



Наличие и актуальные цены на

**HRP-150N3-24**

<https://www.mean-well.ru/store/HRP-150N3-24/>



150W Ultra-High Peak Power Supply

HRP-150N3 series

User's Manual



AS/NZS 62368-1 UL62368-1 BS EN/EN62368-1 TPTC004 IEC62368-1



## Features

- Universal AC input / Full range
- Withstand 300VAC surge input for 5 seconds
- 300% peak power capability
- Built-in constant current limiting circuit
- Fanless design, Cooling by free air convection
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in remote sense function
- Withstand 5G vibration
- Operating altitude up to 5000 meters(Note.5)
- Output voltage adjustable  $\pm 15\%$ (Avg.)
- 1U low profile 38mm
- 5 years warranty

## Applications

- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment
- Diagnostic or biological facilities
- Test or measurement systems
- Telecommunication equipment

## GTIN CODE

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

## Description

HRP-150N3 series is a 150W single output AC/DC ultra-high peak power supply. This series operates at 85~264VAC input voltage and offers the models with the DC output mostly demanded from the industry. Each model is cooled by free air convection, working for the temperature up to 70°C without cover. Moreover, HRP-150N3 can provide 300% short-duration peak power for motor applications and electromechanical loads requiring much higher power during start-up.

## Model Encoding

HRP - 150N3 - 24

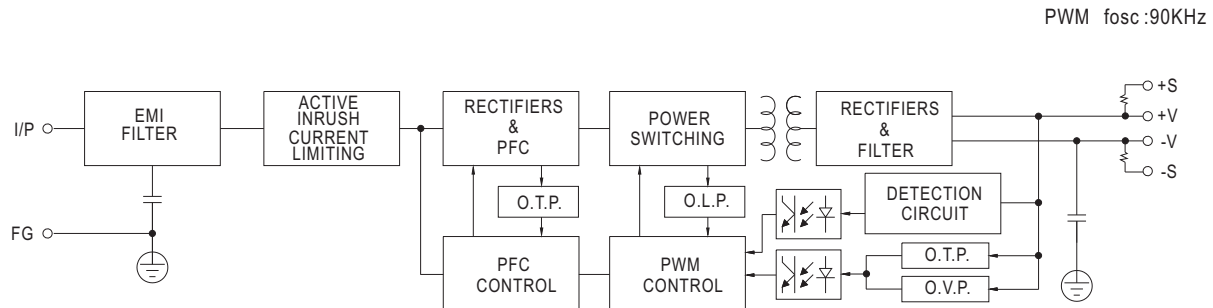
Output voltage(12/24/36/48V)  
3 times peak power  
Rated wattage  
Series name



