

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

Selection Guide

| Part Number | Output Voltage (VDC) | Max. Current (Io, max) | Total Regulation ⁽³⁾ | Ripple & Noise ⁽⁴⁾ | 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 | 250mA | ±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 | |
| Operating Temperature | 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 (using MIL-HDBK217F) | TA = 25°C | > 1000x10 ³ hours |
| | TA = 75°C | > 100x10 ³ hours |
| Physical | Dimension (LxWxH) | 38.25 x 24.35 x 17.40 mm |
| EMI | EN55022, Class B | |
| 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



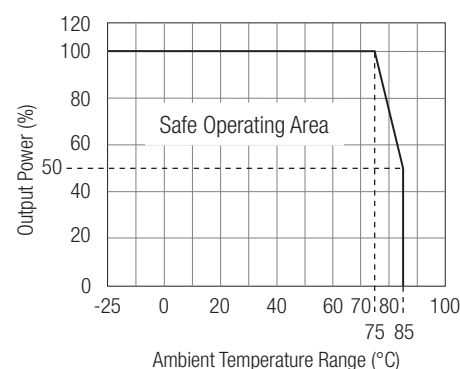
E224736



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

RAC03-SC/277

Derating Graph (Ambient Temperature)



RAC03-xxSC/277

Series

POWERLINE

AC/DC-Converter

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

Notes:

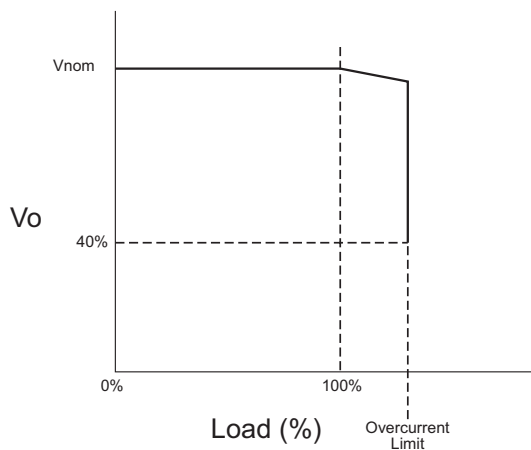
Note1: Measured @ 230VAC / 50Hz / Ta=25°C with constant resistant mode at full load.

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

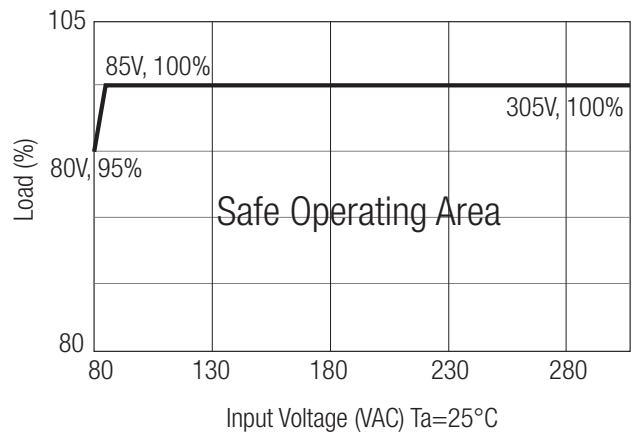
Note3: „Total Regulation“ is the output voltage tolerance which includes initial voltage precise, thermal drift, line regulation and load regulation at rated input voltage and load condition.

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.

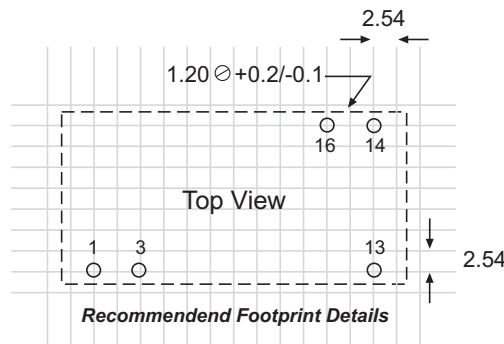
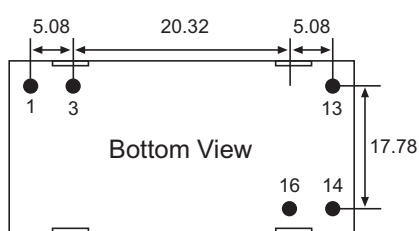
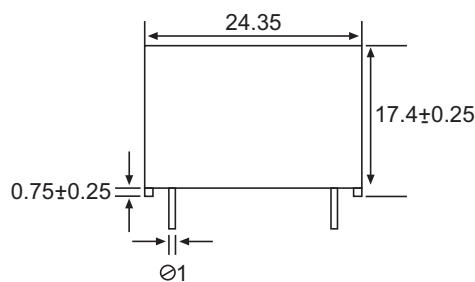
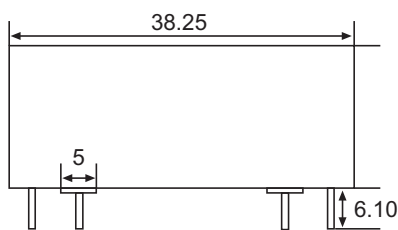
Output V-I Characteristic



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

The product information and specifications are subject to change without prior notice. All products are designed for non-safety critical commercial and industrial applications. The Buyer agrees to implement safeguards that anticipate the consequences of any failures that might cause harm, loss of life and/or damage property.