Features

Regulated Converter

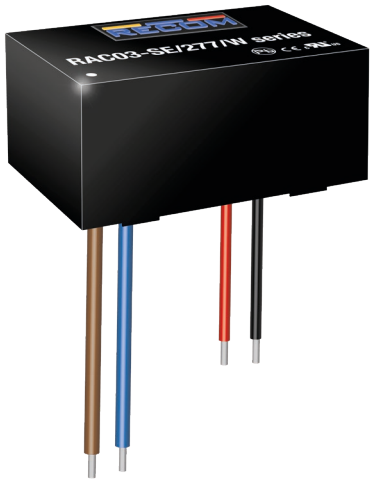
- 30mW max. no load power consumption
- High efficiency up to 80%
- Isolated output 3kVAC / 1 min
- SCP, OVP protection
- Wide operating temperature range: -40°C to +85°C
- Universal input 85-305VAC

RECOM

AC/DC Converter

RAC03-SE/277/W

3 Watt Single Output



Description

The ultra-compact wired RAC03-SE/277/W modules are available with output voltages of 3.3, 5, 12 and 24V, and the input-to-output isolation is 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 <18mm), 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 EN55032, 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	nom. Input Voltage Range [VAC]	Output Voltage [VDC]	Output Current [mA]	Efficiency typ (1) [%]	Max. Capacitive Load (2) [µF]
RAC03-3.3SE/277/W	100-277	3.3	900	71	22000
RAC03-05SE/277/W	100-277	5	600	76	7500
RAC03-12SE/277/W	100-277	12	250	78	1000
RAC03-24SE/277/W	100-277	24	125	80	200

Notes:

Note1: Efficiency is tested at 230VAC and full load at +25°C ambient

Note2: Max Cap Load is tested at nominal input and full resisitive load

Model Numbering

RAC03-__ SE/277/W

- RAC03-__ : nom. Output Power, Output Voltage
- SE/277/W : **W**ired, **S**ingle

Ordering Examples:

RAC03-05SE/277/W	3 Watt	5Vout	Single Output	Wired Version
RAC03-12SE/277/W	3 Watt	12Vout	Single Output	Wired Version

IEC/EN60950-1 certified
CAN/CSA-22.2 No. 60950 certified
UL60950-1 certified
EN60335-1 certified
EN55032 certified
EN55024 certified
EN55014 certified
CB Report

RAC03-SE/277/W Series

Specifications (measured @ Ta= 25°C, nom. Vin (115/230VAC), full load and after warm-up unless otherwise stated)

BASIC CHARACTERISTICS

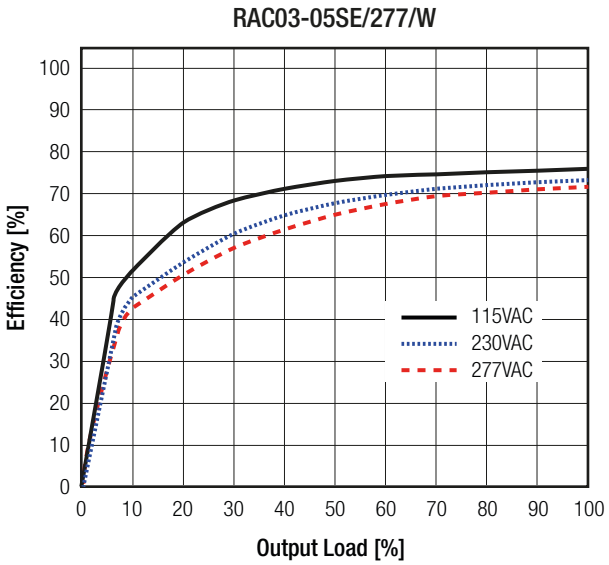
Parameter	Condition		Min.	Typ.	Max.
Input Voltage Range [3]	nom. Vin= 230VAC		85VAC 120VDC	277VAC	305VAC 430VDC
Input Current	115VAC 230VAC			70mA 45mA	
Inrush Current	cold start at +25°C	115VAC 230VAC			15A 30A
No load Power Consumption	85-305VAC, 47-63Hz				30mW
Input Frequency Range	AC Input		47Hz		440Hz
Minimum Load				2%	
Hold-up Time	115VAC 230VAC			15ms 80ms	
Internal Operating Frequency	100% load at nominal Vin			55kHz	
Output Ripple and Noise [4]				200mVp-p	

Notes:

Note3: No line derating required

Note4: Ripple and Noise is the maximum peak-to-peak voltage value measured at the output with a 20MHz bandwidth, at rated line voltage at full load. And with a 47µF low-ESR electrolytic capacitor in parallel with a 0.1µF ceramic capacitor across output

Efficiency vs. Load



REGULATIONS

Parameter	Condition	Value
Output Voltage Tolerance [5]		±6.0% max.
Line Regulation	low line to high line, full load	±1% typ. / ±1.5% max.
Load Regulation	10% to 100% load	6.0% typ.

Notes:

Note5: Includes initial voltage accuracy, thermal drift, line regulation and load regulation at rated input voltage and load conditions