

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.

Selection Guide

| Part Number | Input Range (VAC) | Output Voltage (VDC) | Output Current (mA) | Efficiency (%) | Max. Capacitive Load |
|-------------|-------------------|----------------------|---------------------|----------------|----------------------|
| RAC10-3.3SA | 90-264 | 3.3 | 3000 | 65 | 70000µF |
| RAC10-05SA | 90-264 | 5 | 2000 | 71 | 35000µF |
| RAC10-12SA | 90-264 | 12 | 833 | 76 | 11000µF |
| RAC10-15SA | 90-264 | 15 | 666 | 75 | 7000µF |
| RAC10-24SA | 90-264 | 24 | 426 | 76 | 2300µF |
| RAC10-05DA | 90-264 | ±5 | ±800 | 73 | ±22000µF |
| RAC10-12DA | 90-264 | ±12 | ±380 | 75 | ±3000µF |
| RAC10-15DA | 90-264 | ±15 | ±300 | 74 | ±2000µF |

*add suffix "-E" for extended temperature range, e.g. RAC10-05SA-E

*add suffix "-ST" for screw terminal module e.g. RAC10-05SA-ST, RAC010-05DA-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 | 10 Watts max. | |
| Input Frequency Range (for AC Input) | 47-440Hz | |
| Input Current (full load) | 115VAC/230VAC | 200mA / 130mA max. |
| No Load Power Consumption | 115VAC/230VAC | 1.65W 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) | Noise | 0.5% Vout + 50mVp-p max. |
| | Ripple | <0.2% Vout + 40mVp-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 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 | 95% RH max. | |
| Case Material | Epoxy with Fibreglass (UL94V-0) | |
| Package Weight | 92g | |
| Packing Quantity | 5 pcs (-ST Version: 1 pc) | |
| EMC | EN 55022 Class B / EN 50082-1 | |
| MTBF (+25°C) | using MIL-HDBK-217F | 250 x 10 ³ hours |

POWERLINE

AC/DC-Converter

with 3 year Warranty

RECOM

10 Watt Single/Dual Output

PREFERRED ALTERNATIVES

Please consider these alternatives:

RAC20-K Series

RAC10-K/277 Series



UL-60950-1 Certified

RAC10-A

Derating-Graph (Ambient Temperature)



Refer to Application Notes

POWERLINE

AC/DC-Converter

RAC10-S_DA Series

Screw Terminal Module Option (suffix -ST)

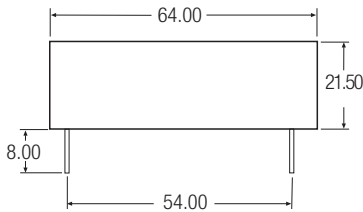


Pin Connections

| 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

RAC10-A



Standard Application Circuit

Suggested fuse rating
2A Slow Blow



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