# NOT RECOMMENDED FOR NEW DESIGNS LAST TIME BUY: 31<sup>57</sup> March 2024

## **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**

NOT RECOMMENDED FOR NEW DESIGN					
Part Number	Input Range (VAC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)	Max. Capacitive Load
RAC10-05SB	90-264	5	2000	75	40000μF
RAC10-12SB	90-264	12	833	77	8500µF
RAC10-24SB	90-264	24	417	77	1200µF
END OF LIFE					

END OF LIFE					
Part Number	Input Range (VAC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)	Max. Capacitive Load
RAC10-3.3SB	90-264	3.3	2500	72	75000µF
RAC10-15SB	90-264	15	667	77	3500µF

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

### **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 / 1minute
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 <sup>3</sup> hours

### **POWERLINE**

AC/DC-Converter with 3 year Warranty



# 10 Watt Single **Output**

**PREFERRED ALTERNATIVES** Please consider these alternatives: RAC10-K/277 Series

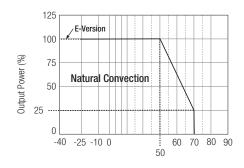


**UL-60950-1** Certified

RAC10-B

## **Derating-Graph**

(Ambient Temperature)



Ambient Temperature Range (°C)

**Please Read Application Notes** 

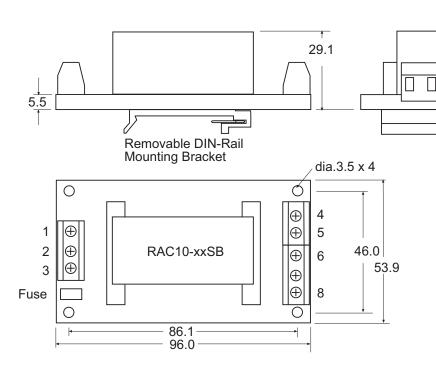
<sup>\*</sup>add suffix "-ST" for screw terminal module e.g. RAC05-05SB-ST, RAC05-05SB-E-ST

## **POWERLINE**

AC/DC-Converter

# **RAC10-5B** Series

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



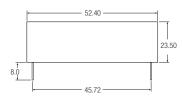
Pin#	Single Out
1	NC
2	VAC in (N)
3	VAC in (L)
4	NC
5	+VDC out
6	-VDC out
7	NC
8	NC

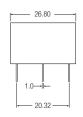
NC = No Connection

### Standard Package Style and Pinning

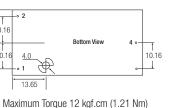
13.60 T

13.65





## **Recommended Footprint Details**



1 20+0 2/-0 1

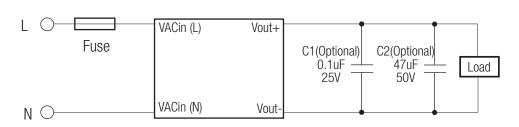
#### Pin Connections

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

 $XX.X \pm 0.5 \text{ mm}$ XX.XX + 0.25 mm

### **Standard Application Circuit**

Suggested fuse rating 2A Slow Blow



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.