

VL-SMI-230-35



Vestaline SMI-Line motors

CONTENTS

1. Safety precautions (safety measures)
2. Short description (identification of products)
3. Scope of delivery
4. Intended use
5. Technical data
6. Standard Motor Interface
7. Installation, Assembly, Disassembly
8. Troubleshooting
9. Warranty
10. Maintenance
11. Disposal of waste
12. Declaration of conformity
13. Service/Contact

1. Safety precautions



WARNING!

Important safety information.
Follow these instructions to ensure the safety of persons.
The instructions must be stored.

- Contact a professional electrician to install the motor, because the motor requires a power supply of 230VAC, 50 Hz.
- Check the motor for signs of mechanical damage after unpacking. If you notice any shipping damage, do not start up the motor and notify your supplier immediately.
- The motor should only be used for the purpose specified by the manufacturer (refer to the operating instructions). Any changes or modifications thereof are not permissible and will result in loss of all warranty claims.
- Technical data can be found on the type label of the tubular motor.
- If the motor cannot be operated without presenting a hazard, it must be switched off and prevented from being switched on unintentionally.
- When performing work on the windows, motor or connected shades, protect them against unauthorised or unintentional operation.
- Moving parts of the motor installed under 2.5m above the floor level should be protected.
- This device is not intended for use by persons (including children) with reduced physical, sensory or mental abilities or lack of experience and/or lack of knowledge, unless they are supervised by a person responsible for their safety, or received instructions on how the device is to be used.
- Children should be supervised to ensure that they do not play with the device.
- Children are not allowed, to play with fixed controls. Keep remotes away from children.
- The installation has to be checked frequently for imbalance or of signs of wear, damaged cables or springs, if applicable.
- Automatically controlled roller shutters have to be disconnected from the supply network, e.g. if maintenance work has to be done close to them.

VL-SMI-230-35/10Nm

Art.-no.: 01066431

Vestaline motor for controlling roller shutters.

Installation and Operating Instructions

- Before the motor is installed, all unneeded wires must be removed and all devices which are not required for actuation with a power drive must be put out of operation.
- The actuating element of a hand release is to be installed at a height of less than 1.8 m.
- The mains cable of this device cannot be replaced. If the mains cable is damaged, the device has to be discarded.



ATTENTION!

Pay attention to the following European guidelines:

- The cables must conform to the applicable VDE standard.
- If installing motors with a PVC H05VV-F cable, the cable on surface-mounted outdoor installations and recessed-mounted installations must be protected by a cable conduit or cable duct.
- When installing the motor an all-pole disconnection with a contact gap of at least 3 mm per pole must be provided.
- The up and down directions of the switch resp. button must be electrically or mechanically locked against each other. The changeover time for changing the running direction (up/down) must be at least 0.5 sec.



WARNING!

Risk of injury due to improper installation and commissioning.

Improper installation and commissioning may lead to personal injury or property damage.

Therefore:

- When connecting the device, observe the currently valid VDE standards (in particular DIN VDE 0100/0700), your local power company's regulations and the current accident prevention regulations.
- Connect the motor in accordance with the wiring diagram.
- It is important for the safety of professional electricians to follow the user instructions. Please keep instructions for reference.



ATTENTION!

- Follow the safety instructions according to EN 60335-2-97.
- Additional components for the implementation of the installation, such as adaptors and brackets must be chosen among those offered by the producer. These products are listed in the catalogue supplied on request.
- When mounting the drive always use the safest and most suitable tubular motor and mounting bracket.



IMPORTANT!

Any screws used to fix the sunshade system / roller shutter must in no way touch the motor. Please refer to fig. 4.1 to 4.5.

2. Short description

- Motor 35 mm tube diameter for roller shutters
- Programmable upper and lower limit position
- Limit positions can be virtual or physical (upper position)
- Programming of an intermediate position possible
- Parallel connection of up to 16 drives possible
- Anti-block function
- SMI-BUS Communication in combination with SMI controls
- Simple setting of the limit position with the "VL-Progset-ME/SMI-230"
- Re-synchronisation of physical limit positions

3. Scope of delivery

- Motor 35 mm tube diameter with 2.5 m connection cable
- Operating instructions
- Adapter set, comprising tube adapter / adapter ring
- Mounting-kit, comprising safety clip / safety cotter

4. Intended use

These types of tubular motor described in these manual is intended solely for controlling roller shutters. These types of tubular motor cannot be used in potentially explosive area.

