Features

Regulated Converters

- Universal Input 85-305VAC
- Regulated Power Supply
- Continuous Short Circuit Protection
- Isolated Output 3kVAC / 1 min
- Meet EN55022 and FCC Class B
- Ultra-low Stand-By Power Consumption

POWERLINE

AC/DC-Converter

with 3 year Warranty

RECOM

3 Watt Single Output

RoHS 2011/65/EU 6/6 CE cULus E224736

CE Marked
UL-60950-1 Certified

RAC03-SCR/277

Selection Guide

Part Number	Input Voltage (VAC)	Output Voltage (VDC)	Output Current (mA)	Typical Efficiency (%)	Max. Capacitive Load [1+2]
RAC03-3.3SCR/277*	85-305	3.3	900	68	22000µF
RAC03-05SCR/277*	85-305	5	600	70	10000µF
RAC03-12SCR/277*	85-305	12	250	74	1500µF
RAC03-24SCR/277*	85-305	24	125	76	200µF

* add „-Tray“ for Tray packaging, e.g. RAC03-05SCR/277-Tray

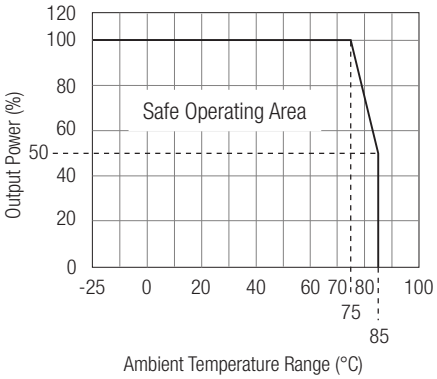
Specifications (measured at TA 25°C, full load after warm-up)

Input Voltage Range		85-305VAC or 120-430VDC
Rated Power		3 Watts
Input Frequency Range (for AC Input)		47-440Hz
Input Current (Full Load)	115VAC / 230VAC	70mA / 45mA typ.
No Load Power Consumption	85-305VAC / 47-440Hz	75mW max.
Inrush Current (<2ms)	115VAC	15A max.
	230VAC	30A max.
Output Voltage		3.3V-24V
Output Voltage Tolerance [3]	3.3V	±4% typ. / ±8% max.
	5V	±3.5% typ. / ±5% max.
	12V / 24V	±3% typ. / ±4% max.
Output Current		see Selection Guide
Output Ripple & Noise [4]	3.3V	250mVp-p
	5V	200mVp-p
	12V / 24V	150mVp-p
Switching Frequency	@ Full Load	45KHz typ.
Hold-up Time	115VAC	18ms min.
Minimum Load		10%
Line Voltage Regulation	LL-HL @ Full Load	±0.7% typ. / ±1% max.
Load Regulation (10%-100% Load)	3.3V	±5.5% typ. / ±9% max.
	5V	±5% typ. / ±7.5% max.
	12V, 24V	±4% typ. / ±5.5% max.
Leakage Current	85-305VAC / 47-440Hz	10uA max.
Isolation Voltage		3kVAC / 1minute
Isolation Resistance		1GΩ min
Short Circuit Protection		Continuous, Auto Restart
Over Current Limit		105% - 150%
Over Voltage Protection (Zener diode clamp)		130%-160%
Over Voltage Category		OVC II
Operating Temperature Range [5]	natural convection, without derating	-25°C to +75°C
	natural air convection, with derating	-25°C to +85°C
Storage Temperature Range		-40°C to +85°C
Relative Humidity		95% RH max.
Case Material		UL94V-0 Black Plastic
Potting Material		Epoxy

continued on next page

Derating-Graph

(Ambient Temperature)



Refer to Application Notes

RAC03-SCR/277 Series

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

Package Weight		41g typ.
Package Quantity		12pcs
	„-Tray“-Version	72pcs
Physical Dimension (LxWxH)		50.3 x 50.3 x 11.0mm
RoHS		Test Report: KA/2012/91224
EMC		EN55022 Class B
Certifications		
UL General Safety	File Number: E224736	UL-60950-1
EN General Safety	Report: TI20925N01-E	EN-55022: 2010 Class B, EN-55024:2010
MTBF	TA = 25°C	1300 x 10^3 hours
(using MIL-HDBK-217F)	TA = 75°C	160 x 10^3 hours

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 contace RECOM for detailed information.

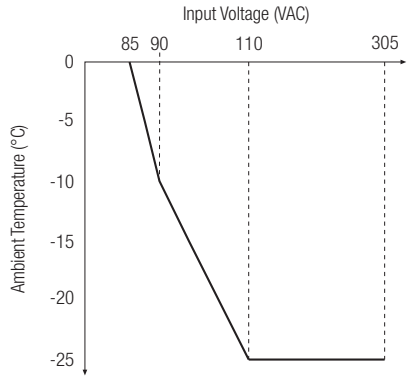
Note3: The “output voltage tolerance“ includes initial voltage accuracy, thermal drift, line regulation and load regulation at rated input voltage and load conditions.

Note4: “Ripple and Noise“ is the maximum peak-to-peak voltage value measured at the output with a 20 MHz bandwidth, at rated line voltage at full load.

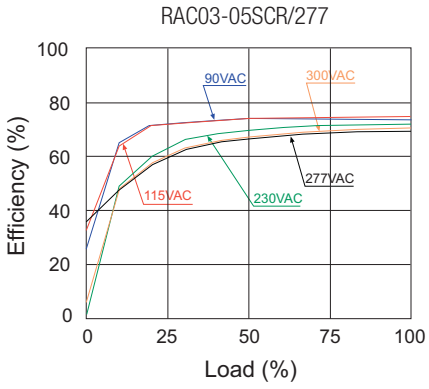
Note5: Start up only is guaranteed at temperatures down to -25°C. Other specifications may not be met.

Typical Characteristics

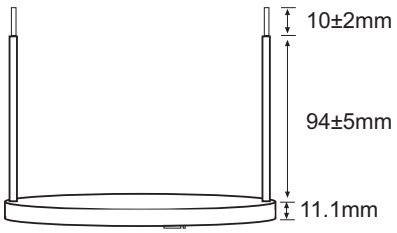
Ambient Temperature vs. Input Voltage

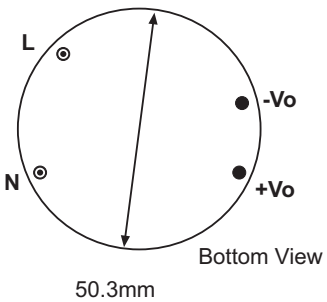


Efficiency vs. Load



Mechanical Dimension





Wire Connections

Wire #			
1 (Brown)	AWG#22	1015	VAC in (L)
2 (Blue)	AWG#22	1015	VAC in (N)
3 (Red)	AWG#22	1430	+VDC out
4 (Black)	AWG#22	1430	-VDC out

Tolerance ±0.5mm unless otherwise specified