Omnexo Switch actuator 4MDC REG/AP

Installation instructions

*Der SonnenLicht**Manager***

General information

Fig. 1   Omnexo Switch actuator 4MDC REG/AP

The switch actuator 4MDC REG/AP is a device for actuating up to four sun shading drives with or without an incremental encoder. It is operated via the Omnexo control system. The drives and switch actuator are supplied with 24 V DC.
The functionality of the Omnexo Switch actuator 4MDC can be parameterised. The control behaviour can be adjusted to the different requirements of the various products.

Intended use

The Omnexo Switch actuator 4MDC REG/AP is an electronic device for controlling sun shading devices. The approval of the manufacturer must be obtained for any use of the device other than its intended purpose specified in these instructions.

Safety instructions

**WARNING
The electrical installation (assembly)/ dismantling must be performed by a certified electrician in accordance with VDE 0100 and/or with the standards and legal requirements pertaining to the respective country. The electrician must observe the installation notes and instructions included with the electrical devices supplied.**

**WARNING
If hazard-free operation cannot be assumed, the device must not be started or must be deactivated. This assumption is justified if:**

▶ **the housing or the connecting lines show signs of damage,**
▶ **the device is no longer working.**

**WARNING
It is important to comply with the following points in the interest of personal safety.**

▪ Children must not play with the operating elements of the control unit or the remote control. Store remote controls out of reach of children.
▪ Make sure that no persons or objects are located in the path of any driven parts (blinds, window, etc.).
▪ Disconnect the switch actuator from the operating voltage if cleaning or other maintenance work must be performed.

CAUTION
When using window drives, the installer of the system must ensure that the safety regulations and precautions of DIN EN 60335-2-103 "Particular requirements for drives for gates, doors and windows" as well as ASR 1.6 "Windows, roof lights, transparent walls" are observed.

WARNING
The switch actuators may only be used to actuate such window drives where the movement of the window cannot cause any injuries.

Function of the switch actuator

You will find a detailed description of the functions for the Omnexo Switch actuators in the Omnexo software. The app is available to download at www.warema.de/omnexo.

Installation

Depending on the selected type of installation, the switch actuator is intended for installation in a distributor (REG) or for surface mounting (AP).

▪ REG: When installing the device in a distributor, clip it onto a symmetrical DIN rail (TH 35 -15).
▪ AP: Insert a slotted screwdriver (3–4 mm blade) into the appropriate cover opening (see Fig. 4) and carefully pry the hinged cover open. Repeat the procedure for the second opening of the cover. After both latches have been unlatched, the cover can be flipped open. Open the second cover in the same way. Alternatively, the AP variant may also be mounted on a DIN rail (TH 35-15).
This device type is not suitable for use in damp locations.

Electrical connection

The product is electrically connected according to the wiring diagram (see Fig. 1 on page 5).

An on-site overload current protection device (fuse) and a disconnecting and isolating switch to switch off the entire unit must be provided.

> **i** The actuator will only work in dead man's mode until it has been successfully commissioned.

The connection to the bus system is made with spring terminals (see Fig. 2 on page 2) and the connection of the drives and the lines is designed in accordance with technical data.

> ⚠ **WARNING**
> **After installation, all terminals and connections under current must be completely closed by the latched cover to prevent accidental contact. It should not be possible to open the latched cover without using tools.**
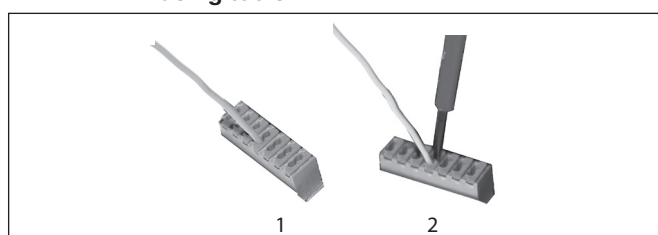

Fig. 2   Connecting and disconnecting the line connections

- Stripping the wire
- Press the wire into the terminal until the insulation on the wire enters the terminal and the conductor is securely held in the terminal (1).
- Disconnect the line:
  press the corresponding unlock button as far as it will go using a screw driver and then remove the conductor from the terminal (2).

After the installation has been completed and the supply voltage is applied, the device must be taken into service using the Omnexo software. The actuator will only work in dead man's mode until it has been successfully commissioned.

You will find a detailed description on commissioning in the Omnexo software under "Help".

> Information on commissioning and the Omnexo app is available at:
> http://www.warema.de/omnexo
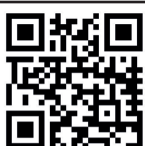
Maintenance

There are no parts inside the device that require maintenance. In the event of a malfunction, the built-in miniature fuses should only be replaced by a certified electrician.

