

Features

Regulated Converter

- 2"x3" optional 2"x4", low profile design
- 60W power from -40°C up to +55°C ambient
- Operating temperature up to +85°C with derating
- 4 kVAC/1min reinforced isolation
- 2MOPP medical certified, B and BF compliant
- 4000m/5000m (medical/ITE) operating altitude
- Class B EMC filter built-in



RACM60-K/OF

60 Watt
Open Frame
2"x3" & 2"x4"
Single Output



Description

The multi-purpose, industrial + household + medical grade AC/DC converter series RACM60-K/OF delivers 60 Watts of output power from -40°C to +55°C with natural air convection only, and up to +85°C with derating or forced cooling. With a clear focus on extended thermal performance for systems where space is limited, these 2" x 3" compact modules are designed to gain highest overall efficiency levels over the full output load range from universal AC inputs. The RACM60-K/OF has ANSI/AAMI/IEC 60601-1 medical safety and EN 60601-1-2 medical EMC certifications and offers 4kVAC/1 min isolation, 2MOPP and designed to meet B and BF requirements. It is additionally certified to IEC/EN62368-1(CB Report) and IEC61558-1/-2-16 for industrial applications and IEC/EN60335-1 for household appliances. The robust built-in Class B EMC filter has sufficient margin to allow both Installation Class II or Class I PELV with grounded output. A range of mechanical fixing options makes the RACM60 suitable for many different mounting conditions: the standard chassis mount part mates with Molex connectors and the /PCB option permits direct installation in printed circuit boards. Additionally, a 2" x 4" footprint for backwards-compatibility with legacy designs is available on request.

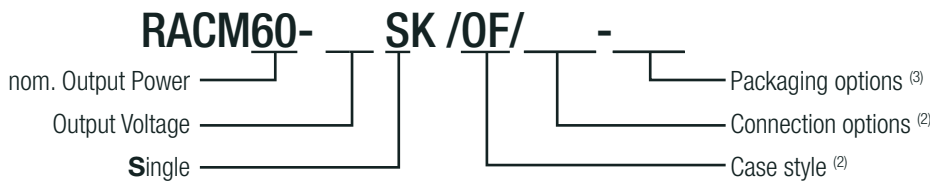
Selection Guide

Part Number	Input Voltage Range [VAC]	Output Voltage [VDC]	Output Current [mA]	Output Power [W]	Efficiency typ. (1) [%]
RACM60-05SK/OF (2,3)	80-264	5	8000	40	89
RACM60-12SK/OF (2,3)	80-264	12	5000	60	90
RACM60-15SK/OF (2,3)	80-264	15	4000	60	90
RACM60-24SK/OF (2,3)	80-264	24	2500	60	90
RACM60-36SK/OF (2,3)	80-264	36	1667	60	90
RACM60-48SK/OF (2,3)	80-264	48	1250	60	90

Notes:

Note1: Efficiency is tested at nominal input and full load at +25°C ambient

Model Numbering



Notes:

Note2: "/OF" = standard 2"x3" open frame version with standard header connectors
 "/OF/PCB-T" = 2"x3" open frame with PCB mounting pins in single tray packaging (05, 12, 24Vout versions available)
 "/OF/2x4" = 2"x4" open frame version with standard header connectors (12 and 24Vout versions available)
 For other case/connection/footprint options, please contact RECOM technical support

Note3: without suffix, standard single pack (1pcs/cardboard box)
 add suffix "-CTN" for project packaging (4 layers of tray within a carton, for "/OF" only + MOQ= 1152pcs)
 for detail information, refer to "PACKAGING INFORMATION"

Ordering Examples:

RACM60-05SK/OF	5Vout	2" x 3"	open frame	standard header connector	1pcs/cardboard box
RACM60-24SK/OF/PCB-T	24Vout	2" x 3"	open frame	PCB mounting pins	12pcs/tray packaging
RACM60-12SK/OF/2x4	12Vout	2" x 4"	open frame	standard header connector	1pcs/cardboard box
RACM60-12SK/OF-CTN	12Vout	2" x 4"	open frame	standard header connector	48pcs/carton (MOQ= 1152pcs)



IEC/EN62368-1 (pending)
 ANSI/AAMI ES60601-1 Ed. 3.1 certified
 CSA/CAN-C22.2 No. 60601-1:14 certified
 IEC/EN60335-1 (pending)
 IEC/EN61558-1 (pending)
 IEC/EN61558-2-16 (pending)
 EN60601-1-2 compliant
 EN55032 compliant
 EN55035 compliant
 CB Report (pending)

Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated)

BASIC CHARACTERISTICS

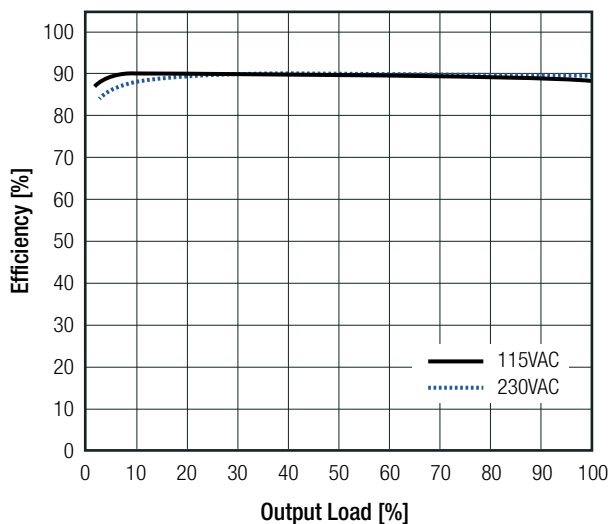
Parameter	Condition		Min.	Typ.	Max.
Internal Input Filter			Pi Type		
Nom. Input Voltage			100VAC		240VAC
Input Voltage Range ^(3,4)			80VAC 120VDC		264VAC 370VDC
Input Current	115VAC 230VAC				1400mA 600mA
Inrush Current	cold start	115VAC 230VAC			30A 60A
ErP Standby Mode Conformity (Output Load Capability)	115/230VAC	Input Power: 0.5W 1.0W		0.3W 0.7W	
No load Power Consumption	230VAC			100mW	
Input Frequency Range	AC Input		47Hz		63Hz
Minimum Load			0%		
Power Factor	115VAC 230VAC		0.6 0.5		
Start-up Time				150ms	
Rise Time				100ms	
Hold-up Time	115VAC 230VAC		12ms 50ms		
Internal Operating Frequency	100% load at nominal Vin			100kHz	
Output Ripple and Noise ⁽⁵⁾	20MHz BW	5Vout others			200mVp-p 1% of Vout

Notes:

- Note3: The products were submitted for safety files at AC-Input operation (90-264VAC)
- Note4: Output power derating for Line-input of less than 90VAC (derate linearly from 100% at 90VAC to 80% at 80VAC)
- Note5: Measurements are made with a 0.1µF MLCC & 10µF E-cap in parallel across output. (low ESR)

Efficiency vs. Load

RACM60-05SK/OF



others

