



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 LT controllers provide manual control of the rotational speed of voltage-controllable (230 VAC / 50 Hz) motors by varying the supplied voltage through phase angle control. They are suitable for both inset and surface mounting. The enclosures are splashproof and suitable for both inset (IP44) and surface (IP54) mounting. An orange LED indicates the operation status. Multiple motors can be connected, as long as the maximum current is not exceeded. All models feature an additional (unregulated) 230 VAC output. These fan speed controllers offer an excellent and accurate regulation.

3. ARTICLE CODES

Article codes		
Article code	Rated current range [A]	Fuse (5*20 mm) [A]
Low to high speed		
LTYN0-05-AT	0,05—0,5	F-0,63 A-H
LTYN0-15-AT	0,1—1,5	F-2 A-H
LTYN0-25-AT	0,2—2,5	F-3,15 A-H
LTYN0-40-AT	0,4—4	F-5 A-H
High to low speed		
LTXN0-05-AT	0,05—0,5	F-0,63 A-H
LTXN0-15-AT	0,1—1,5	F-2 A-H
LTXN0-25-AT	0,2—2,5	F-3,15 A-H
LTXN0-40-AT	0,4—4	F-5 A-H

4. INTENDED AREA OF USE

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

5. TECHNICAL DATA

- Power supply: 230 VAC $\pm 10\%$ / 50 Hz
- Unregulated output: 230 VAC / max. 2 A
- Regulated output to motor(s): 80—230 VAC
- Minimum speed adjustment by trimmer: 80—180 VAC
- Speed control:
 - LTXN – from maximum to minimum
 - LTYN – 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

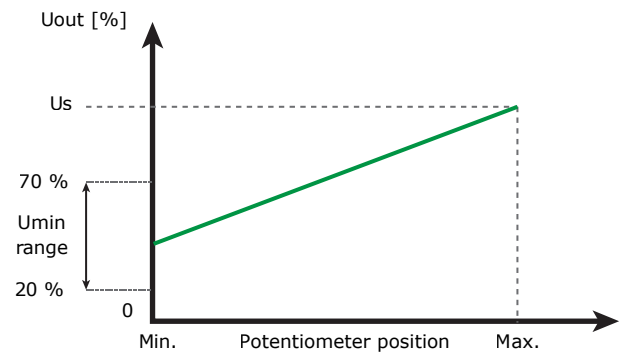
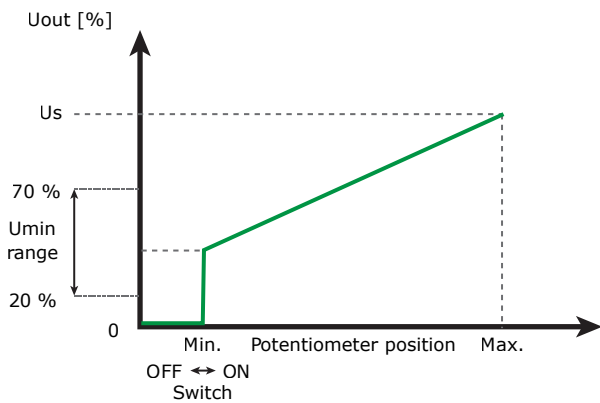


7. OPERATIONAL DIAGRAM

Operational diagram LTY (min. to max.)

OFF position enabled: supply voltage connected to ↑ and N

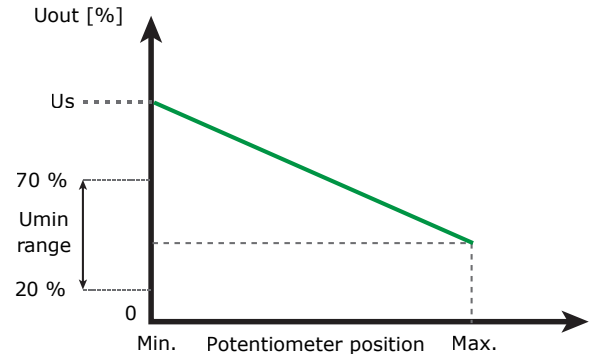
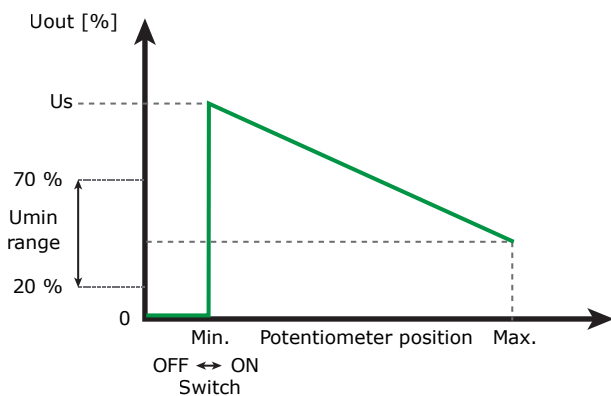
OFF position disabled: supply voltage connected to ↓ and N



Operational diagram LTX (max. to min.)

