Features

Adapter Board

- Up to 488VAC input voltage range
- 9A current rating for up 90°C air temperature
- UL Listed components used
- Stable solderability by secure packaging
- Clearances for operating altitude up to 5000m

RECOM Accessory

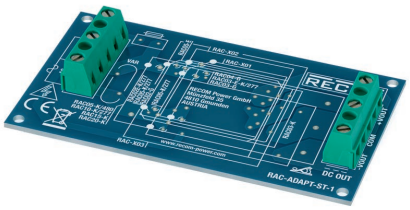
RAC-ADAPT-ST-1

Adapter Board for RECOM AC/DC converters

3 YEAR Warranty

Description

The RAC-ADAPT-ST-1 is an adapter board which allows many of RECOM's latest AC-DC products in the range of 1 to 20 Watts of output power to be fitted with screw terminals for easy connection. Although RECOM's AC-DC modules come equipped with integrated fuses and already meet high immunity levels, space on the board is provided for optional MOV and fusing if preferred. The product comes in a sealed package with a drying agent to ensure long term solderability. Wide input voltage and wide ambient operating temperature ratings of the design and appropriate clearance make it an easy-to-use board for short run or low-volume production and prototyping as well as for evaluation purposes.



Compatible converters

Converter Series	Input Voltage Range [VAC]	nom. Output Voltages [VDC]	Internal Fuse	Converter Link
RAC01-GA	85-264	5, 12	fusible resistor	RAC01-GA.pdf
RAC01-GB	85-264	3.3, 5, 12, 24	fusible resistor	RAC01-GB.pdf
RAC02-GA	85-264	3.3, 5, 12, 15, 24	fusible resistor	RAC02-GA.pdf
RAC02-GB	85-264	3.3, 5, 12, 15, 24	fusible resistor	RAC02-GB.pdf
RAC03-K	85-264	3.3, 5, 12, 15, 18, 24	fusible resistor	RAC03-K.pdf
RAC03-GA	85-264	3.3, 5, 12, 15, 24	T1A	RAC03-GA.pdf
RAC03-GB	85-264	3.3, 5, 9, 12, 15, 24	T1A	RAC03-GB.pdf
RAC04-GA	85-305	3.3, 5, 9, 12, 15, 24	T1A	RAC04-GA.pdf
RAC04-GB	85-264	3.3, 5, 9, 12, 15, 24	T1A	RAC04-GB.pdf
RAC3.5-K/277	85-305	3.3, 5, 12, 15, 24	T1A	RAC3.5-K/277.pdf
RAC05-K/277	85-305	3.3, 5, 12, 15, 24	T1A	RAC05-K/277.pdf
RAC05-K/480	85-528	5, 12	fusible resistor	RAC05-K/480.pdf
RAC10-K/277	85-305	3.3, 5, 12, 15, 24, ±12, ±15	T2A	RAC10-K/277.pdf
RAC15-K	85-264	5, 12, 15, 24	T3.15A	RAC15-K.pdf
RAC20-K	85-264	5, 12, 15, 24, 48, ±12, ±15	T3.15A	RAC20-K.pdf

ELECTRICAL CHARACTERISTICS

Parameter	Condition	Min.	Typ.	Max.
Absolute Maximum Input Voltage	3000m			488VAC 690VDC
	5000m			329VAC 465VDC
Input Current	T_{AMB}= 90°C			9A
Input Fuse Placeholder (1)	5.08mm pitch package for radial leaded fuse with hole size 0.9mm			
Varistor Placeholder (2)	7.5mm/3.5mm pitch			

Notes:

Note1: Refer to local safety regulations if input over-current protection is also required
RECOM suggests: Littlefuse 369 series

