



## 50W Single Output Switching Power Supply

## LPS-50 series



## ■ Features :

- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Small and compact size
- Built-in remote ON-OFF control
- LED indicator for power on
- 100% full load burn-in test
- Low profile:23mm thickness
- 2 years warranty

User's Manual



## ■ GTIN CODE

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

UL62368-1 BS EN/EN62368-1 IEC62368-1 TPTC004

## SPECIFICATION

| MODEL                 |  | LPS-50-3.3  | LPS-50-5     | LPS-50-12    | LPS-50-15      | LPS-50-24    | LPS-50-48    |
|-----------------------|--|---|--------------|--------------|----------------|--------------|--------------|
| OUTPUT                | DC VOLTAGE   | 3.3V  | 5V           | 12V          | 15V            | 24V          | 48V          |
|                       | RATED CURRENT  | 10A   | 10A          | 4.2A         | 3.4A           | 2.1A         | 1.1A         |
|                       | CURRENT RANGE  | 0 ~ 12A   | 0 ~ 12A      | 0 ~ 5A       | 0 ~ 4.1A       | 0 ~ 2.5A     | 0 ~ 1.3A     |
|                       | RATED POWER  | 33W   | 50W          | 50.4W        | 51W            | 50.4W        | 52.8W        |
|                       | PEAK LOAD(10sec.) Note.4   | 39.6W   | 60W          | 60W          | 61.5W          | 60W          | 62.4W        |
|                       | RIPPLE & NOISE (max.) Note.2   | 50mVp-p   | 50mVp-p      | 80mVp-p      | 80mVp-p        | 80mVp-p      | 100mVp-p     |
|                       | VOLTAGE ADJ. RANGE   | 3 ~ 3.6V  | 4.5 ~ 5.5V   | 10.8 ~ 13.2V | 13.5 ~ 16.5V   | 21.6 ~ 27.2V | 43.2 ~ 52.8V |
|                       | VOLTAGE TOLERANCE Note.3   | ±3.0%   | ±3.0%        | ±2.0%        | ±2.0%          | ±1.0%        | ±1.0%        |
|                       | LINE REGULATION  | ±1.0%   | ±1.0%        | ±1.0%        | ±1.0%          | ±1.0%        | ±1.0%        |
|                       | LOAD REGULATION  | ±3.0%   | ±3.0%        | ±2.0%        | ±2.0%          | ±1.0%        | ±1.0%        |
| SETUP, RISE TIME      | 100ms, 40ms/230VAC 100ms, 40ms/115VAC at full load   |   |              |              |                |              |              |
| HOLD UP TIME (Typ.)   | 70ms/230VAC 12ms/115VAC at full load   |   |              |              |                |              |              |
| INPUT                 | VOLTAGE RANGE  | 90 ~ 264VAC 127 ~ 370VDC  |              |              |                |              |              |
|                       | FREQUENCY RANGE  | 47 ~ 63Hz   |              |              |                |              |              |
|                       | EFFICIENCY(Typ.)   | 75%   | 81%          | 82%          | 84%            | 85%          | 86%          |
|                       | AC CURRENT (Typ.)  | 115VAC  | 0.9A         | 1.2A         |                |              |              |
|                       |  | 230VAC  | 0.6A         | 0.8A         |                |              |              |
| INRUSH CURRENT (Typ.) | COLD START 18A/115VAC 35A/230VAC   |   |              |              |                |              |              |
| LEAKAGE CURRENT       | <1mA / 240VAC  |   |              |              |                |              |              |
| PROTECTION            | OVERLOAD   | 122 ~ 160% 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 | 17.25 ~ 20.25V | 27.6 ~ 32.4V | 57.6 ~ 67.2V |
|                       |  | Protection type : Hiccup mode, recovers automatically after fault condition is removed                                  |              |              |                |              |              |
| FUNCTION              | REMOTE ON/OFF  | RC+/RC- : 0 ~ 0.8V power on ; 4 ~ 10V power off   |              |              |                |              |              |
| ENVIRONMENT           | WORKING TEMP.  | -20 ~ +70°C (Refer to "Derating Curve")   |              |              |                |              |              |
|                       | WORKING HUMIDITY   | 20 ~ 90% RH non-condensing  |              |              |                |              |              |
|                       | STORAGE TEMP., HUMIDITY  | -20 ~ +85°C, 10 ~ 95% RH  |              |              |                |              |              |
|                       | TEMP. COEFFICIENT  | ±0.04%/°C (0 ~ 50°C)  |              |              |                |              |              |
|                       | VIBRATION  | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes   |              |              |                |              |              |
| SAFETY & EMC (Note 5) | SAFETY STANDARDS   | UL62368-1, TUV BS EN/EN62368-1, EAC TP TC 004 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°C / 70% RH  |              |              |                |              |              |
|                       | EMC EMISSION   | Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020                                      |              |              |                |              |              |
| EMC IMMUNITY          | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55024, BS EN/EN61000-6-2 (BS EN/EN50082-2), heavy industry level, criteria A, EAC TP TC 020  |   |              |              |                |              |              |
| OTHERS                | MTBF   | 3138.2K hrs min. Telcordia SR-332 (Bellcore) ; 491.4K hrs min. MIL-HDBK-217F (25°C)                                     |              |              |                |              |              |
|                       | DIMENSION  | 195*55*23mm (L*W*H)   |              |              |                |              |              |
|                       | PACKING  | 0.24Kg; 48pcs/12.5Kg/0.87CUFT   |              |              |                |              |              |
| NOTE                  | <ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>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.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. 33.3% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power.</li> <li>5. 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>)</li> <li>6. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</li> </ol> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p> |   |              |              |                |              |              |

