!NOT RECOMMENDED FOR NEW DESIGNS!
(LAST TIME BUY: 30TH OCT 2020 / 31ST MAR 2026)

Features

Regulated Converters

- Universal input 80-264VAC
- High efficiency up to 77%
- Isolated output 3kVAC/1 minute
- Short circuit protection
- Meet EN55032 class B
- Low standby power consumption

RECOM
AC/DC Converter

RAC05-C

5 Watt Single & Dual Output

YEAR 3 Warranty

Description

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

Selection Guide (Last time buy: 31st Mar 2026)

Part Number	Input Voltage Range [VAC]	Output Voltage [VDC]	Output Current [mA]	Efficiency typ (1) [%]	Max. Capacitive Load (2,3) [µF]
RAC05-05SC (4)	80-264	5	1000	73	6800
RAC05-12SC (4)	80-264	12	420	76	1500
RAC05-15SC (4)	80-264	15	340	76	750
RAC05-24SC (4)	80-264	24	210	77	330
RAC05-12DC (4)	80-264	±12	±210	76	±560
RAC05-15DC (4)	80-264	±15	±170	76	±220

NRND (Last time buy: 30th Oct 2020)

Part Number	Input Voltage Range [VAC]	Output Voltage [VDC]	Output Current [mA]	Efficiency typ (1) [%]	Max. Capacitive Load (2,3) [µF]
RAC05-3.3SC (4)	80-264	3.3	1250	70	12000
RAC05-09SC (4)	80-264	9	556	75	2500
RAC05-05DC (4)	80-264	±5	±500	73	±3000

Notes:

Note1: Efficiency is tested at nominal input and full load at +25°C ambient
Note2: Measured @ 230VAC / 50Hz / Ta=25°C with constant resistant mode at full load
Note3: If used @ 115VAC / 60Hz with full load, max. capacitive load is less, please contact RECOM Techsupport for detailed information

E224736

UL60950-1 certified
CAN/CSA-C22.2 No. 60950-1 certified
IEC/EN60950-1 certified
EN55032 compliant
EN55024 compliant

PREFERRED ALTERNATIVES
Please consider these alternatives:

RAC05-K/277/W Series

RAC10-K/277 Series

Model Numbering

RAC05-__ _C/W

nom. Output Power
nom. Output Voltage
Wired option (4)
Single or **D**ual

Notes:

Note4: add suffix „/W“ for wired version
without suffix, standard THT version

Ordering Examples:

RAC05-05SC	5 Watt	5Vout	Single Output	THT version
RAC05-05SC/W	5 Watt	5Vout	Single Output	wired version
RAC05-12DC	12 Watt	5Vout	Dual Output	THT version
RAC05-12DC/W	12 Watt	5Vout	Dual Output	wired version

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RECOM AC/DC Converter

RAC05-C Series

Specifications (measured at Ta= 25°C, full load otherwise noted)

BASIC CHARACTERISTICS

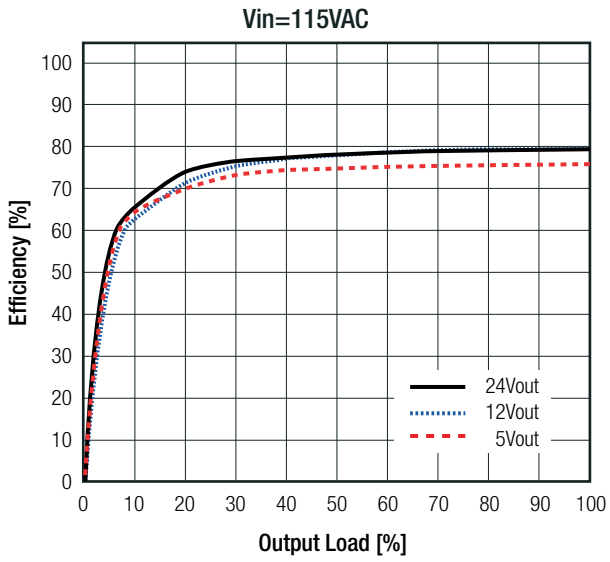
Parameter	Condition		Min.	Typ.	Max.
Input Voltage Range [5]	nom. Vin = 230VAC		80VAC 115VDC		264VAC 370VDC
Input Current	115VAC 230VAC			110mA 70mA	
Inrush Current	<2ms	115VAC 230VAC			30A 60A
No load Power Consumption					250mW
Input Frequency Range	AC Input		47Hz		440Hz
Minimum Load			0%		
Hold-up time	115VAC			10ms	
Internal Operating Frequency	100% load at nominal Vin			132kHz	
Output Ripple and Noise [6]	20MHz BW	3.3Vout all others			120mVp-p 150mVp-p