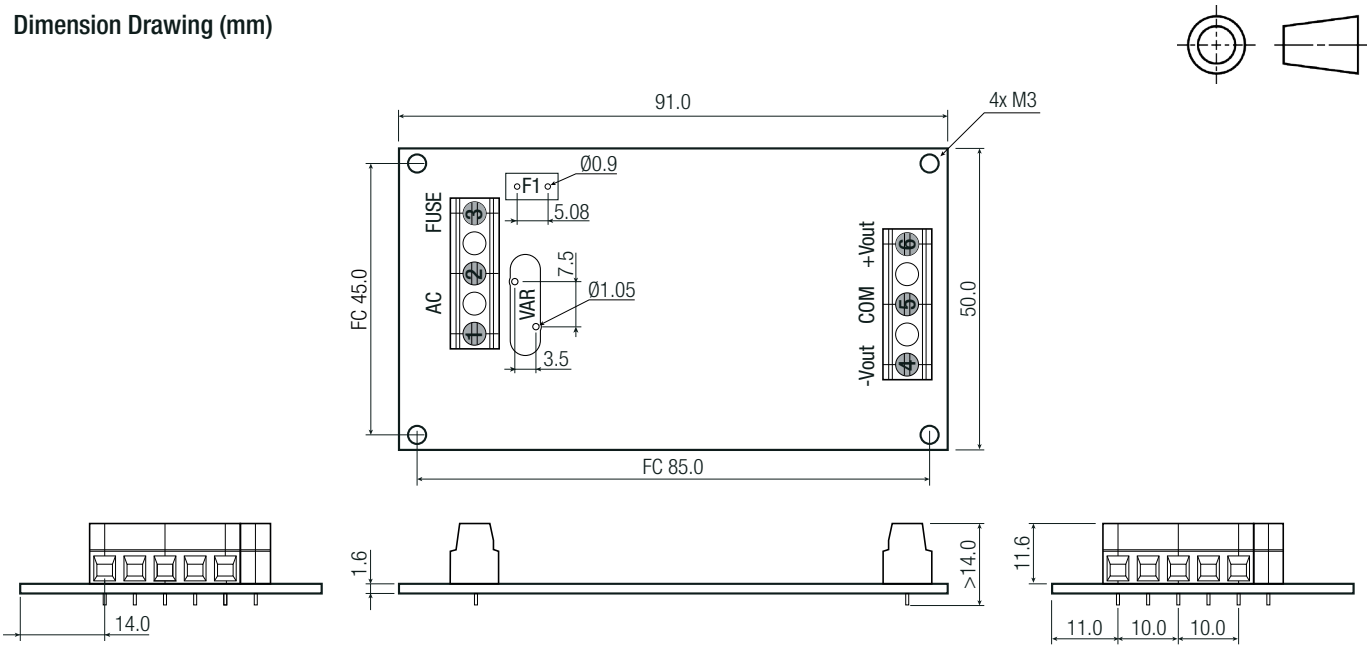
Note2: If Varistor is installed, input fuse is always mandatory
RECOM suggests: EPCOS S14 series

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

DIMENSION AND PHYSICAL CHARACTERISTICS

Parameter	Type	Value
Dimension (LxWxH)		91.0 x 50.0 x 14.0mm
Weight		19g typ.

Dimension Drawing (mm)



Screw Terminal Information

#	Function	recommended	Wire
1	FUSE	16AWG	1-1.5mm²
2	VAC	16AWG	1-1.5mm²
3	VAC	16AWG	1-1.5mm²

Output Screw Terminal

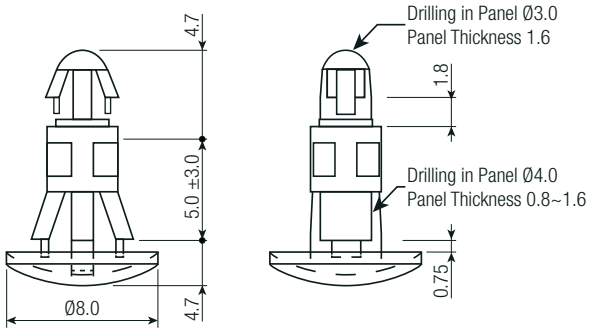
#	Function	recommended	Wire
4	-Vout	16AWG	1-1.5mm²
5	COM	16AWG	1-1.5mm²
6	+Vout	16AWG	1-1.5mm²

wire stripping length: 6mm
recommended tightening torque: 0.6Nm max.
NC= no connection
FC= fixing centres
Tolerance: xx.x= ±0.5mm
xx.xx= ±0.25mm

Snap-on stop spacer suggestion (Model: Wuerth 709440800)

Notes:

Note3: If spacers are needed, RECOM suggests to use Wuerth 70944xx00 series or similar)

