



Installation, Operation and Maintenance instruction

REE - Electronic fan speed controller



Table of contents

SAFETY AND PRECAUTIONS	3
PRODUCT DESCRIPTION	4
ARTICLE CODES	4
INTENDED AREA OF USE	4
TECHNICAL DATA	4
STANDARDS	4
OPERATIONAL DIAGRAMS	5
WIRING AND CONNECTIONS	5
MOUNTING INSTRUCTIONS IN STEPS	5
OPERATING INSTRUCTIONS	7
TRANSPORT AND STORAGE	7
WARRANTY AND RESTRICTIONS	7
MAINTENANCE	7

SAFETY AND PRECAUTIONS



Read all the information, the datasheet, Modbus map, mounting and operating instructions and study the wiring and connection diagram before working with the product. For personal and equipment safety, and for optimum product performance, make sure you entirely understand the contents before installing, using, or maintaining this product.



For safety and licensing (CE) reasons, unauthorised conversion and /or modifications of the product are inadmissible.



The product should not be exposed to abnormal conditions, such as extreme temperatures, direct sunlight or vibrations. Long-term exposure to chemical vapours in high concentration can affect the product performance. Make sure the work environment is as dry as possible; avoid condensation.



All installations shall comply with local health and safety regulations and local electrical standards and approved codes. This product can only be installed by an engineer or a technician who has expert knowledge of the product and safety precautions.



Avoid contacts with energised electrical parts. Always disconnect the power supply before connecting, servicing or repairing the product.



Always verify that you apply appropriate power supply to the product and use appropriate wire size and characteristics. Make sure that all the screws and nuts are well tightened and fuses (if any) are fitted well.



Recycling of equipment and packaging should be taken into consideration and these should be disposed of in accordance with local and national legislation / regulations.



In case there are any questions that are not answered, please contact your technical support or consult a professional.

PRODUCT DESCRIPTION

The **REE** speed controller provides manual control of the rotational speed of voltage controllable (230 VAC, 50 Hz) motors by varying the supply voltage through phase angle control. Several motors can be connected as long as the current limit is not exceeded.

ARTICLE CODES

Code	Current range, [A]	Fuse, [A] (5*20 mm)
REE1	0,1–1,0	F-1,25 A-H
REE2	0,2–2,0	F-2,5 A-H
REE4	0,4–4,0	F-5,00 A-H

INTENDED AREA OF USE

- Manual control of the motor / fan speed in HVAC applications
- For indoor use only

TECHNICAL DATA

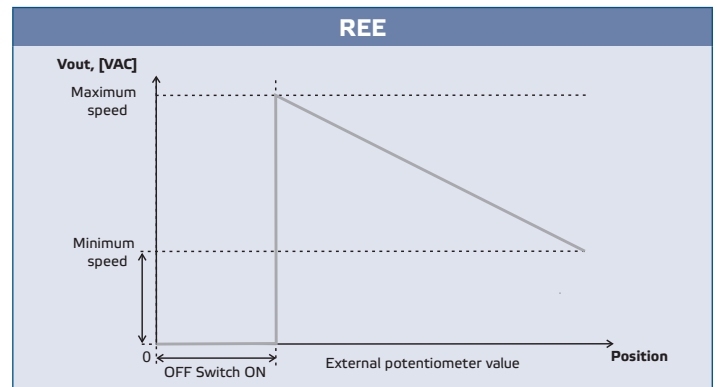
- Power supply: 230 VAC ±10 % / 50 Hz
- Unregulated input / output: 230 VAC / max. 1 A
- Regulated output to motor(s)
- Minimum speed adjustment by trimmer: 80–180 VAC
- Enclosure:
 - ▶ External: ASA, white-ivory (RAL9010), IP54 (according to EN 60529)
 - ▶ Internal: polyamide, white-ivory (RAL9010), IP44 (according to EN 60529)
- Operating ambient conditions:
 - ▶ temperature: 0–35 °C
 - ▶ rel. humidity: < 100 % rH (non-condensing)
- Storage temperature: -10–40 °C

