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

90-264VAC or 120-370VDC

CE Marked

Description

Input Voltage Range

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)

Rated Power		20 Watts max.	
Input Frequency Range (for AC Input	t)	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, hi	gh line at full load)	±0.5% typ.	
Load Voltage Regulation (5% to 10	0% full load)	±1% typ.	
Output Ripple and Noise (2)	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 Co	nvection, 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	

continued on next page

POWERLINE

AC/DC-Converter with 3 year Warranty



20 Watt Single Output





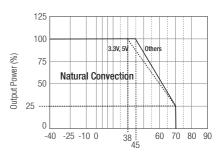
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CE Marked

RAC20-B

Derating Graph

(Ambient Temperature)



Ambient Temperature Range (°C)

Refer to Application Notes

POWERLINE

AC/DC-Converter

RAC20-SB Series

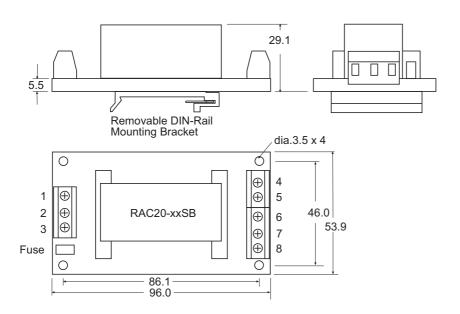
Specifications (typical at 25°C and after warm up time unless otherwise specified)

Notes:

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

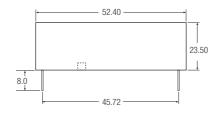
Note 2: Suggested input fuse rating 2A Slow Blow

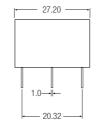
Screw Terminal Module Option (suffix -ST)



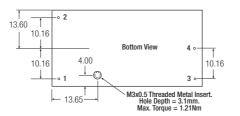
Pin#	Single Out
1	NC
2	VAC in (L)
3	VAC in (N)
4	NC
5	+VDC out
6	-VDC out
7	NC
8	NC

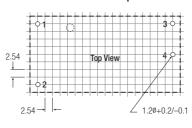
Standard Package Style and Pinning





Recommended Footprint Details





Pin Connections

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

 $\begin{array}{cc} \text{XX.X} & \pm \ 0.5 \ \text{mm} \\ \text{XX.XX} & \pm \ 0.25 \ \text{mm} \end{array}$