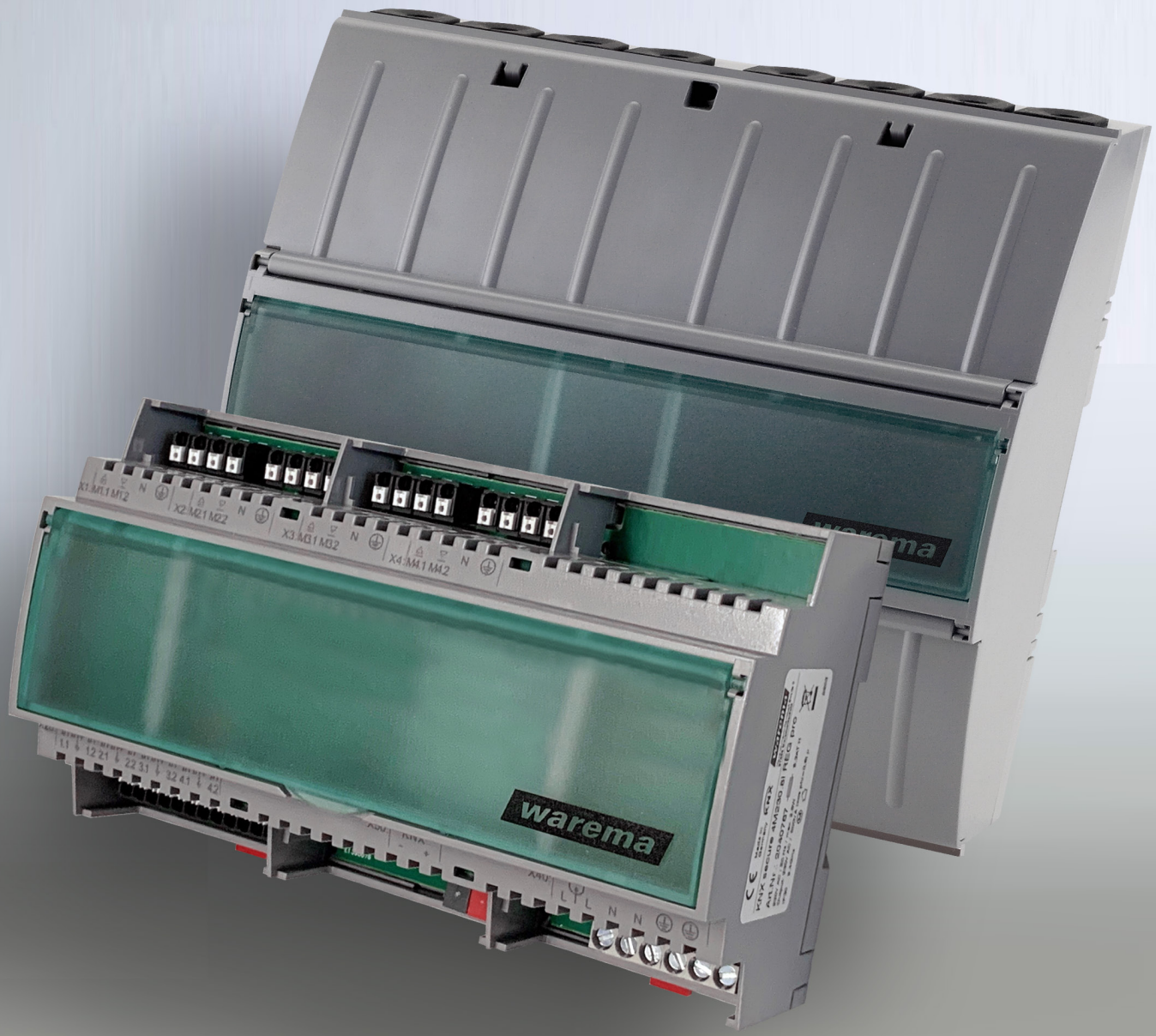
Sun shading actuators KNX secure

Software manual

Der SonnenLichtManager



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General information

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1 Overview

This manual describes the functions of all KNX secure 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 secure 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 secure sun shading actuators

The KNX secure sun shading actuators are used for directly positioning mutually independent drives for venetian blinds, 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

1.2 Device models

WAREMA supplies KNX secure sun shading actuators in a surface-mounted housing (AP) and a device model with a DIN rail-mounted device (REG).

All of the devices have the following features:

- Support KNX Data Secure
- Can be updated via the KNX bus and via USB
- Emergency/manual operation and actuation of the KNX programming button via Bluetooth and smartphone app (can be deactivated)
- Test and diagnostic options via smartphone app
- Freely parameterisable binary inputs available (e.g. switching, dimming, venetian blind, scenario push button, free state/edge evaluation)
- Logic and timer functions

Devices with the addition "pro" include additional features:

- Current measurement to detect faults
- Run time detection

Actuator	Voltage	Channels	Push button inputs	Housing	Housing width	Art. no.
KNX secure 2M230.8I AP pro	230 V AC	2	8	Surface-mounted housing	9 MW	2040737
KNX secure 2M230.8I AP	230 V AC	2	8	Surface-mounted housing	9 MW	2040738
KNX secure 4M230.8I AP pro	230 V AC	4	8	Surface-mounted housing	9 MW	2040739
KNX secure 4M230.8I AP	230 V AC	4	8	Surface-mounted housing	9 MW	2040760
KNX secure 6M230.16I AP pro	230 V AC	6	16	Surface-mounted housing	12 MW	2040761
KNX secure 6M230.16I AP	230 V AC	6	16	Surface-mounted housing	12 MW	2040762
KNX secure 8M230.16I AP pro	230 V AC	8	16	Surface-mounted housing	12 MW	2040763
KNX secure 8M230.16I AP	230 V AC	8	16	Surface-mounted housing	12 MW	2040764
KNX secure 4M230.8I REG pro	230 V AC	4	8	DIN rail-mounted device	9 MW	2040767
KNX secure 4M230.8I REG	230 V AC	4	8	DIN rail-mounted device	9 MW	2040768

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

1.3 Additional documentation

Further information about the installation and commissioning of the KNX secure 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 secure 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 warnings 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. Depending on the respective danger potential, they have the following hierarchic structure:

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 caution**.
Failure to comply may result in **property damage**.

