



■ 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
- Built in DC OK active signal
- LED indicator for power on
- No load power consumption<0.75W
- 100% full load burn-in test
- 3 years warranty

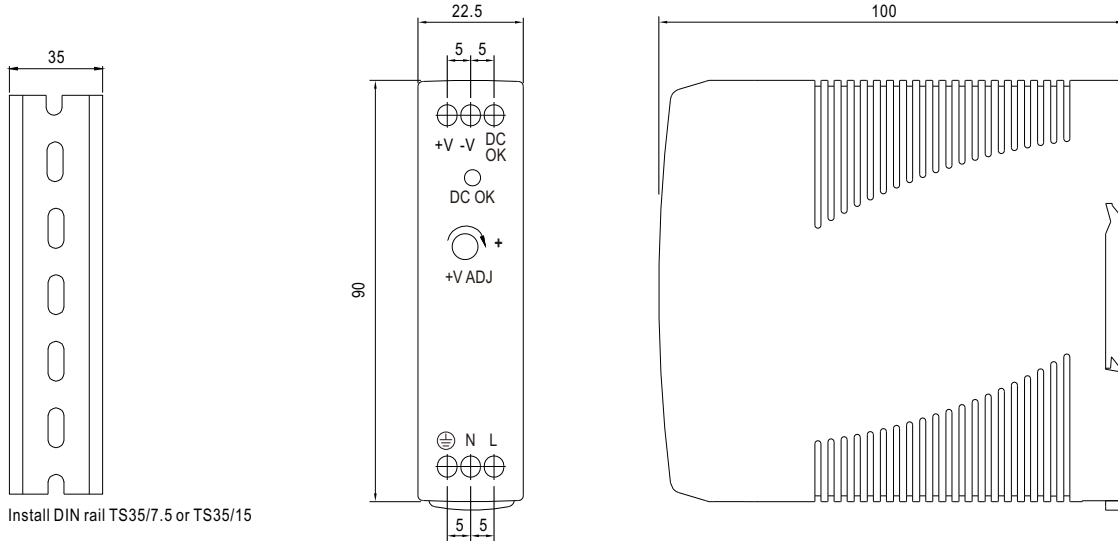


**SPECIFICATION**

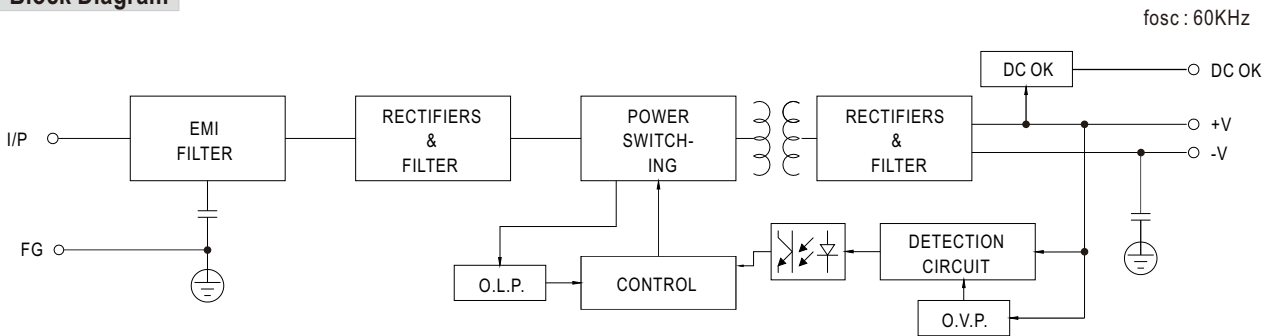
| MODEL                 | MDR-20-5   | MDR-20-12  | MDR-20-15                        | MDR-20-24           |                 |
|-----------------------|--|--|----------------------------------|---------------------|-----------------|
| OUTPUT                | DC VOLTAGE   | 5V   | 12V                              | 15V                 | 24V             |
|                       | RATED CURRENT  | 3A   | 1.67A                            | 1.34A               | 1A              |
|                       | CURRENT RANGE  | 0 ~ 3A   | 0 ~ 1.67A                        | 0 ~ 1.34A           | 0 ~ 1A          |
|                       | RATED POWER  | 15W  | 20W                              | 20W                 | 24W             |
|                       | RIPPLE & NOISE (max.) Note.2   | 80mVp-p  | 120mVp-p                         | 120mVp-p            | 150mVp-p        |
|                       | VOLTAGE ADJ. RANGE   | 4.75 ~ 5.5V  | 10.8 ~ 13.2V                     | 13.5 ~ 16.5V        | 21.6 ~ 26.4V    |
|                       | VOLTAGE TOLERANCE Note.3   | ±2.0%  | ±1.0%                            | ±1.0%               | ±1.0%           |
|                       | LINE REGULATION  | ±1.0%  | ±1.0%                            | ±1.0%               | ±1.0%           |
|                       | LOAD REGULATION  | ±1.0%  | ±1.0%                            | ±1.0%               | ±1.0%           |
|                       | SETUP, RISE TIME Note.5  | 500ms, 30ms/230VAC   | 1000ms, 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.)  | 76%  | 80%                              | 81%                 | 84%             |
|                       | AC CURRENT (Typ.)  | 0.55A/115VAC   | 0.35A/230VAC                     |                     |                 |
|                       | INRUSH CURRENT (Typ.)  | COLD START 20A/115VAC  | 40A/230VAC                       |                     |                 |
|                       | LEAKAGE CURRENT  | <1mA/ 240VAC   |                                  |                     |                 |
| PROTECTION            | OVERLOAD   | 105 ~ 160% rated output power<br>Protection type : Constant current limiting, recovers automatically after fault condition is removed                |                                  |                     |                 |
