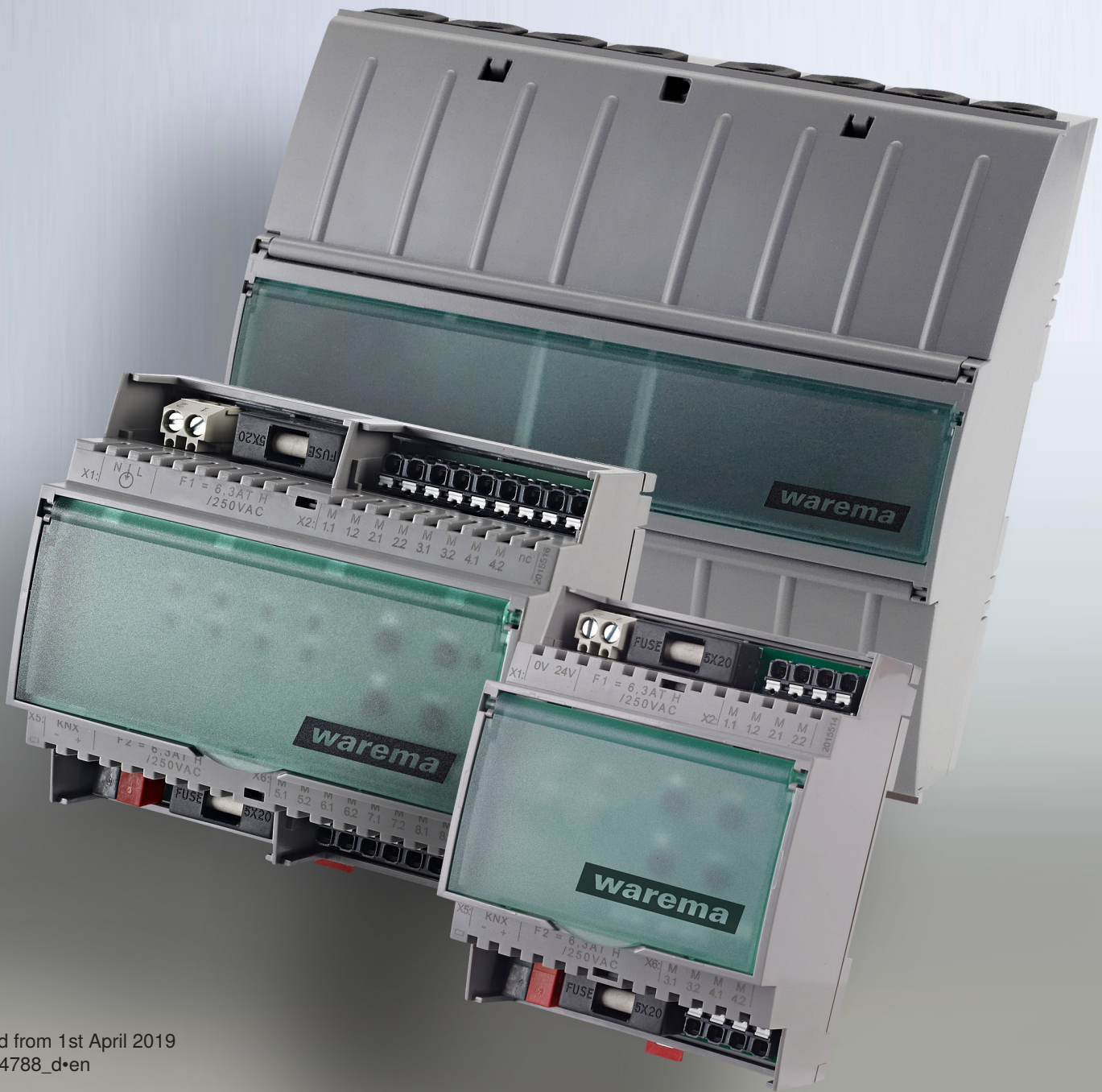
Sun shading actuators KNX SA ...

Manual

Der SonnenLichtManager



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General information

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Legal information

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1 Overview

This manual describes the functions of all KNX SA sun shading actuators. Observe the corresponding notes at the start of the chapter that state which functions are available for your device model.

The designations and the number of objects, as shown in the illustrations, may vary depending on the device and software version.

CAUTION
The KNX SA sun shading actuators position the sun shading drives with a high degree of accuracy. After the devices have been operated for an extended period, however, the positioning may begin to stray. To ensure that the devices continue to function properly, the sun shading drive should be calibrated once a week.

1.1 General information on the KNX SA sun shading actuators

The KNX SA sun shading actuators are used for directly positioning mutually independent drives for internal and external venetian blinds, awnings and other sun shading systems. The number of outputs depends on the respective device model.

- up to eight 230 V AC drives
- up to four 24 V DC drives (with reversing circuit)
- Up to six 100 V AC drives (in the 100 V AC model)

1.2 Device models

WAREMA offers the KNX SA sun shading actuators as DIN rail-mounted devices (REG) and in surface-mounted housing (AP).

- **REG**
  with keyboard for emergency operation and commissioning
- **AP**
  with Bluetooth module for emergency operation and commissioning via a smartphone app (iOS or Android) and inputs for external operating elements (push buttons)

Actuator	Voltage	Channels	Push button inputs	Housing	Housing width	Art. no.
KNX SA 2M230 REG	230 V AC	2	–	DIN rail-mounted device	4 MW	2014568
KNX SA 2M230.4 AP	230 V AC	2	4	Surface-mounted housing	6 MW	2014569
KNX SA 4M230 REG	230 V AC	4	–	DIN rail-mounted device	4 MW	2014570
KNX SA 4M230.8 AP	230 V AC	4	8	Surface-mounted housing	9 MW	2014571
KNX SA 4MDC REG	24 V DC	4	–	DIN rail-mounted device	4 MW	2014572
KNX SA 4MDC.8 AP	24 V DC	4	8	Surface-mounted housing	6 MW	2014573
KNX SA 6M230 REG	230 V AC	6	–	DIN rail-mounted device	6 MW	2014574
KNX SA 6M230.12 AP	230 V AC	6	12	Surface-mounted housing	12 MW	2014575
KNX SA 8M230 REG	230 V AC	8	–	DIN rail-mounted device	6 MW	2014576
KNX SA 8M230.16 AP	230 V AC	8	16	Surface-mounted housing	12 MW	2014577
KNX SA 2M100.4 AP	100 V AC	2	4	Surface-mounted housing	6 MW	2019180
KNX SA 4M100.8 AP	100 V AC	4	8	Surface-mounted housing	9 MW	2019181
KNX SA 6M100.12 AP	100 V AC	6	12	Surface-mounted housing	12 MW	2019182

The dimensions are provided in the devices' respective installation instructions.

1.3 Additional documentation

Further information about the installation and commissioning of the KNX SA sun shading actuators can be found in the associated installation instructions.

In this document, group objects will be abbreviated to ***GO***.

2 Safety instructions

We have developed and tested the KNX SA sun shading actuators in compliance with the basic safety requirements.
Residual risks nevertheless remain.

- For this reason, please read this manual before commissioning and operating the control.
- **It is very important that you adhere to the safety instructions listed in this section and the warning information contained in this manual. Failure to do so will void any warranty claims against the manufacturer.**
- Keep this manual for future use.

2.1 Meanings of symbols and pictograms

The safety instructions contained in these instructions are marked with warning symbols. They are categorised into different warning types depending on the level of potential danger:

DANGER
warns of an **imminently dangerous situation.**
Possible consequences **may include serious injuries and even death (personal injury), property damage or environmental** harm.

WARNING
warns of a **potentially dangerous situation.**
Possible consequences **may include mild or serious injuries and even death (personal injury), property damage or environmental** harm.

CAUTION
Reminder to **exercise care**.
Failure to comply may result in **property damage**.

The following pictograms and symbols may be affixed to the control unit itself or to the connected devices, alerting you to potential danger:

WARNING
Warning against dangerous electrical voltage.

The i symbol designates important **information** and helpful **tips**.

Example The term **Example** marks an **example**.

- The **square** indicates an **instruction** or a **prompt for action**. Perform this action.
- ▶ The **triangle** denotes an **event** or the **result** of a preceding action.
- ▶ The **black triangle** is a **bullet point** for lists or selections.

2.2 Intended use

The KNX SA sun shading actuators are used for directly positioning mutually independent drives for internal and external venetian blinds, awnings and other sun shading systems.

WARNING
Please obtain the approval of the manufacturer if you have questions regarding the connection of devices not listed in these instructions.

All control devices are intended to be installed **indoors** unless otherwise specified.

WARNING
The approval of the manufacturer must be obtained for uses outside of those listed here. The consequences of unintended use may include personal injury to the operator or third parties as well as property damage to the control unit itself, to connected devices or to moveable mechanical parts of the entire unit.

- Therefore, use our product only as intended.

2.3 Target group

These instructions are intended for persons who are commissioning a sun shading system in KNX technology as well as for qualified technicians. Knowledge of KNX technology is essential.

WARNING
Commissioning and operation by persons who are not sufficiently qualified and informed can cause severe damage to the unit or may even cause personal injury.

- Commissioning may therefore only be performed by properly trained and qualified technicians. These technicians must be able to recognise sources of danger that may be caused by the mechanical, electrical or electronic equipment.
- Persons commissioning the unit must know and understand the content of these instructions.

2.4 General safety instructions

The control system controls your sun shading system automatically. You must therefore observe the following safety instructions:

WARNING
An automatically controlled mechanism may begin to move unexpectedly.

- Therefore, never place any objects in the area of an automatically controlled mechanism. Make sure that no persons are located in the movement range of automatically controlled sun shading products during commissioning.
- If measuring or test work needs to be carried out on the active unit, make sure that applicable accident prevention regulations are observed under all circumstances.

CAUTION
The entire unit becomes non-functional if power fails. Therefore, move your sun shading system to a safe position ahead of time if a storm is pending. Changing individual parameters may impair the safety of the unit or reduce its effectiveness. It is better to consult a qualified specialist if you are not sure about the effects of a change.

3 General information

3.1 Technical data

Technical data, wiring diagrams and specifications for electrical lines and connectable devices can be found in the installation instructions for the respective actuators.

3.2 Outputs

The outputs are grouped into channels. Two electrical outputs are allocated to each channel.

The channels can be activated independently of one another.

The ▼ symbol stands for the DOWN direction; the ▲ symbol stands for the UP direction.

Different sun shading operating modes can be set for each output.

3.3 Master reset

The master reset returns the KNX SA sun shading actuator to its delivery condition. All group addresses in the device are deleted, all parameters are set to the default values and the physical address is set to 15.15.255.

A master reset is performed as follows:

1. Switch off the operating voltage
2. Press and hold the programming button
3. Switch on the operating voltage
4. Wait for the programming LED to begin flashing and release the button after approx. 3 seconds
5. Wait for the programming LED to go out
6. Switch off the supply voltage
7. The master reset is finished

   After a master reset, the actuator must be recommissioned.

4 Commissioning

The KNX SA actuators are commissioned using the Engineering Tool Software ETS (**at least ETS 5**).

Before initial operation of the KNX SA sun shading actuator, move all connected sun shading products to a safe position, e.g. move external venetian blinds to their upper limit position.

4.1 Electrical connections

Technical data, wiring diagrams and specifications for electrical lines and connectable devices can be found in the installation instructions for the respective actuators.

CAUTION
Only connect sun shading products with correctly adjusted limit switches in order to prevent damage when commissioning.

4.2 Commissioning sequence

Commissioning is performed as follows:

1. Switch on the operating voltage
2. Switch on the bus voltage
3. Press programming button on the device (programming LED lights up)
4. Load the physical address and application into the device from the ETS
5. Wait for the programming LED to go out
6. Check function of the device

After commissioning or after voltage recovery, the sun shading actuator does not recognise the position of the connected sun shading products. For this reason when a move command is executed for the first time, the connected sun shading products initially perform a calibration in some circumstances.

4.3 Manual override operation

The KNX SA sun shading actuators can be operated manually for commissioning. The DIN rail-mounted devices have a keypad, while the surface-mounted devices can be operated via a smartphone app.

4.3.1 Keypad (for REG)

The **KNX SA sun shading actuators in DIN rail-mounted housing** are equipped with a keypad.

- The UP/DOWN buttons of the keypad function in the same way as KNX push buttons: Impulse/STOP when pressed briefly, move to limit position when pressed for longer.
- The buttons have a direct effect on the the outputs of the selected channel. UP and DOWN relays of all channels are mutually locked.
- Push button operation has the same priority as manual operation via group objects. A currently active safety function can prevent operation on the keypad.
- After commissioning, the buttons continue to have a direct effect on the outputs of the selected channel.

CAUTION
In the delivery condition, the run time is 300 s in the UP/DOWN direction. After pressing the button for a longer time, voltage is supplied to the corresponding terminals for the duration of the run time.

The keypad ensures that the connected devices can be operated during the commissioning phase and in fault situations such as if the bus voltage should fail. It is not intended as a substitute for push buttons, switches, etc.

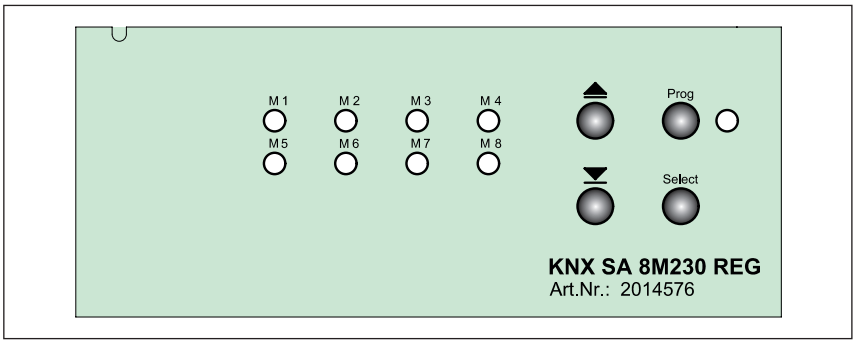


Fig. 1 Keypad

The Select button is used to select the channel on which the UP and DOWN buttons should act. Only the LED of the selected channel lights up. After the last channel, all channels can also be selected at the same time.

If no buttons are operated for one minute, the LED of the selected channel goes out again.

4.3.2 Smartphone app (for AP)

The **KNX SA sun shading actuators in surface-mounted housing** are equipped with a Bluetooth module. This allows for operation via a smartphone app. The communication between the smartphone and the KNX devices is established via Bluetooth LE (Low Energy).

The app ensures that the connected devices can be operated during the commissioning phase and in fault situations such as if the bus voltage should fail. It is not intended as a substitute for push buttons.

When not programmed, the AP actuators can only be operated via Bluetooth. The push buttons connected to the actuator inputs only have a function once it has been parameterised via the ETS and uploaded to the device.

In order to protect against operation by unauthorised persons, access via the app is protected by a password (Bluetooth Login Key). When loading with ETS for the first time, the actuator's password in delivery condition is overwritten with the preset password in the ETS (*see Fig. 2*). This is then required to operate the actuator via the app.

If necessary you can change the password to anything in the range from 0 to 9999 in the ETS. Do not forget to document the change, in case operation via the app is needed once again later.

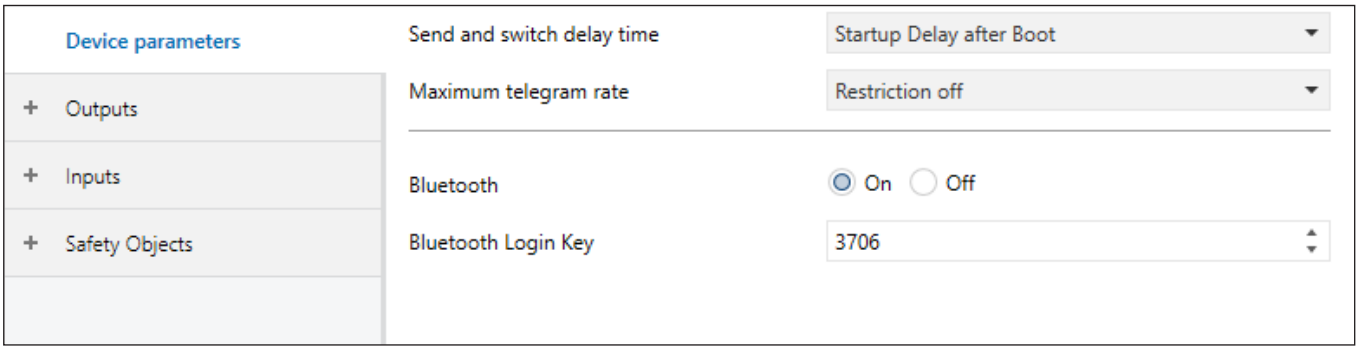


Fig. 2 Parameter dialogue: Device parameters

Alternatively the Bluetooth function of the actuator can also be completely switched off in the parameterisation via the ETS (the function is always preset at the factory to “On”).

4.3.2.1 Load and start app

- Download the WAREMA app for operating the KNX SA sun shading actuators from the appropriate store for your smartphone.

Android: Google Play Store http://www.warema.de/KNX-SA-Android	**iOS: App Store** http://www.warema.de/KNX-SA-iOS
Requirements: Android 4.3 or higher for Android 6 or newer GPS must be active	Requirement: iOS 9 or higher

- Start the app.
- ▶ The surrounding area is automatically scanned for one minute for WAREMA sun shading actuators.
- ▶ All actuators found are shown in the display.

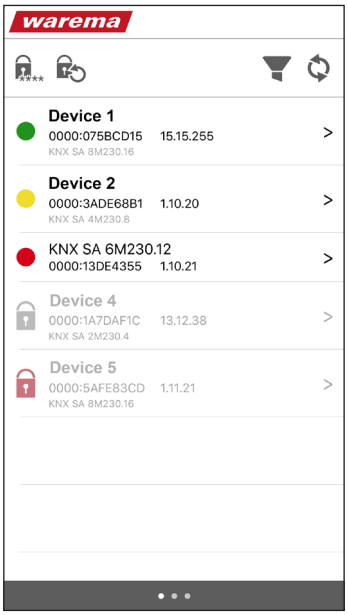
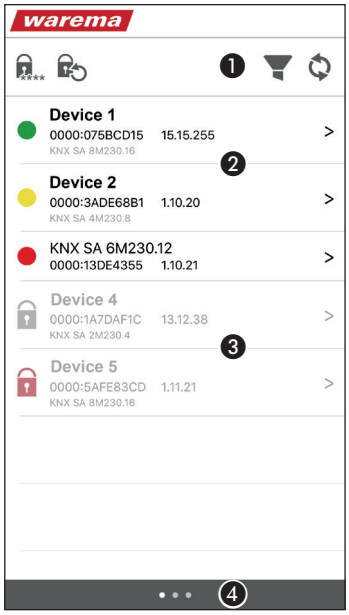
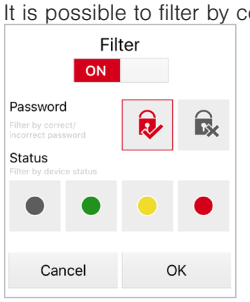


Fig. 3 Bluetooth app

4.3.2.2 Device list



❶ Menu bar	Change password. Reset password to factory setting. Filter displayed devices in the device list. When the filter is active, this symbol is red. It is possible to filter by correct password or status.  Scan for devices again (scan duration one minute). An ongoing scanning procedure can be cancelled with the symbol then shown at this point. (The scanning procedure can also be started by dragging down the device list.)
❷ Device list Password identical	All devices found are displayed in the device list. All devices, whose password matches the password that has just been set in the app, are shown in black. The colour of the point displays the status of the device. The device type, the KNX serial number and the physical address are displayed. (If equipment labelling has been assigned, this is displayed first. The device type then appears in grey beneath the other information.) Briefly touch a device to switch to the operating window.
❸ Device list Password different	All devices, whose password does not match the password that has just been set in the app, are shown in grey. A lock in the device's status colour is shown instead of a point. If you briefly touch the device, you must first enter the device's password to be able to switch to the operating window.
❹ Page indicator	Displays the window in which you are currently located. You can switch between the device list, the cache (total list of all scanned devices) and Help by swiping sideways on the screen.

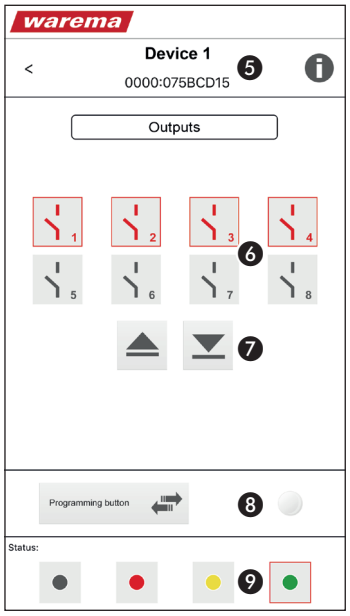
The KNX SA sun shading actuator can only ever have one Bluetooth connection. As soon as you select an actuator in the device list (operating window opens), it stays connected to the smartphone until you select another actuator. If you scan again or completely exit the app, any existing connection is lost.

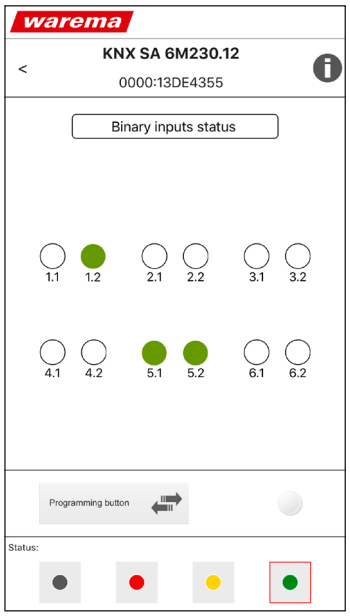
As long as a sun shading actuator is still connected to a smartphone, it is not found in scans by other smartphones operating at the same time.

4.3.2.3 Operating window

Operation via the app has the same priority as manual operation via group objects. A currently active safety function can prevent operation via the app.

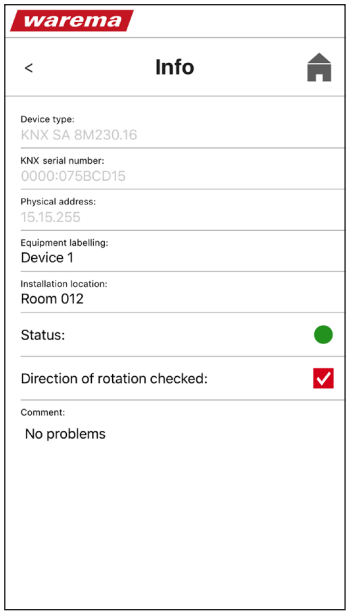
WARNING
Never randomly press the buttons on the app without having a line of sight to the sun shading system.





5 Header	Equipment labelling (or device type) and KNX serial number are displayed in the header. Open actuator info window
6 Toggle view	For actuators with inputs, it is possible to switch between the following: Ausgänge Operate Binary inputs status Display state of inputs (only display, see figure below) The button for switching the view is displayed dependent on the device. It only appears for actuators with inputs. Older series do not yet support this function.
7 Device channels	In this area you can choose whichever channels you want to operate. The operating elements affect all selected channels. RED: Channel selected GREY: Channel not selected The number of displayed channels depends on the device type.
8 UP/DOWN operating elements	All selected (red) channels receive the corresponding up or down move command when the button is pressed. The actuator then switches the associated outputs on or off. The operating behaviour is as follows: Brief push of button = Step / Stop, Longer push of button = Move.
9 Programming button and LED	The programming button and the LED have the same function as on the device. Programming the physical address, *see chapter 5.3 on page 19*.
10 Status	Here you can specify a status for the device. It is displayed in the device list before the device. The status is purely informative and is used to give a better overview of many devices.

4.3.2.4 Actuator info window



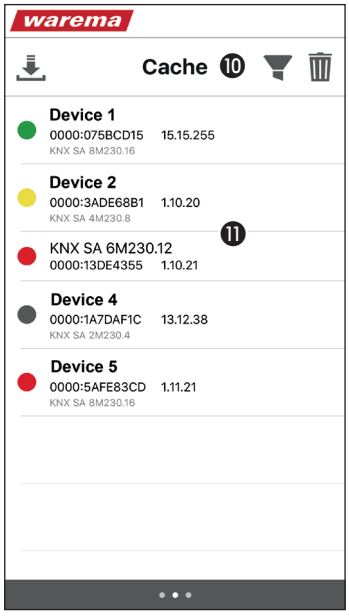
The device information is displayed in the actuator info window.

The device type, KNX serial number and physical address can not be modified and are therefore shown in grey.

The fields shown in black can be modified. Here you can enter the appropriate information as needed. It is saved in the actuator and is available for continued commissioning or future access via the app.
Equipment labelling: Here you can enter a name, an allocation number or a similar label for the actuator.
Installation location: The location of the actuator is entered here.
Status: The status of the device selected in the operating window is displayed here.
Direction of rotation tested: Here you can set a checkmark if you have checked the direction of rotation of all connected drives.
Comment: Field for additional information (info about actuator, special features, notes for colleagues, ...)

Back

4.3.2.5 Cache



10 Menu bar	Export the cache list as a csv file. The list is always exported in full, filter settings are ignored. Android: Select a delivery option in the dialogue box. You can send the csv file by e-mail, save it on Google Drive or transfer it via Android Beam. Alternatively, you can access the file through any file manager. iOS: A draft e-mail opens with the csv file attached, so that you can send it to any e-mail address. Alternatively, you can access the file via iTunes (under “Release” select the app “KNX SA”, the file is then displayed in the documents window). Filter displayed devices in the device list. When the filter is active, this symbol is red. It is possible to filter by status. Delete the entire cache
11 Cache list	All devices previously found while scanning are displayed in the cache list. This also allows you to see the devices that were no longer registered in the repeated scan (e.g. in another part of the building). No operation is possible from this list, as there is no communication with the listed devices.

5 Planning

The KNX SA actuators are commissioned using the Engineering Tool Software ETS (**at least ETS 5**).
The product database required for this (.knxprod) can be found in the online catalogue of the ETS or on the internet at http://www.warema.de/knx.

5.1 Parameterising

The actuators are parameterised using the parameter dialogue of the ETS. For the sake of clarity, the parameters there are presented in parameter groups.