The following pictograms or symbols may have been affixed to the control itself or to the connected devices alerting you to specific potential dangers:

WARNING
Warns of dangerous electrical voltage.

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

Example The term **Example** denotes an **example**.

- The **square** denotes 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 secure sun shading actuators are used for directly positioning mutually independent drives for venetian blinds, 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 specified otherwise.

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 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 in the event of a power failure. Therefore, move your sun shading system to a safe position ahead of time if a storm is imminent. 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 in the following. 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 secure 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.

The key to access the device is reset to the factory default setup key (FDSK).

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 start flashing and release the button after approx. 3 seconds
5. Wait for the programming LED to go out
6. Switch off the operating voltage
7. The master reset is finished

   After a master reset, the actuator must be recommissioned.

4 Commissioning

The KNX secure actuators are commissioned using the Engineering Tool Software ETS (min. ETS 5).

Before initial operation of the KNX secure 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 to prevent damage when commissioning.

4.2 Commissioning (using ETS in standard mode)

Commissioning is performed as follows:

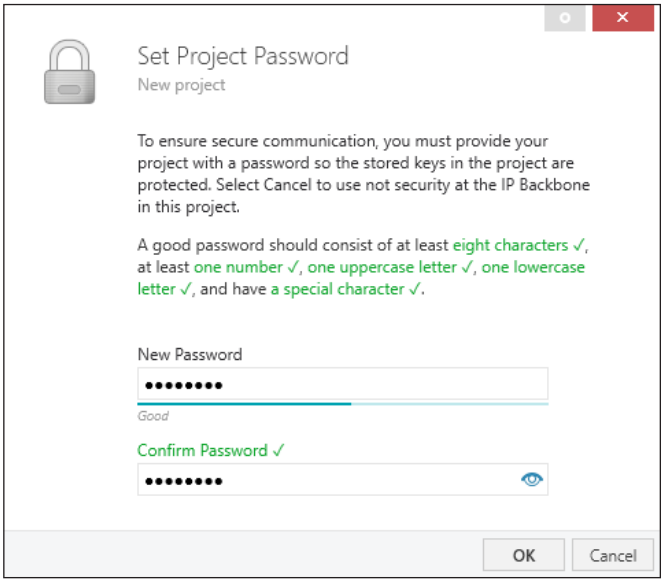
1. Switch on the operating voltage
2. Switch on the bus voltage
3. Press programming button on the device (programming LED lights up)
4. Load the physical address and application into the device from the ETS
5. Wait for the programming LED to go out
6. Check function of the device

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.

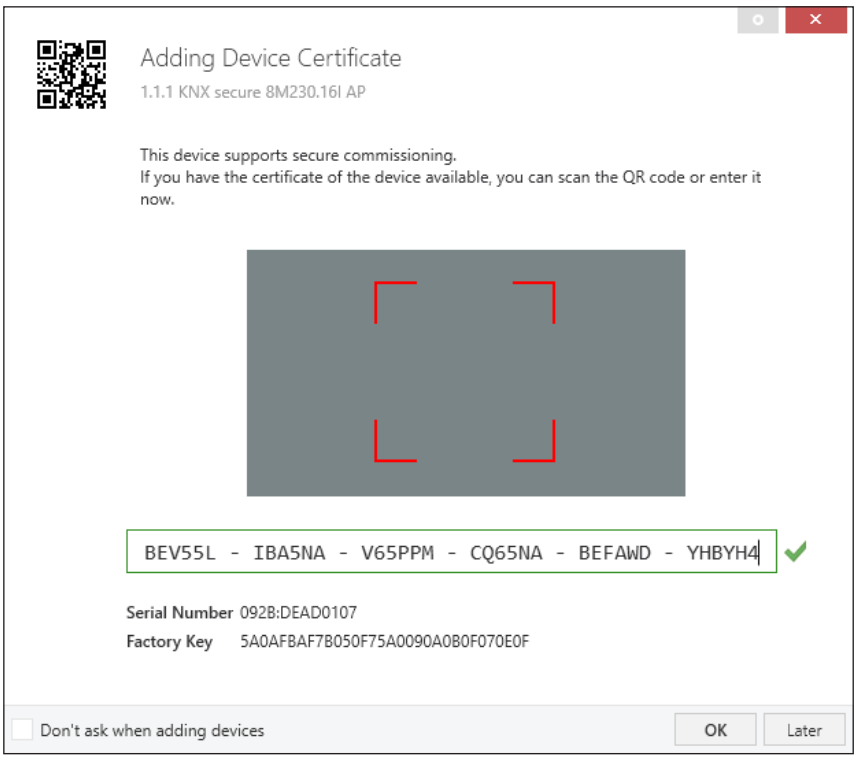
4.3 Secure commissioning (using ETS in secure mode)

Commissioning is performed as described in section *4.2.* The following additional steps are required when planning in the Engineering Tool Software:

1. Add KNX secure sun shading actuator
2. Set project password (This window is only displayed when the first secure device is added to the project.)



3. Add device certificate (Scan QR code on KNX secure sun shading actuator or enter the code via the keyboard. If entered correctly, the serial number and FDSK of the actuator are displayed in the same window.)



4.4 Manual operation via smartphone app

The KNX secure sun shading actuators are equipped with a Bluetooth module. This allows for the emergency 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 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.
- Operation via the app has the same priority as manual operation via group objects. A currently active safety function can prevent operation.

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

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 the delivery condition is overwritten with the preset password in the ETS (*see Fig. 1*). 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 again at a later date.

