



**■ 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/EN 60335-1(PD3) and IEC/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
- 100% full load burn-in test
- High operating temperature up to 70°C
- High efficiency, long life and high reliability
- 3 years warranty

**■ Applications**

- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment
- Electronic instruments, equipments or apparatus
- Household appliances

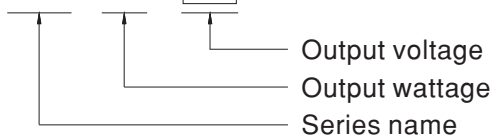
**■ Description**

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 EN60950-1, EN60335-1, EN61558-1/-2-16, UL60950-1 and GB4943. LRS-100 series serves as a high price-to-performance power supply solution for various industrial applications.

**■ Model Encoding**

**LRS - 100 - 3.3**



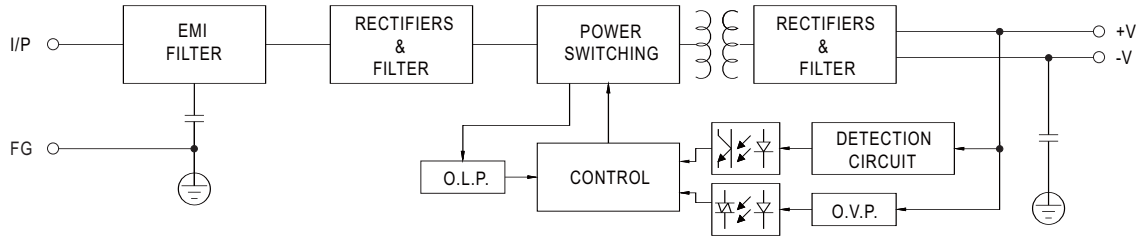


**SPECIFICATION**

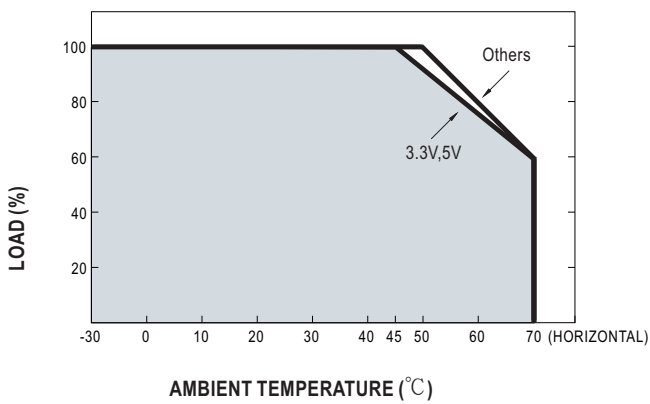
| MODEL                 |  | LRS-100-3.3   | LRS-100-5    | LRS-100-12   | LRS-100-15     | LRS-100-24   | LRS-100-36   | LRS-100-48   |
|-----------------------|--|---|--------------|--------------|----------------|--------------|--------------|--------------|
| OUTPUT                | DC VOLTAGE   | 3.3V  | 5V           | 12V          | 15V            | 24V          | 36V          | 48V          |
|                       | RATED CURRENT  | 20A   | 18A          | 8.5A         | 7A             | 4.5A         | 2.8A         | 2.3A         |
|                       | CURRENT RANGE  | 0 ~ 20A   | 0 ~ 18A      | 0 ~ 8.5A     | 0 ~ 7A         | 0 ~ 4.5A     | 0 ~ 2.8A     | 0 ~ 2.3A     |
|                       | RATED POWER  | 66W   | 90W          | 102W         | 105W           | 108W         | 100.8W       | 110.4W       |
|                       | RIPPLE & NOISE (max.) Note.2   | 100mVp-p  | 100mVp-p     | 120mVp-p     | 120mVp-p       | 150mVp-p     | 200mVp-p     | 200mVp-p     |
|                       | VOLTAGE ADJ. RANGE   | 2.97 ~ 3.6V   | 4.5 ~ 5.5V   | 10.2 ~ 13.8V | 13.5 ~ 18V     | 21.6 ~ 28.8V | 32.4 ~ 39.6V | 43.2 ~ 52.8V |
|                       | VOLTAGE TOLERANCE Note.3   | ±3.0%   | ±2.0%        | ±1.0%        | ±1.0%          | ±1.0%        | ±1.0%        | ±1.0%        |
|                       | LINE REGULATION Note.4   | ±0.5%   | ±0.5%        | ±0.5%        | ±0.5%          | ±0.5%        | ±0.5%        | ±0.5%        |
|                       | LOAD REGULATION Note.5   | ±2.0%   | ±1.0%        | ±0.5%        | ±0.5%          | ±0.5%        | ±0.5%        | ±0.5%        |
|                       | SETUP, RISE TIME   | 500ms, 30ms/230VAC      500ms,30ms/115VAC at full load  |              |              |                |              |              |              |
| HOLD UP TIME (Typ.)   | 55ms/230VAC      10ms/115VAC at full load  |   |              |              |                |              |              |              |
| INPUT                 | VOLTAGE RANGE  | 85 ~ 264VAC      120 ~ 373VDC (Withstand 300VAC surge for 5sec. Without damage)   |              |              |                |              |              |              |
|                       | FREQUENCY RANGE  | 47 ~ 63Hz   |              |              |                |              |              |              |
|                       | EFFICIENCY (Typ.)  | 84.5%   | 86%          | 88%          | 88.5%          | 90%          | 90.5%        | 91%          |
|                       | AC CURRENT (Typ.)  | 1.9A/115VAC      1.2A/230VAC  |              |              |                |              |              |              |