The parameter settings should be created in the following order:

1. Select the operating mode of output channels 1 – 8 (the same for all or separately)
2. Activate or deactivate the safety objects and set the parameters
3. Set the parameters of the output channels

Details on all the parameters are provided in *Chapter 1 Overview on page 5*.

5.2 Group addresses/linking

The operating modes of the output channels are set up in the parameter settings. For each selected operating mode, only a specific set of group objects is required in the ETS. Group objects that are not required are automatically hidden by the ETS. Thus, if the operating mode is changed, links that already exist may be deleted from the ETS project.

5.3 Physical address

The physical address is used for the exact identification of a device.

5.3.1 Program addresses via the programming button or smartphone app

You can perform programming either in the app or directly on the actuator. There is a Prog button for programming and a display LED both in the app and on the actuator.

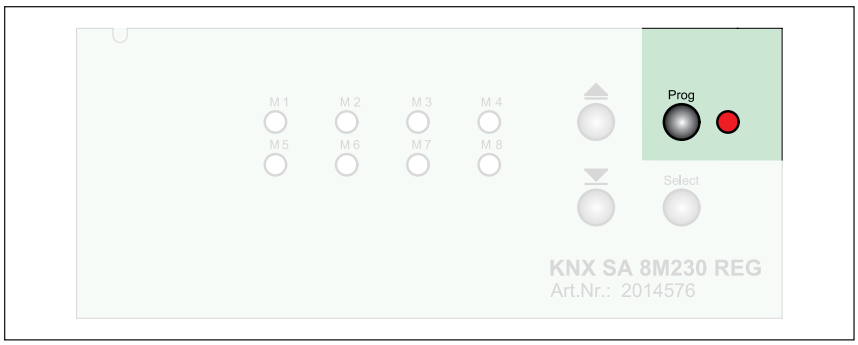


Fig. 4 **REG:** Programming button on the keypad

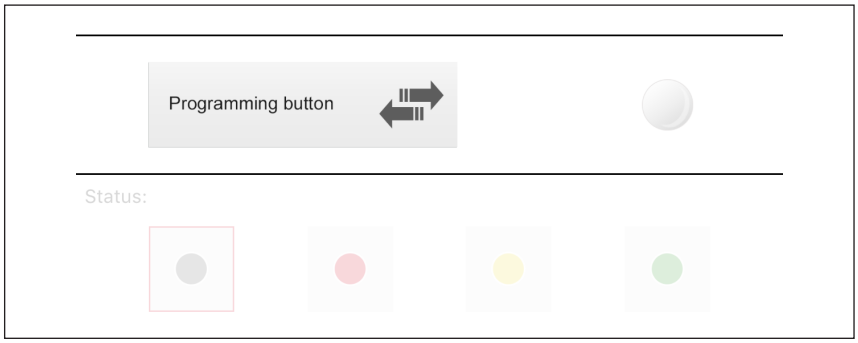


Fig. 5 **AP:** Programming button in the smartphone app.
The actuator is also equipped with a programming button.

The procedure here is basically the same:

- Start the programming in the ETS with [Program physical address].
- Press the programming button in the app or on the actuator to put the actuator into programming mode.
- ▶ The red LED lights up when programming mode is active. Programming is started using the ETS. Programming mode is automatically ended and the red LED goes out.

If the programming mode is to be ended earlier, press the programming button again. The red LED goes out.

After the physical address is programmed, the KNX SA remains operable via the keypad or smartphone app.

The device is delivered with the physical address 15.15.255.

5.3.2 Program addresses via the ETS App

To enable the commissioning of the devices with the actuator serial number via ETS, a two-part label is applied to the device. The actuator serial number of the device appears on both parts of the label as a barcode and as plain text. One part of the label can be removed by the installer and applied to the layout plan of the building.

Siemens are then able, thanks to the free ETS App **SIEMENS Address by ID**, to commission the devices without needing to press the programming button.

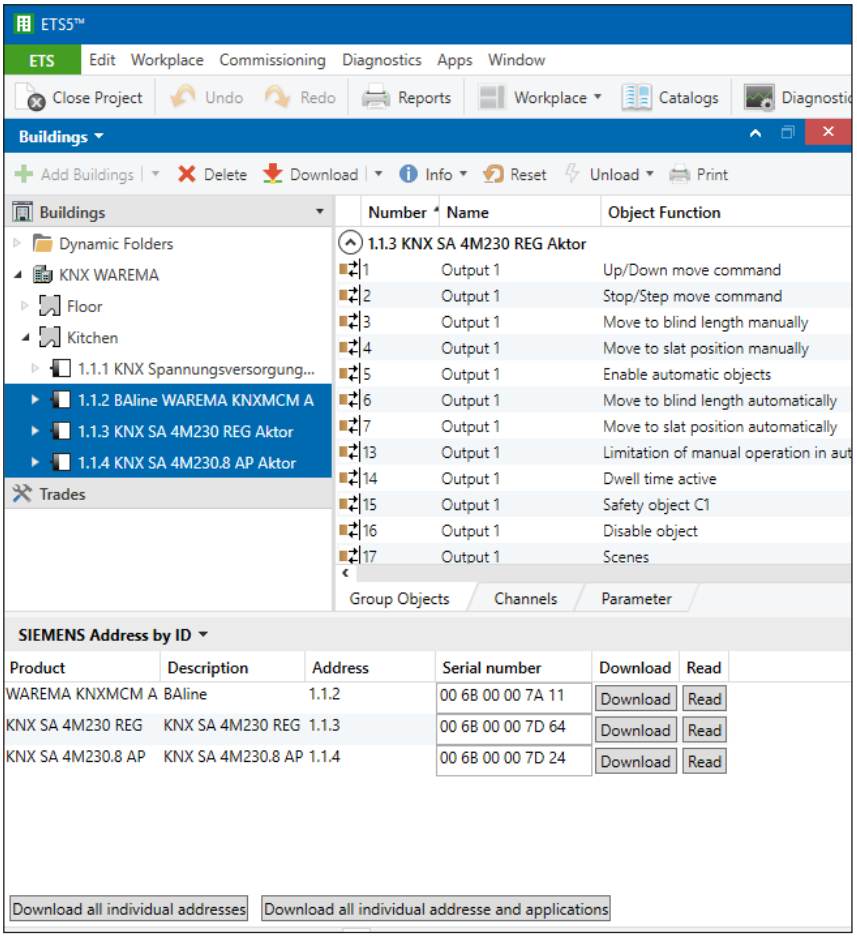


Fig. 6 SIEMENS ETS app for commissioning using the actuator serial number

5.4 Application program

During initial operation of the KNX SA, the physical address, group objects, parameters and group addresses must be programmed. If a project is changed later on, only the group addresses and parameters need to be programmed.

Group objects are loaded, for example, by selecting the following in the ETS: [Programming...] > [Application program].

6 The operating modes of the KNX SA actuators

Three different operating modes can be set for each channel:

- Venetian blind/external venetian blind
- Roller shutter/textile sun shading system
- Window awning with ZIP guidance

In this way, different types of operating elements and different types of sun shading drives or window drives can be connected to the actuators.

WARNING
The KNX SA do not have equipment, algorithms or similar features to switch off connected drives based on load. The danger of pinching and crushing must be prevented using on-site measures.

6.1 Venetian blind/external venetian blind

Internal and external venetian blinds are sun shading or dim-out elements with slats. They are controlled by raising, lowering or tilting the slats. Internal and external venetian blinds differ in their purpose and physical dimensions.

In the `Output for venetian blind/external venetian blind` operating mode, the KNX SA executes the **Up, Down and Tilt slats** move commands. Each channel can be used to control an internal or external venetian blind.

Each channel is equipped with group objects for move commands and status messages.

When moving to a particular slat position, the product may first move to the minimum or maximum slat position and then to the target slat position.

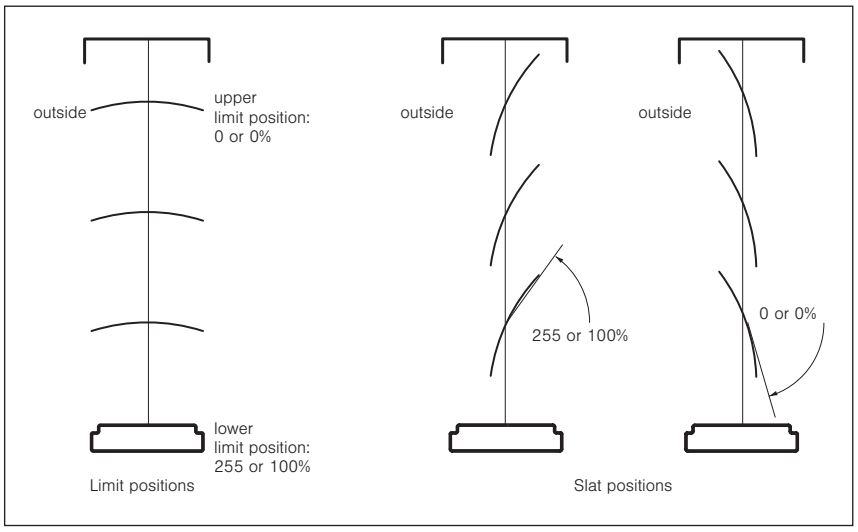


Fig. 7 Motor limit positions, slat positions

6.2 Roller shutter/textile sun shading system

A roller shutter is a rolling closure for the additional closure of window and door openings, for example. Among other things, it provides visual, sun, intrusion and insect protection.

Fabric sun shading products consist of a movable mechanism with a fabric cover. Depending on the model, they provide visual privacy or sun shading.

In the operating mode `Output for roller shutter/Textile sun shading`, the KNX SA executes the **Up and Down** move commands.

Each output can be used to control a roller shutter or a textile sun shading system.

Each channel is equipped with group objects for move commands and status messages.

6.3 Window awning with ZIP guidance

Window awnings with ZIP guidance consist of a textile fabric, which is guided on both sides. Depending on the model, they provide visual privacy or sun shading.

Window awnings with ZIP guidance are equipped with responsive obstacle detection. When the obstacle detection is activated, the awning's run time extends depending on the number of additional test runs.

In the `Output for window awning with ZIP guidance` operating mode the KNX SA executes the **Up and Down** move commands. As long as a safety object is active, an UP command parameterised in the safety object remains active, in order to allow the awning to move safely into the upper limit position even when the run time is extended by the responsive obstacle detection.

Each output can be used to control a window awning with ZIP guidance.

Each channel is equipped with group objects for move commands and status messages.

In the `Output for window awning for ZIP guidance` operating mode, because of the responsive obstacle detection, only the status message *Dwell time active* is available.

7 Parameter dialogue

For the KNX SA actuators the parameter dialogue is divided in the ETS into four groups:

Parameter group	Functions	Description
Device parameters	General actuator settings as well as the Bluetooth functions for AP devices	Section 7.1 on page 24
Outputs	In the Outputs area, in addition to the operating mode and all parameters for movement behaviour, scenes and the reaction to the safety objects and automatic objects are also set for each output.	Section 7.2 on page 25
Inputs	This group is only visible for AP devices. The operating modes and the telegrams that are sent to the bus are parameterised here for the inputs on the device.	Section 7.3 on page 54
Safety objects	The general behaviour of the device is parameterised here to the safety objects of all four priority levels. The reaction of the individual outputs to safety objects is specified in the *Outputs* area.	Section 7.4 on page 60

The default values are shown in **bold** in the following parameter tables.

7.1 Device parameters

In this window you will find the settings specific to the devices as well as the settings for the Bluetooth functions in AP devices.

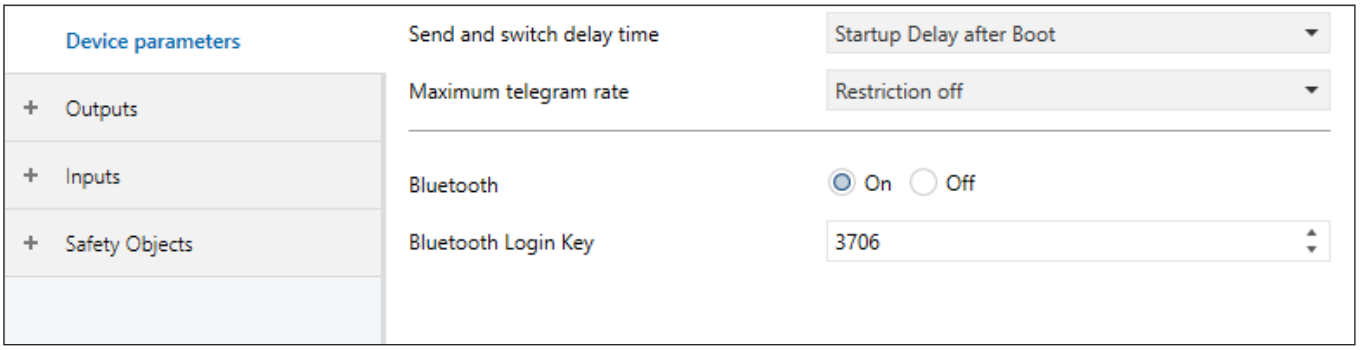


Fig. 8 Parameter dialogue: Device parameters

Parameters	Function	Values
Send and switch delay time	The delay, if any, with which the device starts up after being switched on can be specified here.	**Startup Delay after Boot**
		Boot time + 1 second
		Boot time + 3 second
		Boot time + 10 second
Maximum telegram rate	Restriction of the maximum number of telegrams that the device sends per second. The load of the KNX bus from the device can be reduced as required in this way.	**Restriction off**
		20 telegrams per second
		10 telegrams per second
		3 telegrams per second
		1 telegram per second
Bluetooth [1]	The Bluetooth module in AP devices can be switched off here. Operation via Bluetooth then is no longer possible.	**On**
		Off
Bluetooth Login Key [1]	The login key for the Bluetooth operation can be set here. The key is requested when operating via Bluetooth.	0 : **3706** : 9999

[1] only for AP devices

Emergency operation of the device is possible using Bluetooth. The send behaviour via the KNX bus is not affected by this.

7.2 Outputs

7.2.1 Outputs, general

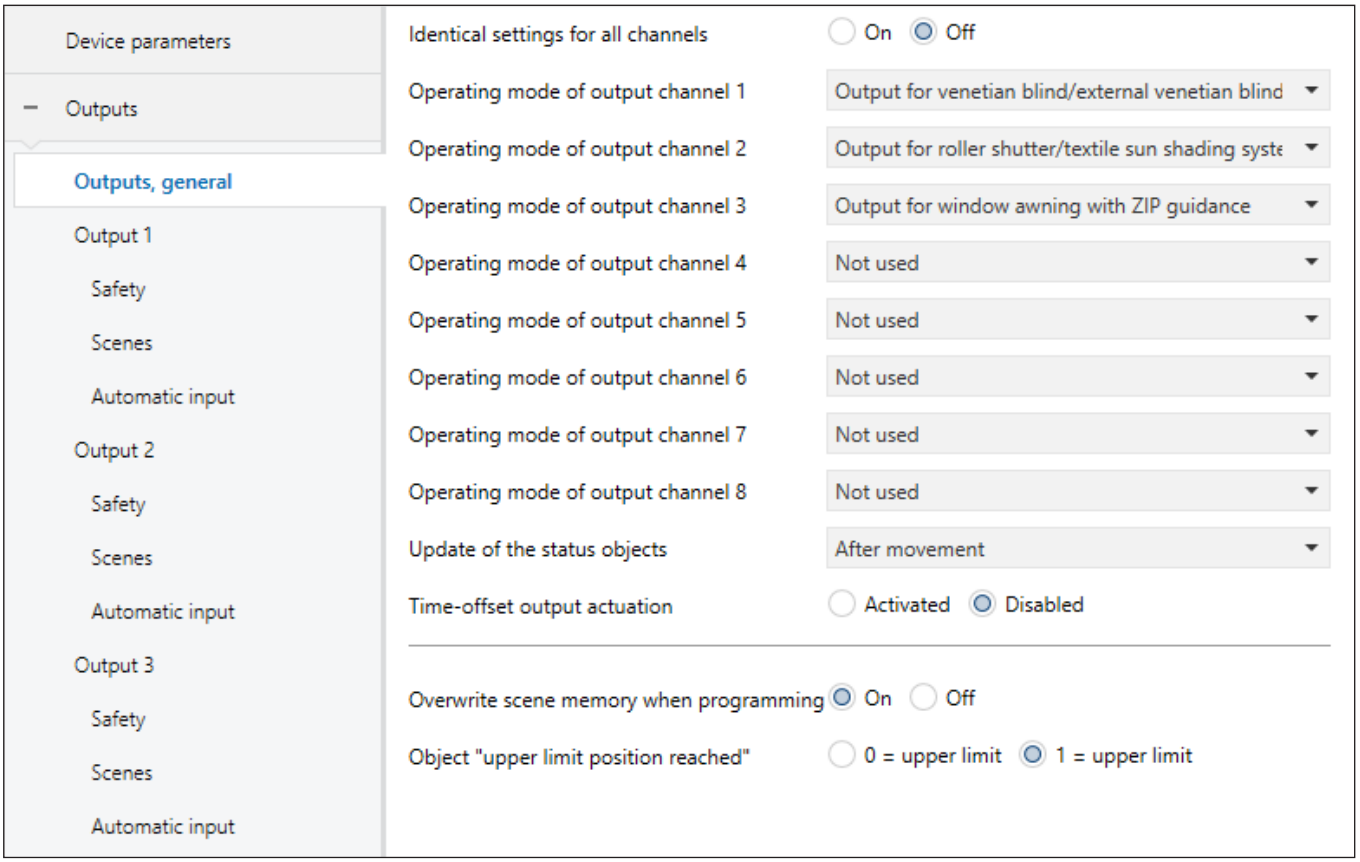


Fig. 9 Parameter dialogue: Outputs → Outputs general

Parameters	Function	Values
Identical settings for all channels	Here the user can specify whether all output channels are to be given identical parameters. The parameters for the individual output channels are then hidden. There is still only one parameter set for all output channels.	**On**
		Off
Operating mode of output channel n	Operating mode of the output channel, distinction made between various sun shading product types (see following chapters)	**Not used**
		Output for venetian blind/external venetian blind
		Output for roller shutter/ Textile sun shading system
		Output for window awning with ZIP guidance
Update of the status objects	Here the user can set when the ***status GOs*** of the outputs are updated. After movement, an updated status object is always sent (regardless of the settings).	**After movement**
		During movement: 1 s interval
		During movement: 2 s interval
		During movement: 5 s interval
		During movement: 10 s interval
Time-offset output actuation	If this is set to “Activated”, there is a minimum pause when switching on of 20 ms between each relay of the actuator.	**Disabled**
		Activated
Overwrite scene memory when programming	Here the user can set whether the values for the scenes of the outputs are to be overwritten with the values of the ETS project when the application is loaded with the ETS.	**On**
		Off
Object “upper limit position reached”	Here the user can set what value the ***GO Upper limit position reached*** sends when the upper limit position is reached.	0 = upper limit
		1 = upper limit

7.2.2 Output for venetian blind/external venetian blind

In the operating mode `Venetian blind/External venetian blind`, the KNX SA executes the **Up/Down and Tilt slats move commands**. Each channel can be used to control an internal or external venetian blind.

The functions of the outputs are explained here in the example of the *Venetian blind/external venetian blind* operating mode. As there are omitted or additional parameters and group objects for the other operating modes, these are explained separately in later chapters.

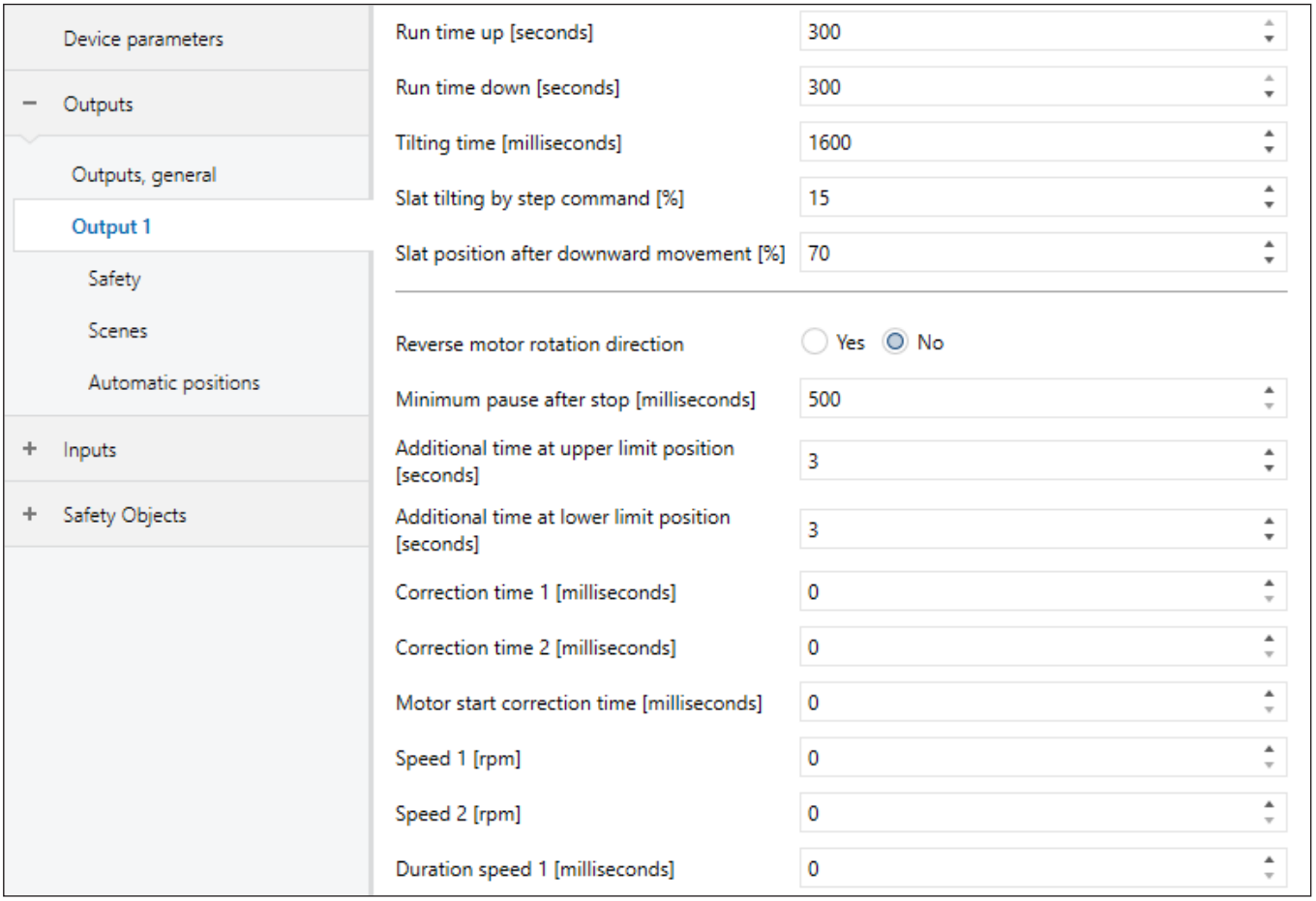


Fig. 10 Parameter dialogue: Outputs → Output n (for venetian blind/external venetian blind)

Parameters	Function	Values
Run time up [seconds]	This parameter defines how long a connected sun shading product requires to move once between the lower and upper limit positions.	0 : **300**
Run time down [seconds]	This parameter defines how long a connected sun shading product requires to move once between the upper and lower limit positions.	0 : **300**
Tilting time [milliseconds]	This parameter must be set to the time that an internal or external venetian blind requires for tilting between the 0 and 100% slat positions.	0 : **1600** : 25000

Slat tilting by step command [%]	This parameter defines how long a sun shading product is raised or lowered after a Stop/step command telegram. The parameter value is based on the tilting time.	0 : **15** : 100
Slat position after downward movement [%]	After a manual operation, it is often useful to automatically turn up the slats of an external venetian blind when the lower limit position is reached. In this way, only one operation is needed to achieve a product position that provides glare control while also permitting visibility to the outside. This parameter defines the slat position for which the slats are tilted up after the lower limit position is reached. The parameter value is based on the tilting time.	0 : **70** : 100
Reverse motor rotation direction	When activated the two relay outputs of the channel are actuated in the reverse direction.	**No** Yes
Minimum pause after stop [milliseconds]	Switchover and switch-on pause for relay	**500** : 5000
Additional time at upper limit position [seconds]	During each up movement, the motor is supplied with power for the time set here beyond the time specified in *Run time up*.	0 : **3** : 25
Additional time at lower limit position [seconds]	During each down movement, the motor is supplied with power for the time set here beyond the time specified in *Run time down*.	0 : **3** : 25
Correction time 1 [milliseconds]	Is included in the position calculation as the time for which the motor continues running after the relay drops in the up direction (braking ramp).	**0** : 5000
Correction time 2 [milliseconds]	Is included in the position calculation as the time for which the motor continues running after the relay drops in the down direction (braking ramp).	**0** : 5000
Motor start correction time [milliseconds]	Delayed start after tightening the relay.	**0** : 5000
Speed 1 [rpm]	Parameter for motors with slow starting speed (crawling speed). Speed of the motor when movement begins (slow speed). The crucial factor is the ratio of speed 1 to speed 2.	**0** : 255
Speed 2 [rpm]	Parameter for motors with slow starting speed. Speed of the motor after the slow movement has ended (fast speed). The crucial factor is the ratio of speed 1 to speed 2.	**0** : 255
Duration speed 1 [milliseconds]	Parameter for motors with slow starting speed. Duration of the slow speed 1.	**0** : 25000

