



### ■ Features

- Ultra slim design with 105mm(6SU) width
- Universal input 85~264VAC(277VAC operational)
- No load power consumption<0.3W
- Isolation class II
- DC output voltage adjustable
- Protections : Short circuit / Overload / Over voltage
- Cooling by free air convection
- DIN rail TS-35/7.5 or 15 mountable
- Over voltage category III
- LED indicator for power on
- 3 years warranty

### ■ Applications

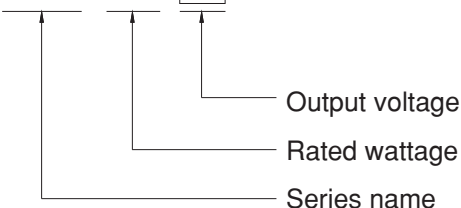
- Household control system
- Building automation
- Industrial control system
- Factory automation
- Electro-mechanical apparatus

### ■ Description

HDR-150 is an economical ultra slim 150W DIN rail power supply series, adapt to be installed on TS-35/7.5 or TS-35/15 mounting rails. The body is designed 105mm(6SU) in width, which allows space saving inside the cabinets. The entire series adopts the full range AC input from 85VAC to 264VAC(277VAC operational) and conforms to EN61000-3-2, the norm the European Union regulates for harmonic current. HDR-150 is designed with plastic housing that it can effectively prevent user from electric hazards. With working efficiency up to 90.5%, the entire series can operate at the ambient temperature between -30°C and 70°C under air convection. It is equipped with constant current mode for over-load protection, fitting various inductive or capacitive applications. The complete protection functions and relevant certificates for home automations and industrial control apparatus (IEC62368-1,UL62368-1,UL61010, EN61558-2-16) make HDR-150 a very competitive power supply solution for household and industrial applications.

