Features

Regulated Converters

- Built-in Active PFC
- Efficiency up to 88%
- Isolated Output 3kVAC / 1 min
- SCP, OVP, OLP, OTP Protection
- Operating Temperature Range -20°C to +70°C
- Universal Input 90-264VAC/120VDC-370VDC
- Conformal Coating

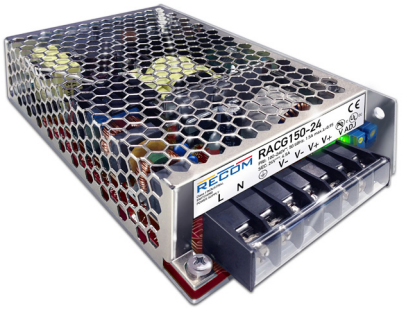
RECOM

AC/DC Converter

RACG150

150 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 to ensure 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, OVP, OTP, 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 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. (%)
RACG150-12S	100-240	1.9	12	10.8-13.2	12.5	86
RACG150-24S	100-240	1.9	24	21.6-26.4	6.3	87
RACG150-48S	100-240	1.9	48	43.2-52.8	3.2	88

c UL us E196683

UL60950-1 Certified

Specifications (measured at T_a= 25°C, nominal input voltage (115/230VAC), 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 45A
No load Power Consumption			3W	
Input Frequency Range		47Hz		63Hz
Set-up time	115VAC 230VAC			3s 2s
Hold-up time	220VAC		18ms	
Output Voltage adjust			±10%	
Minimum Load			0%	
Power Factor	115VAC 230VAC		0.98 0.95	
Output Ripple and Noise (1)	0°C to +70°C -20°C to 0°C		100mVp-p 200mVp-p	

Notes:

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

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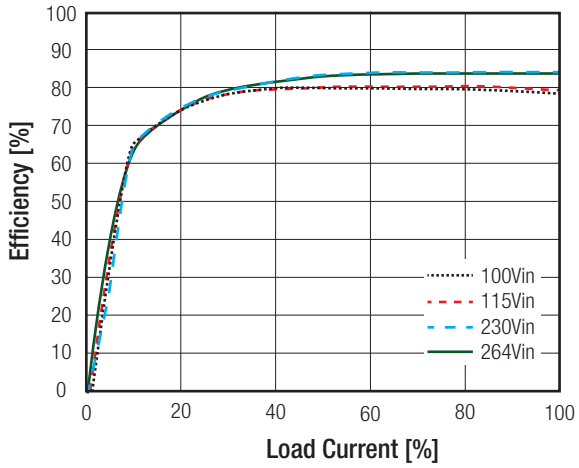
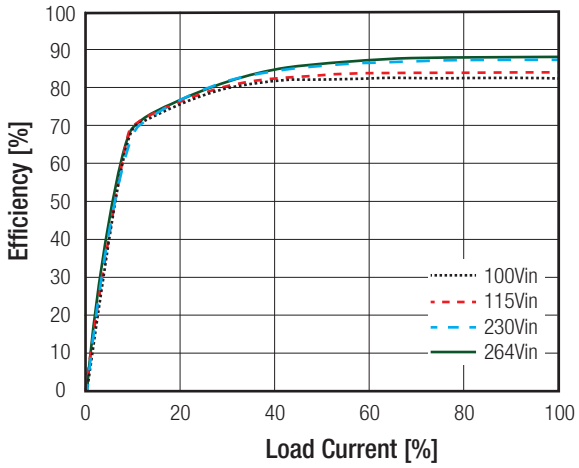
Specifications (measured at T_a= 25°C, nominal input voltage, full load and after warm-up)

Efficiency vs Load

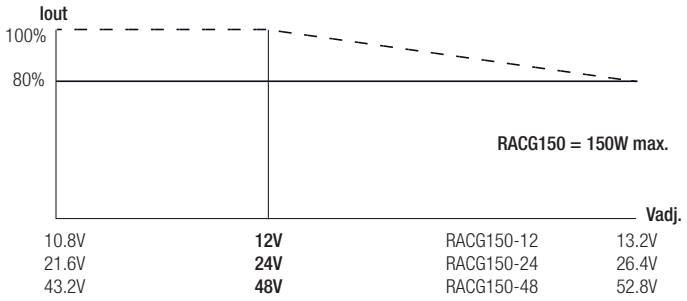
RACG150-12S



RACG150-24S



Vadj. Derating



10.8V	**12V**	RACG150-12	13.2V
21.6V	**24V**	RACG150-24	26.4V
43.2V	**48V**	RACG150-48	52.8V

REGULATIONS

Parameter	Condition	Value
Output Voltage Accuracy		±2.0% max.
Line Voltage Regulation	low line to high line, full load	±0.5% max.
Load Voltage Regulation	12Vout 24Vout, 48Vout	±2.0% max. ±1.0% max.

