

# !NOT RECOMMENDED FOR NEW DESIGNS!

LAST TIME BUY: 30<sup>TH</sup> OCT 2020, 3.3SB, 15SB  
 LAST TIME BUY: 30<sup>TH</sup> OCT 2020, "-E" & "-ST" VERSION

## Features

## Regulated Converters

- Very Compact AC-DC Power Supply
- 5 Watt PCB Mount Package
- Universal Input Voltage Range
- 3000VAC Isolation
- Low Output Ripple and Noise
- Short Circuit Protected
- Very Low No Load Power Consumption
- UL Certified, CE Marked

### Selection Guide

Part Number	Input Range (VAC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)	Max. Capacitive Load
RAC05-05SB	90-264	5	1000	71	6000µF
RAC05-12SB	90-264	12	420	75	1400µF
RAC05-24SB	90-264	24	230	77	170µF

### NRND (Last time buy: 30<sup>th</sup> Oct 2020)

Part Number	Input Range (VAC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)	Max. Capacitive Load
RAC05-3.3SB	90-264	3.3	1250	68	13800µF
RAC05-15SB	90-264	15	333	75	1000µF

\*add suffix "-E" for extended temperature range, e.g. RAC05-05SB-E

\*add suffix "-ST" for screw terminal module e.g. RAC05-05SB-ST, RAC05-05SB-E-ST

### Specifications (typical at 25°C and after warm up time unless otherwise specified)

Input Voltage Range	90-264VAC or 120-370VDC	
Rated Power	5 Watts max.	
Input Frequency Range (for AC Input)	47-440Hz	
Input Current (full load)	115VAC/230VAC	110mA / 70mA max.
No Load Power Consumption	115VAC/230VAC	80mW max.
Inrush Current (<2ms)	115VAC	10A max. (-E = 23A max.)
	230VAC	20A max. (-E = 46A max.)
Leakage Current	0.75mA max.	
Output Voltage Accuracy (Full load)	±2%	
Line Voltage Regulation (low line, high line at full load)	±0.3% typ.	
Load Voltage Regulation ( 5% to 100% full load )	±0.5% typ.	
Output Ripple and Noise (20MHz limited)	Noise	0.5% Vout + 50mVp-p max.
	Ripple	<0.2% Vout + 40mVp-p max.
Operating Frequency	132kHz typ.	
Efficiency at Full Load	see table	
RMS Isolation Voltage (input to output)	3kVAC / 1minute	
Temperature Coefficient	±0.02%/°C typ.	
Isolation Resistance	100 MΩ max.	
Short Circuit Protection	Hiccup, Automatic Restart	
Operating Temperature Range	Standard	-25°C to +70°C
(free air convection, with derating)	Suffix -E	-40°C to +70°C
Storage Temperature Range	-40°C to +85°C	
Humidity	95% RH max.	
Case Material	Epoxy with Fibreglass (UL94V-0)	
Package Weight	30g	
Packing Quantity	9 pcs (-ST Version: 1 pc)	
EMC	EN 55022 Class B / EN 55024	
MTBF (+25°C)	using MIL-HDBK-217F	360 x 10 <sup>3</sup> hours

## POWERLINE

AC/DC-Converter

with 3 year Warranty

RECOM

## 5 Watt Single Output

**PREFERRED ALTERNATIVES**  
 Please consider these alternatives:

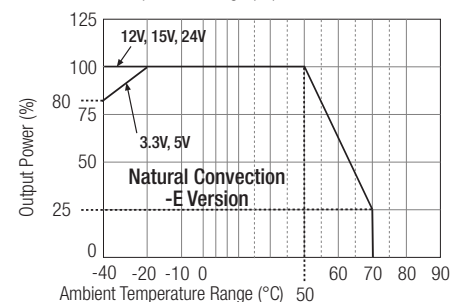
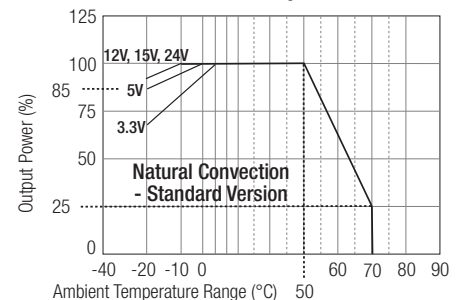
**RAC10-K/277 Series**



