Features

Regulated Converter

- Connector set available
- Class II power supply
- Universal input voltage range
- Compact 4" x 2" size
- 3kVAC Isolation
- OCP, OVP, SCP
- Standby power ErP conform (<0.5W)

Description

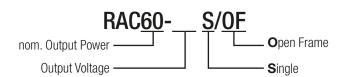
The RAC60/OF series offers compact AC/DC open frame power supplies with universal AC input (90-264VAC) and fully protected DC outputs which are trimmable to compensate for voltage drops on the output connections. The power supplies are CB, UL, and CE certified and ErP conform. Uses include industry controls, test and measurement systems and energy efficient products.

Selection Guide							
Part Number	Input Voltage Range [VAC]	Output Current Range [A]	Output Voltage [VDC]	Voltage Ajd. Range [VDC]	Output Power [W]	Efficiency typ. ⁽¹⁾ [%]	Max. Cap. Load ⁽²⁾ [µF]
RAC60-05S/0	F 90-264	0-10	5	4.8-5.2	50	80	18800
RAC60-12S/0	F 90-264	0-5	12	11.4-12.6	60	83	18800
RAC60-15S/0	F 90-264	0-4	15	14.2-16	60	84	12700
RAC60-24S/0	F 90-264	0-2.5	24	23-25	60	85	4700

Notes:

Note1: Efficiency is tested at nominal input and full load at +25°C ambient Note2: Max Cap Load is tested at nominal input and full resisitive load

Model Numbering



Ordering Examples:

RAC60-05S/OF 5Vout Single Output Open Frame RAC60-24S/OF 24Vout Single Output Open Frame

Specifications (measured @ Ta= 25°C, nom. Vin)

BASIC CHARACTERISTICS					
Parameter	Condition		Min.	Тур.	Max.
Input Voltage Range (3,4)	nom. Vi	n = 230VDC	90VAC 127VDC		264VAC 370VDC
Input Current	115VAC 230VAC				1.5A 1A
Inrush Current	cold start at 25°C	115VAC 230VAC		30A 60A	
No load Power Consumption				0.5W	
Input Frequency Range	AC Input		47Hz		63Hz
Start-up Time	115VAC/230VAC			500ms	
	COI	ntinued on next p	oage		



RAC60/OF

60 Watt Single Output, Open Frame













CAN/CSA-C22.2 No. 60950-1 certified UL no. 60950-1 certified IEC/EN60950-1 certified EN55032 certified EN55024 certified IEC61000 certified



RAC60/OF

Series

Specifications (measured @ Ta= 25°C, nom. Vin = 230VAC)

BASIC CHARACTERISTICS					
Parameter	Con	dition	Min.	Тур.	Max.
Rise Time					30ms
Hold-up Time		5VAC DVAC		13ms 60ms	
Internal Operating Frequency				65kHz	
Output Ripple and Noise (5)	20MHz BW	5VDC 12VDC 15VDC 24VDC			80mVp-p 120mVp-p 150mVp-p 200mVp-p

Notes:

Note3: The products were submitted for safety files at AC-Input operation

Note4: Refer to line derating graph on page PA-3

Note5: Measurements are made with a 1.0µF MLCC across output (low ESR)

REGULATIONS		
Parameter	Condition	Value
Output Acquiracy (6)	5, 12, 15VDC	±2.0% max.
Output Accuracy (6)	24VDC	±1.0% max.
	Notes:	
	Note6: Includes Line-, Load Regulation and Set-up 7	Tolerance

Parameter	Туре	Туре		Valu	
Short Circuit Protection (SCP)			Hiccup n	node, automatic restar	
		5VDC		5.75-6.5VDC	
Over Voltage Protection (OVD)	ra power on to recover	12VDC	latch mode	13.5-15.0VDC	
Over Voltage Protection (OVP)	re-power on to recover	15VDC		16.9-18.75VDC	
		24VDC		27.0-30.0VDC	
Over Current Protection (OCP)	rated output po	rated output power		node, automatic restar	
		I/P to O/P		3.0kVAC	
Isolation Voltage	tested for 1 minute	I/P to FG		1.5kVAC	
		O/P to FG		0.5kVAC	
Isolation Resistance	500VDC	500VDC		100ΜΩ	
Leakage Current	240VAC	240VAC		0.75mA max	

ENVIRONMENTAL					
Parameter	Cond	lition	Value		
Onereting Temperature Dance	@ natural convention 0.1 m/s	full load	-20°C to +50°C		
Operating Temperature Range	@ natural convection 0.1m/s	refer to derating graph	-20°C to +70°C		
Operating Humidity	non-con	densing	20% - 90% RH max.		
continued on next page					

Note7: Refer to local safety regulations if input over-current protection is also required



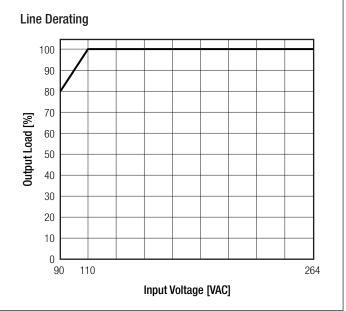
RAC60/OF

Series

Specifications (measured @ Ta= 25°C, nom. Vin = 230VAC)