### ■ Model Encoding

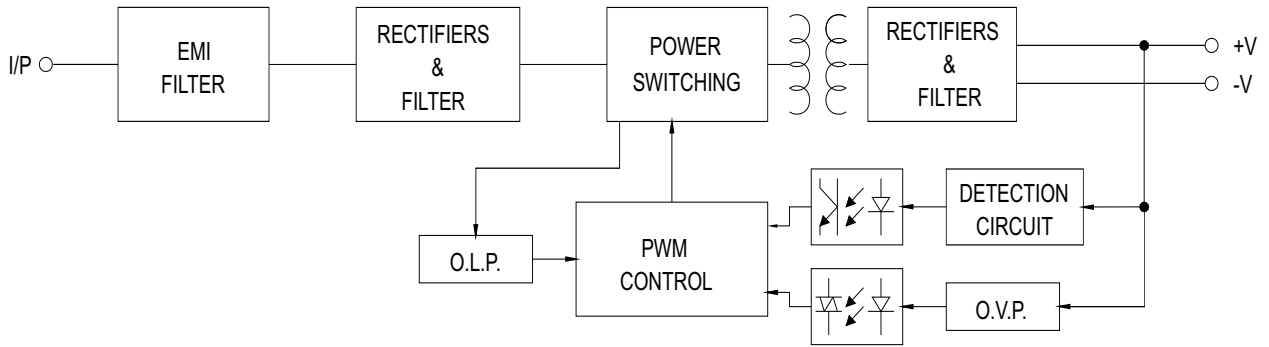
**HDR - 150 - 12**



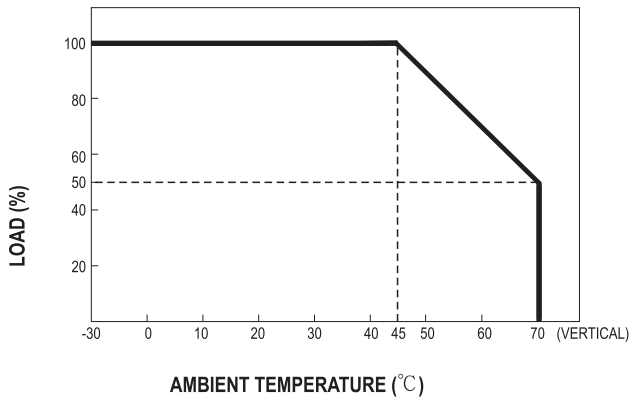
**SPECIFICATION**

| MODEL                          | HDR-150-12  |                           | HDR-150-15  |   | HDR-150-24   |                   | HDR-150-48 |  |              |  |  |
|--------------------------------|---|---------------------------|---|---|--|-------------------|------------|--|--------------|--|--|
| OUTPUT                         | DC VOLTAGE  |                           | 12V   |   | 15V  |                   | 24V        |  | 48V          |  |  |
|                                | RATED CURRENT   | 115VAC                    | 10.2A   |   | 8.55A  |                   | 5.31A      |  | 2.72A        |  |  |
|                                |   | 230VAC                    | 11.3A   |   | 9.5A   |                   | 6.25A      |  | 3.2A         |  |  |
|                                | RATED POWER   | 115VAC                    | 122.4W  |   | 128.3W   |                   | 127.4W     |  | 130.6W       |  |  |
|                                |   | 230VAC                    | 135.6W  |   | 142.5W   |                   | 150W       |  | 153.6W       |  |  |
|                                | RIPPLE & NOISE (max.) Note.2  |                           | 100mVp-p  |   | 120mVp-p   |                   | 150mVp-p   |  | 200mVp-p     |  |  |
|                                | VOLTAGE ADJ. RANGE  |                           | 10.8~ 13.8V   |   | 13.5 ~ 18V   |                   | 21.6 ~ 29V |  | 43.2 ~ 55.2V |  |  |
|                                | VOLTAGE TOLERANCE Note.3  |                           | ±2.0%   |   | ±1.0%  |                   | ±1.0%      |  | ±1.0%        |  |  |
|                                | LINE REGULATION   |                           | ±1.0%   |   | ±1.0%  |                   | ±1.0%      |  | ±1.0%        |  |  |
|                                | LOAD REGULATION   |                           | ±1.0%   |   | ±1.0%  |                   | ±1.0%      |  | ±1.0%        |  |  |
| SETUP, RISE TIME               |   | 500ms, 60ms/230VAC        |   | 500ms, 60ms/115VAC at full load   |  |                   |            |  |              |  |  |
| HOLD UP TIME (Typ.)            |   | 30ms/230VAC               |   | 12ms/115VAC at full load  |  |                   |            |  |              |  |  |
| INPUT                          | VOLTAGE RANGE   |                           | 85 ~ 264VAC (277VAC operational)  |   | 120 ~ 370VDC (390VDC operational)  |                   |            |  |              |  |  |
|                                | FREQUENCY RANGE   |                           | 47 ~ 63Hz   |   |  |                   |            |  |              |  |  |
|                                | EFFICIENCY (Typ.)   |                           | 89%   |   | 89.5%  |                   | 90.5%      |  | 90.5%        |  |  |
|                                | AC CURRENT (Typ.)   |                           | 3A/115VAC   |   | 1.6A/230VAC  |                   |            |  |              |  |  |
|                                | INRUSH CURRENT (Typ.)   |                           | COLD START 35A/115VAC   |   | 70A/230VAC   |                   |            |  |              |  |  |
| PROTECTION                     | OVERLOAD Note.4   |                           | 105 ~ 135% rated output power   |   | Protection type : Constant current limiting, recovers automatically after fault condition is removed |                   |            |  |              |  |  |
|                                | OVER VOLTAGE  |                           | 14.2 ~ 16.2V  |   | 18.8 ~ 22.5V   |                   | 30 ~ 36V   |  | 56.5 ~ 64.8V |  |  |
| ENVIRONMENT                    | WORKING TEMP.   |                           | -30 ~ +70°C (Refer to "Derating Curve")   |   |  |                   |            |  |              |  |  |
|                                | WORKING HUMIDITY  |                           | 20 ~ 90% RH non-condensing  |   |  |                   |            |  |              |  |  |
|                                | STORAGE TEMP., HUMIDITY   |                           | -40 ~ +85°C, 10 ~ 95% RH non-condensing   |   |  |                   |            |  |              |  |  |
|                                | TEMP. COEFFICIENT   |                           | ±0.03%/°C (0 ~ 45°C) RH non-condensing  |   |  |                   |            |  |              |  |  |
|                                | VIBRATION   |                           | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6   |   |  |                   |            |  |              |  |  |