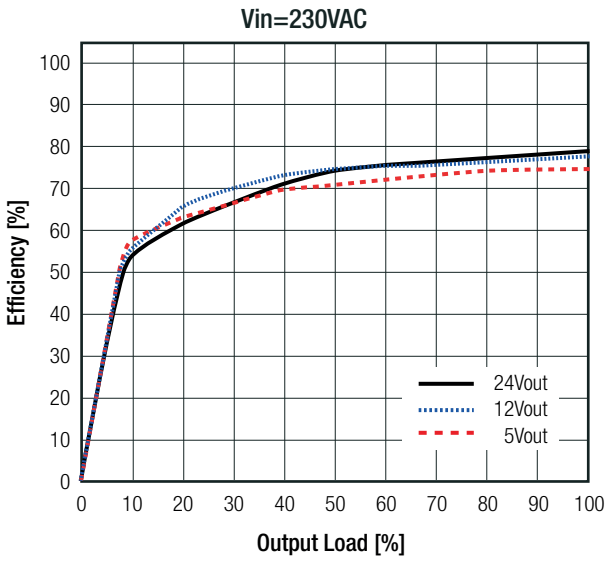
Notes:

Note5: Refer to line derating graph on page PA-3

Note6: Measurements are made with a 0.1µF MLCC across output (low ESR)

Efficiency vs. Load





REGULATIONS

Parameter	Condition	Value
Output Accuracy		±2.0% max.
Line Regulation	low line to high line	±0.3% typ.
Load Regulation [7]	5% to 100% load	0.5% typ.

Notes:

Note7: Operation below 5% load will not harm the converter, but specifications may not be met

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RECOM AC/DC Converter

RAC05-C Series

Specifications (measured at Ta= 25°C, full load otherwise noted)

PROTECTIONS

Parameter	Type		Value
Short Circuit Protection (SCP)	below 100mΩ		Hiccup mode, automatic recovery
Over Voltage Protection (OVP)	zener diode clamp	3.3Vout all others	145% - 165% 110% - 135%
Over Voltage Category			OVCII
Isolation Voltage	I/P to O/P	tested for 1 minute	3kVAC
Isolation Resistance	I/P to O/P		1GΩ min.
Isolation Capacitance			1000pF typ.
Leakage Current			0.85mA max.

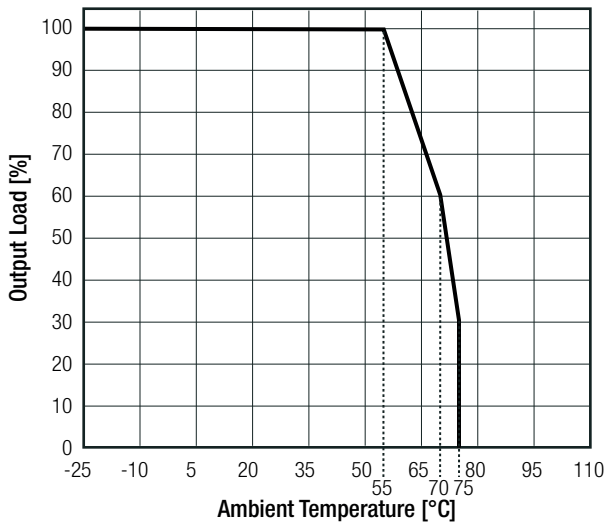
Notes:

Note8: Refer to local safety regulations if input over-current protection is also required. Recommended fuse: slow blow type

