

阅读申明

- 1.本站收集的数据手册和产品资料都来自互联网，版权归原作者所有。如读者和版权方有任何异议请及时告之，我们将妥善解决。
- 2.本站提供的中文数据手册是英文数据手册的中文翻译，其目的是协助用户阅读，该译文无法自动跟随原稿更新，同时也可能存在翻译上的不当。建议读者以英文原稿为参考以便获得更精准的信息。
- 3.本站提供的产品资料，来自厂商的技术支持或者使用者的心得体会等，其内容可能存在描述上的差异，建议读者做出适当判断。
- 4.如需与我们联系，请发邮件到marketing@iczoom.com，主题请标有“数据手册”字样。

Read Statement

1. The datasheets and other product information on the site are all from network reference or other public materials, and the copyright belongs to the original author and original published source. If readers and copyright owners have any objections, please contact us and we will deal with it in a timely manner.
2. The Chinese datasheets provided on the website is a Chinese translation of the English datasheets. Its purpose is for reader's learning exchange only and do not involve commercial purposes. The translation cannot be automatically updated with the original manuscript, and there may also be improper translations. Readers are advised to use the English manuscript as a reference for more accurate information.
3. All product information provided on the website refer to solutions from manufacturers' technical support or users the contents may have differences in description, and readers are advised to take the original article as the standard.
4. If you have any questions, please contact us at marketing@iczoom.com and mark the subject with "Datasheets" .

Features

Regulated Converters

- 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



RAC03-SE/277/W

3 Watt Single Output



Description

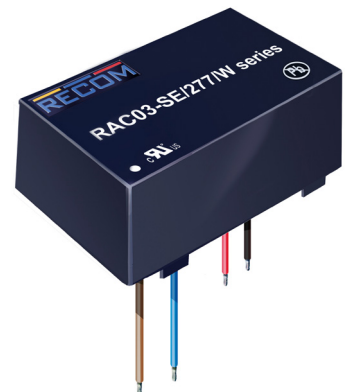
The ultra-compact wired RAC03-SE/277/W modules are available with output voltages of 3.3, 5, 12 and 24V, and the input-to-output isolation is 3kVAC/1min. With a standby consumption of 30mW typical, the mini power supplies are particularly suitable for energy-saving sleep mode and standby applications. 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 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	nom. Input Voltage Range [VAC]	Output Voltage [VDC]	Output Current [mA]	Efficiency typ. [%]	Max. Capacitive Load ⁽¹⁾ [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: Test by minimum input and constant resistor load.



Specifications (measured @ ta= 25°C, nominal input voltage (115/230VAC), full load and after warm-up)

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

Notes:

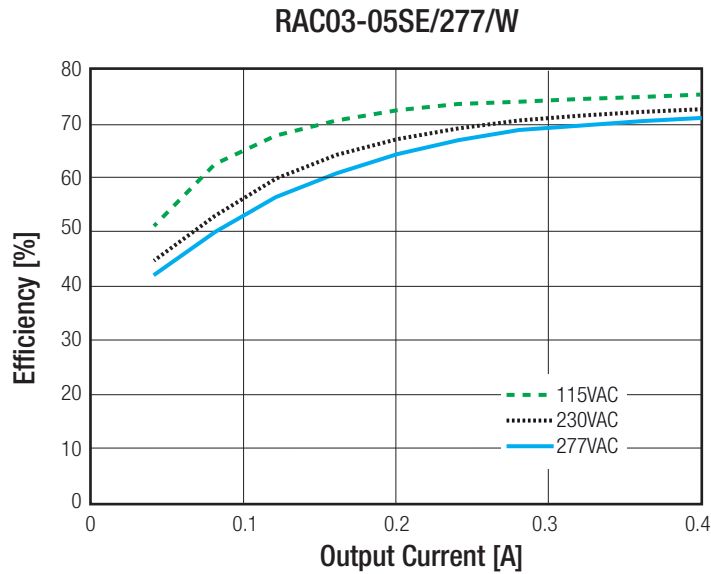
Note2: Ripple and Noise is the maximum peak-to-peak voltage value measured at the output with a 20MHz bandwidth, at rated line voltage at full load. And with a 47µF low-ESR electrolytic capacitor in parallel with a 0.1µF ceramic capacitor across output.

continued on next page

EN55024 Certified
EN60950-1 Certified
UL60950-1 Certified
EN60335-1 Certified

Specifications (measured @ $t_a = 25^\circ\text{C}$, nominal input voltage (115/230VAC), full load and after warm-up)

Efficiency vs. Load



REGULATIONS

Parameter	Condition	Value
Output Voltage Tolerance ⁽³⁾		±6% max.
Line Voltage Regulation	low line to high line, full load	±1% typ. / ±1.5% max.
Load Voltage Regulation	10% to 100% load	±6% typ.

