SIM-250(R) series

250W single output Industrial DIN RAIL

Features:

- Universal AC input 90~264VAC
- Built-in active PFC function
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Can be installed on DIN rail TS-35/7.5 or 15
- The body width is only 50mm
- 100% full load burn-in test
- LED indicator for power on
- Built-in DC OK relay contact(optional)
- Redundant function(MDR-250R)
- High efficiency/High reliability
- 3 years warranty
- Compliance to IEC/EN/UL 62368-1

Specification

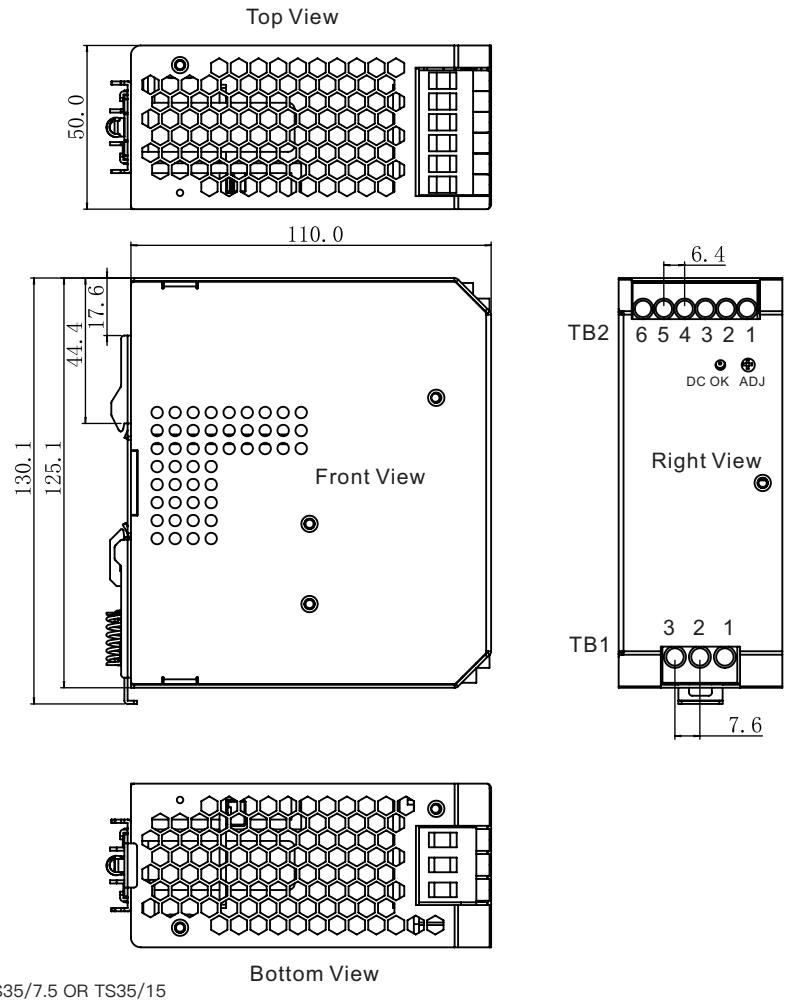
MODEL		SIM-250-12	SIM-250-24	SIM-250-48
INPUT	VOLTAGE RANGE	90~264VAC 127~370VDC(refer to 'static characteristic')		
	FREQUENCY RANGE	47~63Hz		
	POWER FACTOR(Typ.)	PF>0.98/115VAC PF>0.94/230VAC at full load		
	EFFICIENCY(Typ.)	91.5%	93%	94%
	AC CURRENT(Typ.)	3A/115VAC 1.5A/230VAC		
	INRUSH CURRENT(Typ.)	20A/115VAC 40A/230VAC (cold start)		
	LEAKAGE CURRENT	<2mA/240VAC		
OUTPUT	DC VOLTAGE	12V	24V	48V
	RATED CURRENT	18A	10.4A	5.2A
	CURRENT RANGE	0~18A	0~10.4A	0~5.2A
	RATED POWER	216W	249.6W	249.6W
	RIPPLE&NOISE (max.)	100mVp-p	150mVp-p	250mVp-p
	VOLTAGE ADJ.RANGE	12~14V	24~28V	48~55V
	VOLTAGE TOLERANCE	±1%	±1%	±1%
	LINE REGULATION	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±2%	±1%	±1%
	SETUP, RISE TIME	1500ms,50ms/230VAC 3000ms,50ms/115VAC		
	HOLD UP TIME(Typ.)	14ms/230VAC 14ms/115VAC		
PROTECTION	OVER LOAD	110%~140% rated output power		
		Protection type: >0.2s, Shutdown, recovers automatically after repower on		
	OVER VOLTAGE	15~18V	29~35V	56~65V
		Protection type: Shunt down, recovers after repower on		
	OVER TEMPERATURE	Protection type: Shunt down, recovers after temperature goes down		
FUNCTION	DC OK SIGNAL(Optional)	Contact rating(max.):30VDC/1A resistive load		
	REDUNDANT(MDR-250R)	For parallel connection protection: For parallel applications, when one PSU cannot work, the another one will be automatically enabled. This can prevent the system crash, and provide the reliability of system		
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: 3KVac; 100MΩ / 500Vdc / 25℃ / 70%RH		
		I/P-FG: 2KVac; 100MΩ / 500Vdc / 25℃ / 70%RH		
		O/P-FG: 0.5KVac; 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 3, 1KV/L-N, 2KV/L/N-FG 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	≥170Khrs MIL-HDBK-217F(25℃)		
	DIMENSION	50*125.1*110mm(W*H*D)		
	PACKING	0.85Kg; 12pcs/ 11.2Kg/ 0.9CUFT		

