

Features

Regulated Converters

- Very Compact Low AC/DC Power Supply
- High Efficiency
- Single & Dual Output Options
- Continuous Short Circuit Protection
- Isolated Output 3.75kVAC/1 min
- EN55022 Class B Compliant
- High Operating Temperature
- Low Standby Power Consumption

POWERLINE

AC/DC-Converter
with 3 year Warranty

RECOM

10 Watt Single / Dual Output



E224736

EN60950-1 Certified
UL60950-1 Certified
CE marked

RAC10-C/277

Selection Guide

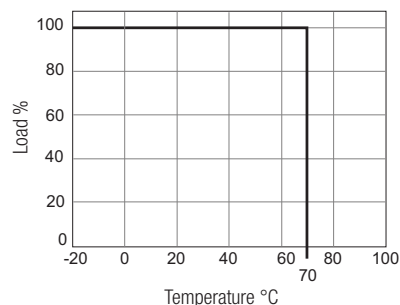
Part Number	Input Range (VAC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (typ.) (%)	Max. Capacitive Load (μ F) ⁽¹⁺²⁾
RAC10-3.3SC/277	80-305	3.3	2500	75	50000
RAC10-05SC/277	80-305	5	2000	78	36000
RAC10-12SC/277	80-305	12	840	80	8600
RAC10-15SC/277	80-305	15	670	78	6000
RAC10-24SC/277	80-305	24	420	80	2700
RAC10-05DC/277	80-305	\pm 5	\pm 1000	77	\pm 21000
RAC10-12DC/277	80-305	\pm 12	\pm 420	79	\pm 3700
RAC10-15DC/277	80-305	\pm 15	\pm 340	79	\pm 2900

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

Input Voltage Range (with Derating)	80-305VAC or 113-430VDC	
Rated Power	10 Watts	
Input Frequency Range (for AC Input)	47-63Hz	
Input Current (full load)	115VAC	250mA typ.
	230VAC	160mA typ.
No Load Power Consumption	230VAC	300mW max.
Inrush Current (cold Start-Up)	115VAC	15A max.
	230VAC	30A max.
Leakage Current	250VAC/50Hz	0.25mA max.
External Fuse Recommended	1.5A slow blow type	
Output Voltage Accuracy	3.3V	\pm 3% typ.
	all others	\pm 2% typ.
Line Voltage Regulation (low line, high line at full load)	\pm 0.3% typ.	
Load Voltage Regulation (0 -100% Load)	3.3V, 5V	-1.5% typ.
	12V	\pm 1% typ.
	all others	\pm 0.5% typ.
Minimum Load	0%	
Output Ripple and Noise (with 0.1 μ F across outputs @20MHz bandwidth)	3.3V / 5V	50mVp-p typ.
	12V / 15V / 24V	125mVp-p typ.
	\pm 5	200mVp-p typ.
	\pm 12	125mVp-p typ.
	\pm 15	200mVp-p typ.
Operating Frequency	100kHz	
Hold-up time	230VAC/50Hz	60ms min.
Isolation Voltage (input to output)	3.75kVAC / 1 minute	
Short Circuit Protection	Hiccup, Automatic Restart	

continued on next page

Derating-Graph (Ambient Temperature)



Refer to Application Notes

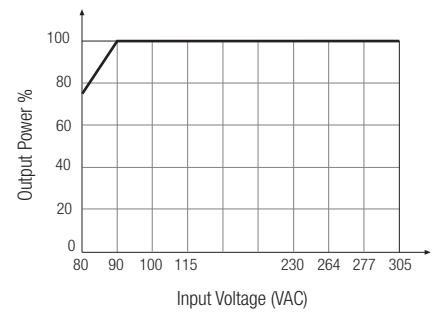
Specifications (measured at TA 25°C, full load after warm-up)

Output Overvoltage Protection		Latch off
Over Voltage Category		OVC II
Overcurrent Protection		Automatic Recovery
Operating Temperature Range	(free air convection, with derating)	-20°C to +70°C
Storage Temperature Range		-40°C to +75°C
Humidity		95% RH max.
Case Material		Epoxy with Fibreglass (UL94V-0)
Dimension (L x W x H)		52.4 x 27.4 x 23.5mm
Package Weight		62g±5g

Certifications

UL General Safety	Report: E224736-A20	UL60950-1, 2nd Edition
IEC/EN General Safety	Report: SPCLVD1210109	EN60950-1, 2nd Edition
EMC	Report: T121026N02-E	EN 55022 Class B
	Report: T121026N02-E	EN 55024
MTBF (+25°C)	using MIL-HDBK-217F	320 x 10 ³ hours
(+70°C)	using MIL-HDBK-217F	120 x 10 ³ hours

