

12V DIN Rail Mounting Power Supply Spec Sheet



Features

- Model: HDR-15-12
- 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
- 2 years warranty

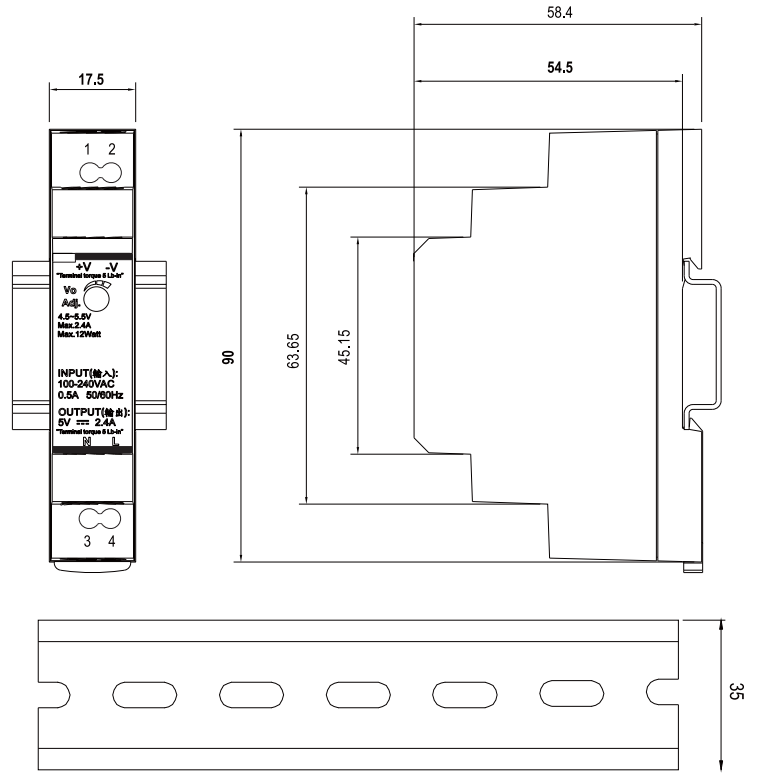
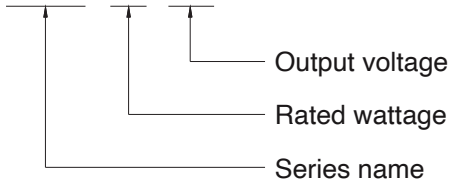
Description

HDR-15-12 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 DIN 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