ENVIRONMENTAL					
Parameter	Condition		Value		
Vibration			10-500Hz, 2G, 10 Min. along X, Y and Z		
MTBF	according to MIL-HDBK-217F, G.B.	+25°C	>450 x 10 ³ hours		

Derating Graph (@ Chamber and natural convection 0.1m/s) 100 90 80 70 Output Load [%] 60 50 40 30 20 10 0 20 40 50 60 100 -20 Ambient Temperature [°C]



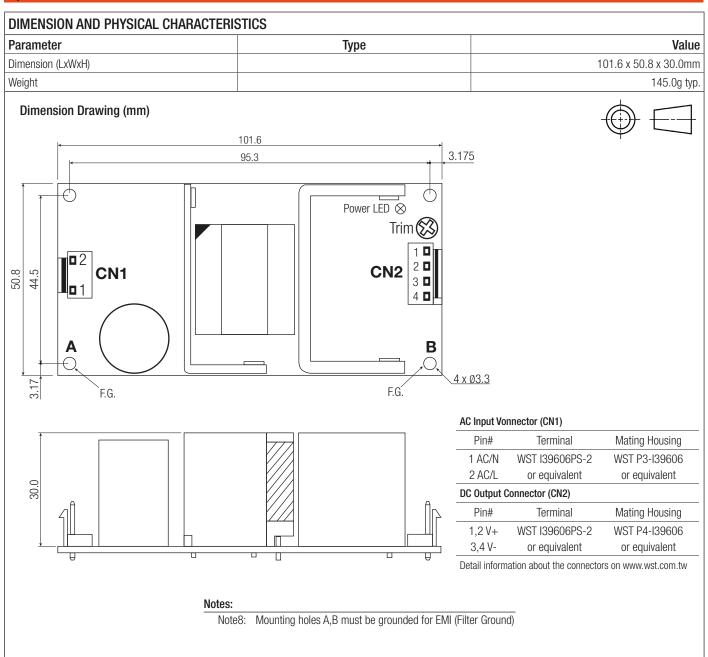
SAFETY AND CERTIFICATIONS		
Certificate Type (Safety)	Report / File Number	Standard
	E196683	CAN/CSA-C22.2 No. 60950-1 UL No. 60950-1
Information Technology Equipment, General Requirements for Safety	11037315 001	EN60950-1:2006 + A2:2013 IEC60950-1:2005 2nd Edition + A2:2013
EAC Safety of Low Voltage Equipment	RU-AT.49.09571	TP TC 004/2011
RoHs 2		RoHS 2011/65/EU
EMC Compliance (8)	Condition	Standard / Criterion
Electromagnetic compatibility of multimedia equipment – Emission Requirements		EN55032; Class B
Information technology equipment - Immunity characteristics - Limits and methods of measurement		EN55024
ESD Electrostatic Discharge Immunity Test	air ± 2.0 , 4.0, 8.0kV contact ± 2.0 ,4.0kV	IEC61000-4-2:2008; Criteria A
Radiated, Radio-Frequency, Electromagnetic Field Immunity Test	3V/m	IEC61000-4-3:2006 + A2:2010; Criteria A
Fast Transient and Burst Immunity	AC Power Port: ±1.0kV	IEC61000-4-4:2012; Criteria A
Surge Immunity	AC Power Port: L-N ±0.5, 1.0kV L-PE, N-PE ±0.5, 1, 2.0kV	IEC61000-4-5:2014; Criteria A
Immunity to Conducted Disturbances, Induced by Radio-Frequency Fields	AC Power Port 3.0V	IEC61000-4-6:2013; Criteria A
Power Magnetic Field Immunity	50Hz, 1A/m	IEC61000-4-8:2009; Criteria A
Voltage Dips and Interruption	Voltage Dips > 95% Voltage Dips > 30% Voltage Interruptions > 95%	IEC61000-4-11:2004; Criteria A IEC61000-4-11:2004; Criteria B IEC61000-4-11:2004; Criteria B
Limits of Harmonic Current Emissions		EN61000-3-2:2014, Class A
Limits of Voltage Fluctuations & Flicker		EN61000-3-3:2013
Limitations on the amount of electromagnetic intererence allowed from digital and electronic devices		47 CFR FCC Part 15 Subpart B 2010-01-07, Class B



RAC60/OF

Series

Specifications (measured @ Ta= 25°C, nom. Vin = 230VAC)



PACKAGING INFORMATION				
Parameter	Туре	Value		
Packaging Dimension (LxWxH)	carton	325.0 x 270.0 x 220.0mm		
Packaging Quantity		30pcs		
Storage Temperature Range		-40°C to +80°C		
Storage Humidity	non-condensing	10% - 90% RH max.		

The product information and specifications may be subject to changes even without prior written notice. The product has been designed for various applications; its suitability lies in the responsibility of each customer. The products are not authorized for use in safety-critical applications without RECOM's explicit written consent. A safety-critical application is an application where a failure may reasonably be expected to endanger or cause loss of life, inflict bodily harm or damage property. The applicant shall indemnify and hold harmless RECOM, its affiliated companies and its representatives against any damage claims in connection with the unauthorized use of RECOM products in such safety-critical applications.