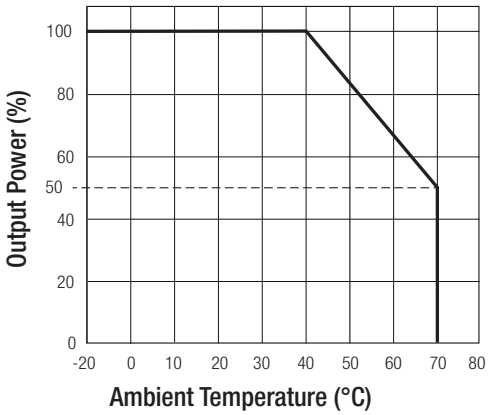
PROTECTIONS

Parameter	Type		Value
Input Fuse	internally		T5A, slow blow
Short Circuit Protection (SCP)			continuous, Hiccup and auto recovery
Over Voltage Protection (OVP)			115% - 150% of rated output voltage, Hiccup and auto recovery
Over Load Protection (OLP)			105% - 150%,of rated output current, Hiccup and auto recovery
Over Temperature Protection (OTP)	detected on Mosfet temperature		+105°C ±5°C auto restart after cooling down to +60°C
Isolation Voltage	tested for 1 minute	I/P to O/P I/P to Case O/P to Case	3kVAC 1.5kVAC 500VAC
Isolation Resistance			100MΩ min.
Leakage Current	I/P to O/P I/P to Case		0.25mA min. 3.5mA min.

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 +70°C
Temperature Coefficient		0.03%/°C
Operating Humidity	non-condensing	20% - 90%, RH max.
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
Harmonic Current		EN61000-3-2, Class A

DIMENSION and PHYSICAL CHARACTERISTICS		
Parameter	**Type**	**Value**
Material	case	Aluminium
Package Dimension (LxWxH)		160 x 98 x 38mm
Package Weight		610g typ.

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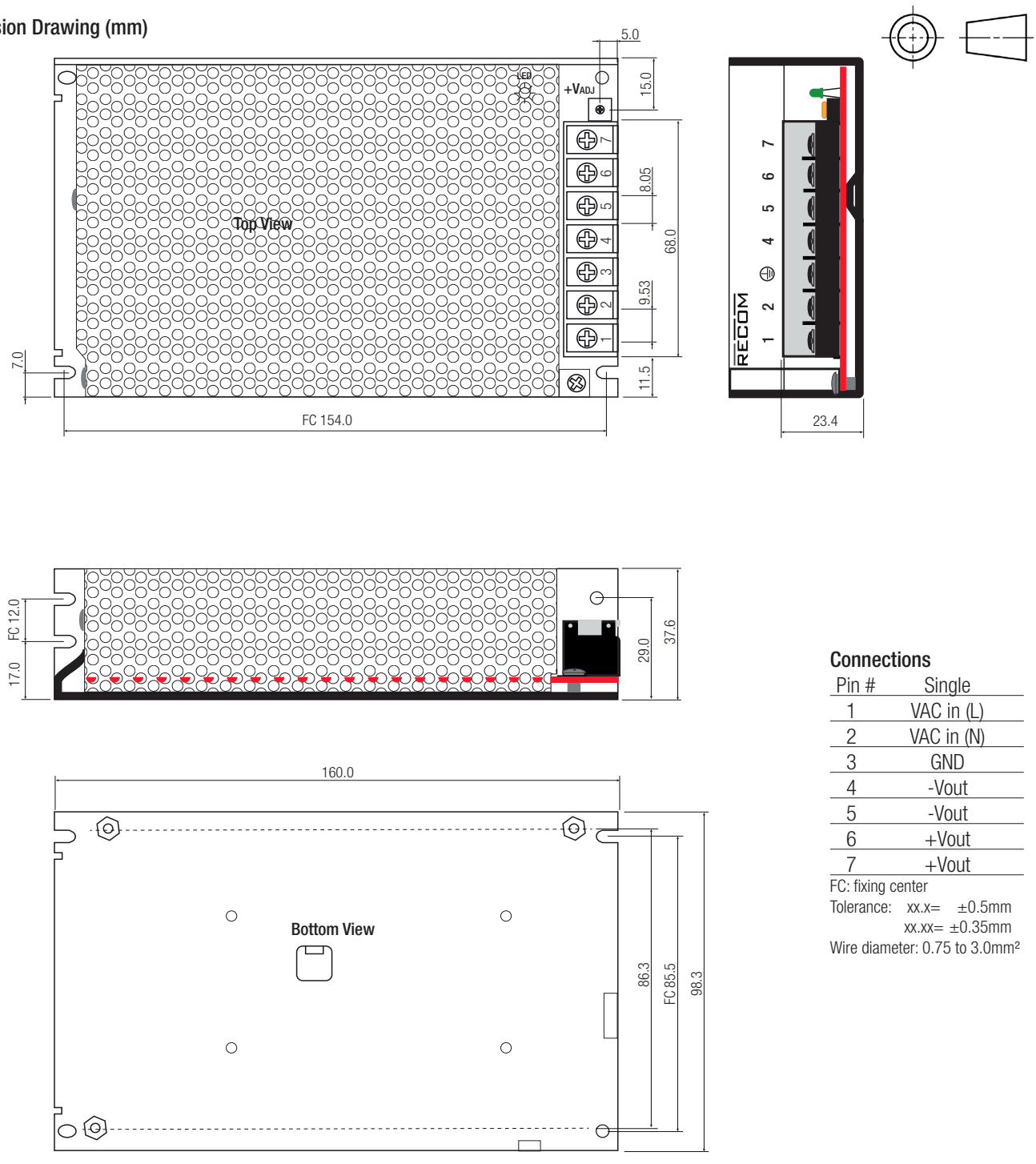
RACG150 Series

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

Dimension Drawing (mm)



Connections

Pin #	Single
1	VAC in (L)
2	VAC in (N)
3	GND
4	-Vout
5	-Vout
6	+Vout
7	+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	170 x 102 x 45mm
Packaging Quantity		1pcs
Storage Temperature Range		-30°C to +85°C
Storage Humidity	non-condensing	10% - 90%, RH max.