Features

Regulated Converters

- built in active PFC
- Efficiency up to 88%
- Isolated Output 3kVAC / 1 min
- SCP, OLP Protection
- Operating Temperature Range -20°C to +60°C
- Universal Input 90-264VAC/120VDC-370VDC

RECOM

AC/DC Converter

RACG100

100 Watt Single Output

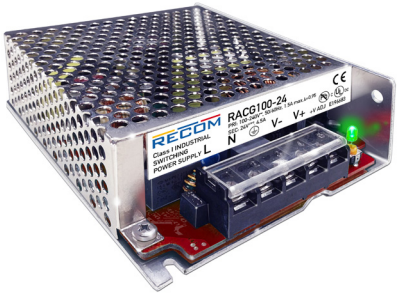
3 YEAR 3 warranty

Description

These industrial grade power supplies have been designed to give many years of trouble-free life. Despite their low cost, they use high grade electrolytic capacitors and are certified to heavy industry performance levels, working reliably over an extended temperature and world-wide input voltage range. The RACG series are more compact than the standard industry size, yet offer higher performance with full output protection (SCP, OLP), active power factor correction and improved input surge, hold-up time and efficiency ratings. The power supplies can be mounted horizontally or vertically and are fully certified to CE, UL and Class B EMC standards. Typical uses are industrial, commercial and high reliability applications. The RACG series come with a 3 year warranty.

Selection Guide

Part Number	nom. Input Voltage Range (VAC)	Input Current max. (A)	Output Voltge (VDC)	Adj. Output Voltage (VDC)	Output Current max. (A)	Efficiency (@230VAC) typ. (%)
RACG100-05S	120-240	1.5	5	3.3-5.5	20	84
RACG100-12S	120-240	1.5	12	10-15	8.5	87
RACG100-24S	120-240	1.5	24	21-27	4.5	88
RACG100-48S	120-240	1.5	48	43.2-52.8	2.2	88



RoHS 6 compliant

REACH compliant

CE

c UL us
E196683

UL60950-1 Certified

Specifications (measured at T_a= 25°C, nominal input voltage (230VAC), full load and after warm-up)

BASIC CHARACTERISTICS					
Parameter	**Condition**		**Min.**	**Typ.**	**Max.**
Input Voltage Range			90VAC 120VDC		264VAC 370VDC
Inrush Current	cold start, 115VAC cold start, 230VAC				30A 50A
No load Power Consumption				3W	
Input Frequency Range			47Hz		63Hz
Set-up time	115VAC 230VAC				4s 2s
Hold-up time	230VAC			20ms	
Output Voltage adjust				±10%	
Minimum Load				0%	
Power Factor	115VAC 230VAC			0.98 0.93	
Output Ripple and Noise[1]	0°C to +60°C	All		150mVp-p	
	-20°C to 0°C	5Vout, 12Vout, 24Vout		150mVp-p	
		48Vout		200mVp-p	

Notes:

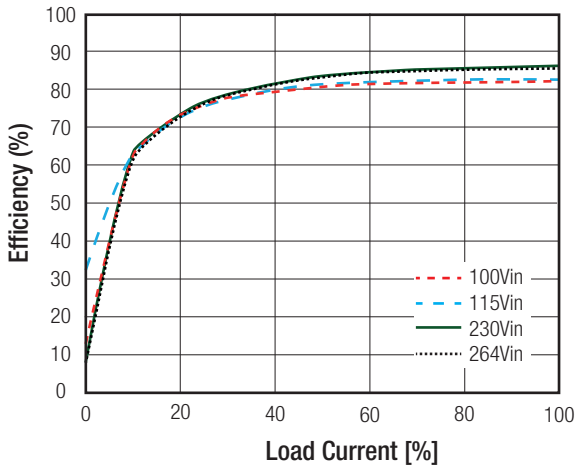
Note1: Measured @ 20MHz Bandwidth with a 0.1µF parallel capacitor.

