

Features

Regulated Converters

- Compact AC-DC Power Supply
- 10 Watt PCB Mount Package
- Universal Input Voltage Range
- 3000VAC Isolation
- Low Output Ripple and Noise
- Short Circuit Protected
- UL Certified, CE Marked

Description

Compact UL certified switching AC/DC power module for PCB, screw-terminal connection or DIN-rail mounting. Pin compatible with RAC5-xxSB models.

Selection Guide

Part Number	Input Range (VAC)	Output Voltage (VDC)	Output Current (mA)	Efficiency typ. (%)	Max. Capacitive Load
RAC10-3.3SB	90-264	3.3	2500	72	75000µF
RAC10-05SB	90-264	5	2000	75	40000µF
RAC10-12SB	90-264	12	833	77	8500µF
RAC10-15SB	90-264	15	667	77	3500µF
RAC10-24SB	90-264	24	417	77	1200µF

*add suffix "-E" for extended temperature range, e.g. RAC10-05SB-E

*add suffix "-ST" for screw terminal module e.g. RAC10-05SB-ST, RAC10-05SB-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	10 Watts max.	
Input Frequency Range (for AC Input)	47-440Hz	
Input Current (full load)	115VAC/230VAC	220mA/ 150mA max.
No Load Power Consumption	230VAC	490mW max.
Inrush Current (<2ms)	115VAC	10A max. (-E = 23A max.)
	230VAC	20A max. (-E = 46A max.)
Leakage Current	0.25mA 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	125kHz typ.	
Efficiency at Full Load	see table	
RMS Isolation Voltage (input to output)	3kVAC / 1 minute	
Temperature Coefficient	±0.02%/°C typ.	
Isolation Resistance	100 MΩ min.	
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	20%-85% RH	
Case Material	Epoxy with Fibreglass (UL94V-0)	
Package Weight	51g	
Packing Quantity	8 pcs (-ST Version: 1 pc)	
EMC	EN 55022 Class B / EN 55024	
MTBF (+25°C)	using MIL-HDBK-217F	330 x 10 ³ hours

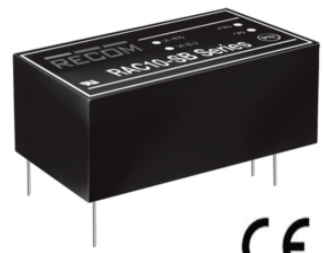
POWERLINE

AC/DC-Converter

with 3 year Warranty

RECOM

10 Watt Single Output

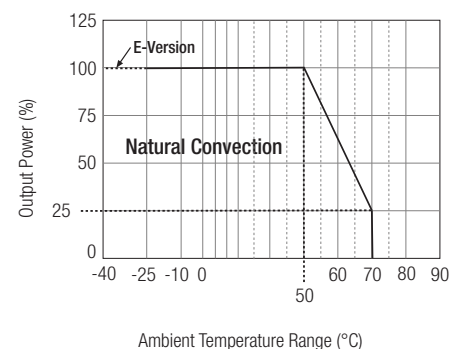


E196683

UL-60950-1 Certified

RAC10-B

Derating-Graph (Ambient Temperature)