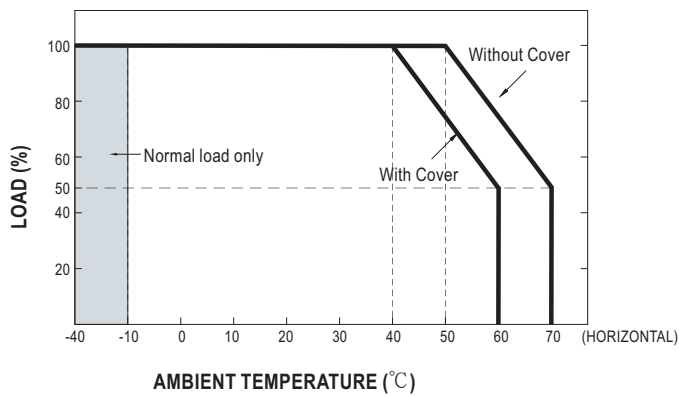
## SPECIFICATION

| MODEL                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | HRP-150N3-12                                                                                                                                                                                                                                 | HRP-150N3-24                                                           | HRP-150N3-36                           | HRP-150N3-48 |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------|--------------|
| OUTPUT                         | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 12V                                                                                                                                                                                                                                          | 24V                                                                    | 36V                                    | 48V          |
|                                | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 13A                                                                                                                                                                                                                                          | 6.5A                                                                   | 4.3A                                   | 3.3A         |
|                                | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0 ~ 13A                                                                                                                                                                                                                                      | 0 ~ 6.5A                                                               | 0 ~ 4.3A                               | 0 ~ 3.3A     |
|                                | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 156W                                                                                                                                                                                                                                         | 156W                                                                   | 154.8W                                 | 158.4W       |
|                                | RIPPLE & NOISE (max.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 120mVp-p                                                                                                                                                                                                                                     | 150mVp-p                                                               | 200mVp-p                               | 240mVp-p     |
|                                | VOLTAGE ADJ. RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 10.2 ~ 13.8V                                                                                                                                                                                                                                 | 21.6 ~ 28.8V                                                           | 28.8 ~ 39.6V                           | 40.8 ~ 55.2V |
|                                | VOLTAGE TOLERANCE <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ± 1.5%                                                                                                                                                                                                                                       | ± 1.5%                                                                 | ± 1.5%                                 | ± 1.5%       |
|                                | LINE REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ± 0.3%                                                                                                                                                                                                                                       | ± 0.2%                                                                 | ± 0.2%                                 | ± 0.2%       |
|                                | LOAD REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ± 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 <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 85 ~ 264VAC    120 ~ 370VDC                                                                                                                                                                                                                  |                                                                        |                                        |              |
|                                | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 47 ~ 63Hz                                                                                                                                                                                                                                    |                                                                        |                                        |              |
|                                | POWER FACTOR (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | PF>0.95/230VAC    PF>0.98/115VAC at full load                                                                                                                                                                                                |                                                                        |                                        |              |
|                                | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 88%                                                                                                                                                                                                                                          | 88%                                                                    | 89%                                    | 89%          |
|                                | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1.7A/115VAC    0.9A/230VAC                                                                                                                                                                                                                   |                                                                        |                                        |              |
|                                | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 35A/115VAC    70A/230VAC                                                                                                                                                                                                                     |                                                                        |                                        |              |
|                                | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <1mA / 240VAC                                                                                                                                                                                                                                |                                                                        |                                        |              |
| PROTECTION                     | OVERLOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Output power >105% rated for more than 5 seconds then shut down o/p voltage, re-power on to recover<br>Constant current limiting for output power >330% rated for more than 5 seconds and then shut down o/p voltage, re-power on to recover |                                                                        |                                        |              |
|                                | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 14.4 ~ 16.8V                                                                                                                                                                                                                                 | 30 ~ 34.8V                                                             | 41.4 ~ 48.6V                           | 57.6 ~ 67.2V |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Protection type : Shut down o/p voltage, re-power on to recover                                                                                                                                                                              |                                                                        |                                        |              |
|                                | OVER TEMPERATURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Shut down o/p voltage, recovers automatically after temperature goes down                                                                                                                                                                    |                                                                        |                                        |              |
| ENVIRONMENT                    | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -40 ~ +70°C (Refer to "Derating Curve")                                                                                                                                                                                                      |                                                                        |                                        |              |
|                                | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 20 ~ 90% RH non-condensing                                                                                                                                                                                                                   |                                                                        |                                        |              |
|                                | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -50 ~ +85°C, 10 ~ 95% RH non-condensing                                                                                                                                                                                                      |                                                                        |                                        |              |
|                                | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ±0.04%/°C (0 ~ 50°C )                                                                                                                                                                                                                        |                                                                        |                                        |              |
|                                | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes                                                                                                                                                                                 |                                                                        |                                        |              |
|                                | OPERATING ALTITUDE <small>Note.5</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 5000 meters                                                                                                                                                                                                                                  |                                                                        |                                        |              |
| SAFETY & EMC<br>(Note 6)       | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | UL62368-1, TUV BS EN/EN62368-1, EAC TP TC 004, AS/NZS 62368.1 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Parameter                                                                                                                                                                                                                                    | Standard                                                               | Test Level / Note                      |              |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Conducted                                                                                                                                                                                                                                    | BS EN/EN55032                                                          | Class B                                |              |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Radiated                                                                                                                                                                                                                                     | BS EN/EN55032                                                          | Class B                                |              |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Harmonic current                                                                                                                                                                                                                             | BS EN/EN61000-3-2                                                      | Class A                                |              |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Voltage Flicker                                                                                                                                                                                                                              | BS EN/EN61000-3-3                                                      | -----                                  |              |
|                                | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | BS EN/EN55035 , BS EN/EN61000-6-2(BS EN/EN50082-2)                                                                                                                                                                                           |                                                                        |                                        |              |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Parameter                                                                                                                                                                                                                                    | Standard                                                               | Test Level / Note                      |              |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ESD                                                                                                                                                                                                                                          | BS EN/EN61000-4-2                                                      | Level 3, 8KV air; Level 2, 4KV contact |              |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | RF field                                                                                                                                                                                                                                     | BS EN/EN61000-4-3                                                      | Level 3, 10V/m                         |              |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | EFT/ Burst                                                                                                                                                                                                                                   | BS EN/EN61000-4-4                                                      | Level 3, 2KV                           |              |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Surge                                                                                                                                                                                                                                        | BS EN/EN61000-4-5                                                      | Level 4, 4KV/Line-FG; 2KV/Line-Line    |              |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Conducted                                                                                                                                                                                                                                    | BS EN/EN61000-4-6                                                      | Level 3, 10V                           |              |
| Magnetic Field                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | BS EN/EN61000-4-8                                                                                                                                                                                                                            | Level 4, 30A/m                                                         |                                        |              |
| Voltage Dips and Interruptions |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | BS EN/EN61000-4-11                                                                                                                                                                                                                           | 95% dip 0.5 periods, 30% dip 25 periods, 95% interruptions 250 periods |                                        |              |
| OTHERS                         | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1706.0K hrs min. Telcordia TR/SR-332 (Bellcore) ;    222.8K hrs min. MIL-HDBK-217F (25°C)                                                                                                                                                    |                                                                        |                                        |              |
|                                | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 159*97*38mm (L*W*H)                                                                                                                                                                                                                          |                                                                        |                                        |              |
|                                | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.54Kg; 24pcs/12.96Kg/0.9CUFT                                                                                                                                                                                                                |                                                                        |                                        |              |
| 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 0.1 μ F & 47 μ F parallel capacitor.<br>3. Tolerance : includes set up tolerance, line regulation and load regulation.<br>4. Derating may be needed under low input voltages. Please check the derating curve for more details.<br>5. 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).<br>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."<br>(as available on <a href="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a> )<br>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a> |                                                                                                                                                                                                                                              |                                                                        |                                        |              |