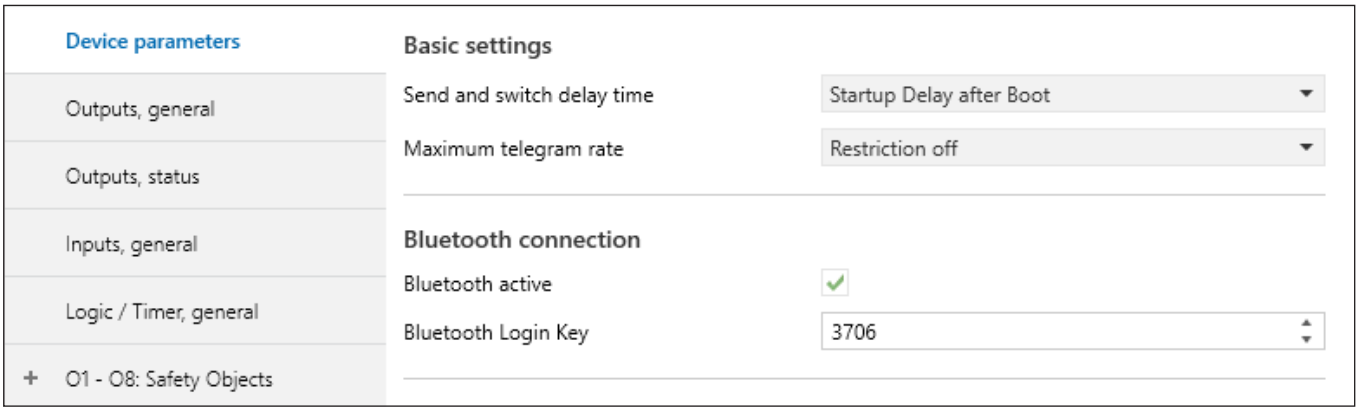


Fig. 1 Parameter dialogue: Device parameters

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

4.4.1 Loading and starting the app

- Download the WAREMA app for operating the KNX secure 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 6 or higher GPS must be activated	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.

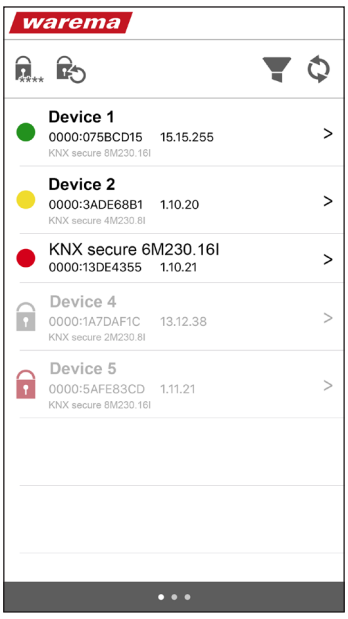
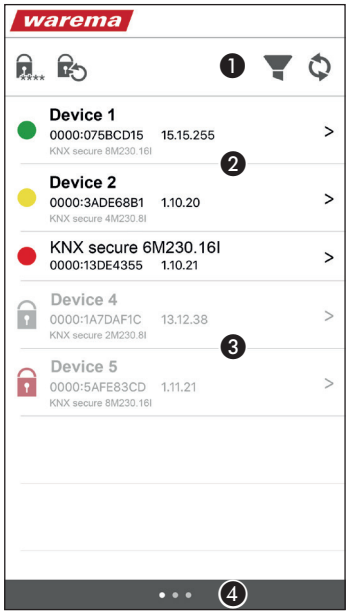
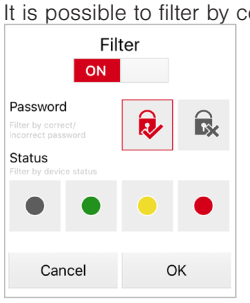


Fig. 2 Bluetooth app

4.4.2 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 for which the 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 for which the password does not match the password that has just been set in the app, are shown in grey. A lock in the status colour of the device 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.

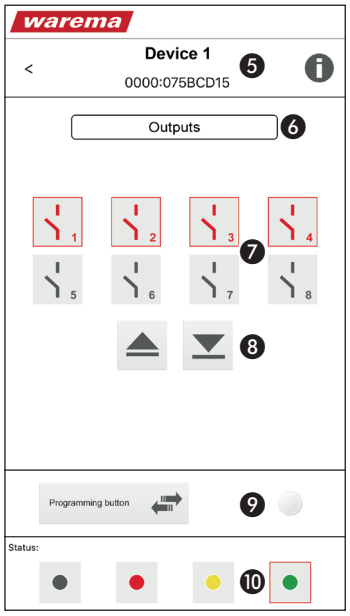
The KNX secure sun shading actuator can only ever establish one Bluetooth connection. As soon as you select an actuator in the device list (operating window opens), it stays connected to the smartphone until you select another actuator. If you scan again or completely exit the app, any existing connection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

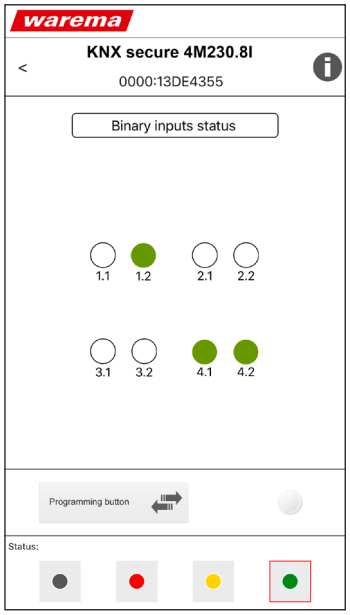
As long as a sun shading actuator is still connected to a smartphone, it is not found in scans by other smartphones operating at the same time.

4.4.3 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.