|                       | OVER VOLTAGE   | 5.75 ~ 6.75V   | 13.8 ~ 16.2V                     | 17.25 ~ 20.25V      | 27.6 ~ 32.4V    |
|                       |  | Protection type : Shut down o/p voltage, re-power on to recover  |                                  |                     |                 |
| FUNCTION              | DC OK ACTIVE SIGNAL (max.)   | 3.75 ~ 6V / 50mA   | 9 ~ 13.5V / 40mA                 | 11.5 ~ 16.5V / 40mA | 18 ~ 27V / 20mA |
| 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, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6   |                                  |                     |                 |
| SAFETY & EMC (Note 4) | SAFETY STANDARDS   | UL508, TUV BS EN/EN62368-1, EAC TP TC 004, BSMI CNS14336-1, AS/NZS 62368.1 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/EN61000-6-1,BS EN/EN61204-3, light industry level, criteria A, EAC TP TC 020 |                                  |                     |                 |
| OTHERS                | MTBF   | 236.9K hrs min. MIL-HDBK-217F (25°C)   |                                  |                     |                 |
|                       | DIMENSION  | 22.5*90*100mm (W*H*D)  |                                  |                     |                 |
|                       | PACKING  | 0.17Kg; 72pcs/13.2Kg/1.04CUFT  |                                  |                     |                 |
| NOTE                  | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>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.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>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>)</p> <p>5. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.</p> <p>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).</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p> |  |                                  |                     |                 |

■ Mechanical Specification

Case No. 956 Unit:mm

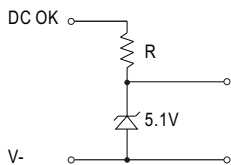


■ Block Diagram



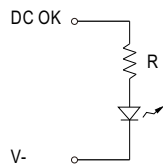
■ Application of DC OK Active Signal

(a) 5V signal



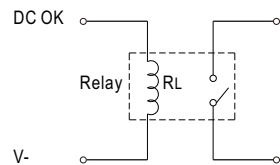
| Model | R      |
|-------|--------|
| 5V    | ≥200Ω  |
| 12V   | ≥1.5KΩ |
| 15V   | ≥2KΩ   |
| 24V   | ≥3.9KΩ |

(b) LED



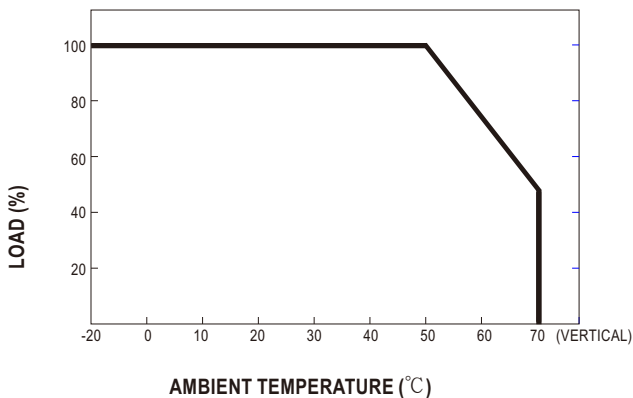
| Model | R      |
|-------|--------|
| 5V    | ≥1KΩ   |
| 12V   | ≥2.4KΩ |
| 15V   | ≥3KΩ   |
| 24V   | ≥4.7KΩ |

(c) Relay



| Model | RL     |
|-------|--------|
| 5V    | ≥120Ω  |
| 12V   | ≥700Ω  |
| 15V   | ≥700Ω  |
| 24V   | ≥1.2KΩ |

■ Derating Curve



■ Output Derating VS Input Voltage

