

# 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 devices have a metal housing, an AC input range from 90 VAC to 264 VAC, and conform 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>Physical Characteristics</b>	
Housing	Metal
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)
<b>Environmental Limits</b>	
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)

## Standards and Certifications

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

## 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>

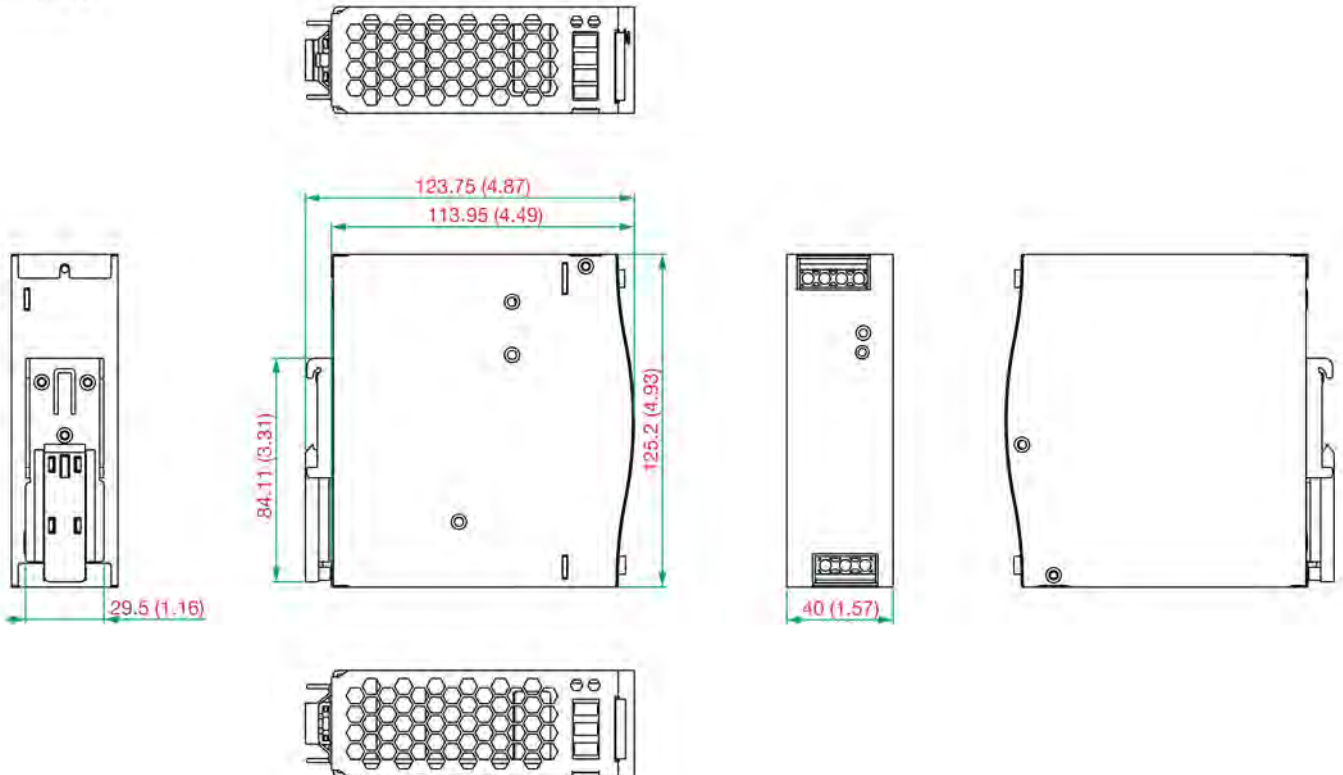
## Package Contents

Device	1 x NDR Power Supply Series power supply
