

# 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



## 10 Watt Single / Dual Output



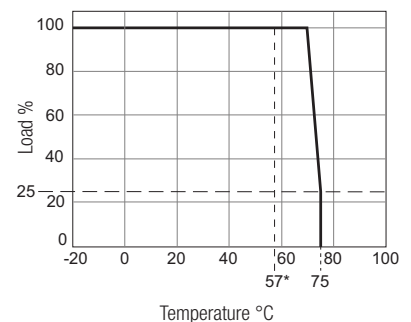
E224736



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

# RAC10-C/277

## Derating-Graph (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.	
	±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 / 1minute	
Short Circuit Protection	Hiccup, Automatic Restart	

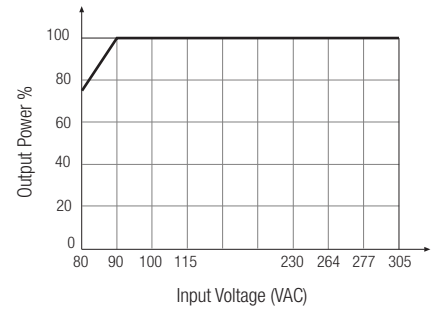
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Please Read Application Notes

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

Output Overvoltage Protection		Latch off
Overcurrent Protection		Automatic Recovery
Operating Temperature Range	(free air convection, with derating)	-20°C to +75°C
Storage Temperature Range		-40°C to +75°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
EMC	EMI	EN 55022 Class B
	EMS	EN 55024
Certifications	UL General Safety (Report: E224736)	UL60950-1
	EMC (Report: T121026N02-E)	EN55022, EN55024
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



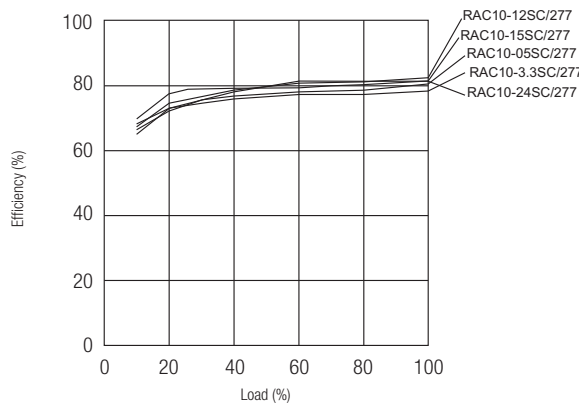
Notes:

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

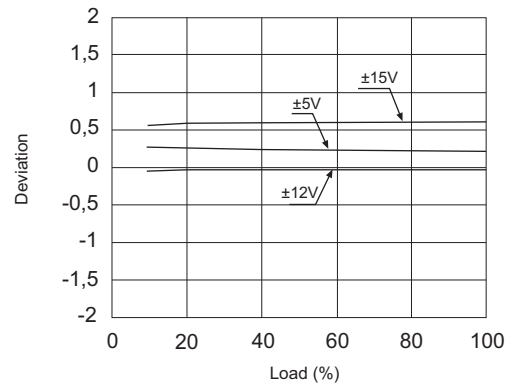
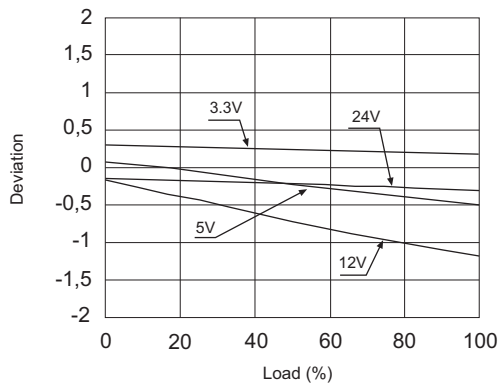
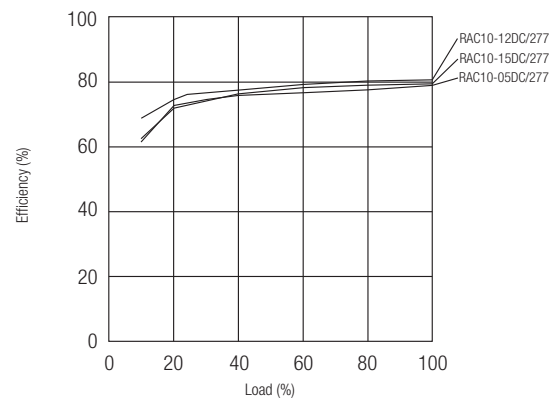
Note2: If used @ 115VAC / 60Hz with full load, max. capacitive load is less, please contact RECOM for detailed information.