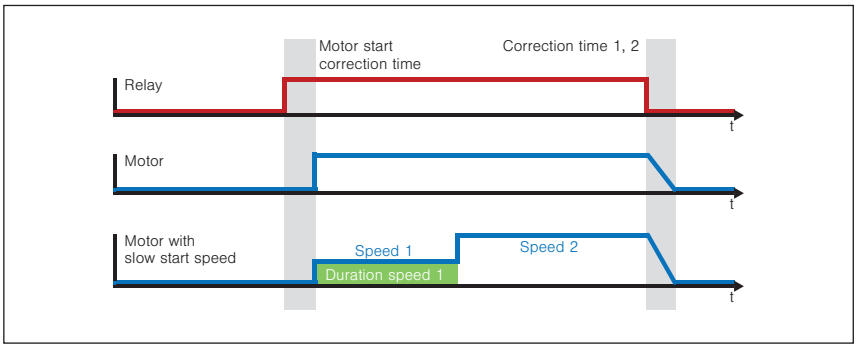


Fig. 11 Function of the correction parameters

7.2.2.1 Safety

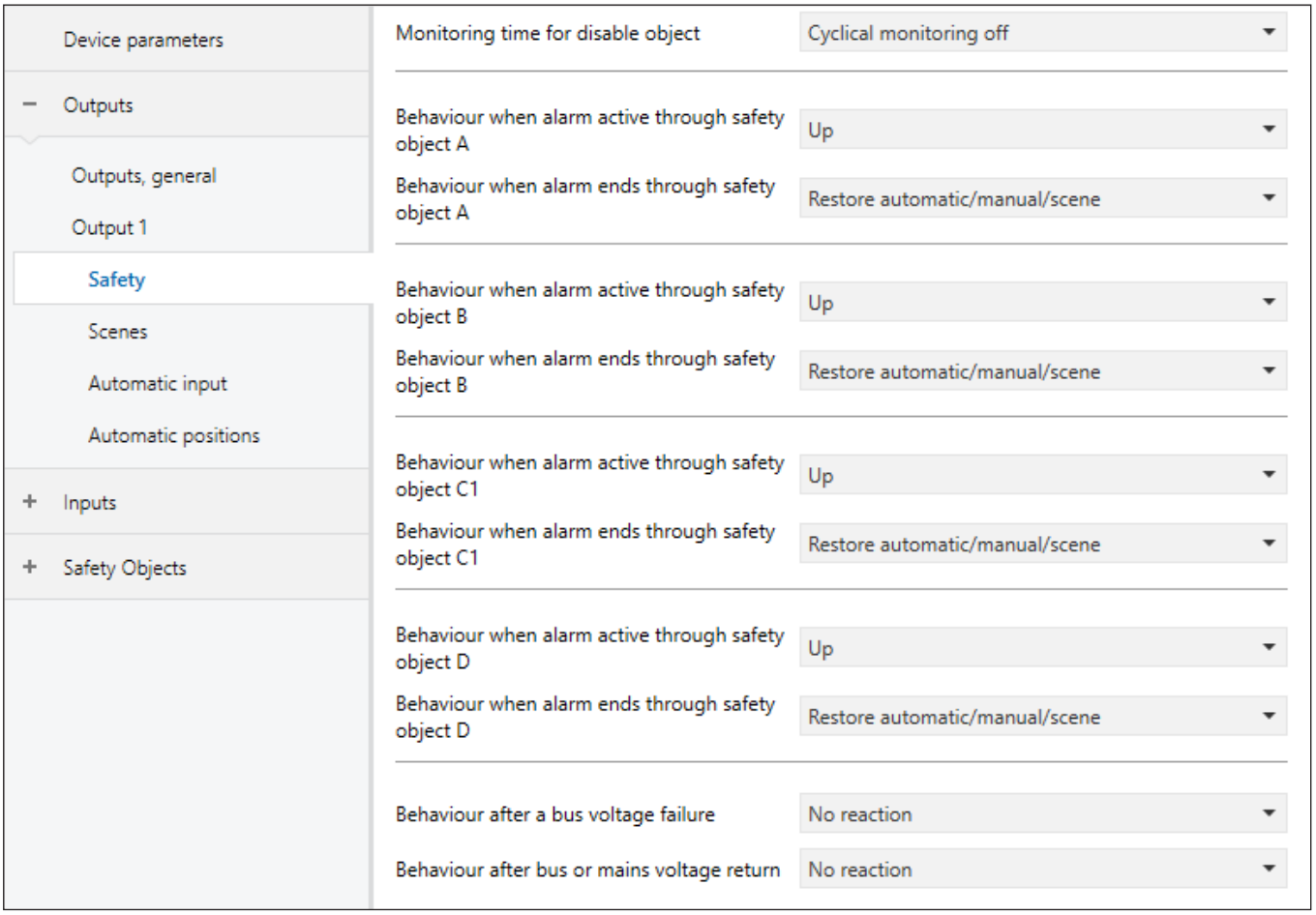


Fig. 12 Parameter dialogue: Outputs → Output n (for venetian blind/external venetian blind) → Safety

The safety objects A, B and D are available on the device once. The safety object C is available separately for each output.

The response to an alarm on the individual safety objects must be parameterised individually for each output.

Parameters	Function	Values
Disable object monitoring time	Monitors whether telegrams are received on the ***GO Disable object*** of the output. The disable object of the channel must receive at least one telegram within this time period. If this time is exceeded without a telegram having been received, the product control is disabled and running movements are stopped. The block is cleared after a 0-telegram to the disable object.	**Cyclical monitoring off**
		10 seconds
		1 minute
		2 minutes
		5 minutes
		10 minutes
Behaviour when *alarm active* through safety object A	Output channels execute the move command that has been set for *alarm active*. Afterwards, only commands from safety objects of higher priority or from the disable object are processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
Blind length [%]	Blind length, to which ***GO Safety object A*** is to move in case of alarm.	**0** : 100
Slat position [%]	Slat position, to which ***GO Safety object A*** is to move in case of alarm.	**0** : 100
Behaviour when *alarm ends* through safety object A	Output channels execute the move command that has been set here for the alarm end. Lower priority commands then continue to be processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
		Perform last automatic object
		Restore automatic/manual/scene
Behaviour when *alarm active* through safety object B	Output channels execute the move command that has been set for *alarm active*. Afterwards, only commands from safety objects of higher priority or from the disable object are processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
Blind length [%]	Blind length, to which ***GO Safety object B*** is to move in case of alarm.	**0** : 100
Slat position [%]	Slat position, to which ***GO Safety object B*** is to move in case of alarm.	**0** : 100
Behaviour when *alarm ends* through safety object B	Output channels execute the move command that has been set here for the alarm end. Lower priority commands then continue to be processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
		Perform last automatic object
		Restore automatic/manual/scene
Behaviour when *alarm active* through safety object Cn	Output channels execute the move command that has been set for *alarm active*. Afterwards, only commands from safety objects of higher priority or from the disable object are processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
Blind length [%]	Blind length, to which ***GO Safety object Cn*** is to move in case of alarm.	**0** : 100

Slat position [%]	Slat position, to which ***GO Safety object Cn*** is to move in case of alarm.	**0** : 100
Behaviour when *alarm ends* through safety object Cn	Output channels execute the move command that has been set here for the alarm end. Lower priority commands then continue to be processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
		Perform last automatic object
		Restore automatic/manual/scene
Behaviour when *alarm active* through safety object D	Output channels execute the move command that has been set for *alarm active*. Afterwards, only commands from safety objects of higher priority or from the disable object are processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
Blind length [%]	Blind length, to which ***GO Safety object D*** is to move in case of alarm.	**0** : 100
Slat position [%]	Slat position, to which ***GO Safety object D*** is to move in case of alarm.	**0** : 100
Behaviour when *alarm ends* through safety object D	Output channels execute the move command that has been set here for the alarm end. Lower priority commands then continue to be processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
		Perform last automatic object
		Restore automatic/manual/scene
Behaviour after the bus voltage fails	This parameter defines the behaviour of the channel after the bus voltage fails.	**No reaction**
		Up
		Down
		Stop
Behaviour after the bus or mains voltage returns	This parameter defines the behaviour of the channel after the mains voltage returns.	**No reaction**
		Up
		Down
		Stop

7.2.2.2 Scenes

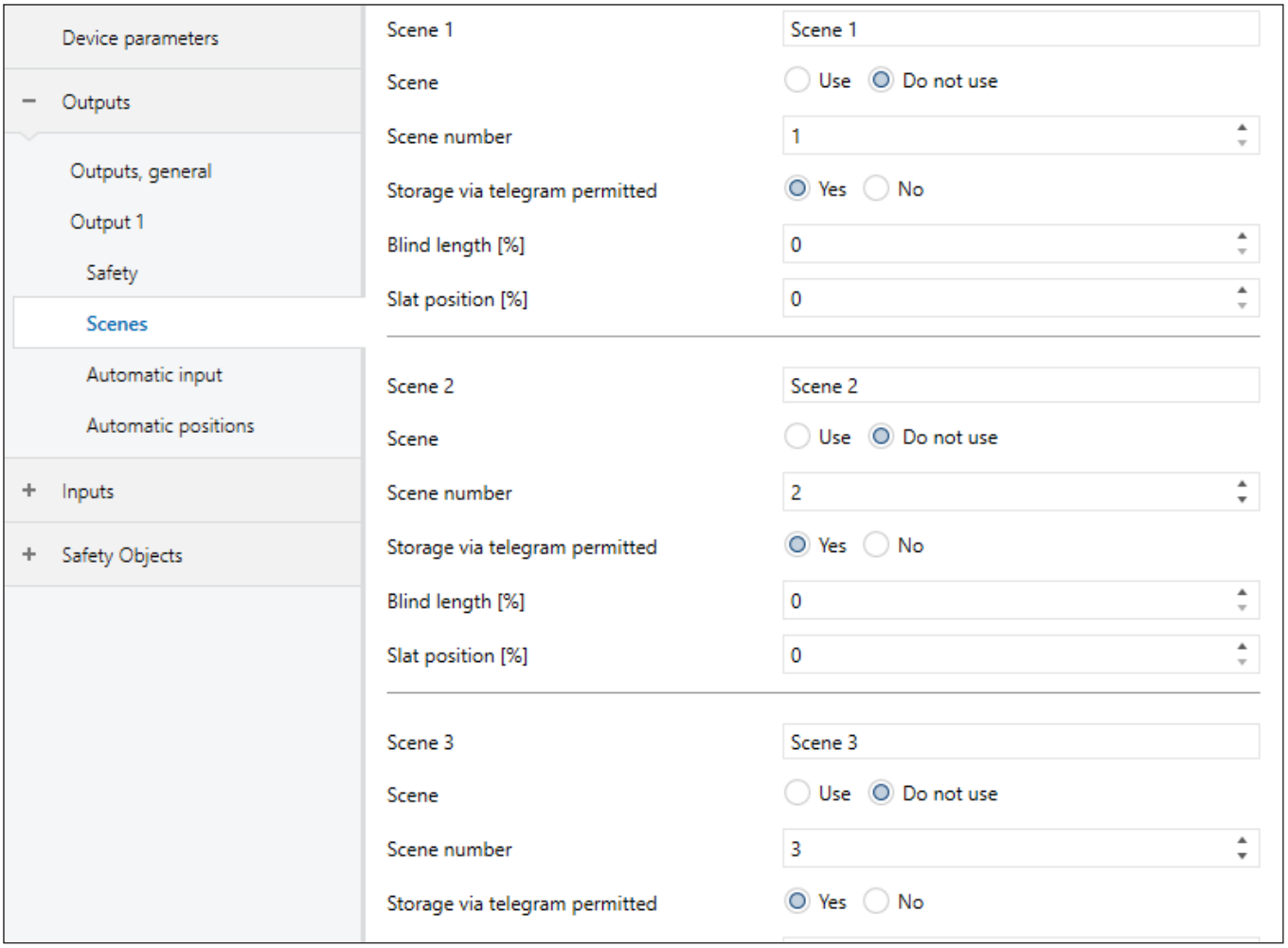


Fig. 13 Parameter dialogue: Outputs → Output n (for venetian blind/external venetian blind) → Scenes

Parameters	Function	Values
Scene n (8 scenes can be defined)	Text as designation of the scene (purely for information). The text may have a maximum of 30 characters.	**Scene n**
Scene	Specifies whether the scene is to be used.	**Do not use**
		Use
Scene number	Scene number that must be received on ***GO Scenes*** of the output for the scene to be executed. Each scene number may only be used once.	**1** : 64
Storage via telegram permitted	Specifies whether the value of the scene may be learned by ***GO Scenes***.	No
		Yes
Blind length [%]	Blind length to which the blind is moved when the scene is activated.	**0** : 100
Slat position [%]	Slat position to which the blind is moved when the scene is activated.	**0** : 100

7.2.2.3 Automatic input

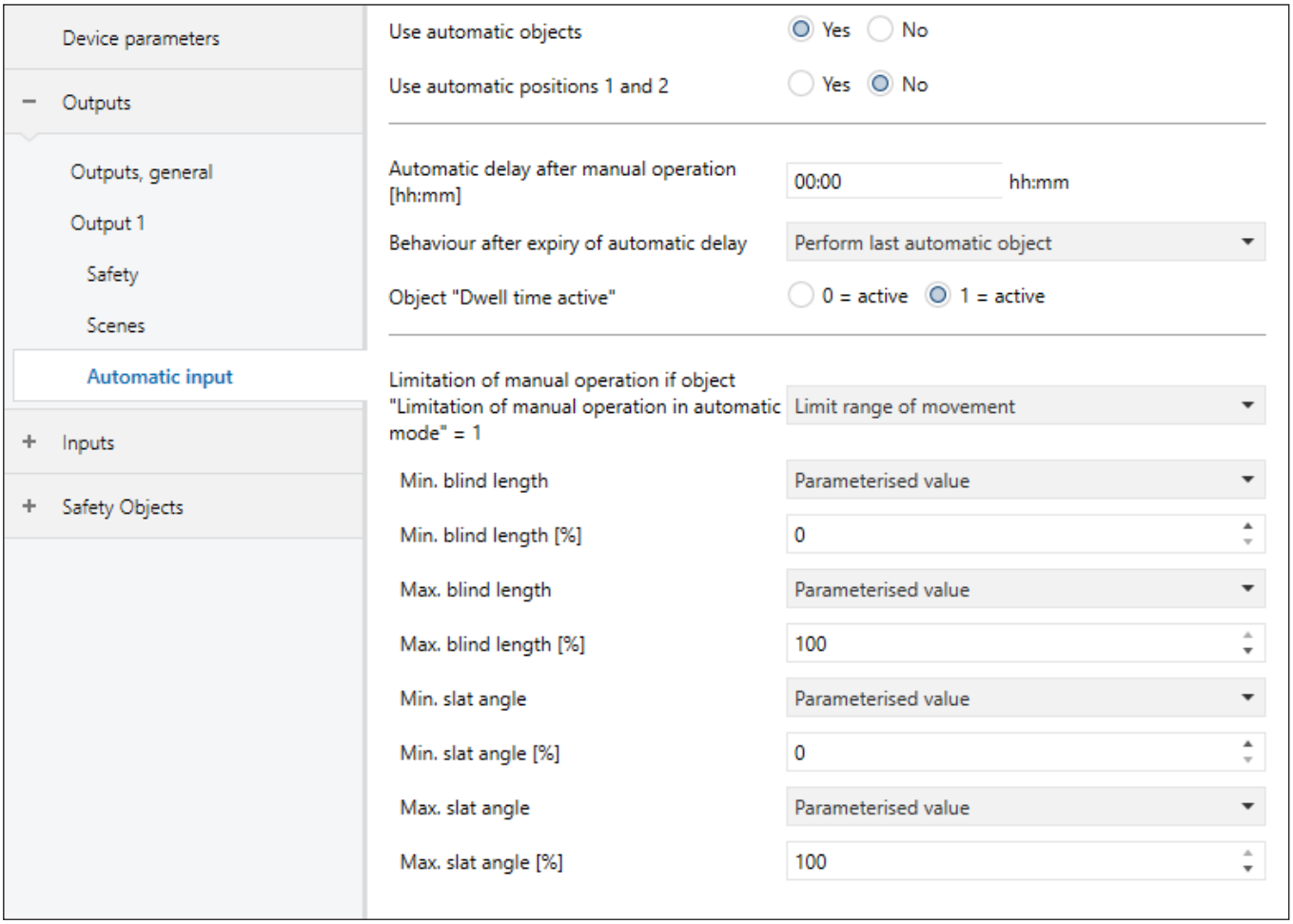


Fig. 14 Parameter dialogue: Outputs → Output n (for venetian blind/external venetian blind) → Automatic input

Parameters	Function	Values
Use automatic objects	Switches on the remaining parameters of this page and the automatic GOs.	**No**
		Yes
Use automatic positions 1 and 2	Specifies whether *automatic positions 1 and 2* are used. Switches on additional parameters.	**No**
		Yes
Automatic delay after manual operation [hh:mm]	After a manual move command the automatic delay starts running. The last position command is repeated after this time expires.	**00:00** : 23:59
Behaviour after expiry of automatic delay	Specifies what action is to take place after the automatic delay (dwell time) has expired.	No reaction
		Up
		Down
		Perform last automatic object
Object “Dwell time active”	Specifies the value, which the ***GO Dwell time active*** sends, as long as the automatic delay (dwell time) is running.	0 = active
		1 = active
Limitation of manual operation if object “Limitation of manual operation in automatic mode” = 1	Specifies in what range the blind length may move if ***GO Limitation of manual operation in automatic mode*** is active.	**Disable manual operation and scenes**
		Disable changing of the blind length
		Limit range of movement

Min. blind length	Specifies the minimum blind length if ***GO Limitation of manual operation in automatic mode*** is active.	No restriction **From automatic blind length object** Parameterised value
Min. blind length [%]	Value used if the parameter *Min. blind length* has been set to *Parameterised value*.	**0** : 100
Max. blind length	Specifies the maximum blind length if **GO Limitation of manual operation in automatic mode** is active.	**No restriction** From automatic blind length object Parameterised value
Max. blind length [%]	Value used if the parameter *Max. blind length* has been set to *Parameterised value*.	0 : **100**
Min. slat angle	Specifies the minimum slat angle if **GO Limitation of manual operation in automatic mode** is active.	No restriction **From automatic slat angle object** Parameterised value
Min. slat angle [%]	Value used if the parameter *Min. slat angle* has been set to *Parameterised value*.	**0** : 100
Max. slat angle	Specifies the maximum slat angle if **GO Limitation of manual operation in automatic mode** is active.	**No restriction** From automatic slat angle object Parameterised value
Max. slat angle [%]	Value used if the parameter *Max. slat angle* has been set to *Parameterised value*.	0 : **100**

7.2.2.4 Automatic positions

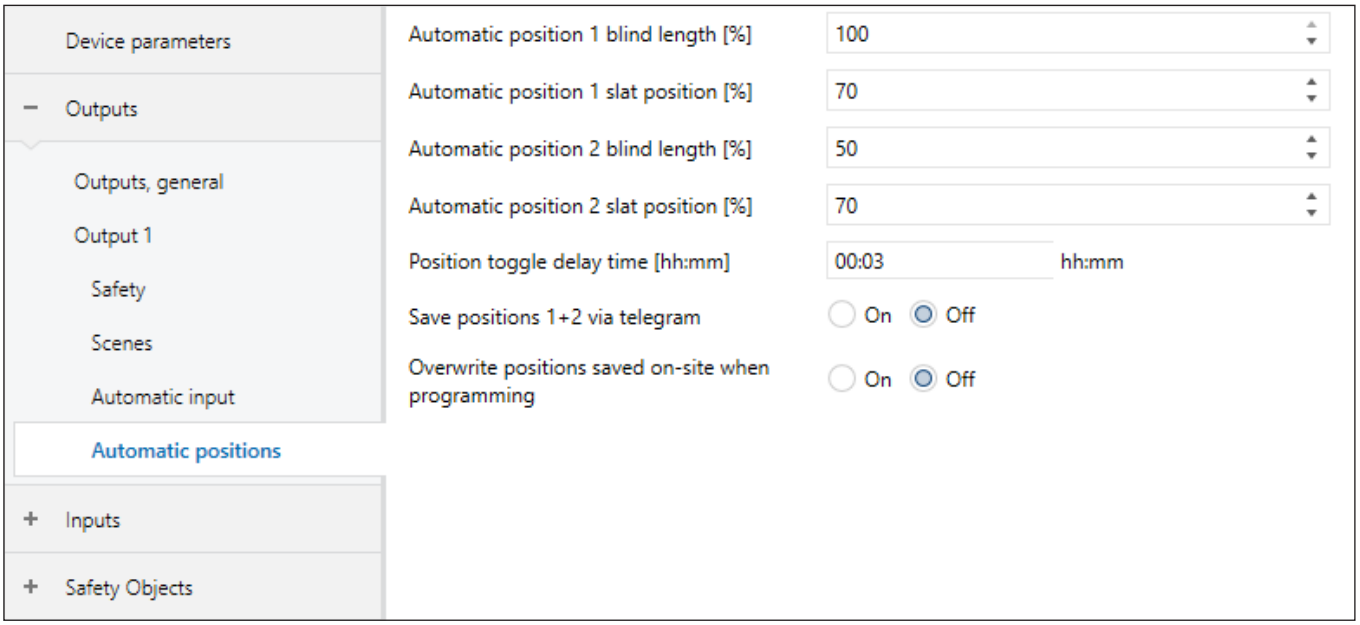


Fig. 15 Parameter dialogue: Outputs → Output n (for venetian blind/external venetian blind) → Automatic positions

Parameters	Function	Values
Automatic position 1 blind length [%]	Specifies the blind length for automatic position 1. If the option *Save positions 1+2 via telegram* is active, the value set here may differ from the value in the device.	0 : **100**
Automatic position 1 slat position [%]	Specifies the slat position for automatic position 1. If the option *Save positions 1+2 via telegram* is active, the value set here may differ from the value in the device.	0 : **70** : 100
Automatic position 2 blind length [%]	Specifies the blind length for automatic position 2. If the option *Save positions 1+2 via telegram* is active, the value set here may differ from the value in the device.	0 : **50** : 100
Automatic position 2 slat position [%]	Specifies the slat position for automatic position 2. If the option *Save positions 1+2 via telegram* is active, the value set here may differ from the value in the device.	0 : **70** : 100
Position toggle delay time [hh:mm]	If a 1-telegram is received on the ***GO Automatic position toggle***, the sun shading product moves to the position that was last received on ***Automatic blind length/Automatic slat position*** after the *Position toggle delay time* expires. If a telegram has not yet been received for ***Automatic blind length/Automatic slat position***, the sun shading product moves to the saved Position 1. If a 0-telegram is received on the ***GO Automatic position toggle***, the sun shading product moves to Position 1 after the *Position toggle delay time* expires. The *Position toggle delay* is always started after the ***Position toggle*** telegram received last, even if the time is already running.	00:00 : **00:03** : 59:59
Save position 1+2 via telegram	On: The current product position is saved after a telegram to the ***GO Save position 1/2***. Off: A telegram to the ***GO Save position 1/2*** causes no change to the position memory.	On **Off**
Overwrite positions saved on-site when programming	On: Positions 1 and 2 saved in the device are overwritten with the parameterised values when the parameters are being programmed. Off: Positions 1 and 2 saved in the device are not overwritten when the parameters are being programmed.	On **Off**

7.2.3 Output for roller shutter/textile sun shading system

In the operating mode `Roller shutter/Textile sun shading`, the KNX SA executes the **Up/Down move commands**.

Each output can be used to control a roller shutter or a textile sun shading system.

The functions of the outputs are explained here in the example of the operating mode *Roller shutter/Textile sun shading*. As there are omitted or additional parameters and group objects for the other operating modes, these are explained separately in later chapters.

