

## Features

### Regulated Converters

- Ultracompact Low Profile AC-DC Power Supply
- Ultra-low 30mW Standby Power Consumption
- 1 Watt or 2 Watt PCB Mount Package
- Extra Wide Input Voltage Range (80~264VAC)
- Class II Power Supply with 3kVAC Isolation
- -25°C to +85°C Operating Temp
- Low Output Ripple
- Short Circuit Protected Outputs
- EN, UL and CE Certified

### Description

The RAC01-SC and RAC02-SC series are ultra-compact universal input AC/DC power modules for PCB mounting. They feature high efficiency, low standby power, high operating temperature, soft start and short-circuit protection as well as a built-in EMC Class B filter. Output voltages range from 3.3VDC to 24VDC.

### Selection Guide

Part Number	Input Range (VAC)	Output Voltage (VDC)	Output Current (mA)	Efficiency typ. (%)	Max Capacitive Load (1+2)
RAC01-3.3SC	80-264	3.3	300	65	2200µF
RAC02-3.3SC			600	66	2700µF
RAC01-05SC	80-264	5	200	68	1600µF
RAC02-05SC			400	70	2000µF
RAC01-09SC	80-264	9	111	70	470µF
RAC02-09SC			222	72	560µF
RAC01-12SC	80-264	12	83	72	180µF
RAC02-12SC			167	74	200µF
RAC01-15SC	80-264	15	67	72	180µF
RAC02-15SC			133	74	200µF
RAC01-24SC	80-264	24	42	73	68µF
RAC02-24SC			83	77	68µF

### Specifications (measured at TA 25°C, full load after warm-up)

Input Voltage Range (with derating)	80-264VAC or 115-370VDC
Rated Power	1 or 2 Watts max.
Input Frequency Range (for AC Input)	47-63Hz
Input Current (full load)	RAC01 (115/230VAC) RAC02 (115/230VAC)
	34mA/23mA max. 55mA/36mA max.
No Load Power Consumption	@115VAC @230VAC
	30mW typ. 80mW typ.
Inrush Current (<0.5ms)	30/60A max.
Leakage Current	0.25mA max.
Output Voltage Tolerance (combined Tolerance, Line Reg and Load Reg at full load)	±5% max.
Line Voltage Regulation	low line, high line at full load
	±2% max.
Load Voltage Regulation	10% to 100% full load
	±6% max.
Output Ripple (20MHz BW limited)	3.3V Output All others
	<150mVrms <100mVrms
Operating Frequency (full load)	30kHz typ.
Minimum Load = 0%	specifications valid for 10% minimum load only
RMS Isolation Voltage (input to output)	3kVAC / 1 minute
Isolation Resistance	1 GΩ min.
Short Circuit Protection	Hiccup, Automatic Restart
Over Voltage Category	OVC II
Operating Temperature Range <sup>(3)</sup>	(1W, natural convection, no derating) (2W natural convection, no derating) (natural convection, with derating)
	-25°C to +80°C -25°C to +75°C -25°C to +85°C
Storage Temperature Range	-40°C to +100°C
Humidity	non-condensing
Case Material	Plastic Case, Silicone potting material (UL94V-0)

continued on next page

## POWERLINE

AC/DC-Converter  
with 3 year Warranty

**RECOM**

### 1 - 2 Watt Single Output



CE



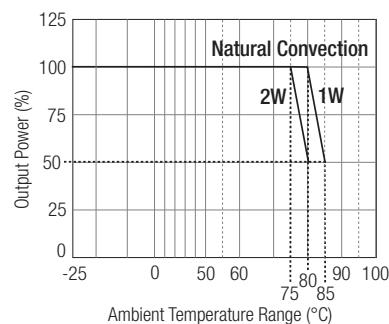
RECOM  
E224736

EN-60950-1 Certified  
UL-60950-1 Certified

### RAC01-C RAC02-C

## Derating-Graph

(Ambient Temperature)