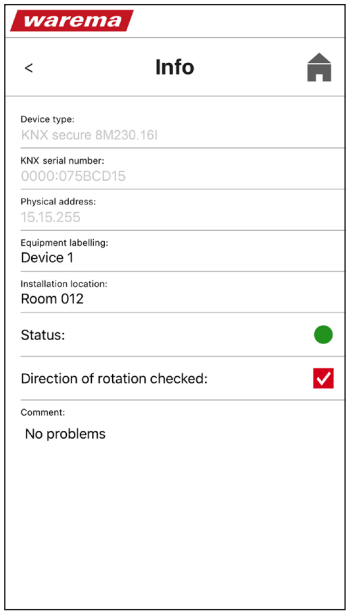
WARNING
Never randomly press the buttons on the app without having a line of sight to the sun shading system.





5 Header	Equipment labelling (or device type) and KNX serial number are displayed in the header. Call up actuator info window
6 Toggle view	For actuators with inputs, it is possible to switch between the following: Outputs Operate Binary inputs status Display state of inputs (only display, see figure below) The button to toggle 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 following a keystroke. The actuator then switches the associated outputs on or off. The operating behaviour is as follows: Short keystroke = Step / Stop, Long keystroke = Move.
9 Programming button and LED	The programming button and 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 if there are lots of devices.

4.4.4 Actuator info window



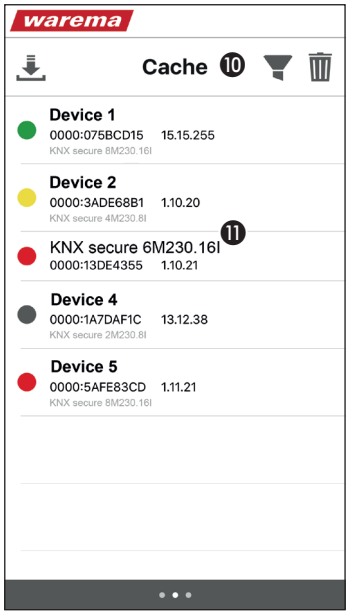
The device information is displayed in the actuator info window.

The device type, KNX serial number and physical address cannot 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 (information about actuator, special features, notes for colleagues, etc.)

Back

4.4.5 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. 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 "Enable" select the app "KNX secure", 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 secure actuators are commissioned using the Engineering Tool Software ETS (**min. 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.

Further information on safe commissioning is provided in section *4.3 Secure commissioning (using ETS in secure mode) on page 12*.

5.1 Setting the parameters

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. **Outputs, general**
   Select the operating mode of output channels 1 – n
   (the same for all or separately) and activate the required outputs
2. **On: Output**
   Set the parameters of the output channels
3. **A1 - On: Safety objects**
   Activate or deactivate the safety objects and set the parameters
4. **Inputs, general** (if necessary)
   Select the operating mode of input channels 1 – n
   (in pairs or individually)
5. **In.n: Input** (if necessary)
   Set the parameters of the input channels
6. **Logic/timer, general** (if necessary)
   Activate functions 1 – 16
7. **Ln: Logic** or **Tn: Timer** (if necessary)
   Set parameters for the functions

Details on all of the parameters are provided in *Chapter 7 Parameter dialogue on page 23*.

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 Programming 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.

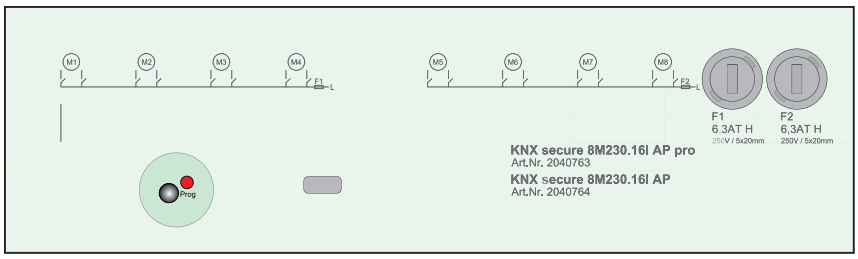


Fig. 3 Programming button on the front of the device

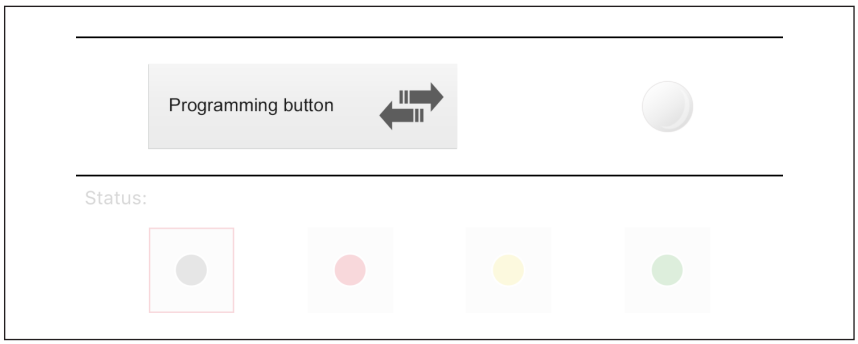


Fig. 4 Programming button in the smartphone app

The procedure here is basically the same:

- Start the programming process 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 terminated automatically and the red LED goes out.

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

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

The device is delivered with the physical address 15.15.255.

5.3.2 Programming 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 floor plan of the building.

Thanks to the free ETS app **SIEMENS Address by ID** provided by Siemens it is then possible to commission the devices without having to press the programming button.

