

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

Description

Compact UL certified switching AC/DC power module for PCB, screw-terminal connection or DIN-rail mounting.

Selection Guide

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
RAC05-05SB	90-264	5	1000	71	6000µF
RAC05-12SB	90-264	12	420	75	1400µF
RAC05-15SB	90-264	15	333	75	1000µF
RAC05-24SB	90-264	24	230	77	170µF

*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 ³ hours

POWERLINE

AC/DC-Converter

with 3 year Warranty

RECOM

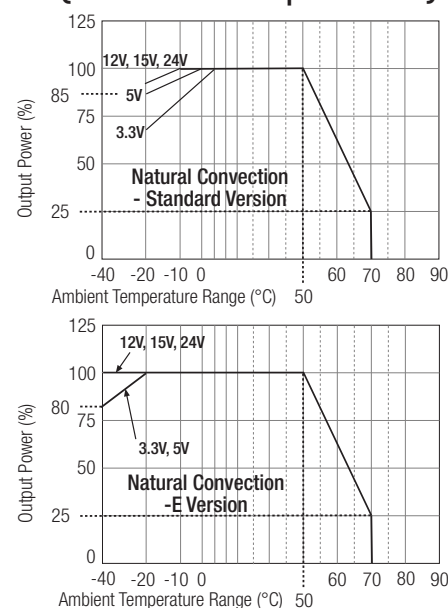
5 Watt Single Output



UL-60950-1 Certified

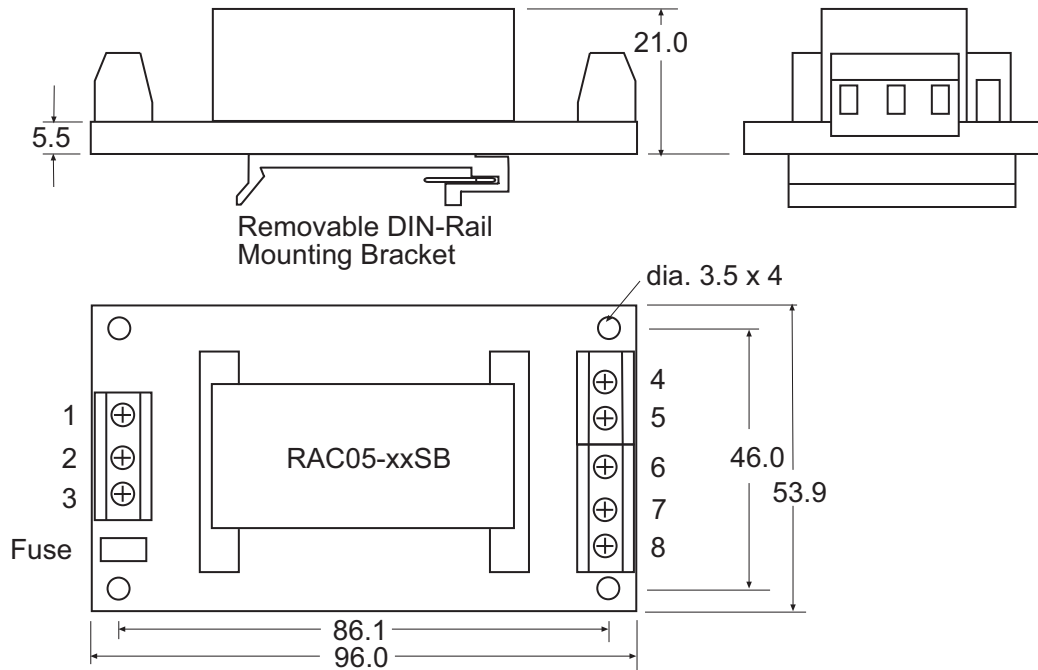
RAC05-B

Derating-Graph (Ambient Temperature)



Refer to Application Notes

Screw Terminal Module Option (suffix -ST)

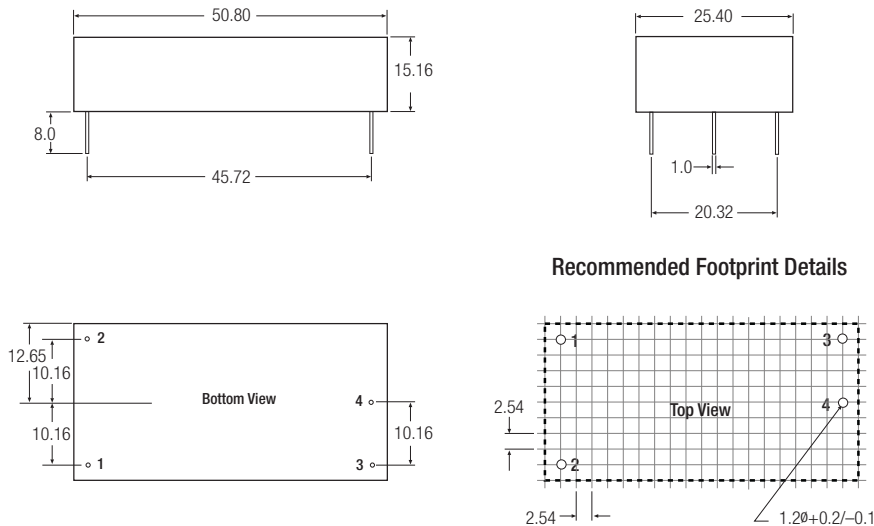


Pin Connections-

Pin #	Single Out
1	NC
2	VAC in (N)
3	VAC in (L)
4	NC
5	+VDC out
6	-VDC out
7	NC
8	NC

NC = No Connection

Package Style and Pinning



Pin Connections

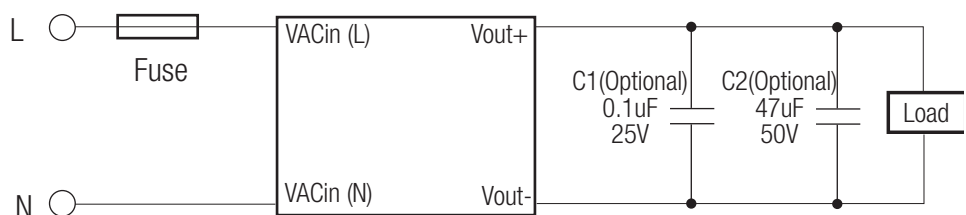
Pin #	Single Out
1	VAC in (N)
2	VAC in (L)
3	+VDC out
4	-VDC out

Tolerance ± 0.5 mm

RAC05-B

Standard Application Circuit

Suggested fuse rating
1A Slow Blow



Please Read Application Notes

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.

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