



Dimension

L	*	W	*	H
300	*	85	*	41 (1U) mm
11.8	*	3.35	*	1.61 (1U) inch



Features

- Universal AC input / Full range
(Withstand 300VAC surge input for 5 seconds)
- Built-in active PFC function
- High efficiency up to 93%
- Forced air cooling by built-in DC fan
- Output voltage and constant current level programmable
- Built-in OR-ing FET, support hot swap (hot plug)
- Active current sharing up to 8000W for one 19" rack shelf
- Built-in I²C interface, PMBus protocol
(Optional CANBus protocol)
- Protections: Short circuit / Overload / Over voltage /
Over temperature
- Optional conformal coating
- 5 years warranty

Certificates

- Safety: UL/EN/IEC 60950-1
- EMC: EN 55032 / 55024

Applications

- Industrial automation
- Distributed power architecture system
- Wireless/telecommunication solution
- Redundant power system
- Electric vehicle charger system
- Constant current source system

Description

RCP-1600 is a 1.6KW single output rack mountable front end AC/DC power supply with a 1U low profile and a high power density up to 25W/inch³. This series operates for 90~264VAC input voltage and offers the models with the DC output mostly demanded from the industry. Each model is cooled by the built-in DC fan with fan speed control, working for the temperature up to 70°C. RCP-1600 provides vast design flexibility by equipping various built-in functions such as the PMBus and CANBus communication protocol, output programming, active current sharing (up to 24000W via three 19" rack shelves, RHP-1U), remote control, auxiliary power, alarm signal, etc. Maximum number that can be monitored by master controller in communication shall be 15 power supplies.

Model Encoding / Order Information

RCP - 1600 - 24

- Communication protocol option
- Output voltage
- Output wattage
- Series name

※ Note 1: 19" rack shelf, RHP-1U, available. Details available on <http://www.meanwell.com/>

※ Note 2: Control/Monitor unit, RKP-CMU1, available. Details available on <http://www.meanwell.com/>

Type	Communication Protocol	Note
Blank	PMBus protocol	In Stock
CAN	CANBus protocol	By request

SPECIFICATION

MODEL		RCP-1600-12		RCP-1600-24		RCP-1600-48	
OUTPUT	DC VOLTAGE	12V		24V		48V	
	RATED CURRENT	125A		67A		33.5A	
	CURRENT RANGE	0 ~ 125A		0 ~ 67A		0 ~ 33.5A	
	RATED POWER	1500W		1608W		1608W	
	RIPPLE & NOISE (max.) Note.2	150mVp-p		200mVp-p		300mVp-p	
	VOLTAGE ADJ. RANGE Note.6	11.5 ~ 15V		23.5 ~ 30V		47.5 ~ 58.8V	
	VOLTAGE TOLERANCE Note.4	± 1.0%		± 1.0%		± 1.0%	
	LINE REGULATION	± 0.5%		± 0.5%		± 0.5%	
	LOAD REGULATION	± 0.5%		± 0.5%		± 0.5%	
	SETUP, RISE TIME	1500ms, 60ms/230VAC at full load					
	HOLD UP TIME (Typ.)	16ms / 230VAC at 75% load		10ms / 230VAC at full load			
INPUT	VOLTAGE RANGE Note.5	90 ~ 264VAC 127 ~ 370VDC					
	FREQUENCY RANGE	47 ~ 63Hz					
	POWER FACTOR (Typ.)	0.97/230VAC at full load					
	EFFICIENCY (Typ.)	88.5%		91%		93%	
	AC CURRENT (Typ.) Note.5	14A/115VAC 8A/230VAC		15A/115VAC 8.5A/230VAC			
	INRUSH CURRENT (Typ.)	COLD START 35A/230VAC					
	LEAKAGE CURRENT	<1.5mA / 230VAC					
PROTECTION	OVERLOAD	105 ~ 115% rated output power Protection type : Constant current limiting, unit will shut down o/p voltage after 5 sec. re-power on to recover					
	OVER VOLTAGE	15.75 ~ 18.75V		31.5 ~ 37.5V		63 ~ 75V	
		Protection type : Shut down o/p voltage, re-power on to recover					
	OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down					
FUNCTION	OUTPUT VOLTAGE PROGRAMMABLE(PV) Note.6	Adjustment of output voltage is allowable to 40 ~ 125% of nominal output voltage(60~125% for 12V). Please refer to the Function Manual in following pages.					
	OUTPUT CURRENT PROGRAMMABLE(PC) Note.6	Adjustment of constant current level is allowable to 20 ~ 100% of rated current. Please refer to the Function Manual in following pages.					
	REMOTE ON-OFF CONTROL	By electrical signal or dry contact Power ON:short Power OFF:open. Please refer to the Function Manual in following pages.					
	REMOTE SENSE	Compensate voltage drop on the load wiring up to 0.5V. Please refer to the Function Manual in following pages.					
	AUXILIARY POWER	5V @ 0.3A, 12V @ 0.8A					
	ALARM SIGNAL	Isolated TTL signal output for T-Alarm, AC-OK and DC-OK					
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 ~ 50℃)					
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes					
SAFETY & EMC (Note 7)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1, EAC TP TC 004 approved					
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC (0.5KVAC for 12V)					
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃ / 70% RH					
	EMC EMISSION	Parameter	Standard			Test Level / Note	
		Conducted	EN55032 (CISPR32) / EN55011 (CISPR11)			Class B	
		Radiated	EN55032 (CISPR32) / EN55011 (CISPR11)			Class A	
		Harmonic Current	EN61000-3-2			-----	
		Voltage Flicker	EN61000-3-3			-----	
	EMC IMMUNITY	EN55024, EN61204-3, EN61000-6-2					
		Parameter	Standard			Test Level / Note	
		ESD	EN61000-4-2			Level 3, 8KV air ; Level 2, 4KV contact	
		Radiated	EN61000-4-3			Level 3	
		EFT / Burst	EN61000-4-4			Level 3	
		Surge	EN61000-4-5			Level 4, 2KV/Line-Line 4KV/Line-Earth	
		Conducted	EN61000-4-6			Level 3	
		Magnetic Field	EN61000-4-8			Level 4	
		Voltage Dips and Interruptions	EN61000-4-11			>95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods	
OTHERS		MTBF	162.2K hrs min. Telcordia SR-332 (Bellcore) ; 39.3K hrs min. MIL-HDBK-217F (25℃)				
	DIMENSION	300*85*41mm (L*W*H)					
	PACKING	1.87Kg; 6pcs/12.2Kg/1.16CUFT					
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. Under parallel operation ripple of the output voltage may be higher than the SPEC at light load condition. It will go back to normal ripple level once the output load is more than 5%. 4. Tolerance : includes set up tolerance, line regulation and load regulation. 5. Derating may be needed under low input voltages. Please check the derating curve for more details. 6. PV/PC functions when users are not operating on PMBus/CANBus. SVR functions when users are neither operating on PMBus/CANBus nor using PV/PC. 7. 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 720mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets 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) 8. 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).						