

## Features

### Regulated Converters

- Very Compact Low AC/DC Power Supply
- High Efficiency
- Single & Dual Output Options
- Continuous Short Circuit Protection
- Isolated Output 3.75kVAC/1 min
- EN55022 Class B Compliant
- High Operating Temperature
- Low Standby Power Consumption

## POWERLINE

AC/DC-Converter  
with 3 year Warranty

# RECOM

## 10 Watt Single / Dual Output



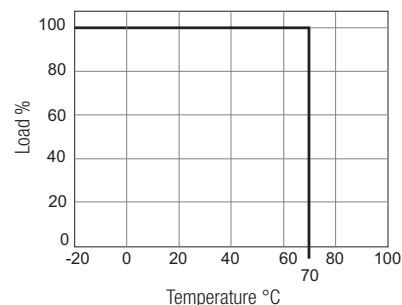
E224736



**EN60950-1 Certified**  
**UL60950-1 Certified**  
**CE marked**

## RAC10-C/277

## Derating-Graph<sup>(3)</sup> (Ambient Temperature)



### Selection Guide

Part Number	Input Range (VAC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (typ.) (%)	Max. Capacitive Load (μF) <sup>(1+2)</sup>
RAC10-3.3SC/277	80-305	3.3	2500	75	50000
RAC10-05SC/277	80-305	5	2000	78	36000
RAC10-12SC/277	80-305	12	840	80	8600
RAC10-15SC/277	80-305	15	670	78	6000
RAC10-24SC/277	80-305	24	420	80	2700
RAC10-05DC/277	80-305	±5	±1000	77	±21000
RAC10-12DC/277	80-305	±12	±420	79	±3700
RAC10-15DC/277	80-305	±15	±340	79	±2900

### Specifications (measured at TA 25°C, full load after warm-up)

Input Voltage Range (with Derating)	80-305VAC or 113-430VDC	
Rated Power	10 Watts	
Input Frequency Range (for AC Input)	47-63Hz	
Input Current (full load)	115VAC	250mA typ.
	230VAC	160mA typ.
No Load Power Consumption	230VAC	300mW max.
Inrush Current (cold Start-Up)	115VAC	15A max.
	230VAC	30A max.
Leakage Current	250VAC/50Hz	0.25mA max.
External Fuse Recommended	1.5A slow blow type	
Output Voltage Accuracy	3.3V	±3% typ.
	all others	±2% typ.
Line Voltage Regulation (low line, high line at full load)	±0.3% typ.	
Load Voltage Regulation (0 -100% Load)	3.3V, 5V	-1.5% typ.
	12V	±1% typ.
	all others	±0.5% typ.
Minimum Load	0%	
Output Ripple and Noise (with 0.1μF across outputs @20MHz bandwidth)	3.3V / 5V	50mVp-p typ.
	12V / 15V / 24V	125mVp-p typ.
	±5	200mVp-p typ.
	±12	125mVp-p typ.
	±15	200mVp-p typ.
Operating Frequency	100kHz	
Hold-up time	230VAC/50Hz	60ms min.
Isolation Voltage (input to output)	3.75kVAC / 1 minute	
Short Circuit Protection	Hiccup, Automatic Restart	

continued on next page

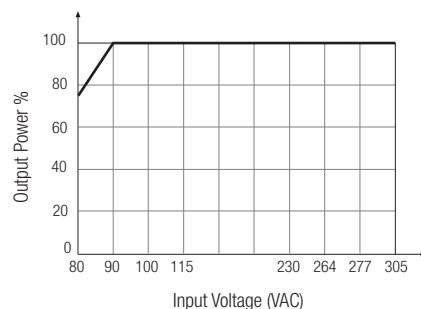
**Specifications** (measured at TA 25°C, full load after warm-up)

Output Overvoltage Protection		Latch off
Over Voltage Category		OVC II
Overcurrent Protection		Automatic Recovery
Operating Temperature Range <sup>(3)</sup>	(free air convection, with derating)	-20°C to +70°C
Storage Temperature Range		-40°C to +7 5°C
Humidity		95% RH max.
Case Material		Epoxy with Fibreglass (UL94V-0)
Dimension (L x W x H)		52.4 x 27.4 x 23.5mm
Package Weight		62g±5g

**Certifications**

UL General Safety	Report: E224736-A20	UL60950-1, 2nd Edition
IEC/EN General Safety	Report: SPCLVD1210109	EN60950-1, 2nd Edition
EMC	Report: T121026N02-E	EN 55022 Class B
	Report: T121026N02-E	EN 55024
MTBF (+25°C)	using MIL-HDBK-217F	320 x 10 <sup>3</sup> hours
(+70°C)	using MIL-HDBK-217F	120 x 10 <sup>3</sup> hours

Input Voltage vs Load



Notes:

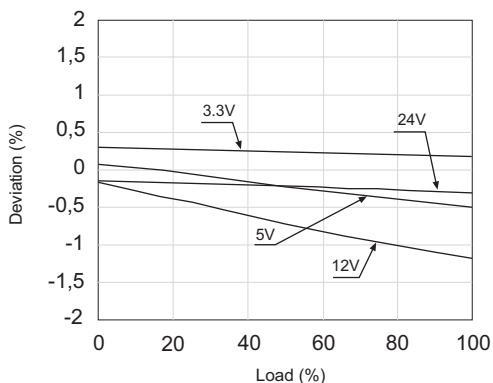
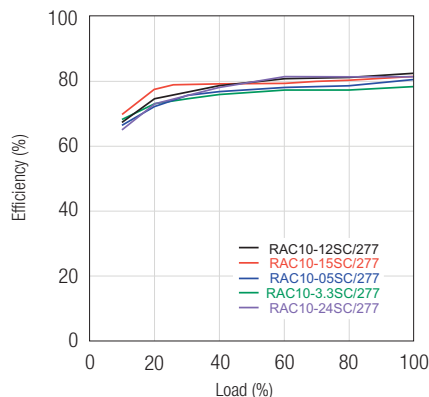
Note1: Measured @ 230VAC / 50Hz / Ta=25°C with constant resistant mode at full load.

Note2: If used @ 115VAC / 60Hz with full load, max. capacitive load is less, please contact RECOM for detailed information.

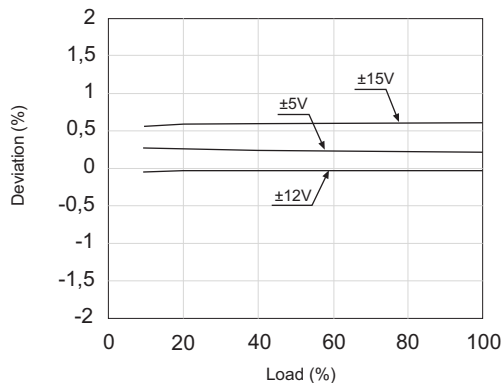
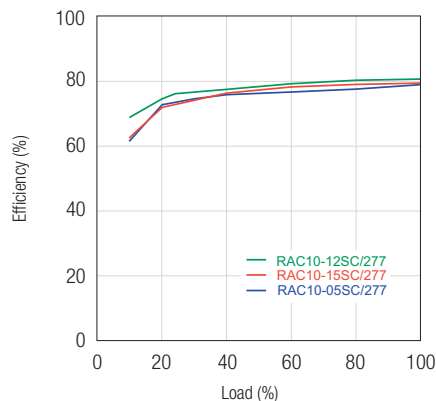
Note3: The RAC10-C/277 has been submitted and evaluated by Underwriters Laboratory (UL) to UL 60950 Standard for the use at the maximum ambient temperature (Tma) of 57°C

**Characteristics** (measured @ 115/230VAC, 50/60Hz after warm up)

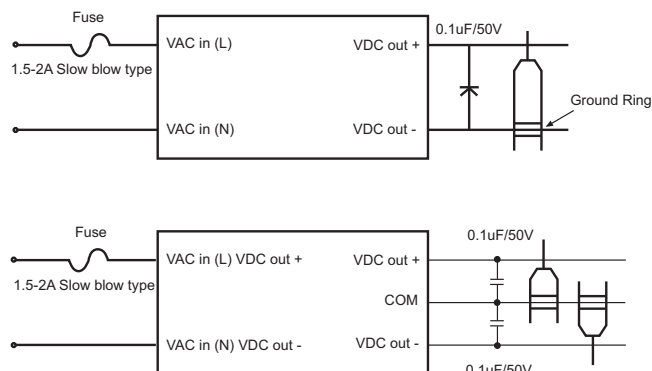
## RAC10-xxSC/277



## RAC10-xxDC/277

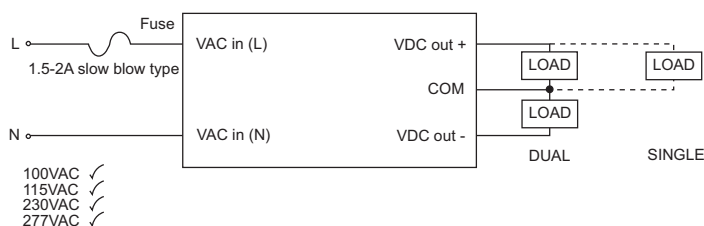


## Application Notes



1. Recommended external input fuse 1.5A / slow blow type.
2. Do not use scope ground lead to measure the output ripple & noise.

