

MDR Power Supply Series

40/60 W slim form factor power supplies for DIN-rail mounted products



Features and Benefits

- High inrush current protection
- 24 VDC power output
- -20 to 70°C operating temperature range
- 85 to 264 VAC or 120 to 370 VDC input

Certifications



Introduction

The MDR Power Supply Series supports inrush current protection of 30 A at 115 VAC and 60 A at 230 VAC. The series has an operating temperature range of -20 to 70°C and a three year warranty, which ensures suitability for operating in harsh environments. In addition, the MDR Series has passed a 100% full load burn-in test, is UL/CUL listed, TÜV/CB certified, and CE marked. There are also models available with output ratings from 40 W to 60 W with 24 VDC output.

Specifications

Output Power Parameters

Wattage	MDR-40-24: 40 W MDR-60-24: 60 W
Voltage	24 VDC
Current Rating	MDR-40-24: 0 to 1.7 A MDR-60-24: 0 to 2.5 A
Ripple and Noise	150 mVp-p
Voltage Adjustment Range	24 to 30 VDC
Setup/Rise Time at Full Load	500 ms, 30 ms at 115 VAC 500 ms, 30 ms at 230 VAC
Typical Hold Up Time at Full Load	20 ms at 115 VAC 50 ms at 230 VAC

Input Power Parameters

Voltage Range	85 to 264 VAC (47 to 63 Hz) 120 to 370 VDC
Typical Efficiency	88%
Typical Current	MDR-40-24: 0.7 A @ 230 VAC, 1.1 A @ 115 VAC MDR-60-24: 1.0 A @ 230 VAC, 1.8 A @ 115 VAC
Typical Current (cold start)	60 A @ 230 VAC, 30 A @ 115 VAC

Overload Protection

Rated Output Power	105 to 150%
Protection Type	Constant current limiting, recovers automatically after fault condition is removed

Overvoltage Protection

Overvoltage Range	31.2 to 36 V
Protection Type	Shut down operating voltage, repower on to recover

Physical Characteristics

Dimensions	40 x 90 x 100 mm (1.57 x 3.54 x 3.94 in)
Weight	MDR-40-24: 260 g (0.57 lb) MDR-60-24: 280 g (0.62 lb)

Environmental Limits

Operating Temperature	-20 to 70°C (-4 to 158°F)
Max. Operating Temperature at Full Load	MDR-40-24: 60°C MDR-60-24: 55°C
Ambient Relative Humidity	20 to 90% (non-condensing)

Standards and Certifications

Safety	UL 508 EN 62368-1 IEC 62368-1
EMC	EN 55032/35 EN 61000-3-2 Class A EN 61000-3-3 EN IEC 61204-3 EN IEC 61000-6-2
EMS	IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 2 kV IEC 61000-4-5 Surge: Power: 4 kV IEC 61000-4-6 CS: 0.15 kHz to 80 MHz: 10 Vrms IEC 61000-4-8 PFMF: 30 A/m IEC 61000-4-11

Warranty

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

Package Contents

Device	1 x MDR Power Supply Series power supply
Documentation	1 x warranty card

Ordering Information

Model Name	Input Voltage	Output Voltage	Output Wattage	Operating Temp.
MDR-40-24	85 to 264 VAC 120 to 370 VDC	24 VDC	40 W	-20 to 70°C
MDR-60-24	85 to 264 VAC 120 to 370 VDC	24 VDC	60 W	-20 to 70°C

