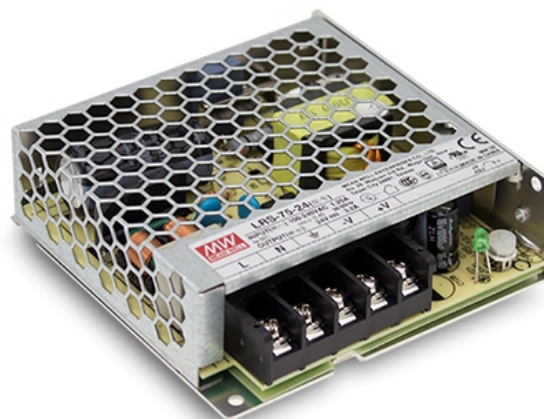




75W Single Output Switching Power Supply

LRS-75 series

User's Manual

R33100
RoHS

IS 13252

(NOTE 9)



AS/NZS62368-1



GB 4943.1



UL62368-1



TP TC004



IEC62368-1



ECO



Automate



Industrial



Security



Network



Telecom

Features

- Universal AC input / Full range
- Withstand 300VAC surge input for 5 second
- No load power consumption < 0.3W
- Miniature size and 1U low profile
- High operating temperature up to 70°C
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 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
- High efficiency, long life and high reliability
- LED indicator for power on
- Over voltage category III
- 100% full load burn-in test
- 3 years warranty

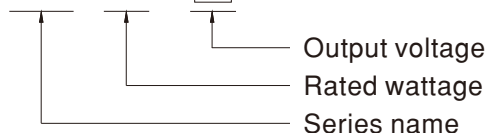
Description

LRS-75 series is a 75W 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 5V, 12V, 15V, 24V, 36V and 48V.

In addition to the high efficiency up to 91.5%, the design of metallic mesh case enhances the heat dissipation of LRS-75 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-75 has the complete protection functions and 5G anti-vibration capability; it is complied with the international safety regulations such as TUV BS EN/EN62368-1, BS EN/EN60335-1, BS EN/EN61558-1/-2-16, UL62368-1 and GB 4943.1. LRS-75 series serves as a high price-to-performance power supply solution for various industrial applications.

Model Encoding

LRS - 75 - 5



Applications

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

GTIN CODE

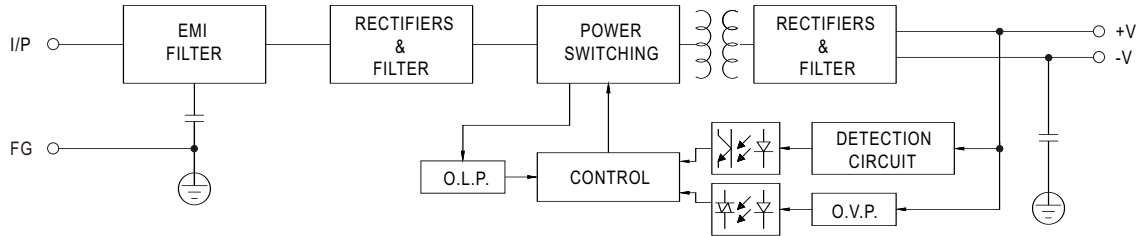
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

