■ Features
- Universal AC input / Full range
- Withstand 300VAC surge input for 5 second
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Miniature size and 1U low profile
- Compliance to IEC/BS EN/EN 60335-1(PD3) and IEC/BS EN/EN61558-1, 2-16 for household appliances
- Operating altitude up to 5000 meters (Note.7)
- Withstand 5G vibration test
- LED indicator for power on
- No load power consumption<0.3W
- Over voltage category III
- 100% full load burn-in test
- High operating temperature up to 70°C
- High efficiency, long life and high reliability
- 3 years warranty

■ Description
LRS-100 series is a 100W single-output enclosed type power supply with 30mm of low profile design. Adopting the full range 85~264VAC input, the entire series provides an output voltage line of 3.3V, 5V, 12V, 15V, 24V, 36V and 48V.

In addition to the high efficiency up to 91%, the design of metallic mesh case enhances the heat dissipation of LRS-100 that the whole series operates from -30°C through 70°C under air convection without a fan. Delivering an extremely low no load power consumption (less than 0.3W), it allows the end system to easily meet the worldwide energy requirement. LRS-100 has the complete protection functions and 5G anti-vibration capability; it is complied with the international safety regulations such as TUV BS EN/EN2368-1, BS EN/EN60335-1,BS EN/EN61558-1/-2-16, UL62368-1 and GB4943. LRS-100 series serves as a high price-to-performance power supply solution for various industrial applications.

■ GTIN CODE
MW Search: https://www.meanwell.com/serviceGTIN.aspx

■ Model Encoding
LRS - 100 - 3.3

Output voltage
Rated wattage
Series name
<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>LRS-100-3.3</td>
<td>3.3V</td>
<td>2A</td>
<td>0~8A</td>
<td>5W</td>
<td>100mV</td>
<td>2.5V</td>
<td>±2%</td>
<td>±0.5%</td>
<td>±0.5%</td>
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<tr>
<td>LRS-100-5</td>
<td>5V</td>
<td>2A</td>
<td>0~8A</td>
<td>5W</td>
<td>100mV</td>
<td>2.5V</td>
<td>±2%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>LRS-100-12</td>
<td>12V</td>
<td>8A</td>
<td>0~8.5A</td>
<td>50W</td>
<td>100mV</td>
<td>2.5V</td>
<td>±2%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>LRS-100-15</td>
<td>15V</td>
<td>7A</td>
<td>0~7A</td>
<td>50W</td>
<td>100mV</td>
<td>2.5V</td>
<td>±2%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>LRS-100-24</td>
<td>24V</td>
<td>4.5A</td>
<td>0~4.5A</td>
<td>100W</td>
<td>150mV</td>
<td>2.5V</td>
<td>±2%</td>
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<td>±0.5%</td>
</tr>
<tr>
<td>LRS-100-36</td>
<td>36V</td>
<td>2.8A</td>
<td>0~2.8A</td>
<td>150W</td>
<td>200mV</td>
<td>2.5V</td>
<td>±2%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>LRS-100-48</td>
<td>48V</td>
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<td>0~2.3A</td>
<td>150W</td>
<td>200mV</td>
<td>2.5V</td>
<td>±2%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>LRS-100-12</td>
<td>28.8~33.6V</td>
<td>105W</td>
<td>0~105W</td>
<td>200W</td>
<td>100mV</td>
<td>2.5V</td>
<td>±2%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>LRS-100-15</td>
<td>5.75~6.75V</td>
<td>100W</td>
<td>0~100W</td>
<td>200W</td>
<td>100mV</td>
<td>2.5V</td>
<td>±2%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>LRS-100-24</td>
<td>36V</td>
<td>110W</td>
<td>0~110W</td>
<td>220W</td>
<td>100mV</td>
<td>2.5V</td>
<td>±2%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>LRS-100-36</td>
<td>72V</td>
<td>150W</td>
<td>0~150W</td>
<td>220W</td>
<td>100mV</td>
<td>2.5V</td>
<td>±2%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>LRS-100-48</td>
<td>100V</td>
<td>200W</td>
<td>0~200W</td>
<td>220W</td>
<td>100mV</td>
<td>2.5V</td>
<td>±2%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
</tbody>
</table>

