

# 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

### 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 (%) |
|-------------|-------------------|----------------------|---------------------|----------------|
| RAC05-3.3SB | 90-264            | 3.3                  | 1250                | 65             |
| RAC05-05SB  | 90-264            | 5                    | 1000                | 72             |
| RAC05-12SB  | 90-264            | 12                   | 420                 | 73             |
| RAC05-15SB  | 90-264            | 15                   | 333                 | 75             |
| RAC05-24SB  | 90-264            | 24                   | 230                 | 76             |

\*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<br>230VAC                | 10A max. (-E = 23A max.)<br>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)                          | 0.5% Vout + 50mVp-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   | Continuous, Automatic Restart   |  |
| Operating Temperature Range (free air convection, with derating) | Standard<br>Suffix -E           | -25°C to +70°C<br>-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 <sup>3</sup> hours                          |

# POWERLINE

AC/DC-Converter

with 3 year Warranty



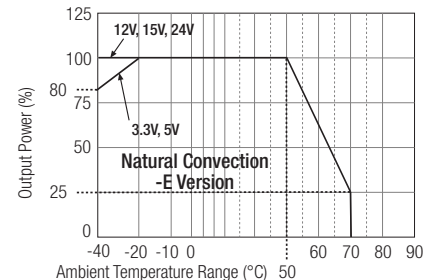
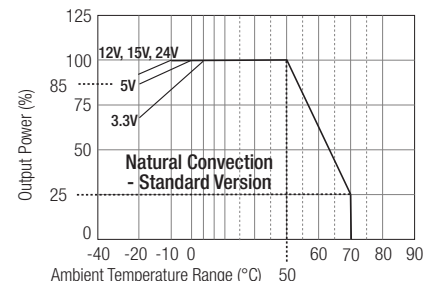
## 5 Watt Single Output



