PDR-45 series

45W single output Industrial DIN RAIL

Features:

- Universal AC input 85~264VAC
- Protections: Short circuit / Overload / Over voltage
- Can be installed on DIN rail TS-35/7.5 or 15
- The body width is only 35mm
- Isolation class II
- LED indicator for power on
- High reliability
- 3 years warranty
- Compliance to IEC/EN/UL 62368-1

Specification

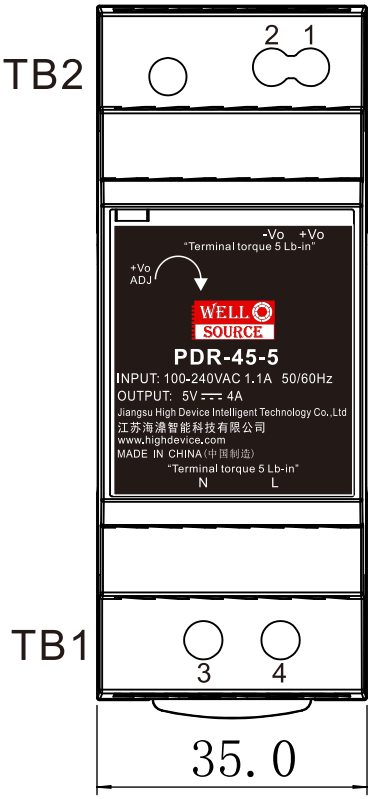
MODEL		PDR-45-5	PDR-45-12	PDR-45-24	PDR-45-48
INPUT	VOLTAGE RANGE	85～264VAC 120~370VDC (Refer to "Static characteristics")			
	FREQUENCY RANGE	47～63Hz			
	EFFICIENCY(Typ.)	82%	88%	90%	91%
	AC CURRENT(Typ.)	1.1A/115VAC 0.6A/230VAC			
	INRUSH CURRENT(Typ.)	25A/115VAC 45A/230VAC (cold start)			
OUTPUT	DC VOLTAGE	5V	12V	24V	48V
	RATED CURRENT	4A	2.5A	1.87A	0.94A
	CURRENT RANGE	0～4A	0～2.5A	0～1.87A	0～0.94A
	RATED POWER	20W	30W	44.88W	45.12W
	RIPPLE&NOISE (max.)	80mVp-p	100mVp-p	100mVp-p	100mVp-p
	VOLTAGE ADJ.RANGE	5～5.5V	10.8～13.8V	21.6～28.8V	43.2～57.6V
	VOLTAGE TOLERANCE	±2%	±1%	±1%	±1%
	LINE REGULATION	±1%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±2%	±1%	±1%	±1%
	SETUP, RISE TIME	500ms,50ms/230VAC 500ms,50ms/115VAC			
	HOLD UP TIME(Typ.)	30ms/230VAC 7ms/115VAC			
PROTECTION	OVER LOAD	105%～160% rated output power			
		Protection type: hiccup mode, recovers automatically after fault condition removed			
	OVER VOLTAGE	6.2～8V	15～18V	30～36V	60～66V
		Protection type: Shunt down, recovers after repower on			
ENVIRONIMENT	WORKING TEMP.,HUMIDITY	-30～+70℃ (Refer to "Derating curve") , 20～90%RH non-condensing			
	STORAGE TEMP.,HUMIDITY	-40～+85℃, 10～95%RH			
	TEMP. COEFFICIENT	±0.03%/℃ (0～50℃)			
	VIBRATION	10～500Hz, 2G 10min./1 cycle, each along X、Y、Z axes			