These types of tubular motor are designed for using in a single sunshade system.

5. Technical data



Article	VL-SMI-230-35/10Nm	
	Art.-no.:	01066431
Torque (nominal)	Nm	10
Output speed	rpm	17
Tractive power	kg	25
Supply voltage	VAC	230
Frequency	Hz	50
Rated power	W	156
Rated current	A	0.68
Running time	Min.	4
Protection degree	IP	44
Length L1	mm	570

6. Standard Motor Interface

What is SMI?

SMI is the abbreviation for **Standard Motor Interface**. SMI has been developed to connect intelligent motors for roller shutters and sun protection devices. SMI allows the transmission of messages from the control system to the motor and vice versa. SMI allows products from different manufacturers to be combined. The SMI interface simplifies the use of highquality solutions and increases the compatibility between standard motors and controls from different manufacturers. Applications for sunscreens require the greatest robustness and economy. SMI was developed to meet these requirements.



ATTENTION!

SMI-Motors must be connected to certified SMI-Actuators. Parallel connection of tubular motor with electronic limit position are allowed. The maximum switching contact load of the connected control device (switch, motor control, actuator, etc.) must be observed.

The combination of different operating modes is not allowed. To change the operating mode from communication mode to switch mode, push sequential the UP- and DOWN-button.

Also in the switch mode, we recommend the wiring between the motor and the switch with a 4-wire cable.

7. Installation, assembly, disassembly

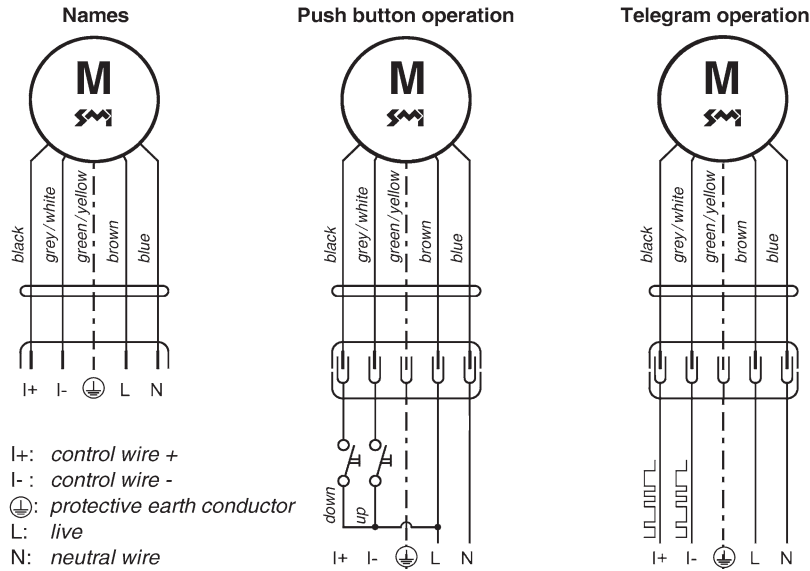
Wiring diagram



ATTENTION!

Parallel connection of tubular motor with electronic limit position are allowed. The maximum switching contact load of the connected control device (switch, motor control, timer etc.) must be observed.

It is not allowed to combine the operation modes. To change the operation mode from communication mode to switch mode, a one-time sequentially up and down button-press is necessary.



Note on laying SMI wires in custom cables!

The I+ and I- SMI wires can be laid in the motor connection line of the SMI drive (as above) or in their own cable. It is not permitted to lay SMI wires together with wires carrying other signals in one cable.

If SMI drives wired in parallel are supplied with electrical power from different phases, the SMI I+ and I- wires must be laid in a separate cable.