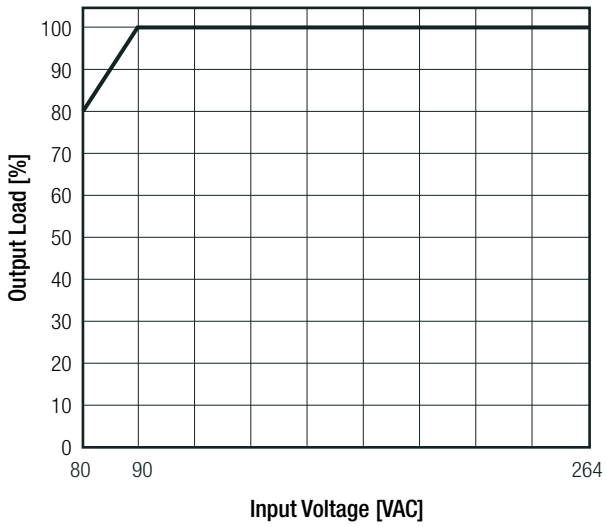
ENVIRONMENTAL

Parameter	Condition		Value
Operating Temperature Range [8]	@ natural convection 0.1m/s	full load	-25°C to +55°C
		refer to derating graph	-25°C to +75°C
Operating Altitude			2000m
Operating Humidity	non-condensing		95% RH max.
Pollution Degree			PD2
MTBF	according to MIL-HDBK-217F, G.B.	+25°C +55°C	>400 x 10^3 hours >200 x 10^3 hours

Derating Graph
(@Chamber and natural convection 0.1m/s)



Line Derating



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Specifications (measured at Ta= 25°C, full load otherwise noted)

SAFETY AND CERTIFICATIONS		
Certificate Type (Safety)	**Report / File Number**	**Standard**
Information Technology Equipment - General Requirments for Safety	E224736-A1-UL	UL60950-1, 2nd Edition, 2007 CAN/CSA-C22.2 No. 60950-1-07, 2nd Edition, 2007
Information Technology Equipment - General Requirments for Safety	SPCLVD1605077-06	IEC60950-1:2005 2nd Edition + A2:2013 EN60950-1:2006 + A2:2013
EAC Safety of Low Voltage Equipment	RU-AT.AB37.B.02367	TP TC 004/2011
RoHS2+		RoHS-2011/65/EU + AM-2015/863
EMC Compliance	**Condition**	**Standard / Criterion**
Electromagnetic compatibility of multimedia equipment – Emission Requirements		EN55032:2015
Information technology equipment - Immunity characteristics - Limits and methods of measurement		EN55024:2010 + A1:2015
ESD Electrostatic discharge immunity test	Air ±8.0kV, Contact ±4.0kV	IEC61000-4-2:2008, Criteria A
Radiated, radio-frequency, electromagnetic field immunity test	3V/m	IEC61000-4-3:2008, Criteria A
Fast Transient and Burst Immunity	AC Power Port: ±1.0kV	IEC61000-4-4:2004, Criteria A
Surge Immunity	AC Power Port: L-N ±1.0kV	IEC61000-4-5:2005, Criteria A
Immunity to conducted disturbances, induced by radio-frequency fields	AC Power Port 3.0V	IEC61000-4-6:2008, Criteria A
Power Magnetic Field Immunity	50Hz, 1A/m	IEC61000-4-8:2009, Criteria A
Voltage Dips and Interruptions	Voltage Dips >95% Voltage Dips 30% Voltage Interruptions > 95%	IEC61000-4-11:2004, Criteria A IEC61000-4-11:2004, Criteria A IEC61000-4-11:2004, Criteria B
Limits of Harmonic Current Emissions		EN61000-3-2:2014, Class A
Limits of Voltage Fluctuations & Flicker		EN61000-3-3:2013

DIMENSION AND PHYSICAL CHARACTERISTICS		
Parameter	**Type**	**Value**
Material	case potting	black plastic (UL94V-0) epoxy (UL94V-0)
Dimension (LxWxH)	single dual	50.9 x 25.5 x 16.4mm 53.5 x 27.8 x 16.4mm
Weight	THT version wired version	35g typ. 38g typ.

