

! NOT RECOMMENDED FOR NEW DESIGNS !

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 ³ 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

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



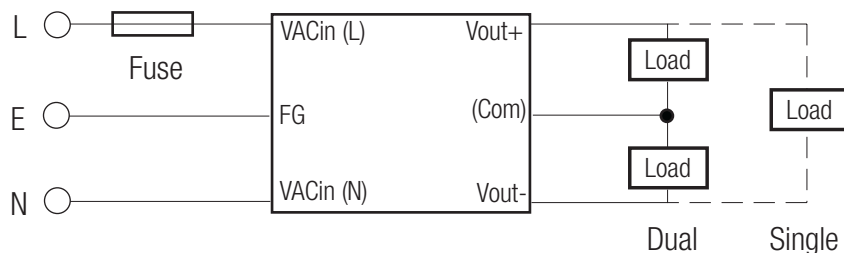
Pin Connections-

| Pin # | Single Out | Dual Out |
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| 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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