# RS-150 Series

150W Single Output Switching Power Supply



■ Features :

- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- LED indicator for power on
- 100% full load burn-in test
- All using 105℃ long life electrolytic capacitors
- Withstand 300VAC surge input for 5 second
- High operating temperature up to 70℃
- Withstand 5G vibration test
- High efficiency, long life and high reliability
- 3 years warranty

User's Manual

## ■ GTIN CODE

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

AS/NZS62368-1 UL62368-1 BS EN/EN62368-1 IEC62368-1 TPTC004

## SPECIFICATION

| MODEL | | RS-150-3.3 | RS-150-5 | RS-150-12 | RS-150-15 | RS-150-24 | RS-150-48 |
|---|---|---|---|---|---|---|---|
| OUTPUT | DC VOLTAGE | 3.3V | 5V | 12V | 15V | 24V | 48V |
| | RATED CURRENT | 30A | 26A | 12.5A | 10A | 6.5A | 3.3A |
| | CURRENT RANGE | 0 ~ 30A | 0 ~ 26A | 0 ~ 12.5A | 0 ~ 10A | 0 ~ 6.5A | 0 ~ 3.3A |
| | RATED POWER | 99W | 130W | 150W | 150W | 156W | 158.4W |
| | RIPPLE & NOISE (max.) Note.2 | 80mVp-p | 80mVp-p | 120mVp-p | 120mVp-p | 120mVp-p | 200mVp-p |
| | VOLTAGE ADJ. RANGE | 3.2V ~ 3.5V | 4.75 ~ 5.5V | 11.4 ~ 13.2V | 14.25 ~ 16.5V | 22.8 ~ 26.4V | 45.6 ~ 52.8V |
| | VOLTAGE TOLERANCE Note.3 | ±3.0% | ±2.0% | ±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 | ±2.0% | ±1.0% | ±0.5% | ±0.5% | ±0.5% | ±0.5% |
| | SETUP, RISE TIME | 800ms, 20ms/230VAC 1200ms, 30ms/115VAC at full load | | | | | |
| | HOLD UP TIME (Typ.) | 28ms/230VAC 20ms/115VAC at full load | | | | | |
| INPUT | VOLTAGE RANGE | 88 ~ 132VAC / 176 ~ 264VAC selected by switch 248 ~ 373VDC(Withstand 300VAC surge for 5sec. Without damage) | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | |
| | EFFICIENCY(Typ.) | 74% | 78% | 83% | 84% | 86% | 86% |
| | AC CURRENT (Typ.) | 3A/115VAC 2A/230VAC | | | | | |
| | INRUSH CURRENT (Typ.) | COLD START 40A/230VAC | | | | | |
| | LEAKAGE CURRENT | <2mA / 240VAC | | | | | |
| PROTECTION | OVERLOAD Note.8 | 110 ~ 150% rated output power | | | | | |
| | | 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 | 55.2 ~ 64.8V |
| | | Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | | | |
| ENVIRONMENT | WORKING TEMP. | -25 ~ +70℃ (Refer to "Derating Curve") | | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85℃, 10 ~ 95% RH | | | | | |
| | TEMP. COEFFICIENT | ±0.03%/℃ (0 ~ 50℃) | | | | | |
| | VIBRATION | 10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes | | | | | |
| SAFETY & EMC (Note 6) | SAFETY STANDARDS | UL62368-1, TUV BS EN/EN62368-1, AS/NZS 62368.1, 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℃/ 70% RH | | | | | |
| | EMC EMISSION | Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2(Note.9),-3, EAC TP TC 020 | | | | | |
| | EMC IMMUNITY | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, BS EN/EN61000-6-2 (BS EN/EN50082-2), heavy industry level, EAC TP TC 020 | | | | | |
| OTHERS | MTBF | 3044.1K hrs min. Telcordia SR-332 (Bellcore) ; 437.3K hrs min. MIL-HDBK-217F (25℃) | | | | | |
| | DIMENSION | 199*98*38mm (L*W*H) | | | | | |
| | PACKING | 0.7Kg; 20pcs/14Kg/0.85CUFT | | | | | |

NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μF & 47 μF 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. 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 )
7. 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.
8. Extra consideration should be taken when selecting output wiring for 3.3V and 5V models. This is to prevent the protection modes for overload and short circuit from becoming constant power.
9. Testing harmonic current at 80% load.
10. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).

