



## 40W Single Output Industrial DIN Rail Power Supply

## MDR-40 series



## ■ 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
- Class I, Div 2 Hazardous Locations T4
- LED indicator for power on
- DC OK relay contact
- No load power consumption<0.75W
- 100% full load burn-in test
- 3 years warranty

User's Manual

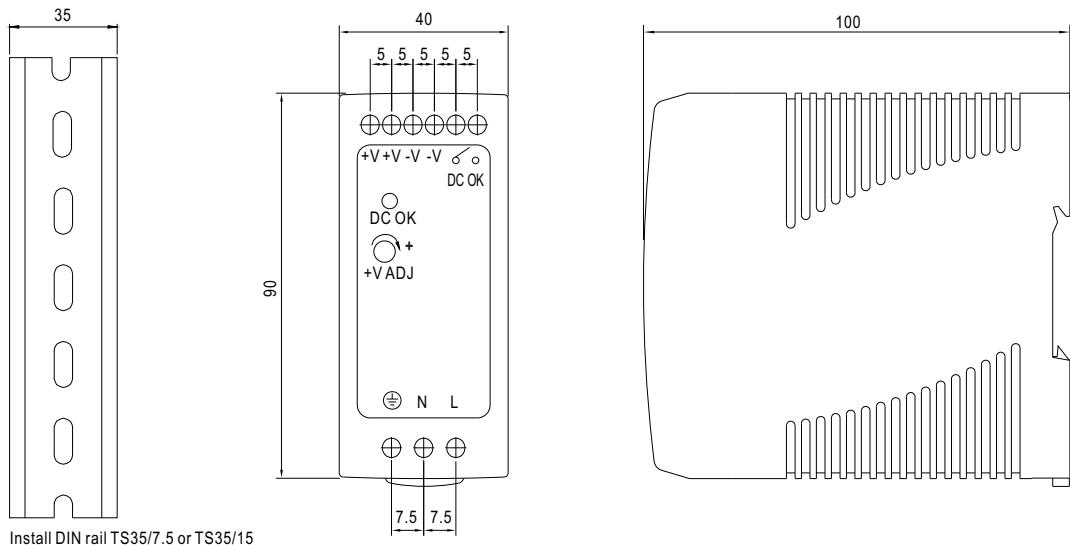


## SPECIFICATION

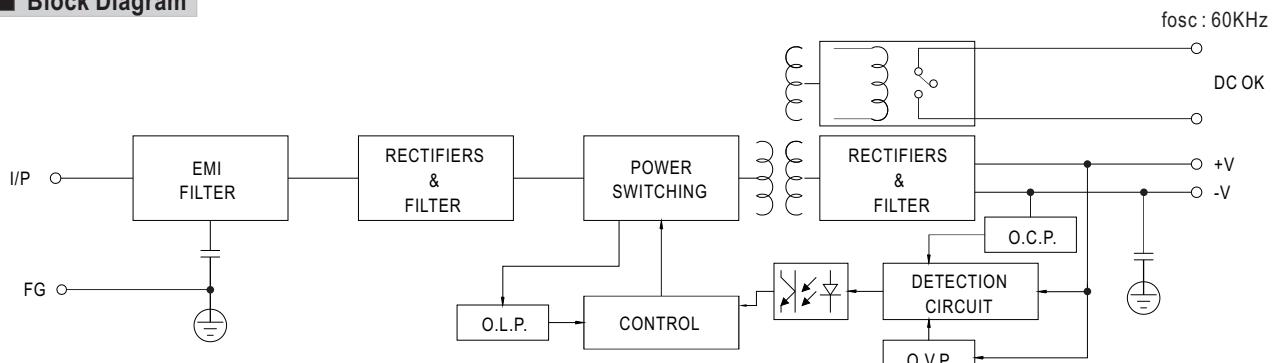
| MODEL                 | MDR-40-5   | MDR-40-12   | MDR-40-24                       | MDR-40-48    |
|-----------------------|--|---|---------------------------------|--------------|
| OUTPUT                | DC VOLTAGE   | 5V  | 12V                             | 24V          |
|                       | RATED CURRENT  | 6A  | 3.33A                           | 1.7A         |
|                       | CURRENT RANGE  | 0 ~ 6A  | 0 ~ 3.33A                       | 0 ~ 1.7A     |
|                       | RATED POWER  | 30W   | 40W                             | 40.8W        |
|                       | RIPLINE & NOISE (max.) Note.2  | 80mVp-p   | 120mVp-p                        | 150mVp-p     |
|                       | VOLTAGE ADJ. RANGE   | 5 ~ 6V  | 12 ~ 15V                        | 24 ~ 30V     |
|                       | VOLTAGE TOLERANCE Note.3   | ±2.0%   | ±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  | 500ms, 30ms/230VAC  | 500ms, 30ms/115VAC at full load |              |
| INPUT                 | HOLD UP TIME (Typ.)  | 50ms/230VAC   | 20ms/115VAC at full load        |              |
|                       | VOLTAGE RANGE  | 85 ~ 264VAC   | 120 ~ 370VDC                    |              |
|                       | FREQUENCY RANGE  | 47 ~ 63Hz   |                                 |              |
|                       | EFFICIENCY (Typ.)  | 78%   | 86%                             | 88%          |
|                       | AC CURRENT (Typ.)  | 1.1A/115VAC   | 0.7A/230VAC                     |              |
|                       | INRUSH CURRENT (Typ.)  | COLD START 30A/115VAC   | 60A/230VAC                      |              |
| PROTECTION            | LEAKAGE CURRENT  | <1mA / 240VAC   |                                 |              |
|                       | OVERLOAD   | 105 ~ 150% rated output power   |                                 |              |
