



150W Single Output with PFC Function

HRPG-150 series



■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- High efficiency up to 88%
- Withstand 300VAC surge input for 5 seconds
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit
- 1U low profile 38mm
- Built-in remote ON-OFF control
- Stand by 5V@0.3A
- Built-in remote sense function
- No load power consumption<0.5W (Note.6)
- 5 years warranty

User's Manual



■ GTIN CODE

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



SPECIFICATION

| MODEL | HRPG-150-3.3 | HRPG-150-5 | HRPG-150-7.5 | HRPG-150-12 | HRPG-150-15 | HRPG-150-24 | HRPG-150-36 | HRPG-150-48 | | |
|-----------------------|--------------------------------------|--|--------------|-------------|----------------------|--------------|--------------|--------------|--------------|--|
| OUTPUT | DC VOLTAGE | 3.3V | 5V | 7.5V | 12V | 15V | 24V | 36V | 48V | |
| | RATED CURRENT | 30A | 26A | 20A | 13A | 10A | 6.5A | 4.3A | 3.3A | |
| | CURRENT RANGE | 0 ~ 30A | 0 ~ 26A | 0 ~ 20A | 0 ~ 13A | 0 ~ 10A | 0 ~ 6.5A | 0 ~ 4.3A | 0 ~ 3.3A | |
| | RATED POWER | 99W | 130W | 150W | 156W | 150W | 156W | 154.8W | 158.4W | |
| | RIPPLE & NOISE (max.) Note.2 | 80mVp-p | 80mVp-p | 100mVp-p | 120mVp-p | 150mVp-p | 150mVp-p | 200mVp-p | 240mVp-p | |
| | VOLTAGE ADJ. RANGE | 2.8 ~ 3.8V | 4.3 ~ 5.8V | 6.8 ~ 9V | 10.2 ~ 13.8V | 13.5 ~ 18V | 21.6 ~ 28.8V | 28.8 ~ 39.6V | 40.8 ~ 55.2V | |
| | VOLTAGE TOLERANCE Note.3 | ± 2.5% | ± 2.5% | ± 2.5% | ± 1.5% | ± 1.5% | ± 1.5% | ± 1.5% | ± 1.5% | |
| | LINE REGULATION | ± 0.5% | ± 0.5% | ± 0.5% | ± 0.3% | ± 0.3% | ± 0.2% | ± 0.2% | ± 0.2% | |
| | LOAD REGULATION | ± 1.0% | ± 1.0% | ± 1.0% | ± 0.5% | ± 0.5% | ± 0.5% | ± 0.5% | ± 0.5% | |
| | SETUP, RISE TIME | 3000ms, 50ms/230VAC 3000ms, 50ms/115VAC at full load | | | | | | | | |
| HOLD UP TIME (Typ.) | 16ms/230VAC 16ms/115VAC at full load | | | | | | | | | |
| INPUT | VOLTAGE RANGE Note.5 | 85 ~ 264VAC 120 ~ 370VDC | | | | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | | | | |
| | POWER FACTOR (Typ.) | PF>0.95/230VAC PF>0.99/115VAC at full load | | | | | | | | |
| | EFFICIENCY (Typ.) | 78.5% | 84% | 86% | 87% | 87% | 87% | 88% | 88% | |
| | AC CURRENT (Typ.) | 1.7A/115VAC 0.9A/230VAC | | | | | | | | |
| | INRUSH CURRENT (Typ.) | 35A/115VAC 70A/230VAC | | | | | | | | |
| | LEAKAGE CURRENT | <1mA / 240VAC | | | | | | | | |
| PROTECTION | OVERLOAD | 105 ~ 135% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed | | | | | | | | |
| | OVER VOLTAGE | 3.96 ~ 4.62V | 6 ~ 7V | 9.4 ~ 10.9V | 14.4 ~ 16.8V | 18.8 ~ 21.8V | 30 ~ 34.8V | 41.4 ~ 48.6V | 57.6 ~ 67.2V | |
| | OVER TEMPERATURE | Shut down o/p voltage, recovers automatically after temperature goes down Protection type : Shut down o/p voltage, re-power on to recover | | | | | | | | |
| FUNCTION | 5V STANDBY | 5VSB : 5V@0.3A ; tolerance ± 5%, ripple : 50mVp-p(max.) | | | | | | | | |
| | REMOTE CONTROL | RC+ / RC- : 4 ~ 10V or open = power on ; 0 ~ 0.8V or short = power off | | | | | | | | |
| ENVIRONMENT | WORKING TEMP. | -40 ~ +70°C (Refer to "Derating Curve") | | | | | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85°C, 10 ~ 95% RH | | | | | | | | |
| | TEMP. COEFFICIENT | ±0.04%/°C (0 ~ 50°C) | | | | | | | | |
| | VIBRATION | 10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes | | | | | | | | |
| SAFETY & EMC (Note 4) | 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/EN55035, BS EN/EN61000-6-2,heavy industry level,EAC TP TC 020 | | | | | | | | |
| OTHERS | MTBF | 1544.0K hrs min. Telcordia SR-332 (Bellcore) ; 213.4K hrs min. | | | MIL-HDBK-217F (25°C) | | | | | |
| | DIMENSION | 159*97*38mm (L*W*H) | | | | | | | | |
| | PACKING | 0.63Kg; 24pcs/16Kg/0.9CUFT | | | | | | | | |

NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. 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 <http://www.meanwell.com>)
5. Derating may be needed under low input voltages. Please check the derating curve for more details.
6. No load power consumption<0.5W when RC- & RC+ (CN100 pin5,6) 0 ~ 0.8V or short.
7. Strongly recommended that external output capacitance should not exceed 5000uF. (Only for: HRPG-150-3.3/-5/-7.5/-12/-15)
8. 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).

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



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Mechanical Specification

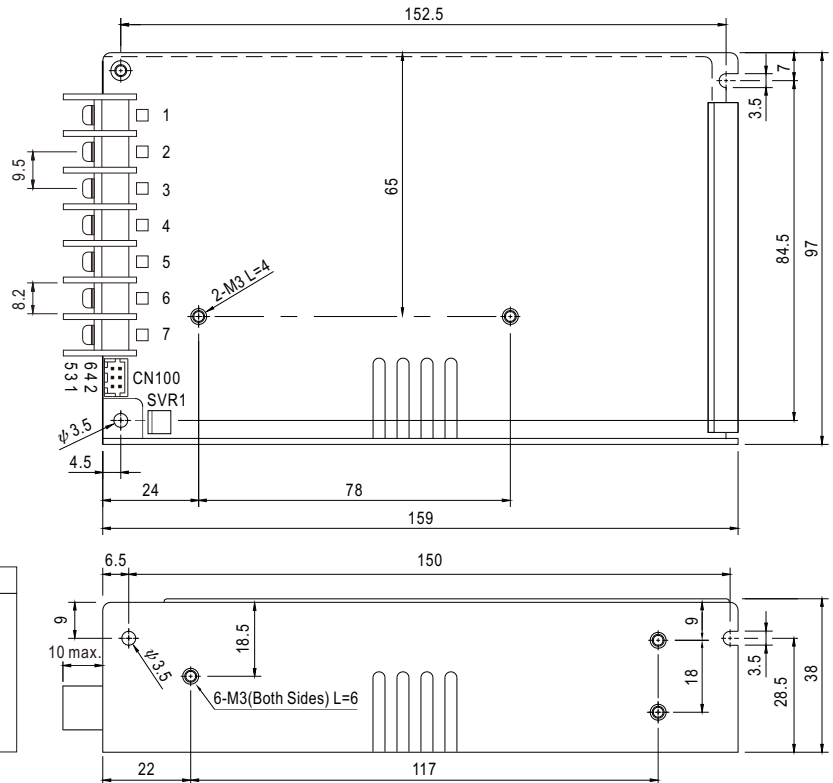
Case No.901I Unit:mm

Terminal Pin No. Assignment

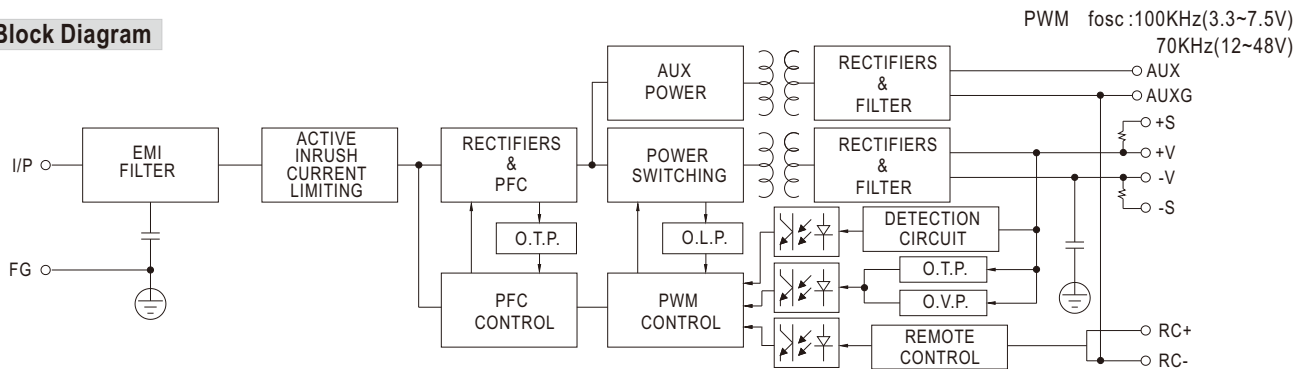
| Pin No. | Assignment | Pin No. | Assignment |
|---------|------------|---------|--------------|
| 1 | AC/L | 4,5 | DC OUTPUT -V |
| 2 | AC/N | 6,7 | DC OUTPUT +V |
| 3 | FG \perp | | |

