

# 75W Single Output Switching Power Supply

# LRS-75 Series



Size: 99\*97\*30mm

## Features:

- Universal AC input/Full range
- Built-in EMI filter, tiny ripple
- Protections:short circuit/overload/over voltage
- Cooling by free air convection
- 43,000 hours of continuous operation at 20 °C
- 100% full load burn-in test
- LED indicator for power on
- Compliance to IEC/EN60335-1 (PD3) and IEC/EN61558-1,2-16 suitable for home appliance
- 3 years warranty

## SPECIFICATION

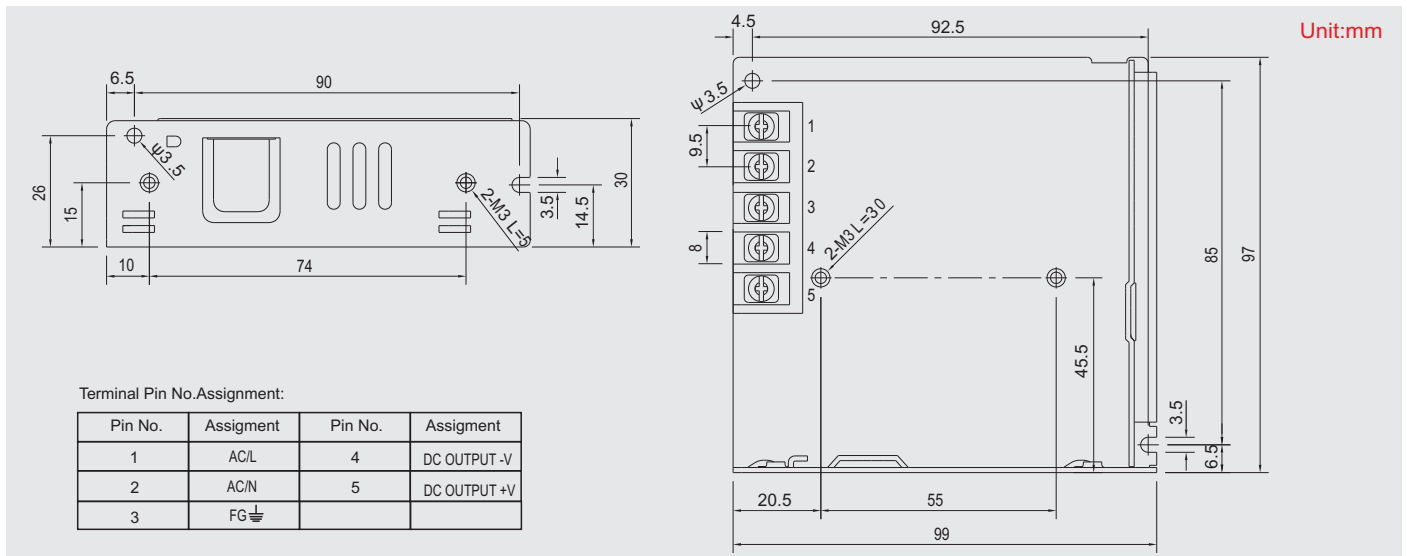


| Model       |                        | LRS-75-12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | LRS-75-15    | LRS-75-24    | LRS-75-36    | LRS-75-48    |
|-------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|
| OUTPUT      | DC VOLTAGE             | 12V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 15V          | 24V          | 36V          | 48V          |
|             | RATED CURRENT          | 6.2A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 5A           | 3.1A         | 2.1A         | 1.6A         |
|             | CURRENT RANGE          | 0 ~ 6.2A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0 ~ 5A       | 0 ~ 3.1A     | 0 ~ 2.1A     | 0 ~ 1.6A     |
|             | RATED POWER            | 74.4W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 75W          | 74.4W        | 75.5W        | 76.8W        |
|             | RIPPLE&NOISE(Max)      | 120mVp-p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 120mVp-p     | 120mVp-p     | 200mVp-p     | 200mVp-p     |
|             | VOLTAGE ADJ.RANGE      | 10.5 ~ 13.8V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 13.5 ~ 18V   | 21.6 ~ 27.5V | 32.4 ~ 39.6V | 43.2 ~ 52.8V |
|             | VOLTAGE TOLERANCE      | ±1.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ±1.0%        | ±1.0%        | ±1.0%        | ±1.0%        |
|             | LINE REGULATION        | ±0.3%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ±0.5%        | ±0.2%        | ±0.2%        | ±0.2%        |
|             | LOAD REGULATION        | ±0.5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ±0.5%        | ±0.5%        | ±0.5%        | ±0.5%        |
|             | SETUP,RISE TIME        | 500ms, 30ms/230VAC 500ms, 30ms/115VAC(full load)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |              |              |              |
|             | HOLD UP TIME (Typ.)    | 60ms/230VAC 12ms/115VAC (full load)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |              |              |              |
| INPUT       | VOLTAGE RANGE          | 85 ~ 264VAC 120 ~ 373VDC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |              |              |              |
|             | FREQUENCY RANGE        | 47 ~ 63Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |              |              |              |
|             | EFFICIENCY(Typ.)       | 89%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 89%          | 90%          | 91.5%        | 91.5%        |
|             | AC CURRENT(Typ.)       | 1.4A/115VAC 0.85A/230VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |              |              |              |
|             | INRUSH CURRENT(Typ.)   | COLD START 65A/230VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |              |              |              |
|             | LEAKAGE CURRENT        | <0.75mA / 240VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |              |              |              |