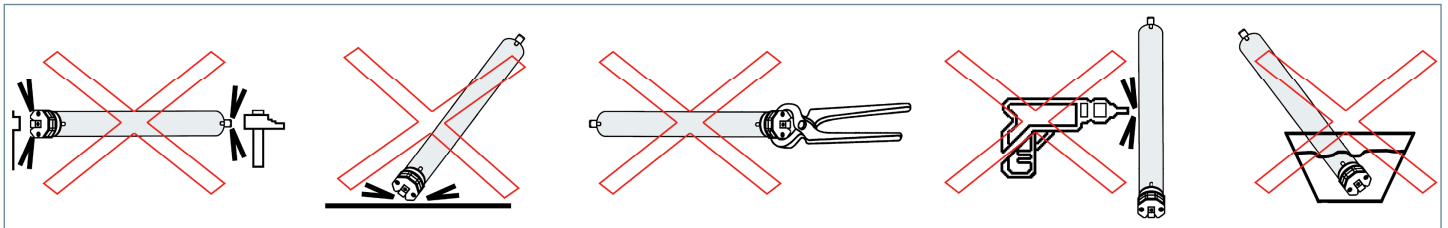


Fig. 4.1

Fig. 4.2

Fig. 4.3

Fig. 4.4

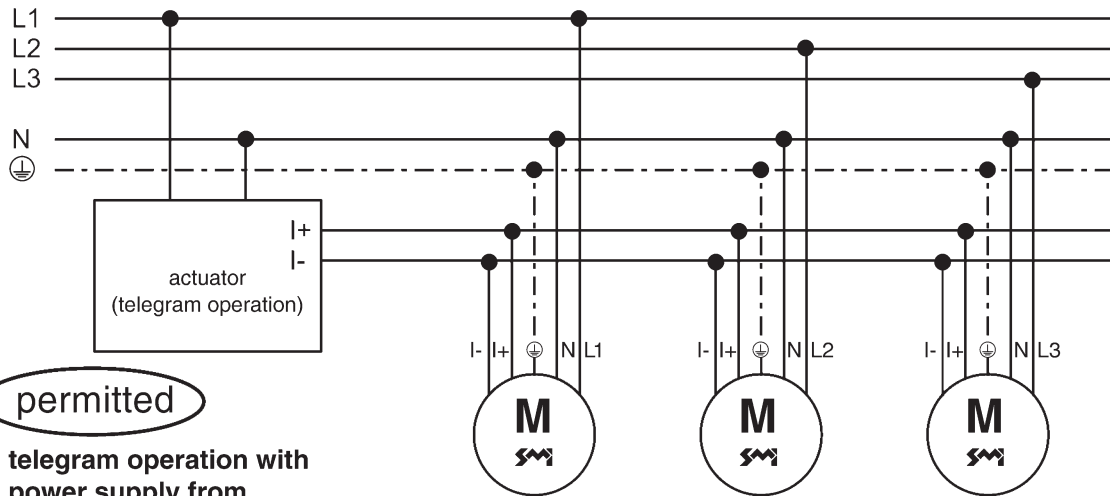
Fig. 4.5

SMI drives on different AC phases



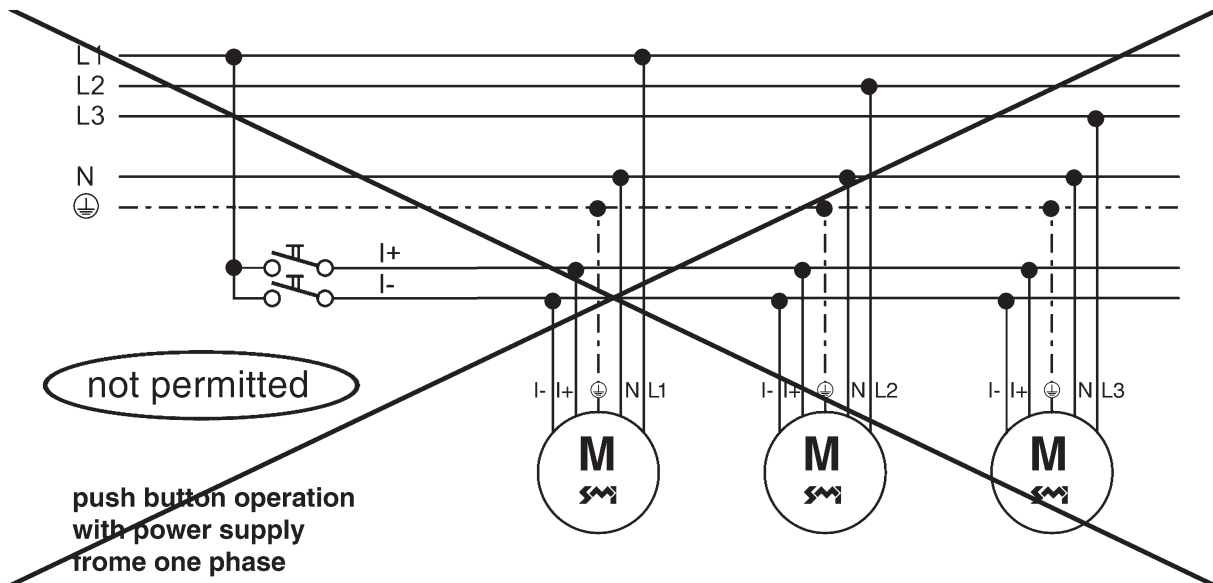
ATTENTION!