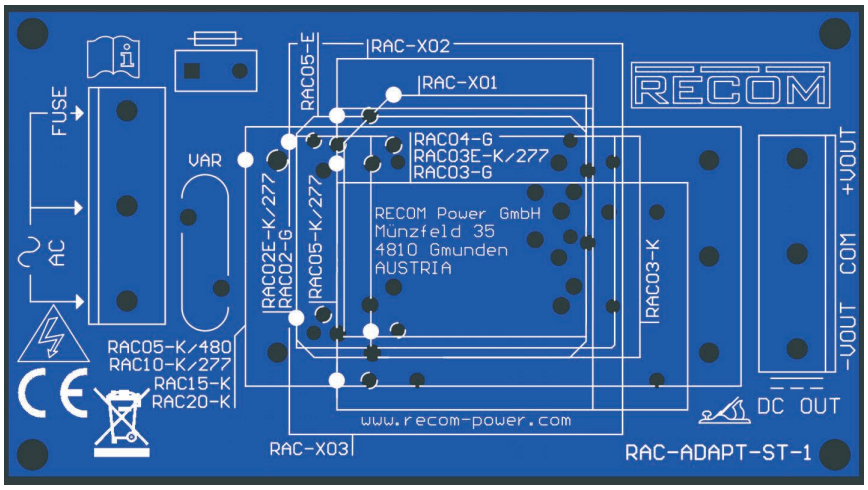


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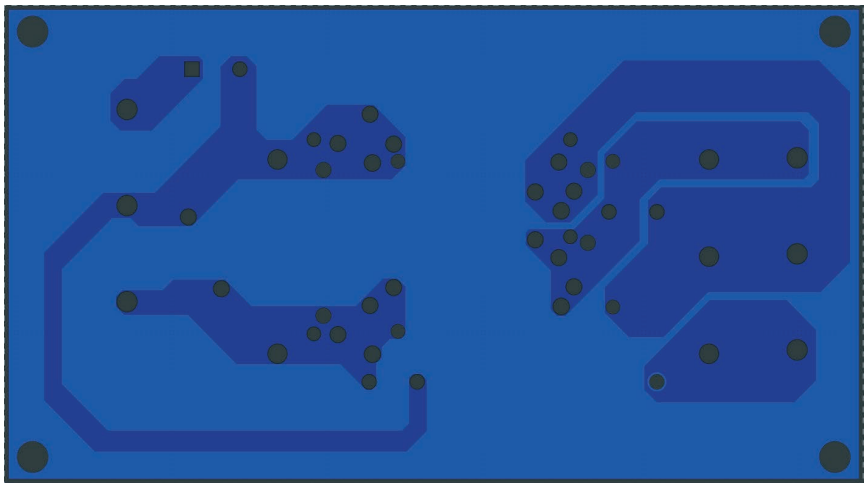
INSTALLATION AND APPLICATION

Layout

Top Layer



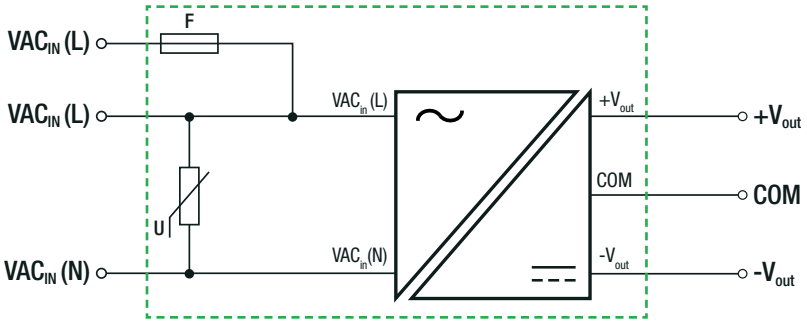
Bottom Layer



Notes:

Note4: User must ensure adequate isolation between bottom of RAC-ADAPT-ST-1 board and any conductive surfaces

Schematic



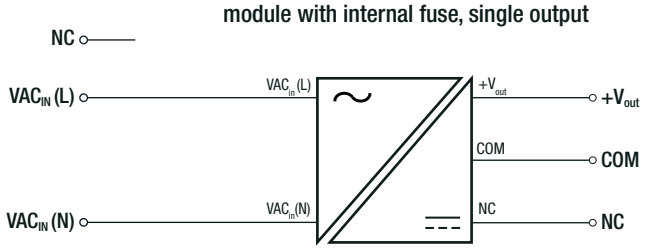
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Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated)

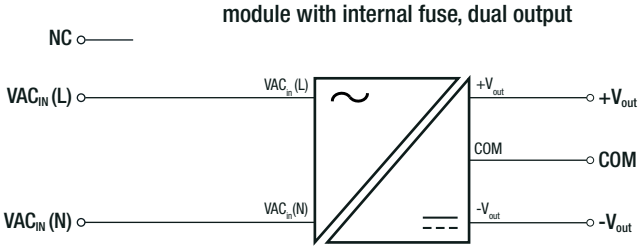
INSTALLATION AND APPLICATION

Application Circuits

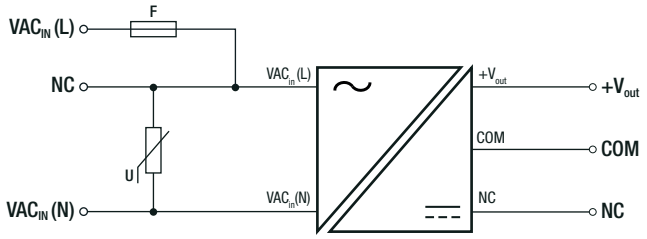
module with internal fuse, single output



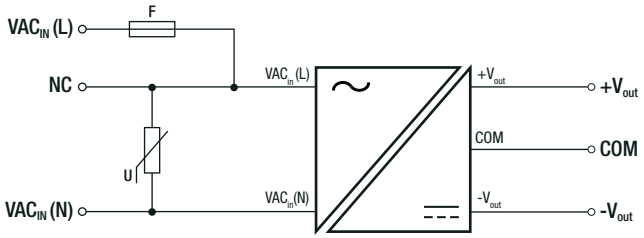
module with internal fuse, dual output



module with external fuse, single output



module with external fuse, dual output



Note: The usage of a cable strain relief is strongly recommended.

PACKAGING INFORMATION

Parameter	Type	Value
Packaging Dimension (LxWxH)	moisture barrier bag	155.0 x 125.0 x 22.0mm
Packaging Quantity		1pcs
Storage Temperature Range		-30°C to +90°C

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.