|                                | OPERATING ALTITUDE  |                           | 2000 meters (Note 5)  |   |  |                   |            |  |              |  |  |
|                                | OVER VOLTAGE CATEGORY   |                           | III ; According to EN62368,EN61558, EN50178,EN60664-1, EN62477-1 ; altitude up to 2000 meters                   |   |  |                   |            |  |              |  |  |
| SAFETY & EMC (Note.8)          | SAFETY STANDARDS  |                           | IEC62368-1, UL62368-1, UL61010, TUV EN61558-2-16, EAC TP TC 004 approved; Design refer to EN50178,TUV EN62368-1 |   |  |                   |            |  |              |  |  |
|                                | WITHSTAND VOLTAGE   |                           | I/P-O/P:4KVAC   |   |  |                   |            |  |              |  |  |
|                                | ISOLATION RESISTANCE  |                           | I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH  |   |  |                   |            |  |              |  |  |
|                                | EMC EMISSION  | Parameter                 |   | Standard  |  | Test Level / Note |            |  |              |  |  |
|                                |   | Conducted                 |   | EN55032(CISPR32)  |  | Class B           |            |  |              |  |  |
|                                |   | Radiated                  |   | EN55032(CISPR32)  |  | Class B (note6)   |            |  |              |  |  |
|                                |   | Harmonic Current (Note 7) |   | EN61000-3-2   |  | Class A           |            |  |              |  |  |
|                                |   | Voltage Flicker           |   | EN61000-3-3   |  | -----             |            |  |              |  |  |
|                                | EMC IMMUNITY  | EN55024, EN61000-6-2      |   |   |  |                   |            |  |              |  |  |
|                                |   | Parameter                 |   | Standard  |  | Test Level /Note  |            |  |              |  |  |
| ESD                            |   | EN61000-4-2               |   | Level 3, 8KV air; Level 2, 4KV contact, criteria A                        |  |                   |            |  |              |  |  |
| Radiated Susceptibility        |   | EN61000-4-3               |   | Level 3, criteria A   |  |                   |            |  |              |  |  |
| EFT/Burest                     |   | EN61000-4-4               |   | Level 3, criteria A   |  |                   |            |  |              |  |  |
| Surge                          |   | EN61000-4-5               |   | Level 4,2KV/L-N, criteria A   |  |                   |            |  |              |  |  |
| Conducted                      |   | EN61000-4-6               |   | Level 3, criteria A   |  |                   |            |  |              |  |  |
| Magnetic Field                 |   | EN61000-4-8               |   | Level 4, criteria A   |  |                   |            |  |              |  |  |
| Voltage Dips and interruptions |   | EN61000-4-11              |   | >95% dip 0. 5 periods, 30% dip 25 periods, >95% interruptions 250 periods |  |                   |            |  |              |  |  |
| OTHERS                         | MTBF  |                           | 536K hrs min. MIL-HDBK-217F (25°C)  |   |  |                   |            |  |              |  |  |
|                                | DIMENSION   |                           | 105*90*54.5mm (W*H*D)   |   |  |                   |            |  |              |  |  |
|                                | PACKING   |                           | 0.31Kg; 32pcs/11Kg/1.0CUFT  |   |  |                   |            |  |              |  |  |
| NOTE                           | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1µf &amp; 47µf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Constant current limiting operation within 50% ~100% rated output voltage; protection type for short circuit is hiccup mode,it will recover automatically after fault condition is removed.</p> <p>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).</p> <p>6. When the input voltage is 230VAC,delivers EMI Class B for radiated emission for the power supply; When the input voltage is 110VAC, delivers EMI Class A for radiated emission for the power supply.</p> <p>7. Harmonic current test at 70% load .</p> <p>8. The power supply is considered as an independent unit, but the final equipment still need to re-confirm that the whole system complies with the EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</p> |                           |   |   |  |                   |            |  |              |  |  |

