

**Application/special features/scope of delivery/accessories**

Application:

- Electronic drive for indoor/outdoor venetian blinds
- Suitable for head rails from 51 x 57 mm (height x width)

Special features:

- Drive on both sides with silent soft brake
- Limit stop: electronic
- Slow travel during rotation of slats
- Standstill detection of drive shaft
- Soft start (2 speeds: slow/fast)
- The travel directions OPEN and DOWN/CLOSE are permanently assigned.
- Observe the marking on cable side on the drive
- Safety cut-out limit switch: Optional as a reference point for band length compensation by means of cyclical reference runs

Standard scope of delivery:

- Drive with 0.5 m connecting cable with Hirschmann plug STAS4, assembly kit, safety instructions and assembly instructions

Accessories:

- Deflector for connecting cable, blind clamping set, clips, damper systems, QuickSnap shaft couplings, mushroom button extension (cut-out extension)
- Hirschmann couplings, control units

**Safety instructions**



**WARNING**

Important safety instructions Observe all assembly instructions. Incorrect assembly can lead to serious injuries. General safety instructions for use, including installation of venetian blind drives, can be found in the "Safety instructions" leaflet supplied with each drive. Please read these installation instructions carefully as the procedure in this manual is a prerequisite for correct use of the product. Figures included are for illustration purposes only. The illustrations may differ from your product with in minor details and are provided for general information only. **elero** GmbH continuously strives to improve all products. As a result, the specifications, features and technology of this product may be changed at any time. The information provided is based on current information at the time of publication. Do not perform any modifications to the device. No claims can be derived from the technical data, images and information provided in this manual.

**Additional assembly instructions:**

- Before installing the drive, all lines and equipment which are not required for operation must be deactivated.
- The rated torque and rated operating time must be suitable for the properties of the driven part (the blind).



**CAUTION**



**Risk of injuries due to hot surfaces. The drive will heat up during operation, the drive casing can become hot. Skin burns are possible.**

- Wear personal protection equipment (protective gloves).
- Venetian blind drives that are installed below 2.5 m above the floor or at another level that allows access to the drive must be installed so that direct contact with the drive or other components that heat up during operation is prevented e.g. by installing a cover.

**Assembly**



**NOTICE**

The drive is intended exclusively for right hand horizontally installation with its lower end position preset. Right-hand installation refers to the view from the outside of the building looking in, the cable outlet and front with marking (direction of movement symbol) are located on the right.

**Mounting the safety cut-out**

On the underside of the limit switch housing, insert the safety cut-out into the openings and clip it in. Check the safety cut-out is working. Any malfunctions may lead to damage. If the safety cut-out is not long enough, it can be extended by 10 mm at a time with the safety cut-out extension (Accessories, article number 161014501) (attach max. 3 cut-out extensions).

Insert a small flat screwdriver into one of the notches on the orange cover and apply pressure to the blade towards the middle of the mushroom button, levering off the cover. Clip on the extension and then clip on the cover again.

**Mounting the optional mushroom button extension**

- Use the extended version of the mushroom button (accessories) instead of the original mushroom button. Clip this in/out to replace it.

**Mounting of QuickSnap coupling**

1. Attach the coupling on the drive shaft so it is diagonal. When doing so, pay attention to the position of coupling and shaft. The retaining springs must slide on the top surface.
2. Push on the coupling until the retaining spring audibly latches in the notch. Hold the drive shaft steady by pushing against it at the other end.
3. Jerk the coupling to check whether it is held securely.

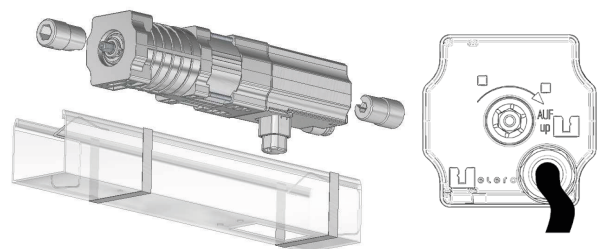
**Dismantling the QuickSnap coupling**

- Lift the retaining spring on the coupling using a suitable screwdriver and pull off the coupling.

**Installation in venetian blind head rail**

Note: Select the damper system according to the specified shaft height (see Accessories).

