



ELECTRONIC FAN SPEED CONTROLLER

Mounting and operating instructions



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1. SAFETY AND PRECAUTIONS



Read all the information in this manual, in the datasheet and in the Modbus Register Map before working with the product. For personal and equipment safety and for optimum product performance, make sure you fully understand the content before installing, using or servicing this product.



For safety and licensing (CE) reasons, unauthorised conversions 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 concentrations can affect the product performance. Make sure the work environment is as dry as possible and avoid condensation.



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



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



Always check that you are connecting the correct power supply to the product and use wires with the correct characteristics and cross-section. Make sure all screws and nuts are properly tightened and fuses (if any) are in place.



Consideration should be given to recycling the equipment and packaging. These should be disposed of in accordance with local and national laws and regulations.



If there are questions that are not answered, contact your technical support or consult a professional.

2. 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. Multiple motors can be connected, as long as the maximum current is not exceeded. All models feature an additional (unregulated) 230 VAC output.

3. ARTICLE CODES

Output regulation from minimum to maximum		
Code	Current range, [A]	Fuse, [A] (5*20 mm)
MTYN0-05-AT	0,05—0,5	F-0,63 A-H
MTYN0-15-AT	0,1—1,5	F-2 A-H
MTYN0-25-AT	0,2—2,5	F-3,15 A-H
MTYN0-40-AT	0,4—4	F-5 A-H
Output regulation from maximum to minimum		
Code	Current range, [A]	Fuse, [A] (5*20 mm)
MTXN0-05-AT	0,05—0,5	F-0,63 A-H
MTXN0-15-AT	0,1—1,5	F-2 A-H
MTXN0-25-AT	0,2—2,5	F-3,15 A-H
MTXN0-40-AT	0,4—4	F-5 A-H

4. INTENDED AREA OF USE

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

5. TECHNICAL DATA

- Continuously variable fan speed control
- Power supply: 230 VAC $\pm 10\%$ / 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:
 - MTXN – from maximum to minimum
 - MTYN – from minimum to maximum
- Enclosure:
 - External: ASA, white, IP54 (according to EN 60529)
 - Internal: polyamide, white, IP44 (according to EN 60529)
- Operating ambient conditions:
 - Temperature: 0—35 °C
 - Relative humidity: < 100 % rH (non-condensing)
- Storage temperature: -10—40 °C

6. STANDARDS

- Low Voltage Directive 2014/35/EU
- Electromagnetic Compatibility (EMC) Directive 2014/30/EU
- Commission Delegated Directive (EU) 2015/863 (RoHS 3) of 31 March 2015 amending Annex II to Directive 2011/65/EU of the European Parliament and of the Council as regards the list of restricted substances
- WEEE Directive 2012/19/EU

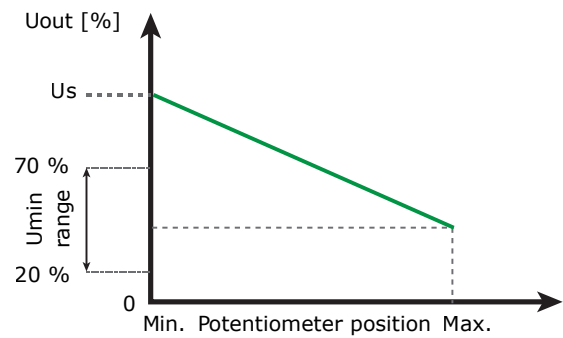
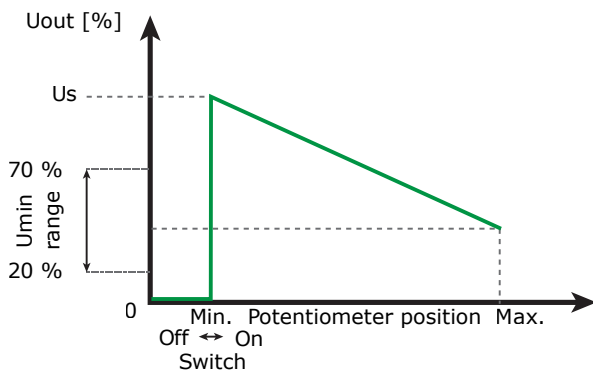