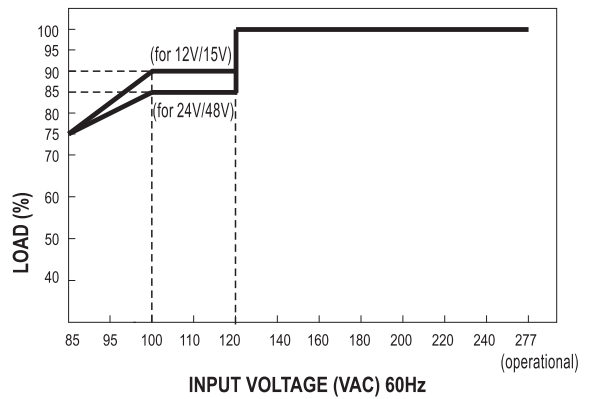
■ Block Diagram



■ Derating Curve VS Ambient Temperature

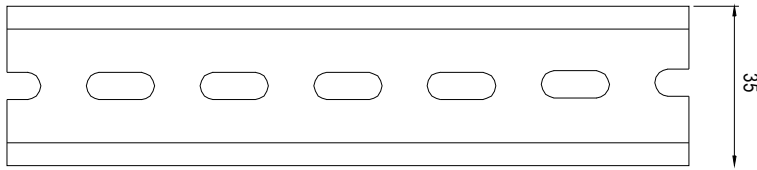
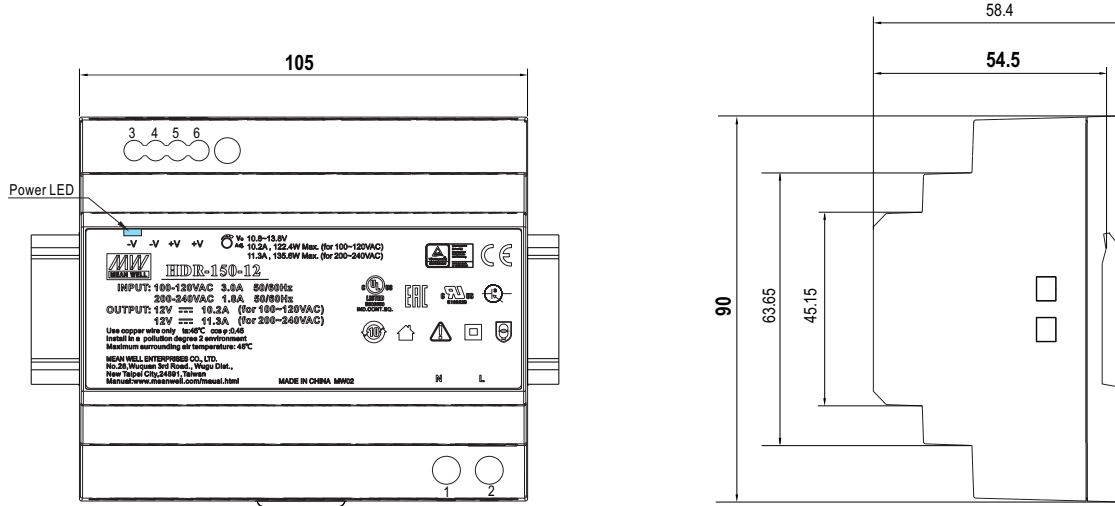


■ Output Derating VS Input Voltage



■ **Mechanical Specification**

(Unit: mm , tolerance  $\pm 0.5\text{mm}$ )



ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15

Terminal Pin No. Assignment

| Pin No. | Assignment | Pin No. | Assignment |
|---------|------------|---------|------------|
| 1       | AC/N       | 3,4     | -V         |
| 2       | AC/L       | 5,6     | +V         |

■ **Installation Manual**

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

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