|                       | INRUSH CURRENT (Typ.)  | COLD START 50A/230VAC   |              |              |                |              |              |              |
|                       | LEAKAGE CURRENT  | <0.75mA / 240VAC  |              |              |                |              |              |              |
| PROTECTION            | OVER LOAD  | 110 ~ 150% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed |              |              |                |              |              |              |
|                       | OVER VOLTAGE   | 3.8 ~ 4.45V   | 5.75 ~ 6.75V | 13.8 ~ 16.2V | 18.75 ~ 21.75V | 28.8 ~ 33.6V | 41.4 ~ 48.6V | 55.2 ~ 64.8V |
| ENVIRONMENT           | 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  |              |              |                |              |              |              |
|                       | TEMP. COEFFICIENT  | ±0.03%/°C (0 ~ 50°C)  |              |              |                |              |              |              |
|                       | VIBRATION  | 10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes  |              |              |                |              |              |              |
| SAFETY & EMC (Note 8) | SAFETY STANDARDS   | UL60950-1, TUV EN60950-1, EN60335-1, EN61558-1/-2-16, CCC GB4943 approved   |              |              |                |              |              |              |
|                       | WITHSTAND VOLTAGE  | I/P-O/P:3.75KVAC    I/P-FG:2KVAC    O/P-FG:1.25KVAC   |              |              |                |              |              |              |
|                       | ISOLATION RESISTANCE   | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH  |              |              |                |              |              |              |
|                       | EMC EMISSION   | Compliance to EN55022 (CISPR22), GB9254 Class B, EN55014 EN61000-3-2,-3   |              |              |                |              |              |              |
| OTHERS                | EMC IMMUNITY   | Compliance to EN61000-4-2,3,4,5,6,8,11, EN61000-6-2 (EN50082-2), heavy industry level, criteria A                       |              |              |                |              |              |              |
|                       | MTBF   | 720.6K hrs min.      MIL-HDBK-217F (25°C)   |              |              |                |              |              |              |
|                       | DIMENSION  | 129*97*30mm (L*W*H)   |              |              |                |              |              |              |
|                       | PACKING  | 0.34Kg ; 40pcs/14.6Kg/0.92CUFT  |              |              |                |              |              |              |
| 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. Line regulation is measured from low line to high line at rated load.</p> <p>5. Load regulation is measured from 0% to 100% rated load.</p> <p>6. Length of set up time is measured at cold first start. Turning ON/OFF the power supply very quickly may lead to increase of the set up time.</p> <p>7. The ambient temperature derating of 5°C/1000m is needed for operating altitude greater than 2000m(6500ft).</p> <p>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-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> |   |              |              |                |              |              |              |