--------	--

## Dimensions

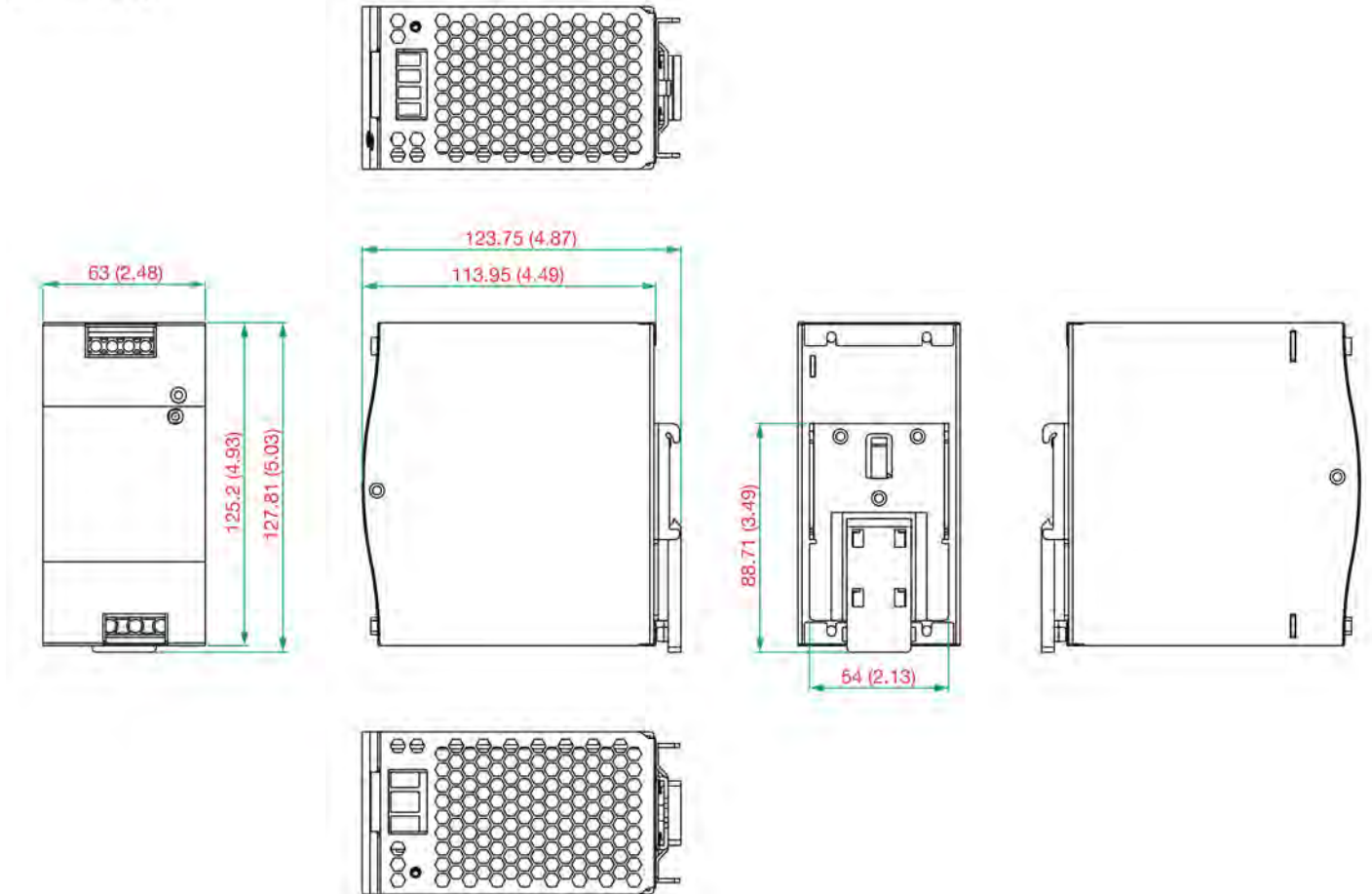
### NDR-120 Series

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 70°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 70°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

© Moxa Inc. All rights reserved. Updated Mar 31, 2020.

This document and any portion thereof may not be reproduced or used in any manner whatsoever without the express written permission of Moxa Inc. Product specifications subject to change without notice. Visit our website for the most up-to-date product information.