

Speed controller

Order-No. : 2968 01

Speed controller with setting knob

Order-No. : 2970 10

Operation- and Assembly Instructions

1 Safety instructions

Electrical equipment may only be installed and fitted by electrically skilled persons.

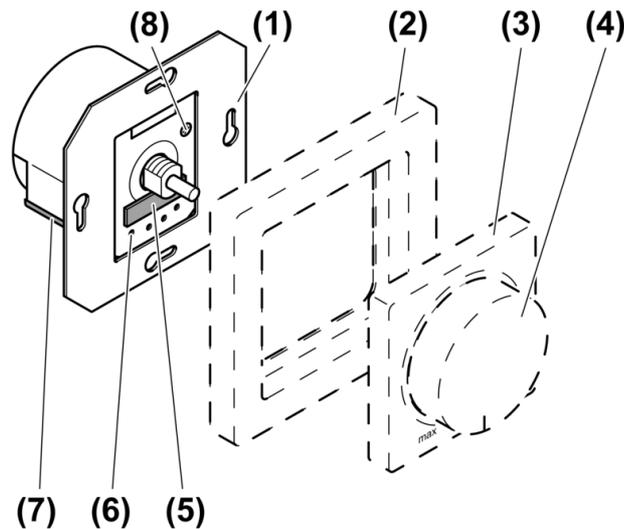
Danger of electric shock. Always disconnect before carrying out work on the device or load. At the same time, take into account all circuit breakers that supply dangerous voltage to the device or load.

Danger of electric shock. Device is not suitable for disconnection from supply voltage.

Failure to observe the instructions may cause damage to the device and result in fire and other hazards.

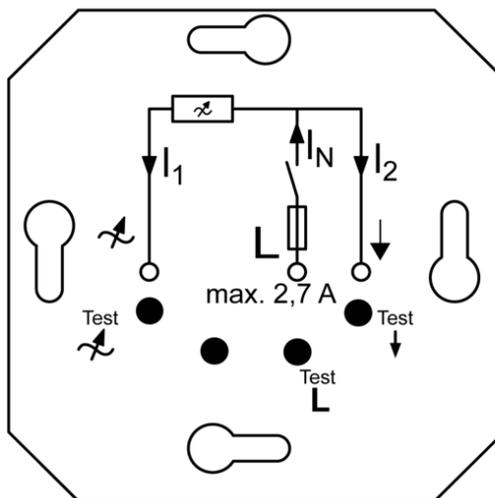
These instructions are an integral part of the product, and must remain with the end customer.

2 Device components



picture 1: Device components

- (1) Speed controller
- (2) Frame
- (3) Central plate
- (4) Adjusting knob
- (5) Fuse holder
- (6) Measuring points for voltage test
 - Test L:** Outer conductor
 - Test ↗:** Motor output
 - Test ↓:** Switching output
- (7) Release lever for plug-in terminal
- (8) Adjuster



picture 2: Circuit schematic

I_N Rated current = $I_1 + I_2 = \text{max. } 2.7 \text{ A}$

I_1 Motor current

I_2 Switching output current

3 Function

Intended use

- Speed controller for speed control of single-phase motors such as induction, shaded-pole or universal motors
- Installation in appliance box to DIN 49073

Product characteristics

- Short-circuit protection through fine-wire fuse
 - Electronic over-temperature protection
 - Switching output e.g. for ohmic loads or for activating ventilation openings
The maximum load capacity of the switching output depends on the motor current. By reducing the motor current it is possible to switch slats or ohmic loads with higher current consumption.
 - Measuring points (picture 2) make it possible to check the connected voltages without dismantling the speed controller.
- i** The device may hum slightly due to the noise suppression choke. This does not represent any defect in the device.
- i** Operation with a changeover switch is not possible.

4 Operation

Switching the motor on

- Turn the control button to the right.
The motor switches on to maximum speed. The switching output is activated.

Adjusting the speed

- Minimum speed: turn control button all the way to the right.
- Increase speed: turn control button to the left. The maximum speed is reached just before the far left position.

Switching the motor off

- Turn the control button all the way to the left.

