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

POWERLINE
AC/DC-Converter
with 3 year Warranty

RECOM

10 Watt Single Output

Description

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

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

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-E-ST

RoHS 2011/65/EU 6/6 CE cULus E196683

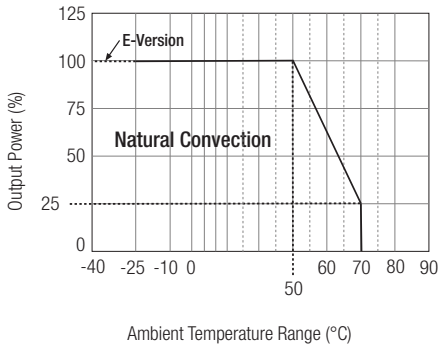
UL-60950-1 Certified

RAC10-B

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 10^3 hours

Derating-Graph
(Ambient Temperature)

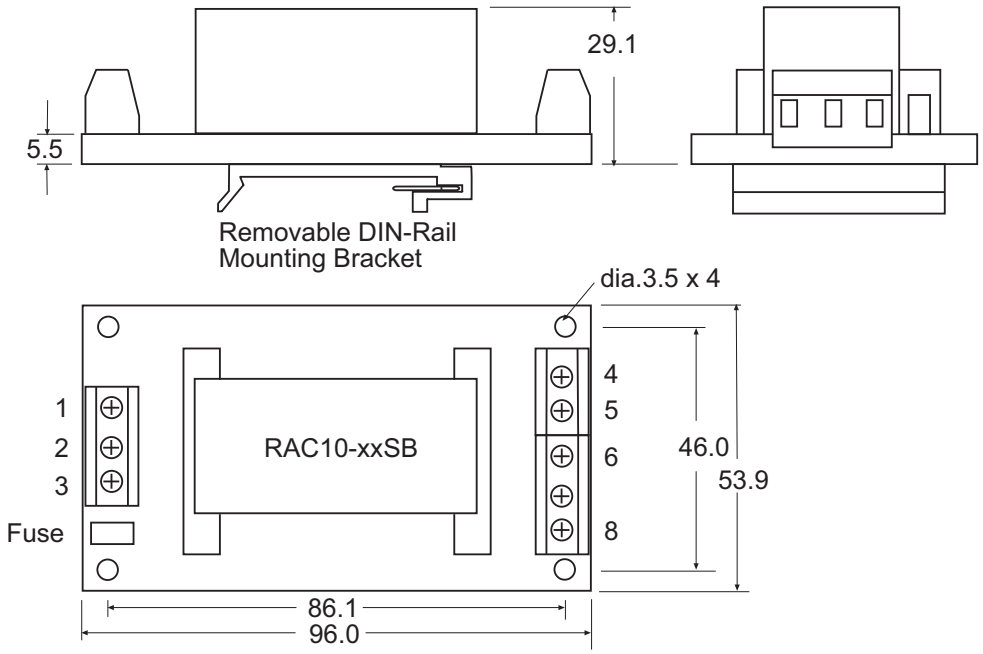


Please Read Application Notes

POWERLINE
AC/DC-Converter

RAC10-SB Series

Screw Terminal Module Option (suffix -ST)

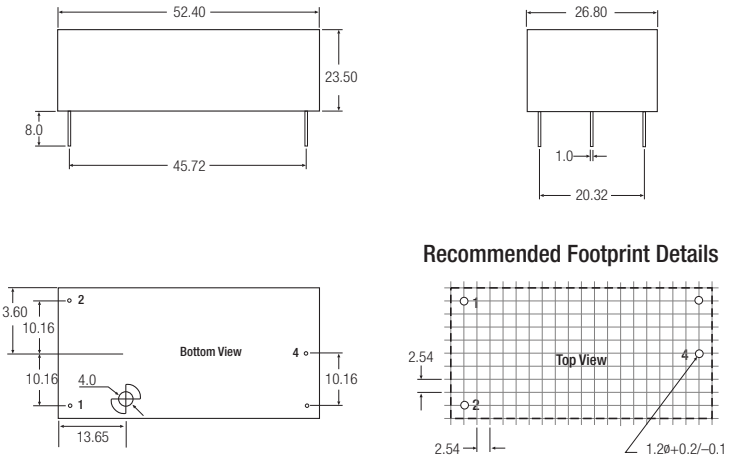


Pin Connections

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



Recommended Footprint Details

Maximum Torque 12 kgf.cm (1.21 Nm)

Pin Connections

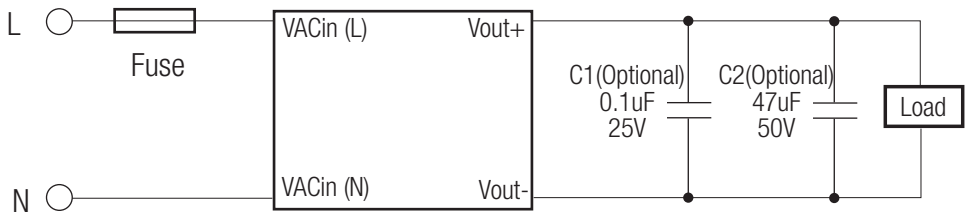
Pin #	Single Out
1	VAC in (N)
2	VAC in (L)
3	+VDC out
4	-VDC out

XX.X ± 0.5 mm
XX.XX ± 0.25 mm

Standard Application Circuit

Suggested fuse rating

2A Slow Blow



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RECOM:

RAC10-05SB RAC10-12SB RAC10-15SB RAC10-24SB RAC10-05SB-ST RAC10-12SB-ST RAC10-15SB-ST RAC10-24SB-ST RAC10-3.3SB RAC10-3.3SB-ST