

# 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

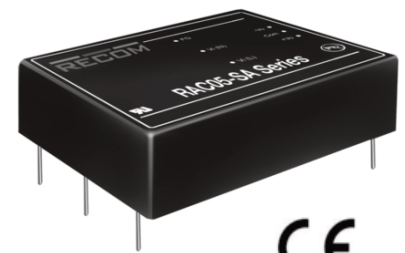
# POWERLINE

## AC/DC-Converter

with 3 year Warranty

# RECOM

## 5 Watt Single/Dual Output

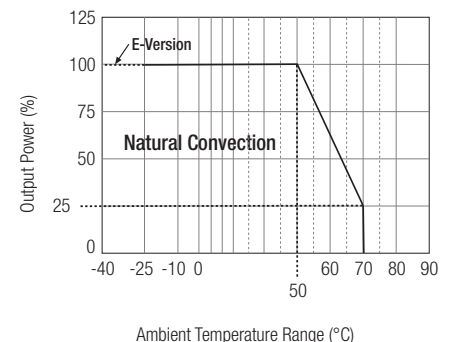


**UL-60950-1 Certified**

# RAC05-A

## Derating-Graph

(Ambient Temperature)



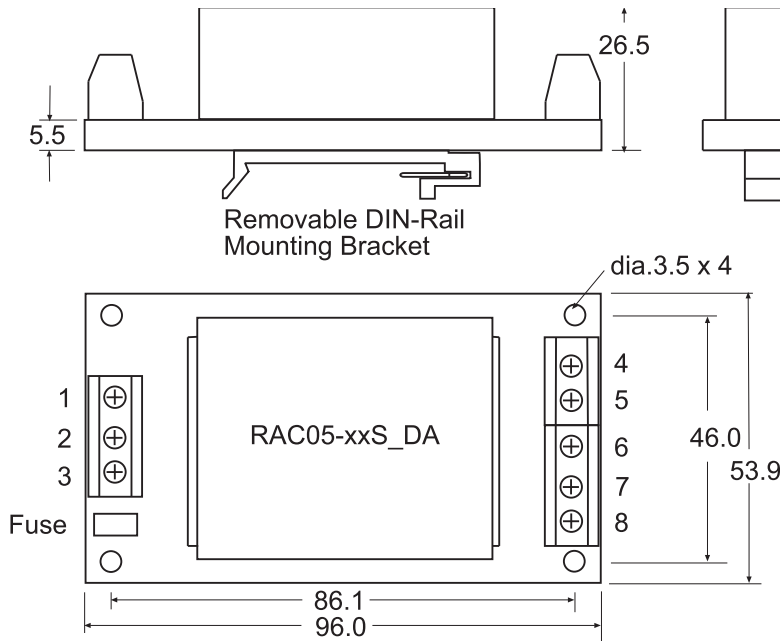
Refer to Application Notes

# POWERLINE

AC/DC-Converter

# RAC05-S\_DA Series

## Screw Terminal Module Option (suffix -ST)

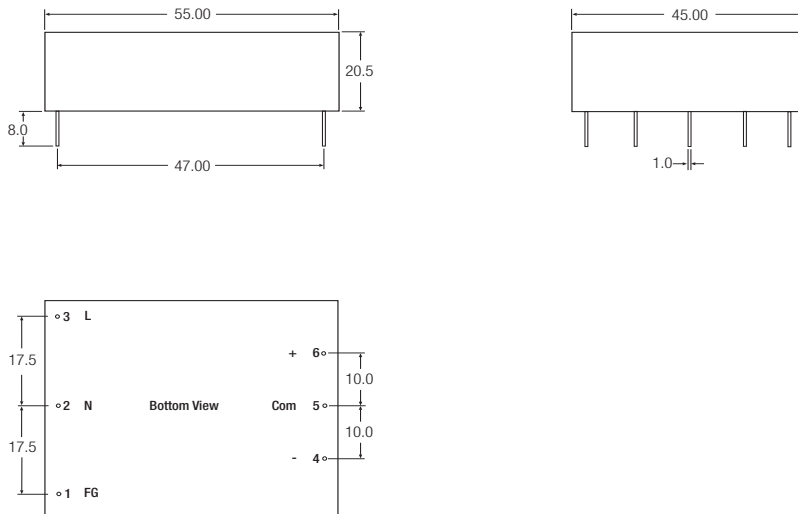


### Pin Connections-

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



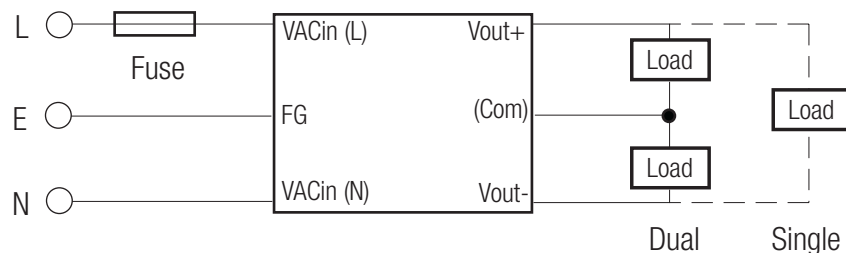
### Pin Connections-

Pin #	Single Out	Dual Out
1	FG	FG
2	VAC in (N)	VAC in (N)
3	VAC in (L)	VAC in (L)
4	-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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