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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# 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	20A max.
	230VAC	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 <sup>(2)</sup>	Ripple (3.3V, 5V)	75mVp-p max.
	Noise (3.3V, 5V)	120mVp-p max.
	Others (Ripple and Noise)	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 <sup>3</sup> hours

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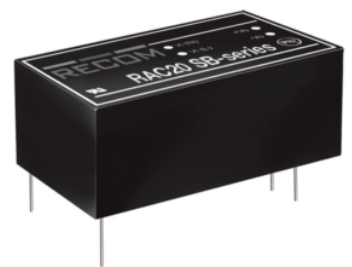
# POWERLINE

## AC/DC-Converter

with 3 year Warranty

# RECOM

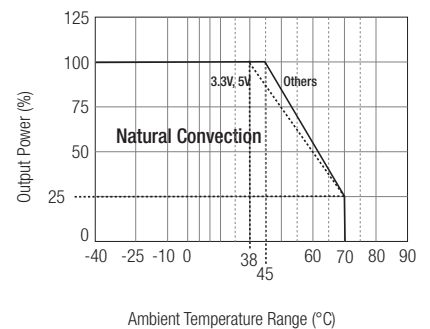
## 20 Watt Single Output



CE Marked

# RAC20-B

## Derating-Graph (Ambient Temperature)



Refer to Application Notes

# POWERLINE

## AC/DC-Converter

# RAC20-SB Series

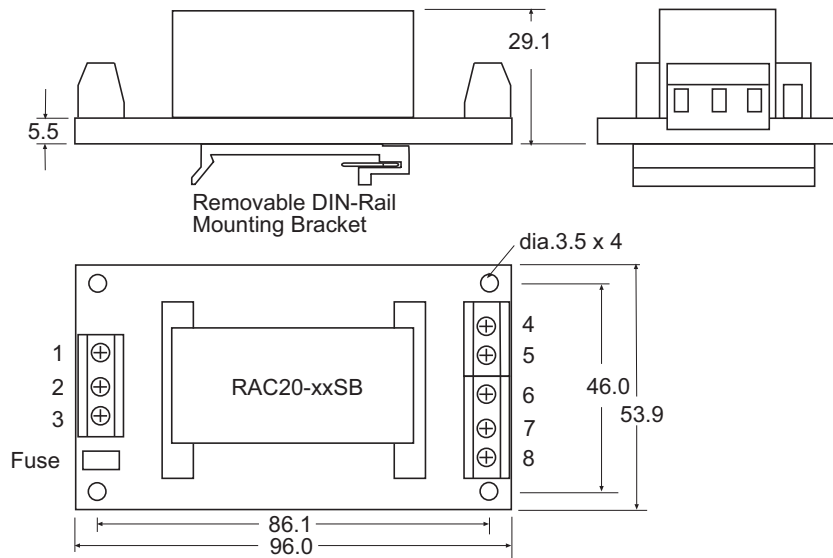
### Specifications (typical at 25°C and after warm up time unless otherwise specified )

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)



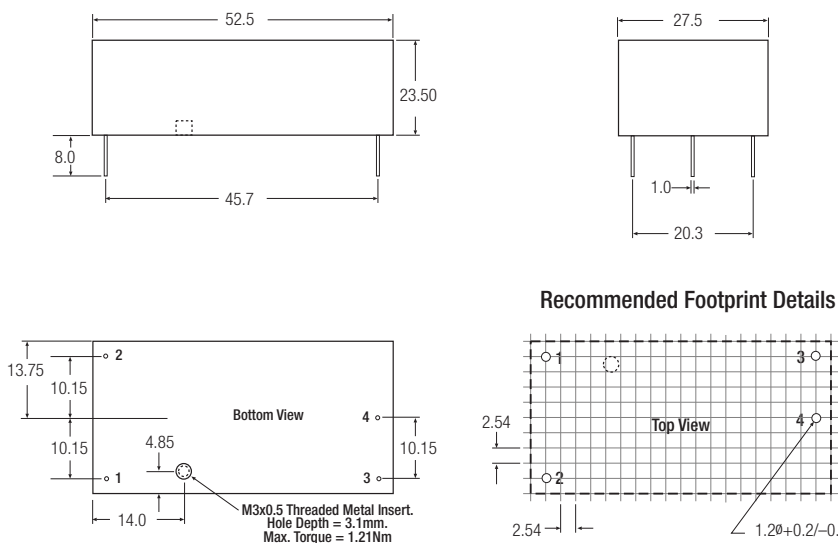
#### Pin Connections

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

NC = No Connection

RAC20-B

### Standard Package Style and Pinning



#### Pin Connections

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

XX.X ± 0.5 mm  
XX.XX ± 0.25 mm

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