20W Single Output Industrial DIN Rail Power Supply

MDR-20-12
1.67A
20W
1.34A
12V
0 ~ 1.34A
1A
VOLTAGE ADJ. RANGE
120mVp-p
81%
84%
0 ~ 1.34A
120mVp-p
216 ~ 26.4V

EMC IMMUNITY
EMC EMISSION
FUNCTION

SPECIFICATION

MODEL | MDR-20-5 | MDR-20-12 | MDR-20-15 | MDR-20-24
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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.) | 80mVp-p | 120mVp-p | 120mVp-p | 150mVp-p
VOLTAGE ADJ. RANGE | ±0.2% | ±1.0% | ±1.0% | ±1.0%
VOLTAGE TOLERANCE | ±1.0% | ±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 | 500ms, 30ms/230VAC | 1000ms, 30ms/115VAC at full load
HOLD UP TIME (Typ.) | 50ms/230VAC | 20ms/115VAC at full load
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
OVERLOAD | 105 ~ 160% rated output power
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 | 27.8 ~ 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℃ (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./cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6
SAFETY & EMC (Note 4)
WITHSTAND VOLTAGE | UL508, TUV EN60950-1 approved
ISOLATION RESISTANCE | IP, O/P: 3KVAC | IP, O/P: 2KVAC | O/P, FG: 0.5KVAC
ECM EMISSION | Compliance to EN55011, EN55032 (CISPR32), EN61204-3 Class B, EN61000-3-2,-3
ECM IMMUNITY | Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024,EN61000-6-1,EN61204-3, light industry level, criteria A
MTBF | 236.9K hrs min. MIL-HDBK-217F (25℃)
DIMENSION | 22.5*90*100mm (W*H*D)
PACKING | 0.17Kg; 72pcs/13.2Kg/0.91CUFT
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 0.1uf & 47uf parallel capacitor.
3. Cooling by free air convection
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 http://www.meanwell.com)
5. Length of set up time is measured at cold start first. Turning ON/OFF the power supply may lead to increase of the set up time.

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### Mechanical Specification

Install DIN rail TS35/7.5 or TS35/15

### Block Diagram

- EMI FILTER
- RECTIFIERS & FILTER
- POWER SWITCHING
- DETECTION CIRCUIT
- CONTROL
- O.V.P.
- O.L.P.
- +V
- -V
- DC OK

fosc: 60KHz

### Application of DC OK Active Signal

(a) 5V signal

(b) LED

(c) Relay

### Derating Curve

### Output Derating VS Input Voltage