

MT | ELECTRONIC FAN SPEED CONTROLLER

Mounting and operating instructions



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SAFETY AND PRECAUTIONS



Read all the information, the datasheet, 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 content 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 and avoid condensation.



All installations shall comply with local health and safety regulations, 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 of the safety precautions.



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



Always ensure that the product is powered properly and that the wire size and characteristics are appropriate. 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.



If you have any further questions, please contact your technical support or consult a professional.

PRODUCT DESCRIPTION

The MT controllers provide manual control of the rotational speed of voltage controllable motors (230 VAC / 50 Hz) by varying the supplied voltage through phase angle control. They are suitable for both inset and surface mounting. Several motors can be connected as long as the current limit is not exceeded. All models have an extra (unregulated) 230 VAC output.

ARTICLE CODES

Output regulation from minimum to maximum		
Code	Current range, [A]	Fuse, [A] (5*20 mm)
MTY-0-05-AT	0,05—0,5	F-0,63 A-H
MTY-0-15-AT	0,1—1,5	F-2,00 A-H
MTY-0-25-AT	0,2—2,5	F-3,15 A-H
MTY-0-40-AT	0,4—4,0	F-5,00 A-H
Output regulation from maximum to minimum		
Code	Current range, [A]	Fuse, [A] (5*20 mm)
MTX-0-05-AT	0,05—0,5	F-0,63 A-H
MTX-0-15-AT	0,1—1,5	F-2,00 A-H
MTX-0-25-AT	0,2—2,5	F-3,15 A-H
MTX-0-40-AT	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