Input Voltage vs Load



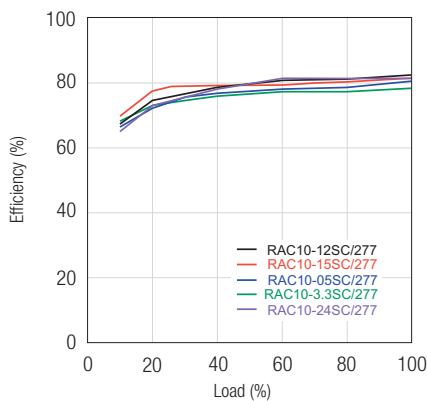
Notes:

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

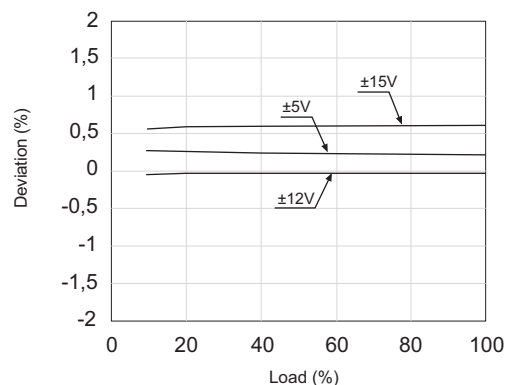
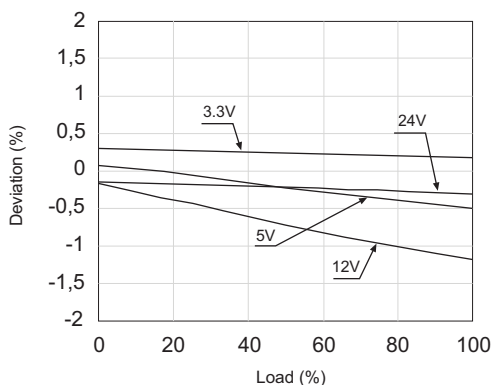
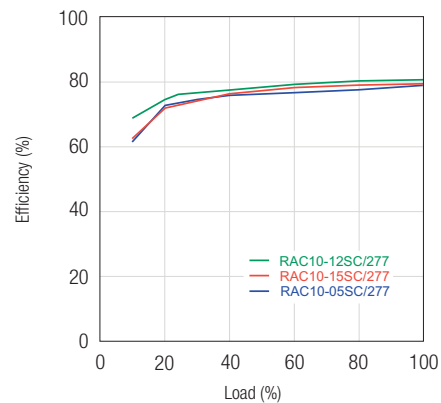
Note2: If used @ 115VAC / 60Hz with full load, max. capacitive load is less, please contact RECOM for detailed information.

Characteristics (measured @ 115/230VAC, 50/60Hz after warm up)

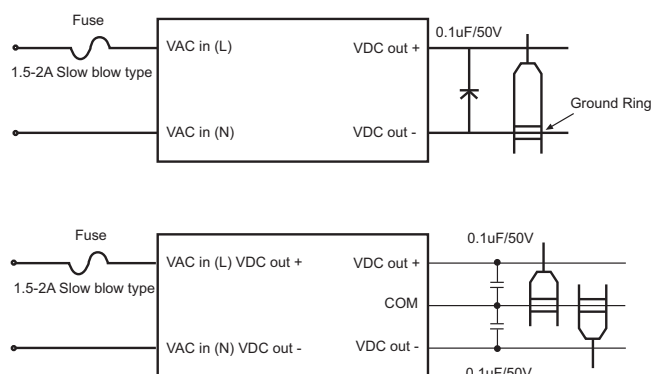
RAC10-xxSC/277



RAC10-xxDC/277

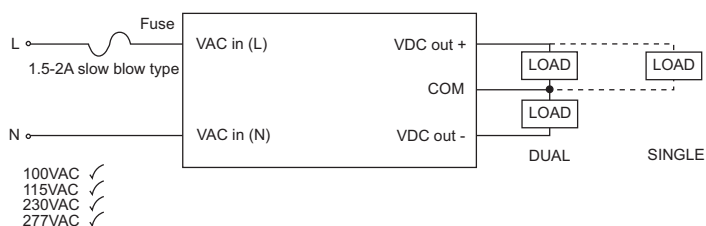


Application Notes



1. Recommended external input fuse 1.5A / slow blow type.
2. Do not use scope ground lead to measure the output ripple & noise.

