

Features

Regulated Converters

- Universal Input 90-264VAC
- High efficiency up to 77%
- Isolated Output 3kVAC / 1 min
- Short Circuit Protection
- Meet EN55022 Class B
- Low Standby Power Consumption

Selection Guide

Part Number	Input Voltage (VAC)	Output Voltage (VDC)	Output Current (max.)	Efficiency (Typ.)	Max. Capacitive Load
RAC05-3.3SC*	90-264	3.3	1250	70	2200μF
RAC05-05SC*	90-264	5	1000	73	2200μF
RAC05-09SC*	90-264	9	556	75	1200μF
RAC05-12SC*	90-264	12	420	76	1000μF
RAC05-15SC*	90-264	15	340	76	680μF
RAC05-24SC*	90-264	24	210	77	330μF
RAC05-05DC*	90-264	±5	±500	76	±900μF
RAC05-12DC*	90-264	±12	±210	76	±220μF
RAC05-15DC*	90-264	±15	±170	77	±150μF

* add suffix /W for wired version

Specifications

(Ta=25°C and after warm-up, measured at 115VAC/60Hz and 230VAC/50Hz)

Input Voltage Range	90-264VAC or 120-370VDC	
Rated Power	5 Watts max.	
Input Frequency	47-440Hz	
Input Current (Full Load)	115VAC / 230VAC	110mA / 70mA typ.
Inrush Current (<2ms)	115VAC / 230VAC	30A / 60A max.
No Load Power Consumption	0.25W max.	
External Input Fuse required	1.5A / Slow Blow Type	
Output Voltage Accuracy (Full Load)	115VAC / 230VAC	2% max.
Line Voltage Regulation (Full Load)	LL-HL	±0.3% typ.
Load Voltage Regulation	5-100% Load	±0.5% typ.
Output Ripple&Noise @115/230VAC	3.3V	120mV max.
(20MHz limited with 100nF across output)	All Others	150mV max.
Switching Frequency (Full Load)	132kHz	
Efficiency (Full Load)	see Selection Guide	
Hold-Up Time (Full Load)	115VAC	10ms typ.
Leakage Current	0.85mA max.	
Isolation Voltage	Input-Output	3kVAC / 1minute
Isolation Capacitance	Input-Output	1000pF typ.
Isolation Resistance	Input-Output	1G Ω min.
Short Circuit Protection	Hiccup, Automatic Restart	
Overvoltage Protection	3.3V	4.8 V - 5.4V
	All Others	110% - 135%
Operating Temperature Range	-25°C to +55°C (without Derating)	
(Natural Convection)	-25°C to +75°C (with Derating)	
Storage Temperature Range	-40°C to +100°C	
Case Material	UL94V-0 Black Plastic	
Potting Material	Epoxy UL94V-0	
Relative Humidity	95% RH	

continued on next page

POWERLINE

AC/DC-Converter

with 3 year Warranty

RECOM

5 Watt Single / Dual Output



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

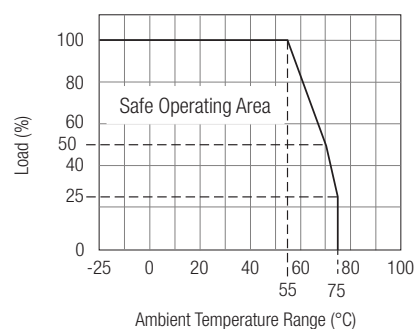
RAC05-C

Description

Compact, low cost, high efficiency, universal input switching AC/DC power module for PCB or wired mounting with single or dual outputs. CE marked and UL/cUL certified.