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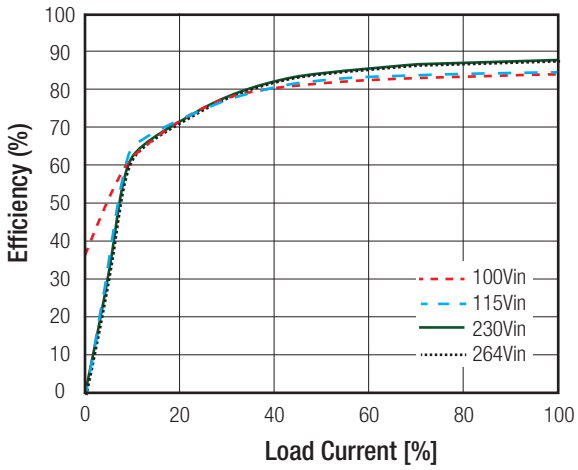
Specifications (measured at T_a= 25°C, nominal input voltage (115/230VAC), full load and after warm-up)

Efficiency vs. Load

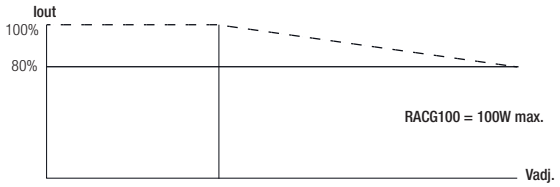
RACG100-12S



RACG100-24S



Vadj. Derating



3.3V	**5V**	RACG100-05	5.5V
10V	**12V**	RACG100-12	15V
21V	**24V**	RACG100-24	27V
43.2V	**48V**	RACG100-48	52.8V

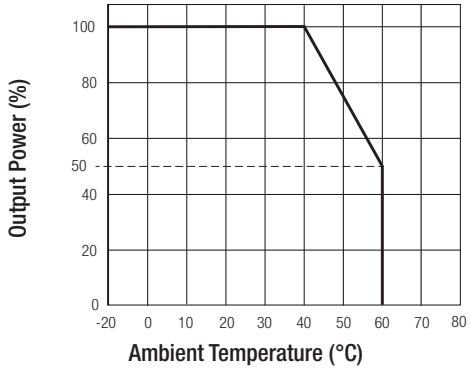
REGULATIONS		
Parameter	**Condition**	**Value**
Output Voltage Accuracy	5Vout, 12Vout 24Vout, 48Vout	±2% max. ±1% max.
Line Voltage Regulation	low line to high line, full load	±0.5% max.
Load Voltage Regulation	5Vout, 12Vout 24Vout, 48Vout	±2% max. ±1% max.

PROTECTIONS		
Parameter	**Type**	**Value**
Input Fuse	internally	T5A, slow blow
Short Circuit Protection (SCP)		continuous, Hiccup and auto recovery
Over Load Protection (OLP)		110% - 150% of rated output current, Hiccup and auto recovery
Isolation Voltage	I/P to O/P I/P to Case O/P to Case	3kVAC/ 1 minute 1.5kVAC/ 1 minute 500VAC/ 1 minute
Isolation Resistance		100MΩ min.
Leakage Current	I/P to O/P I/P to Case	0.25mA max. 3.5mA max.

Specifications (measured at T_a= 25°C, nominal input voltage (115/230VAC), full load and after warm-up)

ENVIRONMENTAL		
Parameter	**Condition**	**Value**
Operating Temperature Range	with derating	-20°C to +60°C
Temperature Coefficient		0.03%/°C
Operating Humidity	non-condensing	20% - 90%, RH max.
Moisture Protection		conformally coated PCB
Operating Altitude		5000m
MTBF	MIL-HDBK-217F, ground benign, +25°C	200 x 10^3 hours

Derating Graph



SAFETY AND CERTIFICATIONS		
Certificate Type	**Report / File Number**	**Standard**
UL General Safety	E196683	UL60950-1
CAN/CSA General Safety	E196683	C22.2 No. 60950-1
Certificate Type (designed to meet)		**Standard**
IEC/EN General Safety		IEC/EN60950-1
EMC Compliance	**Conditions**	**Standard / Criterion**
EMI Standard	internal filter	EN55022, Class B
		FCC Part 15, Class B
Harmonic Current		EN61000-3-2, Class A