1. Attach the damper on the drive or the head rail. Install the drive without pressure into the head rail so it is positioned correctly (mushroom button pointing down). Do not knock the drive, shaft or coupling. Do not load the drive shaft in radial direction.
2. Note: Secure the drive from turning in the head rail using the countersunk screws and the optional clips.
3. Insert the venetian blind shafts into the QuickSnap couplings in the correct position and secure them against slipping out.



**After installation of the venetian blind, attach these instructions to the connecting cable for the electrician.**

## Electrical connection



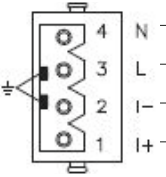
All electrical work may only be carried out by authorised electricians according to the applicable rules and regulations of the trade association and the requirements laid out in DIN VDE 0100. Furthermore, the national legal regulations applicable in the respective country of use must be observed. Connect the electrical connection only when the power is turned off by de-energising the feeder and ensuring it cannot be switched on unintentionally. Persons failing to observe the requirements may be held liable for damage to property and personal injuries.

Connect according to the following scheme while observing the following notes:

- Min. switchover delay 500 ms (voltage-free) in case of a change in direction of rotation due to locked push buttons/switches/control units.
- Parallel switching of several JA type drives comfort SMI is possible.
- Please note the maximum switching capacity of the control unit.
- SMI requires a continuous current power supply
- Connect drive/motor JA comfort SMI only to control units/systems with the **SMI** marking, never to motor control units marked **SMI LoVo** (low voltage).
- The drive is supplied with a spray-painted Hirschmann plug STAS 4.

The use of non elero controls must be checked by the customer in each individual case.

## Plug drive cable assignment

PE	Yellow/green protective conductor	
I+	① Control cable 230 V fixed black1	
I-	② Control cable 230 V fixed black2	
L	③ Phase, brown	
N	④ Neutral conductor, blue	

## Adjusting the end positions and turning range

On initial commissioning, the drive is in delivery condition: Lower end position has been reached. Upper end position needs to be set (see **Setting upper end position**). The end positions and turning range of the slats are set with the **elero** assembly cable.

### Turning range of slats

- This is the range of movement in which the position of the slats is set at low speed. The standard setting is 270° based on the drive shaft.
- This can optionally be changed on setting the lower end position, at minimum 90° (first OPEN movement plus 1 increment), maximum 360°.

### Setting end positions

Generally speaking, only one end position (upper or lower) can be reset; this leads to a deletion of the previous setting.

- If both the top and the bottom end position need to be set, the procedure needs to be carried out twice accordingly.
- On initial commissioning (lower end position reached, drive is in the setting mode for the upper end position), skip point 1 below and continue at point 2 depending on the upper limit stop required later on.

1. With the **elero** SMI assembly cable (Art. no. 23 254.0001) connected and in middle blind position, pull out the mains plug for at least 2 seconds and plug it back in again. Press the buttons **OPEN** and **DOWN/CLOSE** simultaneously and hold them down until the drive initiates brief upward and downward motion.

### Freely setting the upper end position without influence from the run-on end switch

2. Press the **OPEN** button until the desired position is reached (drive starts up, stops briefly and continues).

3. Corrections are possible in inching mode using the **OPEN** and **DOWN/CLOSE** buttons. If the **DOWN/CLOSE** button is pressed down permanently, this position will be stored.

4. Press the **DOWN/CLOSE** button until the drive stops automatically.

*The upper end position has been freely configured. Even if a run-on end switch is present, no reference runs will be made.*

5. Remove the assembly cable, perform the electrical connection (open or down/close), check assignment of the travel directions.

### Setting upper end position on the run-on end switch

2. Press the **OPEN** button until the drive is stopped by the run-on end switch (drive starts up, stops briefly and continues).

*The upper end position is set and is at the position of the run-on end switch. No reference runs are performed.*

3. Remove the assembly cable, connect it electrically (open or down/close), check assignment of the travel directions.

### Adjust the upper end position to the cover position \*) (with cyclical reference runs)

\*) Cover position: 3 turns of the drive shaft below the run-on end switch at maximum

2. Press the **OPEN** button until the drive is stopped by the run-on end switch (drive starts up, stops briefly and continues).

