



■ 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

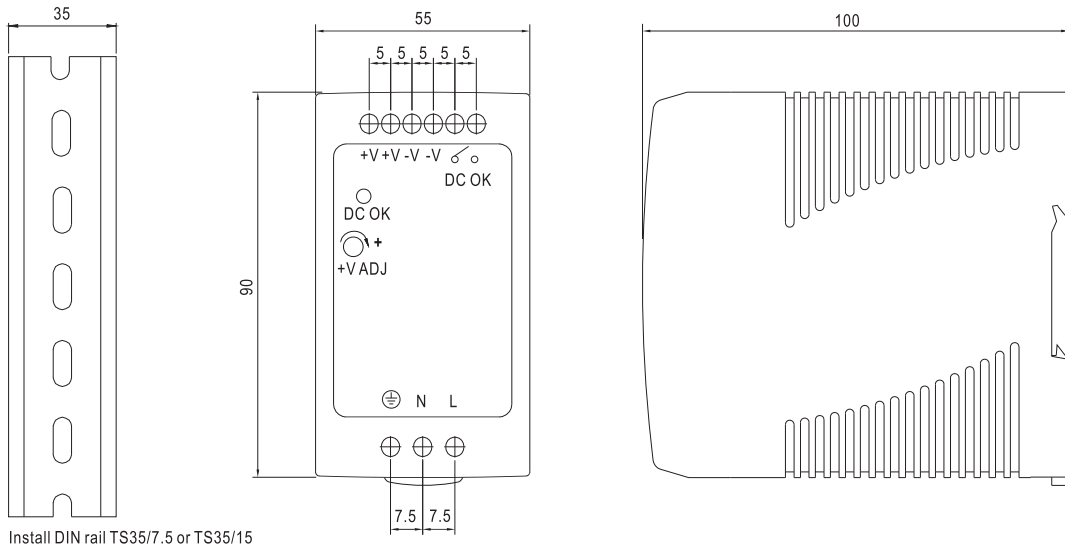


**SPECIFICATION**

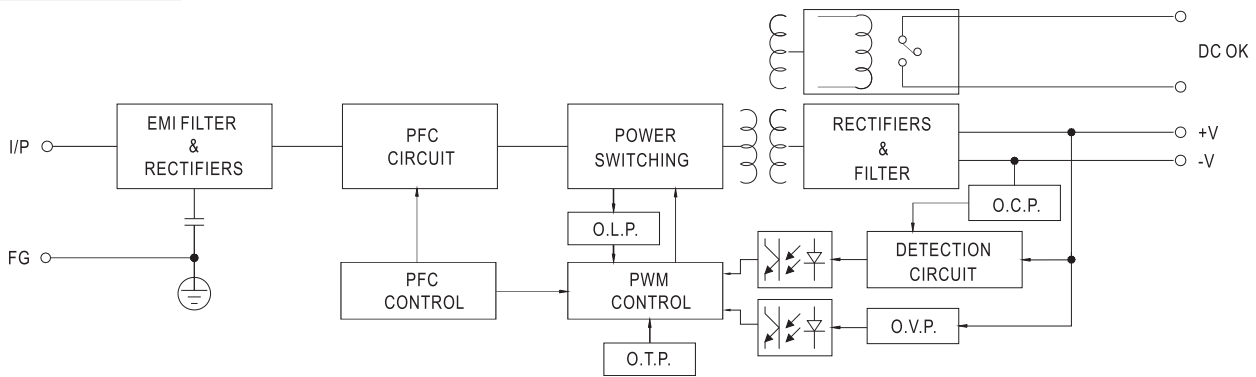
| MODEL                 | MDR-100-12  | MDR-100-24  | MDR-100-48 |              |
|-----------------------|---|---|------------|--------------|
| OUTPUT                | DC VOLTAGE  | 12V   | 24V        | 48V          |
|                       | RATED CURRENT   | 7.5A  | 4A         | 2A           |
|                       | 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<br>Protection type : Constant current limiting, recovers automatically after fault condition is removed |            |              |
|                       | OVER VOLTAGE  | 15.6 ~ 18V  | 31.2 ~ 36V | 57.6 ~ 64.8V |
|                       | OVER TEMPERATURE  | 90°C ±10°C (RTH2) detect on heatsink of power transistor<br>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°C (Refer to output load derating curve)   |            |              |
|                       | WORKING HUMIDITY  | 20 ~ 90% RH non-condensing  |            |              |
|                       | STORAGE TEMP., HUMIDITY   | -40 ~ +85°C, 10 ~ 95% RH  |            |              |
|                       | TEMP. COEFFICIENT   | ±0.03%/°C (0 ~ 50°C)  |            |              |
|                       | 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°C 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, EN50204, EN55024, EN61000-6-2, EN61204-3, heavy industry level, criteria A              |            |              |
| OTHERS                | MTBF  | 346K hrs min.    MIL-HDBK-217F (25°C)   |            |              |
|                       | DIMENSION   | 55*90*100mm (W*H*D)   |            |              |
|                       | PACKING   | 0.42Kg; 30pcs/13.6Kg/0.82CUFT   |            |              |
| NOTE                  | <ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>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.</li> <li>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.</li> <li>6. Deating maybe needed under low input voltages, please check the derating curve for more detail.</li> </ol> |   |            |              |

Case No.973A Unit:mm

**Mechanical Specification**



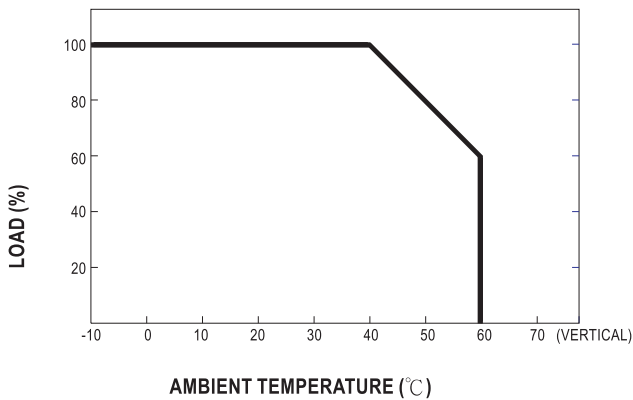
**Block Diagram**



**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**



**Output Derating VS Input Voltage**