7. OPERATIONAL DIAGRAMS

MTXN series (from maximum to minimum)

OFF position enabled: supply voltage connected to ↑ and N

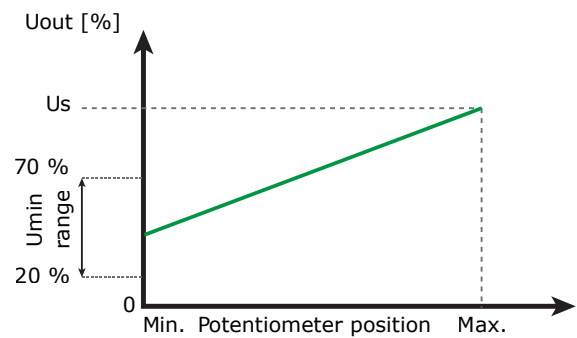
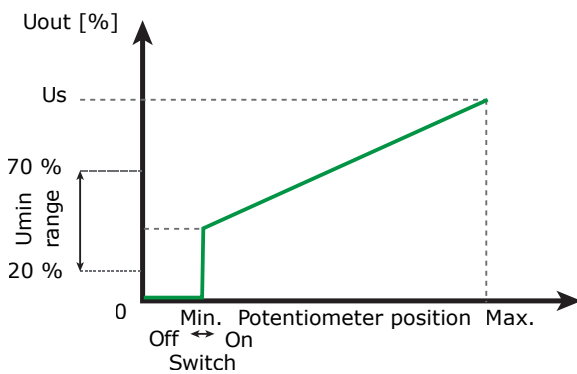
OFF position disabled: supply voltage connected to ↓ and N



MTYN series (from minimum to maximum)

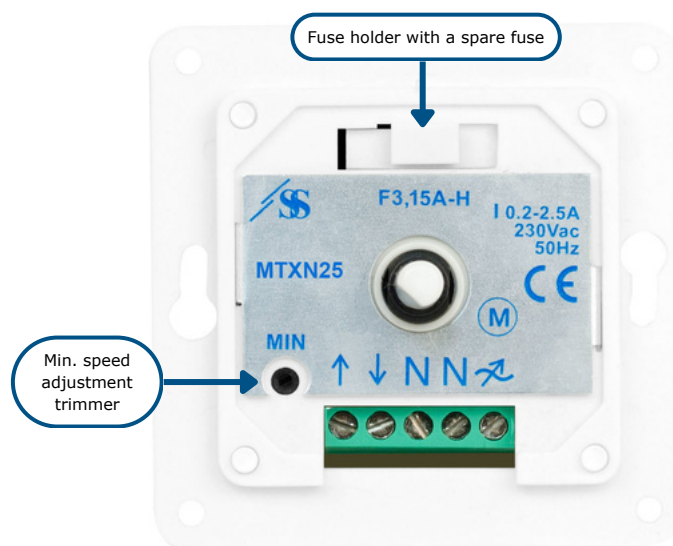
OFF position enabled: supply voltage connected to ↑ and N

OFF position disabled: supply voltage connected to ↓ and N



8. WIRING AND CONNECTIONS

Fig. 1 Wiring diagram



↑	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 ↑.

