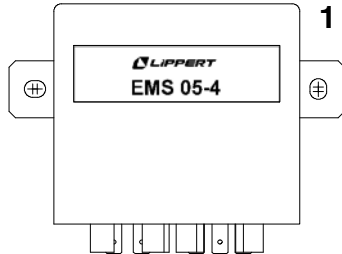


Installation Instructions for EMS 05-4



1 Application and function

The EMS 05-4 step controller is deployed to control electric motors used on steps.

Using the EMS 05-4 step controller means control lines are only loaded with very low current levels. This in turn means cables with a smaller cross-section and standard contacts for control can be used.

Modules

The step controller includes:

- Interpretation of the contacts
- Current monitoring
- Time control

Required activation

A switch/contact with normally closed contact (NCC) function must be connected to the step controller for operation.

Function

The step controller controls the motor as follows:

- Extending out of the step by closing the contact (e.g. reed contact on the entrance door). The step motor is switched off at the end stop.
- Retracting in of the step by opening the contact. The step motor is switched off at the end stop.
- The motor stops if the step hits an obstacle, becomes jammed or is frozen.



- ▲ The benefit of the "opening the contact results in the step retracting" logic is that the step retracts in the event of a cable break or a defective contact.

Operation

Normally the step controller is activated by a contact operated by the entrance door (e.g. reed contact):

- ▶ Open entrance door.
 - Step extends out.
- ▶ Close entrance door.
 - Step retracts in.

2 Design

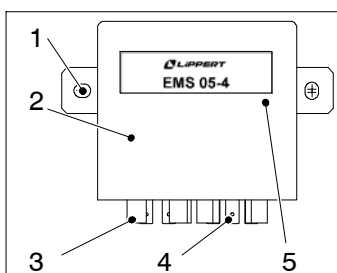


Fig. 1 EMS 05-4 step controller

- 1 Attachment holes
- 2 Casing
- 3 ST2 connector (motor, battery)
- 4 ST1 connector (sensing device)
- 5 Adhesive label

3 Mechanical installation

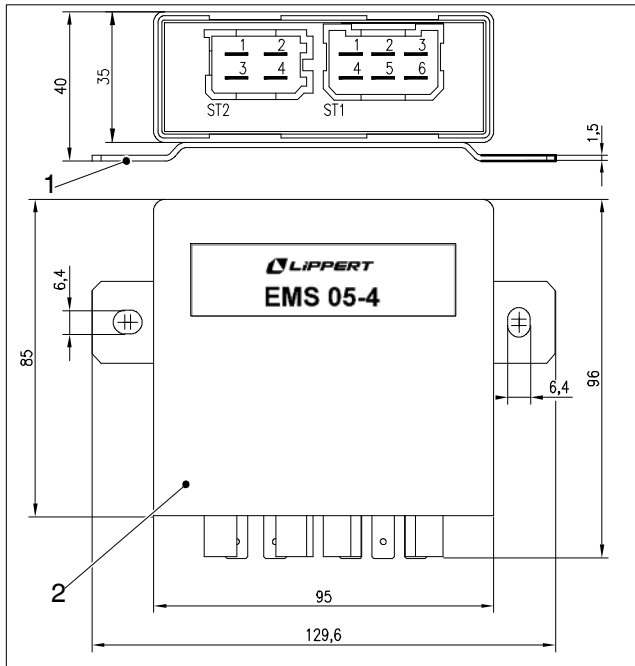


Fig. 2 EMS 05-4 step controller (dimensions in mm)

- 1 Assembly bracket (zinc-plated)
- 2 PA housing

The device is intended as a wall-mounted device (with connections facing downwards) or as a floor-mounted device.

- ▶ Select a dry place for installation.
- ▶ Ensure a minimum clearance to the surrounding fixtures and fittings:
 - Maintain a gap of at least 1 cm on all sides (except mounted side).
 - Whilst in operation, the ambient temperature must not exceed +70 °C, measured 2.5 cm away from the sides of the device.
- ▶ Use two screws (diameter 6mm) to tightly attach the step controller at the two mounting holes provided.

4 Electrical connection



▲ WARNING!

Reverse polarity can cause damage to the electrical system of the basic vehicle. Only carry out electrical connection work when the system is isolated from the power supply.



▲ ATTENTION!