Refer to Application Notes

# POWERLINE

## AC/DC-Converter

# RAC01-SC

# RAC02-SC

### Specifications (measured at TA 25°C, full load after warm-up)

Package Weight	25g	
Packing Quantity	22 pcs	
EMC	Conducted and Radiate Noise Immunity	EN55022 Class B EN55024
MTBF	+25°C	666 x 10 <sup>3</sup> hours
230VAC	+55°C	395 x 10 <sup>3</sup> hours
using MIL-HDBK-217F	+80°C	125 x 10 <sup>3</sup> hours
Certifications:		
UL General Safety	File Nr. E224736	UL-60950-1, 2nd Edition
EN General Safety	SPCLVD 1202026	EN-60950-1, 2nd Edition
CE	Report: 2011-04-19	EN55022 Class B

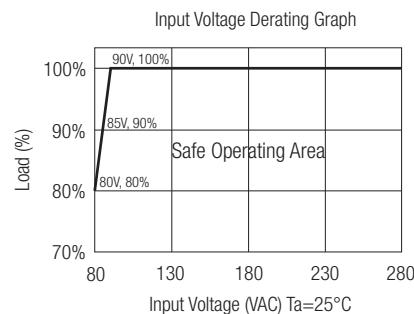
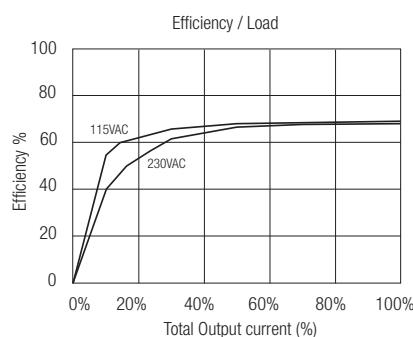
### Notes:

Note1: Measured @ 230VAC / 50Hz / Ta=25°C with constant resistive mode at full load.

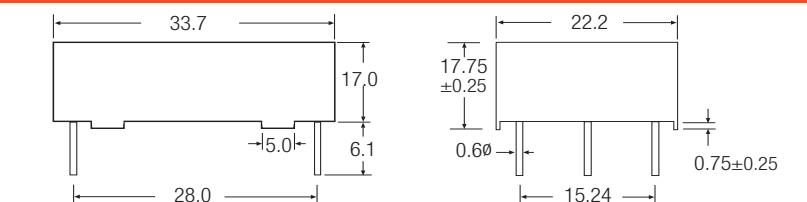
Note2: If used @ 115VAC / 60Hz with full load, max. capacitive load is less, please contact RECOM for detailed information.

Note3: Start up only is guaranteed at temperatures down to -25°C. Other specifications may not be met.

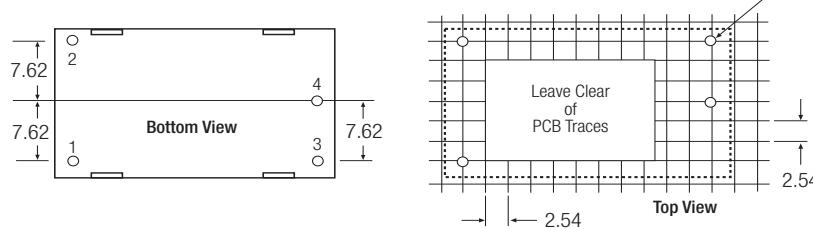
### RAC01-05SC



### Standard Package Style and Pinning



Allow 5mm clearance around converter for air circulation



### Pin Connections

Pin #	Single Output
1	VAC in (N)
2	VAC in (L)
3	-VDC out
4	+VDC out

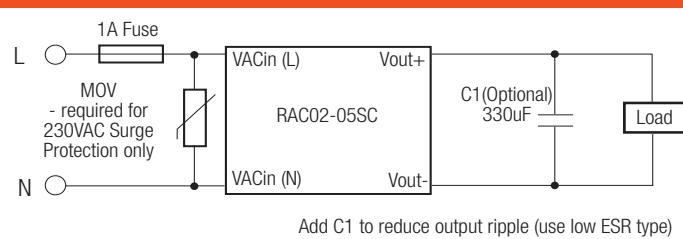
Tolerance  $\pm 0.5$  mm unless otherwise specified

### Recommended Application Circuit

Compact single output regulated power supply

Suggested fuse rating: 1A Slow Blow.

An external MOV is required for 230VAC operation. The varistor should comply with IEC-61051-2 e.g. Epcos S14 series



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# AMEYA360

## Components Supply Platform

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