Cleaning

Clean the housing with a soft, dry cloth. Do not use detergents, cleaning agents, solvents, abrasive substances or steam cleaners!

Liability

Failure to comply with the product information in these instructions and any use of the device other than its intended use may result in the manufacturer refusing to honour warranty claims for product damage. In this case, liability for secondary harm to persons or damage to property will also be excluded. Observe the information in the operating instructions for your sun shading system. The automatic or manual operation of the sun shading system while iced over and the use of the sun shading system during severe weather may cause damage and must be prevented by the operator through suitable precautions.

Obligations for the disposal of electrical devices

A marking with this symbol indicates the following obligations under the scope of legal regulations:

- The owner of this electrical device must dispose of it separately from unsorted municipal waste for further recycling.
- Used batteries and accumulators that are not enclosed in the old device, as well as lamps/bulbs that can be removed from the old device without breaking, must be disposed of separately.
- Distributors of electrical devices and disposal companies are obliged to take back the equipment free of charge.
- The owner must take it upon themselves to delete any personal data contained on the electrical device prior to disposal

Technical data

Omnexo Switch actuator 4MDC REG/AP	min.	type	max.	Unit
Supply				
Operating voltage (SELV)	21.6	24	26.4	V DC
Current consumption	23		160	mA
Outputs				
Switching capacity per output at 24 V DC			60	W
Inputs				
Local operator inputs "Input active"	8	24	36	V DC
Omnexo interface				
Bus interface (X50)		RS485 (two-wire bus)		
Radio extension interface (suitable for retrofitting for 4MDC AP)				
Bus interface (X53)		UART		
Ambient conditions				
Operating temperature	0		50	°C
Storage temperature	0		70	°C
Humidity (not condensing)	10		85	%RH
Degree of soiling				2
Connection REG				
Connecting line		Screw terminal		
Permissible line cross-section		0.2 - 2.5 mm²		
Stripping length		7 - 8 mm		
Motor outputs		Spring terminal		
Permissible line cross-section		0.2 - 1.5 mm²		
Stripping length		8 mm		
Inputs		Spring terminal		
Permissible line cross-section		0.2 - 1.5 mm²		
Stripping length		10 mm		
Omnexo interface		Spring terminal		
Permissible conductor diameter		0.6 - 0.8 mm x		
Stripping length		6.5 mm		
Connection AP				
Connecting line		Screw terminal		
Permissible line cross-section		0.2 - 2.5 mm²		
Stripping length		6 - 7 mm		
Motor outputs		Screw terminal		
Permissible line cross-section		0.2 - 2.5 mm²		
Stripping length		6 - 7 mm		
Inputs		Screw terminal		
Permissible line cross-section		0.2 - 2.5 mm²		
Stripping length		6 - 7 mm		
Omnexo interface		Spring terminal		
Permissible conductor diameter		0.6 - 0.8 mm x		
Stripping length		6.5 mm		
Radio extension interface		Plug-in connection		

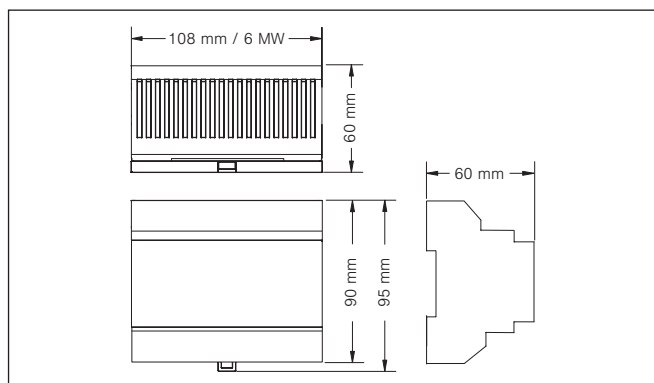| Omnexo Switch actuator 4MDC REG/AP	min.	type	max.	Unit
Housing				
Dimensions		see Fig. 3 and Fig. 4		
Housing type		REG / AP		
Degree of protection, REG		IP20		
Degree of protection, AP		IP30		
Safety class		III		
DIN rail-mounted housing installation		EN-rail - TH 35		
Surface-mounted installation		Surface mounted		
Miscellaneous				
Software class		A		
Conformity		CE	Specified under www.warema.de/ce	
This device complies with the EMC directives for use in residential and commercial areas.				
Article numbers				
Omnexo Switch actuator 4MDC REG		2062710		
Omnexo Switch actuator 4MDC AP		2062709		
Strain relief set for AP housing		1002 236		
WAREMA Renkhoff SE Hans-Wilhelm-Renkhoff-Str. 2 97828 Marktheidenfeld Germany				