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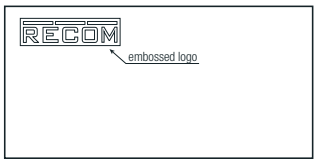
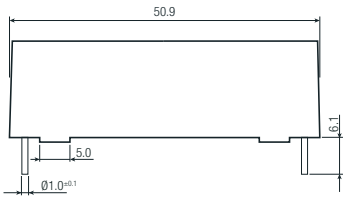
RECOM
AC/DC Converter

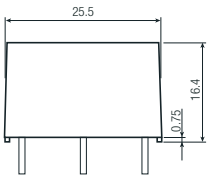
RAC05-C Series

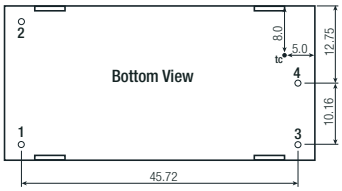
Specifications (measured at Ta= 25°C, full load otherwise noted)

Dimension Drawing Single (mm)

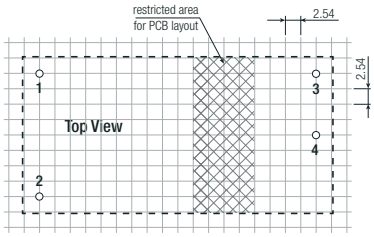








Recommended Footprint Details

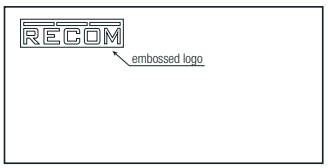


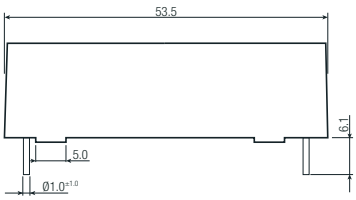
Pin Connections

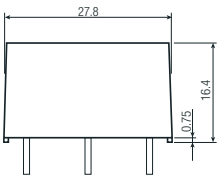
Pin #	Single
1	VAC in (N)
2	VAC in (L)
3	+VDC out
4	-VDC out
5	no pin

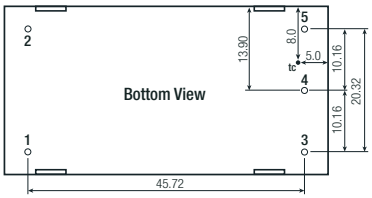
tc= case temperature measuring point
Tolerance: xx.x= ±0.5mm
xx.xx= ±0.25mm

Dimension Drawing Dual (mm)

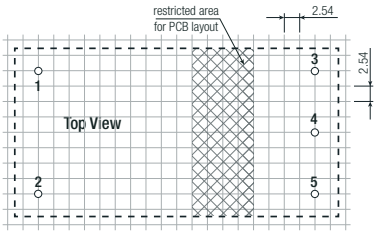








Recommended Footprint Details



Pin Connections

Pin #	Dual
1	VAC in (N)
2	VAC in (L)
3	+VDC out
4	Com
5	-VDC out

tc= case temperature measuring point
Tolerance: xx.x= ±0.5mm
xx.xx= ±0.25mm

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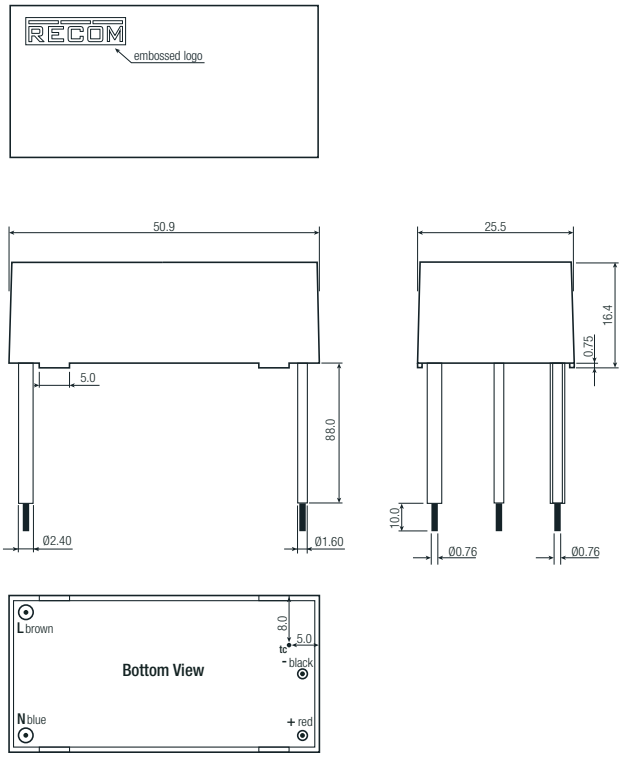
RECOM AC/DC Converter

