96W Single Output Industrial DIN Rail Power Supply MDR-100 series

■ Features :

- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- ZCS/ZVS technology to reduce power dissipation
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- DC OK relay contact
- No load power consumption<1W
- NEC Class 2, limited power source (for 24V,48V only)
- LED indicator for power on
- 100% full load burn-in test
- 3 years warranty

SPECIFICATION

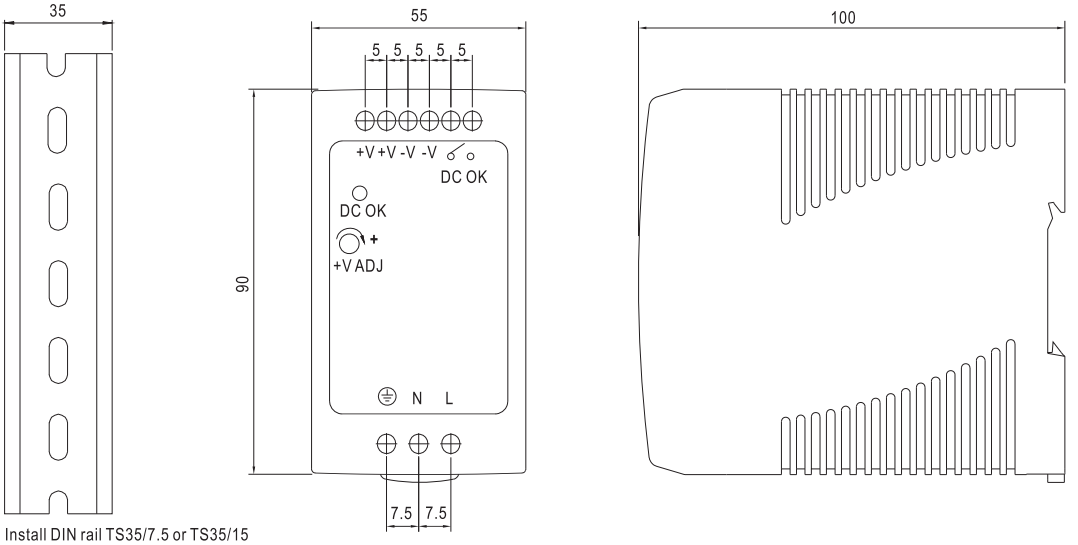
MODEL		MDR-100-12	MDR-100-24	MDR-100-48
OUTPUT	DC VOLTAGE	12V	24V	48V
	RATED CURRENT	7.5A	4A	2A
	CURRENT RANGE	0 ~ 7.5A	0 ~ 4A	0 ~ 2A
	RATED POWER	90W	96W	96W
	RIPPLE & NOISE (max.) Note.2	120mVp-p	150mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	12 ~ 15V	24 ~ 30V	48 ~ 56V
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±1.0%	±1.0%	±1.0%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%
	SETUP, RISE TIME Note.5	3000ms, 50ms/230VAC 3000ms, 50ms/115VAC at full load		
	HOLD UP TIME (Typ.)	50ms/230VAC 20ms/115VAC at full load		
INPUT	VOLTAGE RANGE Note.6	85 ~ 264VAC 120 ~ 370VDC		
	FREQUENCY RANGE	47 ~ 63Hz		
	POWER FACTOR (Typ.)	PF≧0.95/230VAC PF≧0.98/115VAC at full load		
	EFFICIENCY (Typ.)	85%	86%	88%
	AC CURRENT (Typ.)	1.3A/115VAC 0.8A/230VAC		
	INRUSH CURRENT (Typ.)	COLD START 30A/115VAC 60A/230VAC		
	LEAKAGE CURRENT	<1mA / 240VAC		
PROTECTION	OVERLOAD	105 ~ 150% rated output power		
		Protection type : Constant current limiting, recovers automatically after fault condition is removed		
	OVER VOLTAGE	15.6 ~ 18V	31.2 ~ 36V	57.6 ~ 64.8V
		Protection type : Shut down o/p voltage, re-power on to recover		
	OVER TEMPERATURE	90℃ ±10℃ (RTH2) detect on heatsink of power transistor		
		Protection type : Shut down o/p voltage, re-power on to recover		
FUNCTION	DC OK SIGNAL	Relay contact rating(max.): 30V/1A resistive		
ENVIRONMENT	WORKING TEMP.	-10 ~ +60℃ (Refer to output load derating curve)		
	WORKING HUMIDITY	20 ~ 90% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH		
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)		
	VIBRATION	Component : 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes ; Mounting : Compliance to IEC60068-2-6		
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL508, TUV EN60950-1 approved, design refer to NEC CLASS 2 (for 24V,48V only)		
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC		
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms/500VDC 25℃ 70%RH		
	EMI CONDUCTION & RADIATION	Compliance to EN55011, EN55022 (CISPR22), EN61204-3 Class B		
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3		
	EMS IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, ENV50204, EN55024, EN61000-6-2, EN61204-3, heavy industry level, criteria A		
OTHERS	MTBF	346K hrs min. MIL-HDBK-217F (25℃)		
	DIMENSION	55*90*100mm (W*H*D)		
	PACKING	0.42Kg; 30pcs/13.6Kg/0.82CUFT		

