



200W Railway Single Output DC-DC Converter

RSD-200 series



■ Features :

- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage / Over temperature / Input reverse polarity
- 4000VDC I/O isolation
- Cooling by free air convection
- Built-in constant current limiting circuit
- 1U low profile 39mm
- Compliance to EN50155 railway standard
- All using 105°C long life electrolytic capacitors
- LED indicator for power on
- 100% full load burn-in test

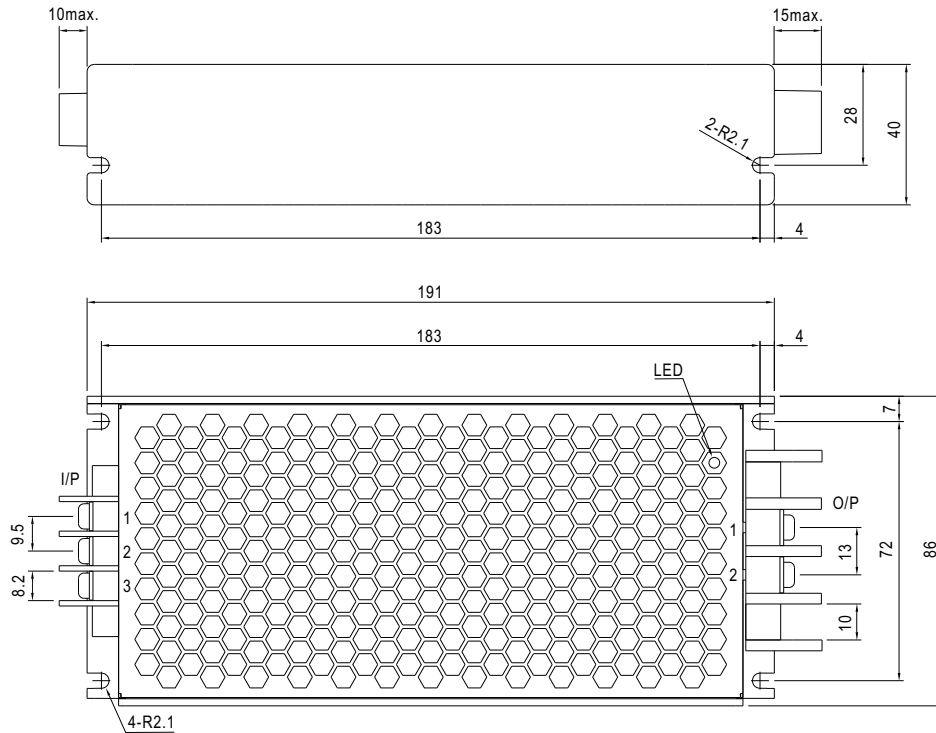


SPECIFICATION

MODEL		RSD-200B-12	RSD-200B-24	RSD-200B-48	RSD-200C-12	RSD-200C-24	RSD-200C-48	RSD-200D-12	RSD-200D-24	RSD-200D-48	
OUTPUT	DC VOLTAGE	12V	24V	48V	12V	24V	48V	12V	24V	48V	
	RATED CURRENT	16.7A	8.4A	4.2A	16.7A	8.4A	4.2A	16.7A	8.4A	4.2A	
	CURRENT RANGE	0 ~ 16.7A	0 ~ 8.4A	0 ~ 4.2A	0 ~ 16.7A	0 ~ 8.4A	0 ~ 4.2A	0 ~ 16.7A	0 ~ 8.4A	0 ~ 4.2A	
	RATED POWER	200.4W	201.6W	201.6W	200.4W	201.6W	201.6W	200.4W	201.6W	201.6W	
	RIPPLE & NOISE (max.) Note.2	120mVp-p	150mVp-p	180mVp-p	120mVp-p	150mVp-p	180mVp-p	120mVp-p	150mVp-p	180mVp-p	
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	
	LINE REGULATION	±0.2%	±0.2%	±0.5%	±0.2%	±0.2%	±0.5%	±0.2%	±0.2%	±0.5%	
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	SETUP, RISE TIME	800ms, 50ms at full load									
HOLD UP TIME (Typ.)	3 ~ 30ms @ full load ; B/C- type comply with S1 level ; D-type comply with S2 level										
INPUT	VOLTAGE RANGE	CONTINUOUS	16.8 ~ 31.2VDC			33.6 ~ 62.4VDC			67.2 ~ 143VDC		
		1 SEC.	14.4 ~ 33.6VDC			28.8 ~ 67.2VDC			57.6 ~ 154VDC		
	EFFICIENCY (Typ.)	89%	89%	89%	91%	91%	91%	91%	91%	91%	
	DC CURRENT (Typ.)	9.6A/24V	9.6A/24V	9.6A/24V	4.8A/48V	4.8A/48V	4.8A/48V	2.1A/110V	2.1A/110V	2.1A/110V	
INRUSH CURRENT (Typ.)	45A/24VDC			45A/48VDC			45A/110VDC				
PROTECTION	OVERLOAD	105 ~ 135% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed									
	OVER VOLTAGE	13.8 ~ 16.2V	27.6 ~ 32.4V	55.2 ~ 64.8V	13.8 ~ 16.2V	27.6 ~ 32.4V	55.2 ~ 64.8V	13.8 ~ 16.2V	27.6 ~ 32.4V	55.2 ~ 64.8V	