Parallel connection to the control lines I+ and I- while supplying power to the drives from different phases, is only permissible in telegram operating mode.



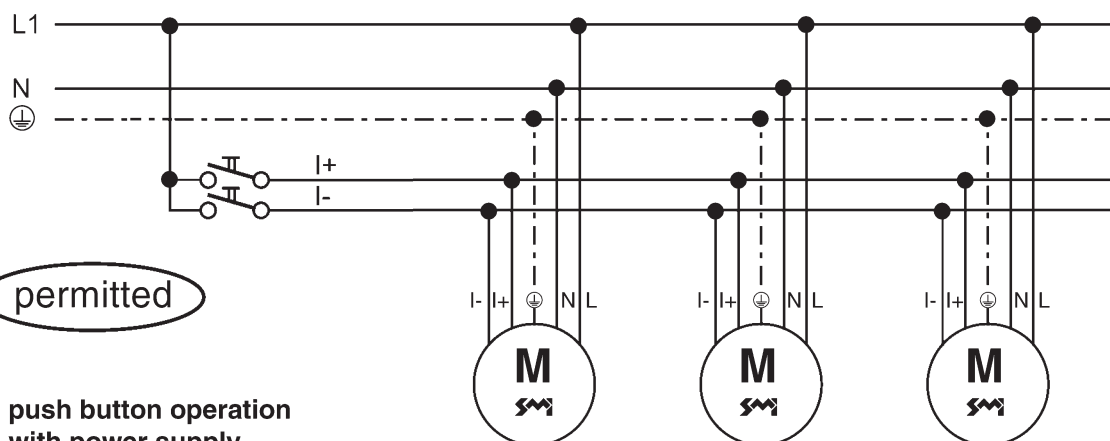
permitted

telegram operation with power supply from different phases



not permitted

push button operation with power supply from one phase



permitted

push button operation with power supply from one phase

Assembly

- The connection cable should be installed in an conduit to the junction box, in compliance with the local building and electrical regulations. Avoid any contact between moving objects and connection cables by routing the cables according to figure 1.
- Move the roller shutter completely down before disconnecting the tube connectors.
- Dissassembly of tubular shaft.
- Place the mounting bracket to the desired position. Assembly of the motor can be performed on both sides.
- Slide the Adapter ring (A) on the adjustment ring (B). Be aware of the correct installation of the notch with the Adapter (D), (figure 2).
- Place the tube adapter (E) on to the motor axle (F) and secure it with the safety clip (G) that comes within the mounting-kit.
- Be careful when sliding the tubular motor completely into the tubular shaft, until the adapter ring is covered into the tubular shaft, (figure 3). Under no circumstances external force should be applied to the motor in any way.
- Place the motor head and tubular shaft into the mounting bracket and check for proper fit. Secure the square pin of the motor head with the safety cotter that comes with the mounting-kit. Make sure to install the motor in a position that the adjustment screws are accessible from the outside.