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.
6. Deating maybe needed under low input voltages, please check the derating curve for more detail.

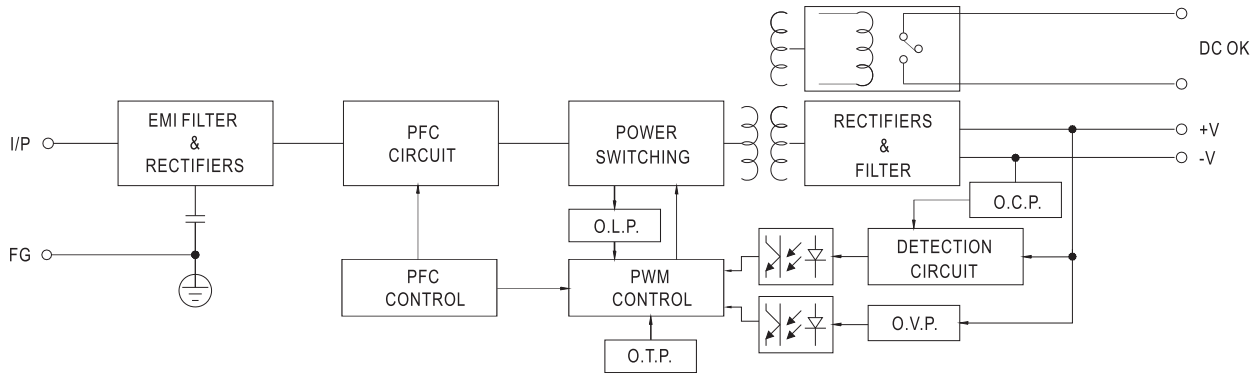
■ Mechanical Specification

Case No.973A Unit:mm



Install DIN rail TS35/7.5 or TS35/15

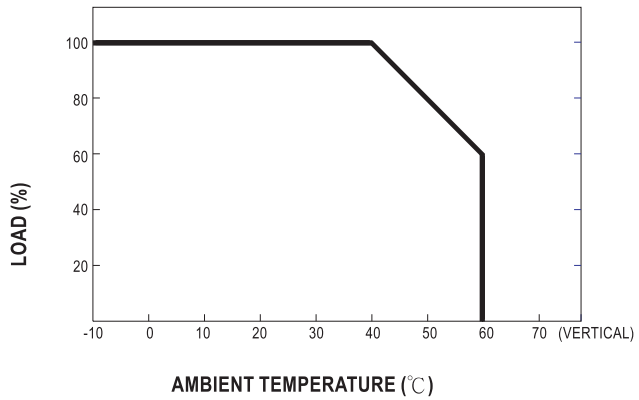
■ Block Diagram



■ DC OK Relay Contact

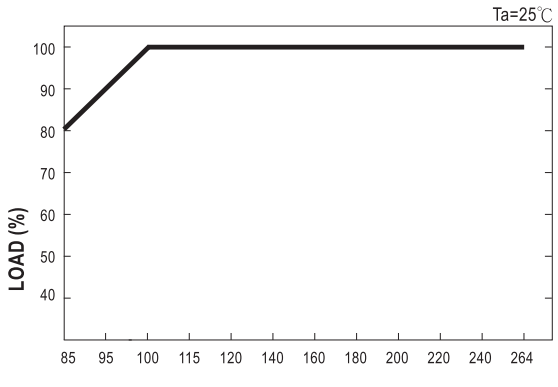
Contact Close	When the output voltage reaches the adjusted output voltage.
Contact Open	When the output voltage drop below 90% output voltage.
Contact Ratings (max.)	30V/1A resistive load

■ Derating Curve



AMBIENT TEMPERATURE (℃)

■ Output Derating VS Input Voltage



INPUT VOLTAGE (VAC) 60Hz