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components for automation and industrial electronics

UL61010



UL62368-1



EN61558



IEC62368-1

**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

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**

Output voltage

Rated wattage

Series name

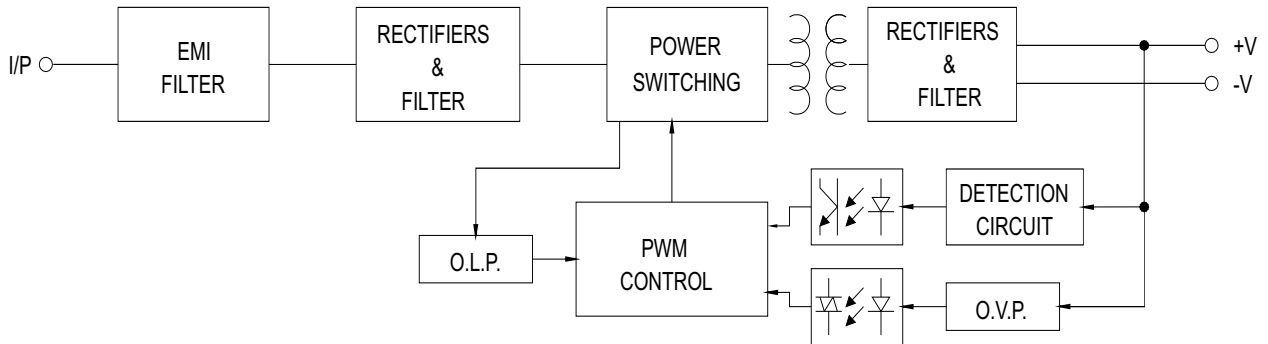
Applications

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

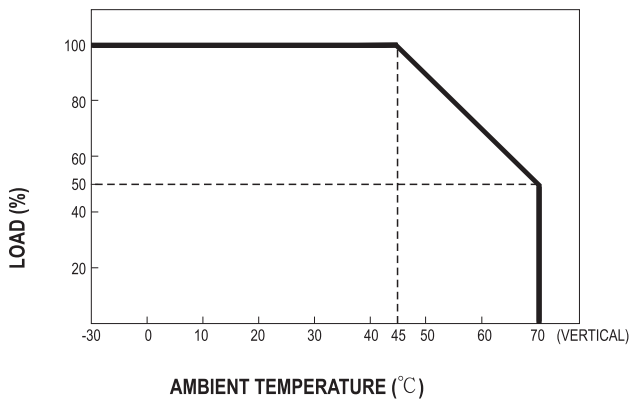
SPECIFICATION

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℃ (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 ~ 45℃) 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℃ / 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℃)			
	DIMENSION		105*90*54.5mm (W*H*D)			
	PACKING		0.31Kg; 32pcs/11Kg/1.0CUFT			
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 0.1μf & 47μf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Constant current limiting operation within 50% ~100% rated output voltage; protection type for short ciruit is hiccup mode,it will recover automatically after fault condition is removed. 5. 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). 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. 7. Harmonic current test at 70% load . 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 http://www.meanwell.com)					

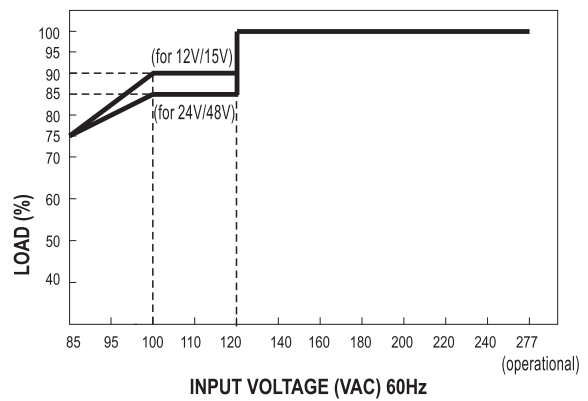
Block Diagram



Derating Curve VS Ambient Temperature

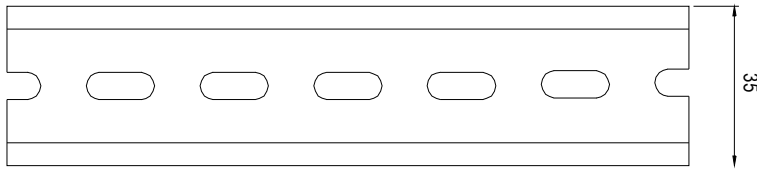
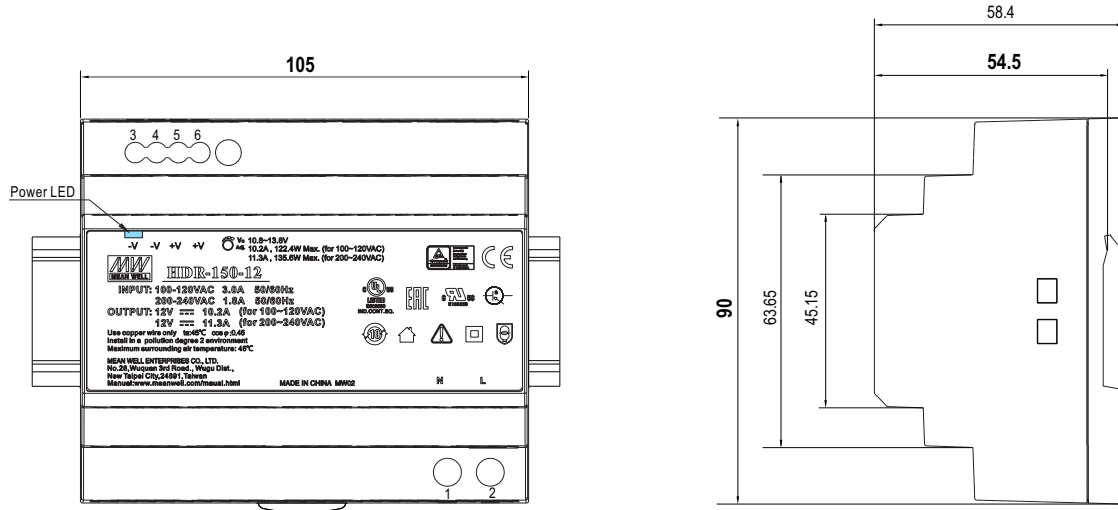


Output Derating VS Input Voltage



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>