3. Press and hold down the **OPEN** button and the **DOWN/CLOSE** button too until the desired position is reached. Release both buttons.

*The upper end position is set and is at the position before the run-on end switch. Cyclical reference runs are performed.*

When the cyclic reference runs are activated, the upper end position is automatically readjusted: in the 1st cycle, every 5 cycles up to the 20th cycle, every 10 cycles up to the 100th cycle, then every cycles.

4. Remove the assembly cable, connect it electrically (open or down/close), check assignment of the travel directions.

### Setting the lower end position and the turning range to standard

2. Press the **DOWN/CLOSE** button until the desired position is reached (drive starts up, stops briefly and continues).

3. Corrections are possible in inching mode using the **OPEN** and **DOWN/CLOSE** buttons.

4. Press the **OPEN** button until the drive stops automatically.

*The lower end position has been set. The turning range is set to 270° (standard).*

5. Remove the assembly cable, connect it electrically (open or down/close), check assignment of the travel directions.

### Freely configuring the lower end position and the turning range (minimum 90° to maximum 360°)

2. Press the **DOWN/CLOSE** button until the desired position is reached (drive starts up, stops briefly and continues).

3. Corrections are possible in inching mode using the **OPEN** and **DOWN/CLOSE** buttons.

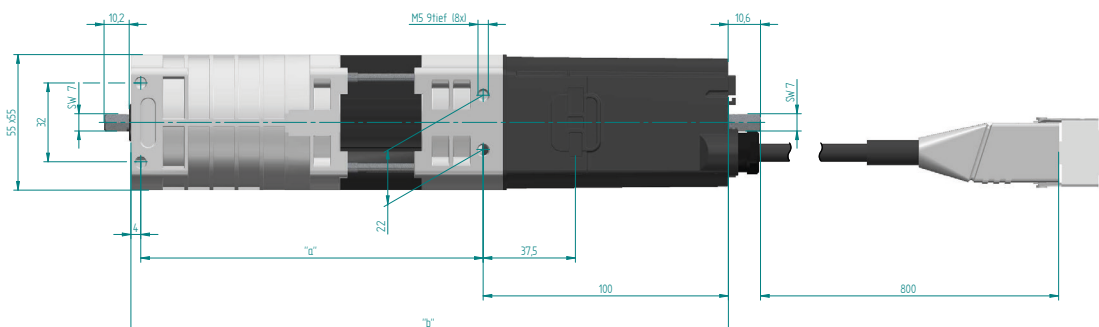
4. Press and hold down the **OPEN** button until the desired turning range is reached (slats open slightly to begin with and continue opening further in small increments after 2 seconds).

Corrections to the turning range in down/close direction are not possible. Releasing the **OPEN** push button will save the turning range.

*The lower end position has been set. The turning range is set.*

5. Remove the assembly cable, connect the electrics, check assignment of the travel directions.

Technical data	JA 06 comfort SMI	JA 09 comfort SMI	JA 04/35 comfort SMI	JA 06/35 comfort SMI	JA 04/50 comfort SMI
Rated torque [Nm]	6	9	4	6	4
Rated speed   Slow travel [rpm]	26   6	26   6	35   6	35   6	50   6
Rated voltage [V]	1 ~ 230	1 ~ 230	1 ~ 230	1 ~ 230	1 ~ 230
Rated frequency [Hz]	50	50	50	50	50
Noiseless soft brake	✓	✓	✓	✓	✓
Rated current [A]	0.50	0.68	0.50	0.68	0.68
Rated power consumption [W]	115	156	115	156	156
Protection class I	✓	✓	✓	✓	✓
Limit switch range (revolutions)	100	100	100	100	100
Protection class (IP)	54	54	54	54	54
Operating time (min S2)	5	4	5	4	4
Length "a" [mm]	139	154	139	154	154
Length "b" [mm]	243	258	243	258	258
Weight [kg]	1.60	1.95	1.60	1.95	1.95
Ambient operating temperature [°C]	-20 ... 60	-20 ... 60	-20 ... 60	-20 ... 60	-20 ... 60
Standby energy efficiency [W]	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Connecting cable [m] with Hirschmann-plug Stas 4 and clip	0.5	0.5	0.5	0.5	0.5
Item number	353570001	353670001	353550001	353650001	353250001



## Connection diagram

### Pushbutton mode

The drives are actuated via the inputs I+ or I- with the control voltage (230 V AC).