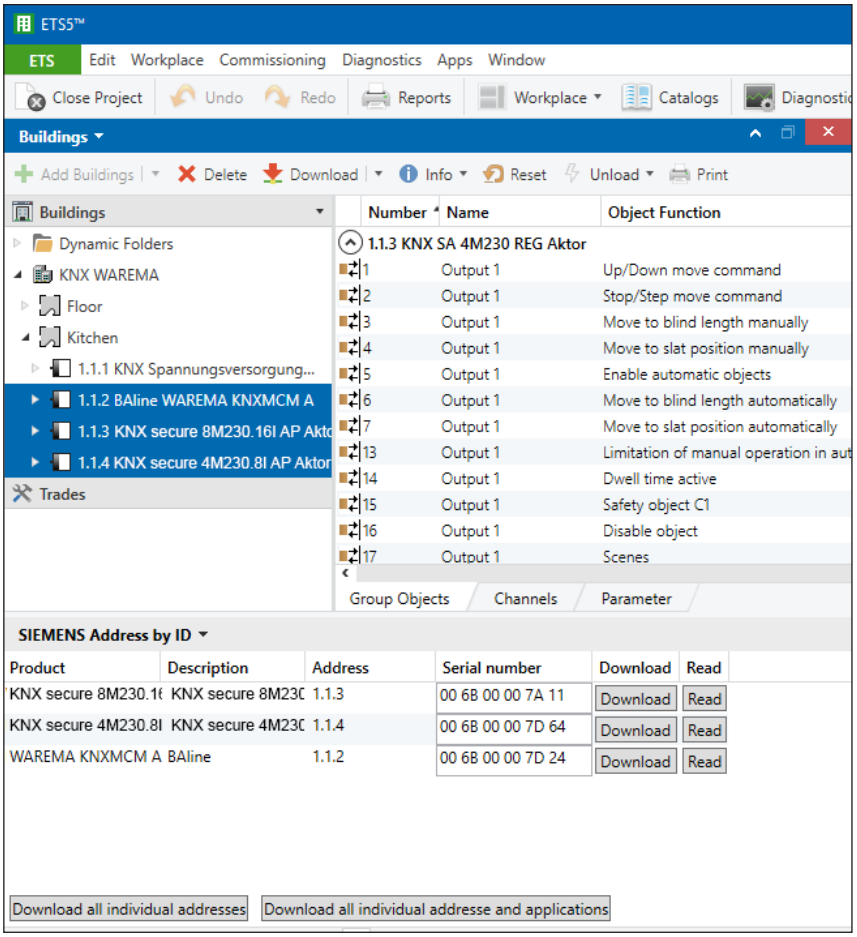


Fig. 5 SIEMENS ETS app for commissioning using the actuator serial number

5.4 Application program

During initial operation of the KNX secure, the physical address, group objects, parameters and group addresses must be programmed. If a project is subsequently changed, 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 secure actuators

Three different operating modes can be set for each channel:

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

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

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

6.1 Venetian blind/external venetian blind

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

In the `Output for venetian blind/external venetian blind` operating mode, the KNX secure executes the **Up, Down and Tilt slats** movements. Each channel can be used to control a venetian blind 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.

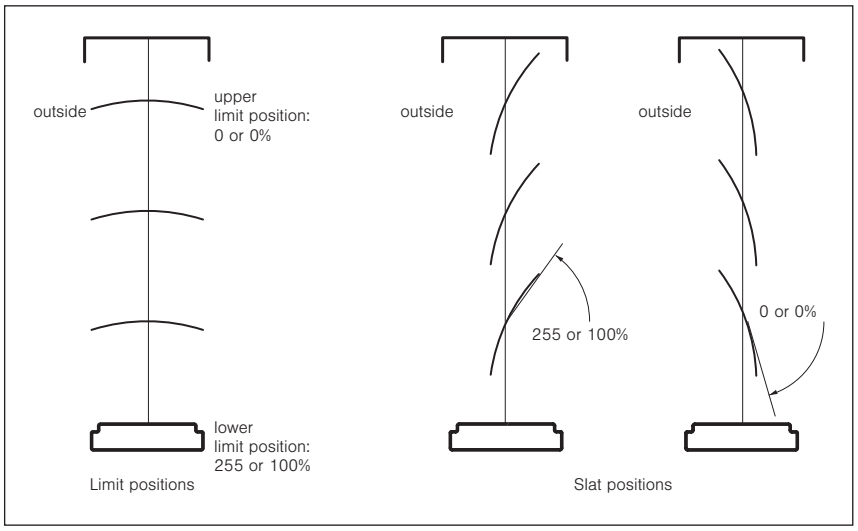


Fig. 6 Motor limit positions, slat positions

6.2 Roller shutter/textile sun shading systems

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 system, the KNX secure executes the **Up and Down** movements.

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 awning with ZIP guidance` operating mode the KNX secure executes the **Up and Down** movements.

WARNING
As long as a safety object is active, an UP command parameterised in the safety object remains active (voltage at UP output), 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.

7 Parameter dialogue

The parameter dialogue for the KNX secure actuators in the ETS is divided into six groups:

Parameter group	Functions	Description
Device parameters	General actuator settings and Bluetooth functions	Section 7.1 on page 24
Outputs, general	Outputs can be activated and renamed here. The parameters for the time-offset movement of the outputs and the parameters for the combined move commands for the blind length and slat position for all outputs are also set here.	Section 7.2 on page 25
On: Output	The parameters for the relevant output are set here. The *On: Output* menus and sub-menus are displayed as soon as the corresponding outputs have been activated. If a name was assigned to the output, this is displayed instead of the designation "Output".	
Outputs, status	The texts, that should be sent for the relevant status, are parameterised here for all of the outputs.	Section 7.2.2 on page 27
Inputs, general	The binary inputs on the device are activated here. Depending on the required operating mode, the input terminals can be activated individually or in pairs.	Section 7.3 on page 86
In.n: Input or In.1/In.2: Input	The function of the relevant input is parameterised here. The *In.n: Input* menus are displayed as soon as the corresponding inputs have been activated. If a name was assigned to the input, this is displayed instead of the designation "Input".	
Logic/timer, general	The 16 available logic links or timer functions are activated and deactivated here.	Section 7.4 on page 105
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 7.5 on page 114

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

7.1 Device parameters

These windows contain the device-specific settings.

