

# 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
- High Efficiency

### Description

Compact universal input voltage switching power module for PCB or DIN-rail mounting available with single, dual or triple output voltages

Part Number	Input Range (VAC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)	Capacitive Load (max)
RAC20-3.3SA	90-264	3.3	4500	75	6800µF
RAC20-05SA	90-264	5	4000	79	6800µF
RAC20-09SA	90-264	9	2230	83	1200µF
RAC20-12SA	90-264	12	1670	83	550µF
RAC20-15SA	90-264	15	1340	83	330µF
RAC20-24SA	90-264	24	840	84	100µF
RAC20-05DA	90-264	±5	±2000	79	±6800µF
RAC20-12DA	90-264	±12	±833	82	±1000µF
RAC20-15DA	90-264	±15	±677	82	±750µF
RAC20-0512TA	90-264	5/±12	+2800/±250	79	6800/±330µF
RAC20-0515TA	90-264	5/±15	+2800/±200	79	6800/±150µF

\*add suffix "-ST" for screw terminal module e.g. RAC20-05SA-ST, RAC20-05DA-ST, RAC20-0512TA-ST

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

Input Voltage Range	90-264VAC or 100-375VDC	
Rated Power	20 Watts max	
Input Frequency Range (for AC Input)	47-440Hz	
Input Current (full load)	115VAC/230VAC	380mA/ 240mA max.
No Load Power Consumption	115VAC/230VAC	470mW max.
Inrush Current (<2ms)	115VAC/230VAC	30A/ 50A max.
Leakage Current	0.75mA max	
Output Voltage Accuracy (Full load)	±2% max	
Line Voltage Regulation (low line, high line at full load)	- Single /Dual Output	±0.5% max
	- Triple Output	±1%/ ±5% max
Load Voltage Regulation (10% to 100% symmetric load)	- Single	±1% max
	- Dual	±3% max
	- Triple	±2% /±5% max
Output Ripple and Noise (see Note 1)	1% Vout max	
Minimum Load	Single/Dual = 0%, Triple = 10% main /20% auxilliary	
Operating Frequency	100kHz typ	
RMS Isolation Voltage (input to output)	3kVAC / 1 minute	
Temperature Coefficient	±0.02%/°C typ	
Over-Current Protection	105% typ	
Short Circuit Protection	Continuous, Automatic Restart	
Over-Voltage Protection	Zener Diode Clamp	
Over-Temperature Protection	100°C	
Operating Temperature Range (free air convection, with derating)	-25°C to +70°C	
Storage Temperature Range	-40°C to +100°C	

continued on next page

# POWERLINE

## AC/DC-Converter

# RECOM

## 20 Watt Single, Dual & Triple Output

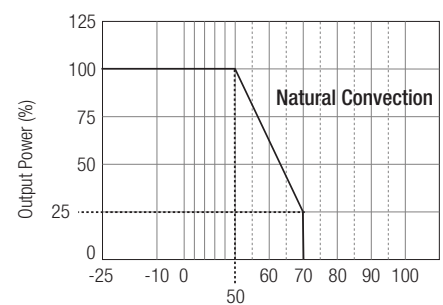


**UL-60950-1 Certified  
E196683**

# RAC20-A

## Derating Graph

(Ambient Temperature)



Ambient Temperature Range (°C)

