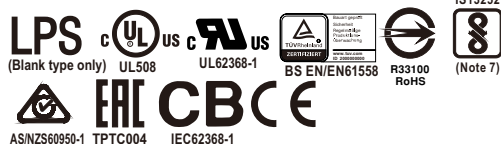




User's Manual



Features

- Ultra slim design with 70mm(4SU) width
- Universal input 85~264VAC(277VAC operational)
- No load power consumption<0.3W
- Isolation class II
- Pass LPS (Limited power source) for Blank type
- DC output voltage adjustable
- Protections : Short circuit / Overload / Over voltage
- Cooling by free air convection (working temperature:-30~+70°C)
- DIN rail TS-35/7.5 or 15 mountable
- LED indicator for power on
- 3 years warranty

Description

HDR-100 is one economical ultra slim 100W DIN rail power supply series, adapt to be installed on TS-35/7.5 or TS-35/15 mounting rails. The body is designed 70mm(4SU) 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 BS EN/EN61000-3-2, the norm the European Union regulates for harmonic current. HDR-100 is designed with plastic housing that it can effectively prevent user from electric hazards. With working efficiency up to 90%, the entire series can operate at the ambient temperature between -30°C and 70°C under air convection. The complete protection functions and relevant certificates for home automations and industrial control apparatus (IEC62368-1,UL508, UL62368-1, BS EN/EN61558-2-16)make HDR-100 a very competitive power supply solution for household and industrial applications.

Model Encoding

HDR - 100 - 12 N

Performance difference

Output voltage

Rated wattage

Series name

Applications

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

GTIN CODE

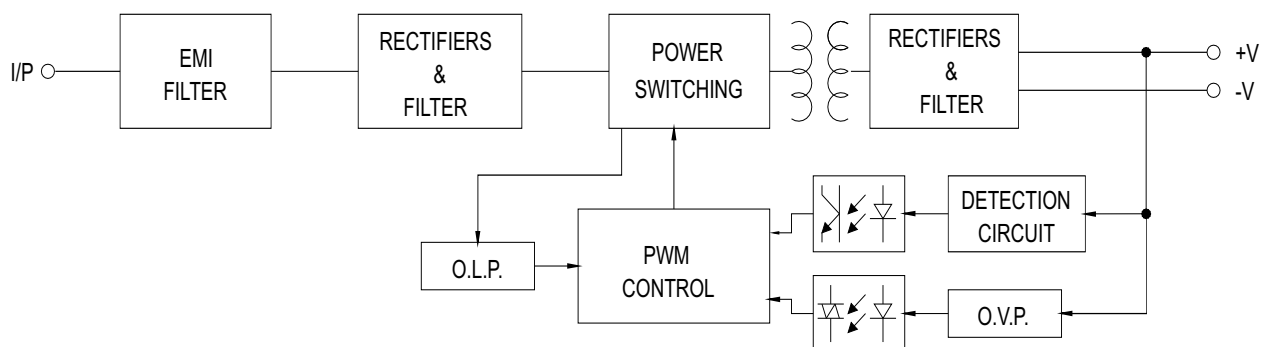
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

| Type | Description | Note |
|-------|---|----------|
| Blank | 92W max, Pass LPS with a narrower output adjustable range | In stock |
| N | 100W max, Non-LPS with a wider output adjustable range | In stock |