STANDARDS

- Low Voltage Directive 2006/95/EC
- EMC Directive 2004/108/EC: EN 61326
- WEEE Directive 2012/19/EU
- RoHs Directive 2011/65/EU



OPERATIONAL DIAGRAMS



WIRING AND CONNECTIONS

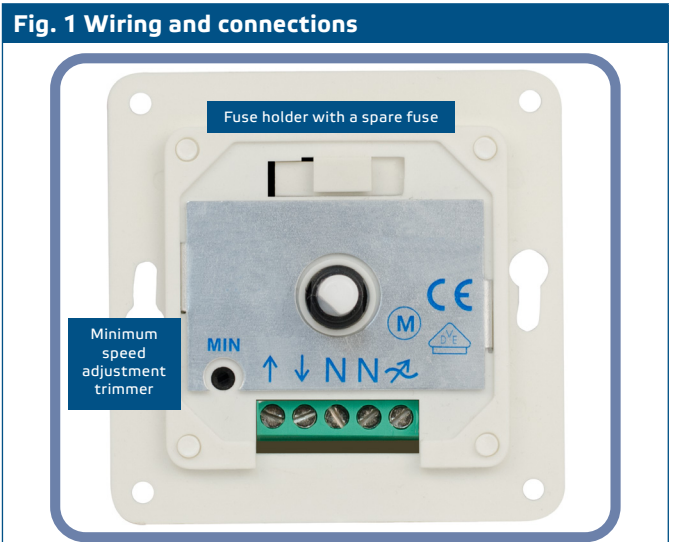
↑	Power supply (230 VAC ±10 % / 50 Hz)
↓	Unregulated output (230 VAC / max. 1 A) for connecting a lamp, valve, etc. or three-wire motor connection; branched off after the switch / input: to bypass switch
N	Neutral
⤴	Regulated output to motor
Connections	Cable cross section: max. 2,5 mm ²

MOUNTING INSTRUCTIONS IN STEPS

Before you start mounting the REE speed controller, read carefully "Safety and Precautions". Then proceed with the following mounting steps:

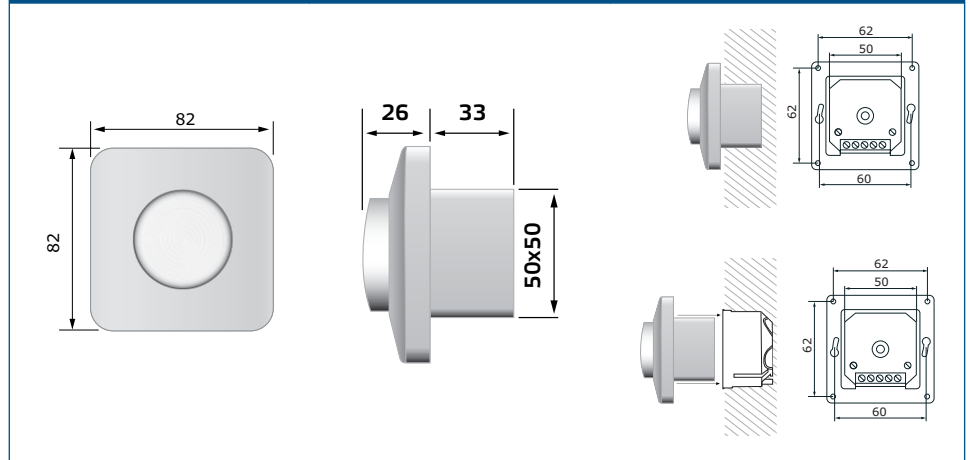
For inset mounting

1. Remove the knob by turning it to the right until it pops out.
2. Unscrew the loose nut to remove the cover of the external enclosure.
3. Do the wiring according to the wiring diagram (see Fig. 1 "Wiring and connections").



4. Mount the internal enclosure into the wall according to the mounting dimensions shown in **Fig. 2**. "Mounting dimensions - inset mounting".

