

DR Power Supply Series

24/48 VDC power supply for DIN-rail mounted products



Features and Benefits

- 24/48 VDC power output
- Wide-range 40 to 120 W power wattage
- -10 to 60°C operating temperature ability

Certifications



Introduction

The DR Power Supply Series provides a reliable 24/48 VDC power source for industrial control systems. The Series has rugged, compact enclosures, and can operate reliably in temperatures between -10 and 60°C. The DR Power Supply Series has passed a 100% full load burn-in test and is UL/CUL listed, TÜV/CB certified, and CE marked.

Specifications

Output Power Parameters

Wattage	DR-4524: 48 W DR-75-24: 76.8 W DR-120-24: 120 W DR-75-48: 76.8 W DR-120-48: 120 W
Voltage	DR-4524: 24 VDC DR-75-24: 24 VDC DR-120-24: 24 VDC DR-75-48: 48 VDC DR-120-48: 48 VDC
Current Rating	DR-4524: 0 to 2 A DR-75-24: 0 to 3.2 A DR-120-24: 0 to 5 A DR-75-48: 0 to 1.6 A DR-120-48: 0 to 2.5 A
Ripple and Noise	DR-4524: 480 mVp-p DR-75-24: 150 mVp-p DR-120-24: 80 mVp-p DR-75-48: 240 mVp-p DR-120-48: 100 mVp-p
Voltage Adjustment Range	DR-4524: 21.6 to 26.4 VDC DR-75-24: 24 to 28 VDC DR-120-24: 24 to 28 VDC DR-75-48: 48 to 53 VDC DR-120-48: 48 to 53 VDC

Setup/Rise Time at Full Load	DR-75-48: 1000 ms, 60 ms at 230 VAC DR-75-24: 1800 ms, 60 ms at 115 VAC DR-120-48: 500 ms, 70 ms at 115 VAC DR-120-48: 500 ms, 70 ms at 230 VAC DR-120-24: 500 ms, 70 ms at 115 VAC DR-4524: 800 ms, 60 ms at 230 VAC DR-120-24: 500 ms, 70 ms at 230 VAC DR-75-48: 1800 ms, 60 ms at 115 VAC DR-75-24: 1000 ms, 60 ms at 230 VAC
Typical Hold Up Time at Full Load	DR-120-48: 32 ms at 115 VAC DR-75-48: 12 ms at 115 VAC DR-75-24: 12 ms at 115 VAC DR-120-24: 36 ms at 230 VAC DR-120-24: 32 ms at 115 VAC DR-4524: 60 ms at 230 VAC DR-120-48: 36 ms at 230 VAC DR-75-48: 60 ms at 230 VAC DR-75-24: 60 ms at 230 VAC

Input Power Parameters

Voltage Range	DR-4524: 85 to 264 VAC (47 to 63 Hz) DR-75-24: 85 to 264 VAC (47 to 63 Hz) DR-120-24: 85 to 132 VAC (47 to 63 Hz) DR-75-48: 85 to 264 VAC (47 to 63 Hz) DR-120-48: 88 to 132 VAC (47 to 63 Hz) DR-120-24: 176 to 264 VAC (47 to 63 Hz) DR-120-48: 176 to 264 VAC (47 to 63 Hz) DR-4524: 120 to 370 VDC DR-75-24: 120 to 370 VDC DR-120-24: 248 to 370 VDC DR-75-48: 120 to 370 VDC DR-120-48: 248 to 370 VDC
Typical Efficiency	DR-4524: 80% DR-75-24: 80% DR-120-24: 84% DR-75-48: 81% DR-120-48: 85%
Typical Current	DR-4524: 0.75 A @ 230 VAC, 1.5 A @ 115 VAC DR-75-24: 0.96 A @ 230 VAC, 1.6 A @ 115 VAC DR-120-24: 1.6 A @ 230 VAC, 2.6 A @ 115 VAC DR-75-48: 0.96 A @ 230 VAC, 1.6 A @ 115 VAC DR-120-48: 1.6 A @ 230 VAC, 2.6 A @ 115 VAC
Inrush Current (cold start)	DR-4524: 56 A @ 230 VAC, 28 A @ 115 VAC DR-75-24: 40 A @ 230 VAC, 20 A @ 115 VAC DR-120-24: 40 A @ 230 VAC, 20 A @ 115 VAC DR-75-48: 40 A @ 230 VAC, 20 A @ 115 VAC DR-120-48: 40 A @ 230 VAC, 20 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

Over-Voltage Range	DR-4524: 27.6 to 32.4 V DR-75-24: 29 to 33 V DR-120-24: 29 to 33 V DR-75-48: 58 to 65 V DR-120-48: 58 to 65 V
Protection Type	Shut down operating voltage, repower on to recover

Physical Characteristics

Dimensions	DR-4524: 78 x 67 x 93 mm (3.07 x 2.64 x 3.66 in) DR-75-24: 55.5 x 100 x 125.2 mm (2.19 x 3.94 x 4.93 in) DR-120-24: 65.5 x 100 x 125.2 mm (2.56 x 3.94 x 4.93 in) DR-75-48: 55.5 x 100 x 125.2 mm (2.19 x 3.94 x 4.93 in) DR-120-48: 65.5 x 100 x 125.2 mm (2.56 x 3.94 x 4.93 in)
Weight	DR-4524: 400 g (0.88 lb) DR-75-24: 550 g (1.21 lb) DR-120-24: 650 g (1.43 lb) DR-75-48: 550 g (1.21 lb) DR-120-48: 650 g (1.43 lb)

Environmental Limits

Operating Temperature	DR-4524: -10 to 50°C (14 to 122°F) DR-75-24: -10 to 60°C (14 to 140°F) DR-120-24: -10 to 60°C (14 to 140°F) DR-75-48: -10 to 60°C (14 to 140°F) DR-120-48: -10 to 60°C (14 to 140°F)
Max. Operating Temperature at Full Load	45°C
Ambient Relative Humidity	20 to 90% (non-condensing)

Standards and Certifications

EMC	EN 50082-2, EN 55022 Class B, EN 61000-3-2 Class A, ENV 50204
Safety	EN 60950-1

Warranty

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

Package Contents

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

Ordering Information

Model Name	Input Voltage	Output Voltage	Output Wattage	Operating Temp.
DR-4524	85 to 264 VAC 120 to 370 VDC	24 VDC	48 W	-10 to 50°C
DR-75-24	85 to 264 VAC 120 to 370 VDC	24 VDC	76.8 W	10 to 60°C
DR-120-24	88 to 132 VAC 176 to 264 VAC 248 to 370 VDC	24 VDC	120 W	10 to 60°C
DR-75-48	85 to 264 VAC (27 to 63 Hz) 120 to 370 VDC	48 VDC	76.8 W	-10 to 60°C
DR-120-48	88 to 132 VAC 176 to 264 VAC (47 to 63 Hz) by switch 248 to 370 VDC	48 VDC	120 W	-10 to 60°C

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