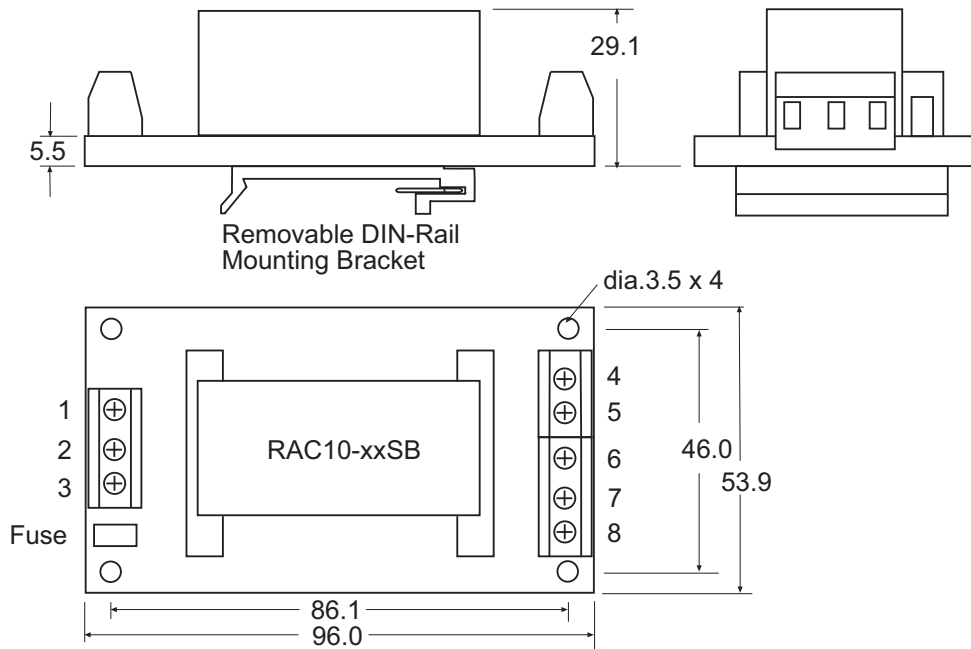
Please Read Application Notes

POWERLINE

AC/DC-Converter

RAC10-SB Series

Screw Terminal Module Option (suffix -ST)

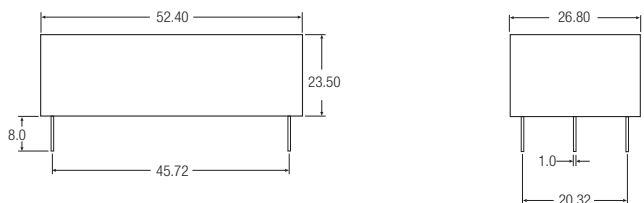


Pin Connections

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

Standard Package Style and Pinning

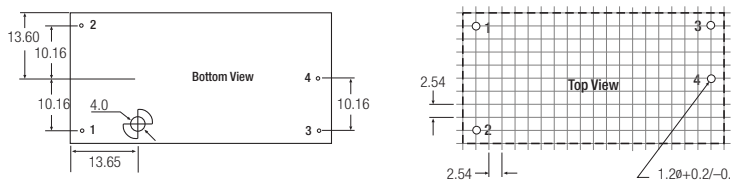


Pin Connections

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

XX.X ± 0.5 mm
XX.XX ± 0.25 mm

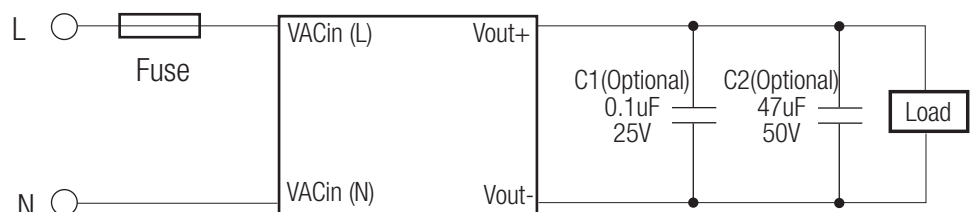
Recommended Footprint Details



Maximum Torque 12 kgf.cm (1.21 Nm)

Standard Application Circuit

Suggested fuse rating
2A Slow Blow



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.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

RECOM:

[RAC10-05SB](#) [RAC10-12SB](#) [RAC10-15SB](#) [RAC10-24SB](#) [RAC10-05SB-E](#) [RAC10-05SB-E-ST](#) [RAC10-05SB-ST](#)
[RAC10-12SB-E](#) [RAC10-12SB-E-ST](#) [RAC10-12SB-ST](#) [RAC10-15SB-E](#) [RAC10-15SB-E-ST](#) [RAC10-15SB-ST](#)
[RAC10-24SB-E](#) [RAC10-24SB-E-ST](#) [RAC10-24SB-ST](#) [RAC10-3.3SB](#) [RAC10-3.3SB-E](#) [RAC10-3.3SB-E-ST](#) [RAC10-3.3SB-ST](#)