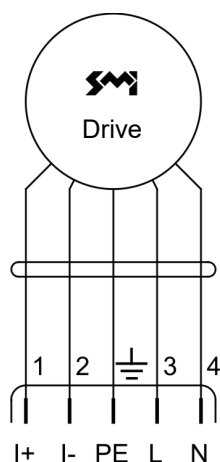
### Command mode

The drives are actuated via the inputs I+ or I- with digital command sequences. The precise connection diagram for your relevant operating mode can be found in this chapter.

## Identification number

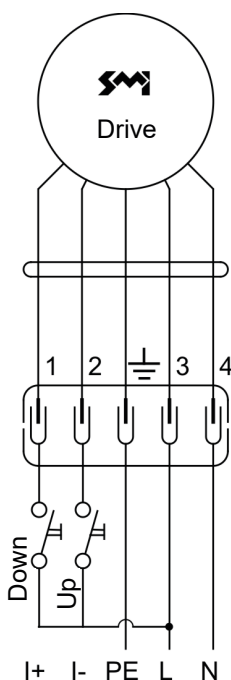
The **elero** SMI drives are equipped with removable ID stickers on the connecting cable. The printed SMI-Key-ID numbers are used for unique identification of the motor in the bus system.

Ensure the stickers and/or the connecting cable are not mixed up. Using the stickers, you can note the installation location for bus integration of each motor later on.

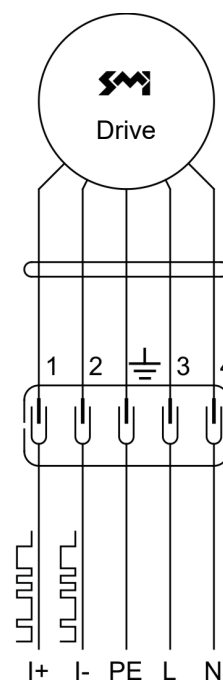


I+: control cable +  
I-: control cable -  
PE: protective conductor (earth)  
L: phase  
N: neutral conductor

**Designations**



**Pushbutton mode**



**Command mode**

## Plug-in connections

Always note the applicable norms and country-specific rules on installation.