|                       |  | Protection type : Constant current limiting, recovers automatically after fault condition is removed  |                                 |              |
|                       | OVER VOLTAGE   | 6.25 ~ 7.25V  | 15.6 ~ 18V                      | 31.2 ~ 36V   |
| FUNCTION              |  | Protection type : Shut down o/p voltage, re-power on to recover   |                                 | 57.6 ~ 64.8V |
|                       | DC OK SIGNAL   | Relay contact rating(max.): 30V/1A resistive  |                                 |              |
| ENVIRONMENT           | WORKING TEMP.  | -20 ~ +70°C (Refer to "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, UL62368-1, TUV BS EN/EN62368-1, Class I, Div. 2 Group A, B, C, D Hazardous Locations T4, EAC TP TC 004, BSMI CNS14336-1, AS/NZS 60950.1 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 BS EN/EN55032 (CISPR32), BS EN/EN61204-3 Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020, CNS13438 Class B                                   |                                 |              |
|                       | EMC IMMUNITY   | Compliance to BS EN/EN61000-4-2, 3, 4, 5, 6, 8, 11, BS EN/EN55024, BS EN/EN61000-6-2, BS EN/EN61204-3, heavy industry level, criteria A, EAC TP TC 020  |                                 |              |
| OTHERS                | MTBF   | 301.7K hrs min. MIL-HDBK-217F (25°C)  |                                 |              |
|                       | DIMENSION  | 40*90*100mm (W*H*D)   |                                 |              |
|                       | PACKING  | 0.3Kg; 42pcs/13.6Kg/0.82CUFT  |                                 |              |
| NOTE                  | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.<br>3. Tolerance : includes set up tolerance, line regulation and load regulation.<br>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. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a> )<br>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.<br>6. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).<br>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a> |   |                                 |              |

## ■ Mechanical Specification

Case No.962A Unit:mm



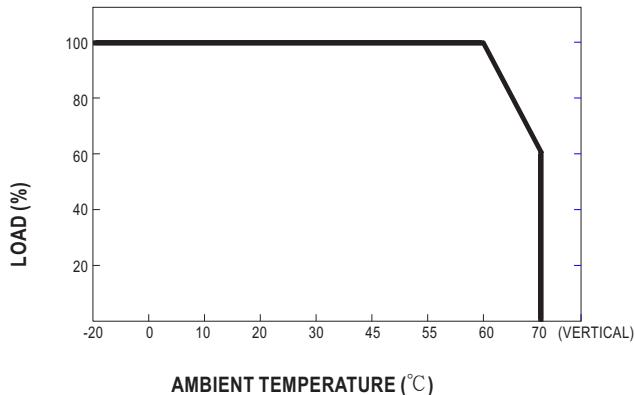
## ■ Block Diagram



## ■ 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



## ■ Output Derating VS Input Voltage

