

Features

Regulated Converters

Rev. 2

- 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

Description

Compact switching AC/DC power module for PCB, screw-terminal connection or DIN-rail mounting with cJL and UL Safety Approvals. Pin compatible with RAC5-SB Models.

Selection Guide

Part Number	Input Range (VAC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)
RAC10-3.3SB	90-264	3.3	2500	70
RAC10-05SB	90-264	5	2000	72
RAC10-12SB	90-264	12	833	76
RAC10-15SB	90-264	15	667	75
RAC10-24SB	90-264	24	417	72

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

*add suffix "-ST" for screw terminal module e.g. RAC10-05SB-ST, RAC10-05SB-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)	220mA max. (115VAC) / 150mA max. (230VAC)		
Inrush Current (<2ms)	115VAC	10A max. (-E = 23A max.)	
	230VAC	20A max. (-E = 46A max.)	
Leakage Current	0.25mA 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	125kHz typ.		
Efficiency at Full Load	see table		
Isolation Voltage (input to output)	3000VAC min.		
Temperature Coefficient	±0.02%/°C typ.		
Isolation Resistance	100 MΩ min.		
Short Circuit Protection	Continuous, Automatic Restart		
Operating Temperature Range (free air convection, with derating)	Standard	-25°C to +70°C	
	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	54g		
EMC	EN 55022 Class B / EN 55024		
MTBF (+25°C)	using MIL-HDBK-217F	330 x 10 ⁶ hours	

POWERLINE

AC/DC-Converter

RAC10-SB Series

10 Watt Single Output

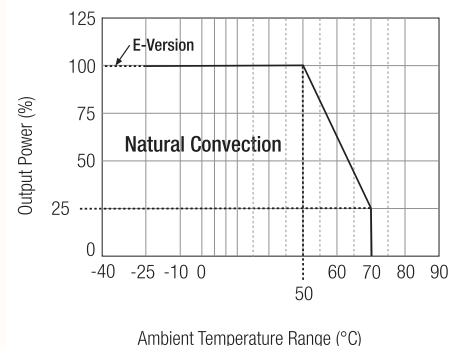


UL-60950-1 Certified

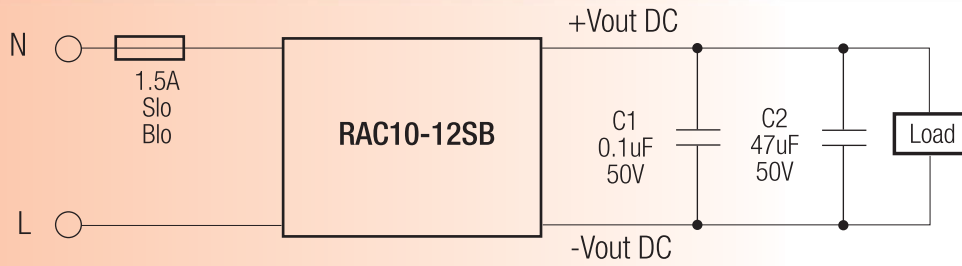


Derating Graph

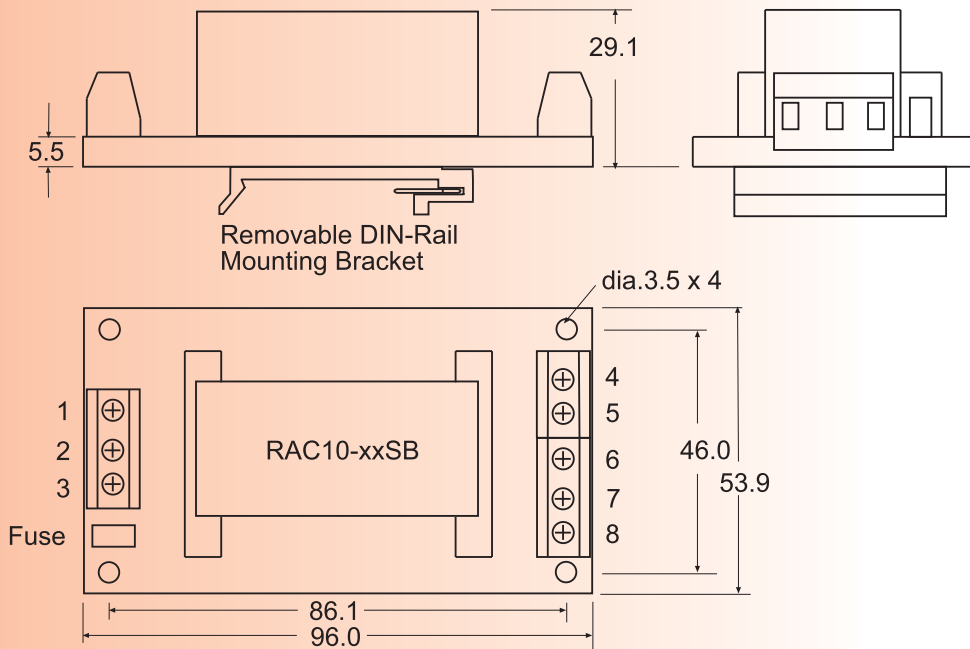
(Ambient Temperature)



Typical Application



Screw Terminal Module Option (suffix -ST)

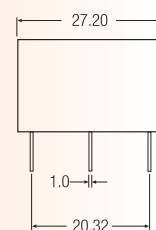
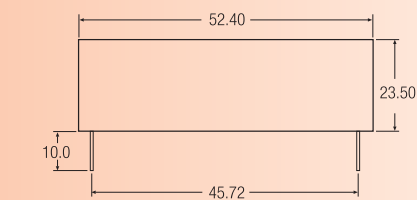


Pin Connections

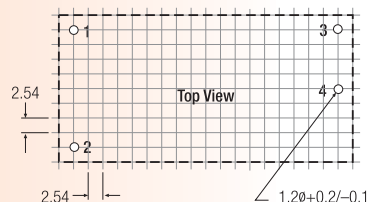
Pin #	Single Out
1	NC
2	VAC in (N)
3	VAC in (L)
4	NC
5	+VDC out
6	-VDC out
7	NC
8	NC

NC = No Connection

Standard Package Style and Pinning



Recommended Footprint Details



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