Features

- 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

Regulated Converters

The ultra-compact wired RAC03-C/277/W modules are available with output voltages of 3.3, 5, 9, 12, 15, and 24V, and the input-to-output isolation is approximately 3kVAC/1 min. 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 <17 mm), 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.

Description

Selection Guide

| Part Number | Output Voltage (VDC) | Max Current (A, max) | Ripple & Noise (mV) | Constant Current Limit (mA) | Efficiency (typ.) (%)
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>RAC03-3.3SC/277/W</td>
<td>3.3</td>
<td>950mA</td>
<td>100</td>
<td>1050-1350</td>
<td>71</td>
</tr>
<tr>
<td>RAC03-5SSC/277/W</td>
<td>5</td>
<td>680mA</td>
<td>150</td>
<td>700-880</td>
<td>76</td>
</tr>
<tr>
<td>RAC03-12SC/277/W</td>
<td>12</td>
<td>250mA</td>
<td>150</td>
<td>310-390</td>
<td>78</td>
</tr>
<tr>
<td>RAC03-24SC/277/W</td>
<td>24</td>
<td>120mA</td>
<td>150</td>
<td>160-195</td>
<td>80</td>
</tr>
</tbody>
</table>

Specifications

- Input Voltage Range: without Derating 85-305VAC or 120-430VDC with 95% Derating 80-305VAC or 115-430VDC
- 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
- Minimum Load: 0%
- Line Voltage Regulation LL-HL at Full Load 1.5% max.
- Load Voltage Regulation @ 100% Load ±6% max.
- Switching Frequency: Full Load 45Hz typ.
- Isolation Voltage: Input-Output 3kVAC / 1 minute
- Leakage Current: 80-305VAC / 47-440Hz 10μA max.
- Isolation Resistance: Input-Output 1G Ω min.
- Short Circuit Protection: Continuous, Auto Restart
- Over-Voltage Protection: Zener clamp, set at 4.4V-5.0V for 3.3V and 112-140% of its nominal output voltage
- Over Voltage Category: OVC II
- Operating Temperature: natural convection, without derating -25°C to +75°C
- Storage Temperature: -40°C to +85°C
- Case Material: UL94V-0 black plastic
- Potting Material: Silicone
- Relative Humidity: 95% RH max.
- Package Weight: 30g
- Package Quantity: 30 pcs

Derating-Graph

Refer to Application Notes
POWERLINE
AC/DC-Converter

Specifications
- @ TA 25°C, nominal input 100-277VAC after warm-up time with rated output current unless otherwise noted.
- Conducted and Radiated: EN55022, Class B
- Noise Immunity: EN55024
- IEC General Safety: CB-Report: 1311035-CB
- EN General Safety: Report: E224736-A17

Notes:
- Note1: Ripple and Noise is maximum peak-to-peak voltage value measured at output within 20Mhz bandwidth, at rated line voltage and output load ranges.
- Note2: Constant Current operation region is within 45% - 90% of Vo, nom. The Range includes all the tolerances of current precise, line regulation and load regulation. Typically, the current tolerance could be within ±7% at rated input voltage and output operation region for every single unit.
- 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.

Typical Characteristic
- Output V-I Characteristic
- Input Voltage Derating Graph

Package Style and Pinning
- Wired Connections

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