

# MDR-100 Series

## 96W Single Output Industrial DIN Rail Power Supply



### Features

- Universal AC input / Full range
- Protections: Short Circuit / Overload / Over voltage / Over Temperature
- ZCS/ZVS technology to reduce power dissipation
- Can be installed on DIN rail TS-35/7.5 or 15
- Cooling by free air convection
- LED indicator for power on
- DC OK relay contact
- No load power consumption <1W
- 100% full load burn-in test
- 3 years warranty



### Specification

INPUT	<b>Voltage</b>	85~264VAC 120~370VDC		
	<b>Frequency</b>	47 ~ 63 Hz		
	<b>Power Factor</b>	PF $\geq$ 0.95/230VAC PF $\geq$ 0.98/115VAC at full load		
	<b>Efficiency</b>	83%	86%	87%
	<b>AC Current (Typ.)</b>	1.3A/115VAC 0.8A/230VAC		
	<b>Inrush Current (Typ.)</b>	Cold start 30A/115VAC 60A/230VAC		
	<b>Leakage Current</b>	<1mA/240VAC		
OUTPUT	<b>MODEL No.</b>	<b>MDR-100-12</b>	<b>MDR-100-24</b>	<b>MDR-100-48</b>
	<b>Voltage</b>	12V	24V	48V
	<b>Rated Current</b>	7.5A	4A	2A
	<b>Current Range</b>	0~7.5A	0~4A	0~2A
	<b>Rated Power</b>	90W	96W	96W
	<b>Ripple Noise MAX.</b>	120mVp-p	150mVp-p	200mVp-p
	<b>Voltage Adjustment Range</b>	12~15V	24~30V	48~56V
	<b>Voltage Tolerance</b>	$\pm$ 1.0%	$\pm$ 1.0%	$\pm$ 1.0%
	<b>Line Regulation</b>	$\pm$ 1.0%	$\pm$ 1.0%	$\pm$ 1.0%
	<b>Load Regulation</b>	$\pm$ 1.0%	$\pm$ 1.0%	$\pm$ 1.0%
	<b>Setup Rise Time</b>	3000ms, 50ms/230VAC 3000ms, 50ms/115VAC at full load		
<b>Holdup Time (Typ.)</b>	50ms/230VAC 20ms/115VAC at full load			
PROTECTION	<b>Over Load</b>	105~150% rated output power Protection Type: Constant current limiting, recovers automatically after fault condition is removed		
	<b>Over Voltage</b>	15.6~18V	31.2~36V	57.6~64.8V
	<b>Over Temperature</b>	Shut down o/p voltage, auto-recovery or re-power on to recover		
FUNCTION	<b>DC OK Signal</b>	Relay contact rating (max): 30V/1A resistive		
ENVIRONMENT	<b>Working Temperature</b>	-20~+60°C (Refer to "Derating Curve")		
	<b>Working Humidity</b>	20~90% RH non-condensing		
	<b>Storage Temp., Humidity</b>	-40~ +85°C, 10~95%RH		
	<b>Temp. Co-efficient</b>	$\pm$ 0.03% / °C (0~50°C)		
SAFETY & EMC	<b>Vibration</b>	10~500Hz, 2G 10min./1cycle, 60 min. each along X, Y, Z axes; Mounting: compliance to IEC60068-2-6		
	<b>Safety Standards</b>	UL508, TUV EN60950-1 approved		
	<b>Withstand Voltage</b>	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC		
	<b>Isolation Resistance</b>	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms/500Vdc/25°C/70% RH		
	<b>EMC Emission</b>	Compliance to EN55011, EN55022 (CISPR22), EN61204-3, Class B, EN61000-3-2,-3		
OTHERS	<b>EMC Immunity</b>	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2, EN61204-3, heavy industry level, criteria A		
	<b>M.T.B.F.</b>	346K hrs min. MIL-HDBK-217F (25°C)		
	<b>Packaging</b>	0.42Kg; 30pcs/13.6Kg/0.82CUFT		

