



## ■ 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

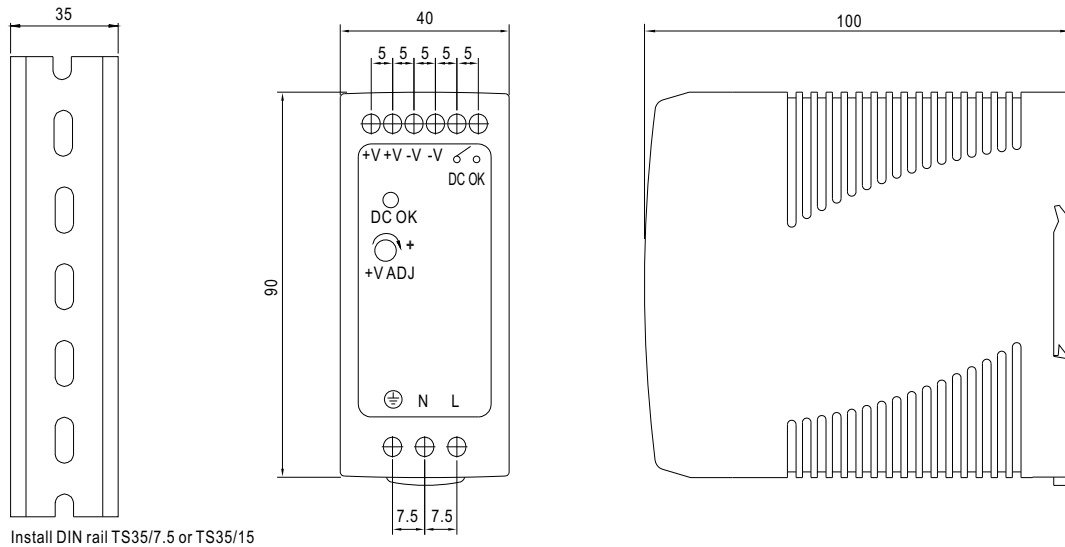


## SPECIFICATION

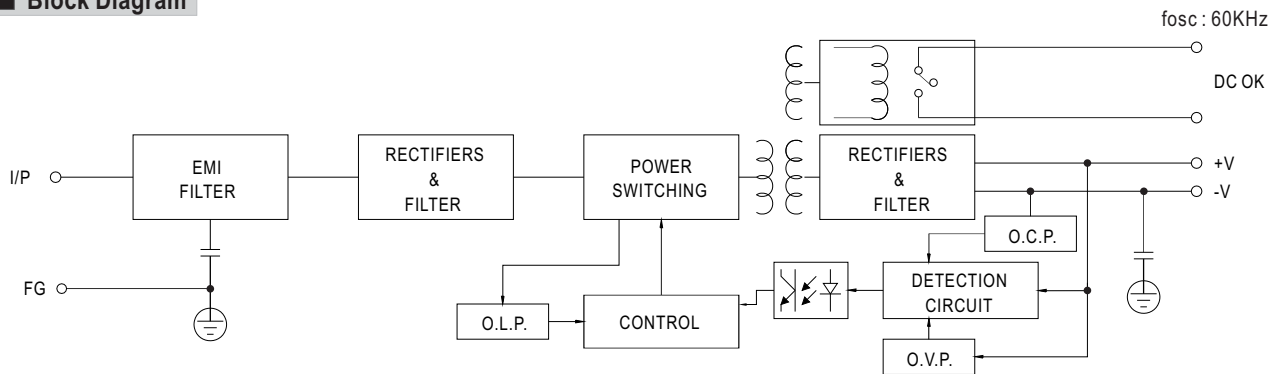
| MODEL                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | MDR-40-5                                                                                                                                         |                          | MDR-40-12                       |  | MDR-40-24  |  | MDR-40-48    |  |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------|--|------------|--|--------------|--|
| OUTPUT                   | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 5V                                                                                                                                               |                          | 12V                             |  | 24V        |  | 48V          |  |
|                          | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 6A                                                                                                                                               |                          | 3.33A                           |  | 1.7A       |  | 0.83A        |  |
|                          | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0 ~ 6A                                                                                                                                           |                          | 0 ~ 3.33A                       |  | 0 ~ 1.7A   |  | 0 ~ 0.83A    |  |
|                          | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 30W                                                                                                                                              |                          | 40W                             |  | 40.8W      |  | 39.8W        |  |
|                          | RIPPLE & NOISE (max.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 80mVp-p                                                                                                                                          |                          | 120mVp-p                        |  | 150mVp-p   |  | 200mVp-p     |  |
|                          | VOLTAGE ADJ. RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5 ~ 6V                                                                                                                                           |                          | 12 ~ 15V                        |  | 24 ~ 30V   |  | 48 ~ 56V     |  |
|                          | VOLTAGE TOLERANCE <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ± 2.0%                                                                                                                                           |                          | ± 1.0%                          |  | ± 1.0%     |  | ± 1.0%       |  |
|                          | LINE REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ± 1.0%                                                                                                                                           |                          | ± 1.0%                          |  | ± 1.0%     |  | ± 1.0%       |  |
|                          | LOAD REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ± 1.0%                                                                                                                                           |                          | ± 1.0%                          |  | ± 1.0%     |  | ± 1.0%       |  |
|                          | SETUP, RISE TIME <small>Note.5</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 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%        |  | 88%          |  |
|                          | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1.1A/115VAC                                                                                                                                      |                          | 0.7A/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℃ (Refer to "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<br>(Note 4) | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | UL508, UL62368-1, TUV 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℃/ 70% RH                                                                                        |                          |                                 |  |            |  |              |  |
|                          | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Compliance to EN55032 (CISPR32), EN61204-3 Class B, EN61000-3-2,-3, EAC TP TC 020, CNS13438 Class B                                              |                          |                                 |  |            |  |              |  |
|                          | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024, EN61000-6-2, EN61204-3, heavy industry level, criteria A, EAC TP TC 020                   |                          |                                 |  |            |  |              |  |
| OTHERS                   | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 301.7K hrs min. MIL-HDBK-217F (25℃)                                                                                                              |                          |                                 |  |            |  |              |  |
|                          | 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℃ 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."<br>(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℃/1000m with fanless models and of 5℃/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> |                                                                                                                                                  |                          |                                 |  |            |  |              |  |