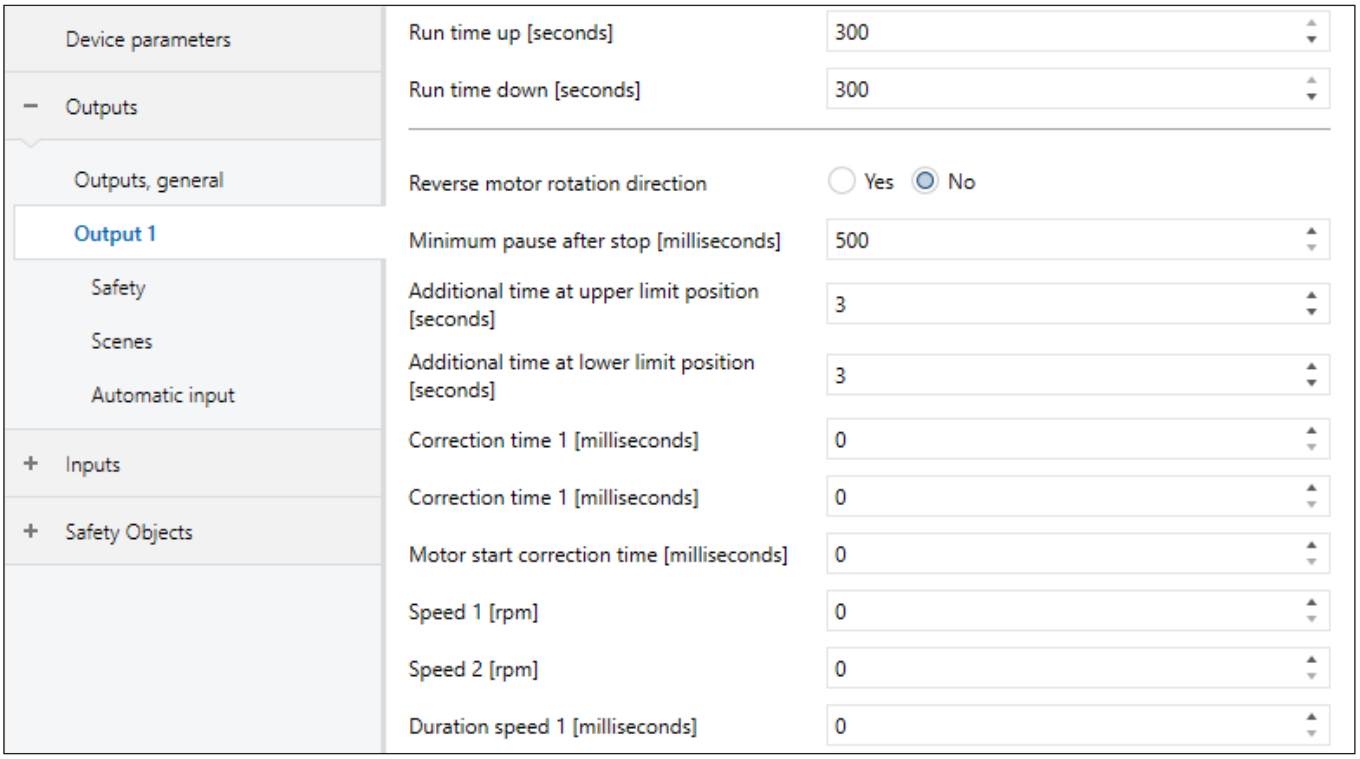


Fig. 16 Parameter dialogue: Outputs → Output n (for Roller shutter/Textile sun shading)

Parameters	Function	Values
Run time up [seconds]	This parameter defines how long a connected sun shading product requires to move once between the lower and upper limit positions.	0 : **300**
Run time down [seconds]	This parameter defines how long a connected sun shading product requires to move once between the upper and lower limit positions.	0 : **300**
Reverse motor rotation direction	When activated the two relay outputs of the channel are actuated in the reverse direction.	**No**
		Yes
Minimum pause after stop [milliseconds]	Switchover and switch-on pause for relay	**500** : 5000
Additional time at upper limit position [seconds]	During each up movement, the motor is supplied with power for the time set here beyond the time specified in *Run time up*.	0 : **3** : 25
Additional time at lower limit position [seconds]	During each down movement, the motor is supplied with power for the time set here beyond the time specified in *Run time down*.	0 : **3** : 25
Correction time 1 [milliseconds]	Is included in the position calculation as the time for which the motor continues running after the relay drops in the up direction (braking ramp).	**0** : 5000
Correction time 2 [milliseconds]	Is included in the position calculation as the time for which the motor continues running after the relay drops in the down direction (braking ramp).	**0** : 5000
Motor start correction time [milliseconds]	Delayed start after tightening the relay.	**0** : 5000
Speed 1 [rpm]	Parameter for motors with slow starting speed (crawling speed). Speed of the motor when movement begins (slow speed). The crucial factor is the ratio of speed 1 to speed 2.	**0** : 255
Speed 2 [rpm]	Parameter for motors with slow starting speed. Speed of the motor after the slow movement has ended (fast speed). The crucial factor is the ratio of speed 1 to speed 2.	**0** : 255
Duration speed 1 [milliseconds]	Parameter for motors with slow starting speed. Duration of the slow speed 1.	**0** : 25000

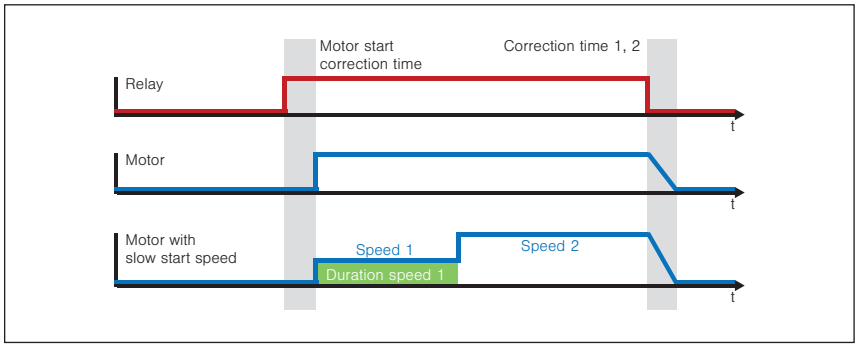


Fig. 17 Function of the correction parameters

7.2.3.1 Safety

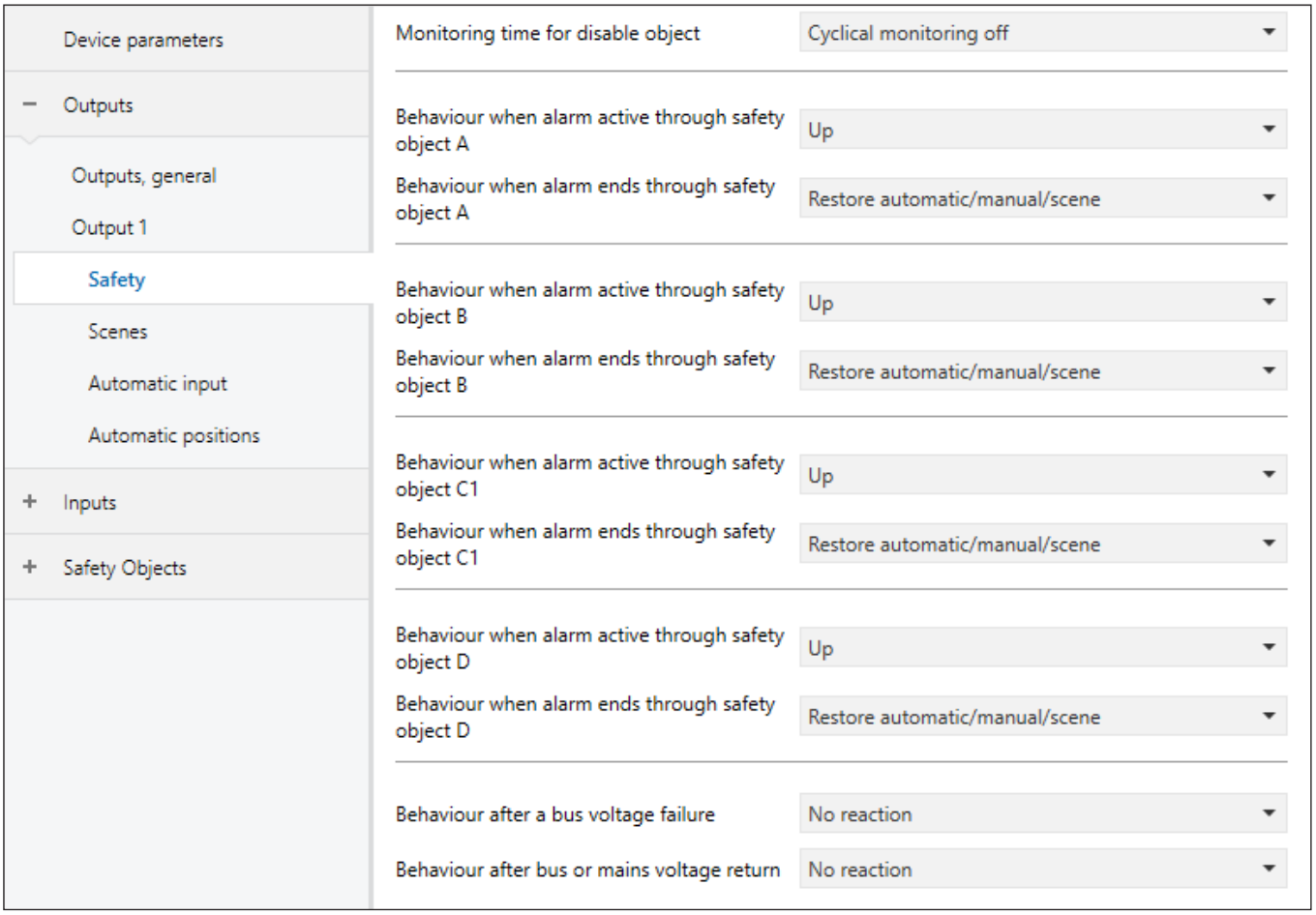


Fig. 18 Parameter dialogue: Outputs → Output n (for Roller shutter/Textile sun shading) Safety

The safety objects A, B and D are available on the device once. The safety object C is available separately for each output.

The response to an alarm on the individual safety objects must be parameterised individually for each output.

Parameters	Function	Values
Disable object monitoring time	Monitors whether telegrams are received on the ***GO Disable object*** of the output. The disable object of the channel must receive at least one telegram within this time period. If this time is exceeded without a telegram having been received, the product control is disabled and running movements are stopped. The block is cleared after a 0-telegram to the disable object.	**Cyclical monitoring off**
		10 seconds
		1 minute
		2 minutes
		5 minutes
		10 minutes
Behaviour when *alarm active* through safety object A	Output channels execute the move command that has been set for *alarm active*. Afterwards, only commands from safety objects of higher priority or from the disable object are processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
Blind length [%]	Blind length, to which ***GO Safety object A*** is to move in case of alarm.	**0** : 100
Behaviour when *alarm ends* through safety object A	Output channels execute the move command that has been set here for the alarm end. Lower priority commands then continue to be processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
		Perform last automatic object
		Restore automatic/manual/scene
Behaviour when *alarm active* through safety object B	Output channels execute the move command that has been set for *alarm active*. Afterwards, only commands from safety objects of higher priority or from the disable object are processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
Blind length [%]	Blind length, to which ***GO Safety object B*** is to move in case of alarm.	**0** : 100
Behaviour when *alarm ends* through safety object B	Output channels execute the move command that has been set here for the alarm end. Lower priority commands then continue to be processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
		Perform last automatic object
		Restore automatic/manual/scene
Behaviour when *alarm active* through safety object Cn	Output channels execute the move command that has been set for *alarm active*. Afterwards, only commands from safety objects of higher priority or from the disable object are processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
Blind length [%]	Blind length, to which ***GO Safety object Cn*** is to move in case of alarm.	**0** : 100

Behaviour when *alarm ends* through safety object Cn	Output channels execute the move command that has been set here for the alarm end. Lower priority commands then continue to be processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
		Perform last automatic object
		Restore automatic/manual/scene
Behaviour when *alarm active* through safety object D	Output channels execute the move command that has been set for *alarm active*. Afterwards, only commands from safety objects of higher priority or from the disable object are processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
Blind length [%]	Blind length, to which ***GO Safety object D*** is to move in case of alarm.	**0** : 100
Behaviour when *alarm ends* through safety object D	Output channels execute the move command that has been set here for the alarm end. Lower priority commands then continue to be processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
		Perform last automatic object
		Restore automatic/manual/scene
Behaviour after the bus voltage fails	This parameter defines the behaviour of the channel after the bus voltage fails.	**No reaction**
		Up
		Down
		Stop
Behaviour after the bus or mains voltage returns	This parameter defines the behaviour of the channel after the mains voltage returns.	**No reaction**
		Up
		Down
		Stop

7.2.3.2 Scenes

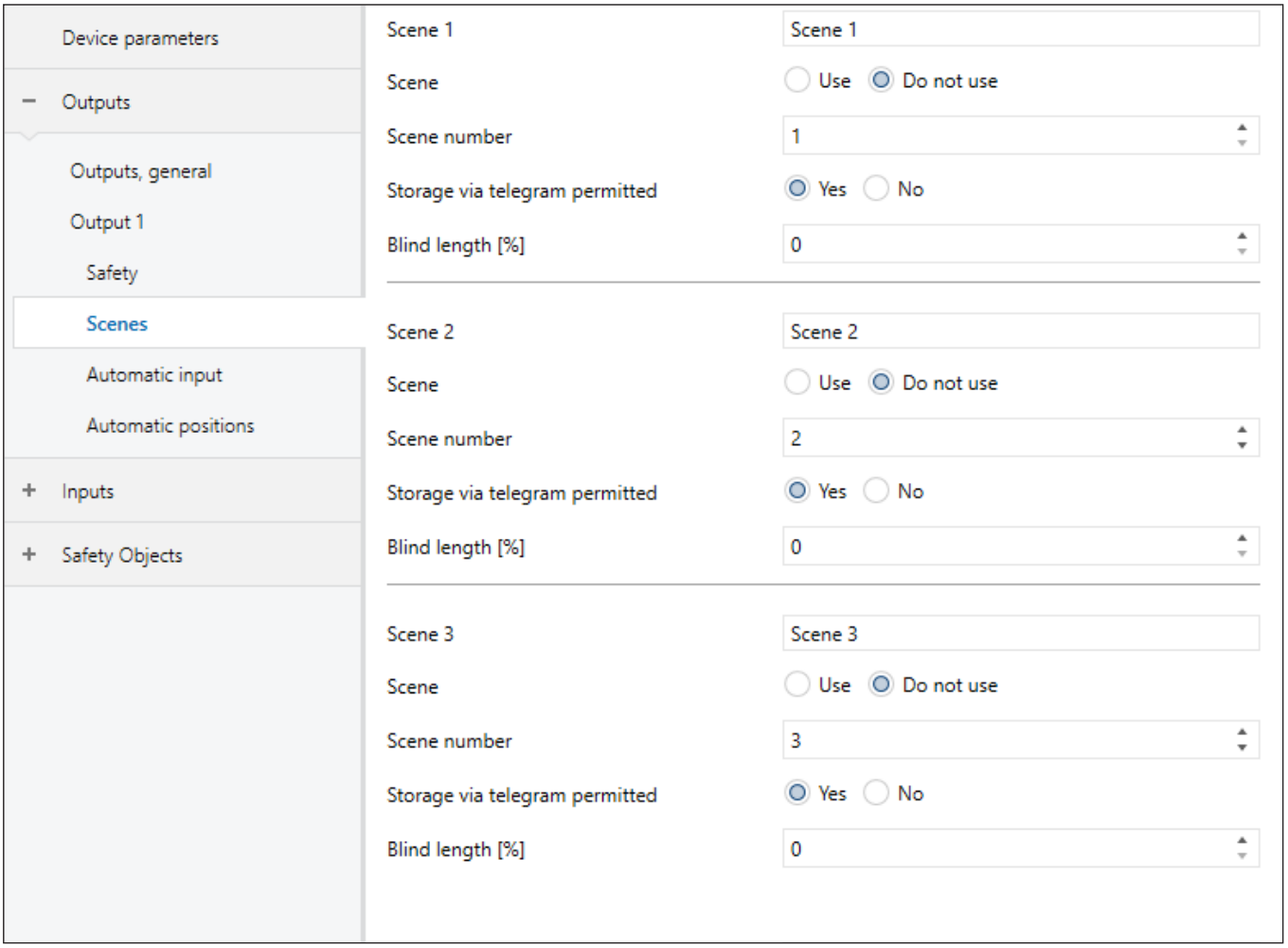


Fig. 19 Parameter dialogue: Outputs → Output n (for Roller shutter/Textile sun shading) Scenes

Parameters	Function	Values
Scene n (8 scenes can be defined)	Text as designation of the scene. The text may have a maximum of 30 characters.	**Scene n**
Scene	Specifies whether the scene is to be used.	**Do not use**
		Use
Scene number	Scene number that must be received on ***GO Scenes*** of the output for the scene to be executed. Each scene number may only be used once.	**1** : 64
Storage via telegram permitted	Specifies whether the value of the scene may be learned by ***GO Scenes***.	No
		Yes
Blind length [%]	Blind length to which the blind is moved when the scene is activated.	**0** : 100

7.2.3.3 Automatic input

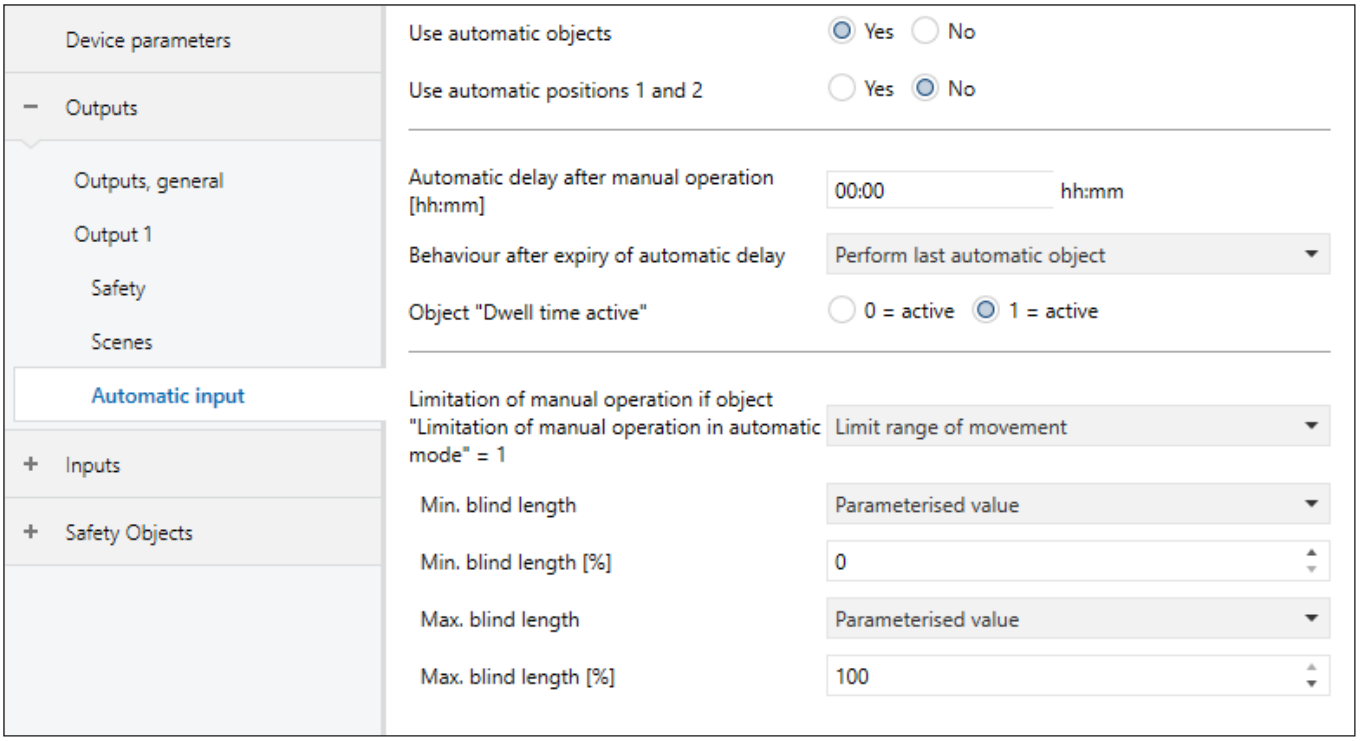


Fig. 20 Parameter dialogue: Outputs → Output n (for Roller shutter/Textile sun shading) Automatic input

Parameters	Function	Values
Use automatic objects	Switches on the remaining parameters of this page and the automatic GOs.	**No**
		Yes
Use automatic positions 1 and 2	Specifies whether *automatic positions 1 and 2* are used. Switches on additional parameters.	**No**
		Yes
Automatic delay after manual operation [hh:mm]	After a manual move command the automatic delay starts running. The last position command is repeated after this time expires.	**00:00** : 23:59
Behaviour after expiry of automatic delay	Specifies what action is to take place after the automatic delay (dwell time) has expired.	No reaction
		Up
		Down
		Perform last automatic object
Object “Dwell time active”	Specifies the value, which the ***GO Dwell time active*** sends, as long as the automatic delay (dwell time) is running.	0 = active
		1 = active
Limitation of manual operation if object “Limitation of manual operation in automatic mode” = 1	Specifies in what range the blind length may move if ***GO Limitation of manual operation in automatic mode*** is active.	**Disable manual operation and scenes**
		Disable changing of the blind length
		Limit range of movement
Min. blind length	Specifies the minimum blind length if **GO Limitation of manual operation in automatic mode** is active.	No restriction
		From automatic blind length object
		Parameterised value
Min. blind length [%]	Value used if the parameter *Min. blind length* has been set to *Parameterised value*.	**0** : 100

Max. blind length	Specifies the maximum blind length if **GO Limitation of manual operation in automatic mode** is active.	No restriction **From automatic blind length object** Parameterised value
Max. blind length [%]	Value used if the parameter *Max. blind length* has been set to *Parameterised value*.	**0** : 100

7.2.3.4 Automatic positions

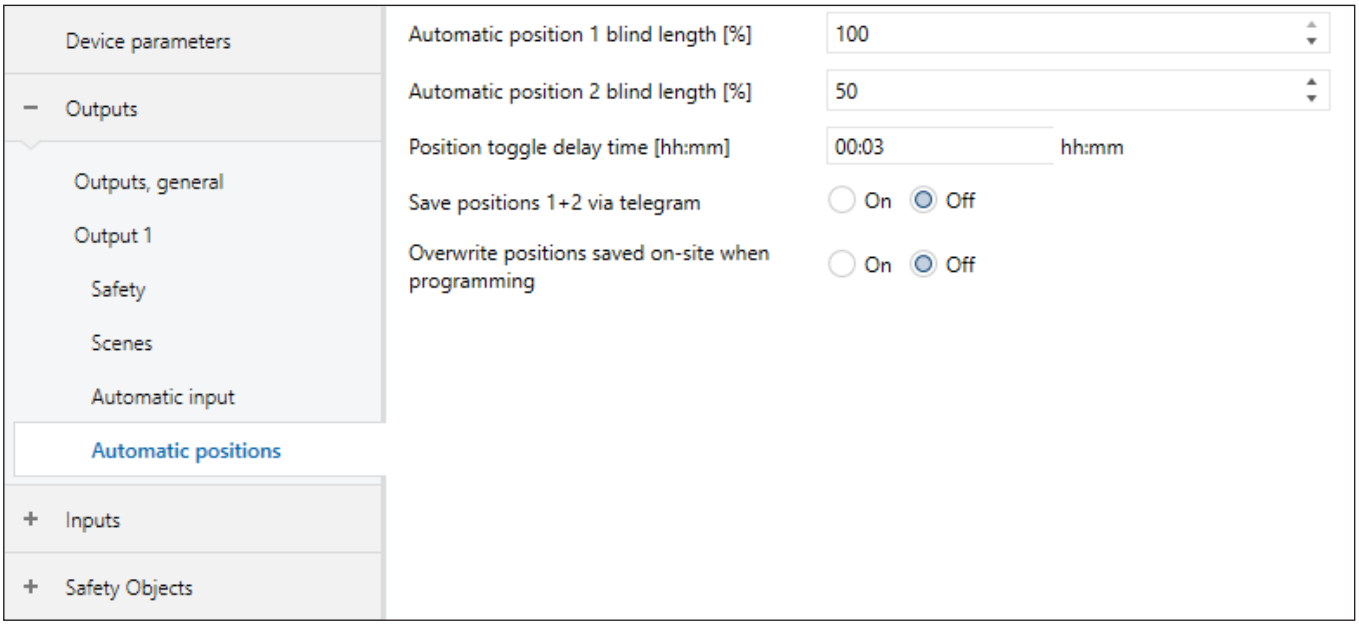


Fig. 21 Parameter dialogue: Outputs → Output n (for Roller shutter/Textile sun shading) Automatic positions

Parameters	Function	Values
Automatic position 1 blind length [%]	Specifies the blind length for automatic position 1. If the option *Save positions 1+2 via telegram* is active, the value set here may differ from the value in the device.	0 : **100**
Automatic position 2 blind length [%]	Specifies the blind length for automatic position 2. If the option *Save positions 1+2 via telegram* is active, the value set here may differ from the value in the device.	0 : **50** : 100
Position toggle delay time [hh:mm]	If a 1-telegram is received on the ***GO Automatic position toggle***, the sun shading product moves to the position that was last received on ***Automatic blind length/Automatic slat position*** after the *Position toggle delay time* expires. If a telegram has not yet been received for ***Automatic blind length/Automatic slat position***, the sun shading product moves to the saved Position 1. If a 0-telegram is received on the ***GO Automatic position toggle***, the sun shading product moves to Position 1 after the *Position toggle delay time* expires. The *Position toggle delay* is always started after the ***Position toggle*** telegram received last, even if the time is already running.	00:00 : **00:03** : 59:59

Save position 1+2 via telegram	On: The current product position is saved after a telegram to the ***GO Save position 1/2***. Off: A telegram to the ***GO Save position 1/2*** causes no change to the position memory.	On
		Off
Overwrite positions saved on-site when programming	On: Positions 1 and 2 saved in the device are overwritten with the parameterised values when the parameters are being programmed. Off: Positions 1 and 2 saved in the device are not overwritten when the parameters are being programmed.	On
		Off

7.2.4 Output for window awnings with ZIP guidance

Window awnings with ZIP guidance are equipped with responsive obstacle detection. When the obstacle detection is activated, the awning's run time extends depending on the number of additional test runs.

In the `ZIP awning` operating mode, the KNX SA executes the **Up/Down move commands**. As long as a safety object is active, the UP command remains active, in order to allow the awning to move safely into the upper limit position even when the run time is extended by the responsive obstacle detection.

Each output can be used to control a window awning with ZIP guidance.

The functions of the outputs are explained here in the example of the *Window awning with ZIP guidance* operating mode. As there are omitted or additional parameters and group objects for the other operating modes, these are explained separately in later chapters.