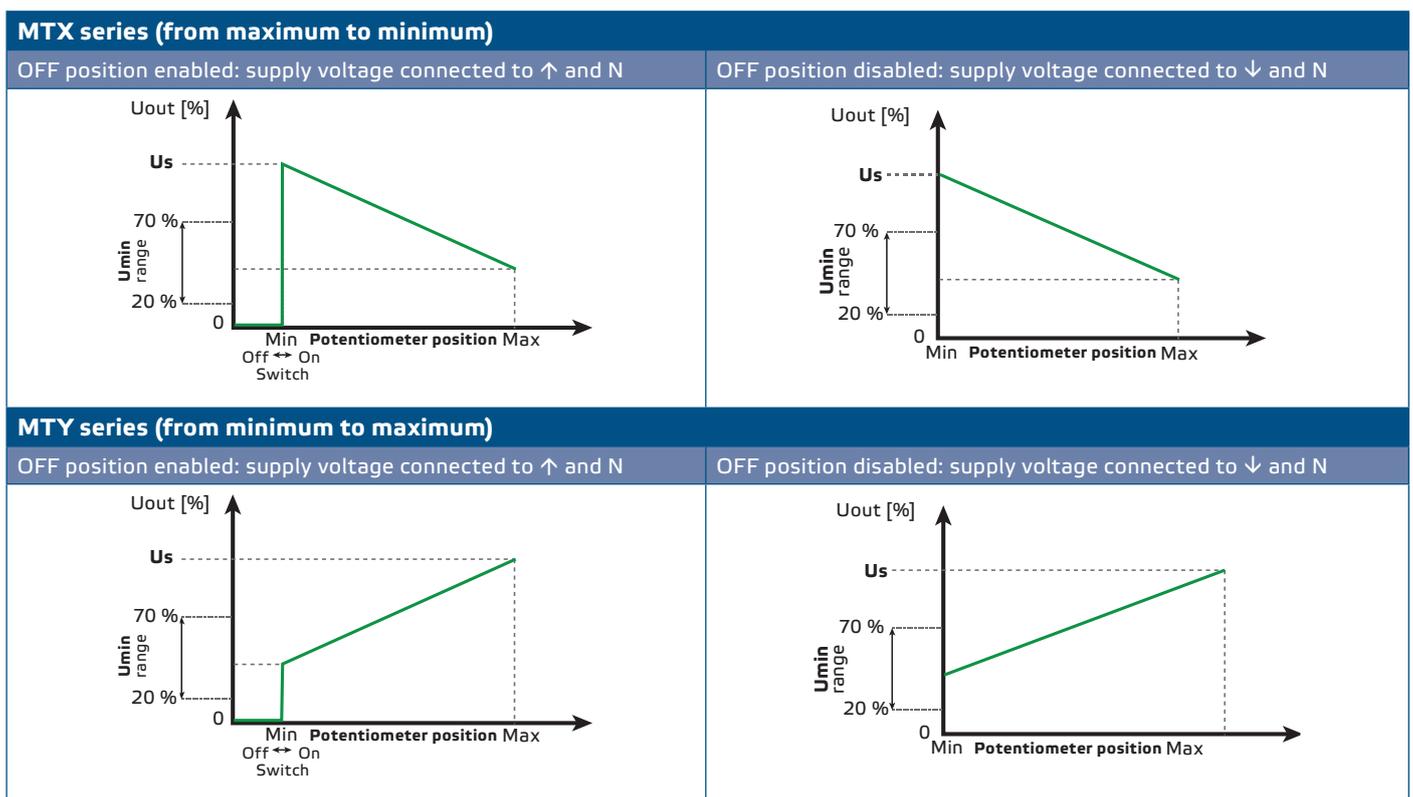
TECHNICAL DATA

- Infinitely variable fan speed control
- Power supply: 230 VAC ±10 % / 50 Hz
- Unregulated input / output: 230 VAC / max. 2 A
- OFF position can be disabled to obtain continuous operation of the fan
- Regulated output: 80—230 VAC
- Minimum speed adjustment by trimmer
- Speed control:
 - ▶ MTX – from maximum to minimum
 - ▶ MTY – from minimum to maximum
- 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

- EMC directive 2014/30/EU: CE
 - ▶ EN 60730-1:2011 Automatic electrical controls for household and similar use - Part 1: General requirements
 - ▶ EN 61000-6-1:2007 Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light industrial environments
 - ▶ EN 61000-6-3:2007 Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments Amendments A1:2011 and AC:2012 to EN 61000-6-3
 - ▶ EN 61000-3-2:2014 Electromagnetic compatibility (EMC) – Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)
- Low Voltage Directive 2014/35/EU
 - ▶ EN 60529:1991 Degrees of protection provided by enclosures (IP Code) Amendment AC:1993 to EN 60529
 - ▶ EN 60730-1:2011 Automatic electrical controls for household and similar use - Part 1: General requirements
- RoHS Directive 2011/65/EU

OPERATIONAL DIAGRAMS



WIRING AND CONNECTIONS

↑	Power supply (230 VAC ± 10 % / 50 Hz)
↓	Unregulated output / input (230 VAC / max. 2 A) to disable OFF position
N	Neutral
	Regulated output to motor
Connections	Cable cross section: max. 2,5 mm ²

ATTENTION

To disable the OFF position, connect the 230 VAC supply voltage to the unregulated output (↓). In this case do not connect the power supply to ↑.

MOUNTING INSTRUCTIONS IN STEPS

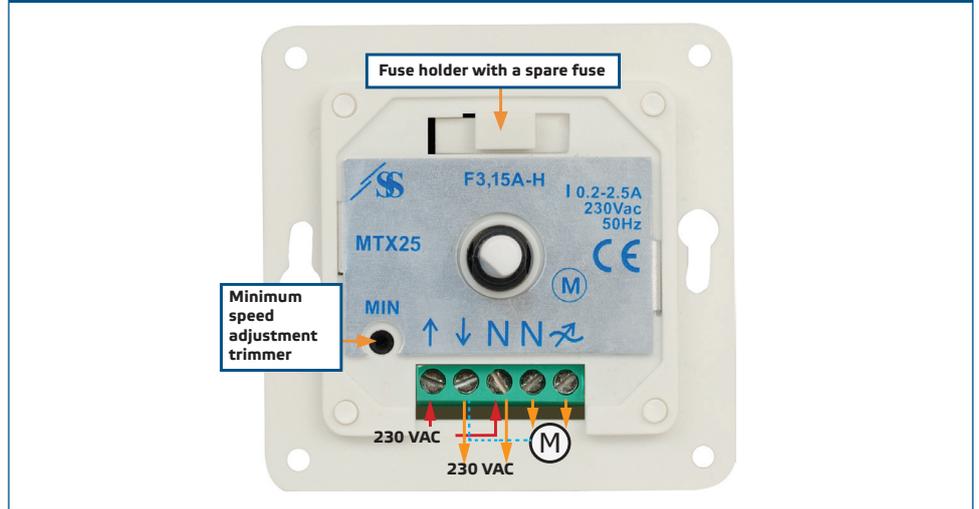
ATTENTION

MTX-0-40-AT and MTY-0-40-AT are suited for surface mounting only!