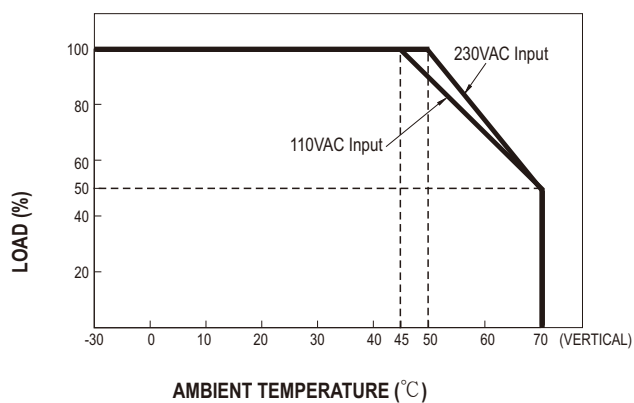
SPECIFICATION

| MODEL | | HDR-100-12 | HDR-100-12N | HDR-100-15 | HDR-100-15N | HDR-100-24 | HDR-100-24N | HDR-100-48 | HDR-100-48N | |
|--------------------------------|---|--|---|--------------------------|----------------------------------|---|-------------|--|--------------|----------|
| OUTPUT | DC VOLTAGE | | 12V | | 15V | | 24V | | 48V | |
| | RATED CURRENT | | 7.1A | 7.5A | 6.13A | 6.5A | 3.83A | 4.2A | 1.92A | 2.1A |
| | CURRENT RANGE | | 0 ~ 7.1A | 0 ~ 7.5A | 0 ~ 6.13A | 0 ~ 6.5A | 0 ~ 3.83A | 0 ~ 4.2A | 0 ~ 1.92A | 0 ~ 2.1A |
| | RATED POWER | | 85.2W | 90W | 92W | 97.5W | 92W | 100.8W | 92.2W | 100.8W |
| | RIPPLE & NOISE (max.) <small>Note.2</small> | | 120mVp-p | | 120mVp-p | | 150mVp-p | | 240mVp-p | |
| | VOLTAGE ADJ. RANGE | Pass LPS | 12 ~ 13V | | 15 ~ 17V | | 24 ~ 25.5V | | 48 ~ 48.7V | |
| | | Non LPS | 12~ 13.8V | | 13.5 ~ 18V | | 21.6 ~ 29V | | 43.2 ~ 55.2V | |
| | VOLTAGE TOLERANCE <small>Note.3</small> | | ±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.) | | 88% | | 89% | | 90% | | 90% | |
| | AC CURRENT (Typ.) | | 3A/115VAC | | 1.6A/230VAC | | | | | |
| | INRUSH CURRENT (Typ.) | | COLD START 35A/115VAC 70A/230VAC | | | | | | | |
| PROTECTION | OVERLOAD | | HDR-100 : 102 ~ 110% rated output power ; HDR-100-xxN : 105 ~ 150% rated output power | | | | | | | |
| | | | Hiccup mode when output voltage <50%, 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℃ (Refer to "Derating Curve") | | | | | | | |
| | WORKING HUMIDITY | | 20 ~ 90% RH non-condensing | | | | | | | |
| | STORAGE TEMP., HUMIDITY | | -40 ~ +85℃, 10 ~ 95% RH non-condensing | | | | | | | |
| | TEMP. COEFFICIENT | | ±0.03%/℃ (0 ~ 50℃) 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 | | | | | | | |
| | OVER VOLTAGE CATEGORY | | III ; According to EN61558, EN50178, EN60664-1, EN62477-1 ; altitude up to 2000 meters | | | | | | | |
| SAFETY & EMC (Note 5) | SAFETY STANDARDS | | UL62368-1, UL508, TUV BS EN/EN61558-2-16, BS EN/EN61558-1, IEC62368-1, EAC TP TC 004, BSMI CNS15598-1 BIS IS13252(Part1):2010/IEC 609501:2005(Note 7) approved; Design refer to TUV BS EN/EN62368-1 | | | | | | | |
| | WITHSTAND VOLTAGE | | I/P-O/P:4KVAC | | | | | | | |
| | ISOLATION RESISTANCE | | I/P-O/P:100M Ohms / 500VDC / 25℃ / 70% RH | | | | | | | |
| | EMC EMISSION | | Parameter | | Standard | | | Test Level / Note | | |
| | | | Conducted | | BS EN/EN55032(CISPR32), CNS15936 | | | Class B | | |
| | | | Radiated | | BS EN/EN55032(CISPR32), CNS15936 | | | Class B | | |
| | | | Harmonic Current (Note 5) | | BS EN/EN61000-3-2 | | | Class A | | |
| | | | Voltage Flicker | | BS EN/EN61000-3-3 | | | ----- | | |
| | EMC IMMUNITY | | BS EN/EN55035, BS EN/EN61000-6-2, BS EN/EN61204-3 | | | | | | | |
| | | | Parameter | | Standard | | | Test Level /Note | | |
| | | | ESD | | BS EN/EN61000-4-2 | | | Level 3, 8KV air; Level 2, 4KV contact, criteria A | | |
| | | | Radiated Susceptibility | | BS EN/EN61000-4-3 | | | Level 3, criteria A | | |
| | | | EFT/Burest | | BS EN/EN61000-4-4 | | | Level 3, criteria A | | |
| | | | Surge | | BS EN/EN61000-4-5 | | | Level 4,2KV/L-N, criteria A | | |
| | | | Conducted | | BS EN/EN61000-4-6 | | | Level 3, criteria A | | |
| Magnetic Field | | | BS EN/EN61000-4-8 | | | Level 4, criteria A | | | | |
| Voltage Dips and interruptions | | | BS EN/EN61000-4-11 | | | > 95% dip 0. 5 periods, 30% dip 25 periods, > 95% interruptions 250 periods | | | | |
| OTHERS | MTBF | | 3271.9K hrs min. Telcordia SR-332 (Bellcore) ; 856.5K hrs min. | | | MIL-HDBK-217F (25℃) | | | | |
| | DIMENSION | | 70*90*54.5mm (W*H*D) | | | | | | | |
| | PACKING | | 0.27Kg; 48pcs/13.74Kg/0.96CUFT | | | | | | | |
| NOTE | | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μ F & 47 μ F parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Harmonic current test at 90% load for HDR-100-xxN. 5. 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 https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf) 6. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft). 7. Some models may not have the BIS logo, please contact your MEAN WELL sales for more information. ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx | | | | | | | | |