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

## RAC10-xxSC/277

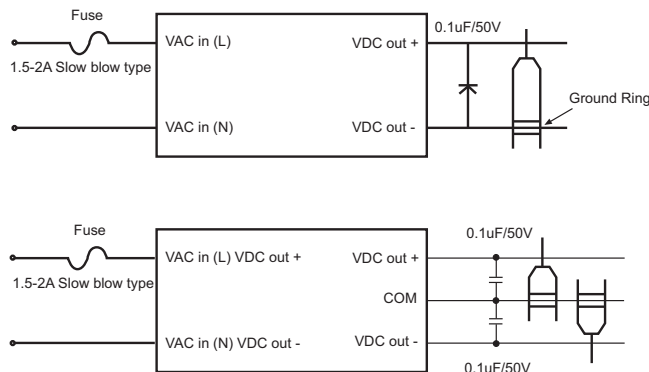


## RAC10-xxDC/277



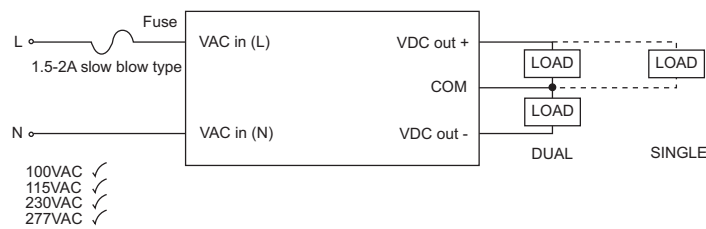
RAC10-C/277

**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.

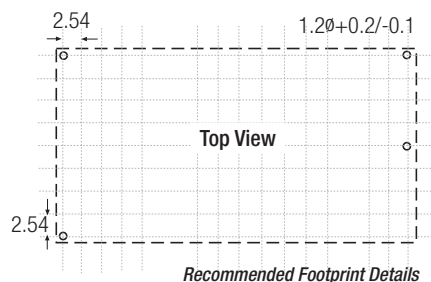
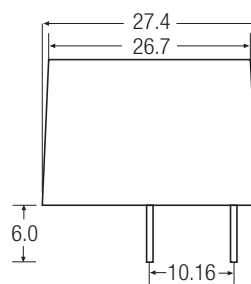
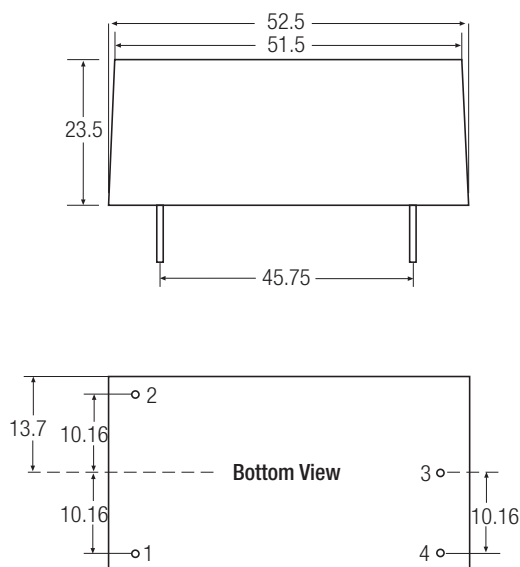
**Standard Application Circuit**



RAC10/277

**Standard Package Style and Pinning**

**RAC10-xxSC/277**

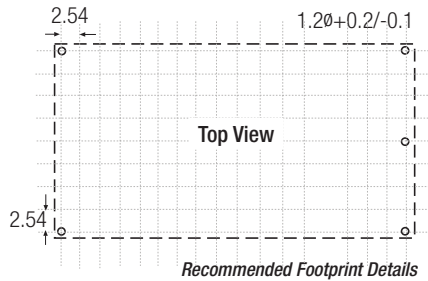
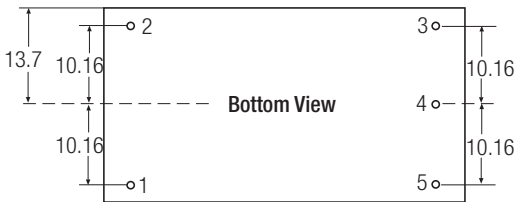
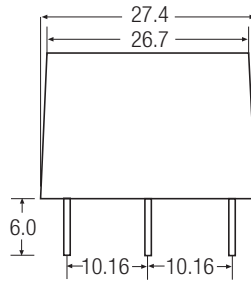
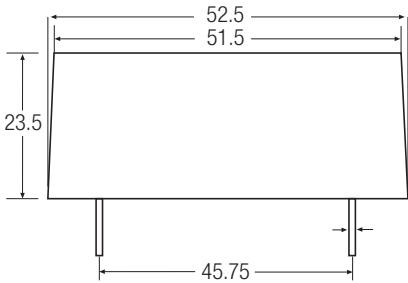


**Pin Connections-**

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

**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 ± 0.5 mm  
XX.XX ± 0.25 mm