9. MOUNTING INSTRUCTIONS IN STEPS

Before you start mounting the unit, read carefully "**Safety and Precautions**". Then proceed with the following mounting steps:

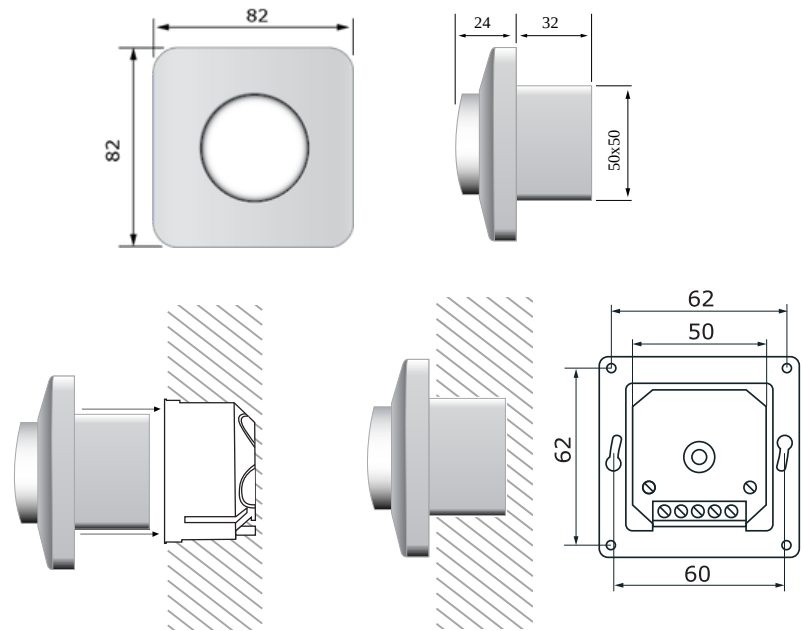
⚠ ATTENTION

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

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. Switch off the power supply and do the wiring according to the wiring diagram — see **Fig. 1**.

Fig. 2 Mounting dimensions — inset mounting

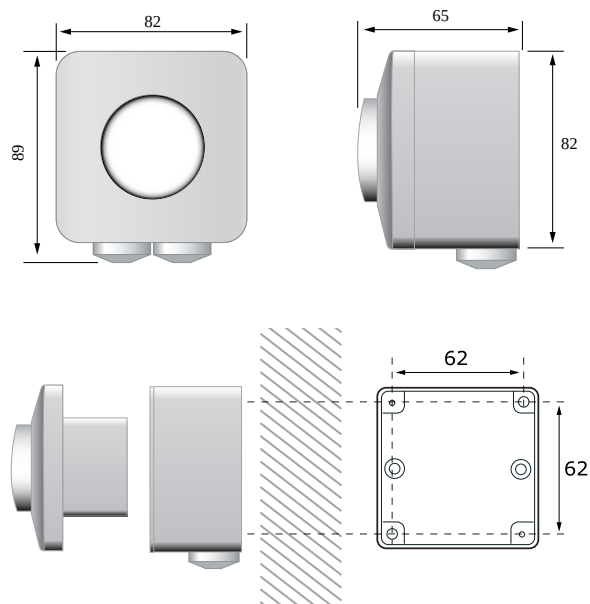


4. Mount the internal enclosure into the wall according to the mounting dimensions shown in **Fig. 2**.
5. Adjust the minimum speed.
6. Refit the cover and secure it with the nut.
7. Put back the knob and turn it to the OFF position.
8. Switch on the power supply

Surface 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. Mount the external enclosure onto the surface by means of screws and dowels (not included), according to the mounting dimensions shown in **Fig. 3**.

Fig. 3 Mounting dimensions — surface mounting



4. Switch off the power supply and insert the cables through the grommets.
5. Do the wiring according to the wiring diagram — see **Fig. 1**.
6. Insert the internal enclosure into the external enclosure and secure it with the screws and washers included in the set.
7. Adjust the minimum speed and turn off the controller.
8. Refit the cover and secure it with the nut.
9. Put back the knob and turn it to the OFF position.
10. Switch on the power supply.

**NOTE**

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

10. VERIFICATION OF INSTALLATION

The controller is to be used only with voltage-controlled fans/motors. Multiple motors can be connected to the controller, as long as the maximum current 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 fan to be regulated is functioning;
- the fuse of the controller is OK.

If 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.

11. TRANSPORT AND STORAGE

Avoid shocks and extreme conditions; stock in original packaging.

12. WARRANTY AND RESTRICTIONS

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

13. 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.

