

## Features

## Regulated Converters

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

### 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 (%) | Max Capacitive Load |
|-------------|-------------------|----------------------|---------------------|----------------|---------------------|
| RAC05-3.3SA | 90-264            | 3.3                  | 1500                | 62             | 40000µF             |
| RAC05-05SA  | 90-264            | 5                    | 1000                | 65             | 19000µF             |
| RAC05-12SA  | 90-264            | 12                   | 416                 | 70             | 4000µF              |
| RAC05-15SA  | 90-264            | 15                   | 333                 | 70             | 3500µF              |
| RAC05-24SA  | 90-264            | 24                   | 200                 | 71             | 900µF               |
| RAC05-05DA  | 90-264            | ±5                   | ±500                | 70             | ±9500µF             |
| RAC05-12DA  | 90-264            | ±12                  | ±200                | 67             | ±1400µF             |
| RAC05-15DA  | 90-264            | ±15                  | ±160                | 67             | ±950µF              |

\*add suffix "-E" for extended temperature range, e.g. RAC05-05SA-E

\*add suffix "-ST" for screw terminal module e.g. RAC05-05SA-ST, RAC05-05DA-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                   | 120mA /70mA max.            |
| No Load Power Consumption                                  | 115VAC/230VAC                   | 1.18W max.                  |
| Inrush Current (<2ms)                                      | 115VAC                          | 10A max. (-E = 23A max.)    |
|                                                            | 230VAC                          | 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)                    | Ripple                          | <0.2% Vout + 40mVp-p max    |
|                                                            | Noise                           | 0.5% Vout + 50mVp-p max     |
| Operating Frequency                                        | 100kHz 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                                   | 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                                                   | 95% RH max                      |                             |
| Case Material                                              | Epoxy with Fibreglass (UL94V-0) |                             |
| Package Weight                                             | 80g                             |                             |
| Packing Quantity                                           | 5 pcs (-ST Version: 1 pc)       |                             |
| EMC                                                        | EN 55022 ClassB / EN 50082-1    |                             |
| MTBF (+25°C)                                               | using MIL-HDBK-217F             | 300 x 10 <sup>3</sup> hours |

## POWERLINE

### AC/DC-Converter

with 3 year Warranty

**RECOM**

## 5 Watt Single/Dual Output

### PREFERRED ALTERNATIVES

Please consider these alternatives:

**RAC10-K/277 Series**

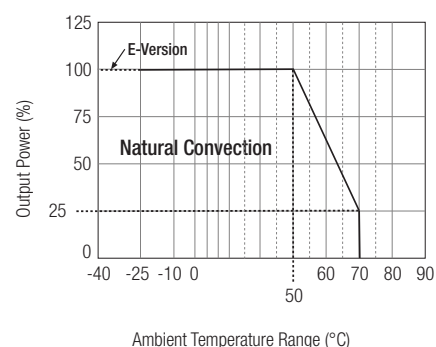
**RAC05-K/277 Series**



**UL-60950-1 Certified**

## RAC05-A

## Derating-Graph (Ambient Temperature)



**Refer to Application Notes**

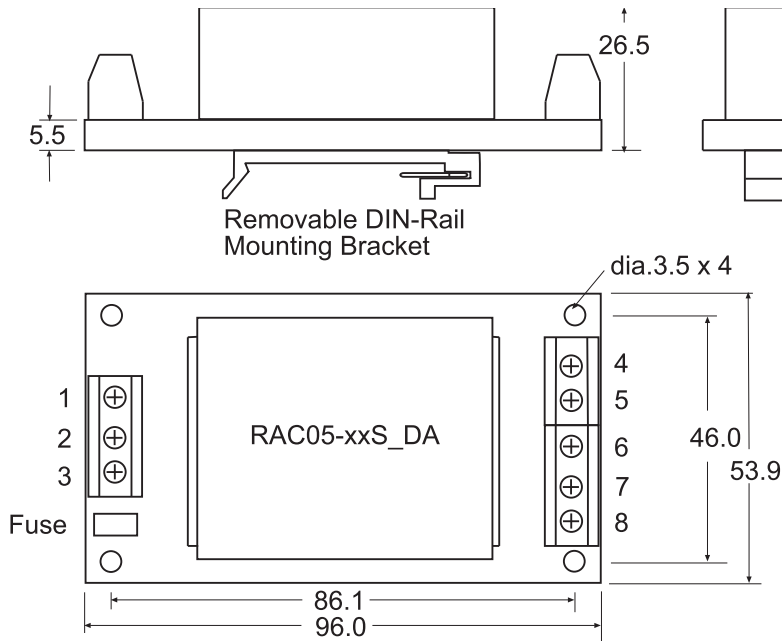
[www.recom-power.com](http://www.recom-power.com)

# POWERLINE

AC/DC-Converter

# RAC05-S\_DA Series

## Screw Terminal Module Option (suffix -ST)

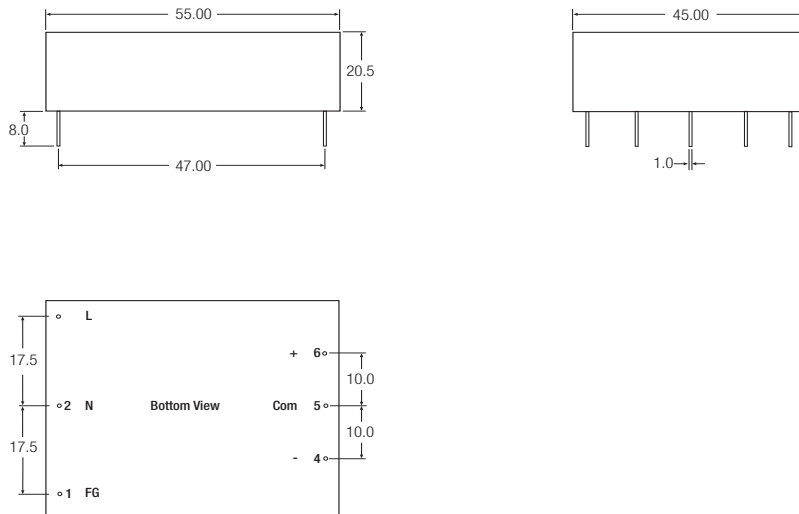


### Pin Connections-

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

NC = No Connection

## Standard Package Style and Pinning



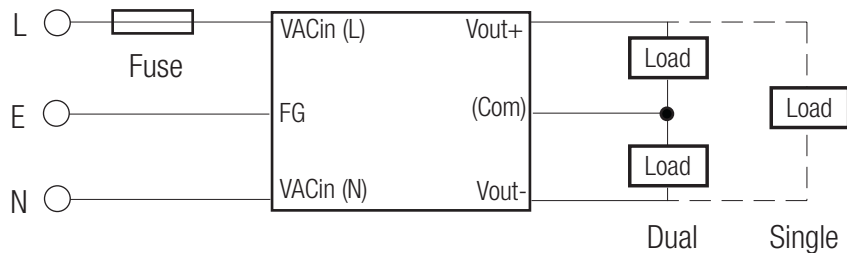
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| 2     | VAC in (N) | VAC in (N) |
| 3     | VAC in (L) | VAC in (L) |
| 4     | -VDC out   | -VDC out   |
| 5     | No Pin     | Com        |
| 6     | +VDC out   | +VDC out   |

XX.X ± 0.5 mm  
XX.XX ± 0.25 mm

## Standard Application Circuit

Suggested fuse rating  
1A Slow Blow



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- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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