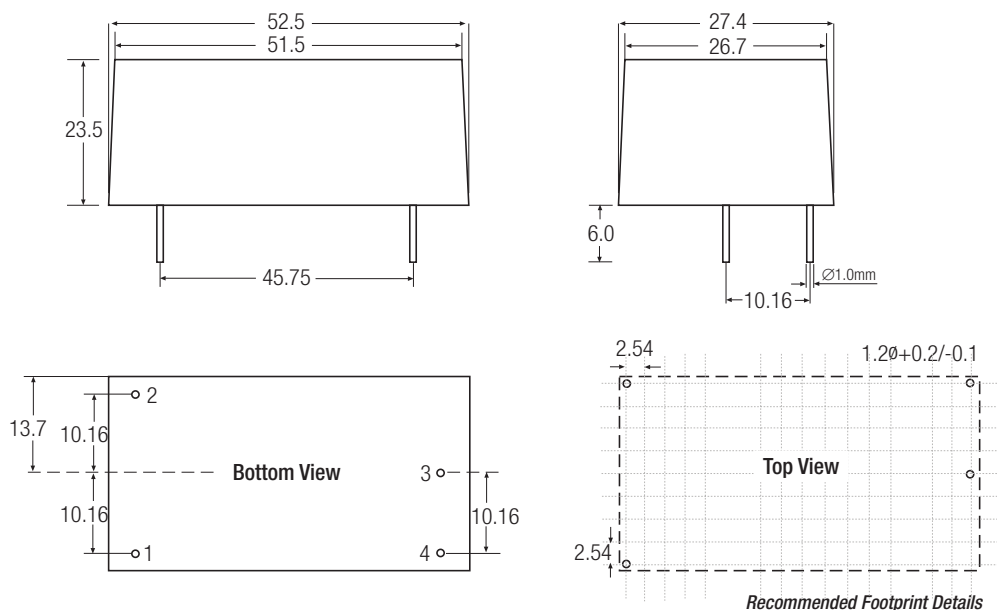
Standard Application Circuit



Standard Package Style and Pinning

RAC10-xxSC/277

RAC10/277

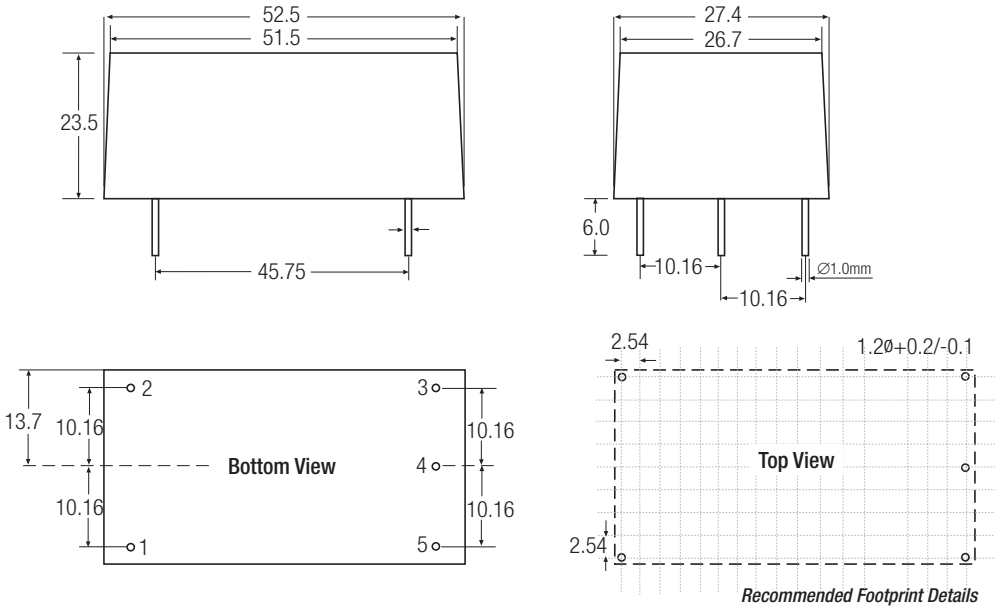


Pin Connections-

Pin #	Single Out
1	VAC in (N)
2	VAC in (L)
3	-VDC out
4	+VDC out

XX.X ± 0.5 mm
XX.XX ± 0.25 mm

RAC10-xxDC/277



Pin Connections-

Pin #	Single Out
1	VAC in (N)
2	VAC in (L)
3	-VDC out
4	COM
5	+VDC out

XX.X ± 0.5 mm
XX.XX ± 0.25 mm