Connector Pin No. Assignment (CN100) : HRS DF11-6DP-2DSA or equivalent

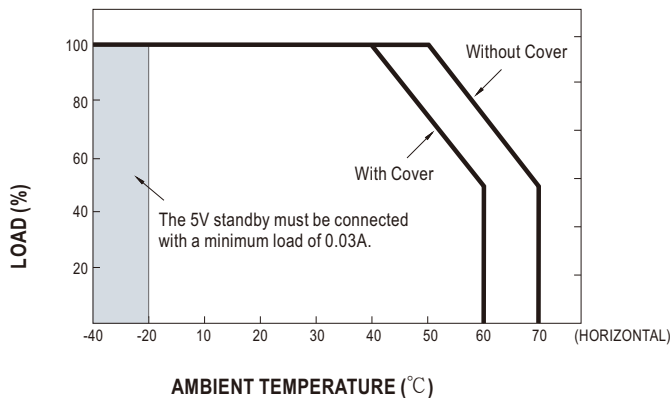
| Pin No. | Assignment | Mating Housing | Terminal |
|---------|------------|-------------------------------|--------------------------------|
| 1 | -S | HRS DF11-6DS or equivalent | HRS DF11-**SC or equivalent |
| 2 | +S | | |
| 3 | AUXG | | |
| 4 | AUX | | |
| 5 | RC- | | |
| 6 | RC+ | | |



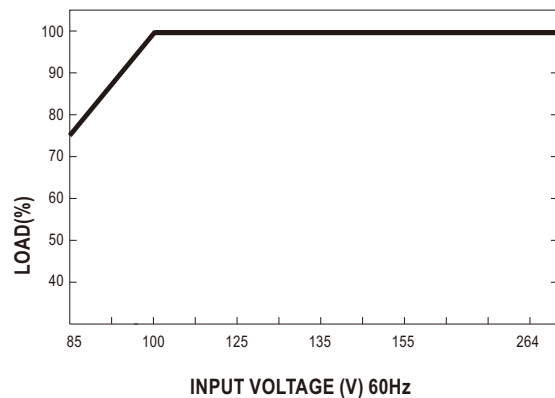
Block Diagram



Derating Curve



Output Derating VS Input Voltage





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Function Description of CN100

| Pin No. | Function | Description |
|---------|----------|---|
| 1 | -S | Negative sensing. The -S signal should be connected to the negative terminal of the load. The -S and +S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.5V. |
| 2 | +S | Positive sensing. The +S signal should be connected to the positive terminal of the load. The +S and -S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.5V. |
| 3 | AUXG | Auxiliary voltage output ground. The signal return is isolated from the output terminals (+V & -V). |
| 4 | AUX | Auxiliary voltage output, 4.75~5.25V, referenced to pin 3(AUXG). The maximum load current is 0.3A. This output is not controlled by the "remote ON/OFF control". |
| 5 | RC- | Remote control ground. |
| 6 | RC+ | Turns the output on and off by electrical or dry contact between pin 5 (RC-). Short: Power OFF, Open: Power ON. |

Function Manual

1. Remote Control

The PSU can be turned ON/OFF by using the "Remote ON/OFF" function

| Between RC-(pin5) and RC+(pin6) | Output Status |
|---------------------------------|---------------|
| SW ON (Short) | OFF |
| SW OFF (Open) | ON |

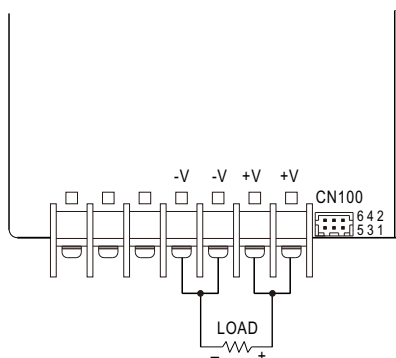
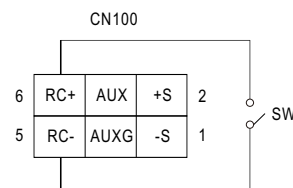


Fig 1.1



2. Remote Sense

The remote sensing compensates voltage drop on the load wiring up to 0.5V.

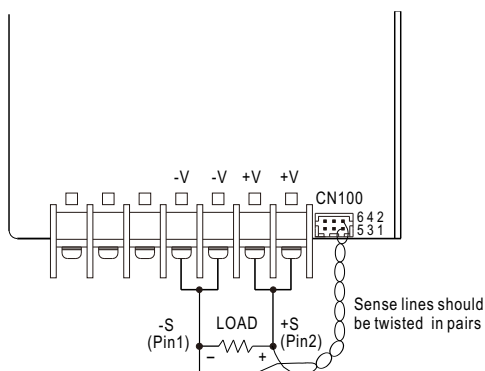


Fig 2.1