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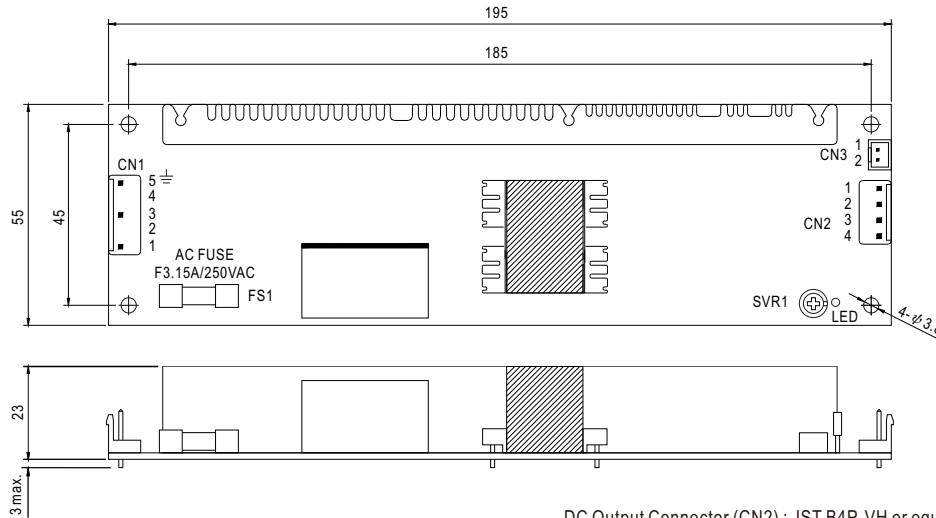


50W Single Output Switching Power Supply

LPS-50 series

■ Mechanical Specification

Unit:mm



AC Input Connector (CN1) : JST B5P-VH or equivalent

| Pin No. | Assignment | Mating Housing        | Terminal                       |
|---------|------------|-----------------------|--------------------------------|
| 1       | AC/L       | JST VHR or equivalent | JST SVH-21T-P1.1 or equivalent |
| 2,4     | No Pin     |                       |                                |
| 3       | AC/N       |                       |                                |
| 5       | FG $\perp$ |                       |                                |

DC Output Connector (CN2) : JST B4P-VH or equivalent

| Pin No. | Assignment | Mating Housing        | Terminal                       |
|---------|------------|-----------------------|--------------------------------|
| 1,2     | -V         | JST VHR or equivalent | JST SVH-21T-P1.1 or equivalent |
| 3,4     | +V         |                       |                                |

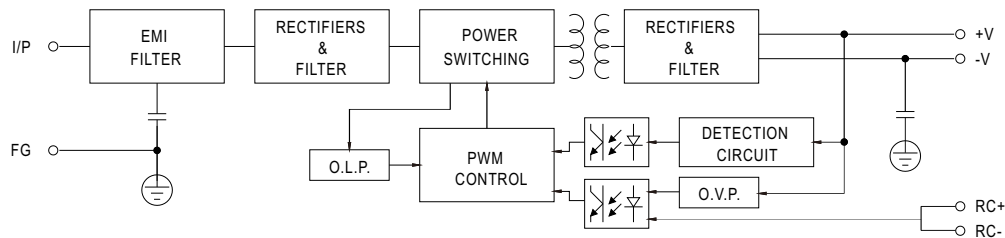
Remote ON/OFF Connector(CN3):JST B2B-XH or equivalent

| Pin No. | Assignment | Mating Housing        | Terminal                        |
|---------|------------|-----------------------|---------------------------------|
| 1       | RC+        | JST XHP or equivalent | JST SXH-001T-P0.6 or equivalent |
| 2       | RC-        |                       |                                 |

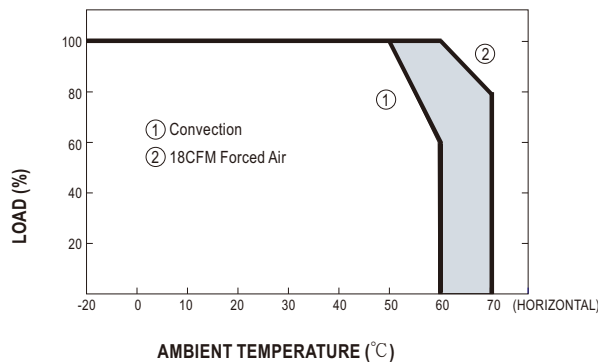
$\perp$  : Grounding Required  
CN1:Pin 5 is safety ground

■ Block Diagram

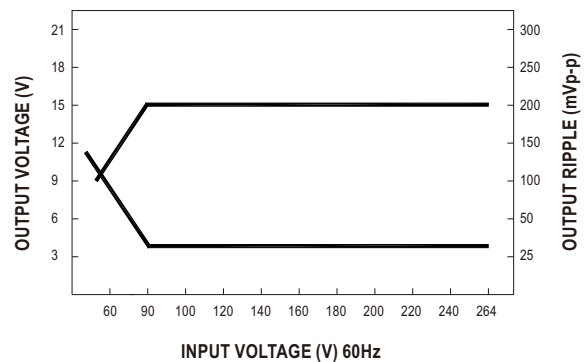
fosc : 60KHz



■ Derating Curve



■ Static Characteristics (15V)



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## We are here for you. Addresses and Contacts.

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