For inset mounting

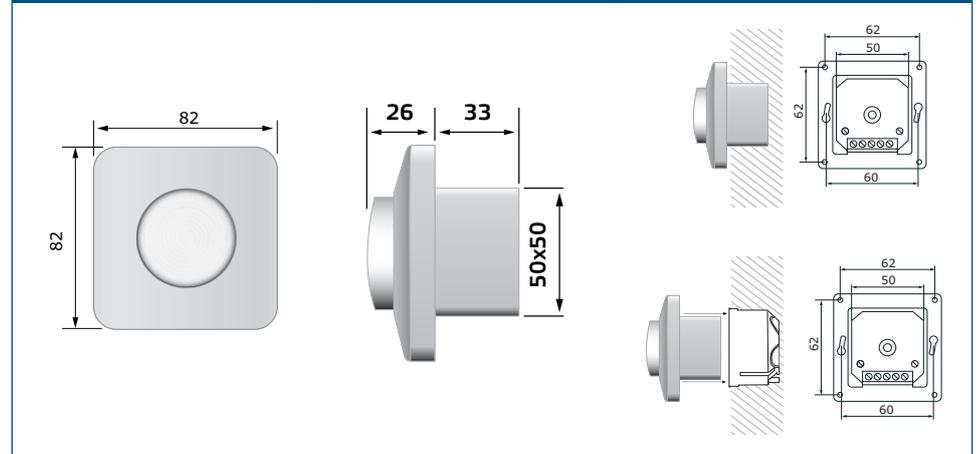
1. Remove the knob by turning it to the right until it pops out.
2. Unscrew the loose nut to remove the cover of the external enclosure.
3. Do the wiring according to the wiring diagram (see Fig. 1 Wiring and connections).

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

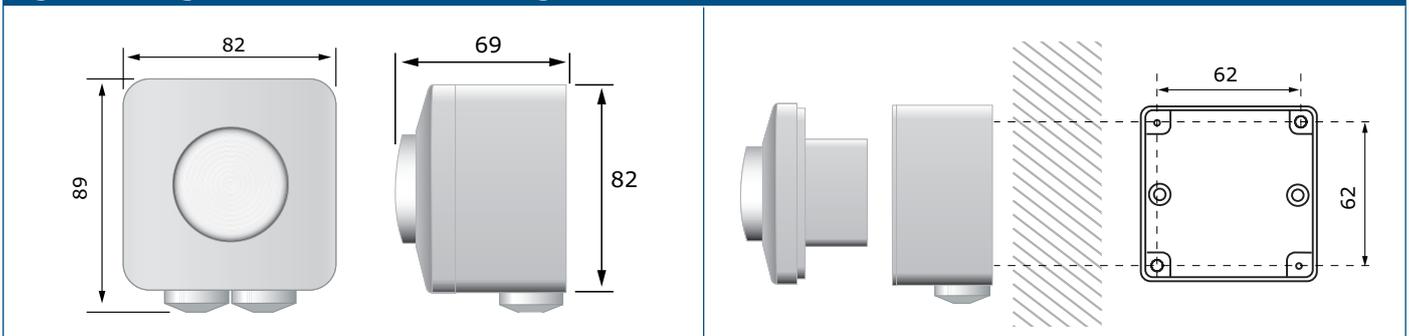


5. Turn on the mains voltage and the controller.
6. Adjust the minimal speed and turn off the controller.
7. Mount back the cover using the nut.
8. Put back the knob and turn it to off position.

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.

TRANSPORT AND STORAGE

Avoid shocks and extreme conditions; stock in original packing.

WARRANTY AND RESTRICTIONS

The warranty against manufacturing flaws is valid for two years starting from the date of delivery. Any alterations or adjustments to the product absolve the manufacturer of all liability. The manufacturer disclaims all liability for typographical or other errors in this document.

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.