

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
- Meets EN55022 and FCC Class B
- Built-In Fusible Resistor

Selection Guide

Part Number	Output Voltage (VDC)	Max. Current (Io, max)	Total Regulation (%)	Ripple & Noise (mV)	Efficiency (Typ.)	Max. Capacitive Load ⁽¹⁺²⁾
RAC03-3.3SC/277	3.3	900mA	±6%	200mV	71%	47000µF
RAC03-05SC/277	5	600mA	±6%	150mV	76%	15000µF
RAC03-12SC/277	12	350mA	±6%	150mV	78%	2200µF
RAC03-24SC/277	24	125mA	±6%	150mV	80%	390µF

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

Input Voltage Range (with Derating)	80-305VAC or 110-430VDC	
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	
Output Voltage Tolerance	±6% max.	
Minimum Load	2%	
Line Voltage Regulation	LL-HL at full Load	±1% typ. / ±1.5% max.
Load Voltage Regulation	2-100% Load	see Selection Guide
Hold-up Time	115VAC	15ms typ.
	230VAC	80ms typ.
Overcurrent Limit	116% - 156%	
Switching Frequency	at full Load	45kHz typ.
Isolation Voltage	Input-Output	3kVAC / 1 minute
Leakage Current	80-305VAC / 47-440Hz 10uA max.	
Isolation Resistance	1G Ω min	
Short Circuit Protection	Continuous, Auto Restart	
Over-Voltage Protection	Zener clamp, set at 4.4V-5.0V for 3.3V and others 112-140% of its nominal output voltage	
Over Voltage Category	OVC II	
Operating Temperature ⁽⁵⁾	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	Silicon	
Relative Humidity	95% RH max.	
Package Weight	28g	
Package Quantity	12 pcs	
MTBF	TA = 25°C	> 1000x10 ³ hours
(using MIL-HDBK217F)	TA = 75°C	> 100x10 ³ hours
Physical	Dimension (LxWxH)	38.25 x 24.35 x 17.40 mm
EMI	EN55022, Class B	
Noise Immunity	Report: T120816N04-E	EN55024
Safety Standard		
EC/EN General Safety	Report: SPCLVD1208051	IEC/EN-60950-1
UL General Safety	Report: E224736-A17-UL	UL-60950-1

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POWERLINE

AC/DC-Converter

with 3 year Warranty

RECOM

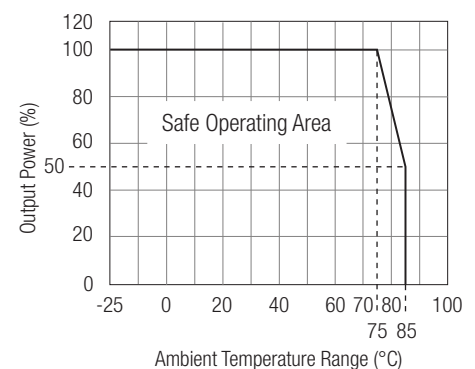
3 Watt Single Output



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

RAC03-SC/277

Derating-Graph (Ambient Temperature)



Refer to Application Notes

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

Notes:

Note1: Measured @ 230VAC / 50Hz / Ta=25°C with constant resistant mode at full load.

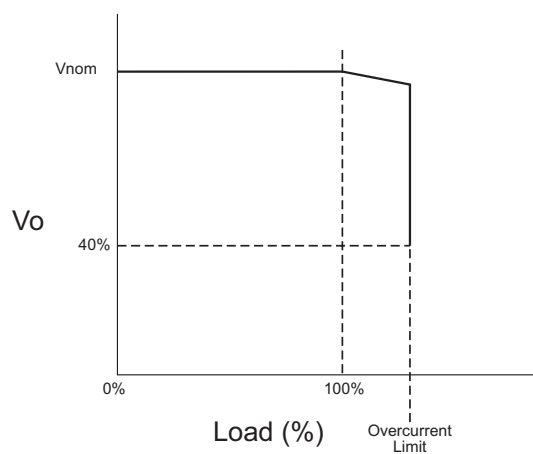
Note2: If used @ 115VAC / 60Hz with full load, max. capacitive load is less, please contact RECOM for detailed information.

Note3: „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.

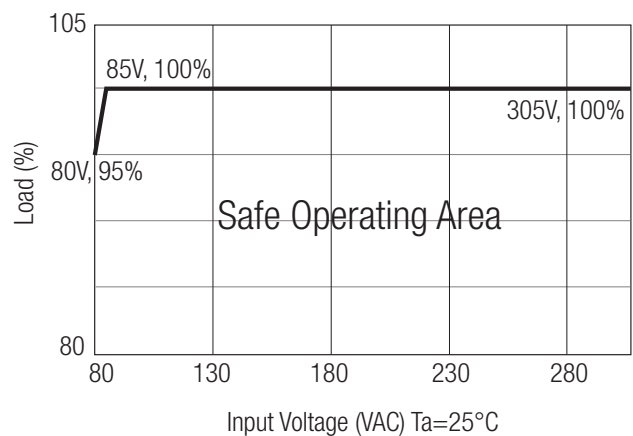
Note4: „Ripple & Noise“ is maximum peak-to-peak voltage value measured at output within 20MHz bandwidth at rated line voltage and output load ranges, and with a 47 µF low-ESR electrolytic capacitor in parallel with a 0.1 µF ceramic capacitor across the output.

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

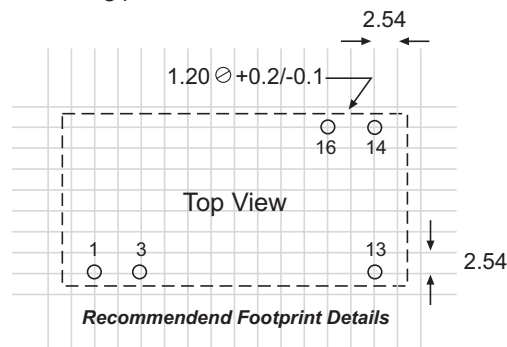
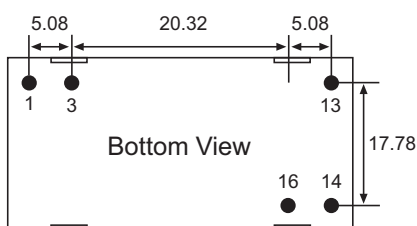
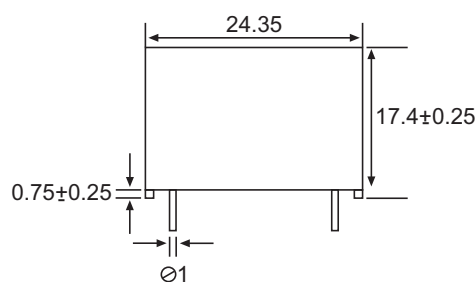
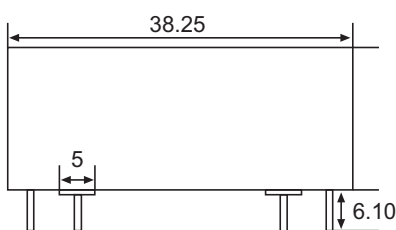
Output V-I Characteristic



Input Voltage Derating Graph



Package Style and Pinning



Pin Connections

Pin #	Single Out
1	VAC in (L)
3	VAC in (N)
13	NC
14	-VDC out
16	+VDC out

Tolerance ± 0.5 mm unless otherwise specified

Recommend Footprint Details

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.