**UL-60950-1 Certified  
E196683**

# RAC05-B

## Derating Graphs (Ambient Temperature)

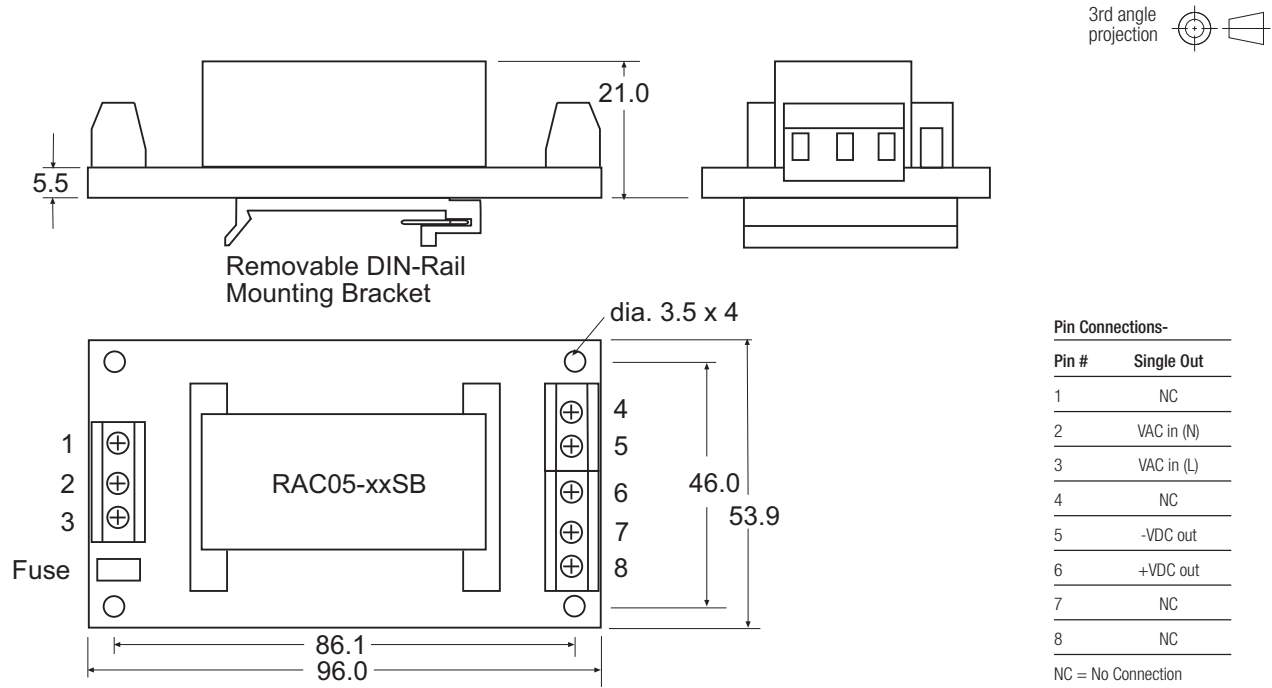


# POWERLINE

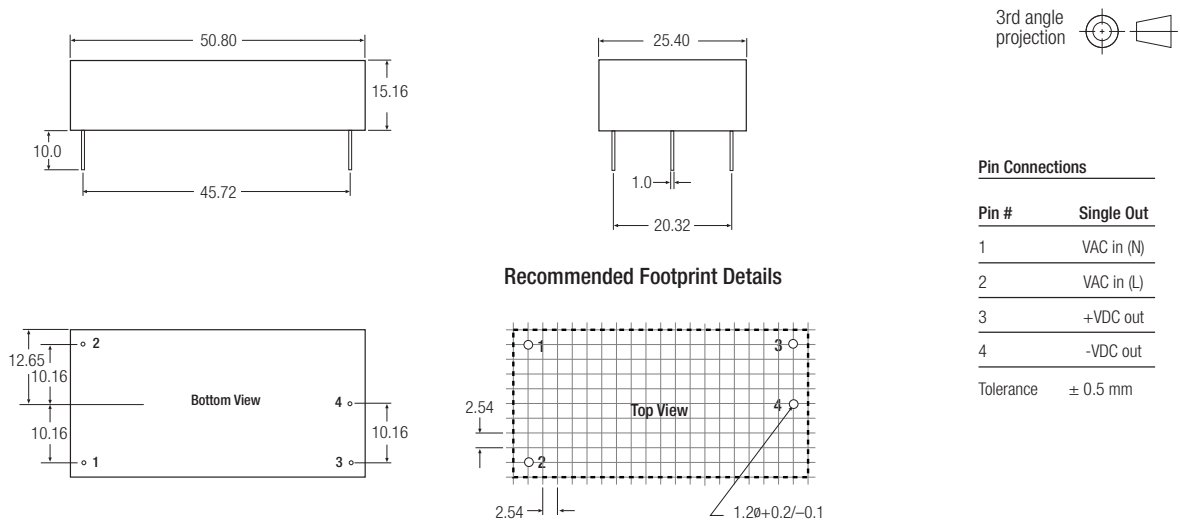
AC/DC-Converter

# RAC05-SB Series

Screw Terminal Module Option (suffix -ST)



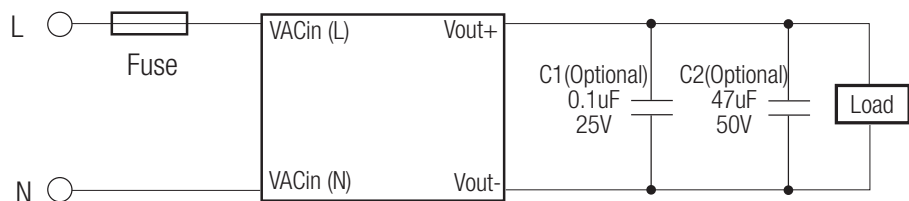
## Package Style and Pinning



RAC05-B

## Standard Application Circuit

Suggested fuse rating  
1A Slow Blow



Please Read Application Notes