| PROTECTION  | OVERLOAD               | 110~ 150% rated output power<br>Protection type:Hiccup mode,recovers automatically after fault condition is removed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |              |              |              |
|             | OVER VOLTAGE           | 13.8~16.2V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 18.75~21.75V | 28.8~33.6V   | 41.4~48.6V   | 55.2~64.8V   |
|             |                        | Protection type:Shut down o/p voltage, re-power on to recover                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |              |              |              |
| ENVIRONMENT | WORKING TEMP.          | -20 ~ +70°C (Refer to "derating curve" )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |              |              |              |
|             | WORKING HUMIDITY       | 20 ~ 90% RH non-condensing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |              |              |              |
|             | STORAGE TEMP.,HUMIDITY | -45 ~ +85°C, 20% ~ 95% RH non-condensing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |              |              |              |
|             | TEMP.COEFFICIENT       | ±0.03%/°C (0 ~ 50°C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |              |              |              |
|             | VIBRATION              | 10 ~ 500Hz, 5G 10 min/1cycle,60min.each X、Y、Z axes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |              |              |              |
| SAFETY      | SAFETY STANDARDS       | GB4943.1, EN 60950.1 APPROVED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |              |              |              |
|             | WITHSTAND VOLTAGE      | I/P-O/P:3.0KVAC I/P-FG:2.0KVAC 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 EN61000-3-2:2014/EN61000-3-3:2013                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |              |              |              |
|             | EMC IMMUNITY           | Compliance to EN 55032:2015/EN55035:2017/60950-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |              |              |              |
| OTHERS      | MTBF                   | ≥763.6K hrs MIL-HDBK-217F(25°C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |              |              |              |
|             | DIMENSION              | 99*97*30mm (L*W*H)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |              |              |              |
|             | PACKING                | 0.23Kg/PCS,60PCS/14.8KG/CTN,43*23*33CM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |              |              |              |
| NOTE        |                        | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.<br>2. Ripple&noise are measured at 20MHz of bandwidth by using a 12 "twisted pair -wire terminated with a 0.1uf and 47uf parallel capacitors.<br>3. Tolerance:includes set up tolerance,line regulation and load regulation.<br>4. Derating output is required under low input voltage. Please refer to the derating curve for details.<br>5. The power supply should be considered as a part of the components in the system. All EMC tests will test the test samples on a metal iron plate with a thickness of 1mm, a length of 360mm * width of 360mm. |              |              |              |              |

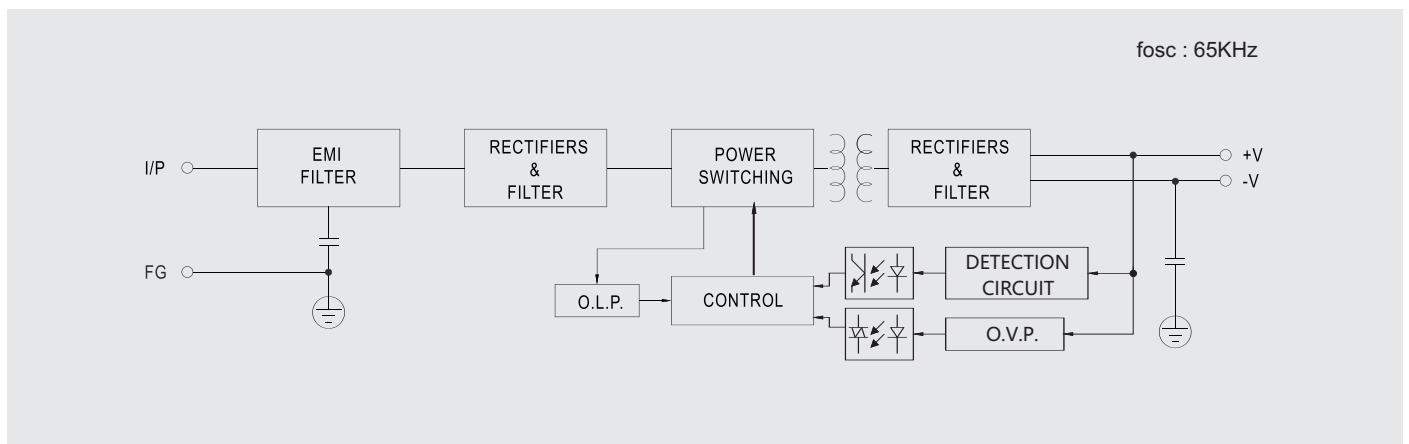
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### Mechanical Specification



### Block Diagram



### Derating Curve

### Static Characteristic