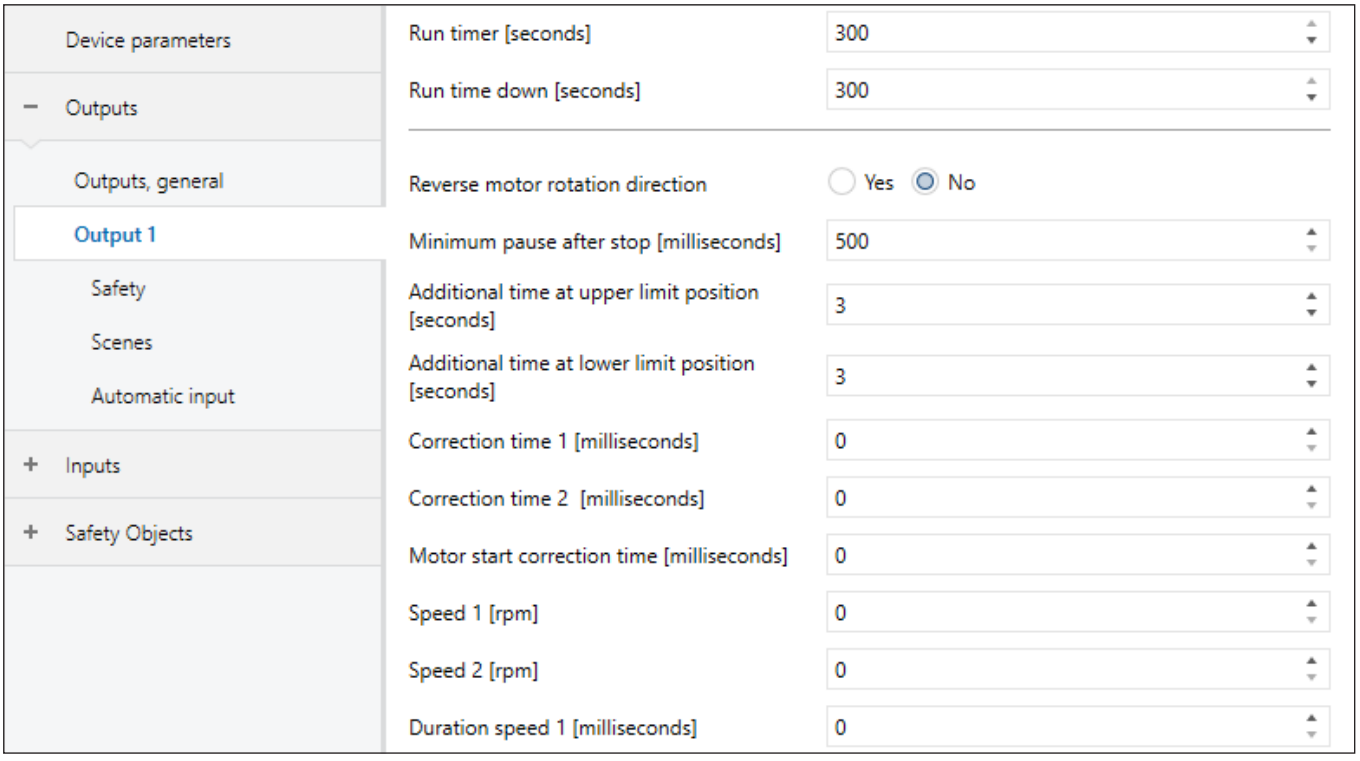


Fig. 22 Parameter dialogue: Outputs → Output n (for window awnings with ZIP guidance)

Parameters	Function	Values
Run time up [seconds]	This parameter defines how long a connected sun shading product requires to move once between the lower and upper limit positions.	0 : **300**
Run time down [seconds]	This parameter defines how long a connected sun shading product requires to move once between the upper and lower limit positions.	0 : **300**
Reverse motor rotation direction	When activated the two relay outputs of the channel are actuated in the reverse direction.	**No**
		Yes
Minimum pause after stop [milliseconds]	Switchover and switch-on pause for relay	**500** : 5000
Additional time at upper limit position [seconds]	During each up movement, the motor is supplied with power for the time set here beyond the time specified in *Run time up*.	0 : **3** : 25
Additional time at lower limit position [seconds]	During each down movement, the motor is supplied with power for the time set here beyond the time specified in *Run time down*.	0 : **3** : 25
Correction time 1 [milliseconds]	Is included in the position calculation as the time for which the motor continues running after the relay drops in the up direction (braking ramp).	**0** : 5000
Correction time 2 [milliseconds]	Is included in the position calculation as the time for which the motor continues running after the relay drops in the down direction (braking ramp).	**0** : 5000
Motor start correction time [milliseconds]	Delayed start after tightening the relay.	**0** : 5000
Speed 1 [rpm]	Parameter for motors with slow starting speed (crawling speed). Speed of the motor when movement begins (slow speed). The crucial factor is the ratio of speed 1 to speed 2.	**0** : 255
Speed 2 [rpm]	Parameter for motors with slow starting speed. Speed of the motor after the slow movement has ended (fast speed). The crucial factor is the ratio of speed 1 to speed 2.	**0** : 255
Duration speed 1 [milliseconds]	Parameter for motors with slow starting speed. Duration of the slow speed 1.	**0** : 25000

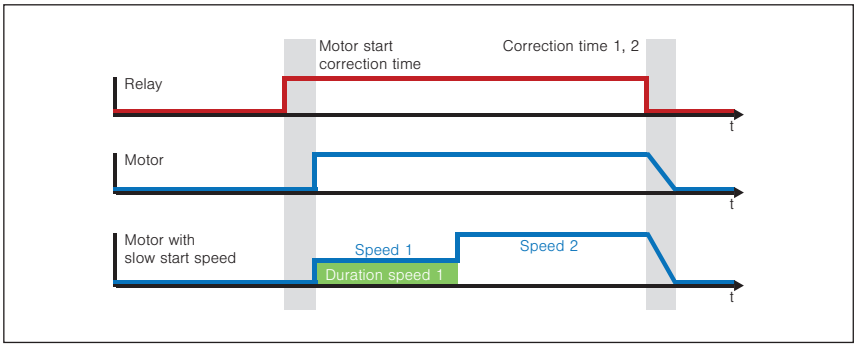


Fig. 23 Function of the correction parameters

7.2.4.1 Safety

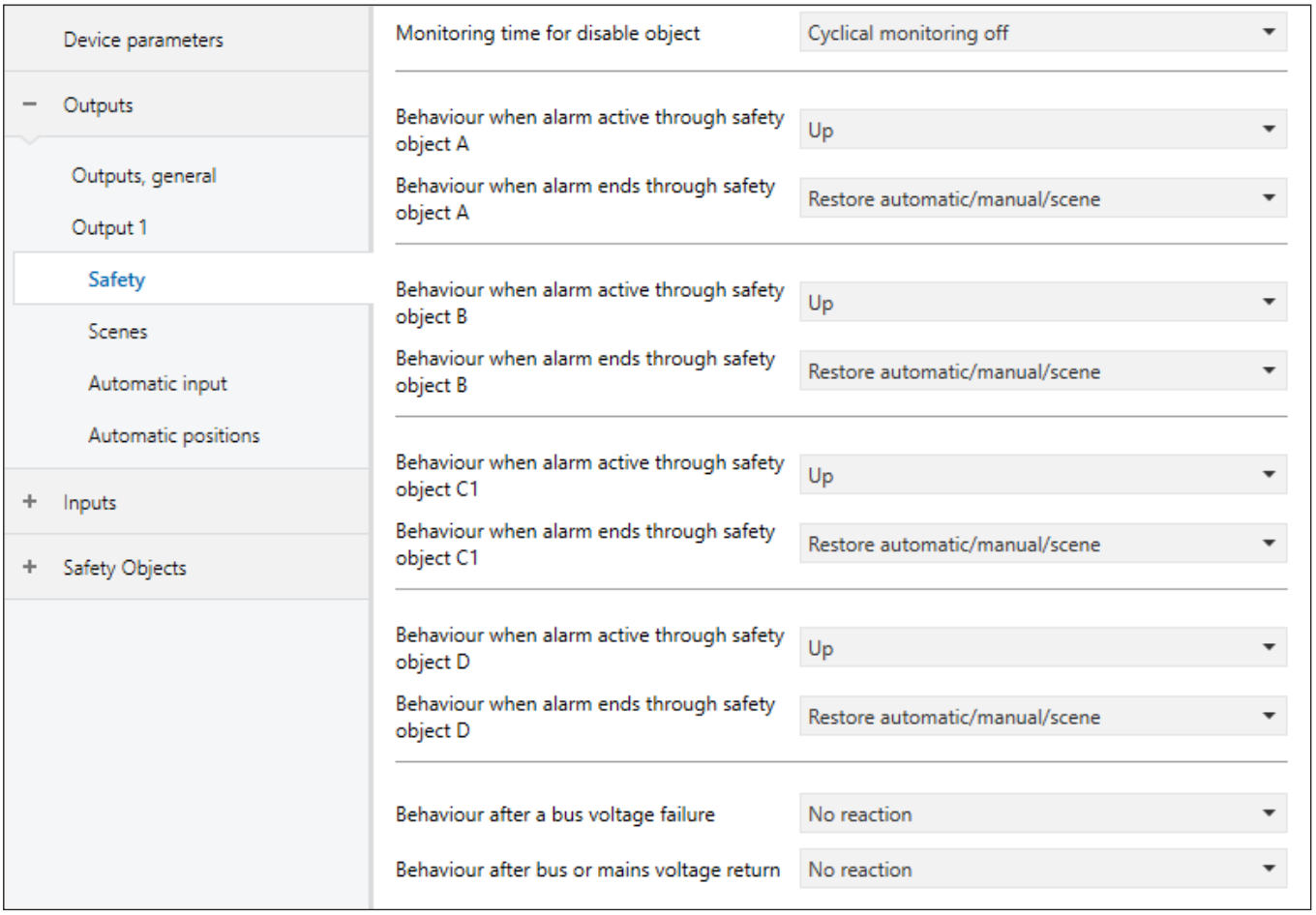


Fig. 24 Parameter dialogue: Outputs → Output n (for window awnings with ZIP guidance) → Safety

The safety objects A, B and D are available on the device once. The safety object C is available separately for each output.

The response to an alarm on the individual safety objects must be parameterised individually for each output.

Parameters	Function	Values
Disable object monitoring time	Monitors whether telegrams are received on the ***GO Disable object*** of the output. The disable object of the channel must receive at least one telegram within this time period. If this time is exceeded without a telegram having been received, the product control is disabled and running movements are stopped. The block is cleared after a 0-telegram to the disable object.	**Cyclical monitoring off**
		10 seconds
		1 minute
		2 minutes
		5 minutes
		10 minutes
Behaviour when *alarm active* through safety object A	Output channels execute the move command that has been set for *alarm active*. Afterwards, only commands from safety objects of higher priority or from the disable object are processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
Blind length [%]	Blind length, to which ***GO Safety object A*** is to move in case of alarm.	**0** : 100
Behaviour when *alarm ends* through safety object A	Output channels execute the move command that has been set here for the alarm end. Lower priority commands then continue to be processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
		Perform last automatic object
		Restore automatic/manual/scene
Behaviour when *alarm active* through safety object B	Output channels execute the move command that has been set for *alarm active*. Afterwards, only commands from safety objects of higher priority or from the disable object are processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
Blind length [%]	Blind length, to which ***GO Safety object B*** is to move in case of alarm.	**0** : 100
Behaviour when *alarm ends* through safety object B	Output channels execute the move command that has been set here for the alarm end. Lower priority commands then continue to be processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
		Perform last automatic object
		Restore automatic/manual/scene
Behaviour when *alarm active* through safety object Cn	Output channels execute the move command that has been set for *alarm active*. Afterwards, only commands from safety objects of higher priority or from the disable object are processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
Blind length [%]	Blind length, to which ***GO Safety object Cn*** is to move in case of alarm.	**0** : 100

Behaviour when *alarm ends* through safety object Cn	Output channels execute the move command that has been set here for the alarm end. Lower priority commands then continue to be processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
		Perform last automatic object
		Restore automatic/manual/scene
Behaviour when *alarm active* through safety object D	Output channels execute the move command that has been set for *alarm active*. Afterwards, only commands from safety objects of higher priority or from the disable object are processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
Blind length [%]	Blind length, to which ***GO Safety object D*** is to move in case of alarm.	**0** : 100
Behaviour when *alarm ends* through safety object D	Output channels execute the move command that has been set here for the alarm end. Lower priority commands then continue to be processed.	No reaction
		Stop
		Up
		Down
		Move to parameterised position
		Perform last automatic object
		Restore automatic/manual/scene
Behaviour after the bus voltage fails	This parameter defines the behaviour of the channel after the bus voltage fails.	**No reaction**
		Up
		Down
		Stop
Behaviour after the bus or mains voltage returns	This parameter defines the behaviour of the channel after the mains voltage returns.	**No reaction**
		Up
		Down
		Stop

7.2.4.2 Scenes

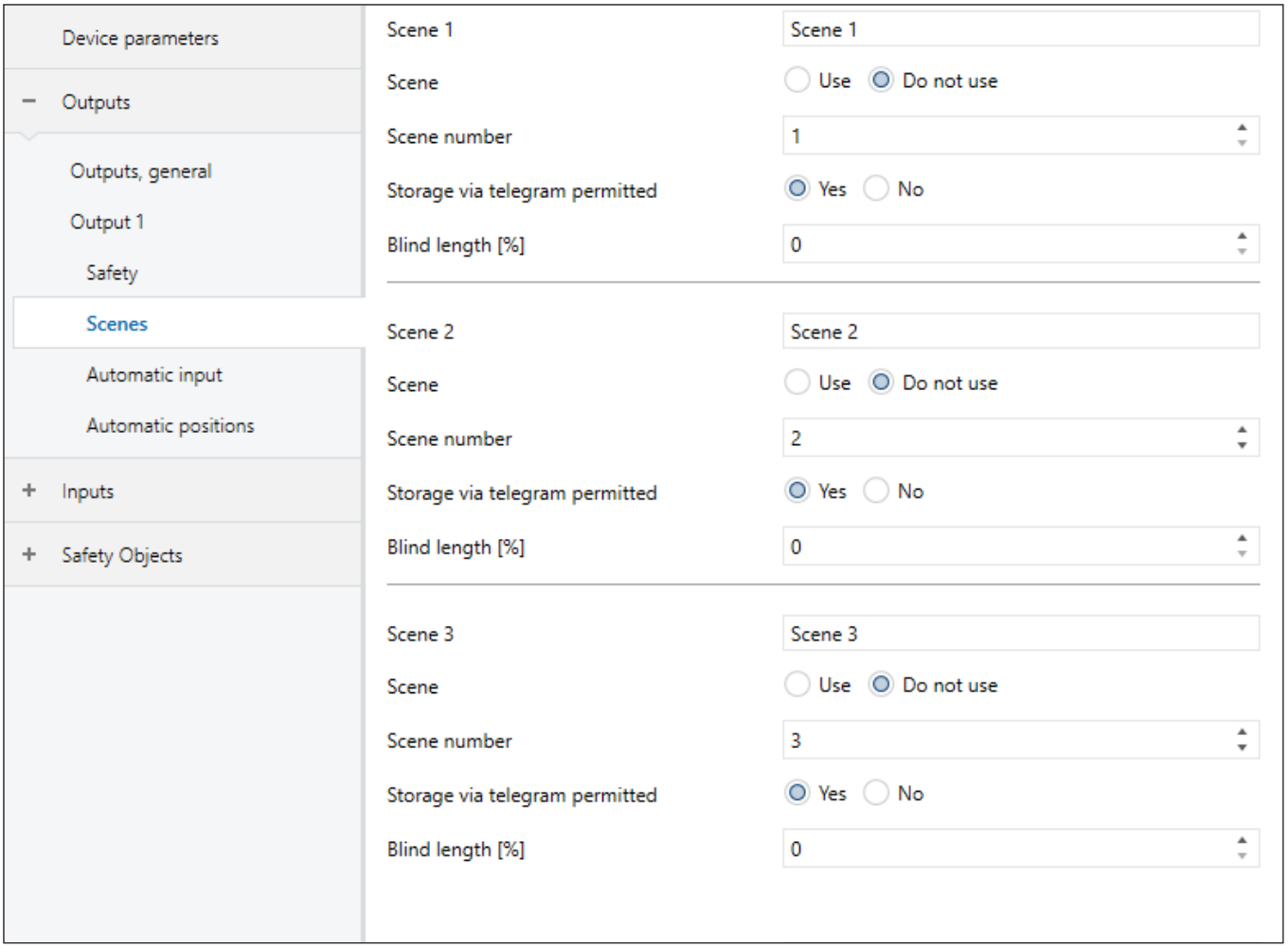


Fig. 25 Parameter dialogue: Outputs → Output n (for window awnings with ZIP guidance) → Scenes

Parameters	Function	Values
Scene n (8 scenes can be defined)	Text as designation of the scene. The text may have a maximum of 30 characters.	**Scene n**
Scene	Specifies whether the scene is to be used.	**Do not use**
		Use
Scene number	Scene number that must be received on ***GO Scenes*** of the output for the scene to be executed. Each scene number may only be used once.	**1** : 64
Storage via telegram permitted	Specifies whether the value of the scene may be learned by ***GO Scenes***.	No
		Yes
Blind length [%]	Blind length to which the blind is moved when the scene is activated.	**0** : 100

7.2.4.3 Automatic input

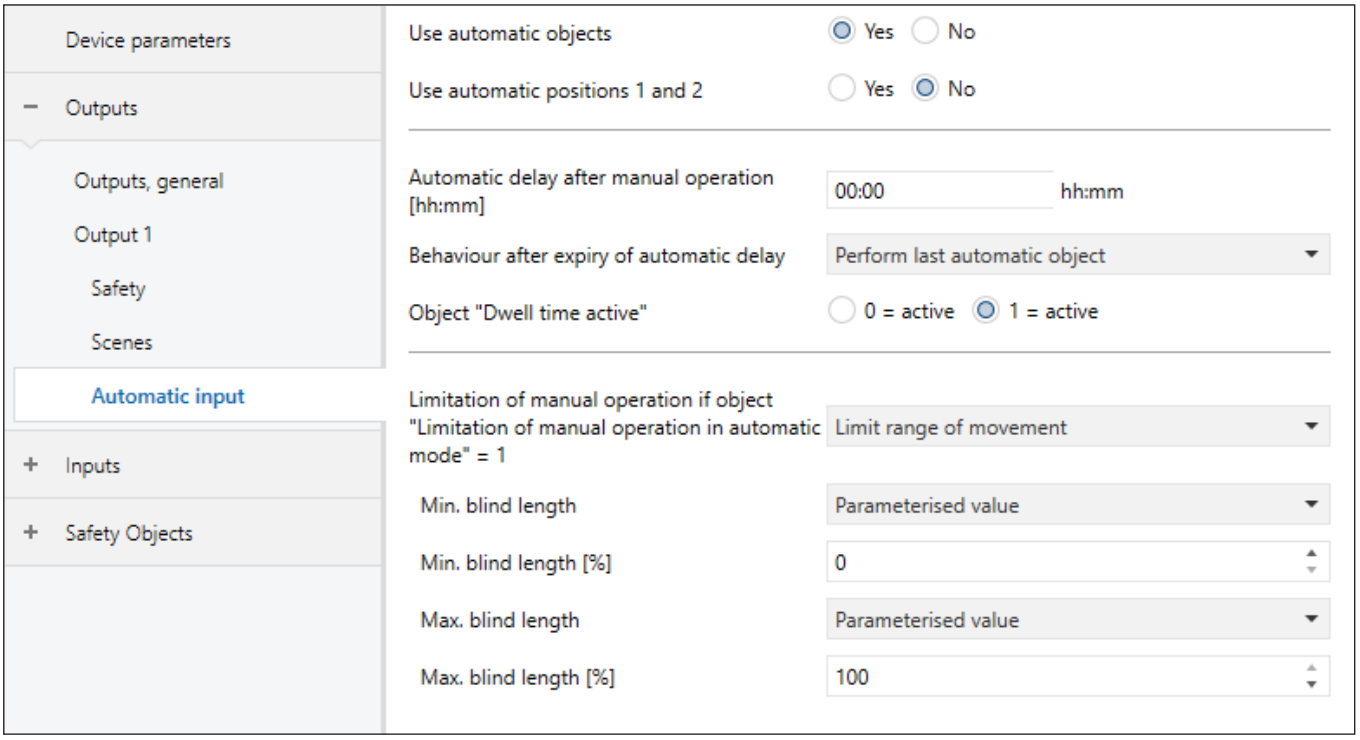


Fig. 26 Parameter dialogue: Outputs → Output n (for window awnings with ZIP guidance) → Automatic input

Parameters	Function	Values
Use automatic objects	Switches on the remaining parameters of this page and the automatic GOs.	**No**
		Yes
Use automatic positions 1 and 2	Specifies whether *automatic positions 1 and 2* are used. Switches on additional parameters.	**No**
		Yes
Automatic delay after manual operation [hh:mm]	After a manual move command the automatic delay starts running. The last position command is repeated after this time expires.	**00:00** : 23:59
Behaviour after expiry of automatic delay	Specifies what action is to take place after the automatic delay (dwell time) has expired.	No reaction
		Up
		Down
		Perform last automatic object
Object “Dwell time active”	Specifies the value, which the ***GO Dwell time active*** sends, as long as the automatic delay (dwell time) is running.	0 = active
		1 = active
Limitation of manual operation if object “Limitation of manual operation in automatic mode” = 1	Specifies in what range the blind length may move if ***GO Limitation of manual operation in automatic mode*** is active.	**Disable manual operation and scenes**
		Disable changing of the blind length
		Limit range of movement
Min. blind length	Specifies the minimum blind length if **GO Limitation of manual operation in automatic mode** is active.	No restriction
		From automatic blind length object
		Parameterised value
Min. blind length [%]	Value used if the parameter *Min. blind length* has been set to *Parameterised value*.	**0** : 100

Max. blind length	Specifies the maximum blind length if **GO Limitation of manual operation in automatic mode** is active.	No restriction
		From automatic blind length object
		Parameterised value
Max. blind length [%]	Value used if the parameter *Max. blind length* has been set to *Parameterised value*.	**0** : 100

7.2.4.4 Automatic positions

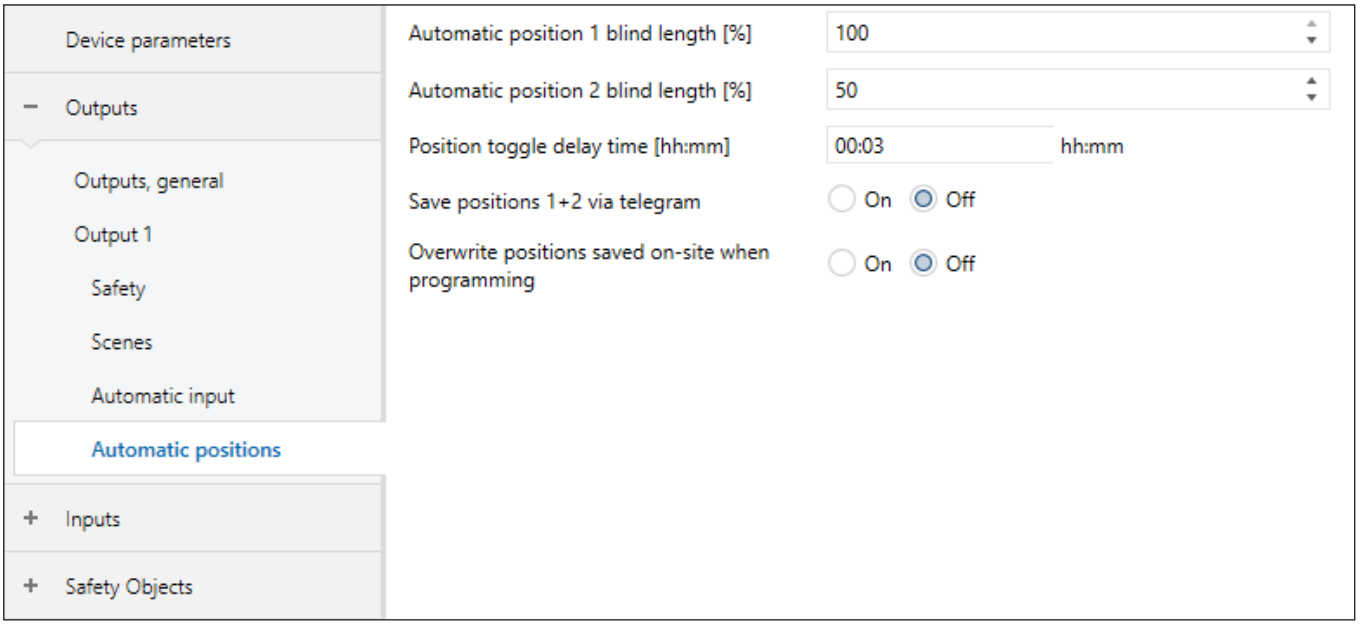


Fig. 27 Parameter dialogue: Outputs → Output n (for window awnings with ZIP guidance) → Automatic positions

Parameters	Function	Values
Automatic position 1 blind length [%]	Specifies the blind length for automatic position 1. If the option *Save positions 1+2 via telegram* is active, the value set here may differ from the value in the device.	0 : **100**
Automatic position 2 blind length [%]	Specifies the blind length for automatic position 2. If the option *Save positions 1+2 via telegram* is active, the value set here may differ from the value in the device.	0 : **50** : 100
Position toggle delay time [hh:mm]	If a 1-telegram is received on the ***GO Automatic position toggle***, the sun shading product moves to the position that was last received on ***Automatic blind length/Automatic slat position*** after the *Position toggle delay time* expires. If a telegram has not yet been received for ***Automatic blind length/Automatic slat position***, the sun shading product moves to the saved Position 1. If a 0-telegram is received on the ***GO Automatic position toggle***, the sun shading product moves to Position 1 after the *Position toggle delay time* expires. The *Position toggle delay* is always started after the ***Position toggle*** telegram received last, even if the time is already running.	00:00 : **00:03** : 59:59
Save position 1+2 via telegram	The current product position is saved after a telegram to the ***GO Save position 1/2***.	On
	A telegram to the ***GO Save position 1/2*** causes no change to the position memory.	**Off**
Overwrite positions saved on-site when programming	Positions 1 and 2 saved in the device are overwritten with the parameterised values when the parameters are being programmed.	On
	Positions 1 and 2 saved in the device are not overwritten when the parameters are being programmed.	**Off**

7.3 Inputs

The surface mounted devices (AP) are equipped with inputs.
The inputs (input terminals) are always parameterised in pairs.
One input supports different operating modes.

