# 96W Single Output Industrial DIN Rail Power Supply MDR-100 series



## ■ 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
- LED indicator for power on
- 100% full load burn-in test
- 3 years warranty

User's Manual

## ■ GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

IS13252 (except for 48V) R33100 RoHS TPTC004 BS EN/EN62368-1

## 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.) | 83% | 86% | 87% |
| | 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 | | |
| | | Protection type : Constant current limiting, recovers automatically after fault condition is removed | | |
| | OVER VOLTAGE | 15.6 ~ 18V | 31.2 ~ 36V | 57.6 ~ 64.8V |
| | | Protection type : Shut down o/p voltage, re-power on to recover | | |
| | OVER TEMPERATURE | Shut down o/p voltage, auto-recovery or re-power on to recover | | |
| FUNCTION | DC OK SIGNAL | Relay contact rating(max.): 30V/1A resistive | | |
| ENVIRONMENT | WORKING TEMP. | -10 ~ +60℃ (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 (Note 4) | SAFETY STANDARDS | UL508, TUV BS EN/EN62368-1, EAC TP TC 004, BSMI CNS15598-1, AS/NZS 60950.1,BIS IS13252(Part1):2010/IEC 609501:2005 (except for 48) 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 BS EN/EN55032 (CISPR32),BS EN/EN61204-3 Class B,BS EN/EN61000-3-2,-3,EAC TP TC 020,CNS15936 Class B | | |
| | EMC IMMUNITY | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, BS EN/EN61000-6-2, BS EN/EN61204-3, heavy industry level, EAC TP TC 020 | | |
| OTHERS | MTBF | 2217.8K hrs min. Telcordia SR-332 (Bellcore) ; 346.5K hrs min. MIL-HDBK-217F (25℃) | | |
| | DIMENSION | 55*90*100mm (W*H*D) | | |
| | PACKING | 0.42Kg; 30pcs/13.6Kg/0.82CUFT | | |

**NOTE**

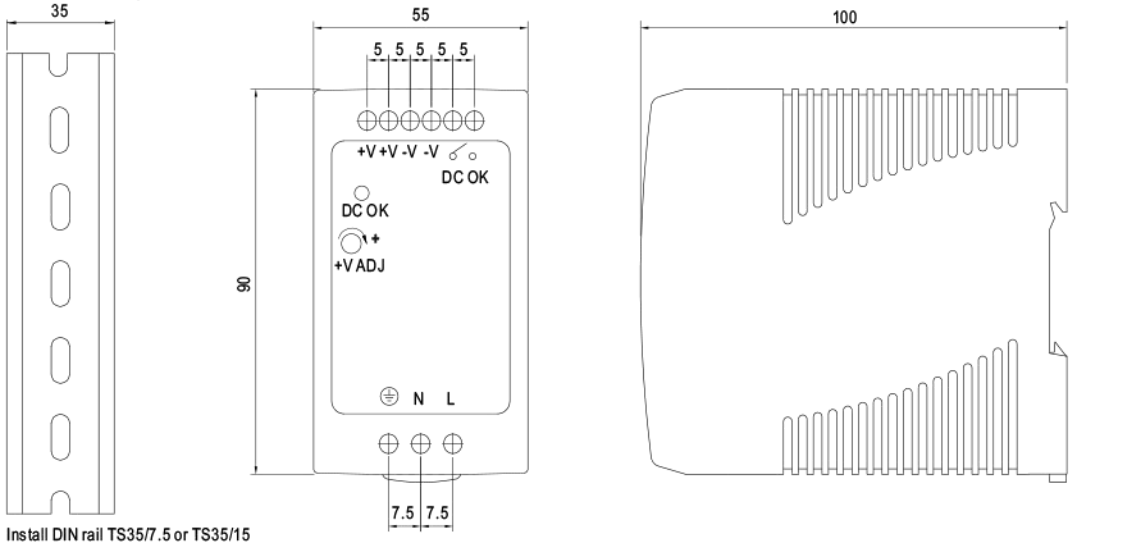
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μF & 47 μF parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
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 https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf )
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.
6. Deating maybe needed under low input voltages, please check the derating curve for more detail.
7. 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).

※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

## ■ Mechanical Specification

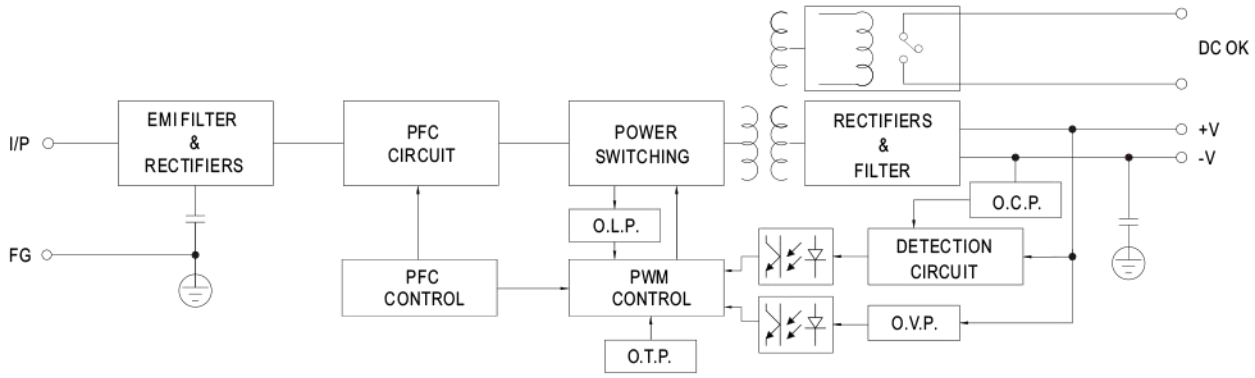
Case No.973A

(Unit: mm , tolerance ± 1mm)




Install DIN rail TS35/7.5 or TS35/15

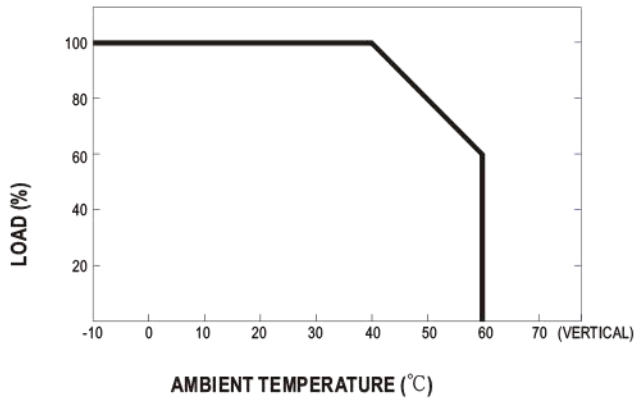
## ■ Block Diagram




## ■ 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

