

## Features

## Regulated Converters

- 30mW max of No Load Power Consumption
- High efficiency up to 80%
- Isolated Output 3kVAC / 1 min
- Short Circuit Protection
- Overvoltage Protection
- Meet EN55022 and FCC Class B
- Built-In Fusible Resistor

## Selection Guide

Part Number	Output Voltage (VDC)	Max. Current (Io, max)	Total Regulation(1)	Ripple & Noise(2)	Efficiency (Typ.)	Max. Capacitive Load
RAC03-3.3SC/277	3.3	900mA	±6%	200mV	71%	47000µF
RAC03-05SC/277	5	600mA	±6%	150mV	76%	15000µF
RAC03-12SC/277	12	250mA	±6%	150mV	78%	2200µF
RAC03-24SC/277	24	125mA	±6%	150mV	80%	390µF

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

Input Voltage Range	85-305VAC or 120-430VDC	
Input Frequency	47-440Hz	
Input Current (full load)	115VAC/230VAC	70mA / 45mA typ.
Inrush Current	115VAC/230VAC	15A/30A max.
No Load Power Consumption	85-305VAC / 47-440Hz 30mW max.	
Output Voltage (Vout nom.)	3.3V-24V	
Output Voltage Tolerance	±6% max.	
Minimum Load	2%	
Line Voltage Regulation	LL-HL at full Load	±1% typ. / ±1.5% max.
Load Voltage Regulation	2-100% Load	see Selection Guide
Overcurrent Limit	116% - 156%	
Switching Frequency	at full Load	45kHz typ.
Isolation Voltage	Input-Output	3kVAC / 1 minute
Leakage Current	85-305VAC / 47-440Hz	10µA max.
Isolation Resistance	1G Ω min	
Short Circuit Protection	Continuous, Auto Restart	
Over-Voltage Protection	Zener clamp, set at 4.4V-5.0V for 3.3V and others 112-140% of its nominal output voltage	
Operating Temperature Range	natural convection, without derating	-25°C ~ +75°C
	natural air convection, with derating	-25°C ~ +85°C
Storage Temperature Range	-40°C ~ +85°C	
Case Material	UL94V-0 black plastic	
Potting Material	Silicon	
Relative Humidity	95% RH max.	
Package Weight	28g	
Package Quantity	12 pcs	
MTBF	TA = 25°C	> 1000x10 <sup>3</sup> hours
(using MIL-HDBK217F)	TA = 75°C	> 100x10 <sup>3</sup> hours
Physical	Dimension (LxWxH)	38.25 x 24.35 x 17.40 mm
EMI	EN55022, Class B	
Safety Standard		
EN General Safety	EN-60950-1	
UL General Safety	UL-60950-1	

## POWERLINE

AC/DC-Converter  
with 3 year Warranty

# RECOM

## 3 Watt Single Output

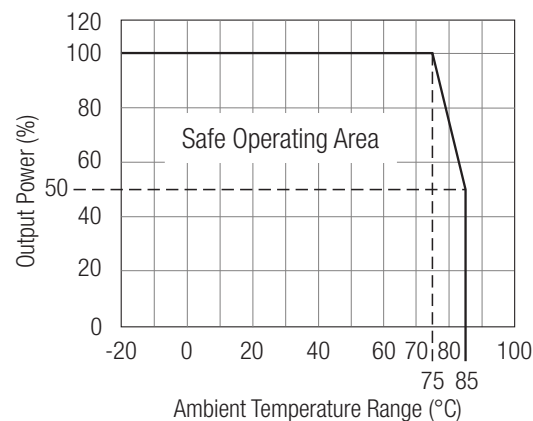


**EN-60950-1 (pending)**  
**UL-60950-1 (pending)**

## RAC03-SC/277

## Derating Graph

(Ambient Temperature)



# RAC03-xxSC/277

## Series

### POWERLINE

AC/DC-Converter

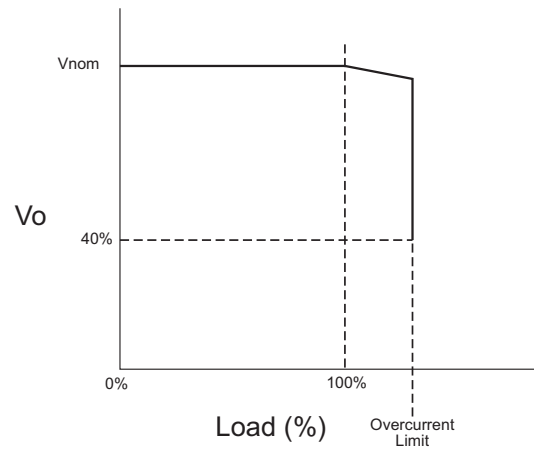
#### Specifications (measured at TA 25°C, full load after warm-up)

Notes:

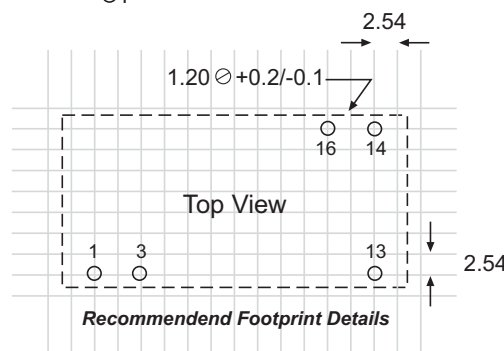
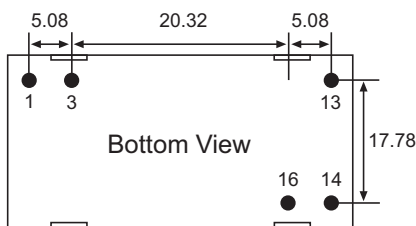
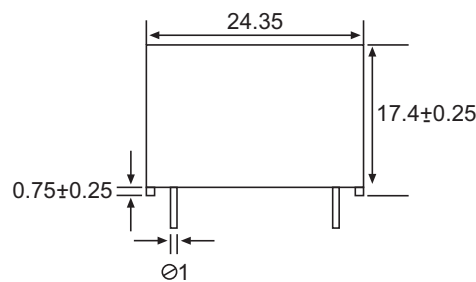
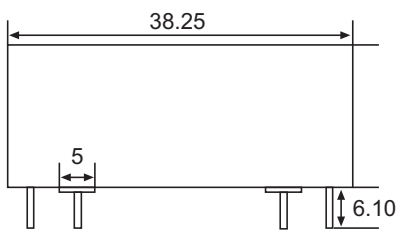
1. „Total Regulation“ is the output voltage tolerance which includes initial voltage precise, thermal drift, line regulation and load regulation at rated input voltage and load condition.

2. „Ripple & Noise“ is maximum peak-to-peak voltage value measured at output within 20MHz bandwidth at rated line voltage and output load ranges, and with a 47 µF low-ESR electrolytic capacitor in parallel with a 0.1 µF ceramic capacitor across the output.

Output V-I Characteristic



#### Package Style and Pinning



#### Pin Connections

Pin #	Single Out
1	VAC in (L)
3	VAC in (N)
13	NC
14	-VDC out
16	+VDC out

Tolerance  $\pm 0.5$ mm unless otherwise specified

RAC03/277