SPECIFICATION

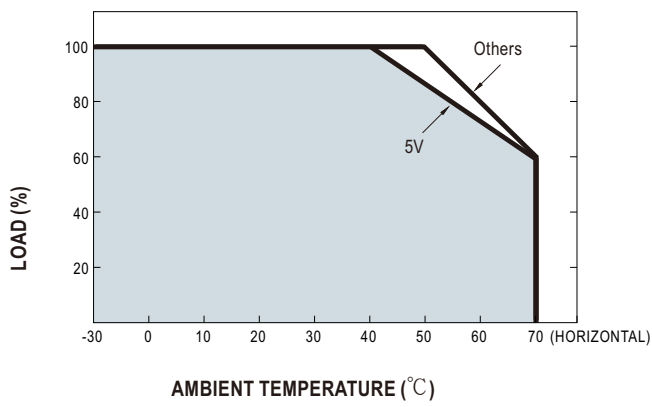
| MODEL | | LRS-75-5 | LRS-75-12 | LRS-75-15 | LRS-75-24 | LRS-75-36 | LRS-75-48 |
|-----------------------|--|---|--------------|----------------|--------------|--------------|--------------|
| OUTPUT | DC VOLTAGE | 5V | 12V | 15V | 24V | 36V | 48V |
| | RATED CURRENT | 14A | 6A | 5A | 3.2A | 2.1A | 1.6A |
| | CURRENT RANGE | 0 ~ 14A | 0 ~ 6A | 0 ~ 5A | 0 ~ 3.2A | 0 ~ 2.1A | 0 ~ 1.6A |
| | RATED POWER | 70W | 72W | 75W | 76.8W | 75.6W | 76.8W |
| | RIPPLE & NOISE (max.) Note.2 | 100mVp-p | 120mVp-p | 120mVp-p | 150mVp-p | 200mVp-p | 200mVp-p |
| | VOLTAGE ADJ. RANGE | 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 | ±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% |
| | LOAD REGULATION Note.5 | ±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.) | 60ms/230VAC 12ms/115VAC at full load | | | | | | |
| INPUT | VOLTAGE RANGE | 85 ~ 264VAC 120 ~ 373VDC | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | |
| | EFFICIENCY (Typ.) | 86.5% | 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 | OVER LOAD | 110 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | | | |
| | OVER VOLTAGE | 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 non-condensing | | | | | |
| | TEMP. COEFFICIENT | ±0.03%/°C (0 ~ 50°C) | | | | | |
| | VIBRATION | 10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes | | | | | |
| | 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 | UL62368-1, TUV BS EN/EN62368-1, BS EN/EN60335-1, BS EN/EN61558-1/-2-16,GB 4943.1, BSMI CNS15598-1, EAC TP TC 004,AS/NZS 62368.1(by CB),KC62368-1, BIS IS13252(Part1): 2010/IEC 60950-1: 2005(NOTE 9) approved | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:4KVAC 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 BS EN/EN55032 (CISPR32) Class B, BS EN/EN55014, BS EN/EN61000-3-2,-3, GB17625.1,GB/T 9254.1, BSMI CNS15936, EAC TP TC 020,KC KSC 9832, KSC 9835 | | | | | |
| EMC IMMUNITY | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN61000-6-2 (BS EN/EN50082-2), BS EN/EN55035, heavy industry level,EAC TP TC 020,KC KSC 9832, KSC 9835 | | | | | | |
| OTHERS | MTBF | 3334.3K hrs min. Telcordia SR-332 (Bellcore) ; 667.2Khrs min. MIL-HDBK-217F (25°C) | | | | | |
| | DIMENSION | 99*97*30mm (L*W*H) | | | | | |
| | PACKING | 0.25Kg ; 45pcs/ 12.25Kg/ 0.77CUFT | | | | | |
| NOTE | <ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Tolerance : includes set up tolerance, line regulation and load regulation. Line regulation is measured from low line to high line at rated load. Load regulation is measured from 0% to 100% rated load. 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. The ambient temperature derating of 5°C/1000m is needed for operating altitude greater than 2000m(6500ft). 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 https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf) Some model may not have the BIS logo, please contact your MEAN WELL sales for more information. <p>⊗ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p> | | | | | | |

■ Block Diagram

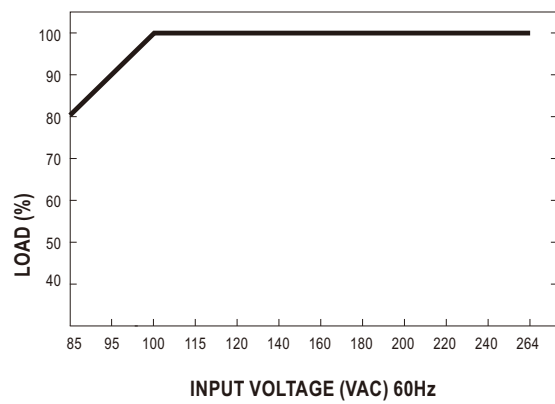
fosc : 65KHz



■ Derating Curve

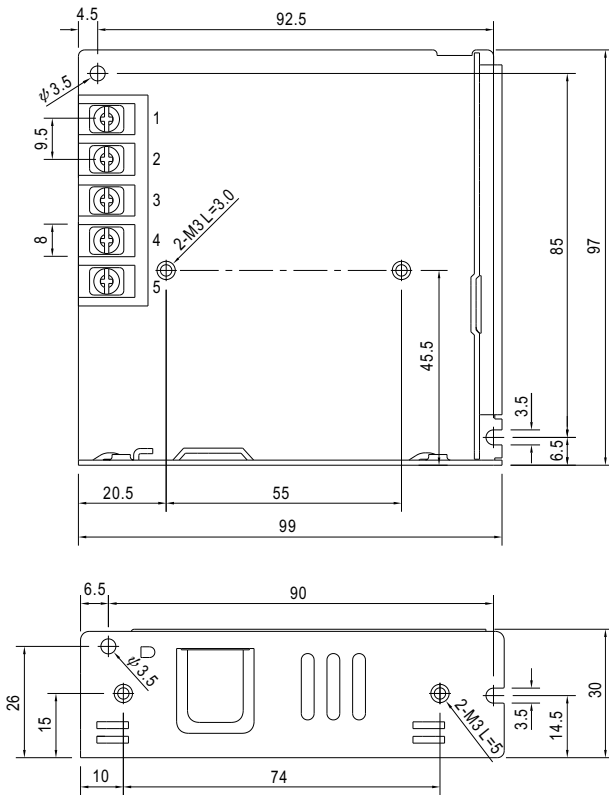


■ Static Characteristics



Mechanical Specification

Case No.240A Unit:mm Tolerance:±1



Terminal Pin No. Assignment

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

Installation Manual

Please refer to : <http://www.meanwell.com/manual.html>