RAC05-C Series

Specifications (measured at Ta= 25°C, full load otherwise noted)

Dimension Drawing Single wired (mm)

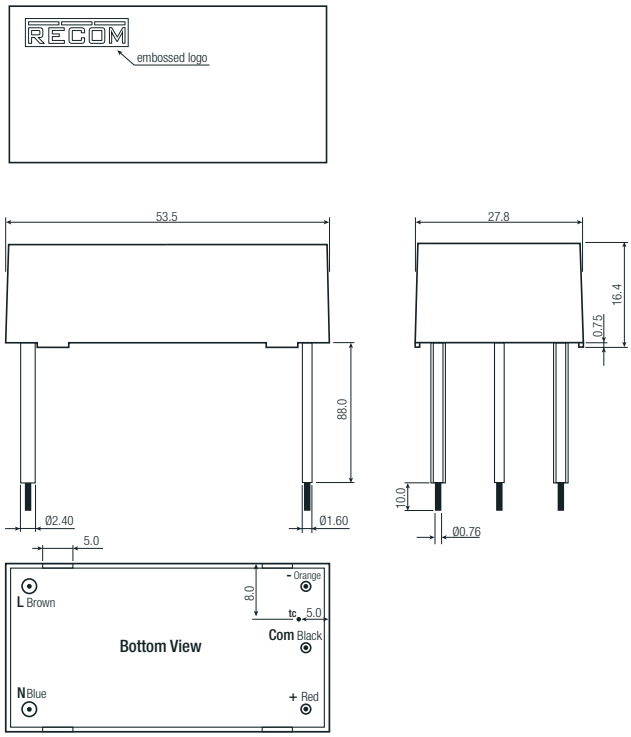


Wired information

#	Function	Wire color	Type	AWG
1	VAC in (N)	blue	UL-1015	22
2	VAC in (L)	bown	UL-1015	22
3	+VDC out	red	UL-1007	22
4	-VDC out	black	UL-1007	22

tc= case temperature measuring point
Tolerance: xx.x= ±0.5mm
xx.xx= ±0.25mm

Dimension Drawing Dual wired (mm)



Wired information

#	Function	Wire color	Type	AWG
1	VAC in (N)	blue	UL-1015	22
2	VAC in (L)	bown	UL-1015	22
3	+VDC out	red	UL-1007	22
4	Com	black	UL-1007	22
5	-VDC out	orange	UL-1007	22

tc= case temperature measuring point
Tolerance: xx.x= ±0.5mm
xx.xx= ±0.25mm

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Specifications (measured at Ta= 25°C, full load otherwise noted)

PACKAGING INFORMATION			
Parameter	**Type**		**Value**
Packaging Dimension (LxWxH)	tube cardbox	THT wired	520.0 x 56.0 x 26.0 520.0 x 195.0 x 67.0
Packaging Quantity	THT single THT dual wired		10pcs 9pcs 20pcs
Storage Temperature Range			-40°C to +100°C
Storage Humidity	non-condensing		95% RH max.

The product information and specifications may be subject to changes even without prior written notice.The product has been designed for various applications; its suitability lies in the responsibility of each customer. The products are not authorized for use in safety-critical applications without RECOM's explicit written consent. A safety-critical application is an application where a failure may reasonably be expected to endanger or cause loss of life, inflict bodily harm or damage property. The applicant shall indemnify and hold harmless RECOM, its affiliated companies and its representatives against any damage claims in connection with the unauthorized use of RECOM products in such safety-critical applications.

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