

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 |

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| 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 |
| Input Power Parameters | |
| 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 |
| Overload Protection | |
| Rated Output Power | 105 to 160% |
| Protection Type | Constant current limiting, recovers automatically after fault condition is removed |
| Overvoltage Protection | |
| 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 |
| Physical Characteristics | |
| 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) |
| 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) |

Standards and Certifications

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| 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

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| Warranty Period | 3 years |
| Details | See www.moxa.com/warranty |

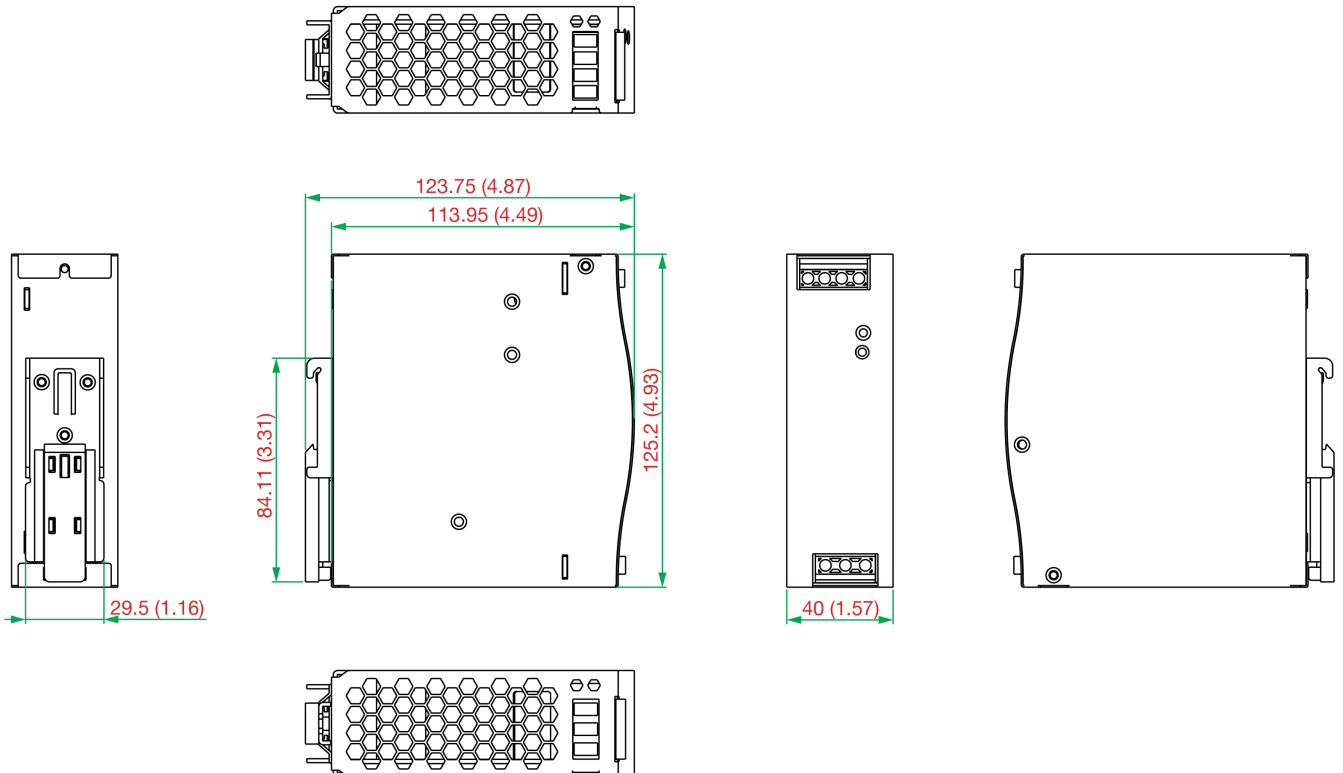
Package Contents

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

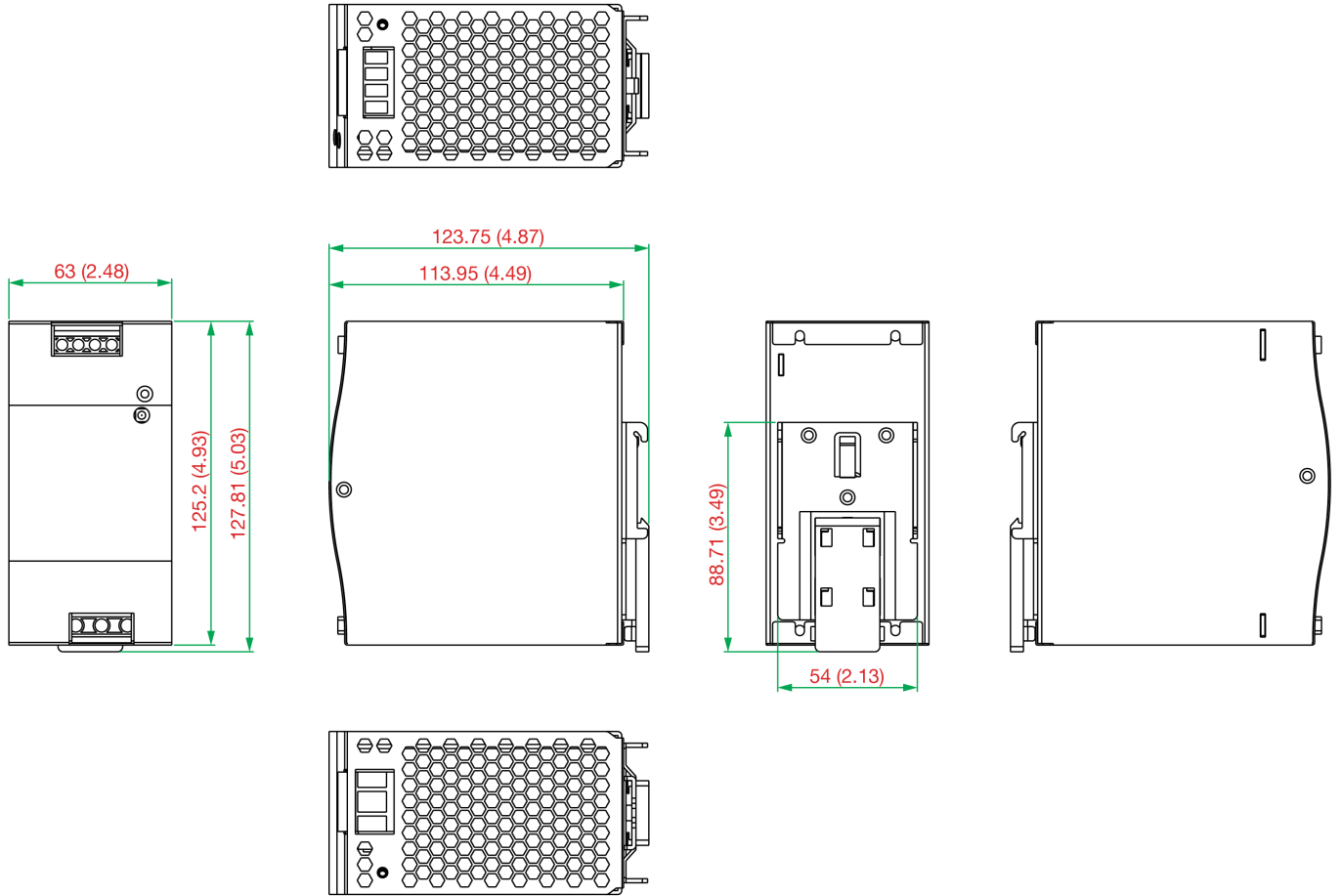
NDR-120 Series

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 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 |

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