7.3.1 Inputs, general

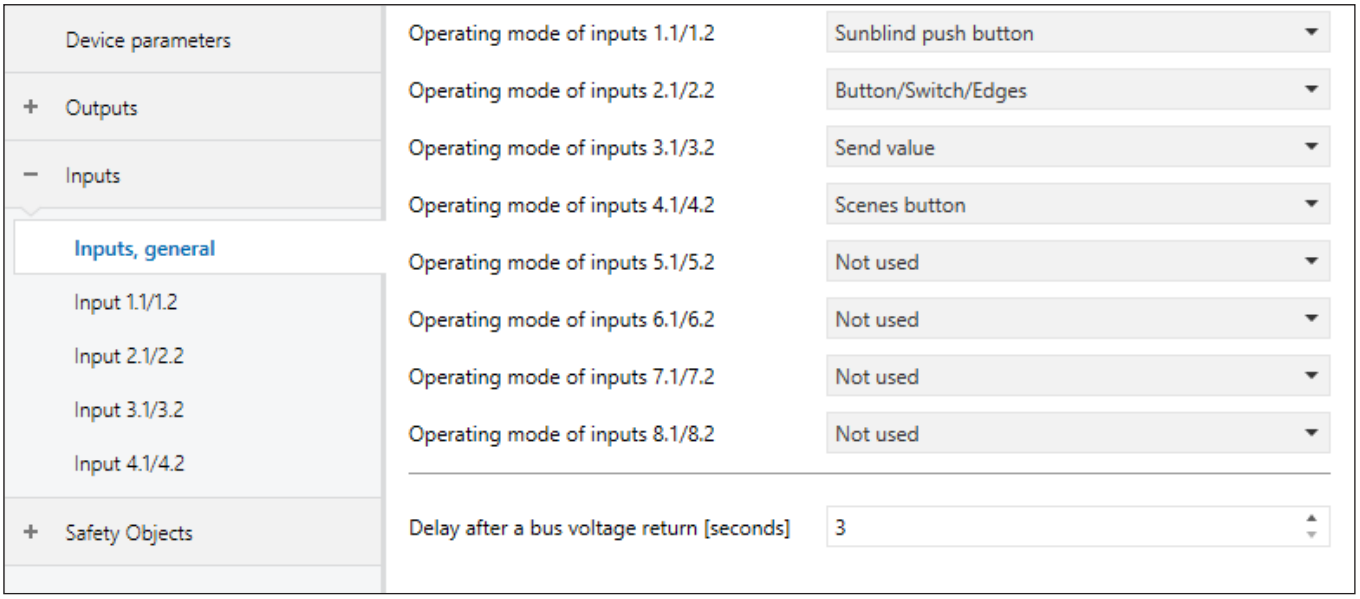


Fig. 28 Parameter dialogue: Inputs → Inputs general

Parameters	Function	Values
Operating mode Inputs n.1/n.2	Specifies the operating mode of a pair of inputs. The Sunblind push button operating mode requires two inputs (Up / Down). The other operating modes require just one input each.	**Not used**
		Sunblind push button
		Button/Switch/Edges
		Sensor
		Scenes button
Delay after a bus voltage return [seconds]	This parameter determines how much time must pass between the return of the bus voltage and sending the first telegram.	**3** : 255

7.3.2 Sunblind push button input

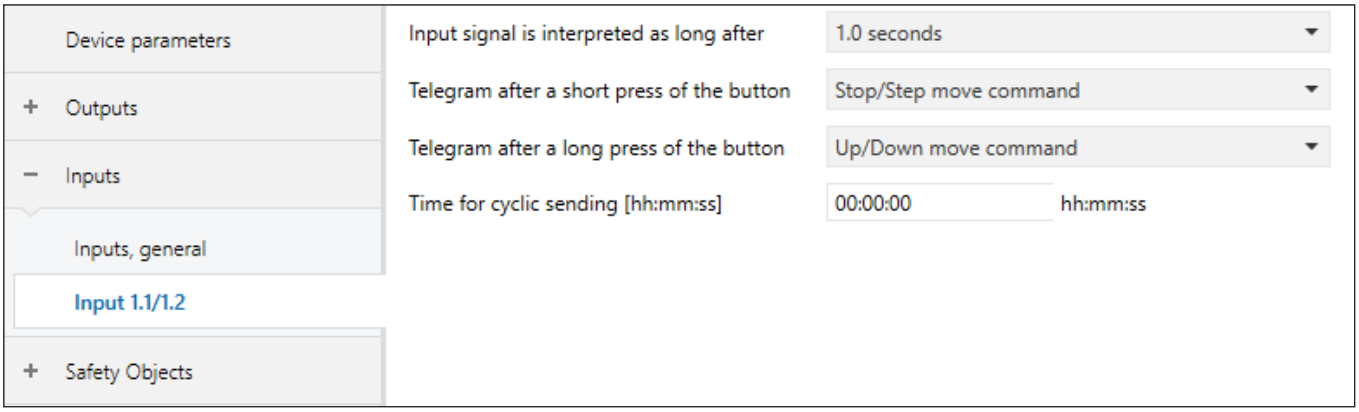


Fig. 29 Parameter dialogue: Inputs → Input n.1/n.2 (Sunblind push button)

Parameters	Function	Values
Input signal is interpreted as long after	If the push button is pressed for at least the set time, the telegram for a long press of the button is sent after the set time. If the button is pressed for a shorter time, the telegram for a short press of the button is sent after the button is released.	0 seconds
		0.4 seconds
		0.5 seconds
		0.6 seconds
		0.8 seconds
		1.0 seconds
		1.2 seconds
		1.5 seconds
		2 seconds
		3 seconds
		4 seconds
		5 seconds
		10 seconds
Telegram after pressing button	If the up contact was closed, the ***GO Up/Down move command*** sends a 0-telegram. If the down contact was closed, the ***GO Up/Down move command*** sends a 1-telegram.	No move command
		Up/Down move command
		Stop/Step move command
Telegram after long press of button	If the up contact was closed, the ***GO Stop/Step move command*** sends a 0-telegram. If the down contact was closed, the ***GO Stop/Step move command*** sends a 1-telegram.	No move command
		Up/Down move command
		Stop/Step move command
Time for cyclic sending [hh:mm:ss]	Telegrams after a longer press of the button can be sent repeatedly as long as the connected contact is closed. The interval between two consecutive repeats can be parameterised here. Setting the value to 0 causes a telegram to be sent only once after a long press of the button.	**00:00:00** : 23:59:59

7.3.3 Button/Switch/Edges input

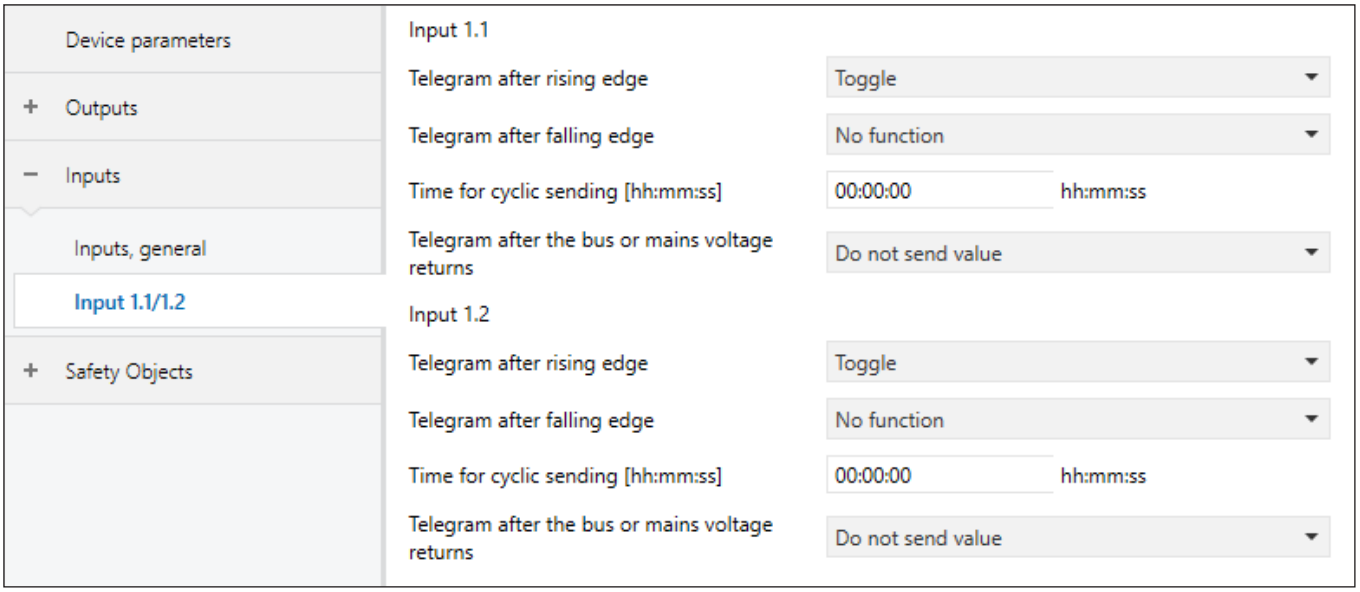


Fig. 30 Parameter dialogue: Inputs → Input n.1/n.2 (Button/Switch/Edges)

Parameters	Function	Values
Telegram after rising edge	No sending after the button is pressed or released or after the bus/mains voltage returns.	No function
	GO Button/Switch/Edges sends 1-telegram(s) once or repeatedly	On
	GO Button/Switch/Edges sends 0-telegram(s) once or repeatedly	Off
	GO Button/Switch/Edges sends toggle telegram(s) once or repeatedly	**Toggle**
Telegram after falling edge	No sending after the button is pressed or released or after the bus/mains voltage returns.	**No function**
	GO Button/Switch/Edges sends 1-telegram(s) once or repeatedly	On
	GO Button/Switch/Edges sends 0-telegram(s) once or repeatedly	Off
	GO Button/Switch/Edges sends toggle telegram(s) once or repeatedly	Toggle
Time for cyclic sending [hh:mm:ss]	Telegrams after a longer press of the button can be sent repeatedly as long as the connected contact is closed. The interval between two consecutive repeats can be parameterised here. Setting the value to 0 causes a telegram to be sent only once after a long press of the button. After the bus or network voltage returns, if no new edge is detected, the value determined in the following parameter is sent cyclically.	**00:00:00** : 23:59:59
Telegram after the bus or mains voltage returns	No telegram is sent after the button is pressed or released	**Do not send value**
	An ON telegram is sent	Send ON telegram
	An OFF telegram is sent	Send OFF telegram
	When the *Delay after bus voltage return* expires, the following is sent once: - when the contact is closed, a value corresponding to the telegram after the rising edge - when the contact is open, a value corresponding to the telegram after the falling edge	Send current input state

7.3.4 Sensor input

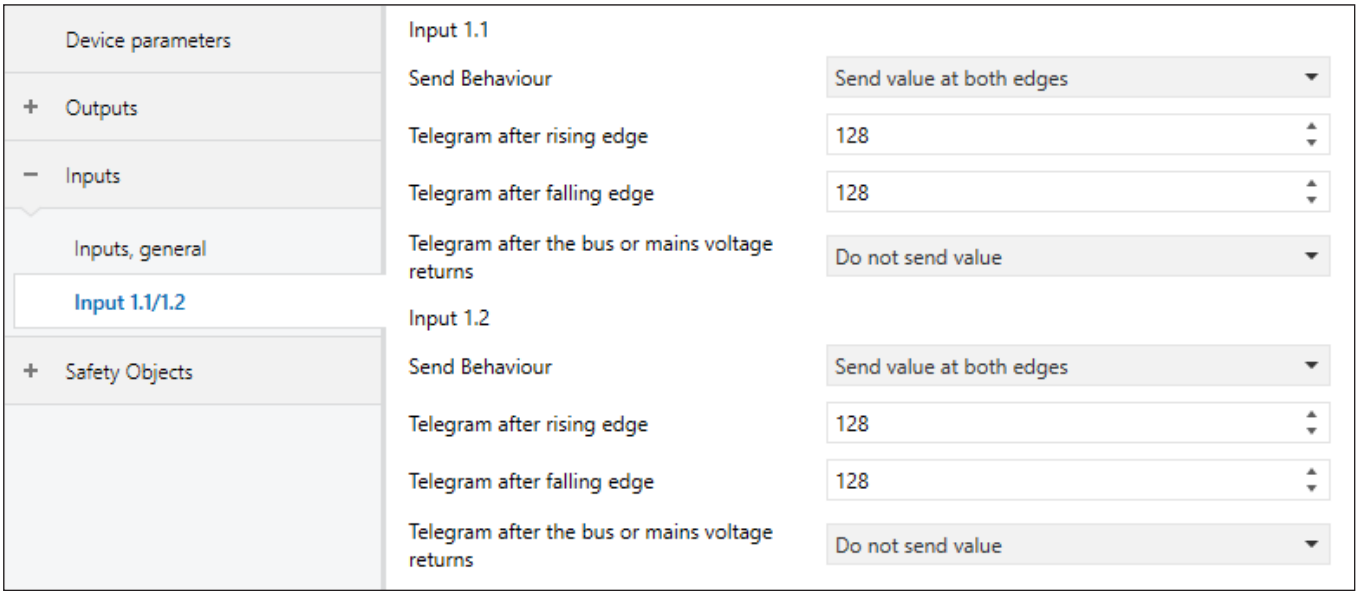


Fig. 31 Parameter dialogue: Inputs → Input n.1/n.2 (Sensor)

Parameters	Function	Values
Send behaviour	***GO Sensor*** sends after the rising edge the value parameterised in *Telegram after rising edge*	Send value at rising edges
	GO Sensor sends after the falling edge the value parameterised in *Telegram after falling edge*	Send value at falling edges
	GO Sensor sends after the rising edge the value parameterised in *Telegram after rising edge* and after the falling edge the value parameterised in *Telegram after falling edge*	**Send value at both edges**
Telegram after rising edge	Value that is sent after the rising edge.	0 : **128** : 255
Telegram after falling edge	Value that is sent after the falling edge.	0 : **128** : 255
Telegram after the bus or mains voltage returns	Specifies what value is sent after the bus or mains voltage returns.	**Do not send value**
		Send value for rising edges
		Send value for falling edges
		Send current input state

7.3.5 Scenes push button input

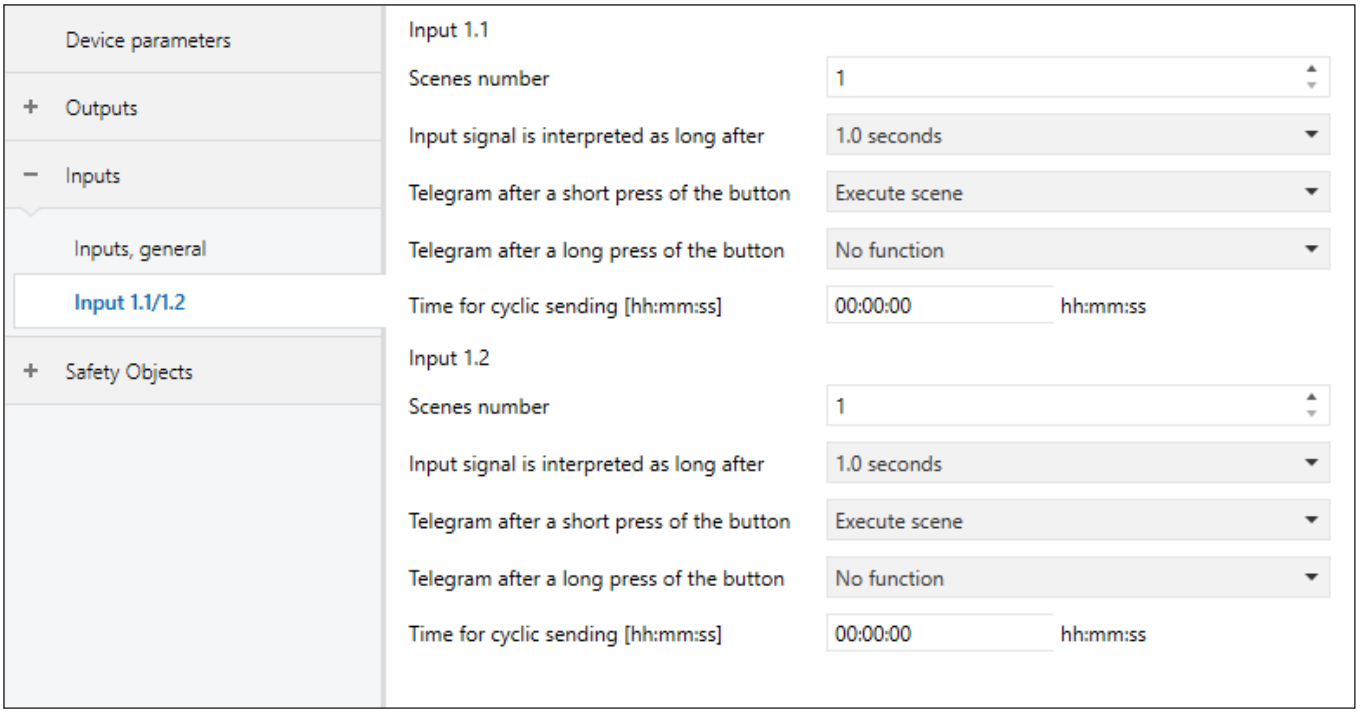


Fig. 32 Parameter dialogue: Inputs → Input n.1/n.2 (Scenes push button)

Parameters	Function	Values
Scenes number	***GO Scenes*** sends the value parameterised here	**1** : 64
Input signal is interpreted as long after	If the push button is pressed for at least the set time, the telegram for a long press of the button is sent after the set time. If the button is pressed for a shorter time, the telegram for a short press of the button is sent after the button is released.	0 seconds
		0.4 seconds
		0.5 seconds
		0.6 seconds
		0.8 seconds
		1.0 seconds
		1.2 seconds
		1.5 seconds
		2 seconds
		3 seconds
		4 seconds
		5 seconds
		10 seconds
Telegram after pressing button		No function
	GO Scenes sends after a short press of the button the value from *Scenes number* and Execute scene	**Execute scene**
	GO Scenes sends after a short press of the button the value from *Scenes number* and Learn scene	Learn scene
Telegram after long press of button		**No function**
	GO Scenes sends after a long press of the button the value from *Scenes number* and Execute scene	Execute scene
	GO Scenes sends after a long press of the button the value from *Scenes number* and Learn scene	Learn scene
Time for cyclic sending [hh:mm:ss]	Telegrams after a longer press of the button can be sent repeatedly as long as the connected contact is closed. The factor for cyclic sending determines the time interval between two consecutive repeats. Setting the value to 0 causes a telegram to be sent only once after a long press of the button.	**00:00:00** : 23:59:59

7.4 Safety objects

The safety functions of the actuators are used to protect controlled systems against damage, such as in the case of a wind alarm.

Four safety group objects are available with different priorities. These safety objects can start or end internal alarms according to the following criteria:

- Bus or mains voltage return
- Bus voltage failure
- Programming of the device
- Cyclical monitoring (Time intervals between received telegrams)
- Contents of telegrams to safety objects

The safety objects ***A***, ***B*** and ***D*** are available for the actuator once. The safety object ***C*** is available for each output once (***C1***, ***C2***, ...).

For each output channel, you can set how the ***safety objects*** (***SO***) are to affect it and which move command is to be performed after activation or de-activation of the respective ***SO***.

For the priorities of the safety objects, see also Chapter *7.4.1*.

Example

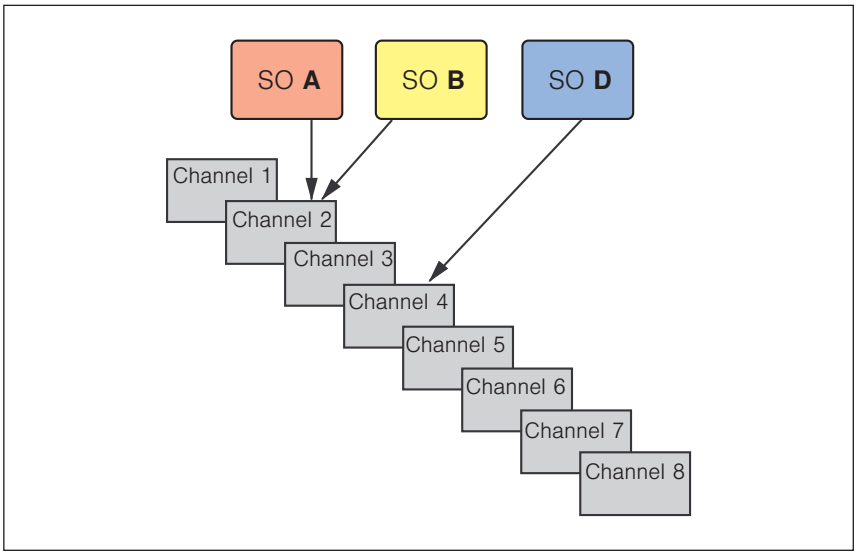


Fig. 33 Allocation example

For example, if safety object ***A*** is activated (1-telegram) while safety object ***B*** is already active, safety object ***B*** is overridden. Channel 4 remains unaffected by the change in state of safety objects ***A*** or ***B***.

In the example, the following parameter settings are used:

- Behaviour after start of alarm from ***SO A***: Raise
- Behaviour after end of alarm from ***SO A***: Return to previous position
- Behaviour after start of alarm from ***SO B***: Lower
- Behaviour after end of alarm from ***SO B***: Return to previous position

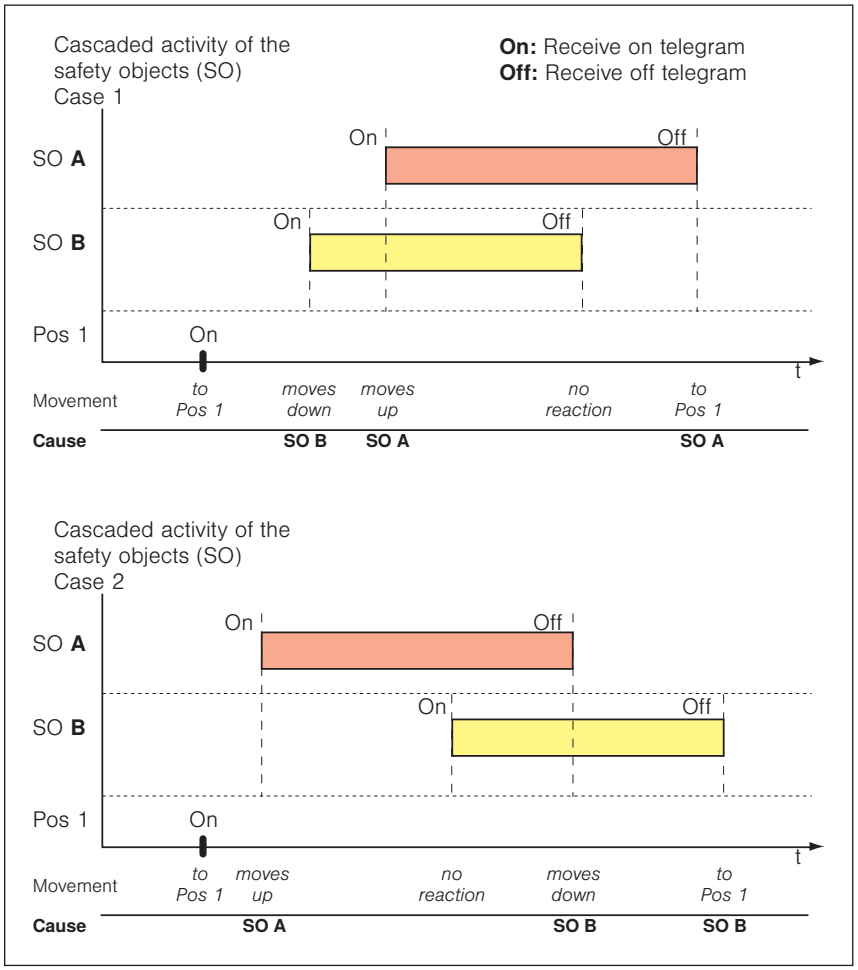


Fig. 34 Example: Behaviour of the safety objects

After a safety object ends, the move command with the lowest priority that is set for this event is executed. This means that it is only executed if no other safety objects are active when an alarm ends.

After a high priority alarm ends, the action that should have been executed when a safety object that is currently still active was first activated is now executed.

7.4.1 Order of priorities

In descending order:

- ***GO Disable object***
  (highest priority, stops all move commands after activation)
- ***GO Safety object A***
- ***GO Safety object B***
- ***GO Safety object C*** (available separately for each input)
- ***GO Safety object D***
- ***GO Limitation of manual operation in automatic mode*** *
- ***GO Move to blind length manually***
  GO Move to slat position manually
  GO Scenes
- Automatic delay after manual operation
- ***GO Move to blind length automatically***
  GO Move to slat position automatically
  GO Move to automatic position 1
  GO Move to automatic position 2

* It is possible that the area which all GOs for manual operation can move to is limited by the ***GO Limitation of manual operation in automatic mode*** and the parameterisation of the automatic input.

For each sun shading output, the behaviour of the product when an alarm starts or ends can be set.

7.4.2 Safety objects - General settings in the parameter dialogue

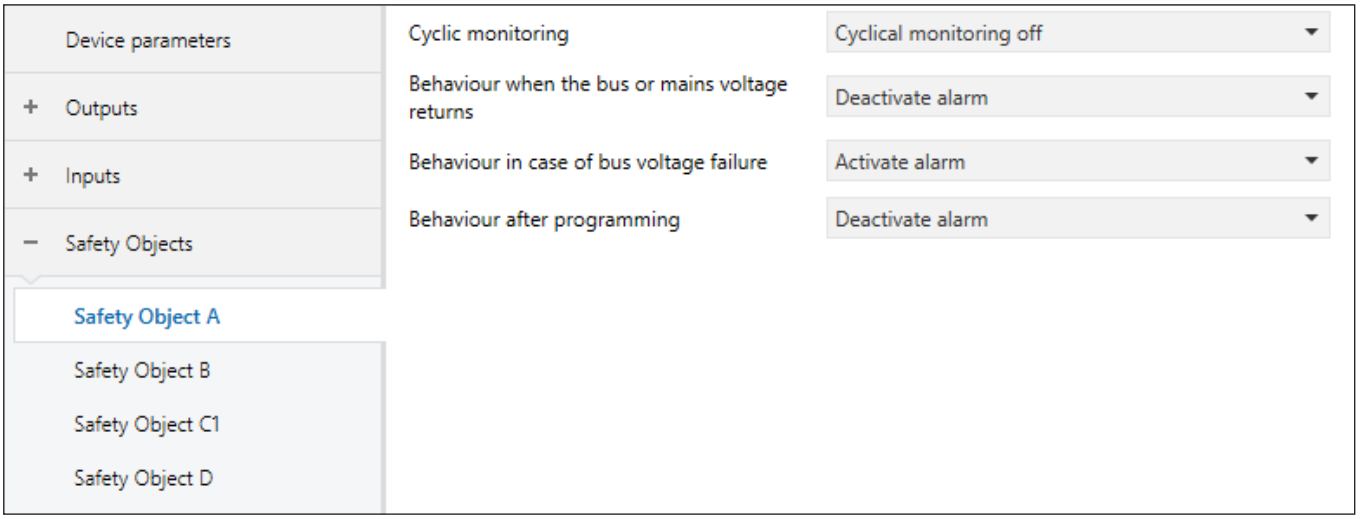


Fig. 35 Parameter dialogue: Safety objects

Parameters	Function	Values
Cyclical monitoring	Monitors whether telegrams are cyclically received on the ***GO Safety object n***. The safety object must receive at least one telegram within this time period. If this time expires without a telegram having been received, the safety object is activated. After a 0-telegram to the safety object, it is disabled again.	**Cyclical monitoring off**
		10 seconds
		1 minute
		2 minutes
		5 minutes
		10 minutes
Behaviour when the bus or mains voltage returns	This parameter defines the behaviour of the safety objects after the mains voltage returns.	**Deactivate alarm**
		Activate alarm
		No change
Behaviour in case of bus voltage failure	This parameter defines the behaviour of the safety objects after the bus voltage fails.	Deactivate alarm
		Activate alarm
		No change
Behaviour after programming	This parameter defines the behaviour of the safety objects after programming.	**Deactivate alarm**
		Activate alarm
		No change

8 Group objects

8.1 Overview

The KNX SA is equipped with a total of 195 group objects (GO).
Depending on the actuator model and parameter setting (e.g. product type), the group objects available in each case are shown on the ETS interface.

The following table contains all group objects with the associated specifications.