Fig. 1

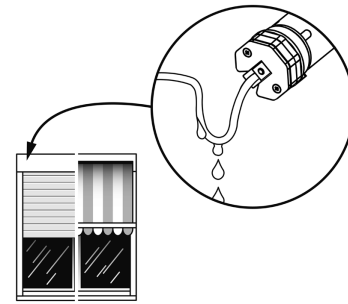


Fig. 2

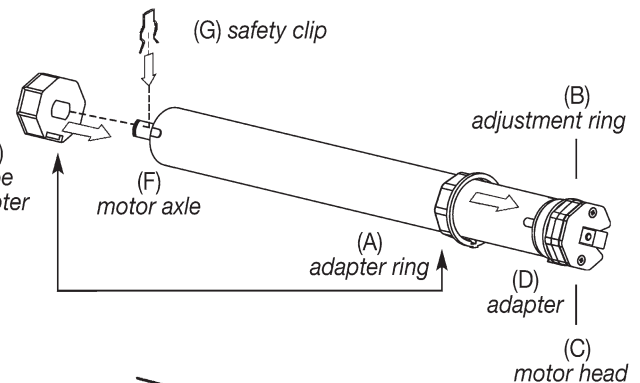
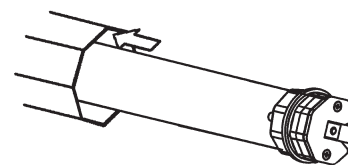


Fig. 3



Disassembly

The workflow is the same as in the section "Assembly" (see above) but in reverse order.
The setup of limit positions can be skipped.

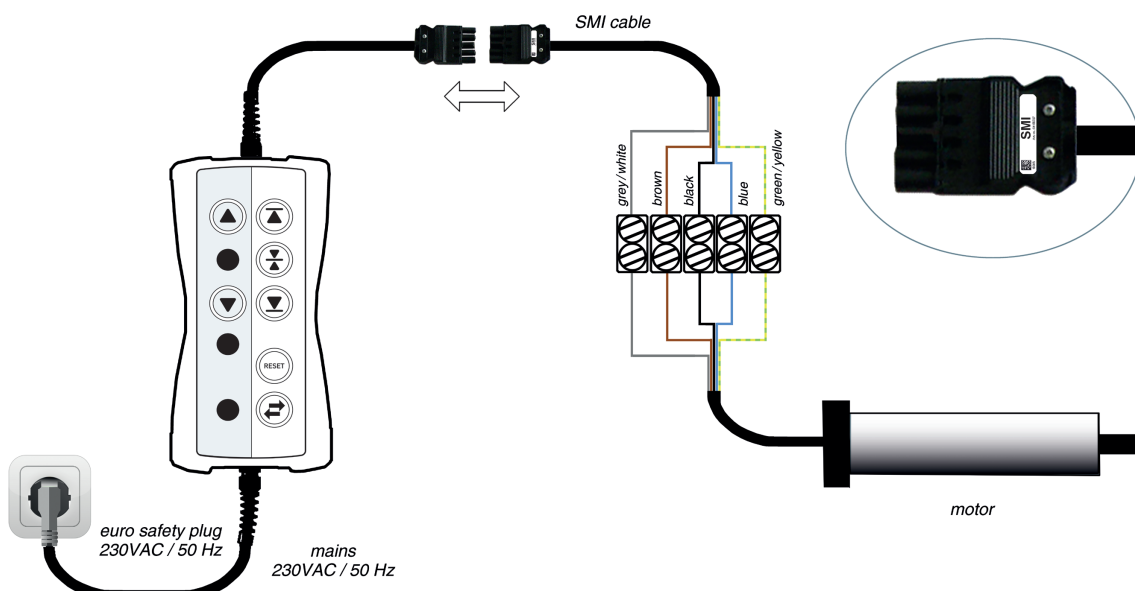
Electronic limit position setting with Installation tool

How to connect to an Installation tool (VL-Progset-ME/SMI-230).