■ Block Diagram

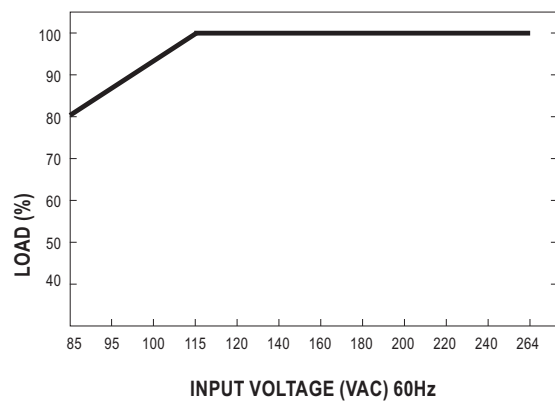
fosc : 65KHz



■ Derating Curve

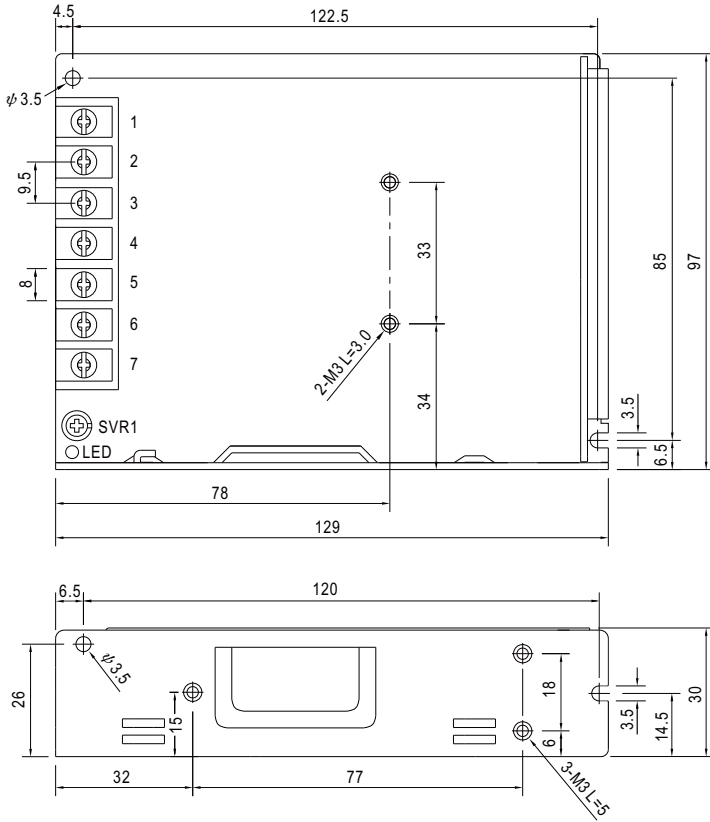


■ Static Characteristics



**Mechanical Specification**

Case No.238A Unit:mm



Terminal Pin No. Assignment

| Pin No. | Assignment | Pin No. | Assignment   |
|---------|------------|---------|--------------|
| 1       | AC/L       | 4,5     | DC OUTPUT -V |
| 2       | AC/N       | 6,7     | DC OUTPUT +V |
| 3       | FG $\perp$ |         |              |

**Installation Manual**

Please refer to : <http://www.meanwell.com/webnet/search/InstallationSearch.html>