MDR100 Series

100 W AC/DC Switching Power Supply – DIN rail

CoolPower Solutions

- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Can be installed on DIN rail TS-35/7.5 or 15
- ZCS/ZVS technology to reduce power dissipation
- DC OK relay contact
- No load power consumption <1W



Electrical specifications

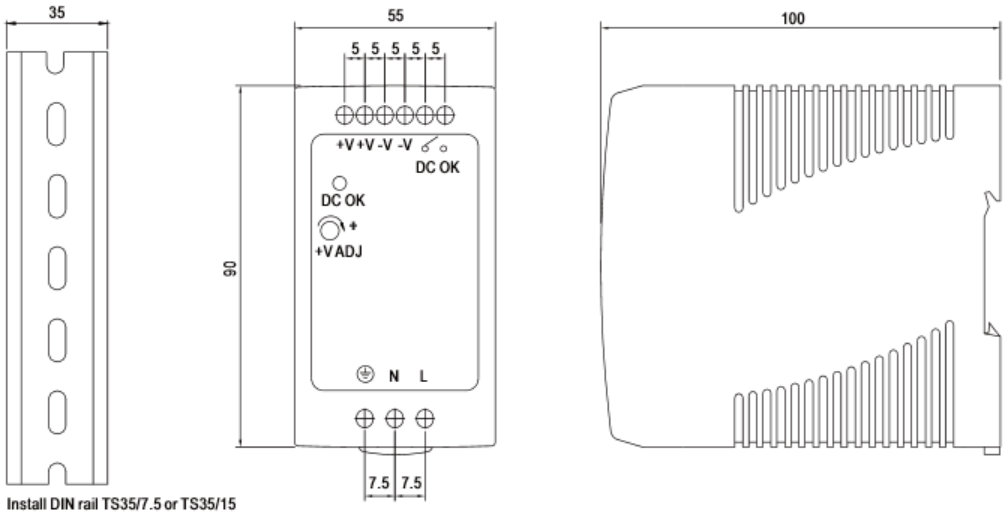
Model No.		MDR100-12	MDR100-24	MDR100-48
Max Output Wattage (W)		90W	96W	96W
Input	Voltage	85-264 VAC or 120-370 VDC		
	Frequency (Hz)	47-65 Hz		
	Power Factor	PF≥0,95/230VAC, PF≥0,98/115VAC at full load		
	Current (Full load)	1,3 A max. (115 VAC) / 0,8 A max. (230 VAC)		
	Inrush Current (typ)	Cold start 30 A (115 VAC) / 60 A (230 VAC)		
	Leakage Current	<1 mA /240 VAC		
Output	Voltage (V.DC.)	12V	24V	48V
	Voltage adjustable range	12 - 15V	24 - 30V	48 - 56V
	Rated Current	7,5 A	4 A	2 A
	Line Regulation	±1%	±1%	±1%
	Load Regulation	±1%	±1%	±1%
	Ripple % Noise (max) (Note2)	$120mV_{p-p}$	$150mV_{p-p}$	$200mV_{p-p}$
	Efficiency (typ)	83%	86%	87%
	Hold-up Time	50 ms / 230 VAC		
	Setup, Rise Time (Note 5)	3000 ms, 50 ms / 230 VAC		
Protection	Over Load	105% - 150% rated output power		
		Type: Constant current limiting, recovers automatically after fault condition is removed		
	Over Voltage	15,6 ~ 18,0V	31,2 ~ 36,0V	57,6 ~ 64,8V
		Protection type : Shut down o/p voltage, re-power on to recover		
	Over Temperature	Shut down o/p voltage, auto-recovery or re-power on to recover		
Function	DC OK Signal	Relay contact rating(max.): 30V/1A resistive		
Environment	Operating Temperature	-10°C…+60°C (with derating), 20 ~ 90% RH non-condensing		
	Temperature coefficient	±0.03%/°C		
	MTBF	346 000 h @ 25°C (MIL-HDBK-217F)		
Physical	Dimension (L x W x H)	55 x 90 x 100 mm		
	Weight	420 g		
	Cooling Method	Free air convection		
Safety	Safety standards	UL508, TUV EN60950-1 approved		
	Withstand Voltage	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC		
	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH		
	EMC Emission	Compliance to EN55011, EN55032 (CISPR32), EN61204-3 Class B, EN61000-3-2,-3		
	EMC Immunity	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024,EN61000-6-2,EN61204-3, heavy industry level, criteria A		
Note	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25 of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 5. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.			

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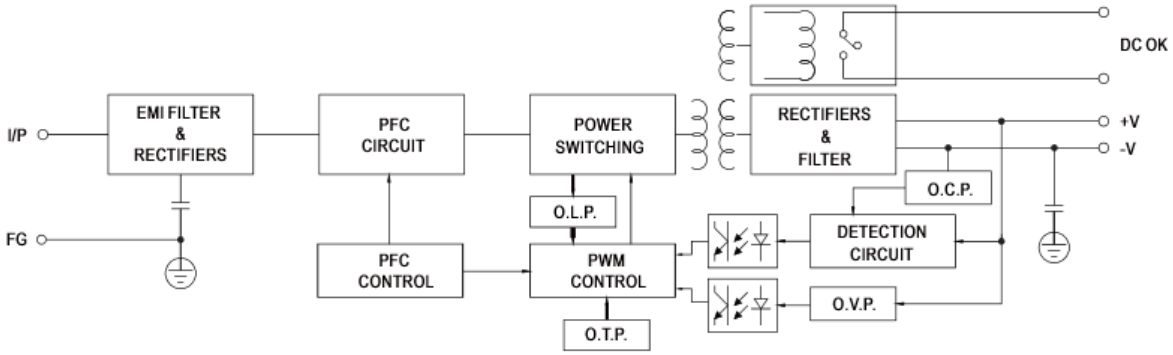
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Mechanical Specifications



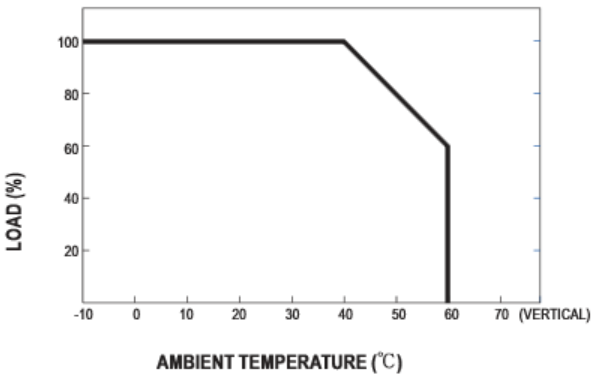
Block Diagramm



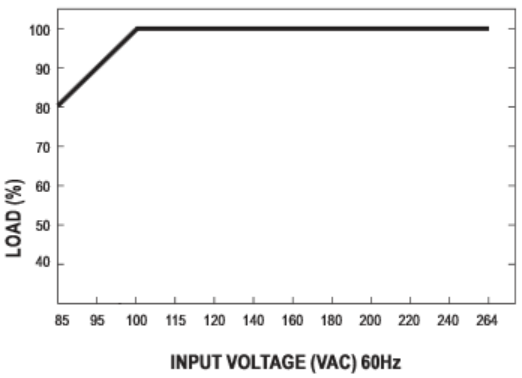
DC OK Relay Contact

Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.

Derating Curve



Output Derating VS Input Voltage



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