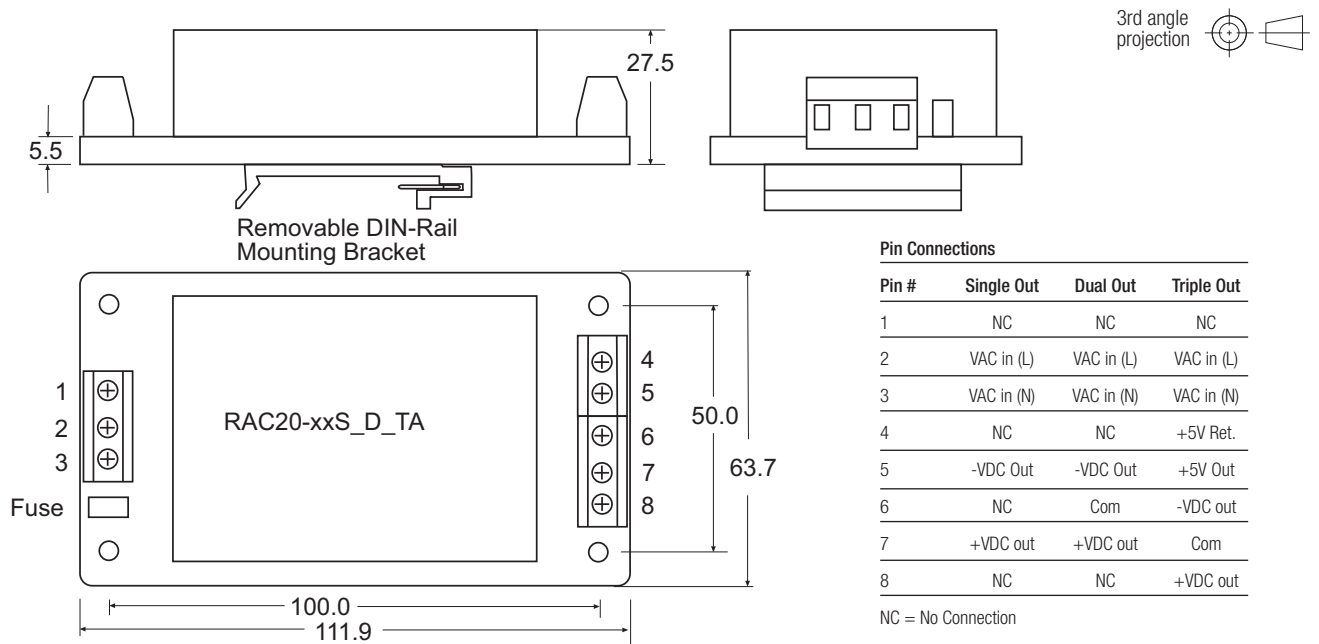
**Please Read Application Notes**

[www.recom-electronic.com](http://www.recom-electronic.com)

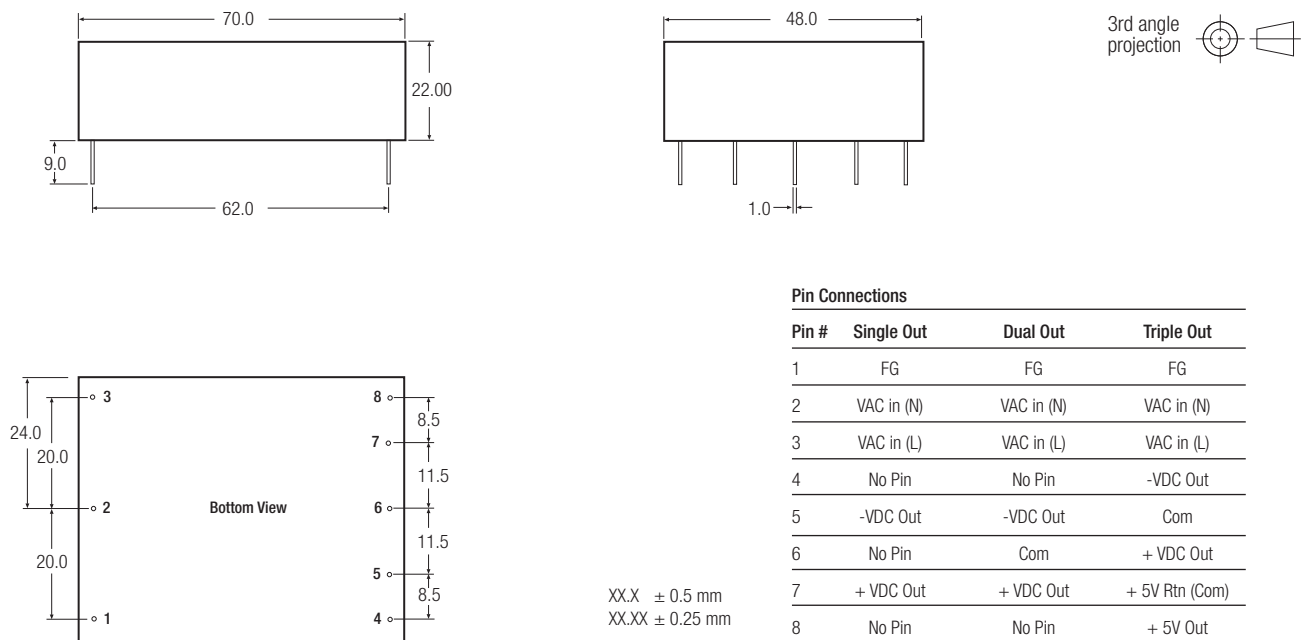
**Specifications continued**

Humidity		95% RH max.
Case Material		Epoxy with Fibreglass (UL94V-0)
Package Weight		110g
EMC		EN 55022 Class B / EN 55024
MTBF (+25°C)	using MIL-HDBK-217F	>200 x 10 <sup>3</sup> hours

**Screw Terminal Module Option (suffix -ST)**



**Package Style and Pinning**



**Notes**

Note 1: Ripple & Noise measured with 20MHz BW probe and 0.1µF + 47µF capacitors in parallel across the outputs.  
Note 2: Suggested input fuse rating 2A Slo Blo