[1] only in operating mode *Venetian blind/external venetian blind*
[2] not in operating mode *Window awning with ZIP guidance*

No.	Name	Object function	Length	Flags	Data type
1	Output 1	Up/Down move command	1 bit	C, W	1 bit, 1.008 Up/Down
2	Output 1	Stop/Step move command	1 bit	C, W	1 bit, 1.007 step
3	Output 1	Move to blind length manually	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
4	Output 1	Move to slat position manually [1]	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
5	Output 1	Enable automatic objects	1 bit	C, W	1 bit, 1.003 Enable
6	Output 1	Move to blind length automatically	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
7	Output 1	Move to slat position automatically [1]	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
8	Output 1	Move to automatic position 1	1 bit	C, W	1 bit, 1.002 Boolean
9	Output 1	Move to automatic position 2	1 bit	C, W	1 bit, 1.002 Boolean
10	Output 1	Save automatic position 1	1 bit	C, W	1 bit, 1.002 Boolean
11	Output 1	Save automatic position 2	1 bit	C, W	1 bit, 1.002 Boolean
12	Output 1	Automatic position toggle	1 bit	C, W	1 bit, 1.002 Boolean
13	Output 1	Limitation of manual operation in automatic mode	1 bit	C, W	1 bit, 1.003 Enable
14	Output 1	Dwell time active	1 bit	C, R, T	1 bit, 1.002 Boolean
15	Output 1	Safety object C1	1 bit	C, W	1 bit, 1.005 alarm
16	Output 1	Disable object	1 bit	C, W	1 bit, 1.005 alarm
17	Output 1	Scenes	1 byte	C, W	Scenes check, 18.001 Scenes check
18	Output 1	Disable scenes	1 bit	C, W	1 bit, 1.003 Enable
19	Output 1	Upper limit position reached [2]	1 bit	C, R, T	1 bit, 1.002 Boolean
20	Output 1	Blind length status [2]	1 byte	C, R, T	8 bit unsigned, 5.001 percent (0..100%)
21	Output 1	Slat position status [1]	1 byte	C, R, T	8 bit unsigned, 5.001 percent (0..100%)
22	Output 2	Up/Down move command	1 bit	C, W	1 bit, 1.008 Up/Down
23	Output 2	Stop/Step move command	1 bit	C, W	1 bit, 1.007 step
24	Output 2	Move to blind length manually	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
25	Output 2	Move to slat position manually [1]	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
26	Output 2	Enable automatic objects	1 bit	C, W	1 bit, 1.003 Enable
27	Output 2	Move to blind length automatically	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
28	Output 2	Move to slat position automatically [1]	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
29	Output 2	Move to automatic position 1	1 bit	C, W	1 bit, 1.002 Boolean

No.	Name	Object function	Length	Flags	Data type
30	Output 2	Move to automatic position 2	1 bit	C, W	1 bit, 1.002 Boolean
31	Output 2	Save automatic position 1	1 bit	C, W	1 bit, 1.002 Boolean
32	Output 2	Save automatic position 2	1 bit	C, W	1 bit, 1.002 Boolean
33	Output 2	Automatic position toggle	1 bit	C, W	1 bit, 1.002 Boolean
34	Output 2	Limitation of manual operation in automatic mode	1 bit	C, W	1 bit, 1.003 Enable
35	Output 2	Dwell time active	1 bit	C, R, T	1 bit, 1.002 Boolean
36	Output 2	Safety object C2	1 bit	C, W	1 bit, 1.005 alarm
37	Output 2	Disable object	1 bit	C, W	1 bit, 1.005 alarm
38	Output 2	Scenes	1 byte	C, W	Scenes check, 18.001 Scenes check
39	Output 2	Disable scenes	1 bit	C, W	1 bit, 1.003 Enable
40	Output 2	Upper limit position reached [2]	1 bit	C, R, T	1 bit, 1.002 Boolean
41	Output 2	Blind length status [2]	1 byte	C, R, T	8 bit unsigned, 5.001 percent (0..100%)
42	Output 2	Slat position status [1]	1 byte	C, R, T	8 bit unsigned, 5.001 percent (0..100%)
43	Output 3	Up/Down move command	1 bit	C, W	1 bit, 1.008 Up/Down
44	Output 3	Stop/Step move command	1 bit	C, W	1 bit, 1.007 step
45	Output 3	Move to blind length manually	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
46	Output 3	Move to slat position manually [1]	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
47	Output 3	Enable automatic objects	1 bit	C, W	1 bit, 1.003 Enable
48	Output 3	Move to blind length automatically	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
49	Output 3	Move to slat position automatically [1]	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
50	Output 3	Move to automatic position 1	1 bit	C, W	1 bit, 1.002 Boolean
51	Output 3	Move to automatic position 2	1 bit	C, W	1 bit, 1.002 Boolean
52	Output 3	Save automatic position 1	1 bit	C, W	1 bit, 1.002 Boolean
53	Output 3	Save automatic position 2	1 bit	C, W	1 bit, 1.002 Boolean
54	Output 3	Automatic position toggle	1 bit	C, W	1 bit, 1.002 Boolean
55	Output 3	Limitation of manual operation in automatic mode	1 bit	C, W	1 bit, 1.003 Enable
56	Output 3	Dwell time active	1 bit	C, R, T	1 bit, 1.002 Boolean
57	Output 3	Safety object C3	1 bit	C, W	1 bit, 1.005 alarm
58	Output 3	Disable object	1 bit	C, W	1 bit, 1.005 alarm
59	Output 3	Scenes	1 byte	C, W	Scenes check, 18.001 Scenes check
60	Output 3	Disable scenes	1 bit	C, W	1 bit, 1.003 Enable
61	Output 3	Upper limit position reached [2]	1 bit	C, R, T	1 bit, 1.002 Boolean
62	Output 3	Blind length status [2]	1 byte	C, R, T	8 bit unsigned, 5.001 percent (0..100%)
63	Output 3	Slat position status [1]	1 byte	C, R, T	8 bit unsigned, 5.001 percent (0..100%)
64	Output 4	Up/Down move command	1 bit	C, W	1 bit, 1.008 Up/Down
65	Output 4	Stop/Step move command	1 bit	C, W	1 bit, 1.007 step
66	Output 4	Move to blind length manually	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
67	Output 4	Move to slat position manually [1]	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
68	Output 4	Enable automatic objects	1 bit	C, W	1 bit, 1.003 Enable

No.	Name	Object function	Length	Flags	Data type
69	Output 4	Move to blind length automatically	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
70	Output 4	Move to slat position automatically [1]	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
71	Output 4	Move to automatic position 1	1 bit	C, W	1 bit, 1.002 Boolean
72	Output 4	Move to automatic position 2	1 bit	C, W	1 bit, 1.002 Boolean
73	Output 4	Save automatic position 1	1 bit	C, W	1 bit, 1.002 Boolean
74	Output 4	Save automatic position 2	1 bit	C, W	1 bit, 1.002 Boolean
75	Output 4	Automatic position toggle	1 bit	C, W	1 bit, 1.002 Boolean
76	Output 4	Limitation of manual operation in automatic mode	1 bit	C, W	1 bit, 1.003 Enable
77	Output 4	Dwell time active	1 bit	C, R, T	1 bit, 1.002 Boolean
78	Output 4	Safety object C4	1 bit	C, W	1 bit, 1.005 alarm
79	Output 4	Disable object	1 bit	C, W	1 bit, 1.005 alarm
80	Output 4	Scenes	1 byte	C, W	Scenes check, 18.001 Scenes check
81	Output 4	Disable scenes	1 bit	C, W	1 bit, 1.003 Enable
82	Output 4	Upper limit position reached [2]	1 bit	C, R, T	1 bit, 1.002 Boolean
83	Output 4	Blind length status [2]	1 byte	C, R, T	8 bit unsigned, 5.001 percent (0..100%)
84	Output 4	Slat position status [1]	1 byte	C, R, T	8 bit unsigned, 5.001 percent (0..100%)
85	Output 5	Up/Down move command	1 bit	C, W	1 bit, 1.008 Up/Down
86	Output 5	Stop/Step move command	1 bit	C, W	1 bit, 1.007 step
87	Output 5	Move to blind length manually	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
88	Output 5	Move to slat position manually [1]	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
89	Output 5	Enable automatic objects	1 bit	C, W	1 bit, 1.003 Enable
90	Output 5	Move to blind length automatically	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
91	Output 5	Move to slat position automatically [1]	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
92	Output 5	Move to automatic position 1	1 bit	C, W	1 bit, 1.002 Boolean
93	Output 5	Move to automatic position 2	1 bit	C, W	1 bit, 1.002 Boolean
94	Output 5	Save automatic position 1	1 bit	C, W	1 bit, 1.002 Boolean
95	Output 5	Save automatic position 2	1 bit	C, W	1 bit, 1.002 Boolean
96	Output 5	Automatic position toggle	1 bit	C, W	1 bit, 1.002 Boolean
97	Output 5	Limitation of manual operation in automatic mode	1 bit	C, W	1 bit, 1.003 Enable
98	Output 5	Dwell time active	1 bit	C, R, T	1 bit, 1.002 Boolean
99	Output 5	Safety object C5	1 bit	C, W	1 bit, 1.005 alarm
100	Output 5	Disable object	1 bit	C, W	1 bit, 1.005 alarm
101	Output 5	Scenes	1 byte	C, W	Scenes check, 18.001 Scenes check
102	Output 5	Disable scenes	1 bit	C, W	1 bit, 1.003 Enable
103	Output 5	Upper limit position reached [2]	1 bit	C, R, T	1 bit, 1.002 Boolean
104	Output 5	Blind length status [2]	1 byte	C, R, T	8 bit unsigned, 5.001 percent (0..100%)
105	Output 5	Slat position status [1]	1 byte	C, R, T	8 bit unsigned, 5.001 percent (0..100%)
106	Output 6	Up/Down move command	1 bit	C, W	1 bit, 1.008 Up/Down
107	Output 6	Stop/Step move command	1 bit	C, W	1 bit, 1.007 step

No.	Name	Object function	Length	Flags	Data type
108	Output 6	Move to blind length manually	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
109	Output 6	Move to slat position manually [1]	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
110	Output 6	Enable automatic objects	1 bit	C, W	1 bit, 1.003 Enable
111	Output 6	Move to blind length automatically	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
112	Output 6	Move to slat position automatically [1]	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
113	Output 6	Move to automatic position 1	1 bit	C, W	1 bit, 1.002 Boolean
114	Output 6	Move to automatic position 2	1 bit	C, W	1 bit, 1.002 Boolean
115	Output 6	Save automatic position 1	1 bit	C, W	1 bit, 1.002 Boolean
116	Output 6	Save automatic position 2	1 bit	C, W	1 bit, 1.002 Boolean
117	Output 6	Automatic position toggle	1 bit	C, W	1 bit, 1.002 Boolean
118	Output 6	Limitation of manual operation in automatic mode	1 bit	C, W	1 bit, 1.003 Enable
119	Output 6	Dwell time active	1 bit	C, R, T	1 bit, 1.002 Boolean
120	Output 6	Safety object C6	1 bit	C, W	1 bit, 1.005 alarm
121	Output 6	Disable object	1 bit	C, W	1 bit, 1.005 alarm
122	Output 6	Scenes	1 byte	C, W	Scenes check, 18.001 Scenes check
123	Output 6	Disable scenes	1 bit	C, W	1 bit, 1.003 Enable
124	Output 6	Upper limit position reached [2]	1 bit	C, R, T	1 bit, 1.002 Boolean
125	Output 6	Blind length status [2]	1 byte	C, R, T	8 bit unsigned, 5.001 percent (0..100%)
126	Output 6	Slat position status [1]	1 byte	C, R, T	8 bit unsigned, 5.001 percent (0..100%)
127	Output 7	Up/Down move command	1 bit	C, W	1 bit, 1.008 Up/Down
128	Output 7	Stop/Step move command	1 bit	C, W	1 bit, 1.007 step
129	Output 7	Move to blind length manually	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
130	Output 7	Move to slat position manually [1]	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
131	Output 7	Enable automatic objects	1 bit	C, W	1 bit, 1.003 Enable
132	Output 7	Move to blind length automatically	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
133	Output 7	Move to slat position automatically [1]	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
134	Output 7	Move to automatic position 1	1 bit	C, W	1 bit, 1.002 Boolean
135	Output 7	Move to automatic position 2	1 bit	C, W	1 bit, 1.002 Boolean
136	Output 7	Save automatic position 1	1 bit	C, W	1 bit, 1.002 Boolean
137	Output 7	Save automatic position 2	1 bit	C, W	1 bit, 1.002 Boolean
138	Output 7	Automatic position toggle	1 bit	C, W	1 bit, 1.002 Boolean
139	Output 7	Limitation of manual operation in automatic mode	1 bit	C, W	1 bit, 1.003 Enable
140	Output 7	Dwell time active	1 bit	C, R, T	1 bit, 1.002 Boolean
141	Output 7	Safety object C7	1 bit	C, W	1 bit, 1.005 alarm
142	Output 7	Disable object	1 bit	C, W	1 bit, 1.005 alarm
143	Output 7	Scenes	1 byte	C, W	Scenes check, 18.001 Scenes check
144	Output 7	Disable scenes	1 bit	C, W	1 bit, 1.003 Enable
145	Output 7	Upper limit position reached [2]	1 bit	C, R, T	1 bit, 1.002 Boolean

No.	Name	Object function	Length	Flags	Data type
146	Output 7	Blind length status [2]	1 byte	C, R, T	8 bit unsigned, 5.001 percent (0..100%)
147	Output 7	Slat position status [1]	1 byte	C, R, T	8 bit unsigned, 5.001 percent (0..100%)
148	Output 8	Up/Down move command	1 bit	C, W	1 bit, 1.008 Up/Down
149	Output 8	Stop/Step move command	1 bit	C, W	1 bit, 1.007 step
150	Output 8	Move to blind length manually	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
151	Output 8	Move to slat position manually [1]	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
152	Output 8	Enable automatic objects	1 bit	C, W	1 bit, 1.003 Enable
153	Output 8	Move to blind length automatically	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
154	Output 8	Move to slat position automatically [1]	1 byte	C, W	8 bit unsigned, 5.001 percent (0..100%)
155	Output 8	Move to automatic position 1	1 bit	C, W	1 bit, 1.002 Boolean
156	Output 8	Move to automatic position 2	1 bit	C, W	1 bit, 1.002 Boolean
157	Output 8	Save automatic position 1	1 bit	C, W	1 bit, 1.002 Boolean
158	Output 8	Save automatic position 2	1 bit	C, W	1 bit, 1.002 Boolean
159	Output 8	Automatic position toggle	1 bit	C, W	1 bit, 1.002 Boolean
160	Output 8	Limitation of manual operation in automatic mode	1 bit	C, W	1 bit, 1.003 Enable
161	Output 8	Dwell time active	1 bit	C, R, T	1 bit, 1.002 Boolean
162	Output 8	Safety object C8	1 bit	C, W	1 bit, 1.005 alarm
163	Output 8	Disable object	1 bit	C, W	1 bit, 1.005 alarm
164	Output 8	Scenes	1 byte	C, W	Scenes check, 18.001 Scenes check
165	Output 8	Disable scenes	1 bit	C, W	1 bit, 1.003 Enable
166	Output 8	Upper limit position reached [2]	1 bit	C, R, T	1 bit, 1.002 Boolean
167	Output 8	Blind length status [2]	1 byte	C, R, T	8 bit unsigned, 5.001 percent (0..100%)
168	Output 8	Slat position status [1]	1 byte	C, R, T	8 bit unsigned, 5.001 percent (0..100%)
169	Input 1	Sunblind push button operating mode: Up/Down move command Button/Switch/Edges operating mode: On/Off/Toggle 1.1 Sensor operating mode: Sensor 1.1 Scenes push button operating mode: Scene 1.1	1 bit 1 bit 1 byte 1 byte	C, T C, W, T C, T C, T	1 bit, 1.008 Up/Down 1 bit, 1.002 Boolean 8 bit unsigned, 5.010 counting impulses (0..255) Scenes check, 18.001 Scenes check
170	Input 1	Sunblind push button operating mode: Stop/Step move command Button/Switch/Edges operating mode: On/Off/Toggle 1.2 Sensor operating mode: Sensor 1.2 Scenes push button operating mode: Scene 1.2	1 bit 1 bit 1 byte 1 byte	C, T C, W, T C, T C, T	1 bit, 1.007 step 1 bit, 1.002 Boolean 8 bit unsigned, 5.010 counting impulses (0..255) Scenes check, 18.001 Scenes check
171	Input 1	Sunblind push button operating mode: Enable Button/Switch/Edges operating mode: – Sensor operating mode: – Scenes push button operating mode: –	1 bit	C, W	1 bit, 1.003 Enable
174	Input 2	Sunblind push button operating mode: Up/Down move command Operating mode Button/Switch/Edges: On/Off/Toggle 2.1 Operating mode Sensor: Sensor 2.1 Operating mode Scenes push button: Scene 2.1	1 bit 1 bit 1 byte 1 byte	C, T C, W, T C, T C, T	1 bit, 1.008 Up/Down 1 bit, 1.002 Boolean 8 bit unsigned, 5.010 counting impulses (0..255) Scenes check, 18.001 Scenes check

No.	Name	Object function	Length	Flags	Data type
175	Input 2	Sunblind push button operating mode: Stop/Step move command Operating mode Button/Switch/Edges: On/Off/Toggle 2.2 Operating mode Sensor: Sensor 2.2 Operating mode Scenes push button: Scene 2.2	1 bit 1 bit 1 byte 1 byte	C, T C, W, T C, T C, T	1 bit, 1.007 step 1 bit, 1.002 Boolean 8 bit unsigned, 5.010 counting impulses (0..255) Scenes check, 18.001 Scenes check
176	Input 2	Sunblind push button operating mode: Enable Button/Switch/Edges operating mode: – Sensor operating mode: – Scenes push button operating mode: –	1 bit	C, W	1 bit, 1.003 Enable
179	Input 3	Sunblind push button operating mode: Up/Down move command Operating mode Button/Switch/Edges: On/Off/Toggle 3.1 Operating mode Sensor: Sensor 3.1 Operating mode Scenes push button: Scene 3.1	1 bit 1 bit 1 byte 1 byte	C, T C, W, T C, T C, T	1 bit, 1.008 Up/Down 1 bit, 1.002 Boolean 8 bit unsigned, 5.010 counting impulses (0..255) Scenes check, 18.001 Scenes check
180	Input 3	Sunblind push button operating mode: Stop/Step move command Operating mode Button/Switch/Edges: On/Off/Toggle 3.2 Operating mode Sensor: Sensor 3.2 Operating mode Scenes push button: Scene 3.2	1 bit 1 bit 1 byte 1 byte	C, T C, W, T C, T C, T	1 bit, 1.007 step 1 bit, 1.002 Boolean 8 bit unsigned, 5.010 counting impulses (0..255) Scenes check, 18.001 Scenes check
181	Input 3	Sunblind push button operating mode: Enable Button/Switch/Edges operating mode: – Sensor operating mode: – Scenes push button operating mode: –	1 bit	C, W	1 bit, 1.003 Enable
184	Input 4	Sunblind push button operating mode: Up/Down move command Operating mode Button/Switch/Edges: On/Off/Toggle 4.1 Operating mode Sensor: Sensor 4.1 Operating mode Scenes push button: Scene 4.1	1 bit 1 bit 1 byte 1 byte	C, T C, W, T C, T C, T	1 bit, 1.008 Up/Down 1 bit, 1.002 Boolean 8 bit unsigned, 5.010 counting impulses (0..255) Scenes check, 18.001 Scenes check
185	Input 4	Sunblind push button operating mode: Stop/Step move command Operating mode Button/Switch/Edges: On/Off/Toggle 4.2 Operating mode Sensor: Sensor 4.2 Operating mode Scenes push button: Scene 4.2	1 bit 1 bit 1 byte 1 byte	C, T C, W, T C, T C, T	1 bit, 1.007 step 1 bit, 1.002 Boolean 8 bit unsigned, 5.010 counting impulses (0..255) Scenes check, 18.001 Scenes check
186	Input 4	Sunblind push button operating mode: Enable Button/Switch/Edges operating mode: – Sensor operating mode: – Scenes push button operating mode: –	1 bit	C, W	1 bit, 1.003 Enable
189	Input 5	Sunblind push button operating mode: Up/Down move command Operating mode Button/Switch/Edges: On/Off/Toggle 5.1 Operating mode Sensor: Sensor 5.1 Operating mode Scenes push button: Scene 5.1	1 bit 1 bit 1 byte 1 byte	C, T C, W, T C, T C, T	1 bit, 1.008 Up/Down 1 bit, 1.002 Boolean 8 bit unsigned, 5.010 counting impulses (0..255) Scenes check, 18.001 Scenes check
190	Input 5	Sunblind push button operating mode: Stop/Step move command Operating mode Button/Switch/Edges: On/Off/Toggle 5.2 Operating mode Sensor: Sensor 5.2 Operating mode Scenes push button: Scene 5.2	1 bit 1 bit 1 byte 1 byte	C, T C, W, T C, T C, T	1 bit, 1.007 step 1 bit, 1.002 Boolean 8 bit unsigned, 5.010 counting impulses (0..255) Scenes check, 18.001 Scenes check
191	Input 5	Sunblind push button operating mode: Enable Button/Switch/Edges operating mode: – Sensor operating mode: – Scenes push button operating mode: –	1 bit	C, W	1 bit, 1.003 Enable

No.	Name	Object function	Length	Flags	Data type
194	Input 6	Sunblind push button operating mode: Up/Down move command Operating mode Button/Switch/Edges: On/Off/Toggle 6.1 Operating mode Sensor: Sensor 6.1 Operating mode Scenes push button: Scene 6.1	1 bit 1 bit 1 byte 1 byte	C, T C, W, T C, T C, T	1 bit, 1.008 Up/Down 1 bit, 1.002 Boolean 8 bit unsigned, 5.010 counting impulses (0..255) Scenes check, 18.001 Scenes check
195	Input 6	Sunblind push button operating mode: Stop/Step move command Operating mode Button/Switch/Edges: On/Off/Toggle 6.2 Operating mode Sensor: Sensor 6.2 Operating mode Scenes push button: Scene 6.2	1 bit 1 bit 1 byte 1 byte	C, T C, W, T C, T C, T	1 bit, 1.007 step 1 bit, 1.002 Boolean 8 bit unsigned, 5.010 counting impulses (0..255) Scenes check, 18.001 Scenes check
196	Input 6	Sunblind push button operating mode: Enable Button/Switch/Edges operating mode: – Sensor operating mode: – Scenes push button operating mode: –	1 bit	C, W	1 bit, 1.003 Enable
199	Input 7	Sunblind push button operating mode: Up/Down move command Operating mode Button/Switch/Edges: On/Off/Toggle 7.1 Operating mode Sensor: Sensor 7.1 Operating mode Scenes push button: Scene 7.1	1 bit 1 bit 1 byte 1 byte	C, T C, W, T C, T C, T	1 bit, 1.008 Up/Down 1 bit, 1.002 Boolean 8 bit unsigned, 5.010 counting impulses (0..255) Scenes check, 18.001 Scenes check
200	Input 7	Sunblind push button operating mode: Stop/Step move command Operating mode Button/Switch/Edges: On/Off/Toggle 7.2 Operating mode Sensor: Sensor 7.2 Operating mode Scenes push button: Scene 7.2	1 bit 1 bit 1 byte 1 byte	C, T C, W, T C, T C, T	1 bit, 1.007 step 1 bit, 1.002 Boolean 8 bit unsigned, 5.010 counting impulses (0..255) Scenes check, 18.001 Scenes check
201	Input 7	Sunblind push button operating mode: Enable Button/Switch/Edges operating mode: – Sensor operating mode: – Scenes push button operating mode: –	1 bit	C, W	1 bit, 1.003 Enable
204	Input 8	Sunblind push button operating mode: Up/Down move command Operating mode Button/Switch/Edges: On/Off/Toggle 8.1 Operating mode Sensor: Sensor 8.1 Operating mode Scenes push button: Scene 8.1	1 bit 1 bit 1 byte 1 byte	C, T C, W, T C, T C, T	1 bit, 1.008 Up/Down 1 bit, 1.002 Boolean 8 bit unsigned, 5.010 counting impulses (0..255) Scenes check, 18.001 Scenes check
205	Input 8	Sunblind push button operating mode: Stop/Step move command Operating mode Button/Switch/Edges: On/Off/Toggle 8.2 Operating mode Sensor: Sensor 8.2 Operating mode Scenes push button: Scene 8.2	1 bit 1 bit 1 byte 1 byte	C, T C, W, T C, T C, T	1 bit, 1.007 step 1 bit, 1.002 Boolean 8 bit unsigned, 5.010 counting impulses (0..255) Scenes check, 18.001 Scenes check
206	Input 8	Sunblind push button operating mode: Enable Button/Switch/Edges operating mode: – Sensor operating mode: – Scenes push button operating mode: –	1 bit	C, W	1 bit, 1.003 Enable
209	All outputs	Safety object A	1 bit	C, W	1 bit, 1.005 alarm
210	All outputs	Safety object B	1 bit	C, W	1 bit, 1.005 alarm
219	All outputs	Safety object D	1 bit	C, W	1 bit, 1.005 alarm

[1] only in operating mode *Venetian blind/external venetian blind*
[2] not in operating mode *Window awning with ZIP guidance*

8.2 Group objects in detail

Below you will find a function description of the group objects used, as well as the possible values. In the column “Must be enabled” you will find the prerequisites for the respective group object to be activated and displayed in the ETS.

