

## Features

## Regulated Converters

Rev. 0

- 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
- UL Certified

### Selection Guide

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)	380mA max. (115VAC) / 240mA max. (230VAC)	
Inrush Current (<2ms)	30A max. (115VAC) / 50A max. (230VAC)	
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	
Isolation Voltage (input to output)	3000VAC min	
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	
Humidity	95% RH max	
Case Material	Epoxy with Fibreglass (UL94V-0)	
Package Weight	110g	
EMC	EN55022 Class B / EN 55024	
MTBF (+25°C)	using MIL-HDBK-217F	>200 x 10 <sup>3</sup> hours

# POWERLINE

AC/DC-Converter

## RAC20-S\_D\_TA Series

## 20 Watt Single, Dual & Triple Output



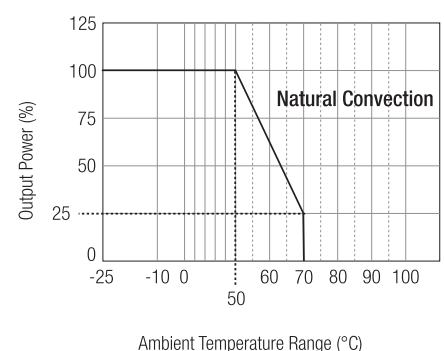
UL-60950-1 Certified

# RECOM

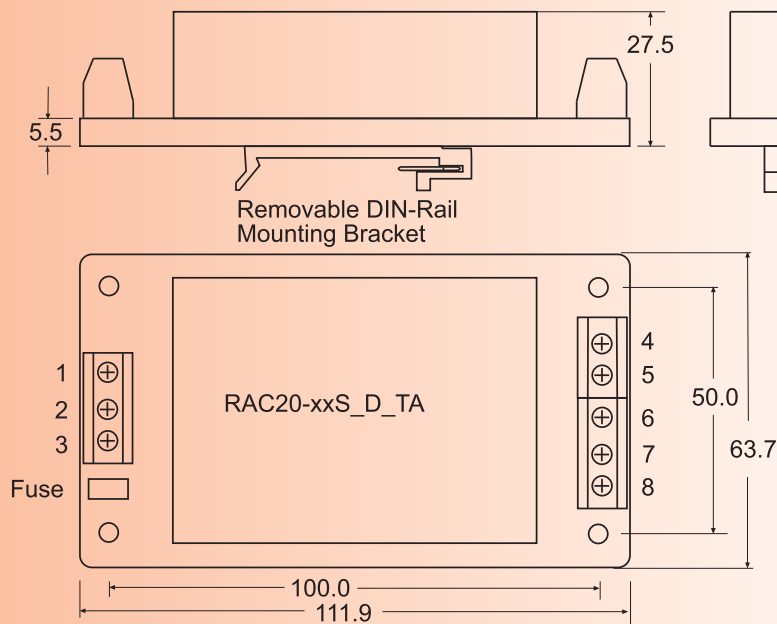
### Description

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

## Derating Graph (Ambient Temperature)



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

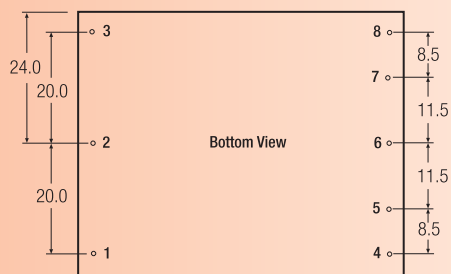
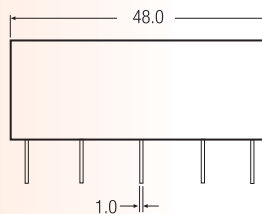
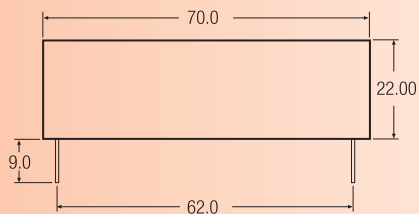


**Pin Connections**

Pin #	Single Out	Dual Out	Triple Out
1	NC	NC	NC
2	VAC in (L)	VAC in (L)	VAC in (L)
3	VAC in (N)	VAC in (N)	VAC in (N)
4	NC	NC	+5V Ret.
5	-VDC Out	-VDC Out	+5V Out
6	NC	Com	-VDC out
7	+VDC out	+VDC out	Com
8	NC	NC	+VDC out

NC = No Connection

**Package Style and Pinning**



**Pin Connections**

Pin #	Single Out	Dual Out	Triple Out
1	FG	FG	FG
2	VAC in (N)	VAC in (N)	VAC in (N)
3	VAC in (L)	VAC in (L)	VAC in (L)
4	No Pin	No Pin	-VDC Out
5	-VDC Out	-VDC Out	Com
6	No Pin	Com	+ VDC Out
7	+ VDC Out	+ VDC Out	+ 5V Rtn (Com)
8	No Pin	No Pin	+ 5V Out

XX.X ± 0.5 mm  
XX.XX ± 0.25 mm

**Notes**

Note 1: Ripple & Noise measured with 20MHz BW probe and 0.1µF + 47µF capacitors in parallel across the outputs.