Fig. 2 Mounting dimensions - inset mounting

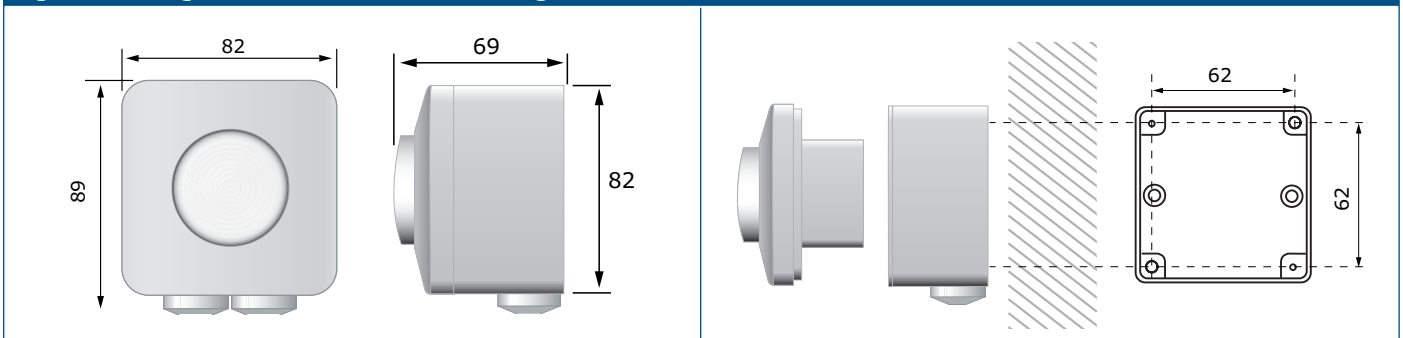


5. Turn on the mains voltage and the controller.
6. Adjust the minimal speed and turn off the controller.
7. Mount back the cover using the nut.
8. Put back the knob and turn it to off position.

For surface mounting

1. Disconnect the mains supply.
1. Remove the knob by turning it to the right until it pops out.
2. Unscrew the loose nut to remove the cover of the external enclosure.
3. Mount the external enclosure onto the surface by means of screws and dowels (not included) adhering to the mounting dimensions shown in **Fig. 3**. "Mounting dimensions - surface mounting".

Fig. 3 Mounting dimensions - surface mounting



4. Insert the cables through the grommets.
5. Do the wiring according to the wiring diagram (see **Fig. 1** "Wiring and connections").
6. Insert the internal enclosure into the external one and fix it using the screws and washers included in the set.
7. Turn on the mains voltage and the controller.
8. Adjust the minimal speed and turn off the controller.
9. Mount back the cover using the nut.
10. Put back the knob and turn it to off position.

 **NOTE**

A 5 mm hole can be drilled at the bottom of the external enclosure to drain the condensed water.

OPERATING INSTRUCTIONS

The controller is to be used only with voltage controllable fans / motors. You can connect several motors to the controller as long as the current limit is not exceeded. The motor used should be protected internally against overheating.

The trimmer is adjusted so that the motor does not stop due to mains voltage variations. The controller restarts after power failure.

In case of faulty operation

Please check if:

- the right voltage is applied;
- all connections are correct;
- the machine to be regulated is functioning;
- the fuse of the controller is OK.

In case that the fuse has blown up, remove the knob by turning it to the right, beyond the end stop and then pull. Open the cover and unscrew the nut. Remove the fuse holder with the help of a screwdriver. Replace the fuse. Mount all the parts back in place.



ATTENTION

Use only fuses with type and rating specified above; otherwise, loss of warranty will ensue.

TRANSPORT AND STORAGE

Avoid shocks and extreme conditions; stock in original packing.

WARRANTY AND RESTRICTIONS

Two years from the delivery date against defects in manufacturing. Any modifications or alterations to the product after the date of publication relieve the manufacturer of any responsibilities. The manufacturer bears no responsibility for any misprints or mistakes in this data.

MAINTENANCE

In normal conditions this product is maintenance-free. If soiled, clean with a dry or damp cloth. In case of heavy pollution, clean with a non-aggressive product. In these circumstances the unit should be disconnected from the supply. Pay attention that no fluids enter the unit. Only reconnect it to the supply when it is completely dry.