

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

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	10µA 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

POWERLINE

AC/DC-Converter

with 3 year Warranty

RECOM

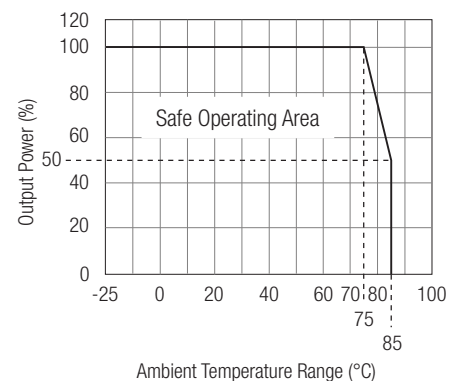
3 Watt Single Output



CE Marked
UL-60950-1 Certified

RAC03-SCR/277

Derating-Graph (Ambient Temperature)



Refer to Application Notes

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: T120925N01-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 contact RECOM for detailed information.

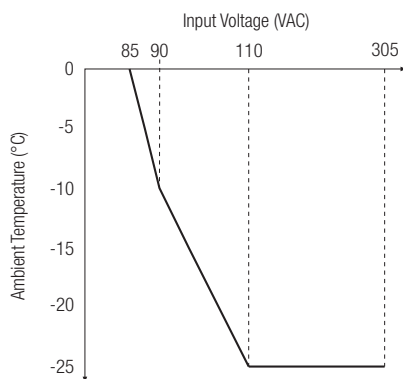
Note3: The "output voltage tolerance" includes initial voltage accuracy, thermal drift, line regulation and load regulation at rated input voltage and load conditions.

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.

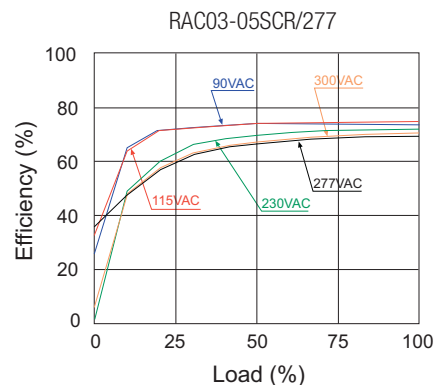
Note5: Start up only is guaranteed at temperatures down to -25°C. Other specifications may not be met.

Typical Characteristics

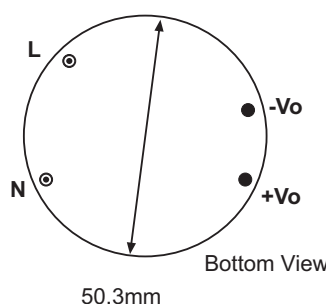
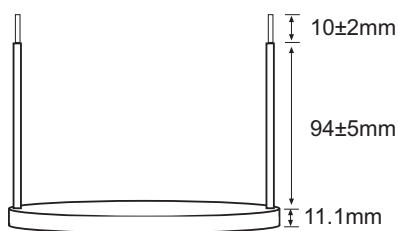
Ambient Temperature vs. Input Voltage



Efficiency vs. Load



Mechanical Dimension



Wire Connections

Wire #	Color	AWG	Quantity	Connection
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

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