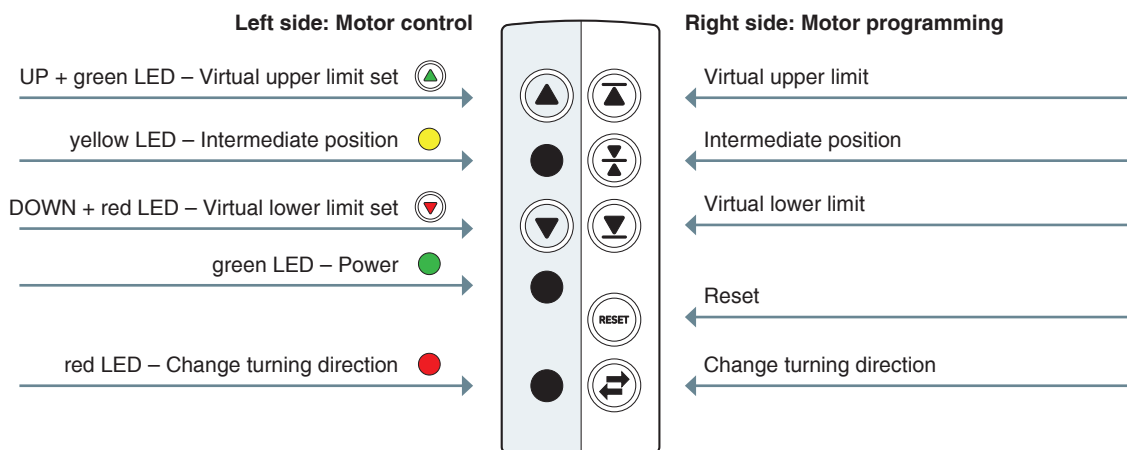


IMPORTANT!

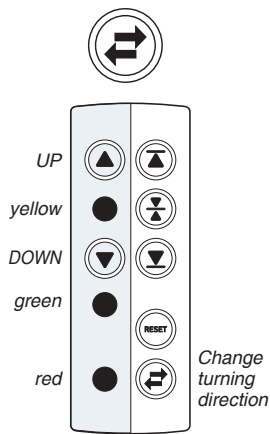
- Switch off the power supply. Connect the wire of the motor to the terminal clamps of the installation tool.
- It is important that the motor-wire-colors correspond with the installation-tool-wire-colors, otherwise the motor turning direction could be set incorrect. Switch on the power supply.
- The installation tool is not suitable for continuous operation and has only been used for set the limit position.



Description of installation tool VL-Progset-ME/SMI-230



Motor control		Motor programming		
Button	Control motor in UP direction Hold down the button to move the motor in UP direction.			
LED	green LED – Virtual upper limit position:			
	<i>OFF</i> when no “Virtual upper limit” is set.			
	<i>Blinking</i> when “Virtual upper limit” or „Reset“ programming is in progress.			
	<i>Lit solid</i> when “Virtual upper limit” programming sequence has completed.			
LED	yellow LED – Intermediate position:			
	<i>OFF</i> when no “Intermediate position” is set.			
	<i>Blinking</i> when “Intermediate position” programming is in progress.			
	<i>Lit solid</i> when “Intermediate position” programming sequence has been completed.			
Button	Control motor in DOWN direction Hold down the button to move the motor in DOWN direction.			
LED	red LED – Virtual lower limit position:			
	<i>OFF</i> when no “Virtual lower limit” is set.			
	<i>Blinking</i> when “Virtual lower limit” or „Reset“ programming is in progress.			
	<i>Lit solid</i> when “Virtual lower limit” programming sequence has completed.			
LED	green LED – Power:			
	<i>OFF</i> when powerless (it is safe to connect a motor to the Installation Tool).			
	<i>Lit solid</i> when attached to mains 230VAC.			
LED	red LED – Change turning direction:			
	<i>OFF</i> when no “Change turning direction” is used.			
	<i>Blinking</i> when “Change motor turning direction” programming sequence is in progress.			
	<i>Lit solid</i> when “Change motor turning direction” programming sequence has completed.			



Changing motor turning direction

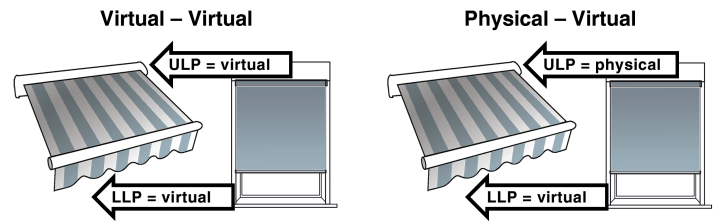
- Hold down the button or to check the motor turning direction.
- When the motor reacts in opposite direction (when motor goes down when you press up and vice-versa), you need to change the motor direction. Motor direction can only be changed during installation phase, when no limit positions are set.
- Press the button shortly.
- The *red* LED starts blinking as long as the change motor turning direction process is in progress.
- The *red* LED lit solid if the process is finished.

Electronic limit position setting combination

ULP = is an abbreviation for Upper Limit Position.