Notes:

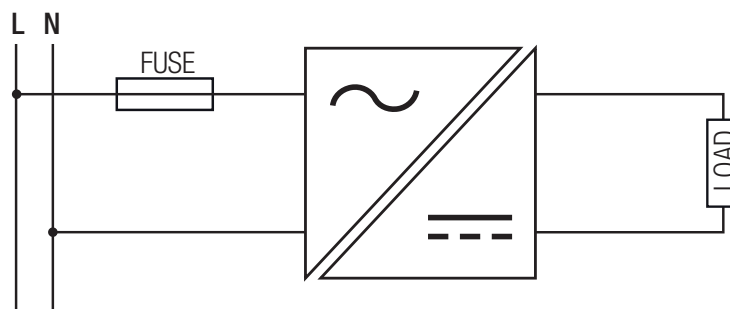
Note3: Includes initial voltage accuracy, thermal drift, line regulation and load regulation at rated input voltage and load conditions.

PROTECTIONS

Parameter	Type	Value
Short Circuit Protection (SCP)		continuous, automatic recovery
Over Voltage Protection (OVP)	Zener Diode clamp	112% - 140%
Over Current Limit		120% - 190%
Over Voltage Category		OVC II
Isolation Voltage		3kVAC / 1 Minute
Isolation Resistance		1GΩ min.
Leakage Current	85-305VAC, 47-440Hz	10μA max.

Notes:

Note4: An input fuse is required if the mains supply is not over-current protected. Recommended fuse: T1A slow blow type



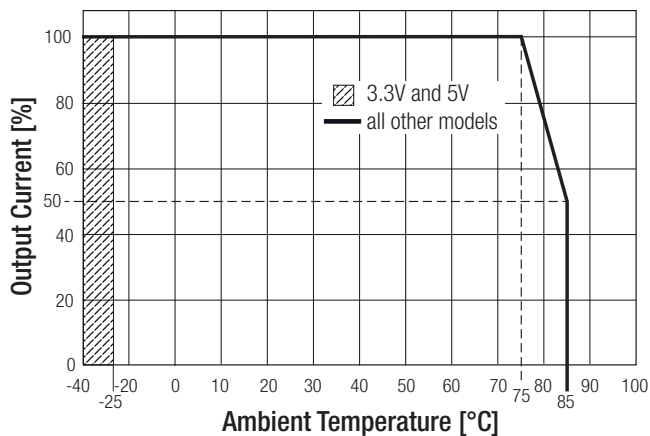
Specifications (measured @ $t_a = 25^\circ\text{C}$, nominal input voltage (115/230VAC), full load and after warm-up)

ENVIRONMENTAL

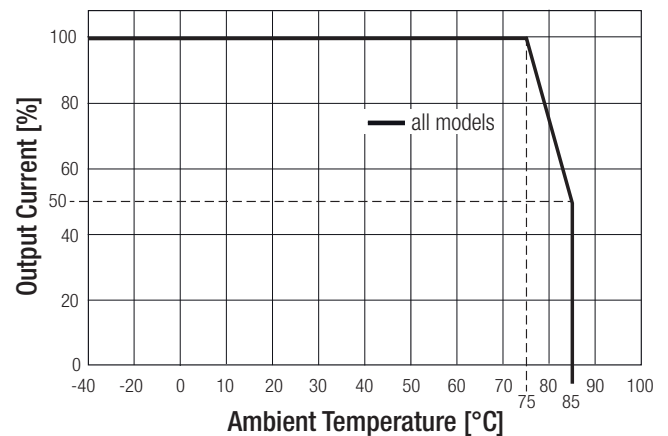
Parameter	Condition	Value
Operating Temperature Range ⁽⁵⁾	230VAC, with derating (see graph)	-40°C to +85°C
Maximum Case Temperature		105°C
Thermal Impedance		10°C / W typ.
Humidity	non-condensing	5% to 95%, RH max.
MTBF ⁽⁶⁾	MIL-HDBK-217F, 115VAC, +25°C	3503 x 10 ³ hours
	MIL-HDBK-217F, 230VAC, +25°C	1816 x 10 ³ hours

Derating Graph

@ 85-140VAC



@ 140-305VAC



Notes:

Note5: At low input voltage (85-140VAC) and temperature below -25°C the RAC03-3.3SE/277/W and RAC03-05SE/277/W, will not start.