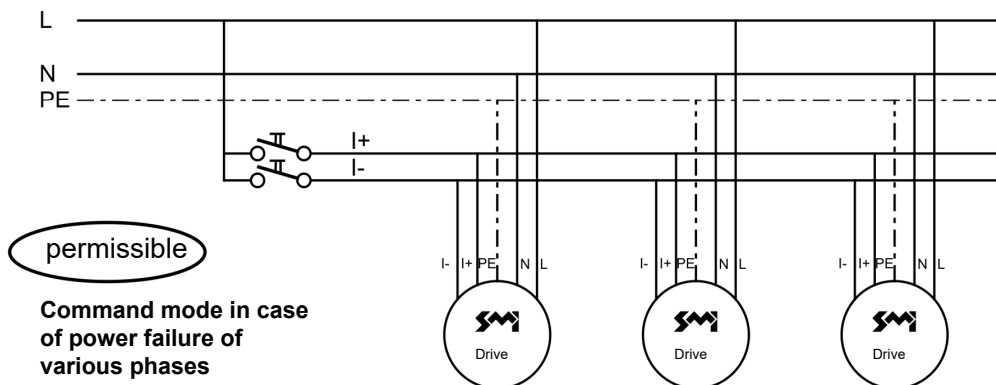
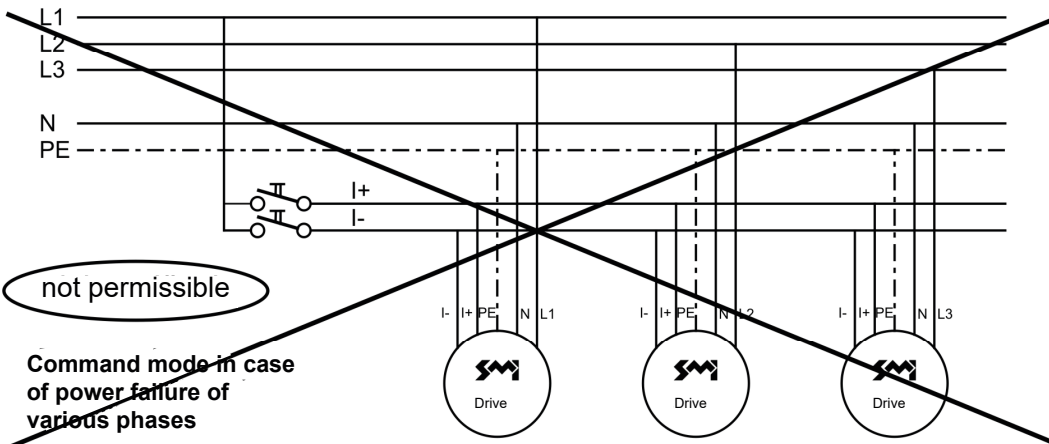
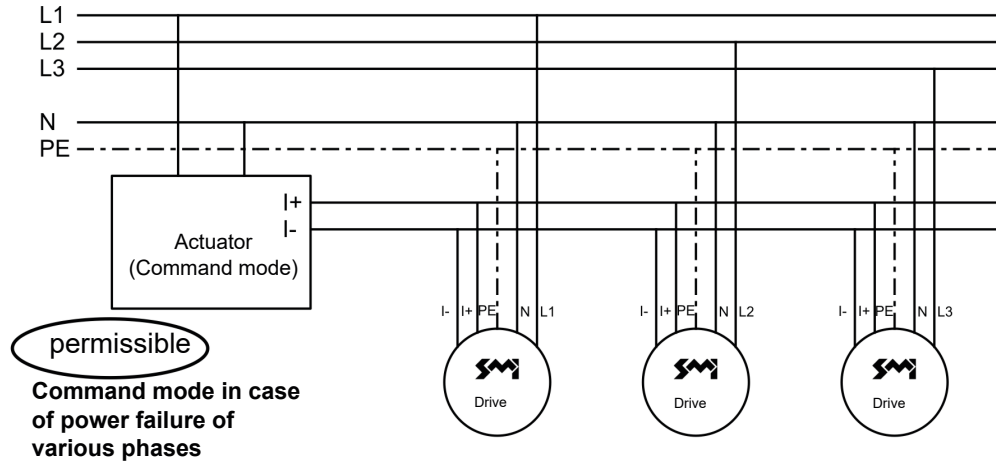
Plug connection to drive cables	Plug connection STAS4 by Hirschmann is recommended.		
Connecting cables and plug assignment for plug system STAS4/STAK4 for cables with <b>black, grey, brown, blue and yellow-green wires.</b>	<b>STAS 4/STAK 4</b> 1 2 3 4 5 (earth)	<b>Wire colour</b> black grey brown blue green-yellow	<b>Designation</b> I+ I- L N PE
Connecting cables and plug assignment for plug system STAS4/STAK4 for cables with 2 black wires. Definition of black wires: Black 1: between blue and green/yellow Black 2: between brown and green/yellow	<b>STAS 4/STAK 4</b> 1 2 3 4 5 (earth)	<b>Wire colour</b> black 1 black 2 brown blue green-yellow	<b>Designation</b> I+ I- L N PE
Notes on installation of SMI wires in own cables	SMI wires I+ and i- can be routed in the motor connection cable of the SMI drive (as above) or in their own cable. Combining SMI wires with wires of external signals in one cable is not permitted.		

## SMI drives to different alternating voltage phases

Parallel switching of control cables I+ and I- and on power supply of drives of different phases is only possible in command mode.

## Changing from command mode to pushbutton mode

Changes from command mode to pushbutton mode are only possible after the mains has been disconnected.



### EU Declaration of Conformity

This product conforms to basic requirements and all other pertinent provisions in EU Directives. For the full declaration of conformity, see [www.elero.com/downloads-service/](http://www.elero.com/downloads-service/)

Manufacturer's address	Service
elero GmbH 73278 Schlierbach GERMANY <a href="http://www.elero.de">www.elero.de</a>	If malfunctions have occurred or the device has been damaged despite proper handling, please contact your contractor or dealer.