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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

POWERLINE
AC/DC-Converter
with 3 year Warranty

RECOM

3 Watt Single Output



RoHS 2011/65/EU 6/6

c UL us E224736

CE

EN-60950-1 Certified
IEC-60950-1 Certified
UL-60950-1 Certified

RAC03-C/277/W

Descritption

The ultra-compact wired RAC03-C/277/W modules are available with output voltages of 3.3, 5, 9, 12, 15, and 24V, and the input-to-output isolation is approximately 3kVAC/1min. With a standby consumption of 30mW typical, the mini power supplies are particularly suitable for energy-saving sleep mode and standby applications. Because of its compact design (height <17 mm), it is a versatile solution for home automation and other similar applications. Complete with an integrated input filter, the series has enhanced EMI performance and complies with EN55022, class B. The mini power supplies are also protected against short circuit with fully automatic restart after the error has been solved. The converters are EN/UL60950-1 certified and come complete with a 3 year warranty.

Selection Guide

Part Number	Output Voltage (VDC)	Max. Current (Io, max)	Ripple & Noise (mV) [1]	Constant Current Range (mA) [2]	Efficiency (typ.) (%)
RAC03-3.3SC/277/W	3.3	900mA	200	1050-1350	71
RAC03-05SC/277/W	5	600mA	150	700-880	76
RAC03-12SC/277/W	12	250mA	150	310-390	78
RAC03-24SC/277/W	24	125mA	150	160-195	80

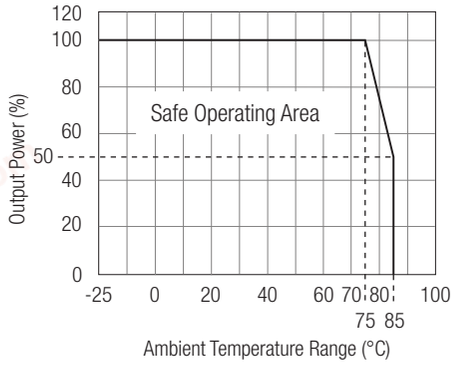
Specifications (@ TA 25°C, nominal input 100-277VAC after warm-up time with rated output current unless otherwise noted)

Input Voltage Range	without Derating	85-305VAC or 110-430VDC
	with 95% Derating	80-305VAC or 115-430VDC
Input Frequency		47-440Hz
Input Current (full Load)	115VAC/230VAC	70mA / 45mA typ.
Inrush Current	115VAC/230VAC	15A/30A max.
No Load Power Consumption	80-305VAC / 47-440Hz	30mW max.
Output Voltage (Vout nom.)		3.3V-24V
Minimum Load		0%
Line Voltage Regulation	LL-HL at Full Load	1.5% max.
Load Voltage Regulation [3]	10-100% Load	±6% max.
Switching Frequency	Full Load	45kHz typ.
Isolation Voltage	Input-Output	3kVAC / 1 minute
Leakage Current	80-305VAC / 47-440Hz	10µA max.
Isolation Resistance	Input-Output	1G Ω min
Short Circuit Protection		Continuous, Auto Restart
Over-Voltage Protection		Zener clamp, set at 4.4V-5.0V for 3.3V and 112-140% of its nominal output voltage
Over Voltage Category		OVC II
Operating Temperature	natural convection, without derating	-25°C to +75°C
	natural air convection, with derating	-25°C to +85°C
Storage Temperature		-40°C to +85°C
Case Material		UL94V-0 black plastic
Potting Material		Silicone
Relative Humidity		95% RH max.
Package Weight		30g
Package Quantity		90 pcs
MTBF	TA = 25°C	> 1.000 x 10^3 hours
(using MIL-HDBK217F)	TA = 75°C	> 100 x 10^3 hours
Physical	Dimension (LxWxH)	38.25 x 24.35 x 17.40 mm

continued on next page

Derating Graph

(Ambient Temperature)



Refer to Application Notes

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POWERLINE
AC/DC-Converter

RAC03-xxxC/277/W Series

Specifications (@ TA 25°C, nominal input 100-277VAC after warm-up time with rated output current unless otherwise noted)

EMC	Conducted and Radiated	EN55022, Class B
	Noise Immunity	EN55024
Safety Standard		
IEC General Safety	CB-Report: 1311035-CB	IEC-60950-1 2nd Edition
EN General Safety		EN-60950-1 3rd Edtion
UL General Safety	Report: E224736-A17	UL-60950-1

