

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
- UL Approved

POWERLINE AC/DC-Converter

RAC05-SB Series

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 "-DIN for DIN Rail mounting module (see separate datasheet)

Description

Compact switching power module for PCB or DIN-rail mounting with cUL, UL Safety Approvals.

Specifications

(typical at 25°C, nominal input voltage 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)	110mA max. (115VAC) / 70mA max. (230VAC)
Inrush Current (<2ms)	10A max. (115VAC) / 20A max. (230VAC)
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
Isolation Voltage (input to output)	3000VAC min.
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)	-25°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
	DIN Rail Module 67g
MTBF (+25°C)	using MIL-HDBK-217F 360 x 10 ³ hours

5 Watt Single Output

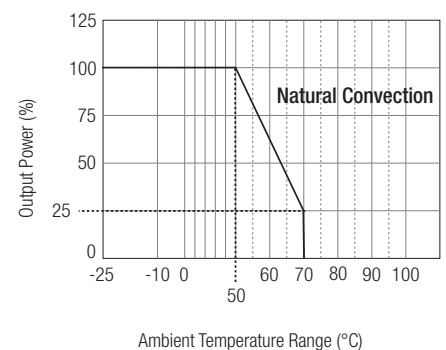


UL-60950 Certified

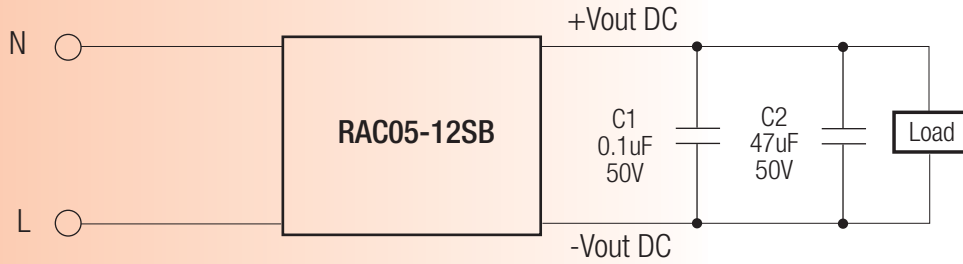


Derating Graph

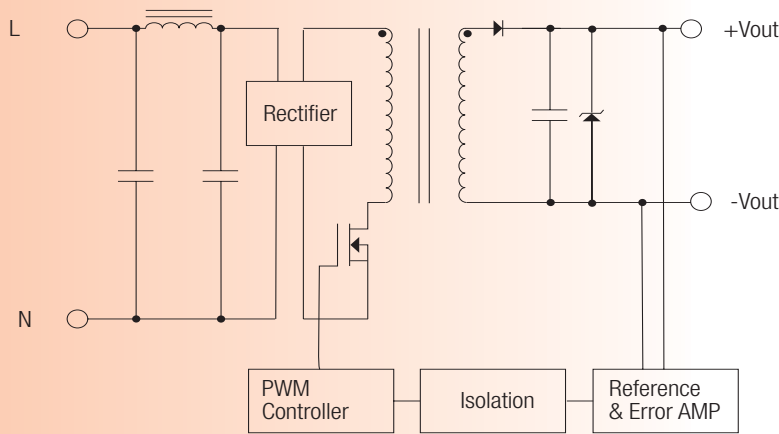
(Ambient Temperature)



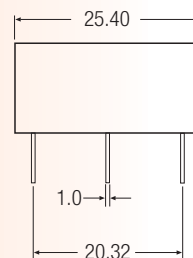
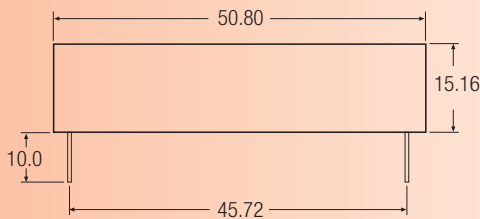
Typical Application



Simplified Schematic



Package Style and Pinning



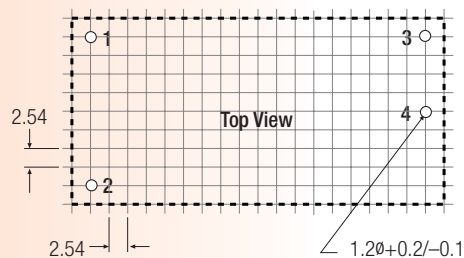
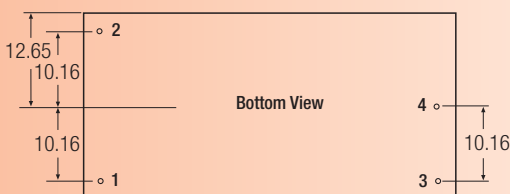
3rd angle projection

Pin Connections

Pin #	Single Out
1	VAC in (N)
2	VAC in (L)
3	+VDC out
4	-VDC out

XX.X ± 0.5 mm
XX.XX ± 0.25 mm

Recommended Footprint Details



See DIN Rail Modules for DIN rail mounting option