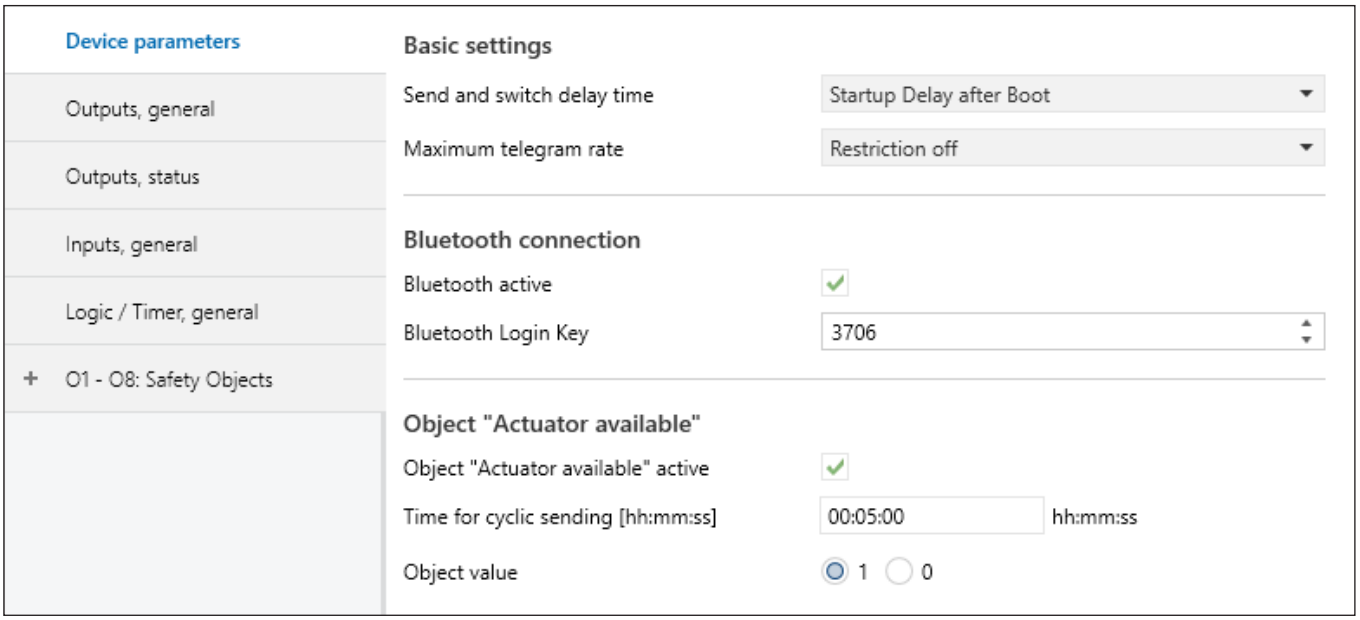


Fig. 7 Parameter dialogue: Device parameters

Parameter	Function	Values
Transmit and switch delay time	The delay, if any, with which the device starts up after being switched on can be specified here	**Boot time**
		Boot time + 1 second
		Boot time + 3 seconds
		Boot time + 10 seconds
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 thus be reduced if necessary.	**Restriction off**
		20 telegrams per second
		10 telegrams per second
		3 telegrams per second
		1 telegram per second
Bluetooth active	The Bluetooth module can be switched off here. Operation via Bluetooth is then no longer possible.	**On**
		Off
Bluetooth Login Key	The login key for the Bluetooth operation can be set here. The key is requested when operating via Bluetooth.	0 : **3706** : 9999
Object "Actuator available" active	The object "Actuator available" indicates whether the actuator is ready for operation. Here you can set whether the object should be used.	**On**
		Off
Time for cyclic sending [hh:mm:ss]	The object "Actuator available" can be sent again. The interval between two consecutive repeats can be parameterised here. Setting the value to 0 causes the object to just be sent once.	00:00:00 : **00:05:00** : 23:59:59
Object value	Specifies whether the object "Actuator available" sends a 0 or a 1 for an actuator that is ready for operation.	0
		1

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

7.2 Outputs

- Outputs can be activated and renamed under **Outputs, general**.
  The parameters for the time-offset movement of the outputs and the parameters for the combined move commands for the blind length and slat position for all outputs are also set here.
- The texts, that should be sent for the relevant status are defined under **Output, status**.
- The **On: Output** menus and sub-menus are displayed as soon as the corresponding outputs have been activated. If a name was assigned to the output, this is displayed instead of the designation "Output".

