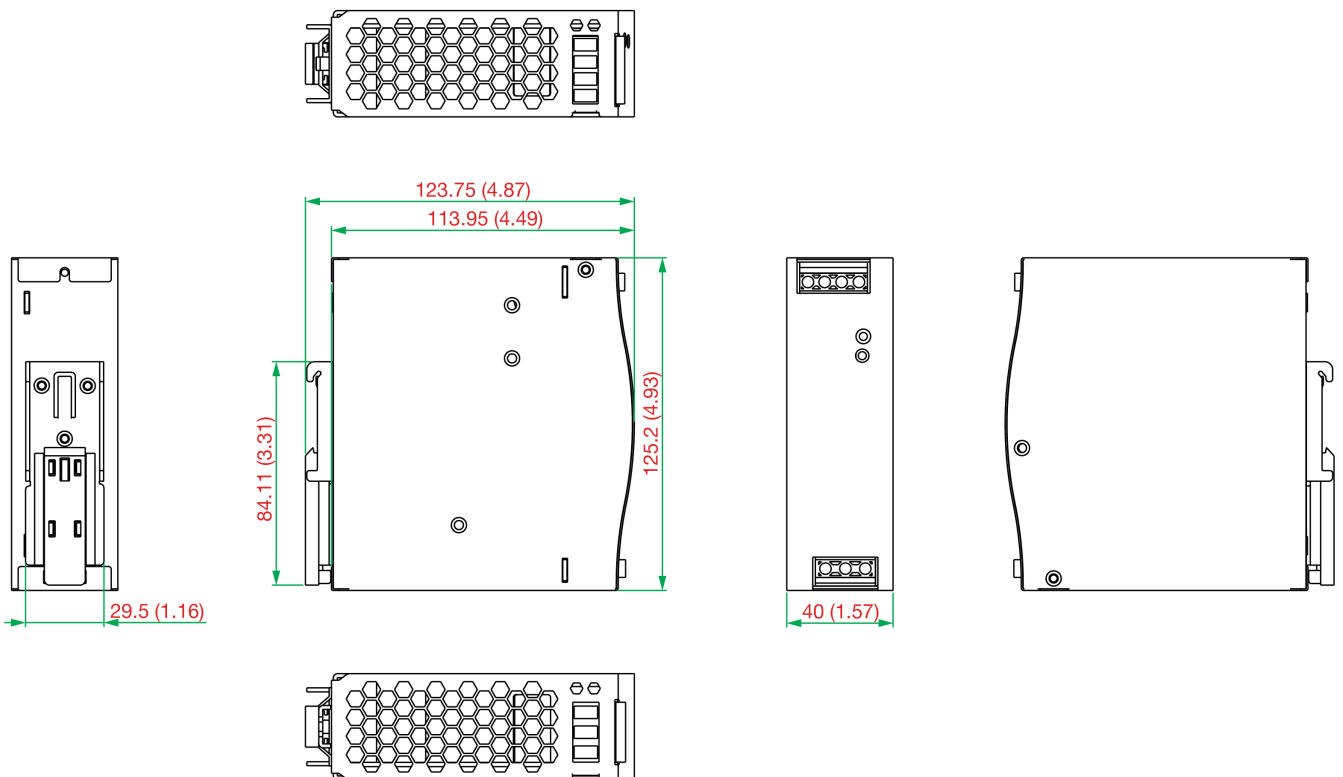
## Package Contents

Device	1 x NDR Power Supply Series power supply
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## Dimensions

