



■ Features :

- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- NEC class 2 / LPS compliant (24V,48V only)
- LED indicator for power on
- DC OK relay contact
- No load power consumption<0.75W
- 100% full load burn-in test
- 3 years warranty

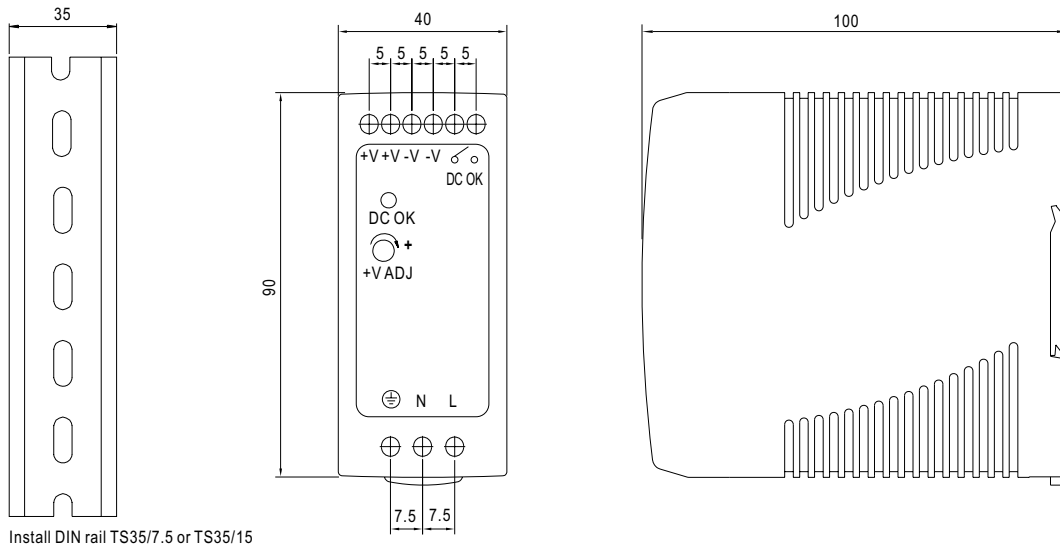


**SPECIFICATION**

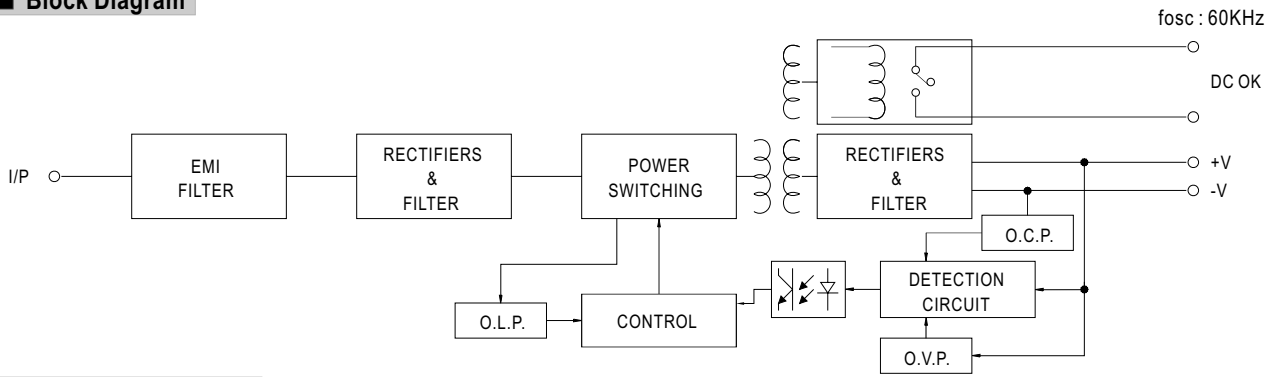
| MODEL                 | MDR-60-5  | MDR-60-12   | MDR-60-24                       | MDR-60-48      |              |
|-----------------------|---|---|---------------------------------|----------------|--------------|
| OUTPUT                | DC VOLTAGE  | 5V  | 12V                             | 24V            | 48V          |
|                       | RATED CURRENT   | 10A   | 5A                              | 2.5A           | 1.25A        |
|                       | CURRENT RANGE   | 0 ~ 10A   | 0 ~ 5A                          | 0 ~ 2.5A       | 0 ~ 1.25A    |
|                       | RATED POWER   | 50W   | 60W                             | 60W            | 60W          |
|                       | RIPPLE & NOISE (max.) Note.2  | 80mVp-p   | 120mVp-p                        | 150mVp-p       | 200mVp-p     |
|                       | VOLTAGE ADJ. RANGE  | 5 ~ 6V  | 12 ~ 15V                        | 24 ~ 30V       | 48 ~ 56V     |
|                       | VOLTAGE TOLERANCE Note.3  | ±2.0%   | ±1.0%                           | ±1.0%          | ±1.0%        |
|                       | LINE REGULATION   | ±1.0%   | ±1.0%                           | ±1.0%          | ±1.0%        |
|                       | LOAD REGULATION   | ±1.5%   | ±1.0%                           | ±1.0%          | ±1.0%        |
|                       | SETUP, RISE TIME Note.5   | 500ms, 30ms/230VAC  | 500ms, 30ms/115VAC at full load |                |              |
| HOLD UP TIME (Typ.)   | 50ms/230VAC   | 20ms/115VAC at full load  |                                 |                |              |
| INPUT                 | VOLTAGE RANGE   | 85 ~ 264VAC   | 120 ~ 370VDC                    |                |              |
|                       | FREQUENCY RANGE   | 47 ~ 63Hz   |                                 |                |              |
|                       | EFFICIENCY (Typ.)   | 78%   | 86%                             | 88%            | 87%          |
|                       | AC CURRENT (Typ.)   | 1.8A/115VAC   | 1A/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  | 6.25 ~ 7.25V  | 15.6 ~ 18V                      | 31.2 ~ 36V     | 57.6 ~ 64.8V |
|                       |   | 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.   | -20 ~ +70°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, UL60950-1, TUV EN60950-1 approved, NEC class 2 / LPS compliant (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, ENV50204, EN55024, EN61000-6-2, EN61204-3, heavy industry level, criteria A             |                                 |                |              |
| OTHERS                | MTBF  | 299.2K hrs min. MIL-HDBK-217F (25°C)  |                                 |                |              |
|                       | DIMENSION   | 40*90*100mm (W*H*D)   |                                 |                |              |
|                       | PACKING   | 0.33Kg; 42pcs/14.8Kg/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> </ol> |   |                                 |                |              |

**Mechanical Specification**

Case No.962A Unit:mm



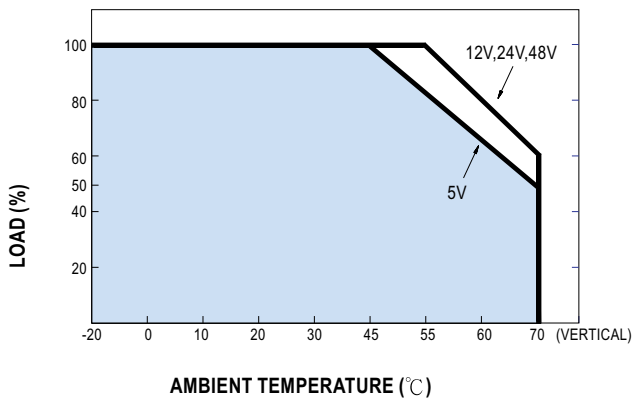
**Block Diagram**



**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**