Fig. 3   Dimensions of 6 MW DIN rail-mounted housing for Omnexo Switch actuator 4MDC REG
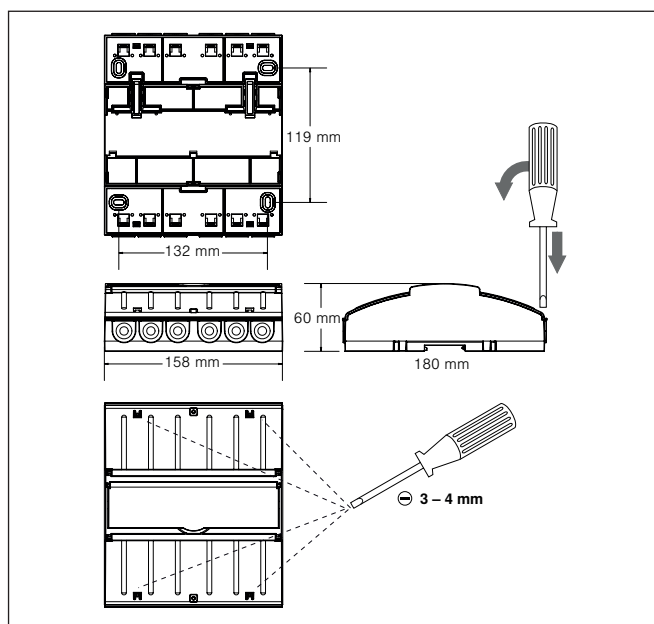
Fig. 4   Surface-type housing dimensions

Fuse protection

Omnexo Switch actuator type	Quantity	Fuse protection
Omnexo Switch actuator 4MDC REG 2062710	2 x	5 AT H
Omnexo Switch actuator 4MDC AP 2062709	2 x	5 AT H

Inscription on the actuator (see Fig. 1 on page 5):

S1	Button to transmit the serial number to the central control unit	
LED with two functions:	LED lights up: voltage is applied	LED flashes: bus communication is taking place
X53	Connection for WMS module	

KEEP IN A SAFE PLACE FOR COMMISSIONING!

Affix the switch actuator ID label here	Note down installation location here
00001357 Aktor	

Allocation:						
Output	**Product/sun shading system**	**Designation/room**	**Facade**	**Formation of groups**	**V1**	**V2**
M1						
M2						
M3						
M4						
Example	External venetian blind ❶	Ground floor office on the left ❷	East ❸	Ground floor office ❹	x	

❶ Product/sun shading system: information on the type of sun shading product

❷ Designation/room: information on the installation location for the corresponding sun shading product

❸ Facade: information on the orientation of the facade for the corresponding sun shading product

❹ Formation of groups: information on the formation of operating groups in the Omnexo system

Motor 1 Motor 2 Motor 3

Motor connection

Direction of movement		V+	0 V
▲		V+	0 V
▼		0 V	V+
		Mx.1	Mx.2

ATTENTION:
The operating voltage must be SELV voltage in accordance with VDE 0700-1 and EN 60335-1.

Connection example Motor 4
Motor DCD22-E

Motor 5

M 24 V DC

2 x 0.75 mm²

2 x 0.75 mm²

2 x 0.75 mm²

LiHH 3 x 0.25 mm²

* Protect the wire against short circuit with an additional terminal

GN *
(not connected)

WH BN

2 x 0.75 mm²

Supply line
24 V DC SELV

X41: 6 5 4 3 2 1
P O W E R
0V 0V 0V 24V 24V 24V

X1: M M nc nc M M
1.1 1.2 2.1 2.2

X2: 6 5 4 3 2 1
M M nc nc M M
3.1 3.2 4.1 4.2

Omnexo Switch actuator 4MDC AP

0V 24V	F1 5AT H 5x20mm 250V	nc 1.1 1.2 M	nc 2.1 2.2 M	nc 3.1 3.2 M	nc 4.1 4.2 M	F2 5AT H 5x20mm 250V
POWER X41		X1	X2	X3	X4	

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Omnexo Switch actuator 4MDC REG
art.no. **2062710**

S1 LED

X50
Bus

X20	X21	X22
↓ ↗	↗1 ↗2	↗3 ↗4
In+ In+ V1 V2	▲ ▼ ▲ ▼	▲ ▼ ▲ ▼
In+ In+ V1 V2	▲ ▼ ▲ ▼	▲ ▼ ▲ ▼

S1: Button to transmit the serial number to the central control unit

X50: BUS   S1 LED   0V 0V In+ V1 In+ V2 ▲ In+ ▼
X20:1 2 3 4 5 6 7 8 9

X53

X21:1 ▲ In+ ▼ 2 3 ▲ In+ ▼ 7 ▲ In+ ▼ 8 9
4 5 6

- + A B

With double clamping, the same conductor cross-sections must be used.

