

Micro-sized AC/DC converters with extremely low power

Recom's new RAC converters have exceeded set goals with extremely low power ratings as demanded by the EU standards. They have also received an excellent "Energy Star" rating. These very cost effective, well regulated converters may be used for a variety of applications.



Since 2010 the new EuP Directive (Energy-using Products) for standby and sleep mode operation has become effective – this directive aims at further reducing the current limits by 2013 (see table 1) and also the "Energy Star" recommendation of America rated energy consumption in standby mode (see table 2). With very low no-load power up to 30mW, Recom's RAC-converters conforms to these rules and regulations. They can be used as relay-drivers in standby-applications, also in pre-amplifiers, instruments, wireless based control systems, micro controller circuits and in applications with high energy efficiency.

RAC01 and RAC02

The 1W and 2W converters cover an input voltage of 90-277VAC. They are available with 3.3, 5, 9, 12, 15 or 24VDC outputs. An exceptional factor is the extremely low no-load power rating of only 30mW at 115VAC. These AC/DC-converters can operate over a temperature range of -25°C to +85°C and offer efficiency up to 75%. Input voltages are regulated with 2%, load variations with 6%. The RAC01- and RAC02- models measure only 33.7x22.2x17.0mm. The MTBF (+25°C) to MIL-HDBK 217F is specified at >1.000.000 hours.

RAC03

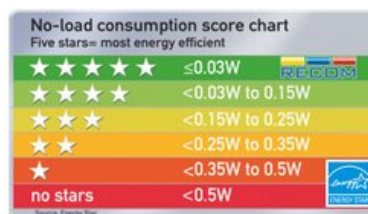
The 3W converter shows 80mW no-load power consumption and is therefore better by a factor 6 than required by the EuP Directive. With an input range of 90-265VAC, the outputs are also 3.3, 5, 9, 12, 15 or 24VDC. With efficiency close to 78% the units can also be used up to +80°C. The line regulation is 3%, the load regulation 6%. The MTBF (+25°C) to MIL-HDBK 217F exceeds 500.000 hours. The RAC03-converter is slightly larger than the RAC01/02, measuring 37.8x23.9x15.6mm.

RAC06

The higher rated 6W unit also features high efficiency at 80% and is available with single- and dual- outputs. The single output voltages are identical to the smaller units, the dual outputs are specified at ± 5 , ± 12 and ± 15 VDC. The inputs are also 90-264VAC. The no-load power at <250mW at 115VAC is also considerably below the specified limits. The ambient temperature range is -25°C to +75°C. With 0.3% line regulation and 0.5% load regulation, these converters are applicable for demanding applications without requiring post-regulation. Dimensions are compact with 50.9x25.5x15.6mm for single or 53.5x27.8x15.6mm for dual output models. The MTBF (+25°C) to MIL-HDBK 217F is specified at >400.000 hours. The RAC06-series is also available with lead wires.

Datasheets and additional information can be found on www.recom-international.com

EuP-Requirement	2010	2013
Apparent-Off-Mode	1.0 Watt	0.5 Watt
Standby (active only)	1.0 Watt	0.5 Watt
Standby (with status-/info-display)	2.0 Watt	1.0 Watt



Other Specifications:

- Recom's new micro-converters are 3kVAC/1 min. Isolated
- Features an integrated input filter to EN 55022/EN 55024 Class B EMV
- Short circuit and over-load protected
- All converters are CE and UL certified (EN 60950-1/UL 60950-1)
- 3 year warranty