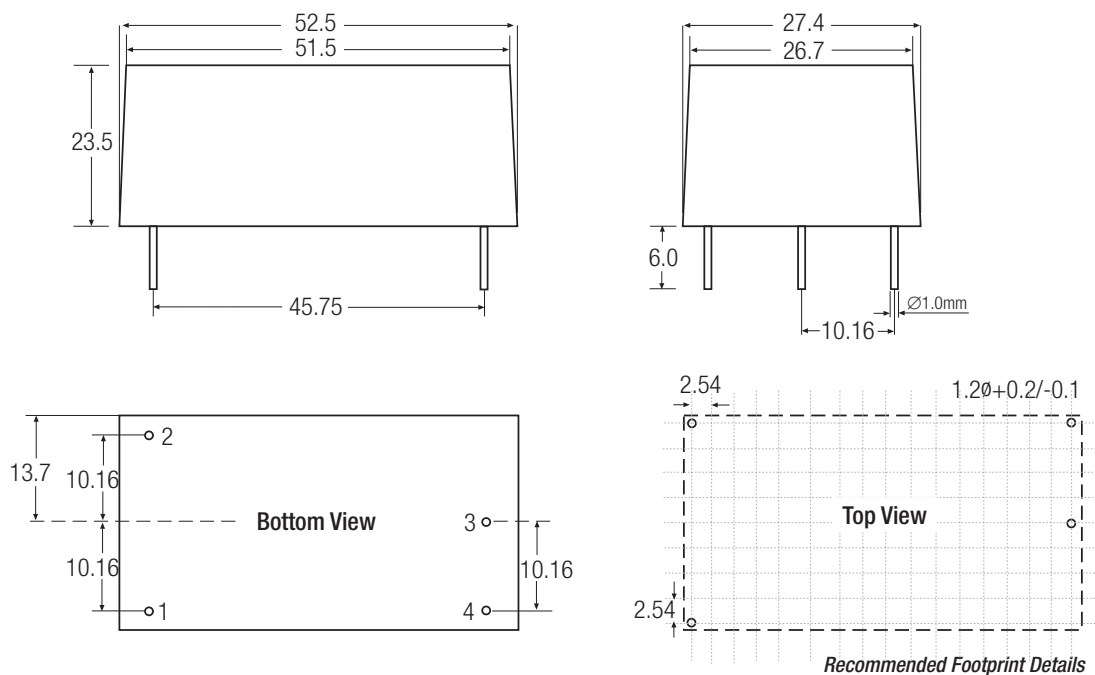
## Standard Application Circuit



## Standard Package Style and Pinning

### RAC10-xxSC/277

RAC10/277



#### Pin Connections-

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

XX.X ± 0.5 mm  
XX.XX ± 0.25 mm

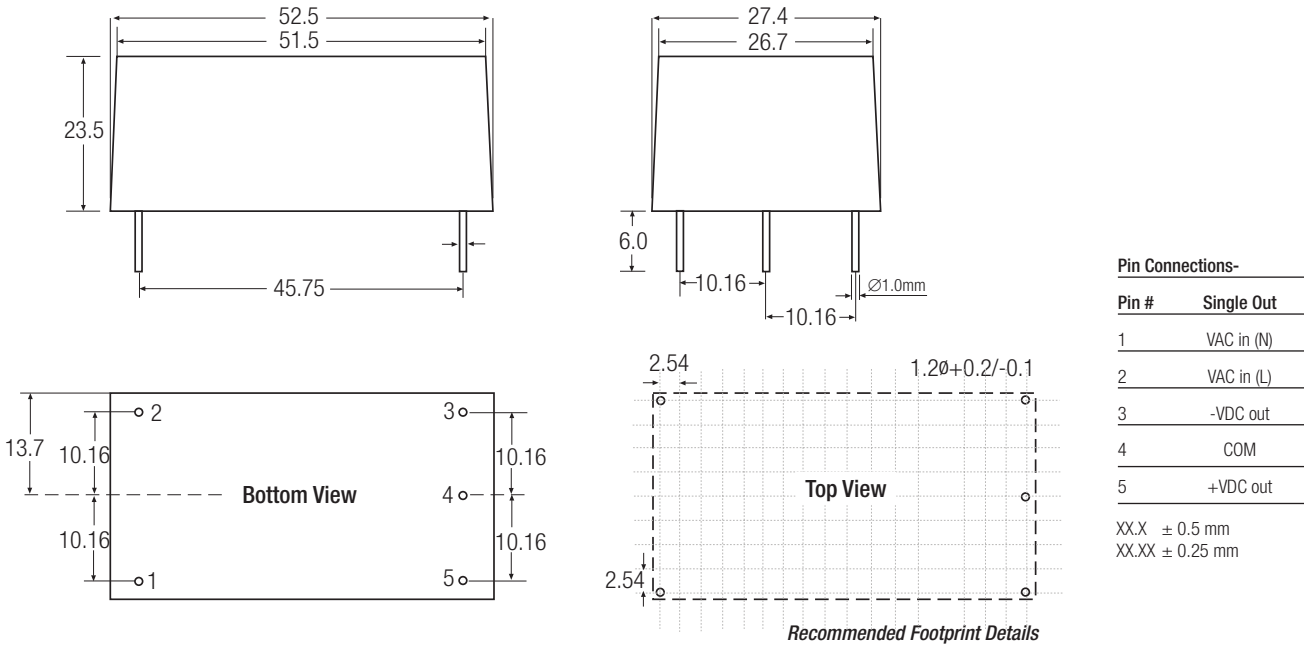
# POWERLINE

AC/DC-Converter

# RAC10-xxS\_DC /277 Series

Standard Package Style and Pinning

## RAC10-xxDC/277



### Pin Connections-

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

XX.X  $\pm 0.5$  mm  
XX.XX  $\pm 0.25$  mm