8.2.1 Group objects for the actuator outputs

[1] only in operating mode *Venetian blind/external venetian blind*
[2] not in operating mode *Window awning with ZIP guidance*

Name	Object function	Values	Must be enabled in the parameter dialogue
Up/Down move command	If a telegram with the value 0 is received on this GO, the sun shading product is raised. If a telegram with the value 1 is received, the sun shading product is lowered.	0 = UP 1 = DOWN	Outputs \ Outputs general \ Operating mode Output channel n = e.g. Output for venetian blind/ external venetian blind
Stop/Step move command	If a telegram is received on this GO, a moving sun shading product is stopped. In the *Venetian blind/external venetian blind* operating mode, a step command is executed for a stationary sun shading product.	0 = STOP/Open slat tilt 1 = STOP/Close slat tilt	
Move to blind length manually	If a telegram is received on this GO, the sun shading product moves to the height that corresponds to the received value. Once the target position is reached, the slats assume the same position they had before the movement.	0% (top) ...100% (bottom)	
Move to slat position manually [1]	If a telegram is received on this GO, the slats are positioned in accordance with the received value.	0% (slat OPEN) ...100% (slat CLOSED)	Outputs \ Outputs general \ Operating mode Output channel n = Output for venetian blind/ external venetian blind
Enable automatic objects	Disable the ***GO Move to automatic positions 1+2***, ***Move to blind length*** and ***Move to slat position***.	0 = Switch off	Outputs \ Outputs general \ Operating mode Output channel n = e.g. Output for venetian blind/ external venetian blind AND Outputs \ Output n \ Automatic input \ Use automatic object = Yes
	Enable the ***GO Move to automatic positions 1+2***, ***Move to blind length*** and ***Move to slat position***. Any ongoing dwell time is ended.	1 = Enable	
Move to blind length automatically	If a telegram is received on this GO, the sun shading product moves to the height that corresponds to the received value. Once the target position is reached, the slats assume the same position they had before the movement.	0% (top) ...100% (bottom)	
Move to slat position automatically [1]	If a telegram is received on this GO, the slats are positioned in accordance with the received value.	0% (slat OPEN) ...100% (slat CLOSED)	Outputs \ Outputs general \ Operating mode Output channel n = Output for venetian blind/ external venetian blind AND Outputs \ Output n \ Automatic input \ Use automatic object = Yes
Move to automatic position 1	If 1-telegrams are transmitted to the ***GO Move to automatic position 1***, the connected sun shading product is moved to the blind length and the slat position of automatic position 1.	0 = Blind moves to position 0% 1 = Move to position	Outputs \ Outputs general \ Operating mode Output channel n = Output for venetian blind/ external venetian blind AND Outputs \ Output n \ Automatic input \ Use automatic object = Yes AND Outputs \ Output n \ Automatic input \ Use automatic positions 1 and 2 = Yes
Move to automatic position 2	If 1-telegrams are transmitted to the ***GO Move to automatic position 2***, the connected sun shading product is moved to the blind length and the slat position of automatic position 2.	0 = Blind moves to position 0% 1 = Move to position	

Name	Object function	Values	Must be enabled in the parameter dialogue
Save automatic position 1	After a 1-telegram is transmitted to the ***GO Save automatic position 1***, the current blind length and slat position are stored in the Position 1 memory of the corresponding channel.	1 = Save position	Outputs \ Outputs general \ Operating mode Output channel n = Output for venetian blind/ external venetian blind AND Outputs \ Output n \ Automatic input \ Use automatic object = Yes AND Outputs \ Output n \ Automatic input \ Use automatic positions 1 and 2 = Yes AND Outputs \ Output n \ Automatic positions \ Save positions 1 and 2 via telegram = Yes
Save automatic position 2	After a 1-telegram is transmitted to the ***GO Save automatic position 2***, the current blind length and slat position are stored in the Position 2 memory of the corresponding channel.	1 = Save position	
Automatic position toggle	After a 0-telegram to the ***GO Automatic position toggle***, the product moves to the saved automatic position 1. After a 1-telegram to the ***GO Automatic position toggle***, the product moves to the position that would result from the automatic *Move to blind length* and automatic *Move to slat position* received last. If a *Position toggle delay time* is parameterised, the actions named above are delayed by this delay time. If the same telegram arrives while the delay time is running, it is ignored. The delay time is cancelled in the event of: - opposite telegram to this ***GO*** - a telegram to ***GO Move to automatic position 1 or 2*** - manual commands via GOs, buttons or the smartphone app	0 = Blind moves to saved position 1 1 = move to the position that results from the automatic *Move to blind length* and automatic *Move to slat position* received last	Outputs \ Outputs general \ Operating mode Output channel n = Output for venetian blind/ external venetian blind AND Outputs \ Output n \ Automatic input \ Use automatic object = Yes AND Outputs \ Output n \ Automatic input \ Use automatic positions 1 and 2 = Yes
Limitation of manual operation in automatic mode	The range of movement of the sun shading product can be limited, or manual operation can be completely disabled. When the limitation is enabled, any ongoing dwell time is ended.	0 = disabled 1 = enabled	Outputs \ Outputs general \ Operating mode Output channel n = Output for venetian blind/ external venetian blind AND Outputs \ Output n \ Automatic input \ Use automatic object = Yes
Dwell time active	The GO shows when the dwell time for manual operation of the output is still active. The send value can be parameterised.	Is specified by Outputs \ Output n \ Automatic input \ Object “Dwell time active”	Outputs \ Outputs general \ Operating mode Output channel n = e.g. Output for venetian blind/ external venetian blind
Safety object Cn	Activated safety position Cn	0 = No alarm 1 = Alarm	
Disable object	Stops and disables all movements of the channel	0 = Enabled 1 = Disable	
Scenes	Execute or save scenes	0 = Activate scene 1 = Learn scene 1...64 = Scene number	
Disable scenes	Disables all scene call-ups of the channel. Disabled scene commands are not executed.	0 = Enabled 1 = Disable	
Upper limit position reached [2]	Reports when sun shading product is in the upper limit position.	Is specified by Outputs \ Outputs general \ Object “upper limit position reached”	Outputs \ Outputs general \ Operating mode Output channel n = e.g. Output for venetian blind/ external venetian blind

Name	Object function	Values	Must be enabled in the parameter dialogue
Blind length status [2]	Sends the current height of the sun shading product. Send behaviour is parameterised by: Outputs general \ Update of the status objects	0% (top) ...100% (bottom)	Outputs \ Outputs general \ Operating mode Output channel n = e.g. Output for venetian blind/ external venetian blind
Slat position status [1]	Sends the current slat position of the sun shading product. Send behaviour is parameterised by: Outputs general \ Update of the status objects	0% (slat OPEN) ...100% (slat CLOSED)	Outputs \ Outputs general \ Operating mode Output channel n = Output for venetian blind/ external venetian blind

[1] only in operating mode *Venetian blind/external venetian blind*
[2] not in operating mode *Window awning with ZIP guidance*

8.2.2 Group objects for the actuator inputs

8.2.2.1 Group objects for sunblind push button input

Name	Object function	Values	Must be enabled in the parameter dialogue
Up/Down move command	Sends Up/Down telegram	0 = Up 1 = Down	Inputs \ Inputs general \ Operating mode Input n.1/n.2 = Sunblind push button
Stop/step move command	Sends Reduce / Increase telegram	0 = Reduce 1 = Increase	Inputs \ Inputs general \ Operating mode Input n.1/n.2 = Sunblind push button
Enable	Enables sunblind push button. An Up/Down or Stop/Step telegram is always sent after resetting If False has been received via the bus on ***GO Enable***, telegrams are no longer sent on the ***GOs Up/Down move command*** and ***Stop/Step move command*** until a TRUE value is received again on ***GO Enable***	0 = Disable 1 = Enable	Inputs \ Inputs general \ Operating mode Input n.1/n.2 = Sunblind push button

8.2.2.2 Group objects for Button/Switch/Edges input

Name	Object function	Values	Must be enabled in the parameter dialogue
On/Off/Toggle n.1/n.2	***GO Button/Switch/Edges*** sends 1-telegram(s) once or repeatedly.	On	Inputs \ Inputs general \ Operating mode input n.1/n.2 = Button / Switch / Edge
	GO Button/Switch/Edges sends 0-telegram(s) once or repeatedly.	Off	
	GO Button/Switch/Edges sends toggle telegram(s) once or repeatedly.	Toggle	

8.2.2.3 Group objects for sensor input

Name	Object function	Values	Must be enabled in the parameter dialogue
Sensor n.1/n.2	Sends parameterised values	0...**128**...255	Inputs \ Inputs general \ Operating mode Input n.1/n.2 = Sensor

8.2.2.4 Group objects for Scenes push button input

Name	Object function	Values	Must be enabled in the parameter dialogue
Scene n.1/n.2	Sends parameterised values	0 = Activate scene 1 = Learn scene 1...64 = Scene number	Inputs \ Inputs general \ Operating mode Input n.1/n.2 = Scenes push button

8.2.3 Group objects for the safety objects

Name	Object function	Values	Must be enabled in the parameter dialogue
Safety object A / B / D	Receives external alarm	0 = No alarm 1 = Alarm	Always enabled

For safety objects Cn see *chapter 8.2.1 Group objects for the actuator outputs on page 71*

9 Planning examples

9.1 Operating venetian blinds with push buttons

Each of the actuators, KNX SA 8M230.16 AP and KNX SA 4M230 REG, have one venetian blind connected to them. A sunblind push button is connected to the KNX SA 8M230.16 AP. This button is used to move both venetian blinds to any blind length and any slat position.

A long press of the button (>1 s) should start movement of the product to the limit position, while a short press of the button should cause the slats to tilt.

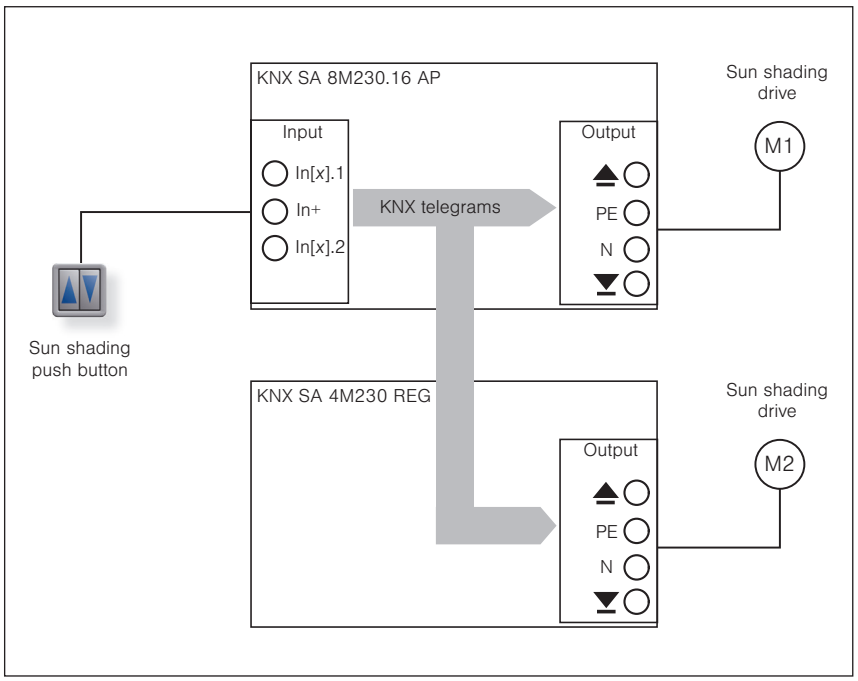


Fig. 36 “Operating venetian blinds” planning example

9.1.1 Settings

- Use the factory settings for both KNX SA.
- Parameterise `run time Up/Down`, `slat tilting time`, `minimum pause after stop`, any `correction times` and similar as specified by the venetian blind manufacturer.

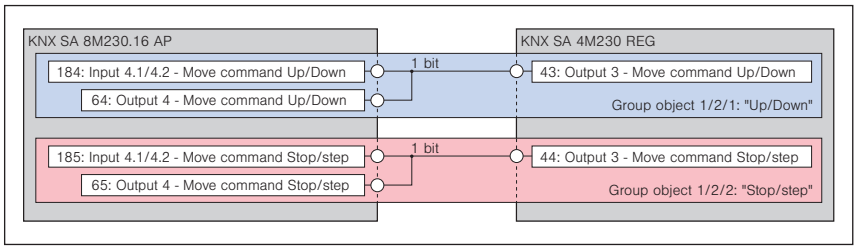


Fig. 37 Links in the “Operating venetian blinds” planning example

9.2 Connection to an automation

Connection of a KNX SA sun shading actuator to an automation (here BAline KNXMCM) including a visualisation and a tactile sensor. Overview of the connections via group objects.

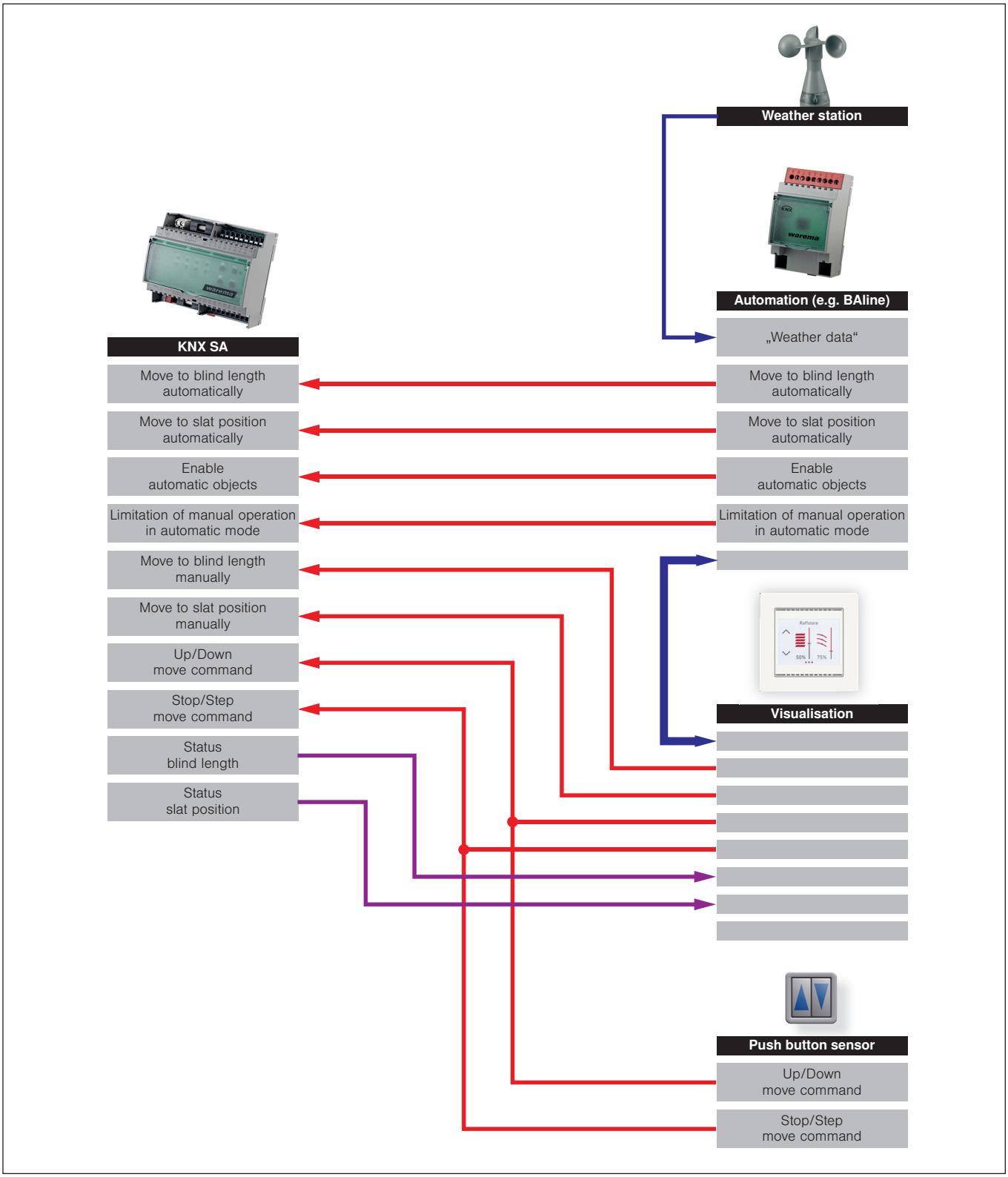


Fig. 38 “Connection to an automation” planning example

10 Control functions

The following diagrams show the behaviour of the actuators depending on the different conditions of the automatic group objects.

Example After a manual move command **M**, a set dwell time begins. If the dwell time has elapsed, the last automatic move command **A** is executed.

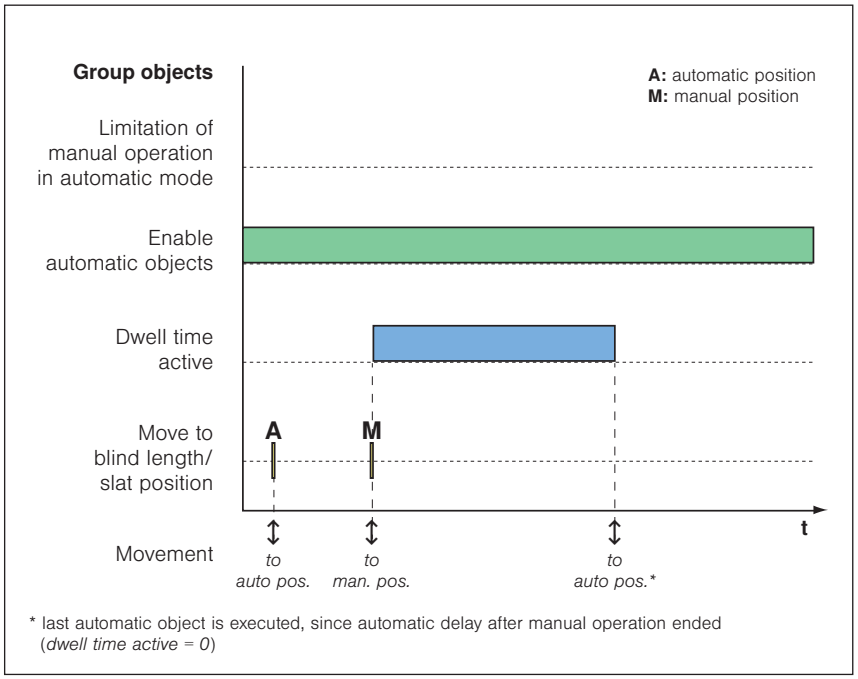


Fig. 39 Automatic objects enabled

Example If the ***GO Enable automatic objects*** is set to 0, all automatic commands ($\mathbf{A_2}$) from this point on are ignored. The last automatic move command $\mathbf{A_1}$ is also not executed once the dwell time has elapsed.

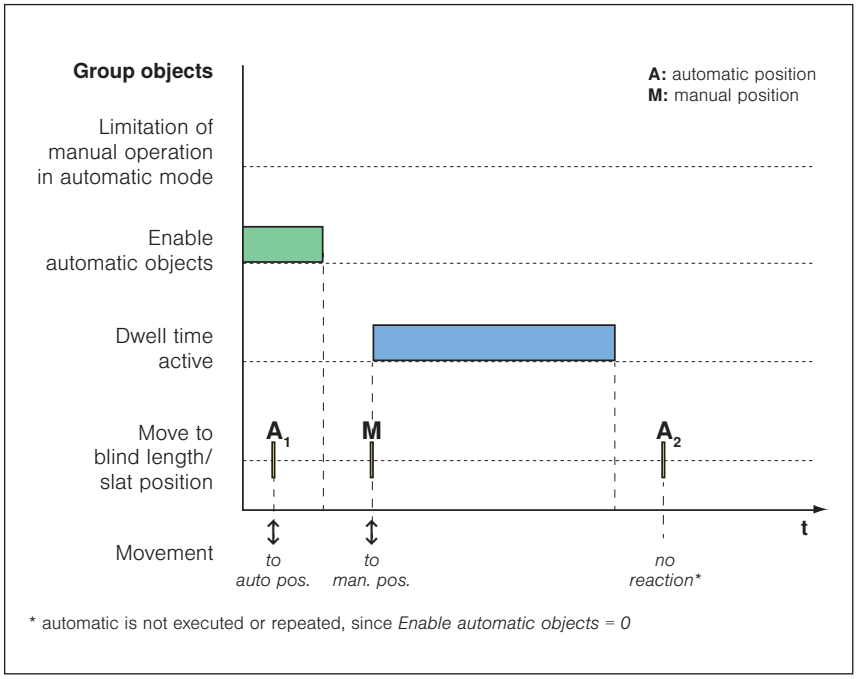


Fig. 40 Automatic objects disabled

Example If the GO ***Enable automatic objects*** is set to 0 and then set back to 1, any still ongoing dwell time is ended. The last automatic move command **A** is executed.

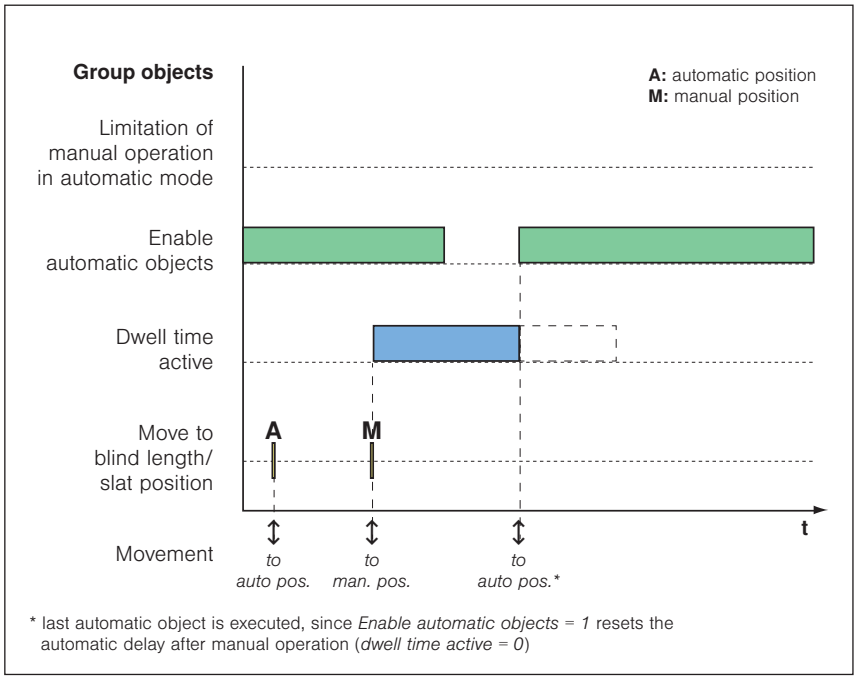


Fig. 41 Enable automatic objects when dwell time is ongoing

Example If a repeated 1 is received on the (still active) GO ***Enable automatic objects***, any still ongoing dwell time is ended. The last automatic move command ($\mathbf{A_2}$ in the example) is executed.

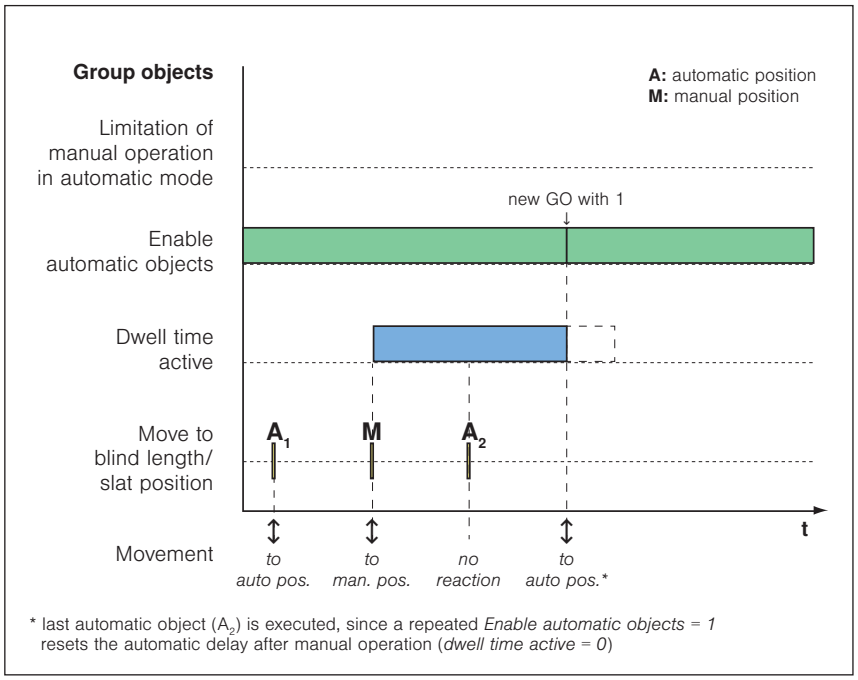


Fig. 42 Enable automatic objects with repeated GO

Example If the ***GO Limitation of manual operation in automatic mode*** is active, manual movements are only possible in the parameterised area (M_1 in the example).
A 0 on the ***GO Enable automatic objects*** will disable the automatic object ***Limitation of manual operation in automatic mode***. From this point on, manual move commands are once again executed without any limitation (M_2 in the example).

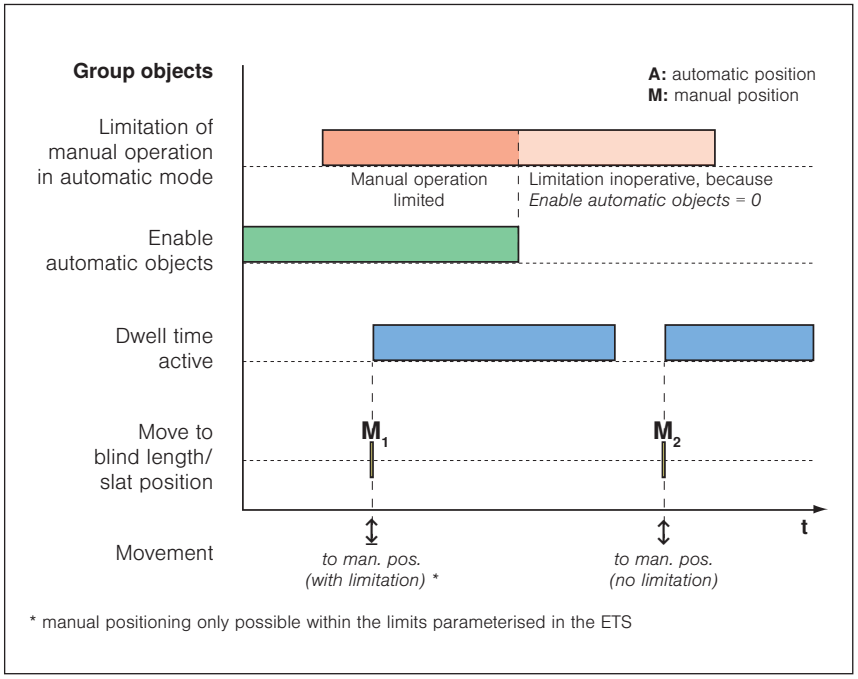


Fig. 43 Limitation of manual operation

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