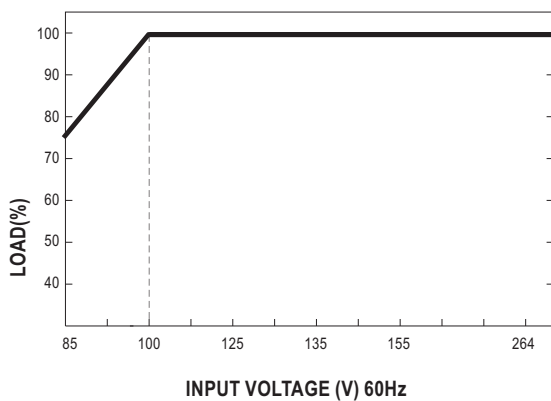
## Block Diagram



## Derating Curve



## Output Derating VS Input Voltage



## Function Manual

### 1. Peak Power

$$P_{av} = \frac{P_{pk} \times t + P_{npk} \times (T-t)}{T} \leq P_{rated}$$

$$\text{Duty} = \frac{t}{T} \times 100\% \leq 35\%$$

$$t \leq 5 \text{ sec}$$

$P_{av}$  : Average output power (W)

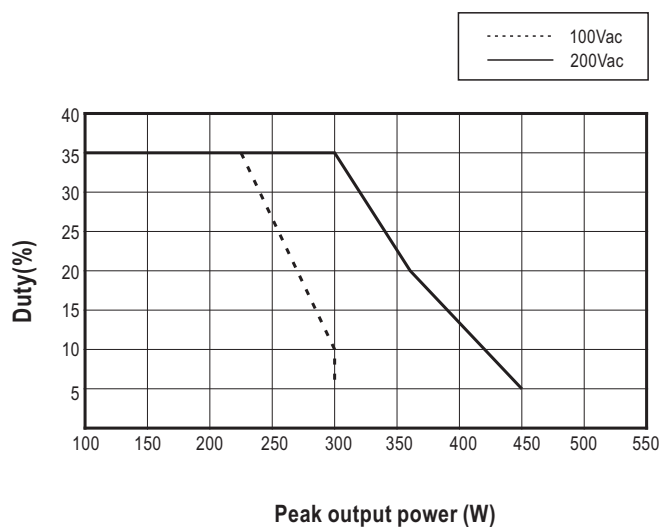
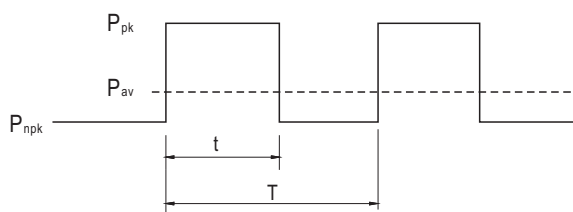
$P_{pk}$  : Peak output power (W)