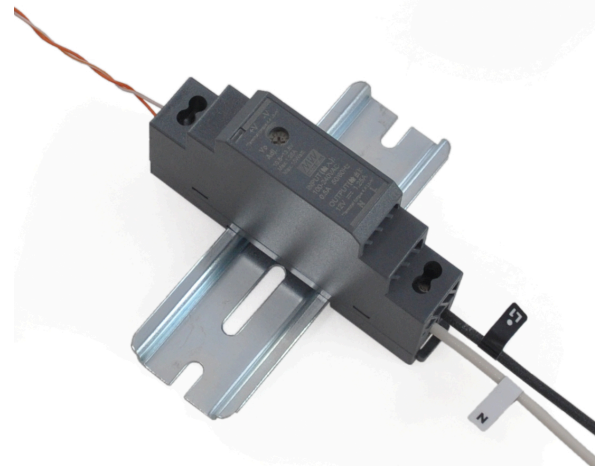
HDR - 15 - 12



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

Terminal Pin No. Assignment

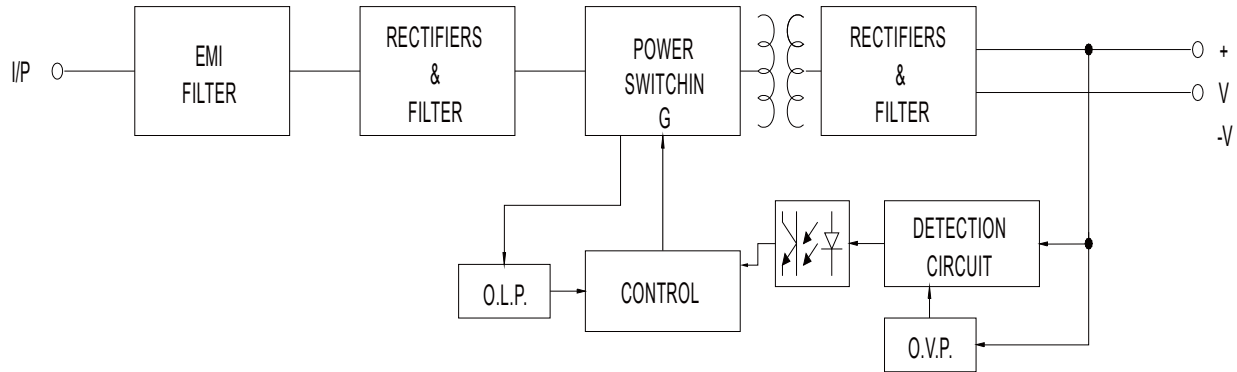
Pin No.	Assignment	Pin No.	Assignment
1	+V	3	AC/N
2	-V	4	AC/L



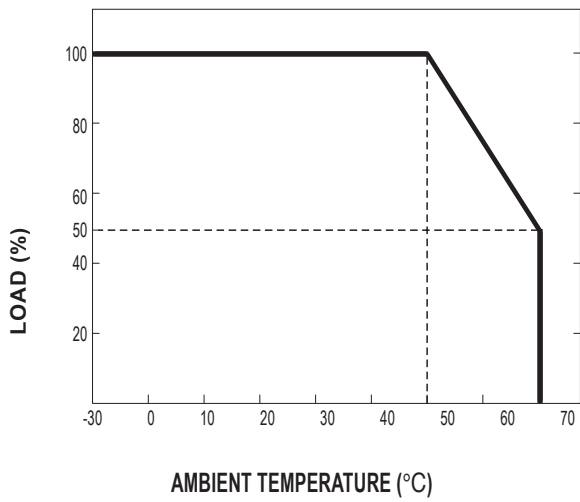
SPECIFICATION

MODEL		HDR-15-12				
OUTPUT	DC VOLTAGE	12V				
	RATED CURRENT	1.25A				
	CURRENT RANGE	0 ~ 1.25A				
	RATED POWER	15W				
	RIPPLE & NOISE (max.) Note.2	120mVp-p				
	VOLTAGE ADJ. RANGE	10.8 ~ 13.8V				
	VOLTAGE TOLERANCE Note.3	±1.0%				
	LINE REGULATION	±1.0%				
	LOAD REGULATION	±1.0%				
	SETUP, RISE TIME	2000ms, 80ms/230VAC 2000ms, 80ms/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.)	80%	85%	85.5%	86%	87%
	AC CURRENT (Typ.)	0.5A/115VAC 0.25A/230VAC				
	INRUSH CURRENT (Typ.)	COLD START 25A/115VAC 45A/230VAC				
PROTECTION	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				
	OVER VOLTAGE	5.75 ~ 6.75V	14.2 ~ 16.2V	18.8 ~ 22.5V	30 ~ 36V	56.5 ~ 64.8V
ENVIRONMENT	WORKING TEMP.	-30 ~ +70°C(Refer to "Derating Curve") 20 ~ 90% RH non-condensing				
	WORKING HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing				
	STORAGE TEMP., HUMIDITY	±0.03%/°C(0 ~ 50°C) RH non-condensing				
	TEMP. COEFFICIENT	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6				
	VIBRATION					
	OPERATING ALTITUDE	2000 meters				
	OVER VOLTAGE CATEGORY	III;According to E N61558, EN50178,EN60664-1, EN62477-1; altitude up to 2000 meters				
SAFETY & EMC (Note 4)	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/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 DIMENSION	3724.3K hrs min. Telcordia SR-332 (Bellcore) ; 1166.1K hrs min. MIL-HDBK-217F (25°C)				
		17.5*90*54.5mm (W*H*D)				
	PACKING	74g;160pcs/12.9Kg/1.09CUFT				
NOTE	<ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25 °Cof ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μF & 47 μF parallel capacitor. Tolerance : includes set up tolerance, line regulation and load regulation. 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. The ambient temperature derating of 3.5 °C/1000m with fan-less models and of 5 °C/1000m with fan models for operating altitude higher than 2000m(6500ft). 					

■ Block Diagram



■ Derating Curve



■ Output Derating VS Input Voltage

