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

### SPECIFICATION

#### OUTPUT

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DC VOLTAGE</th>
<th>RATED CURRENT</th>
<th>CURRENT RANGE</th>
<th>RATED POWER</th>
<th>RIPPLE &amp; NOISE (max.)</th>
<th>VOLTAGE ADJ. RANGE</th>
<th>VOLTAGE TOLERANCE</th>
<th>LINE REGULATION</th>
<th>LOAD REGULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD-40-5</td>
<td>5V</td>
<td>6A</td>
<td>0 ~ 6A</td>
<td>30W</td>
<td>80mVp-p</td>
<td>5 ~ 6V</td>
<td>±2.0%</td>
<td>±1.0%</td>
<td>±1.0%</td>
</tr>
<tr>
<td>MD-40-12</td>
<td>12V</td>
<td>3.33A</td>
<td>0 ~ 3.33A</td>
<td>40W</td>
<td>120mVp-p</td>
<td>12 ~ 15V</td>
<td>±2.0%</td>
<td>±1.0%</td>
<td>±1.0%</td>
</tr>
<tr>
<td>MD-40-24</td>
<td>24V</td>
<td>1.7A</td>
<td>0 ~ 1.7A</td>
<td>40.8W</td>
<td>150mVp-p</td>
<td>24 ~ 30V</td>
<td>±1.0%</td>
<td>±1.0%</td>
<td>±1.0%</td>
</tr>
<tr>
<td>MD-40-48</td>
<td>48V</td>
<td>0.83A</td>
<td>0 ~ 0.83A</td>
<td>39.8W</td>
<td>200mVp-p</td>
<td>48 ~ 56V</td>
<td>±1.0%</td>
<td>±1.0%</td>
<td>±1.0%</td>
</tr>
</tbody>
</table>

#### INPUT

- **RATING:**
  - AC: 85 ~ 264VAC
  - DC: 120 ~ 370VDC
- **FREQUENCY**: 47 ~ 63Hz
- **EYEPOSSITY** (Typ.): 78%
- **EFFICIENCY**: 86%, 88%
- **AC CURRENT (Typ.)**: 1.1A/115VAC, 0.7A/230VAC
- **INRUSH CURRENT (Typ.)**: COLD START 30A/115VAC, 60A/230VAC
- **LEAKAGE CURRENT**: <1mA / 240VDC

#### PROTECTION

- **OVERLOAD**: 105 ~ 150% rated output power
- **OVER VOLTAGE**: 6.25 ~ 7.25V, 15.6 ~ 16V, 31.2 ~ 36V, 57.6 ~ 64.8V
- **PROTECTION**: Shut down o/p voltage, re-power on to recover
- **DC OK SIGNAL**: Relay contact rating(max.): 30V/1A resistive

#### FUNCTION

- **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, UL60950-1, TUV EN60950-1, Class I, Div. 2 Group A, B, C, D Hazardous Locations T4 approved
- **WITHSTAND VOLTAGE**: 1kV/15min. / 500VDC -500VAC / 1500V / 10% RH
- **ISOLATION RESISTANCE**: 1kV/15min. / 500VDC -500VAC / 1500V / 10% RH
- **EMC EMISSION**: Compliance to EN55011, EN55032 (CISPR32), EN61204-3 Class B, EN61000-3-2,-3
- **EMC IMMUNITY**: Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024, EN61000-6-2, EN61004-3, heavy industry level, criteria A
- **MTBF**: 301.7K hrs min. MIL-HDBK-217F (25°C)
- **DIMENSION**: 40.9*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.
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. Tolerance : includes set up tolerance, line regulation, 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 http://www.meanwell.com)
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.
**Mechanical Specification**

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**