



User's Manual



## ■ Features

- Ultra slim design with 17.5mm(1SU) width
- Universal input 85~264VAC(277VAC operational)
- No load power consumption<0.3W
- Isolation class II
- Pass LPS (Limited power source)
- 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

## ■ Applications

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

## ■ GTIN CODE

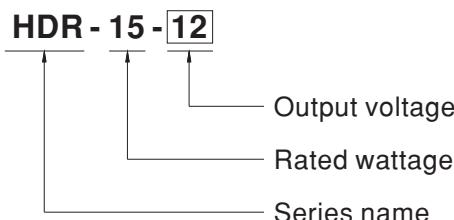
 MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

## ■ Description

HDR-15 is one economical ultra slim 15W DIN rail power supply series, adapt to be installed on TS-35/7.5 or TS-35/15 mounting rails. The body is designed 17.5mm(1SU) 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-15 is designed with plastic housing that it can effectively prevent user from electric hazards. With working efficiency up to 87%, 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-15 a very competitive power supply solution for household and industrial applications.

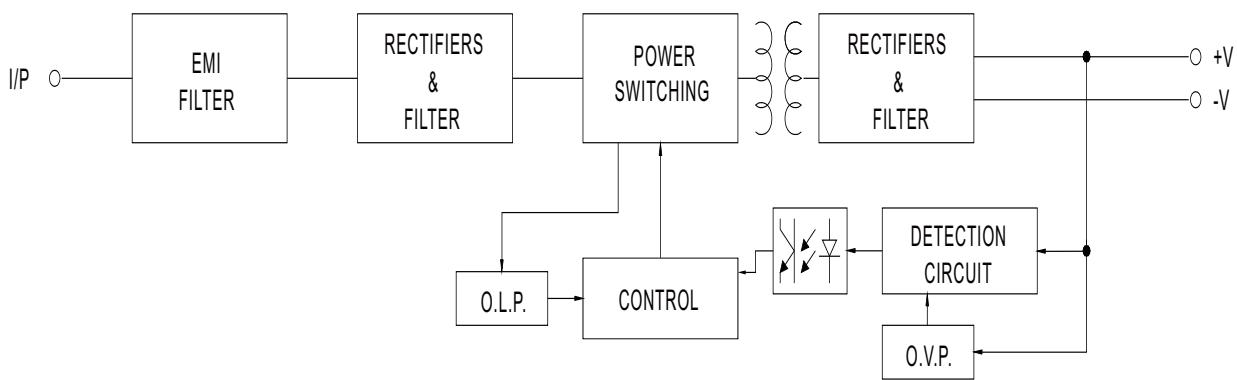
## ■ Model Encoding



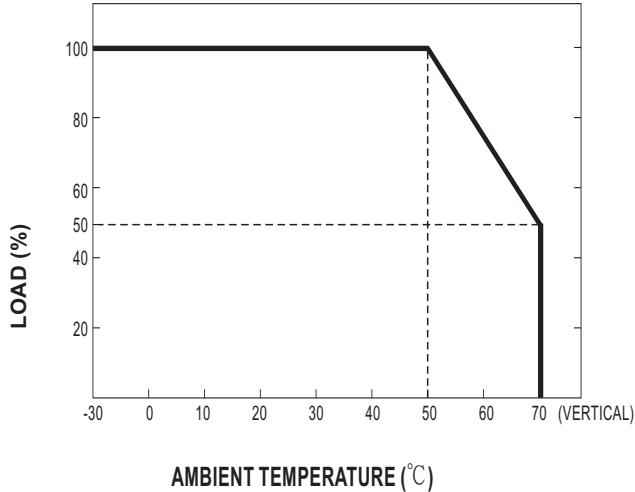
## SPECIFICATION

MODEL	HDR-15-5	HDR-15-12	HDR-15-15	HDR-15-24	HDR-15-48
OUTPUT	DC VOLTAGE	5V	12V	15V	24V
	RATED CURRENT	2.4A	1.25A	1A	0.63A
	CURRENT RANGE	0 ~ 2.4A	0 ~ 1.25A	0 ~ 1A	0 ~ 0.63A
	RATED POWER	12W	15W	15.2W	15.4W
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	120mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	4.5 ~ 5.5V	10.8 ~ 13.8V	13.5 ~ 18V	21.6 ~ 29V
	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	2000ms, 80ms/230VAC	2000ms, 80ms/115VAC at full load		
INPUT	HOLD UP TIME (Typ.)	30ms/230VAC	12ms/115VAC at full load		
	VOLTAGE RANGE	85 ~ 264VAC (277VAC operational)	120 ~ 370VDC (390VDC operational)		
	FREQUENCY RANGE	47 ~ 63Hz			
	EFFICIENCY (Typ.)	80%	85%	85.5%	86%
	AC CURRENT (Typ.)	0.5A/115VAC	0.25A/230VAC		
PROTECTION	INRUSH CURRENT (Typ.)	COLD START 25A/115VAC	45A/230VAC		
	OVERLOAD	110 ~ 145% rated output power			
		Hiccup mode when output voltage <50%, recovers automatically after fault condition is removed			
		Constant current limiting within 50% ~100% rated output voltage, recovers automatically after fault condition is removed			
ENVIRONMENT	OVER VOLTAGE	5.75 ~ 6.75V	14.2 ~ 16.2V	18.8 ~ 22.5V	30 ~ 36V
		Protection type : Shut off o/p voltage, clamping by zener diode			56.5 ~ 64.8V
	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 ~ 50°C) RH non-condensing			
SAFETY & EMC (Note 4)	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 STANDARDS	UL62368-1, UL508, TUV BS EN/EN61558-2-16, BS EN/EN61558-1, IEC62368-1, EAC TP TC 004, BSMI CNS14336-1 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°C / 70% RH			
	EMC EMISSION	Parameter	Standard	Test Level / Note	
		Conducted	BS EN/EN55032(CISPR32), CNS13438	Class B	
		Radiated	BS EN/EN55032(CISPR32), CNS13438	Class B	
		Harmonic Current	BS EN/EN61000-3-2	Class A	
		Voltage Flicker	BS EN/EN61000-3-3	-----	
EMC IMMUNITY	BS EN/EN55035, BS EN/EN61000-6-2, BS EN/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/Burst	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	3724.3K hrs min.	Telcordia SR-332 (Bellcore) ; 1166.1K hrs min.	MIL-HDBK-217F (25°C)	
	DIMENSION	17.5*90*54.5mm (W*H*D)			
	PACKING	74g;160pcs/12.9Kg/1.09CUFT			
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μF & 47μF parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. 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> ) 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). ※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>				