$P_{npk}$  : Non-peak output power (W)

$P_{rated}$  : Rated output power (W)

$t$  : Peak power width (sec)

$T$  : Period (sec)



#### For example (12V model) :

$$V_{in} = 200V \quad \text{Duty}_{max} = 5\%$$

$$P_{av} = P_{rated} = 156W$$

$$P_{pk} = 450W$$

$$t \leq 5 \text{ sec}$$

$$T \geq \frac{5 \text{ sec}}{5\%} \geq 100 \text{ sec}$$

$$P_{npk} \leq \frac{T P_{av} - t P_{pk}}{T-t}$$

$$P_{npk} \leq 140W$$

## 2.Remote Sense

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

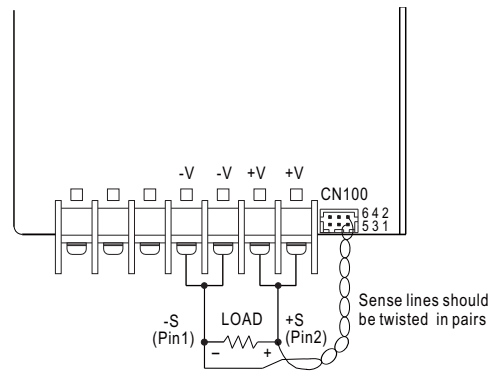


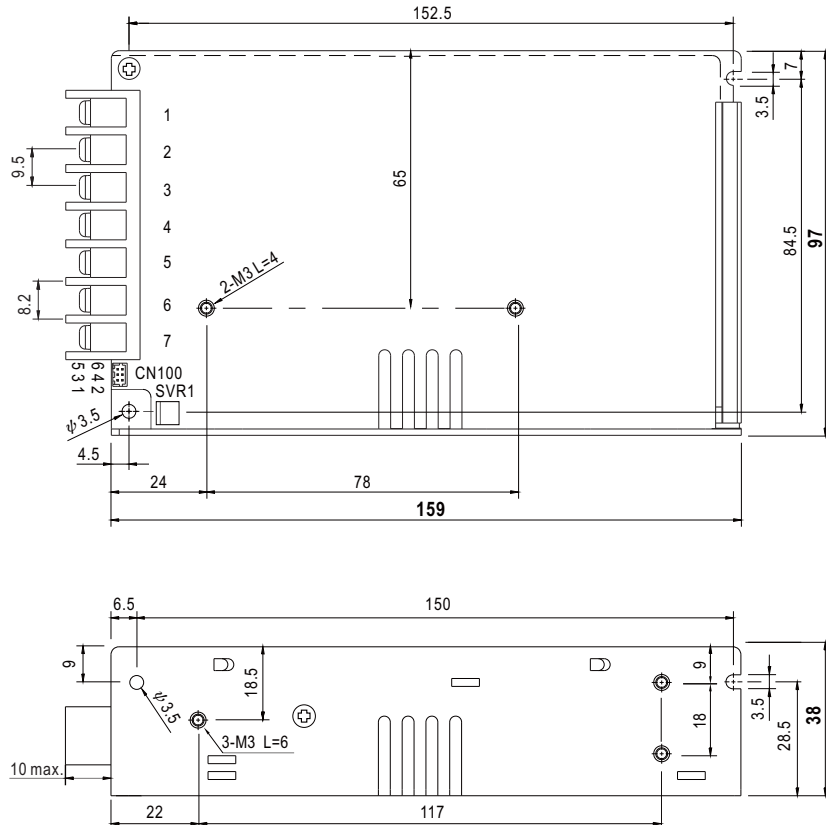
Fig 1.1

| CN100 |    |    |      |
|-------|----|----|------|
| 6     | NC | NC | +S 2 |
| 5     | NC | NC | -S 1 |

## Mechanical Specification

(Unit: mm , tolerance  $\pm 1$ mm)

Case No.9011



### 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         |                            |                             |
| 3~6     | NC         |                            |                             |

## Installation Manual

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