Case No.962A Unit:mm

## Mechanical Specification



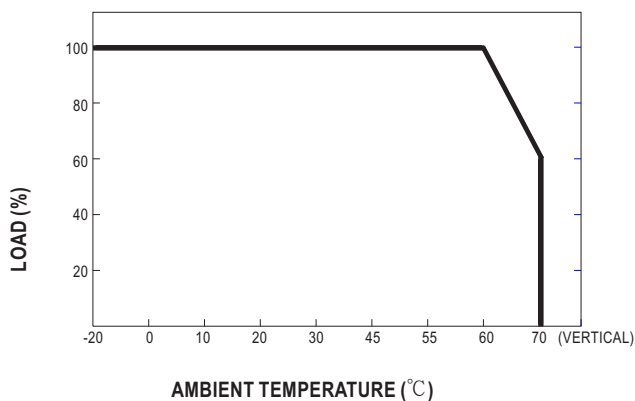
## Block Diagram



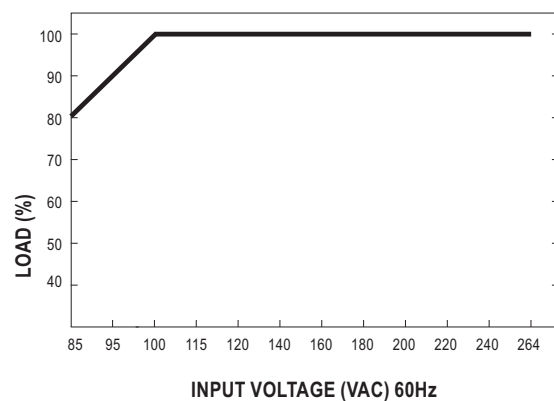
## DC OK Relay Contact

|                        |                          |
|------------------------|--------------------------|
| Contact Close          | PSU turns on / DC OK.    |
| Contact Open           | PSU turns off / DC Fail. |
| Contact Ratings (max.) | 30V/1A resistive load.   |

## Derating Curve



## Output Derating VS Input Voltage



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