To prevent cable fire (e.g. if a short-circuit occurs), the supply line to the EMS 05-4 must be fused. This is generally inside the EBL .. (or another voltage supply), but must be checked on a case-by-case basis.

Select cable cross-sections in line with EN 1648-1/-2. The maximum current load must not exceed 90% of the individual fuse rating.

Connection sequence

Connect the step controller in the following order (also refer to the circuit diagram):

1. Contact (e.g. reed switch in the door)
2. Motor
3. Voltage of the living area battery



- ▲ The step controller must be connected to a circuit supplied from the living area battery (steady plus, e.g. floor light/step). This ensures the step is extended out and retracted even when the 12V supply is off.

Disconnection

Disconnect in the reverse order.



- ▲ Individual AMP 6.3 flat push-on contacts can be used for the connection. Alternatively, suitable plug housings for ST1 and ST2 can be used.

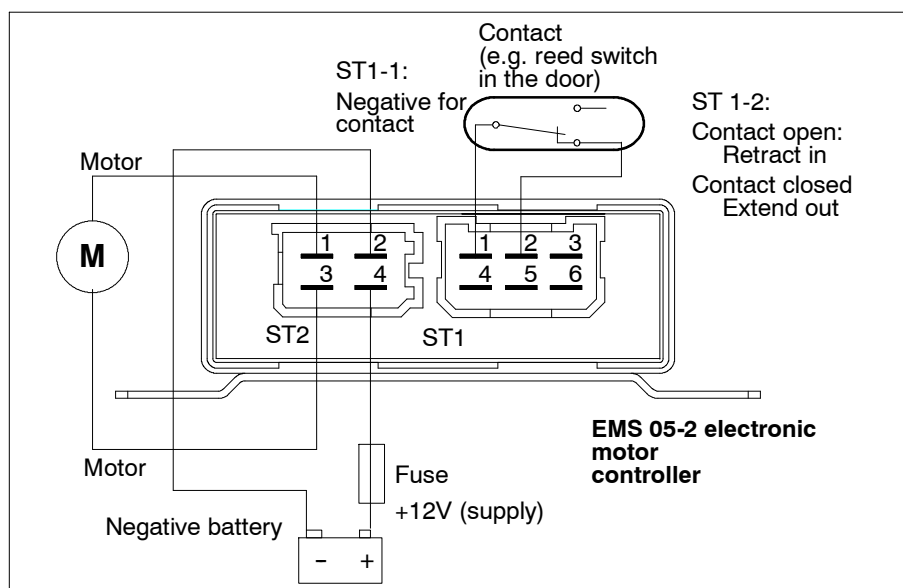


Fig. 3 Block diagram for EMS 05-4 connection

The polarity of the "Motor" connections is as follows:

Function	Connection ST2 - 1	Connection ST2 - 3
Retract/Close	+	-
Extend out/Open	-	+

5 Initial use

The step controller is ready for use immediately after proper connection.

6 Technical details

6.1 Mechanical details

Dimensions	96 x 130 x 40 (D x W x H in mm) including connectors and assembly bracket
Weight	155 g
Casing	Black plastic, assembly bracket: 1.5mm steel plate, zinc-plated

6.2 Electrical details

Operating voltage	for 12V DC systems (10 to 15 V)
Current consumption	Standby current ca. 2.5 mA
Motor current	The EMS 05-4 can be used for steps with the following current values: Step normal current: approx. 5 A Step stall current: >10 A EMS 05-4 cut-off current: 7.5 A \pm 10 %

If the motor is not switched off within 5 seconds via the current, the time--controlled switch-off is used.

6.3 Environmental parameters

Storage temperature -20 °C to +70 °C

Operating temperature -20 °C to +70 °C

7 Storage - packaging - transportation

Only transport and store the adaptor if the packaging is suitable and ambient conditions are dry.

Appendix

A EC declaration of conformity

Schaudt GmbH hereby confirms that the design of the EMS 05-4 step controller complies with the relevant regulations.

The original EC declaration of conformity is available for reference at any time.

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Phone: +49 7544 9577-16 e-mail: kundendienst@schaudt-gmbh.de

Office hours Mon to Thurs 08.00 – 12.00, 13.00 – 16.00
 Fri 08.00 – 12.00

Send in device Returning a faulty device:

- ▶ Always use well-padded packaging.
- ▶ Include the fault description.
- ▶ Send it to the addressee (delivery free).

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