Derating Graph

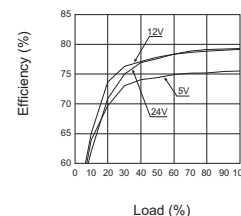
(Ambient Temperature)



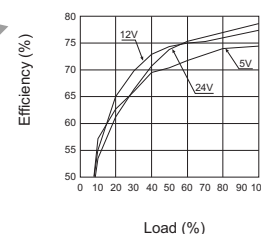
Specifications (measured at TA 25°C, full load after warm-up)

Package Weight	35g / 38g	
Packing Quantity	Single Output	10pcs
	Dual Output	9pcs
	Wired Version	1pc
MTBF (25°C)	Using MIL-HDBK 217F	>400 x 10 ³ hours
	Using MIL-HDBK 217F	>200 x 10 ³ hours
Emmissions	CE	EN 55022: 2006 + A1: 2007 / Class B
	EMC	EN 55024:1998 + A1:2001 + A2:2003
	Harmonics	EN 61000-3-2:2006 / Class A
	Flicker	EN 61000-3-3:1995 + A1:2001 + A2:2005
Immunity	ESD	IEC 61000-4-2 / Criterion B
	RS	IEC 61000-4-3 / Criterion A
	EFT	IEC 61000-4-4 / Criterion B
	Surge	IEC 61000-4-5 / Criterion B
	CS	IEC 61000-4-6 / Criterion A
	PMF	IEC 61000-4-8 / Criterion A
	Voltage Variations	IEC 61000-4-11 / Criteria B + C
Certifications:		
UL General Safety	Report: E224736	UL-60950-1, 2nd Edition
cUL	Report: E224736	C22.2 No. 60950-1-07, 2nd Edition
EN General Safety	Report: SPCLVD1105038	EN-60950-1, 2nd Edition
CE		EN55022 Class B

Vin=115VAC

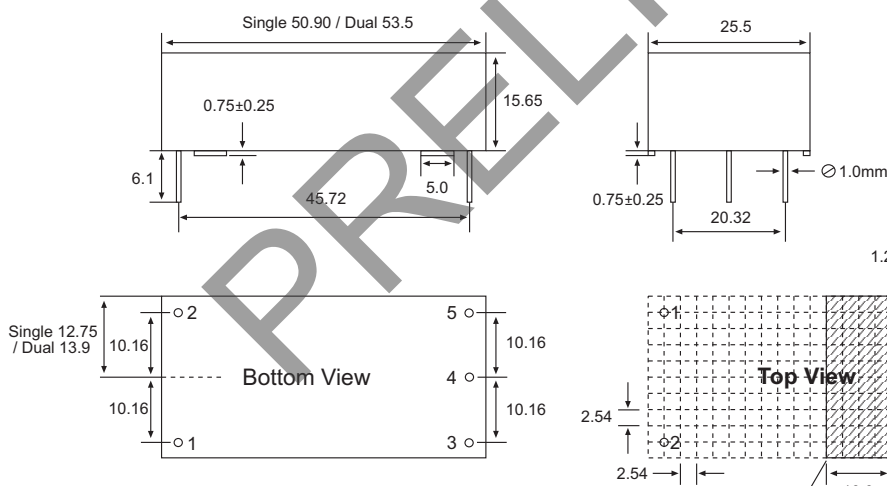


Vin=230VAC



Package Style and Pinning

PCB Mout Version (Standard)



Pin Connections

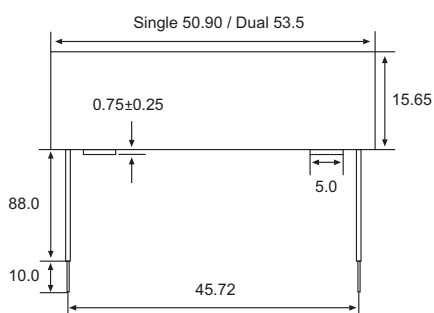
Pin #	Single Out	Dual Out
1	VAC in (N)	VAC in (N)
2	VAC in (L)	VAC in (L)
3	+VDC out	+VDC out
4	-VDC out	Com
5	no Pin	-VDC out

NC = No Connection

xx.x = ±0.5mm

xx.xx = ±0.25mm

Wire Version with Suffix „W“ (Standard)



Recommended Footprint Details

Wire Connections

Pin #			Single out	Dual out
1 (Blue)	AWG#22	1015	VAC in (N)	VAC in (N)
2 (Brown)	AWG#22	1015	VAC in (L)	VAC in (L)
3 (Red)	AWG#22	1007	+VDC out	+VDC out
4 (Black)	AWG#22	1007	-VDC out	
			Common	
5 (Orange)	AWG#22	1007	no Wire	-VDC out

NC = No Connection

xx.x = ±0.5mm

xx.xx = ±0.25mm