7.2.1 Outputs, general

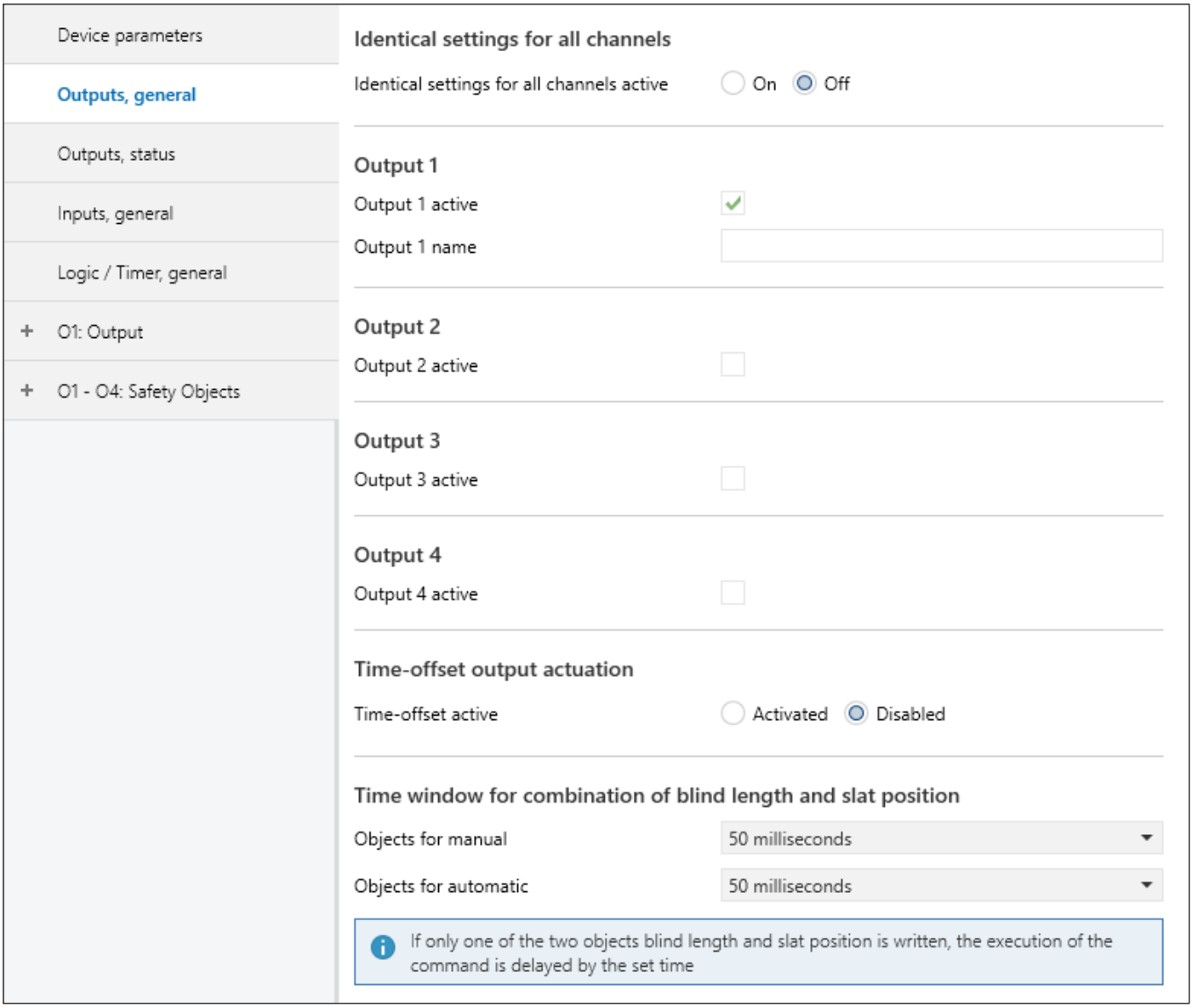


Fig. 8 Parameter dialogue: Outputs → Outputs, general

Parameter	Function	Values
Parameterise all outputs identically	Here, the user can specify whether all outputs should be given identical parameters. The parameters for the individual outputs are then hidden. There is just one parameter set for all of the outputs.	On
		Off
Output channel n active	Specifies whether the output channel should be used	On
		Off
Output n name	A name for the output can be specified here so that it is easier to assign.	Text (max. 80 characters)
Time-offset output actuation Time-offset active	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
Timeframe for combination of blind length and slat position Objects for manual	Any telegrams for the blind length and slat position received during this timeframe are combined into a joint destination. If only one of the two objects blind length and slat position is specified, the execution of the command is delayed by the set time.	**50 milliseconds** : 10 seconds
Timeframe for combination of blind length and slat position Objects for control mode	Any telegrams for the blind length and slat position received during this timeframe are combined into a joint destination. If only one of the two objects blind length and slat position is specified, the execution of the command is delayed by the set time.	**50 milliseconds** : 10 seconds

7.2.2 Outputs, status

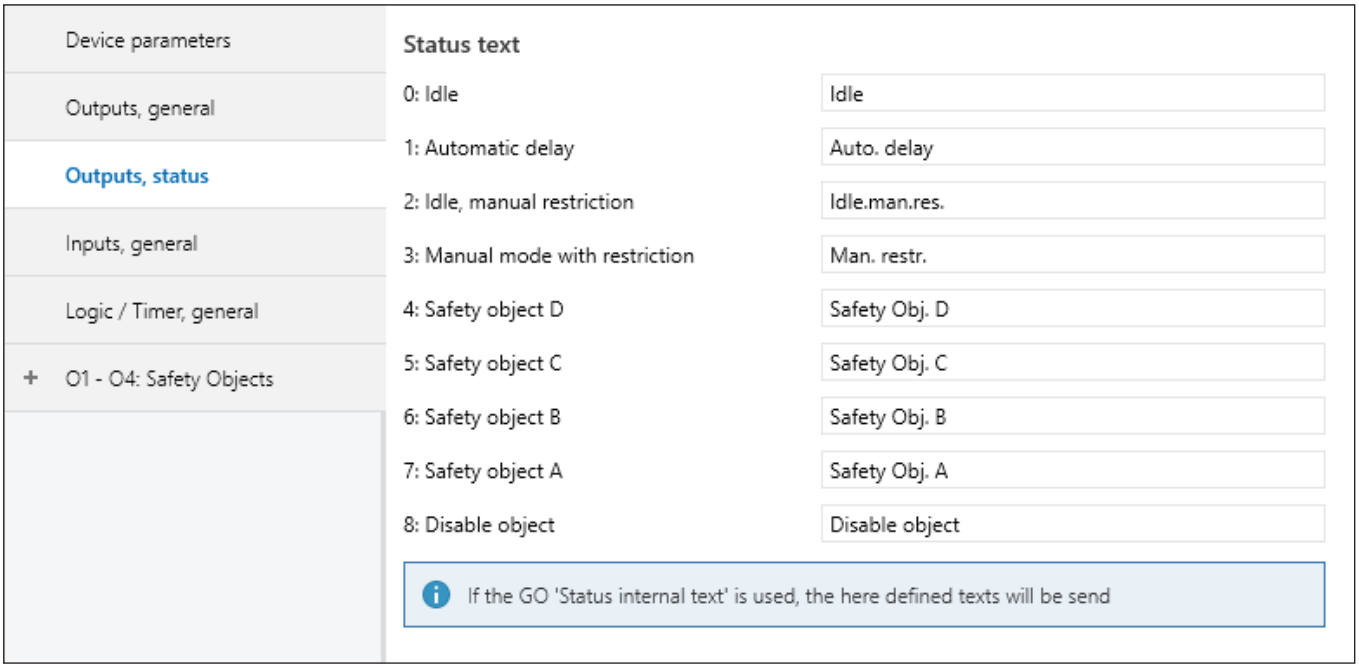


Fig. 9 Parameter dialogue: Outputs → Outputs, status

Parameter	Function	Values
0: Idle	If the ***GO Status internal text*** is used, the texts defined here depending on the output status will be sent. The indexes of the texts correspond to the values that are sent when using the ***GO Status internal byte***.	**Idle**
1: Control mode delay		**Auto. delay**
2: Idle, manual restriction		**Idle.man.res.**
3: Manual operation with restriction		**Man. restr.**
4: Safety object D		**Safety Obj. D**
5: Safety object C		**Safety Obj. C**
6: Safety object B		**Safety Obj. B**
7: Safety object A		**Safety Obj. A**
8: Disable object		**Disable object**

The issued values are in "text" format and must have max. 14 characters.

