

Translation of original operating instruction
V1 LM-1200 SMI AC – Linear motor



1 General information

1.1 Notice

This document is part of the product. Keep this operating instruction for future references.

1.2 Scope of delivery

Check the delivery according to the delivery note.

Product designation

Art.-Nr.	Description
0150002	LM-1200 SMI AC – Linear motor

1.3 Accessories

Art.-Nr.	Description
	MCU-16X SMI AC Box (Setting device)
0108016	V2 MCU-16X SMI AC

1.4 Product description

The Linear motor is used to move sun louvres with a maximum thrust of 1200 N. The Stroke Length and End Position, aswell as additional functions like Pinch Protection, can be configured via a setting device. The drive is controlled according to the SMI standard. According to this, drives can also be connected in parallel.

The motor has an integrated speed control that ensures that several systems can be operated in parallel and synchronously.

The integrated ramp control ensures smooth starting and stopping.

1.5 Limitations of liability

All information and notes in this operating instruction have been compiled in consideration of the applicable standards and regulations, the state of the art as well as our many years of knowledge and experiences.

The manufacturer assumes no liability for damages and operational malfunction due to

- disregarding this operating instruction
- improper use
- faulty connection
- non-use of original spare parts and accessories

1.6 Disposal

The disposal of this product in normal household waste is forbidden within the European Union.

Dispose of the device via the municipal collection points.

The packaging materials used are recyclable. Dispose of packaging materials that are no longer required according to local regulations.

1.7 Copyright

This documentation is protected by copyright.

All rights reserved, including those of photomechanical reproduction, copying and distribution by means of special procedures (e.g. data processing, data carriers, and data networks), even in parts. Subject to technical changes and alterations in content.

1.8 Manufacturer/ Customer service

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2 Safety

2.1 Intended use

The linear motor is designed to move sun louvres within its technical limitations. Any other use or extended use is considered to be improper.

2.2 Foreseeable misuse

Any use for a purpose other than the above mentioned purpose is improper. The risk of improper use or misuse is borne solely by the operator.

All types of claims due to damage arising from improper use are excluded.

2.3 Personnel's qualification

Improper use can cause considerable personal injury and material damage!

All tasks for installation, connection and commissioning must be carried out exclusively by a qualified electrician.

A qualified electrician is able to carry out work on electrical installations due to her/ his professional training, knowledge, and experience as well as knowledge of the relevant standards and regulations. She/ he can identify and avoid possible dangers.

The qualified electrician is trained for the specific place of employment in which she/ he is working and is aware of the relevant standards and regulations.

2.4 Basic safety instructions

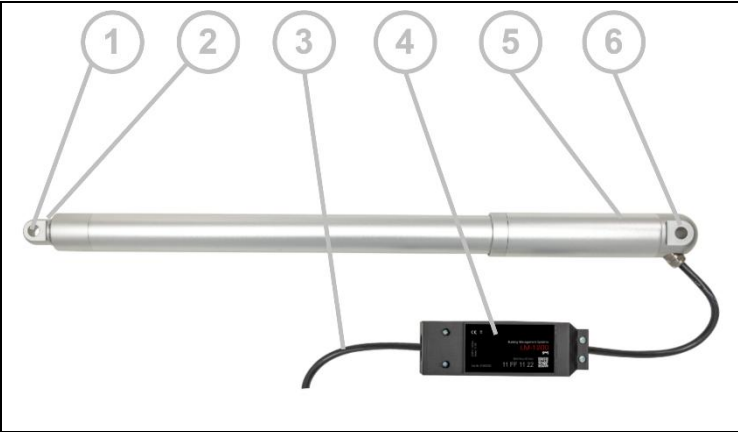
	⚠ DANGER Danger of life! There is a risk of life when touching live parts. ► All tasks must be carried out exclusively by qualified personnel. ► Disconnect all power supplies before starting work.
	⚠ DANGER Risk of crushing! Operating the motor without the pinch protection set can lead to crushing injuries and other injuries ► Ensure that the travel area is free of objects and persons. ► Refer to the details on the configuration
	⚠ CAUTION Material damage! Incorrect wiring and configuration of the device can lead to damage up to total failure. ► Ensure that the supply voltage corresponds to the specifications from the technical data for the device. ► Refer to the software-helpfile for details on the configuration.