	OVER TEMPERATURE	90°C ±5°C (TSW1) detect on heatsink of power transistor Protection type : Shut down o/p voltage, recovers automatically after temperature goes down									
ENVIRONMENT	WORKING TEMP.	-40 ~ +55°C (no derating) ; +70°C @ 60% load by free air convection ; +70°C (no derating with external base plate)									
	WORKING HUMIDITY	20 ~ 95% RH non-condensing									
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH									
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)									
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes ; Mounting : compliance to IEC61373									
SAFETY & EMC (Note 4)	SAFETY STANDARDS	Meet IEC60950-1(LVD)									
	WITHSTAND VOLTAGE	I/P-O/P:4KVDC I/P-FG:2.5KVDC O/P-FG:2.5KVDC									
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH									
	EMC EMISSION	Compliance to EN55022 (CISPR22) Conduction Emission: Class A, Radiation Emission: Class B ; EN50155(EN50121-3-2)									
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8, light industry level, criteria A ; EN50121-3-2									
OTHERS	RAILWAY STANDARD	Meet EN50155 / IEC60571 including IEC61373 for shock & vibration, EN50121-3-2 for EMC									
	MTBF	218.2K hrs min. MIL-HDBK-217F (25°C)									
	DIMENSION	191*86*40mm (L*W*H)									
NOTE	PACKING	0.94Kg; 12pcs/12.3Kg/0.8CUFT									
		1. All parameters NOT specially mentioned are measured at 24,48,110VDC 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 0.1uF & 47uF parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.									

Mechanical Specification

Case No.203A Unit:mm



Input Terminal Pin No. Assignment :

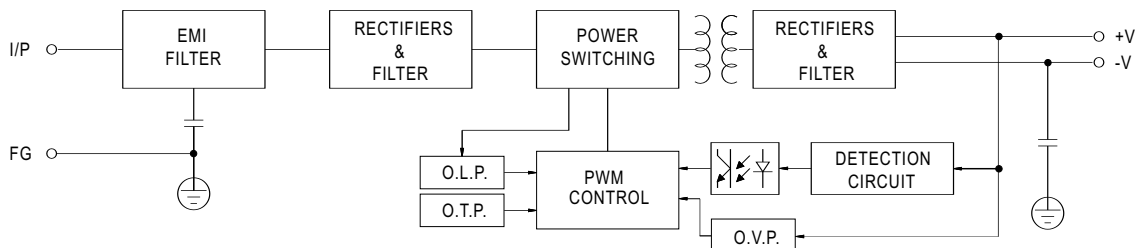
Pin No.	Assignment
1	DC INPUT V+
2	DC INPUT V-
3	FG \perp

Output Terminal Pin No. Assignment :

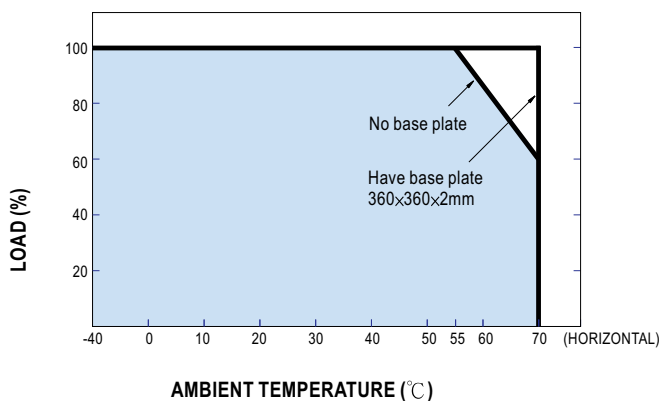
Pin No.	Assignment
1	DC OUTPUT -V
2	DC OUTPUT +V

Block Diagram

fosc : 130KHz



Derating Curve



Static Characteristics(RSD-200D-24)