**UL-60950-1 Certified**

## RAC05-B

### Derating-Graph (Ambient Temperature)

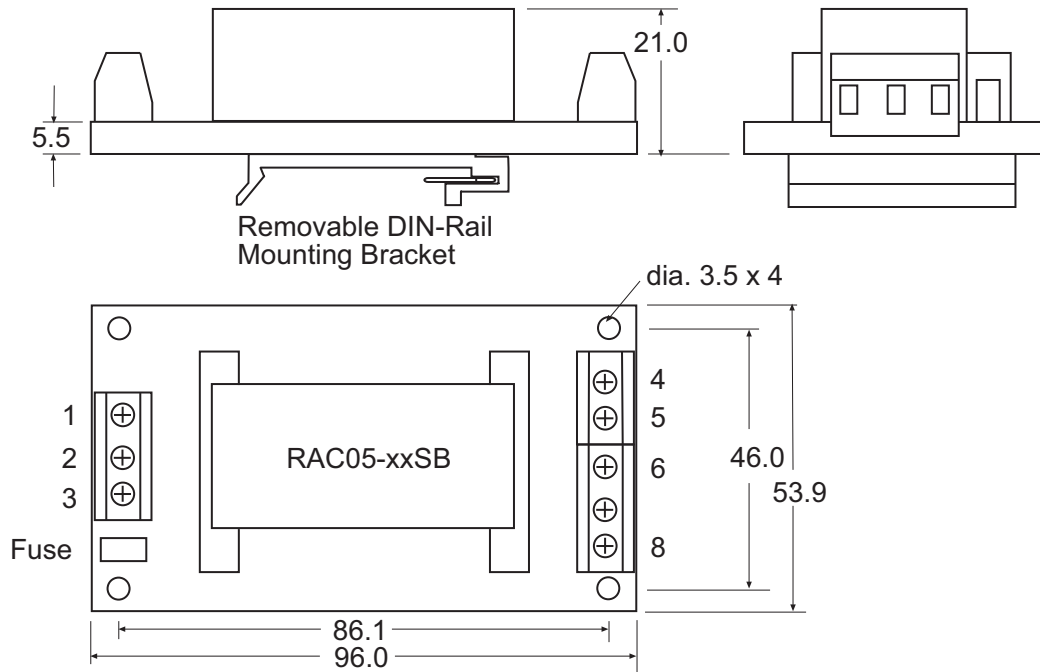


Refer to Application Notes

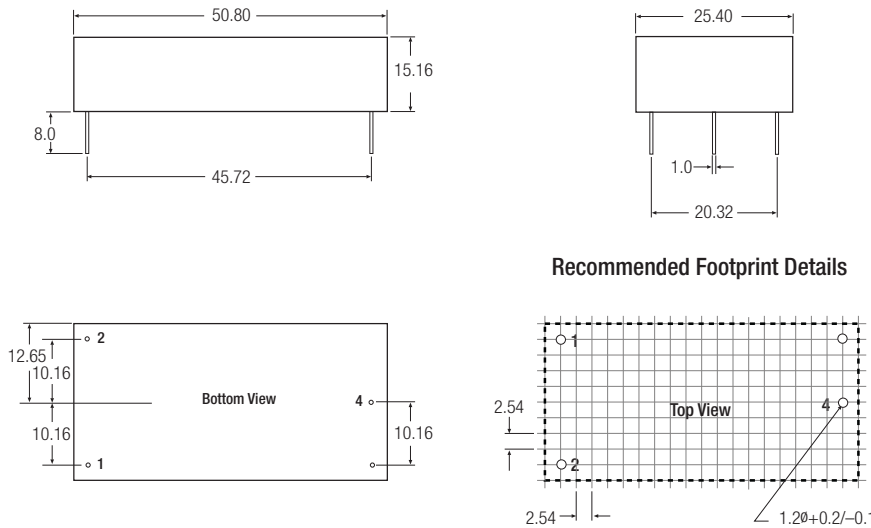
**POWERLINE**  
AC/DC-Converter

**RAC05-SB**  
Series

**Screw Terminal Module Option (suffix -ST)**



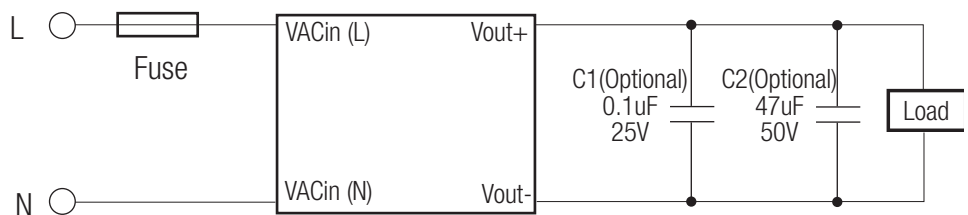
**Package Style and Pinning**



**RAC05-B**

**Standard Application Circuit**

Suggested fuse rating  
1A Slow Blow



**Please Read Application Notes**

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.

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