

Features

Regulated Converters

- Compact AC-DC Power Supply
- 20 Watt PCB Mount Package
- Universal Input Voltage Range
- 3000VAC Isolation
- Low Output Ripple and Noise
- Short Circuit Protected
- Low Temperature Operation
- Anti-Vibration Mechanical Fixing
- CE Marked

Description

Compact switching AC/DC power module for PCB, screw-terminal connection or DIN-rail mounting. The converter is pin compatible with the RAC05-SB and RAC10-SB models. A threaded insert is provided for additional mechanical fixing.

Selection Guide

Part Number	Input Range (VAC)	Output Voltage (VDC)	Output Current (mA)	Typical Efficiency (%)	Maximum Power (W)	Max. Capacitive Load
RAC20-3.3SB	90-264	3.3	3600	74	11.9W	4500µF
RAC20-05SB	90-264	5	3600	78	18W	3500µF
RAC20-12SB	90-264	12	1660	82	20W	1800µF
RAC20-15SB	90-264	15	1330	83	20W	1500µF
RAC20-24SB	90-264	24	833	83	20W	1200µF

*add suffix "-ST" for screw terminal module e.g. RAC20-05SB-ST

Specifications (typical at 25°C and after warm up time unless otherwise specified)

Input Voltage Range	90-264VAC or 120-370VDC	
Rated Power	20 Watts max.	
Input Frequency Range (for AC Input)	47-440Hz	
Input Current (full load)	115VAC/230VAC	385mA / 250mA max.
No Load Power Consumption	115VAC/230VAC	470mW max.
Inrush Current (<2ms)	115VAC 230VAC	20A max. 40A max.
Leakage Current	0.75mA max.	
Output Voltage Accuracy (Full load)	±2%	
Line Voltage Regulation (low line, high line at full load)	±0.5% typ.	
Load Voltage Regulation (5% to 100% full load)	±1% typ.	
Output Ripple and Noise ⁽²⁾	Ripple (3.3V, 5V) Noise (3.3V, 5V) Others (Ripple and Noise)	75mVp-p max. 120mVp-p max. 1% Vout
Operating Frequency	100 - 130kHz typ.	
Minimum Load	0%	
Isolation Voltage (input to output)	3000VAC min.	
Temperature Coefficient	±0.02%/°C typ.	
Isolation Resistance	100 MΩ min.	
Short Circuit Protection	Continuous, Automatic Restart	
Over Voltage Category	OVC II	
Operating Temp. Range (Natural Convection, with derating)	-40°C to +70°C	
3.3V, 5V (no derating)	-40°C to +40°C	
Others (no derating)	-40°C to +45°C	
Storage Temperature Range	-40°C to +85°C	
Humidity	95% RH max.	
Case Material	Epoxy with Fibreglass (UL94V-0)	
Package Weight	59g	
Packing Quantity	5 pcs (-ST Version: 1 pc)	
EMC	designed to meet EN 55022 Class B / EN 55024	
MTBF (+25°C)	using MIL-HDBK-217F	>250 x 10 ³ hours

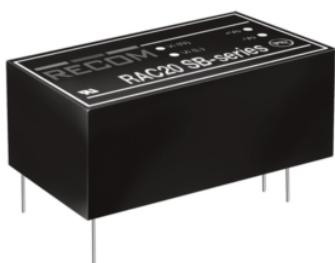
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POWERLINE

AC/DC-Converter
with 3 year Warranty

RECOM

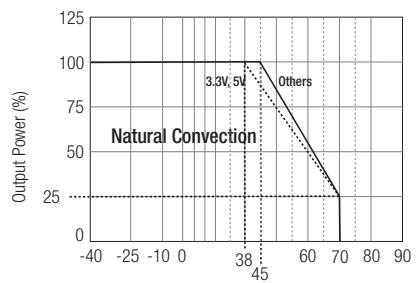
20 Watt Single Output



CE Marked

RAC20-B

Derating-Graph (Ambient Temperature)



Ambient Temperature Range (°C)

Refer to Application Notes

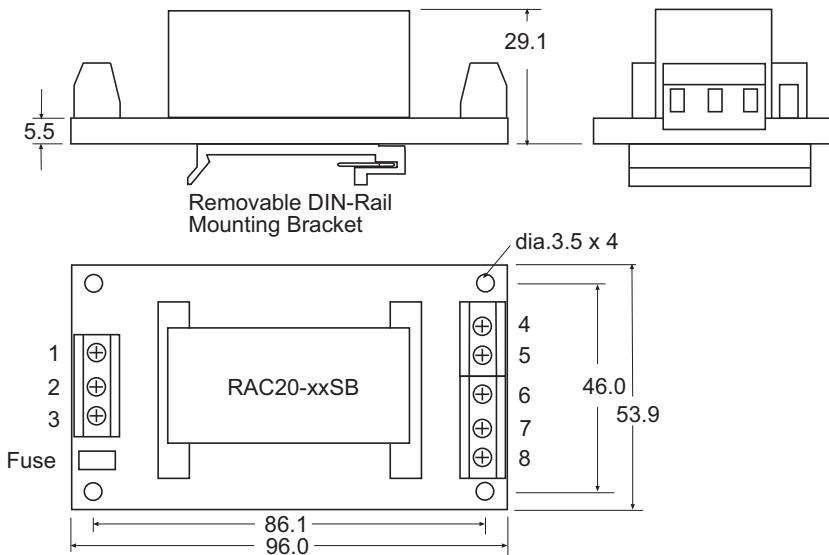
Specifications (typical at 25°C and after warm up time unless otherwise specified)

Notes:

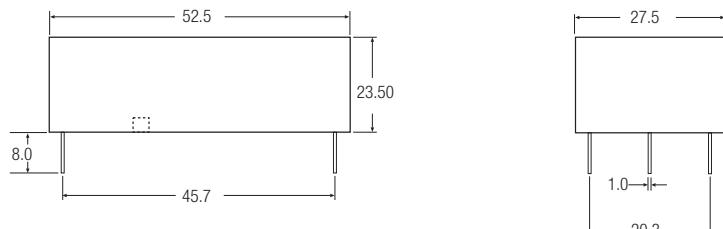
Note 1: Ripple & Noise measured with 20MHz BW probe and 0.47µF capacitor in parallel across the outputs.

Note 2: Suggested input fuse rating 2A Slow Blow

Screw Terminal Module Option (suffix -ST)

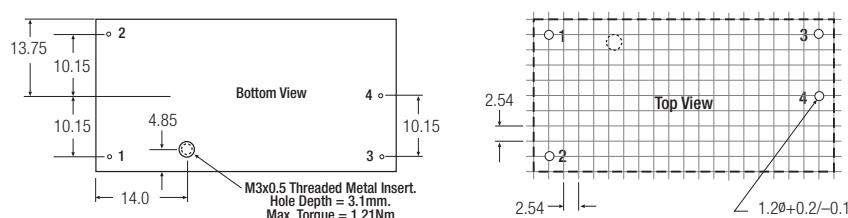


Standard Package Style and Pinning



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

Recommended Footprint Details



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Contact Us :

➤ Address :

401 Building No.5, JiuGe Business Center, Lane 2301, Yishan Rd
Minhang District, Shanghai , China

➤ Sales :

Direct +86 (21) 6401-6692
Email amall@ameya360.com
QQ 800077892
Skype ameyasales1 ameyasales2

➤ Customer Service :

Email service@ameya360.com

➤ Partnership :

Tel +86 (21) 64016692-8333
Email mkt@ameya360.com