※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

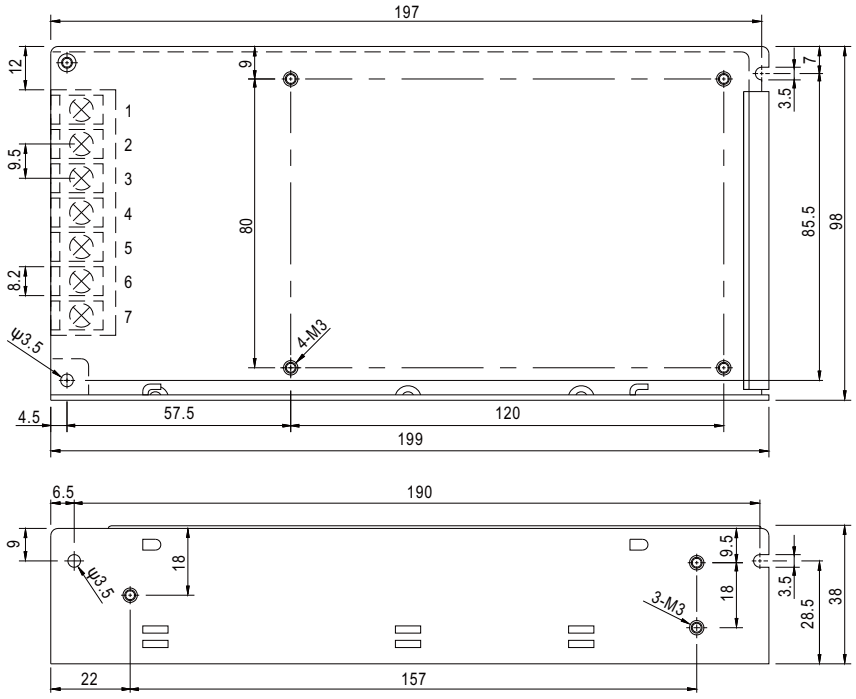


**Sunpower Electronics** is a trading division of Sunpower Group Holdings | Orion House, Calleva Park, Aldermaston, Berkshire RG7 8SN | Tel: +44 (0)118 981 1001 | Email: enquiries@sunpower-uk.com

## ■ Mechanical Specification

(Unit: mm , tolerance ± 1mm)

Case No. 902A

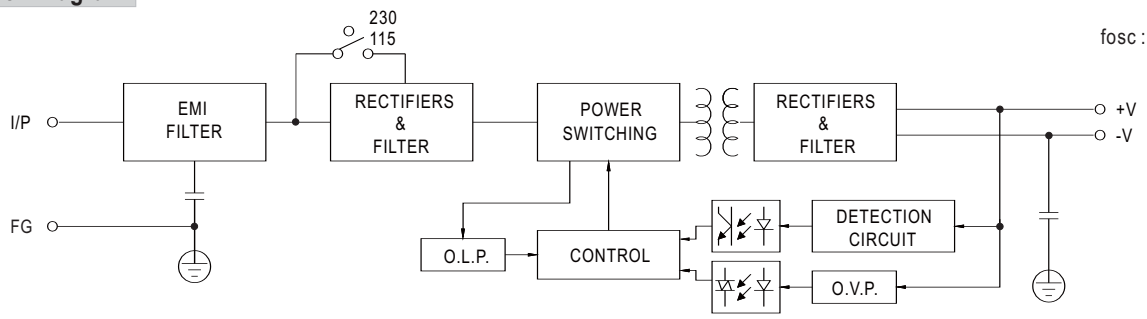



Terminal Pin No. Assignment

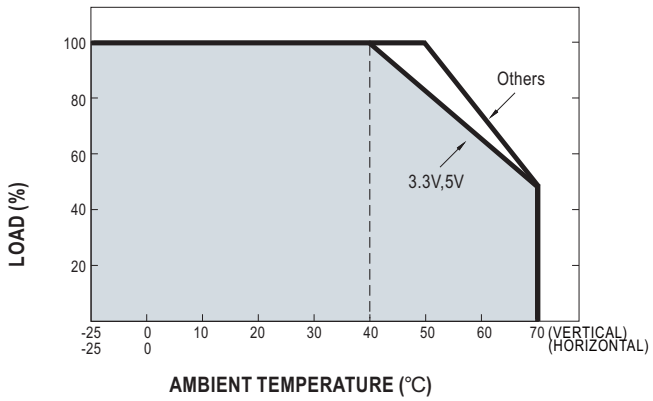
| Pin No. | Assignment | Pin No. | Assignment |
|---|---|---|---|
| 1 | AC/L | 4,5 | DC OUTPUT -V |
| 2 | AC/N | 6,7 | DC OUTPUT +V |
| 3 | FG ⏚ | | |

## ■ Block Diagram

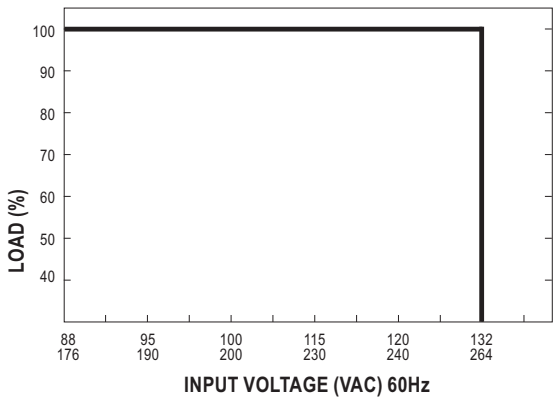
fosc : 60KHz




## ■ Derating Curve




## ■ Static Characteristics







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