2.5 Signage

Symbol	Meaning
	General warning
	Risk of crushing
	Electrostatic discharge
	CE label

3 Design and function

3.1 Complete overview



Location of functional elements

- 1 Push rod joint mount
- 2 Push rod
- 3 Supply
- 4 Control Unit with Hex ID
- 5 Linear motor
- 6 Motor joint mount

4 Installation

4.1 Mounting

To mount the linear motor, proceed as follows

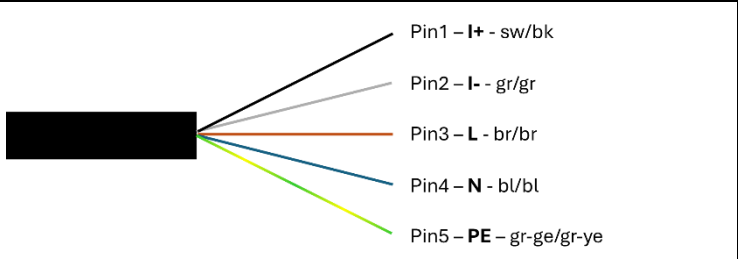
- Attach the motor to the facade mount using a clevis
- Attach the motor to the moving construction mount using a clevis
- Mount the control unit separately

	⚠ CAUTION Compliance with Machinery Directive 2006/42/EC The motor must be installed in accordance with Machinery Directive 2006/42/EC and must not be put into operation until compliance has been ensured.
	⚠ CAUTION In the event of a motor malfunction or defect, the electronically set limit positions may deviate. The motor incorporates appropriate safety measures (such as a reference run); nevertheless, the system must be designed in such a way that small deviations cannot cause damage.
	ⓘ NOTICE If installed vertically, the motor should be mounted so that it extends downwards.

- Set the end positions

4.2 Electrical connection

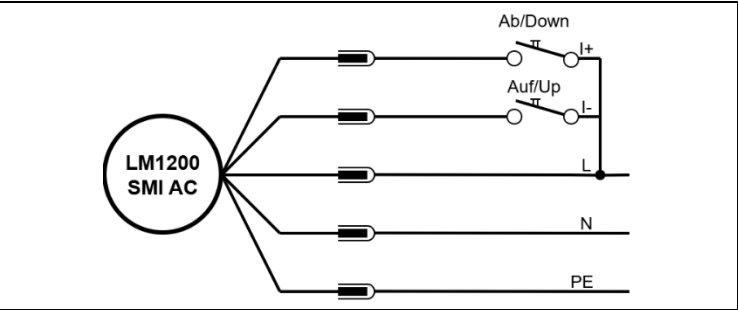
Overview



Cable assignment

4.2.1 Push-button operation

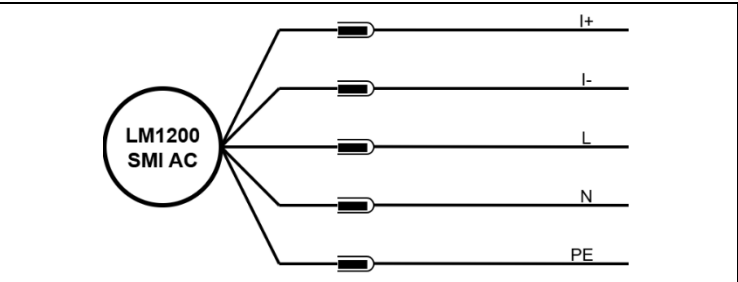
When push-button operation is active, the motor can be moved manually, with the help of push-buttons, between the end positions.



	ⓘ NOTICE Simultaneous push-button operation and gateway operation is not permitted.
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4.2.2 Gateway operation

When Gateway operation is used, the data wires I+ and I- have to be connected to a SMI gateway, which then controls the motor.



4.3 Setting via MCU-16X SMI AC Box

The setting tool is not included in the scope of delivery. To adjust the motor using the setting tool, please refer to the setting tool's operating instructions.

The setting tool allows for the following adjustments:

- Setting individual end positions
- Configuring the travel profile
- Configuring the anti-trap/emergency stop function

The motor can also be ordered with a pre-configuration.

4.3.1 Factory setting

Without pre-configuration, the motor has following settings. These are designed to provide protection during commissioning. Nevertheless, the motor's extension path must be continuously monitored and kept clear during the commissioning process.

Name	Value	
End position 2	0	mm
End position 3	60	mm
Pinch protection	active	
Speed start / stop ramp	2,5	mm/s
Normal speed	4,5	mm/s
Ramp duration	1	s

5 Technical data

General		
Operating environment	Outside mounting	
Operating temperature	-10 ... +45	°C
Storage temperature	-20 ... +55	°C
Mounting	use original spare parts/ accessories	
Dimensions motor (L x D)	550x38	mm
Dimensions motor (L x W x H)	150x45x36	mm
Weight motor	approx. 1380	g

Elektrische Anschlussdaten		
Supply voltage	230	V _{AC}
Max. nominal current	0,3	A
Standby power	< 0,3	W
Rated surge voltage	2	kV
Connections	open wire / BMS connector system	
Degree of protection	IP 66	
Degree of pollution	1	

Mechancal data		
Speed	2,5 – 4,5 (adjustable)	mm/s
Maximum thrust	300	mm
Maximum push force	1200	N
Static load	1800	N
Nominal operating mode	S3 (30% / 20min)	
Lifetime	10.000 moving cycles	