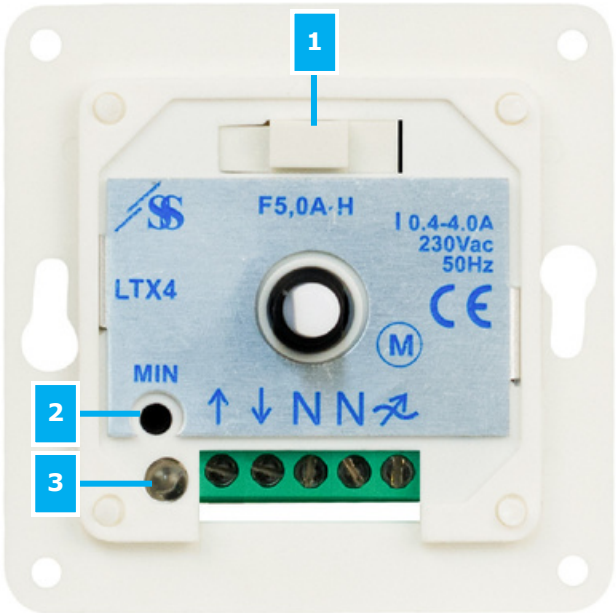
OFF position enabled: supply voltage connected to ↑ and N

OFF position disabled: supply voltage connected to ↓ and N



8. WIRING AND CONNECTIONS

Fig. 1 Wiring and connections



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

Note: 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: ↑.

 **NOTE**

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:

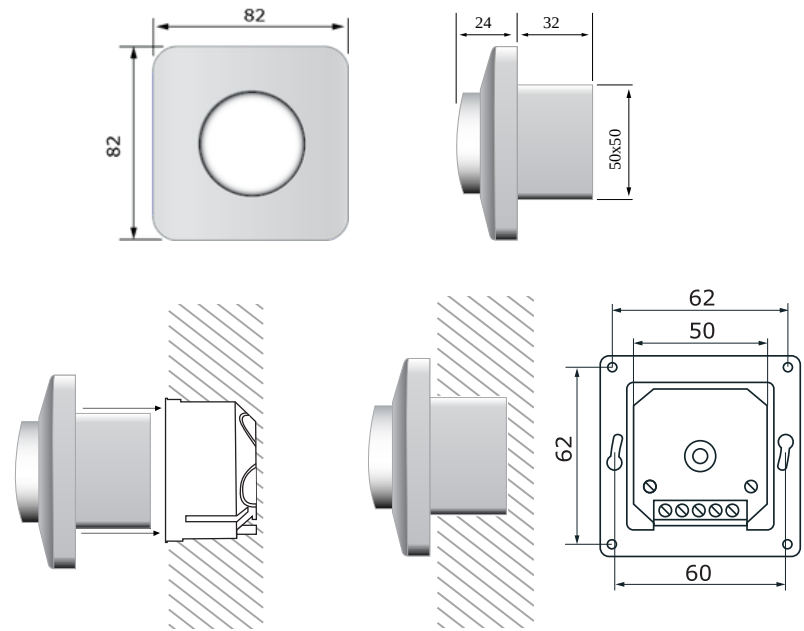
 **ATTENTION**

LTXN0-40-AT and LTYN0-40-AT are suited for surface mounting only!

Inset mounting

1. Remove the knob by turning it to the right until it pops out.
2. Unscrew the 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**.
4. Mount the internal enclosure into the wall according to the mounting dimensions shown in **Fig. 2**.

Fig. 2 Mounting dimensions — inset mounting



NOTE

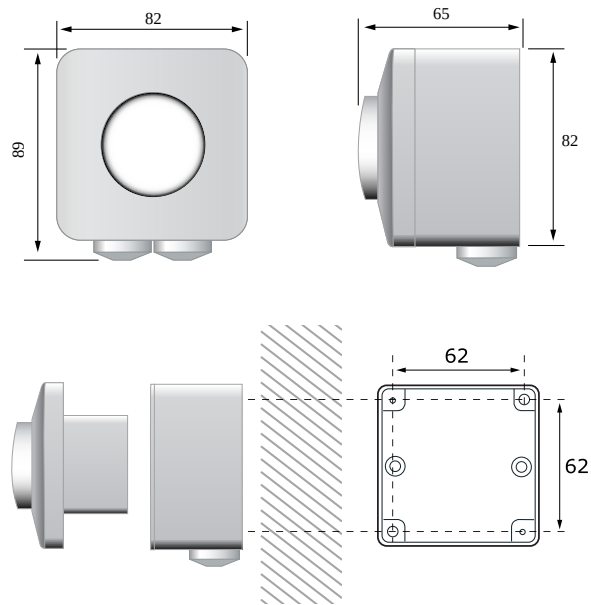
Mount the unit so that the terminal block and connections are at the bottom.

5. Adjust the 'MIN' speed trimmer.
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 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 one and fix it using the screws and washers included in the set.



NOTE

Mount the unit so that the terminal block and connections are at the bottom.

7. Adjust the 'MIN' speed trimmer.
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



ATTENTION

Use only tools and equipment with non-conducting handles when working on electrical devices.

In case of faulty operation, please check if

- the right voltage is applied;
- all connections are correct;
- the regulated device is functioning.

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.

