

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 |

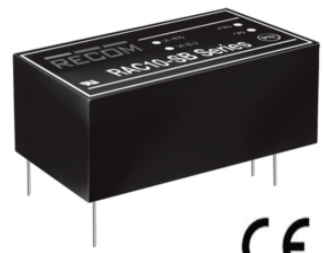
POWERLINE

AC/DC-Converter

with 3 year Warranty

RECOM

10 Watt Single Output

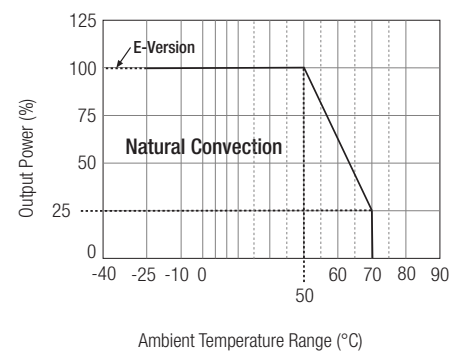


E196683

UL-60950-1 Certified

RAC10-B

Derating-Graph (Ambient Temperature)



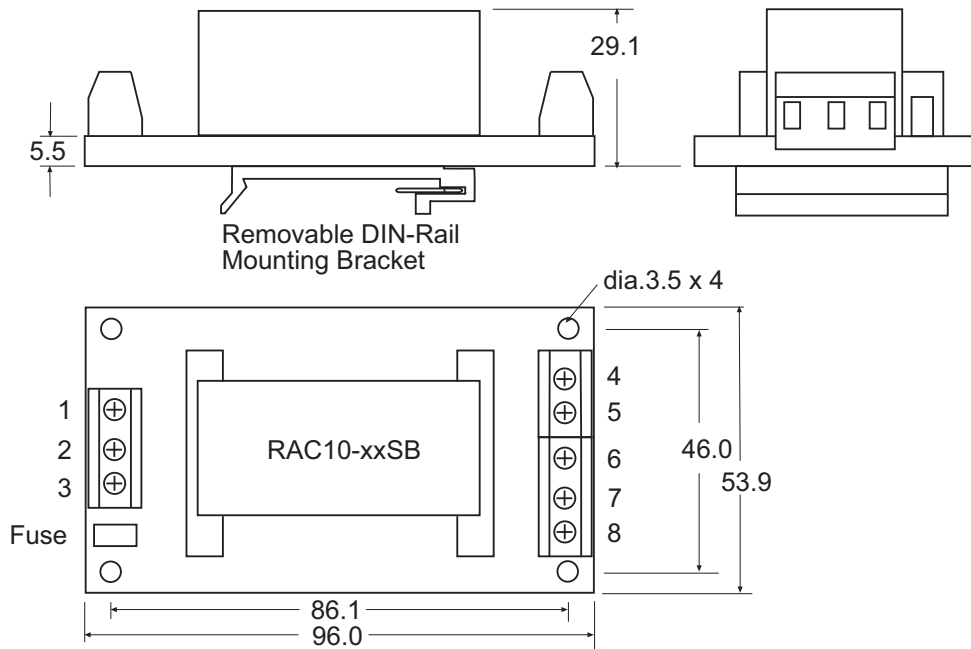
Please Read Application Notes

POWERLINE

AC/DC-Converter

RAC10-SB Series

Screw Terminal Module Option (suffix -ST)

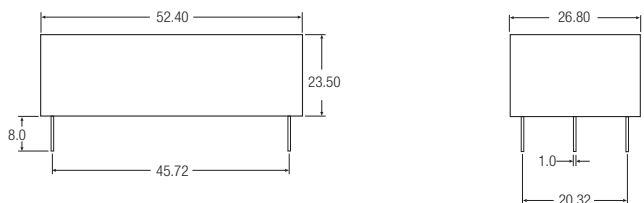


Pin Connections

| 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

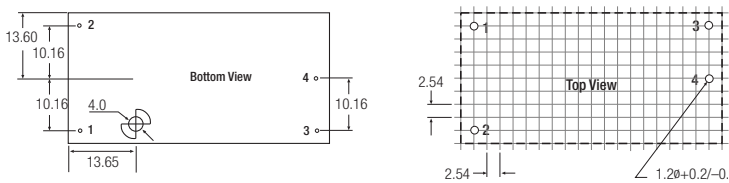


Pin Connections

| 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

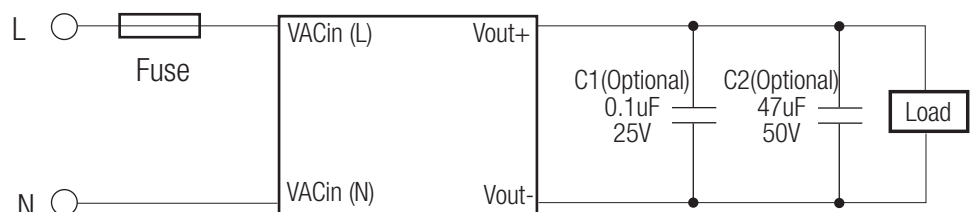
Recommended Footprint Details



Maximum Torque 12 kgf.cm (1.21 Nm)

Standard Application Circuit

Suggested fuse rating
2A Slow Blow



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