LLP = is an abbreviation for Lower Limit Position.

Following combinations virtual / physical limit position settings are possible:



Setting electronic limit position



ATTENTION!

- The motor starts to move with a short delay time during installation-phase, when no limit positions are set.
- **Conditions to use the physical (automatic) limit position settings:**
The upper limit stop has to be installed.

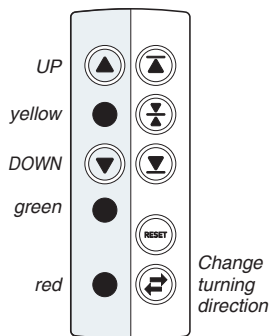
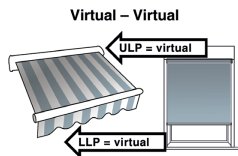
Virtual – Virtual

Start with upper limit position setting

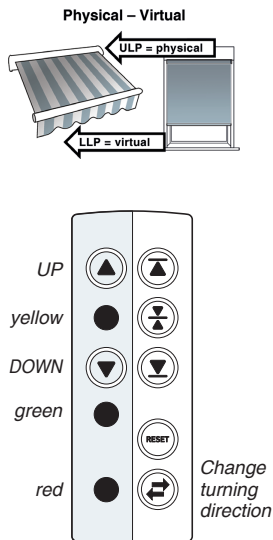
- Hold down the button to move the motor in the requested *upper* limit position. For precise moving of the motor briefly press the button , press again and hold.
- Press the button shortly.
- The *green* LED of button starts blinking as long as the limit setting process is in progress.
- The *green* LED lit solid if the process is finished.
- Hold down the button to move the motor in the requested *lower* limit position. For precise moving of the motor briefly press the button , press again and hold.
- Press the button shortly.
- The *red* LED of button starts blinking as long as the limit setting process is in progress.
- The *red* LED of button lit solid if the process is finished.
- The motor will give a feedback (short UP/DOWN movement) to confirm that the installation procedure has ended.

Start with lower limit position setting

- Hold down the button to move the motor in the requested *lower* limit position. For precise moving of the motor briefly press the button , press again and hold.
- Press the button shortly.
- The *red* LED of button starts blinking as long as the limit setting process is in progress.
- The *red* LED lit solid if the process is finished.
- Hold down the button to move the motor in the requested *upper* limit position. For precise moving of the motor briefly press the button , press again and hold.
- Press the button shortly.
- The *green* LED of button starts blinking as long as the limit setting process is in progress.
- The *green* LED of button lit solid if the process is finished.
- The motor will give a feedback (short UP/DOWN movement) to confirm that the installation procedure has ended.



Physical – Virtual



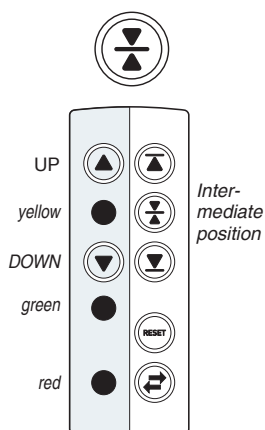
Start with upper limit position setting

- Hold down the button  till motor stops automatically due to obstacle detection. Upper physical limit position is now set.
- Hold down the button  to move the motor in the requested *lower* limit position. For precise moving of the motor briefly press the button , press again and hold.
- Press the button  shortly.
- The *red* LED of button  starts blinking as long as the limit setting process is in progress.
- The *red* LED of button  lit solid if the process is finished.
- The motor needs the following complete movement to memorize the *limit* positions. Hold down the button  till motor stops automatically due to obstacle detection.
- The motor will give a feedback (short UP/DOWN movement) to confirm that the installation procedure has ended.

Start with lower limit position setting

- Hold down the button  to move the motor in the requested *lower* limit position. For precise moving of the motor briefly press the button , press again and hold.
- Press the button  shortly.
- The *red* LED of button  starts blinking as long as the limit setting process is in progress.
- The *red* LED lit solid if the process is finished.
- Hold down the button  till motor stops automatically due to obstacle detection. Upper physical limit position is now set.
- The motor needs the following complete movement to memorize the *limit* positions. Hold down the button  to move the motor downwards about 20 cm. Then hold down the button  till motor stops automatically.
- The motor will give a feedback (short UP/DOWN movement) to confirm that the installation procedure has ended.