Notes:

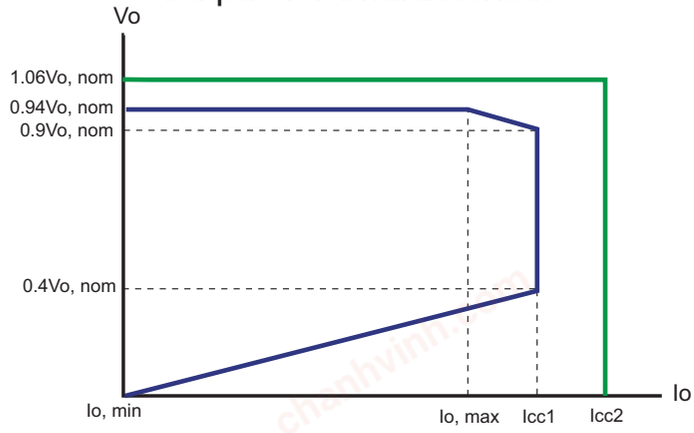
Note1: Ripple and Noise is maximum peak-to-peak voltage value measured at output within 20Mhz bandwith, at rated line voltage and output load ranges.

Note2: Constant Current operation region is within 45% - 90% of Vo, nom. The Range includes all the tolerance of current precise, line regulation and load load regulation. Typically, the current tolerance could be within ±7% at rated input voltage and output operation region for every single unit.used

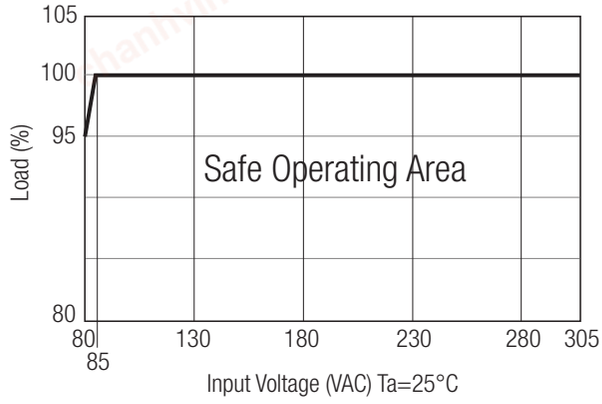
Note3: „Total Regulation“ is the output voltage tolerance which includes initial voltage precise, thermal drift, line regulation and load regulation at rated input voltage and load condition.

Typical Characteristic

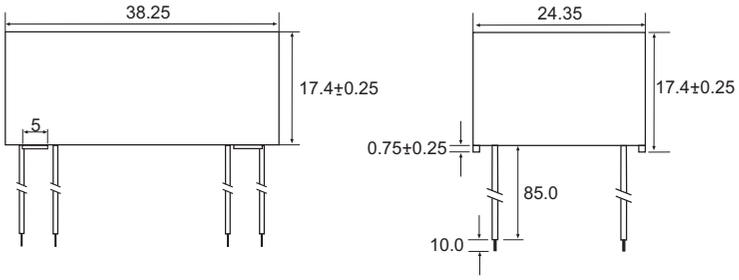
Output V-I Characteristic

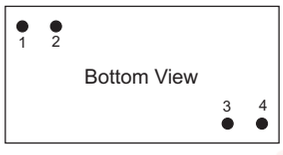


Input Voltage Derating Graph

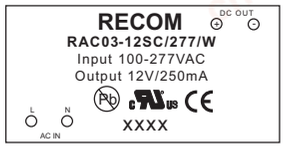


Package Style and Pinning





Recommendend Footprint Details



Wired Connections

Wired color	Type	Function
1 Brown	UL-1015 AWG#22	VAC in (L)
2 Blue	UL1015 AWG#22	VAC in (N)
3 Red	UL-1430 AWG#22	+VDC out
4 Black	UL-1430 AWG#22	-VDC out

Tolerance ±0.5mm unless otherwise specified

The product information and specifications are subject to change without prior notice. All products are designed for non-safety critical commercial and industrial applications.
The Buyer agrees to implement safeguards that anticipate the consequences of any failures that might cause harm, loss of life and/or damage property.