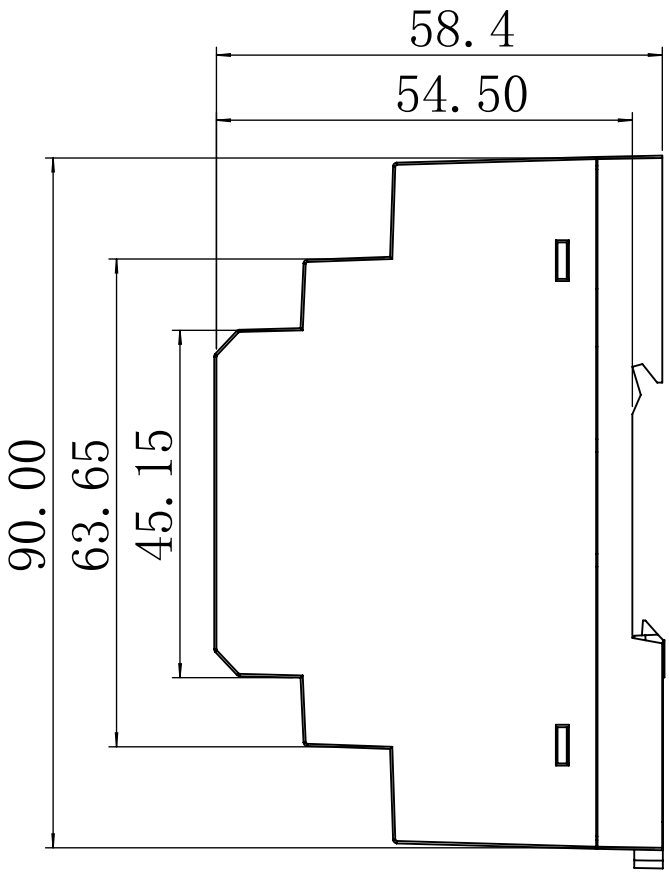
Safety and electromagnetic compatibility	Safety standards	Refer to UL62368-1,TUV EN62368-1,CCC GB4943.1		
	Withstand voltage and isolation resistance	I/P-O/P: 4KVac ; 100MΩ / 500Vdc / 25℃ / 70%RH		
	Electromagnetic	**Parameter**	**Standard**	**Test Level / Note**
		Conducted emission	BS EN/EN55032(CISPR32),FCC PART 15 / CISPR22 ,GB9254.1	Class B
		Radiated emission	BS EN/EN55032(CISPR32),FCC PART 15 / CISPR22 ,GB9254.1	Class B
		Harmonic current	BS EN/EN61000-3-2,GB17625.1	Class A
		Voltage flicker	BS EN/EN61000-3-3	----
	Electromagnetic compatibility immunity	BS EN/EN55035		
		Parameter	**Standard**	**Test Level /Note**
		ESD	BS EN/EN61000-4-2	Level 4, 8KV air, Level 2, 4KV contact, criteria A
		RF field susceptibility	BS EN/EN61000-4-3	Level 3, criteria A
		EFT bursts	BS EN/EN61000-4-4	Level 3, criteria A
		Surge susceptibility	BS EN/EN61000-4-5	Level 4, 2KV/L-N criteria A
		Conducted susceptibility	BS EN/EN61000-4-6	Level 3, criteria A
		Magnetic field immunity	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	≥1000Khrs MIL-HDBK-217F(25℃)		
	DIMENSION	35*90*54.5mm(W*H*D)		
	PACKING	0.15Kg; 84pcs/ 13.6Kg/ 1.1CUFT		

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 0.1uF & 47uF parallel capacitor.
3. Tolerance: includes set up tolerance, line regulation and load regulation.
4. Line regulation is measured from low line to high line at rated load.
5. Load regulation is measured from 0% to 100% rated load
6. Length of set up time is measured at cold first start, Turning ON/OFF the power supply very quickly may lead to increase of the set up time.
7. The ambient temperature derating of 5℃/1000m is needed for operating altitude great than 2000m(6500ft).
8. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives.
9. Installation clearances:40mm on top,20mm on the bottom,5mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.

Mechanical specification





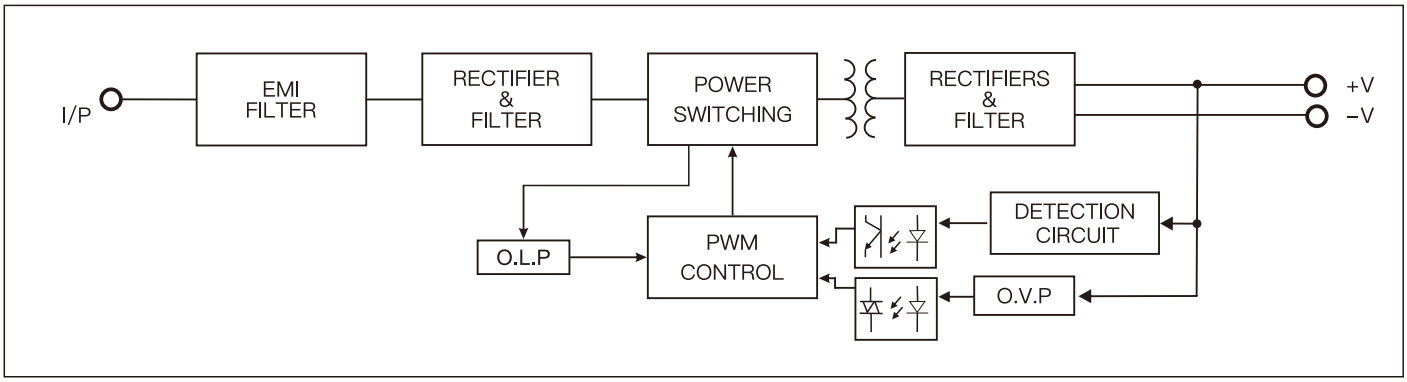
NOTE:
Unit: mm
ADJ:Output adjustable resistor
TOL: ±1.00

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

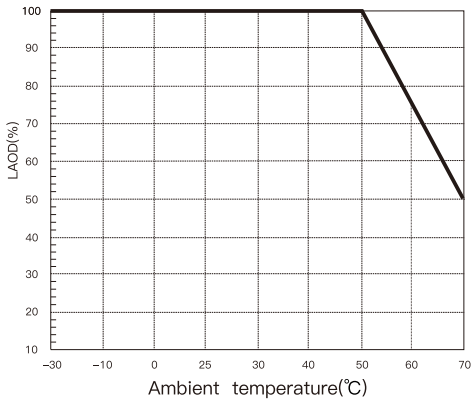
Terminal Pin No. Assignment

TB1		TB2	
Pin No.	Assignment	Pin No.	Assignment
3	AC/N	2	DC output –V
4	AC/L	1	DC output +V

Block diagram



Derating curve



Static characteristics