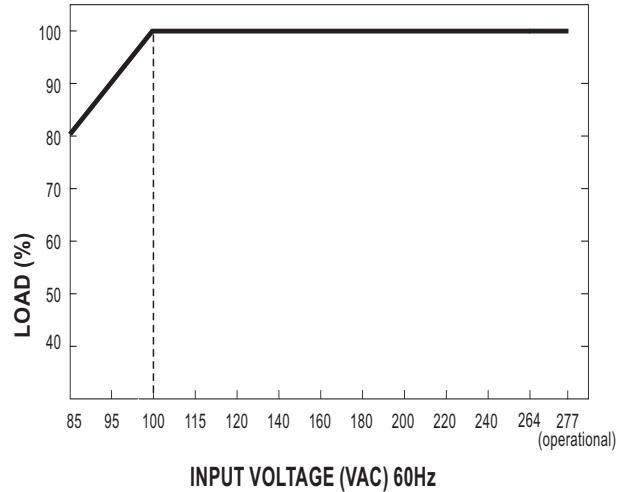
## ■ Block Diagram



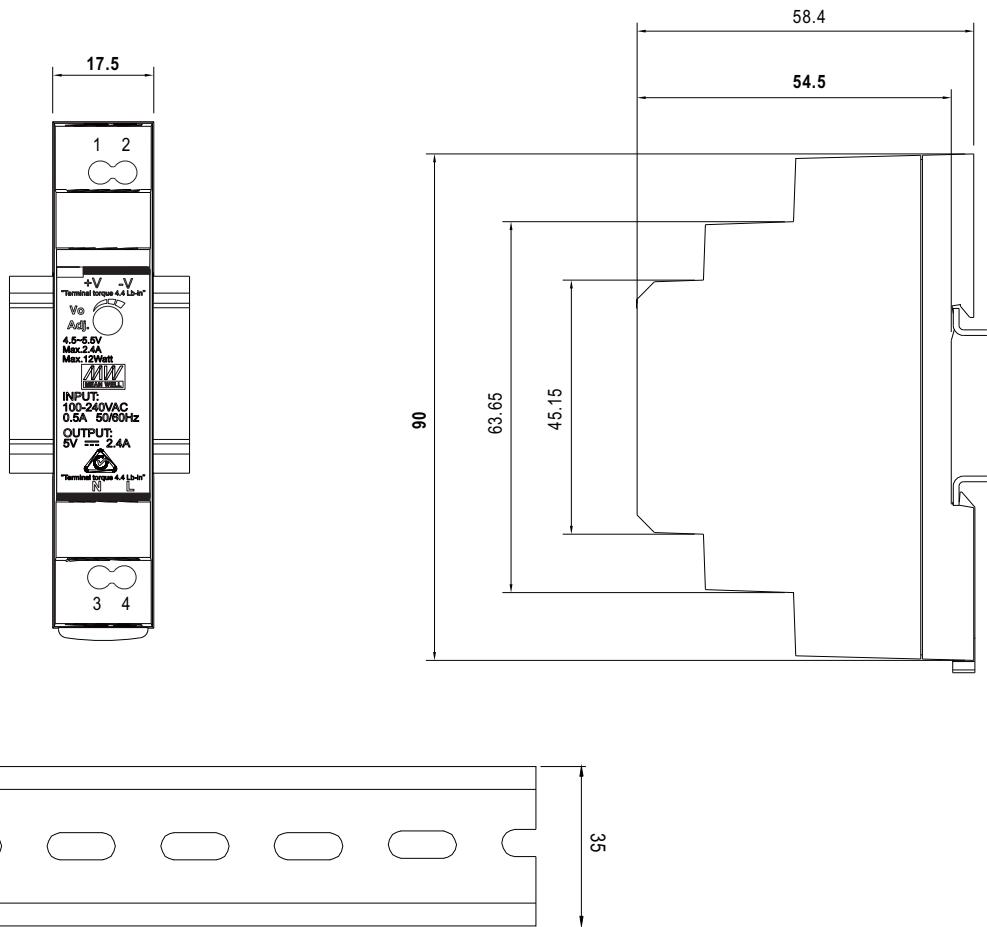
## ■ Derating Curve



## ■ Output Derating VS Input Voltage



## ■ 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	+V	3	AC/N
2	-V	4	AC/L

## ■ Installation Manual

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