Save intermediate position



- Before setting the intermediate position, the upper and lower limit position should be set and confirmed.
- Press the button  or  = self-locking. Simply press the opposite button to stop the motion.
- Press the button “intermediate position” shortly.
- The yellow LED  starts blinking as long as the setting process is in progress.
- The yellow LED  lit solid if the process is finished.
- The motor will give a feedback (short DOWN/UP movement) to confirm that the installation procedure has ended.
- When an intermediate position is programmed, the motor reaction is dependable of how long the UP/DOWN button is pressed.
- Press the button  or  short = intermediate position.
- Press the button  or  long (> as 1 sec.) = overrun the intermediate position.
- The intermediate position can be change/overwritten at any time.

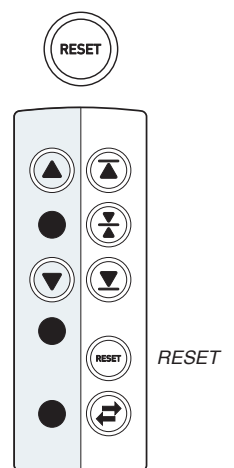
Motor – RESET

Clear – LED status

- Clear the installation tool LED-status. Keep the RESET button  pressed till the LEDs turn off.

Delete the limit position settings of the motor

- Press the RESET button , till the LEDs start blinking.
- The LEDs keep blinking as long as the motor reset process is in progress.
- When the reset process is finished, the LEDs turn off, the motor limit positions have been cleared, and can be set again.
- The motor will shortly move during the reset sequence.



NOTE!

Tubular motor might be switched off before reaching the limit position: Extraordinary large increases of load (anti-block-function) – obstacles, roller shutter keeps jamming, tubular motor is overloaded.

Remedy action:

- Removing the obstacle.
- Check the mechanical parts of the roller shutter.
- Use the correct tubular motor (rated torque – tractive power) according the specification of the roller shutter.

8. Troubleshooting

Problem	Possible cause	Solution
■ Motor is not responding.	1. No mains voltage. 2. Connection error. 3. Cutoff by internal temperature fuse.	1. Check mains voltage. 2. Check connections (see wiring diagram). 3. Allow the motor to cool down for 20 min.
■ Motor starts slowly or makes too much noise.	1. Connection error. 2. Installation error or undersized motor selected.	1. Check connections. 2. Check installation and motor load.
■ Motor rotation direction is wrong.	Motor connection cables are reversed.	Disconnect the supply line from the power, and swap the black and brown conductors of the motor cable at the controller.
■ Motor stops while moving up or downwards.	1. Preset endpoint reached. 2. Cutoff by internal temperature fuse.	1. Set the end limits again, according to the instructions. 2. Allow the motor to cool down for 20 min.
■ Motor stops while moving upwards.	Iced roller shutter or obstacle in running rail.	Remove icing or obstacle. Release the roller shutter by steering the motor in downward direction.

9. Warranty

Principally, the General Terms and Conditions of the manufacturer, Vestamatic GmbH apply. The terms and conditions are part of the sales documents and handed over to the operator upon delivery. Liability claims for personal or material damages are excluded when they can be attributed to one or more of the following causes:

- Unintended use of the product.
- Opening of the product by the customer.
- Improper installation, commissioning, or operation of the product.
- Non-compliance with the technical specifications.
- Non-observance of the safety provisions and instructions of the Operating Instructions.
- Operation of the product with improperly installed connections, defective safety devices or improperly installed safeguards.
- Modifications to the product.

10. Maintenance

The motor is maintenance-free.

11. Disposal of waste

The disposal of electrical equipment and batteries in household waste is strictly forbidden.



The symbol (dustbin crossed out, in line with WEEE Appendix IX) indicates separate collection of electrical and electronic products in EU countries. Do not dispose of the device or battery in your household waste. Ask your town or local council about the return and collection systems available in your area to dispose of this product.

12. Declaration of conformity



These products comply with the essential requirements. The Declaration of Conformity concerning these products are available on request.

13. Support/Contact

Vestamatic GmbH
Dohrweg 27
41066 Mönchengladbach
Germany
info@vestamatic.com
Phone: +49 2161 / 29 408-0