Input:
- **Voltage Range**: 85 ~ 264VAC, 120 ~ 373VDC (Withstand 300VAC surge for 5sec. Without damage)
- **Frequency Range**: 47 ~ 63Hz
- **Efficiency (Typ.)**: 84.5%
- **AC Current (Typ.)**: 1.9A/115VAC, 1.2A/230VAC
- **Inrush Current (Typ.)**: COLD START 10A/230VAC
- **Leakage Current**: <0.75mA/240VAC

Protection:
- **Over Load**: 110 ~ 150% rated output power Protection type: Hiccup mode, recovers automatically after fault condition is removed
- **Over Voltage**: 3.8 ~ 4.45V Protection type: Shut down o/p voltage, re-power on to recover
- **Working Temp.**: -30 ~ +70°C (Refer to "Derating Curve")
- **Working Humidity**: 20 ~ 90% RH non-condensing
- **Storage Temp., Humidity**: -40 ~ +85°C, 10 ~ 95% RH non-condensing
- **Temp. Coefficient**: ±0.03%/°C (0 ~ 50°C)
- **Vibration**: 10 ~ 500Hz, 5G 10min./cycle, 60min. each along X, Y, Z axes

Environment:
- **Over Voltage Category**: III: Compliance to BS EN/EN61558, BS EN/EN50178, BS EN/EN60664-1, BS EN/EN62477-1; altitude up to 2000 meters

Safety & EMC (Note 8):
- **Safety Standards**: UL 62368-1, TUV BS EN/EN62368-1, BS EN/EN60335-1, BS EN/EN61558-1/-2/-16,CCC GB4943.1,BSMI CNS15998-1, EAC TP TC 004,S/NZS62368.1(by CB),KC K60950-1(for LRS-100-12/24 only), BSI IS13252(part1); 2010/IEC 60950-1; 2005 approved
- **Withstand Voltage**: IP-O/P:4KVAC, IP-O/P-F:2KVAC O/P-F:1.25KVAC
- **Isolation Resistance**: IP-O/P, IP-O/F, O/P-F:100M Ohms / 500VDC / 25°C / 70% RH
- **EMC Emission**: Compliance to BS EN/EN50082-2-2,BS EN/EN55088-2,BS EN/EN55035, heavy industry level, EAC TP TC 020,KC KN32,KN35(for LRS-100-12/24 only)
- **EMC Immunity**: Compliance to BS EN/EN50082-2,BS EN/EN55088-2,BS EN/EN55035, heavy industry level, EAC TP TC 020,KC KN32,KN35(for LRS-100-12/24 only)

MTBF: 3348.9 hrs min. Telcordia SR-332 (Bellcore); 677.4Khrs min. MIL-HDBK-217F (25°C)

Dimension: 129*97*30mm (L*W*H)

Packing: 0.34kg ; 40pcs/14.6kg/0.92CUFT

**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 and load regulation. 4. Line regulation is measured from low line to high line at rated load. 5. Load regulation is measured from 0% to 100% rated load. 6. Length of set up time is measured at cold start first. Turning ON/OFF the power supply very quickly may lead to increase of the set up time. 7. The ambient temperature derating of 5°C/1000m is needed for operating altitude greater than 2000m(6500ft). 8. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-certified that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMF testing of component power supplies." (as available on http://www.meanwell.com)
100W Single Output Switching Power Supply

**LRS-100 series**

### Block Diagram

- EMI FILTER
- RECTIFIERS & FILTER
- POWER SWITCHING
- RECTIFIERS & FILTER
- DETECTION CIRCUIT
- O.V.P.
- O.L.P.
- FG
- +V
- -V
- I/P
- CONTROL
- O.V.P.
- RECTIFIERS & FILTER

fosc : 65KHz

### Derating Curve

**Ambient Temperature (°C)**

- Load (%)

### Static Characteristics

**Input Voltage (VAC) 60Hz**

- Load (%)

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File Name: LRS-100-SPEC  2023-03-03
**Mechanical Specification**

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Assignment</th>
<th>Pin No.</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AC/L</td>
<td>4.5</td>
<td>DC OUTPUT -V</td>
</tr>
<tr>
<td>2</td>
<td>AC/N</td>
<td>6.7</td>
<td>DC OUTPUT +V</td>
</tr>
<tr>
<td>3</td>
<td>FG</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Installation Manual**