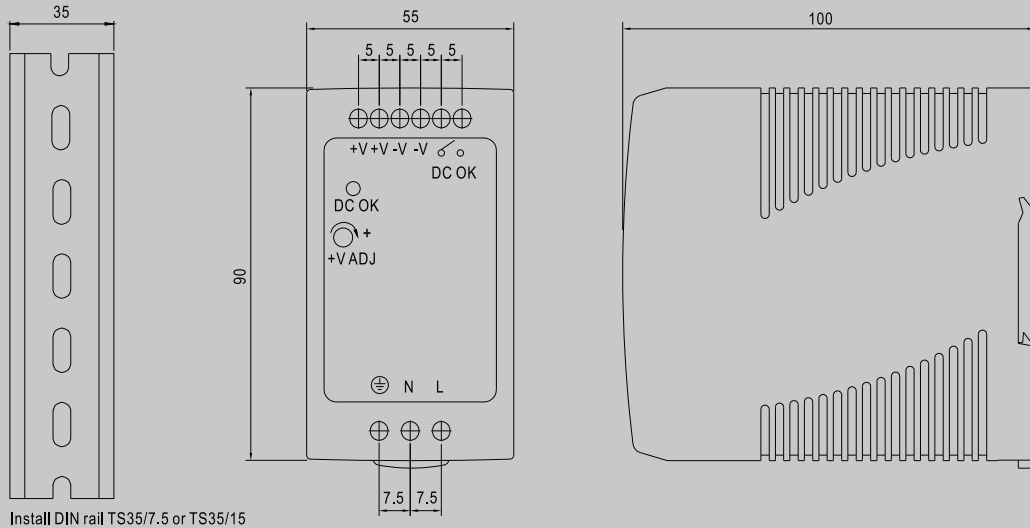
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple and noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
3. Tolerance: includes set up tolerance, line regulation and load regulation.
4. The power supply is considered as a component which will be installed with final equipment. The final equipment must re-confirmed that it still meets EMC Directives.  
For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."
5. Length of setup time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the setup time.
6. Derating maybe needed under low input voltages, please check the derating curve for more detail.

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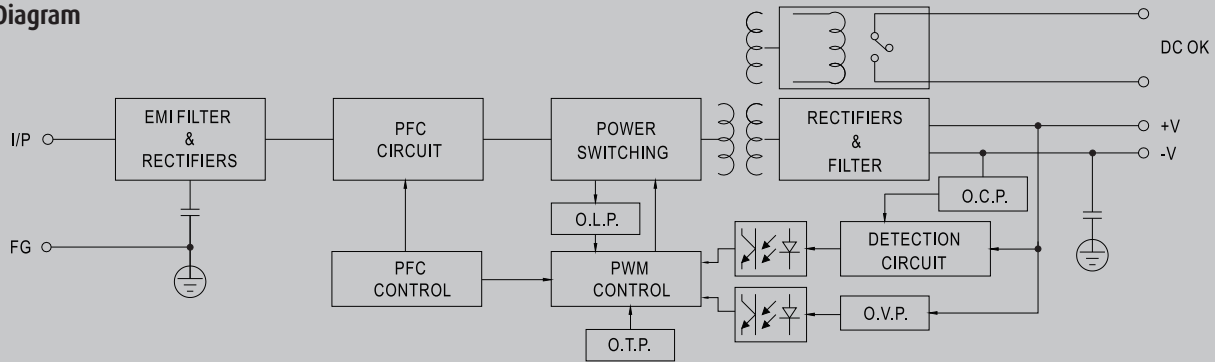
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### Mechanical Specification



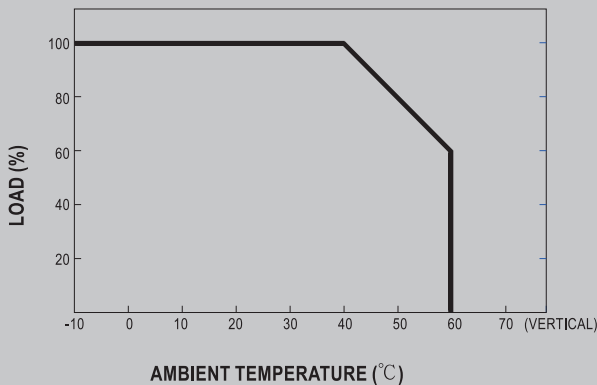
### Block Diagram



### 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



### Derating Curve