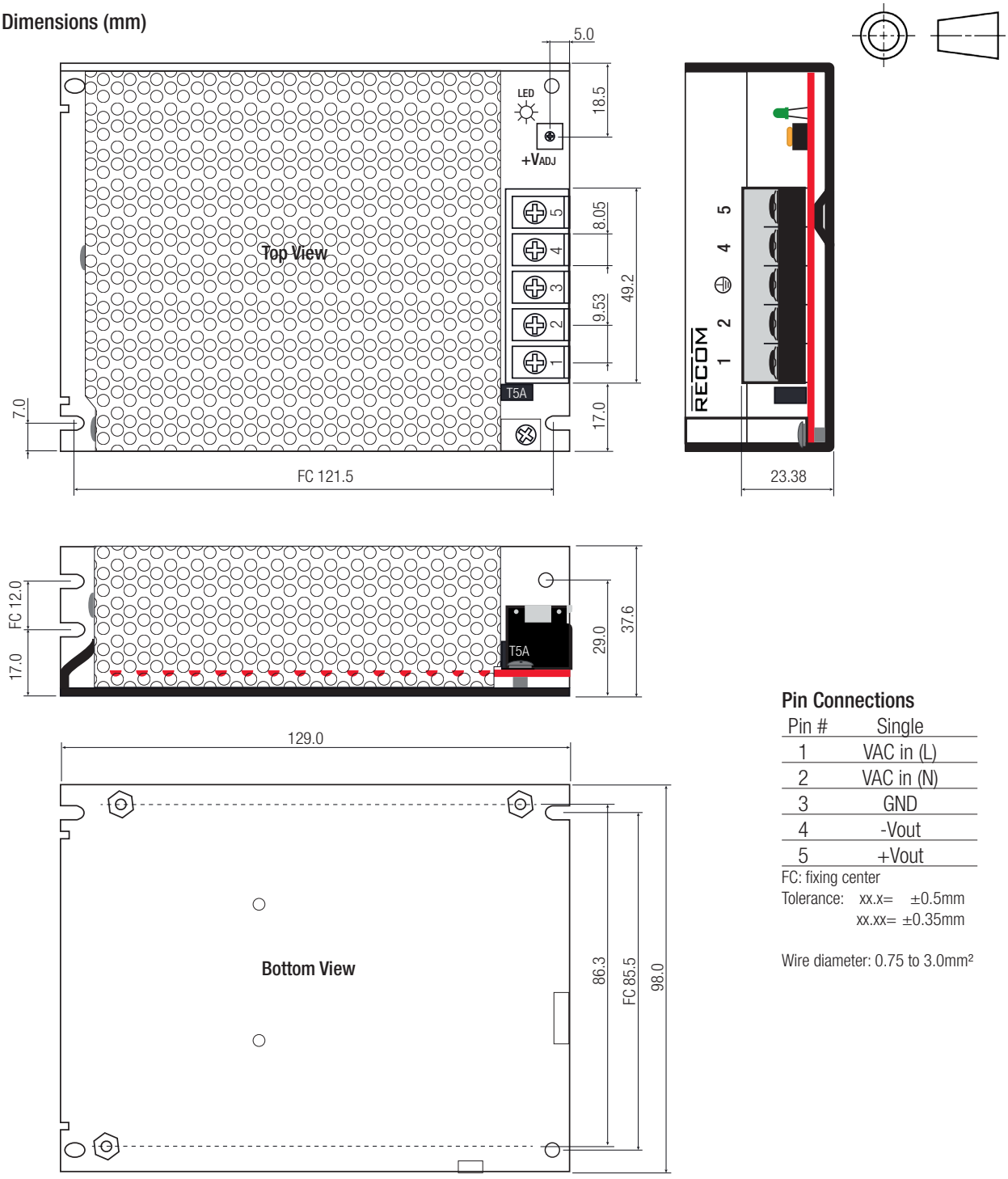
DIMENSION and PHYSICAL CHARACTERISTICS		
Parameter	**Type**	**Value**
Case Material		Aluminium
Package Dimension (LxWxH)		129.0 x 98.0 x 38.0mm
Package Weight		432g typ.

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RACG100 Series

Specifications (measured at T_a= 25°C, nominal input voltage (115/230VAC), full load and after warm-up)

Mechanical Dimensions (mm)



Pin Connections

Pin #	Single
1	VAC in (L)
2	VAC in (N)
3	GND
4	-Vout
5	+Vout

FC: fixing center
Tolerance: xx.x= ±0.5mm
xx.xx= ±0.35mm

Wire diameter: 0.75 to 3.0mm²

PACKAGING INFORMATION		
Parameter	**Type**	**Value**
Packaging Dimension (LxWxH)	Cardboard box	138 x 100 x 45mm
Packaging Quantity		1pcs
Storage Temperature Range		-30°C to +85°C
Storage Humidity	non-condensing	10% - 90%, RH max.

The product information and specifications are subject to change without prior notice. RECOM products are not authorized for use in safety-critical applications (such as life support) without RECOM's explicit written consent. A safety-critical application is defined as an application where a failure of a RECOM product may reasonably be expected to endanger or cause loss of life, inflict bodily harm or damage property. The buyer 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.