MEAN WELL

10000W Power Supply with Single Output

RST-10000 series

Dimension

L	*	W	*	H	
540	*	424	*	83.5(2U)	mm
21.3	*	16.7	*	3.29(2U)	inch

Features

- 3ψ 3-wire / △ 196~305VAC or 3ψ 4-wire / Y 340~530VAC wide input range
- Built-in active PFC function
- High efficiency up to 91%
- Forced air cooling by built-in DC fan
- Output voltage and constant current level programmable
- Active current sharing up to 20000W (1+1)
- Built-in remote ON-OFF control / Remote sense / Auxilary power / Alarm signal
- Protections: Short circuit / Overload / Over voltage / Over temperature / Fan fail
- 5 years warranty

Certificates

- Safety: UL/EN/IEC 60950-1
- EMC: EN 55022 / 55024

Applications

- Factory control or automation apparatus
- Test and measurement instrument
- Laser related machine
- Burn-in facility
- RF application
- Electric scooter or vehicle charger station
- Constant current source

Description

RST-10000 is a 10KW single output enclosed type AC/DC power supply. This series operates for the wide range three phase AC input (3 phase 3 wire / △196~305VAC or 3 phase 4 wire / Y 340~530VAC) and offers the models with the DC output mostly demanded from the industry. Each model is cooled by the built-in fan with fan speed control, working for the temperature up to ,70℃. Moreover, RST-10000 provides vast design flexibility by equipping various built-in functions such as the output programming, active current sharing, remote ON-OFF control, auxiliary power, etc.

Model Encoding

RST - 10000- 24

- 24 → Output voltage (24V/36V/48V)
- 10000 → Output wattage
- RST → Series name

SPECIFICATION

MODEL		RST-10000-24	RST-10000-36	RST-10000-48
OUTPUT	DC VOLTAGE	24V	36V	48V
	RATED CURRENT	400A	276A	210A
	CURRENT RANGE	0 ~ 400A	0 ~ 276A	0 ~ 210A
	RATED POWER	9600W	9936W	10080W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	200mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	23.5 ~ 28.8V	35 ~ 43.2V	47 ~ 57.6V
		Can be adjusted via built-in potentiometer		
	VOLTAGE TOLERANCE Note.3	±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	2200ms, 80ms at full load		
	HOLD UP TIME (Typ.)	20ms / 230VAC at 75% load 14ms / 230VAC at full load		
INPUT	VOLTAGE RANGE	3ψ 3-wire / △ 196 ~ 305VAC or 3ψ 4-wire / Y 340 ~ 530VAC		
	FREQUENCY RANGE	47 ~ 63Hz		
	POWER FACTOR (Typ.)	0.95/230VAC(400VAC) at full load		
	EFFICIENCY (Typ.)	89%	90%	91%
	AC CURRENT (Typ.)	30A/230VAC(3ψ 3-wire / △) 18A/400VAC(3ψ 4-wire / Y)		
	INRUSH CURRENT (Typ.)	150A/230VAC(3ψ 3-wire / △) 100A/400VAC(3ψ 4-wire / Y)		
	LEAKAGE CURRENT	<7mA / △305VAC(Y 530VAC)		
PROTECTION	OVERLOAD(OLP)	100 ~ 112% rated output power		
		User selectable continuous constant current limiting or constant current limiting with delay shutdown after 5 seconds, re-power on to recover		
	OVER VOLTAGE	30 ~ 33.6V	45 ~ 50.4V	60 ~ 67.2V
		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	REMOTE SENSE	Compensate voltage drop on the load wiring up to 0.3V. Please refer to the Function Manual.		
	CURRENT SHARING	Up to 20000W or (1+1) units. Please refer to the Function Manual.		
	AUXILIARY POWER	12V@0.1A(Only for Remote ON/OFF control)		
	REMOTE ON-OFF CONTROL	By electrical signal or dry contact Power ON:open Power OFF:short. Please refer to the Function Manual.		
	OUTPUT VOLTAGE PROGRAMMABLE	Adjustment of output voltage is allowable to between 20 ~ 120% of nominal output voltage. Please refer to the Function Manual.		
	CONSTANT CURRENT LEVEL PROGRAMMABLE	Adjustment of constant current level is allowable to between 20 ~ 100% of rated current. Please refer to the Function Manual.		
	ALARM SIGNAL OUTPUT	AC fail, DC OK, fan fail, OTP. Please refer to the Function Manual.		
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 6)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1, EAC TP TC 004 approved		
	WITHSTAND VOLTAGE Note.4	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC		
	ISOLATION RESISTANCE Note.4	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 A
		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, 4KV/Line-Earth ; Level 3, 2KV/Line-Line
		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	50K hrs min. Telcordia SR-332 (Bellcore) ; 17K hrs min. MIL-HDBK-217F (25℃)		
	DIMENSION	540*424*83.5mm (L*W*H)		
	PACKING	23.5Kg; 1pcs/23.5Kg/2.82CUFT		

NOTE

1. All parameters NOT specially mentioned are measured at △230VAC(Y 400VAC) 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. During withstand voltage and isolation resistance testing, the screw "A" shall be temporarily removed, and shall be installed back after the testing.
5. There is high possibility to trigger the floating over voltage protection when PV voltage is trimmed from a high voltage level to a lower voltage level at light load or no load condition. It is suggested that turn off the power supply and set PV voltage to the lowest level, then adjust output voltage to a desired value.
6. 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 1300mm*900mm metal plate with 2mm 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)
7. 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).