SAFETY AND CERTIFICATIONS

Certificate Type (Safety)	Report / File Number	Standard
Information Technology Equipment, General Requirements for Safety (LVD)	LVD1208051	IEC60950-1, 2nd Edition, 2009 EN60950-1, 2nd Edition, 2011
Information Technology Equipment, General Requirements for Safety	E224736-X1-A24	UL60950-1, 2nd Edition, 2014 CAN/CSA C22.2 No. 60950-1-07, 2nd Edition 2014
Household and similar electrical appliances, General requirements	L0339L26-B2	EN60335-1, 2014

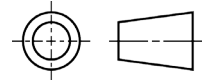
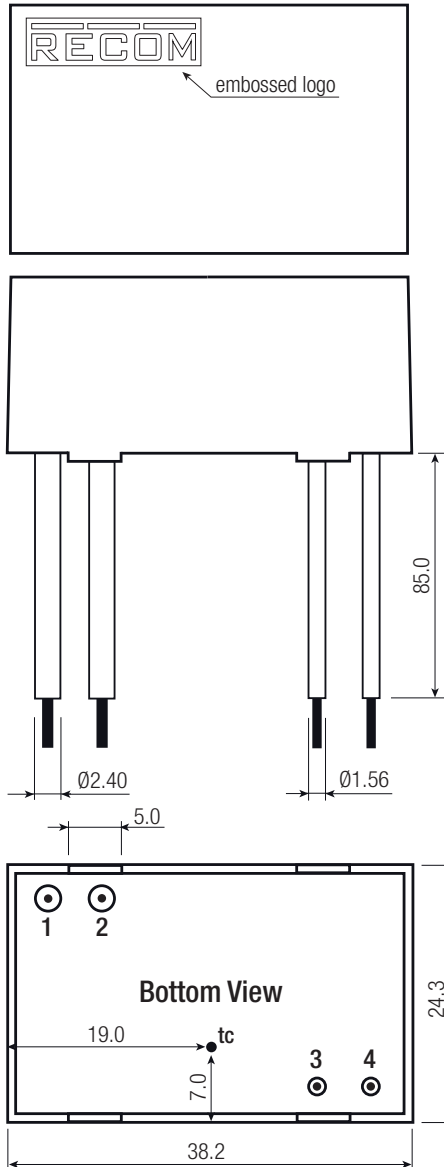
EMC Compliance	Condition	Standard / Criterion
Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement	Report: 1502CE17	EN55022, Class B EN55024
ESD Electrostatic discharge immunity test	±8kV Air Discharge; ±6kV Contact	EN61000-4-2, Criteria B
Radiated, radio-frequency, electromagnetic field immunity test	3V/m	EN61000-4-3, Criteria A
Fast Transient and Burst Immunity	AC Power Port: ±1kV	EN61000-4-4, Criteria B
Surge Immunity	AC Power Port: line to line: ±1kV	EN61000-4-5, Criteria B
Immunity to conducted disturbances, induced by radio-frequency fields	AC Power Port: 3V/m	EN61000-4-6, Criteria A
Power Magnetic Field Immunity	1 A/m	EN61000-4-8, Criteria A
Voltage Dips and Interruption	Voltage Dips: >95% reduction >30% reduction Interruption: >95%	EN61000-4-11, Criteria B
		EN61000-4-11, Criteria C
		EN61000-4-11, Criteria C
Voltage Fluctuations and Flicker in Public Low-Voltage Systems		EN61000-3-3

Specifications (measured @ $t_a = 25^\circ\text{C}$, nominal input voltage (115/230VAC), full load and after warm-up)

DIMENSION and PHYSICAL CHARACTERISTICS

Parameter	Type	Value
Material	Case Potting	black plastic (UL94 V-0) epoxy (UL94 V-0)
Package Dimension (LxWxH)		38.25 x 24.35 x 17.4mm
Package Weight		29g typ.

Dimension Drawing (mm)



Wired Connections

Wired Color	Type	Wire Composition	Function
1, brown	UL-1015, AWG22	17/0.16	VAC in (L)
2, blue	UL-1015, AWG22	17/0.16	VAC in (N)
3, red	UL-1430, AWG22	17/0.16	+Vout
4, black	UL-1430, AWG22	17/0.16	-Vout

tc= case temperature measuring point

Tolerance: xx.x= $\pm 0.5\text{mm}$

xx.xx= $\pm 0.35\text{mm}$

PACKAGING INFORMATION

Parameter	Type	Value
Packaging Dimension (LxWxH)	cardboard box	520.0 x 195.0 x 68.0mm
Packaging Quantity		30 pcs
Storage Temperature Range		-40°C to +85°C

The product information and specifications are subject to change without prior notice. RECOM products are not authorized for use in safety-critical applications (such as life support) without RECOM's explicit written consent. A safety-critical application is defined as an application where a failure of a RECOM product may reasonably be expected to endanger or cause loss of life, inflict bodily harm or damage property. The buyer shall indemnify and hold harmless RECOM, its affiliated companies and its representatives against any damage claims in connection with the unauthorized use of RECOM products in such safety-critical applications.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[RECOM:](#)

[RAC03-05SE/277/W](#) [RAC03-12SE/277/W](#) [RAC03-3.3SE/277/W](#) [RAC03-24SE/277/W](#)