



**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**

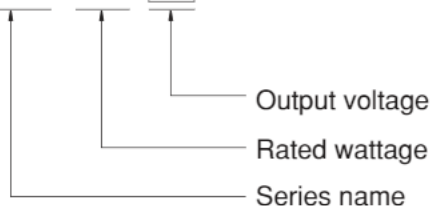
- Household control system
- Building automation
- Industrial control system
- Factory automation
- Electro-mechanical apparatus

**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**

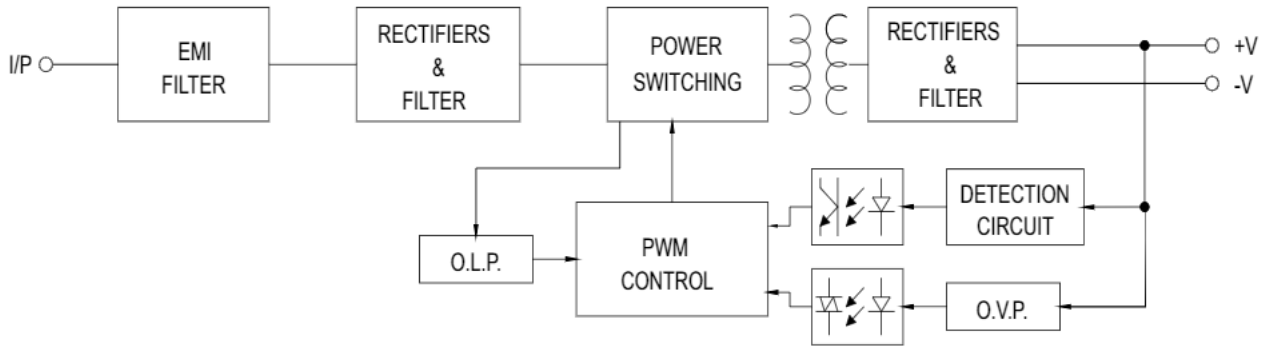
**HDR - 150 - 12**



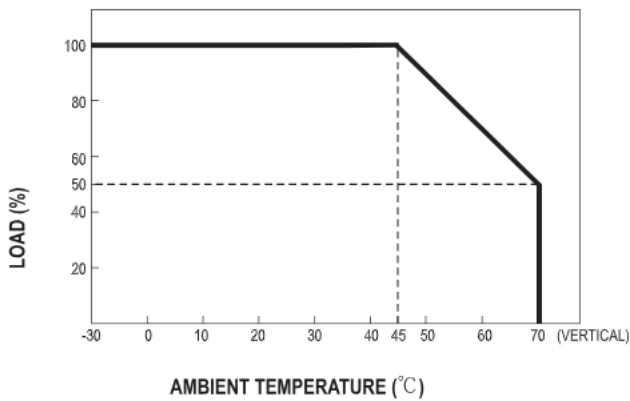
**SPECIFICATION**

| 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 |  |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                    |                                                                                                                  | Protection type : Shut down o/p voltage, re-power on to recover           |                                                                                                      |  |                   |  |              |  |
| 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> |                    |                                                                                                                  |                                                                           |                                                                                                      |  |                   |  |              |  |

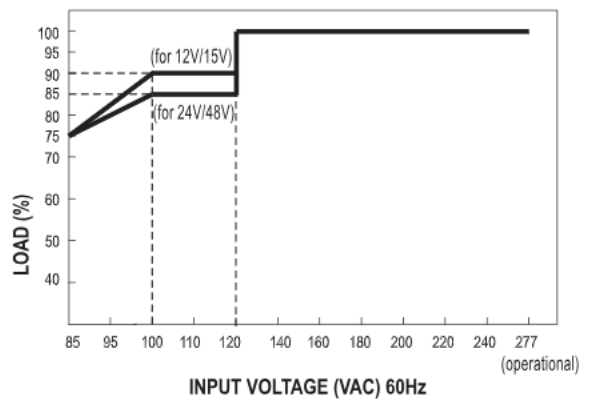
■ Block Diagram



■ Derating Curve VS Ambient Temperature

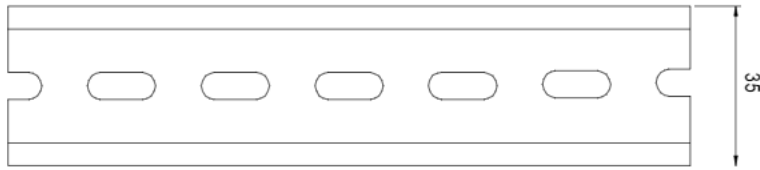
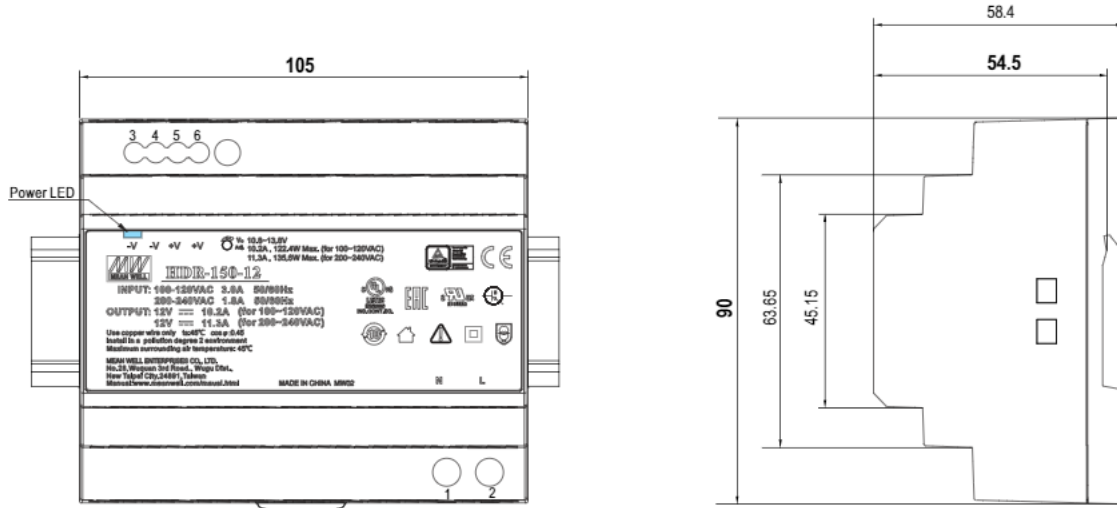


■ Output Derating VS Input Voltage



■ **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>