From previous bus device

0 V
24 V
Bus A
Bus B

0 V
24 V
Bus A
Bus B

0 V
24 V
Bus A
Bus B

0 V
24 V
Bus A
Bus B

To next bus device

All push button lines, JY(St)Y 2x2x0.8 mm
Max. line length 200 m for interference-proof routing, use a twisted pair line.

All bus lines JY(St)Y 4×2×0.8 mm

Example:
Push button, motor 1

Example:
Group push button, motor 2 and motor 3
Groups are built by means of "jumpering"

Example:
Interlocking via window contact
Operation is enabled when the window is shut.
This function must be programmed accordingly.

S1

Example:
Motor 1 and Motor 4 group push buttons
Groups are built across actuators using "jumper wires".
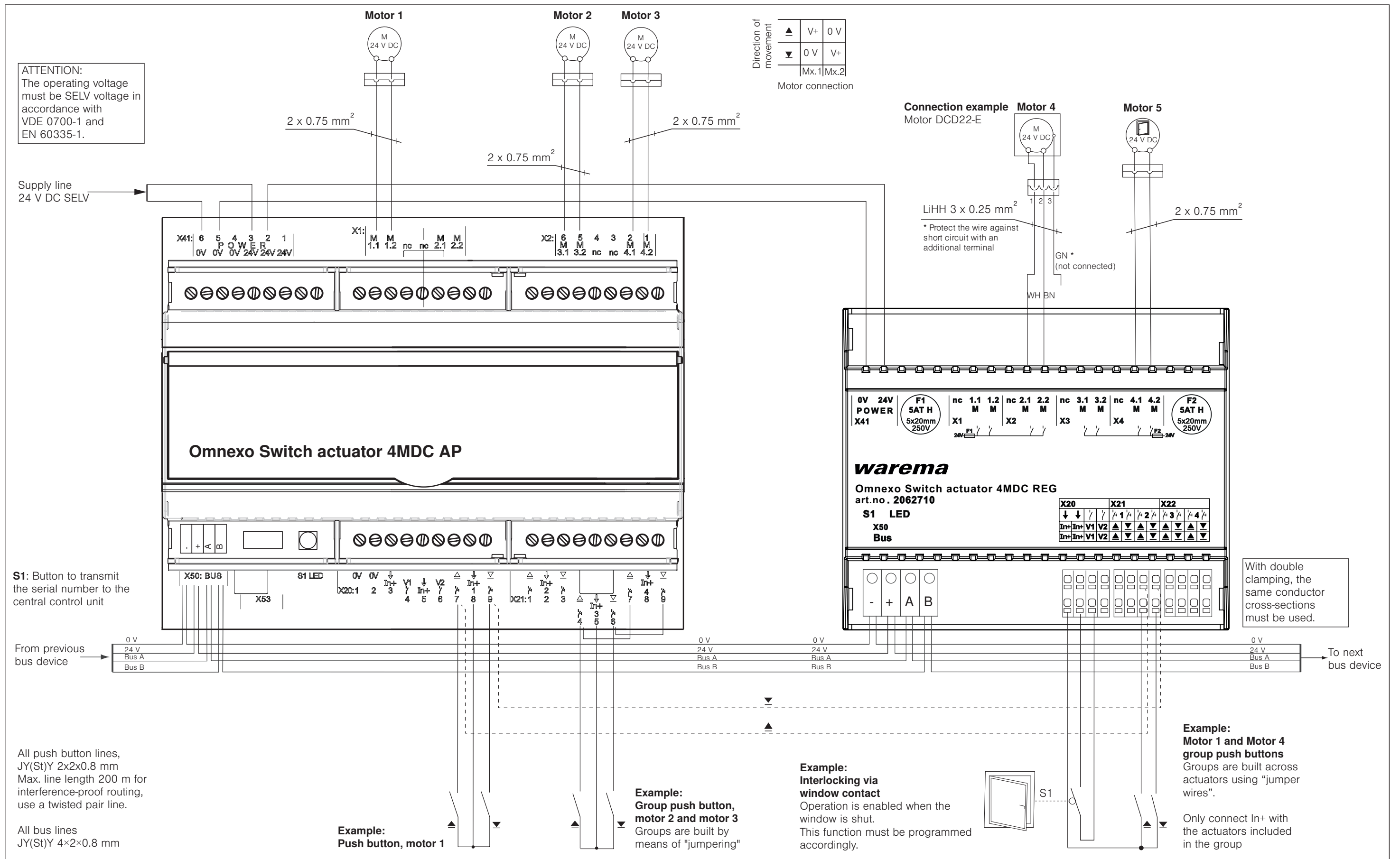
Only connect In+ with the actuators included in the group

Fig. 1   Connection example of Omnexo Switch actuator 4MDC AP/REG