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

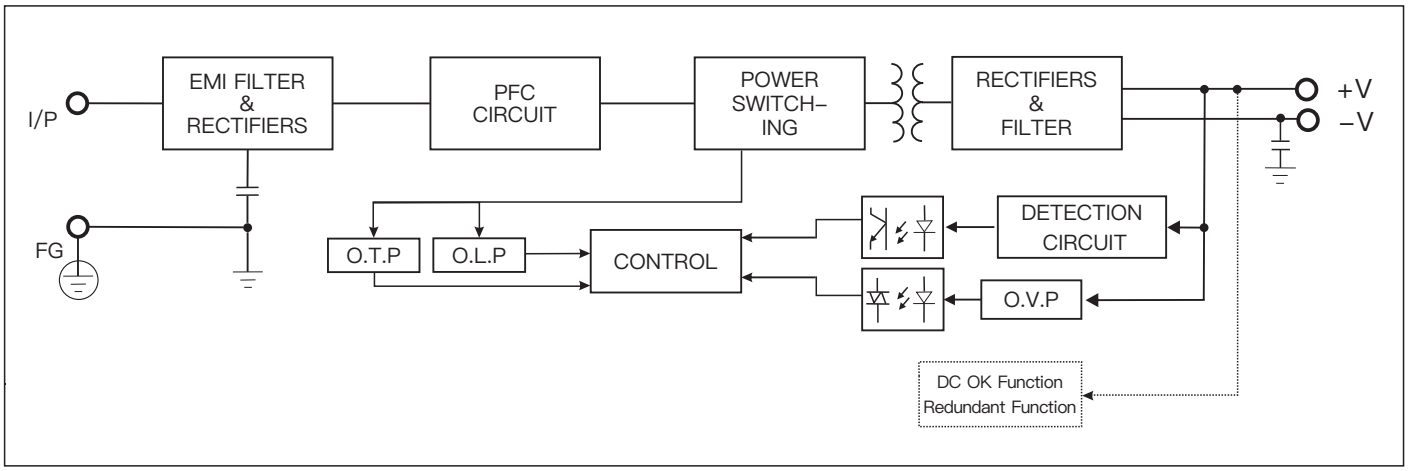


NOTE:
Unit: mm
ADJ:Output adjustable resistor
TOL: ±1.00

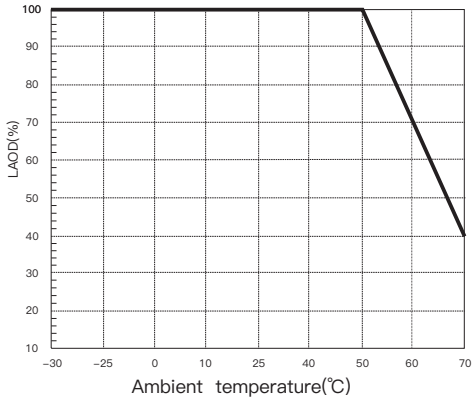
ADMISSIBLE DIN-RAIL:TS35/7.5 OR TS35/15
Terminal Pin No. Assignment

TB1		TB2	
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	1,2	Relay contact(Optional)
2	AC/N	3,4	DC output -V
3	FG	5,6	DC output +V

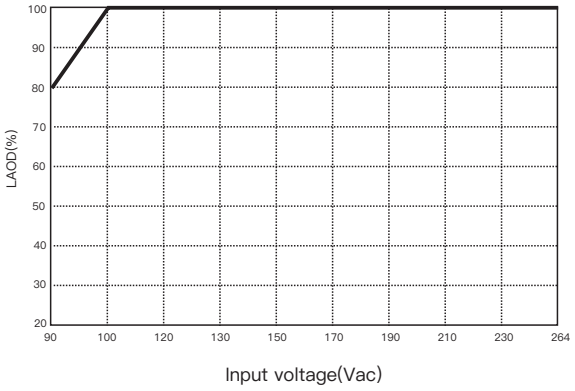
Block diagram



Derating curve



Static characteristics



DC OK Relay Contact(Optional)

Contact close	PSU turns on/DC ok
Contact open	PSU turns off/DC fail
Contact Rating(max.)	30V/1A resistive load

Redundant function(SIM–250R)

(1) SIM–250R is built–in redundant function and can be connected 2 units in parallel.
(2) When in parallel operation the maximum load should not be greater than the rated power of any PSU.