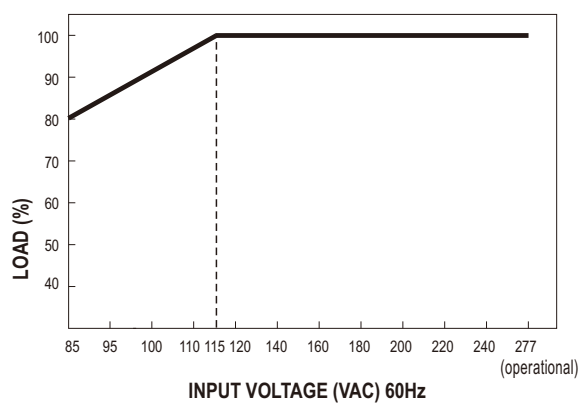
Block Diagram



Derating Curve VS Ambient Temperature



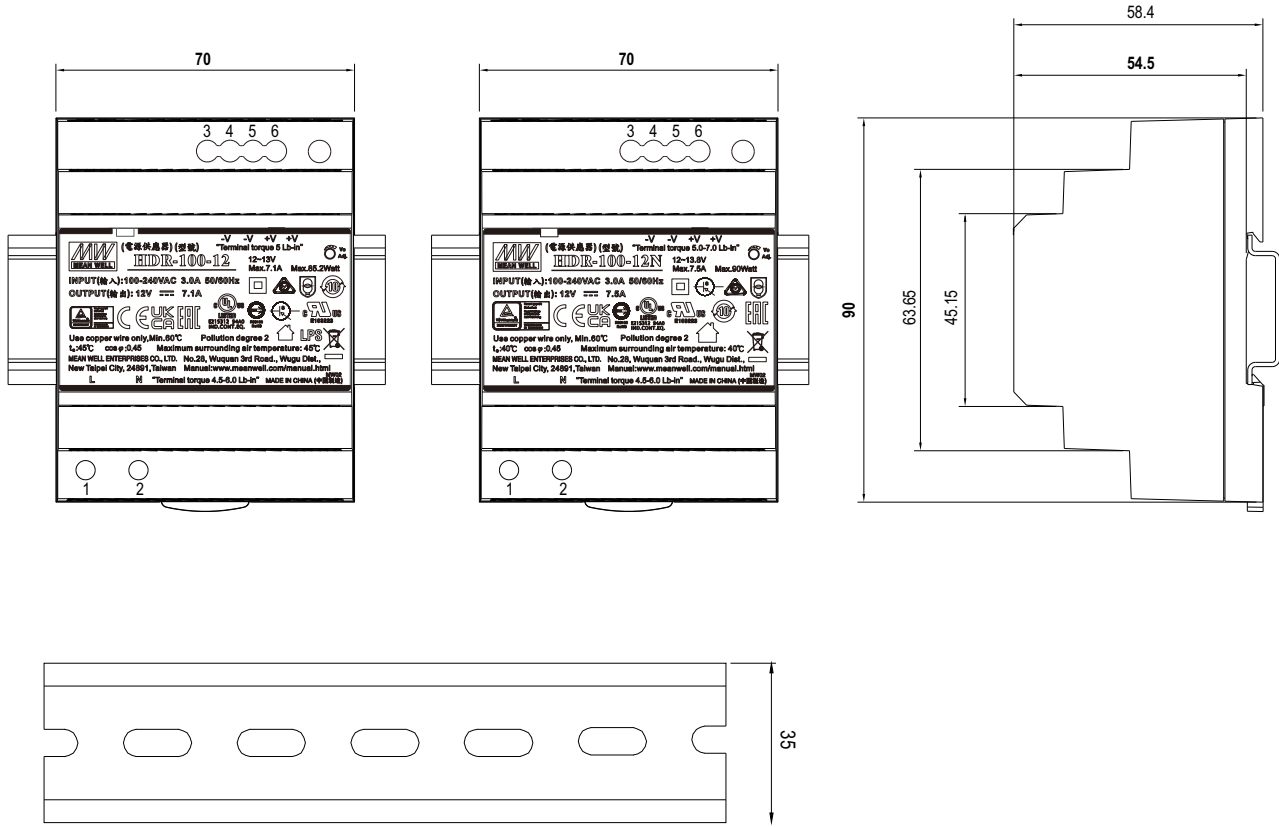
Output Derating VS Input Voltage



Mechanical Specification

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

Case No.HDR-15



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

Terminal Pin No. Assignment

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

Installation Manual

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