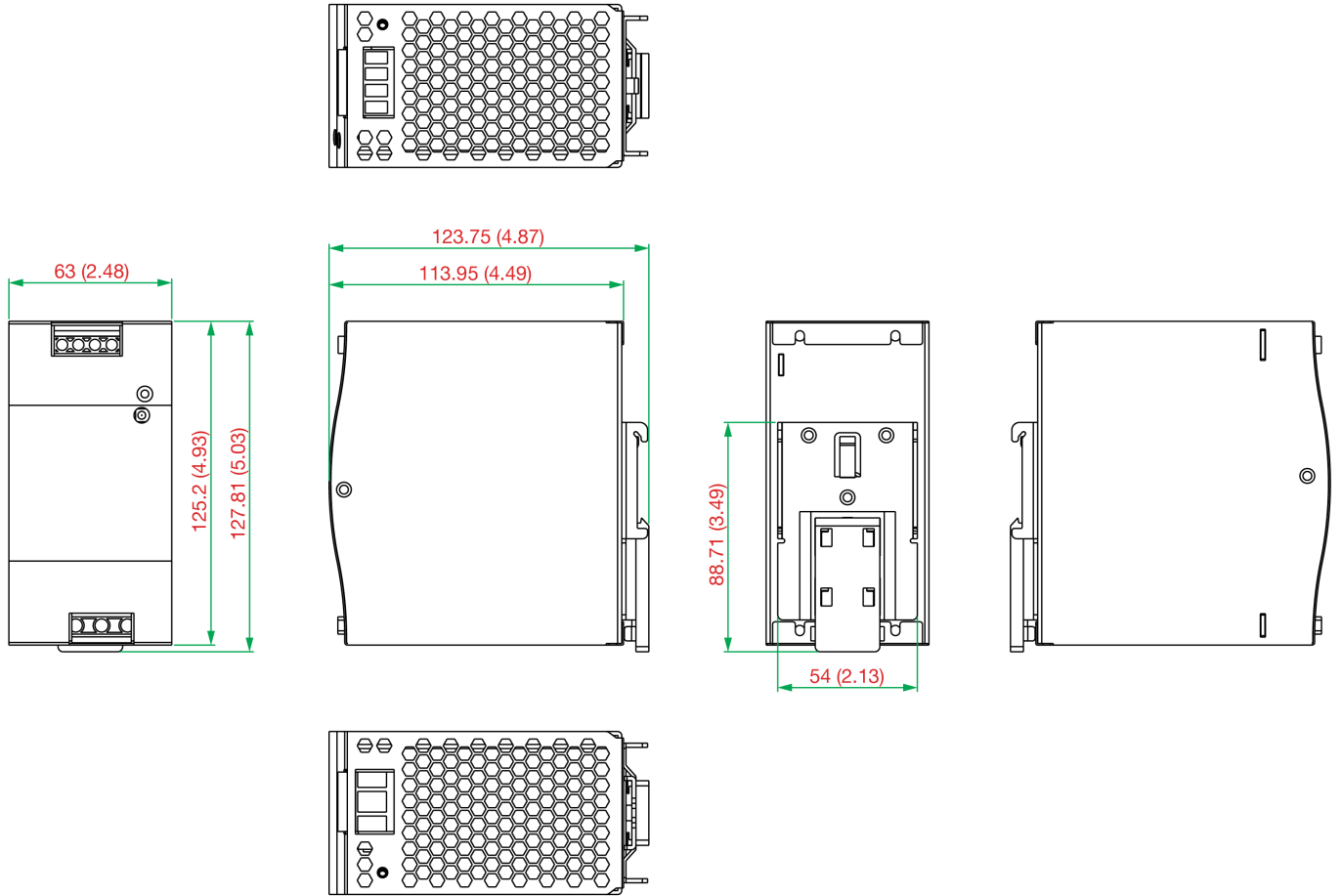
### NDR-120 Series

Unit: mm (inch)



## NDR-240 Series

Unit: mm (inch)



## Ordering Information

Model Name	Input Voltage	Wattage	Output Voltage	Rated Current	Operating Temp.
NDR-120-24	90 to 264 VAC 47 to 63 Hz 120 to 370 VDC	120 W	24 V	5 A	-20 to 65°C
NDR-120-48	90 to 264 VAC 47 to 63 Hz 120 to 370 VDC	120 W	48 V	2.5 A	-20 to 65°C
NDR-240-48	90 to 264 VAC 47 to 63 Hz 120 to 370 VDC	240 W	48 V	5 A	-20 to 70°C

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