

MDR Series

20 – 100 W AC/DC DIN Rail Power Supplies

CoolPower
Solutions



- Universal AC input / Full range
- Can be installed on DIN rail TS-35/ 7.5 or 15
- Protections: Short circuit / Over load / Over voltage
- No load power consumption <0.75W (<1W for MDR-100)
- LED indicator for power on
- NES class 2 / LPS compliant (selected models)
- Built - in active PFC and over temp. protection (MDR-100)
- DC OK signal output (MDR-20)
- DC OK relay contact (MDR-40/60/100)
- Cooling by free air convection
- 100% full load burn-in test
- 3 years warranty

Specifications

Model	MDR20	MDR40	MDR60	MDR100	
Output	Power	20 W	40 W	60 W	100 W
	Current	See table below			
	Ripple & Noise	See table below			
	Efficiency	See table below			
	Voltage adj. range	±10% rated output V		0 ~ +20% rated output Voltage	
	Setuo, rise time	500ms, 30ms /230VAC at full load			3000ms, 30ms
	Hold time (Typ.)	50ms/230VAC at full load			50 ms
Input	Voltage range	85 ~ 264VAC	120 ~ 370VDC		
	Frequency range	47 ~ 63Hz			
	Efficiency (Typ.)	72 %	77 %	77 %	80 %
	AC current (Typ.)	1.5A/115VAC	0.75A/230VAC		
	Inrush current (Typ.)	Cold start 20A/115VAC	40A/230VAC		
	Leakage current	<1mA / 240VAC			
Protection	Over load	105 ~ 160% constant current limiting, auto-recovery	105%~150% constant current limiting, auto-recovery	105%~150% constant current limiting, auto-recovery	95%~150% constant current limiting, auto-recovery
	Over voltage	115%~135% rated output voltage	125%~150% rated output voltage	125%~150% rated output voltage	125%~150% rated output voltage
Environment	Working temp.	-20~50·C@100%, 70·C@50% load	-20~60·C@100%, 70·C@60% load	-20~55·C@100%, 70·C@60% load (5V only: - 20~45·C@100%, 70·C@50% load)	-20~50·C@100%, 70·C@50% load
	Working humidity	20 ~ 90% RH non-condensing			
Safety & EMC (note 4)	Safety standards	UL508, TUV EN60950-1 Approved, NEC class 2 / LPS compliant (MDR-20, MDR-40-12/24/48, MDR-60-12/24/48, MDR-100-24/48)			
	Withstand voltage	I/P-O/P:3KVAC, I/P-FG:1.5KVAC, 1minute			
	EMI conduction & rafiation	EN55022 class B, EN61000-3-2,-3, ENV50204, EN61000-4-2,3,4,5,6,8,11, EN61204-3, EN61000-6-2 heavy industry level (MDR-40/60/100)			
Others	DC OK Signal	Open collector	Relay contact	Relay contact	Relay contact
	Connection	I/P: 3 poles, O/P: 3 poles screw DIN terminal	IP: 3 poles, O/P: 6 poles screw DIN terminal	IP: 3 poles, O/P: 6 poles screw DIN terminal	IP: 3 poles, O/P: 6 poles screw DIN terminal
	Dimension (LxWxH)	22,5 x 90 x 100 mm	40 x 90 x 100 mm	40 x 90 x 100 mm	55 x 90 x 100 mm
	Weight	190 g	300 g	330 g	

Specifications

MDR-20 Series				
Model No.	Output	Tol.	R&N	Effi.
MDR-20-5	5V, 0-3.0A	±2%	80mV	76%
MDR-20-12	12V, 0-1.67A	±1%	120mV	80%
MDR-20-15	15V, 0-1.34A	±1%	120mV	81%
MDR-20-24	24V, 0-1.00A	±1%	150mV	84%

MDR-60 Series				
Model No.	Output	Tol.	R&N	Effi.
MDR-60-5	5V, 0-10.0A	±2%	80mV	78%
MDR-60-12	12V, 0-5.00A	±1%	120mV	86%
MDR-60-24	24V, 0-2.50A	±1%	150mV	88%
MDR-60-48	48V, 0-1.25A	±1%	200mV	87%

MDR-40 Series				
Model No.	Output	Tol.	R&N	Effi.
MDR-40-5	5V, 0-6.00A	±2%	80mV	78%
MDR-40-12	12V, 0-3.33A	±1%	120mV	86%
MDR-40-24	24V, 0-1.70A	±1%	150mV	88%
MDR-40-48	48V, 0-0.83A	±1%	200mV	88%

MDR-100 Series				
Model No.	Output	Tol.	R&N	Effi.
MDR-100-12	12V, 0-8.0A	±1%	120mV	87%
MDR-100-24	24V, 0-4.0A	±1%	150mV	88%
MDR-100-48	48V, 0-2.0A	±1%	200mV	87%

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