5 Information for qualified electricians

5.1 Fitting and electrical connection

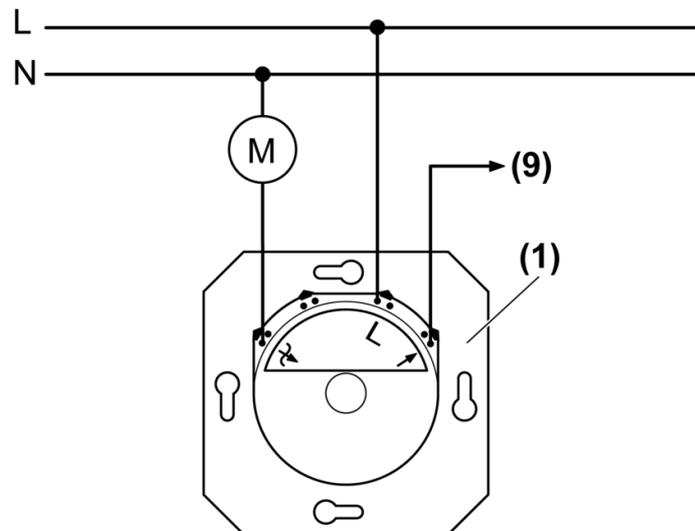
**DANGER!**

Electrical shock when live parts are touched.

Electrical shocks can be fatal.

Before carrying out work on the device or load, disengage all the corresponding circuit breakers. Cover up live parts in the working environment.

Connecting and installing the speed controller



picture 3: Connection diagram

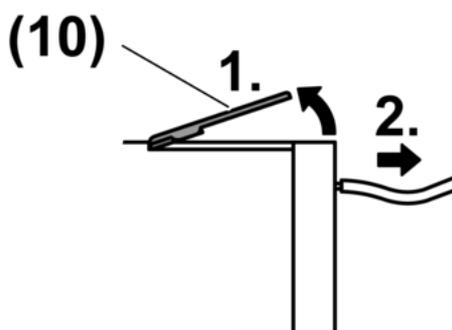
(1) Speed controller

(9) Switching output

- Remove approx. 15 mm of insulation from the connecting cables.
- Connect speed controller according to the connection diagram (picture 3).
- Install speed controller in appliance box.

i The maximum load capacity of the switching output depends on the motor current. By reducing the motor current it is possible to switch slats or ohmic loads with higher current consumption.

Pull the connecting cable out of the plug-in terminal.



picture 4: Disconnecting the plug-in terminal

- Raise release lever (10) as shown in the illustration (picture 4) and pull out connecting cable.

5.2 Commissioning

Adjusting the basic speed

The basic speed must be set so that the motor does not stop when the control button is turned all the way to the right.



DANGER!

Electrical shock when live parts are touched.

Electrical shocks can be fatal.

Use only insulated tools when adjusting the basic speed! Cover up live parts in the working environment.

- Switch on mains voltage.
- Switch on motor by turning the rotary axis.
- Turn rotary axis all the way to the right / to minimum speed.
- Readjust the adjuster (picture 1) until the basic speed has been set. Take the motor's overtravel into account!
- Switch off the mains voltage.
- Mount the frame and the central plate.
- Attach the adjusting knob.

6 Appendix

6.1 Technical data

Rated voltage	AC 230 / 240 V ~
Mains frequency	50 / 60 Hz
Ambient temperature	+5 ... +25 °C
Switching current at 25 °C	
Flush-mounting	
Order-No. 2968 01	2.7 A
Order-No. 2970 10	—
Surface-mounting	
Order-No. 2968 01	2.5 A
Order-No. 2970 10	2.1 A
Minimum switching current AC	100 mA
Power reduction per 5°C in excess of 25°C	-10 %

Speed controller

when installed in wooden or dry construction walls	-15 %
when installed in multiple combinations	-20 %
Connection	
Single stranded	1.0 ... 2.5 mm ²
Fine-wire fuse	D 3.15 H 250



The symbols used to label the dimmer load show the load type that can be connected to a dimmer and the electric behaviour of a load: M = motor

6.2 Troubleshooting

Speed controller switches the load off, the load can only be switched on again after a certain time.

Electronic overheating protection has tripped due to overload or too high ambient temperature.

Let device cool down and switch on again manually.

The device switches the load off and cannot be switched on again.

Short-circuit protection has tripped.

Eliminate short-circuit. Replace the fine-wire fuse, replacement fuse in the fuse holder. Use only original fuses.

Speed controller is defective and has been disconnected from the mains permanently by the internal circuit breaker.

Exchange speed controller.

6.3 Warranty

We reserve the right to make technical and formal changes to the product in the interest of technical progress.

Our products are under guarantee within the scope of the statutory provisions.

If you have a warranty claim, please contact the point of sale or ship the device postage free with a description of the fault to the appropriate regional representative.

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