7.2.3 Output for venetian blind/external venetian blind

In the operating mode `Venetian blind/External venetian blind`, the KNX secure executes the **Up/Down and Tilt slats movements**. Each channel can be used to control a venetian blind 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.

7.2.3.1 Blind parameters

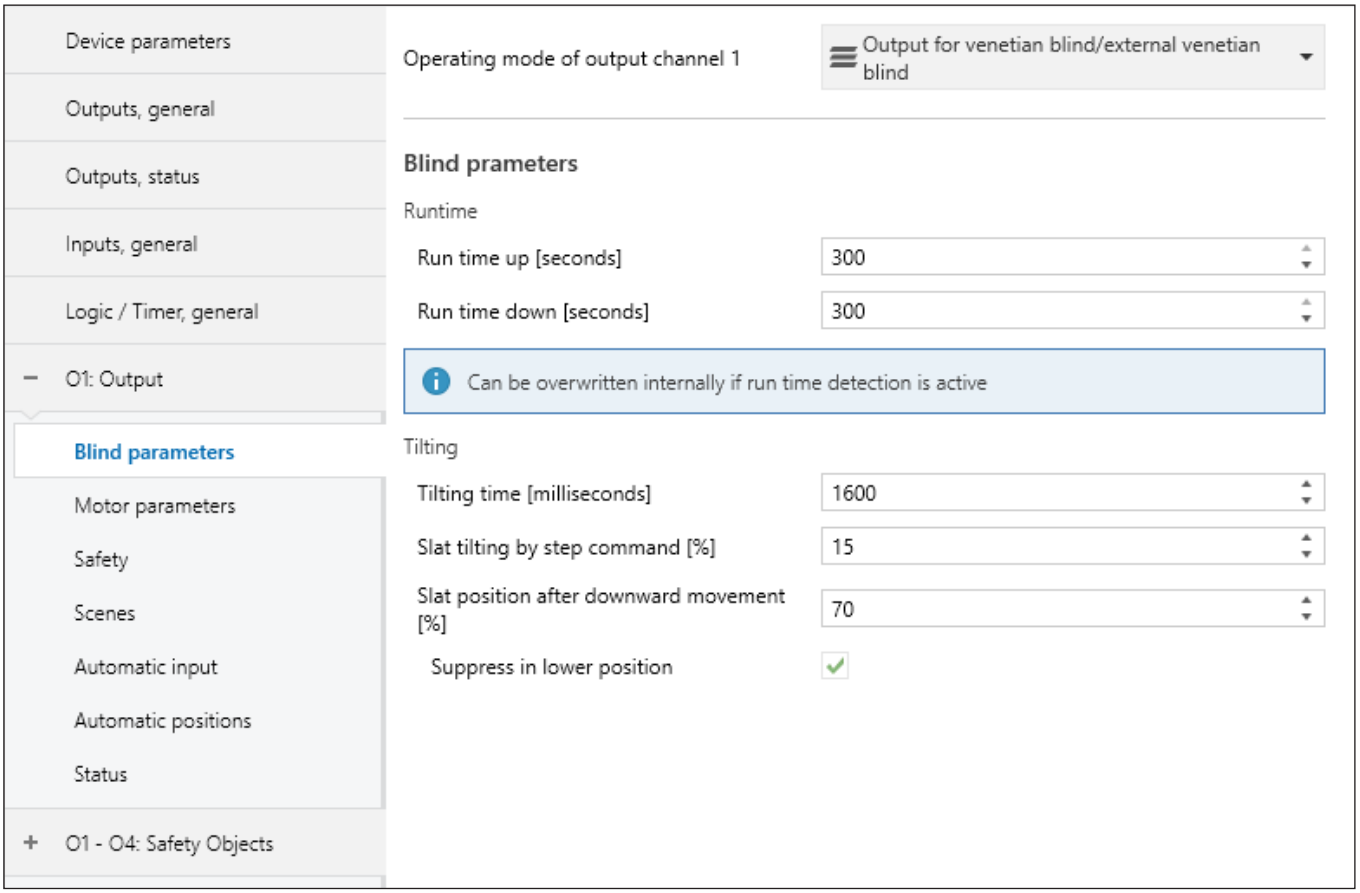


Fig. 10 Parameter dialogue: On: Output (for venetian blind/external venetian blind) → Blind parameters

Parameter	Function	Values
Operating mode of output channel n	Operating mode of the output, distinction made between various sun shading product types (see following chapters)	**Output for venetian blind/external venetian blind**
		Output for roller shutter/ textile sun shading system
		Output for awning with ZIP guidance
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. (Value can be overwritten if run time detection is active)	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. (Value can be overwritten if run time detection is active)	0 : **300**
Tilting time [milliseconds]	This parameter must be set to the time that a venetian blind 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 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 blind position that provides glare control while also permitting a view out. This parameter defines the slat position that is set after the lower limit position is reached. The parameter value is based on the tilting time.	0 : **70** : 100
Suppress in lower position	This prevents the slats from being tilted up in the lower limit position following the manual downward movement if the sun shading product is already in the lower limit position.	**Yes**
		No

7.2.3.2 Motor parameters (for all actuators)

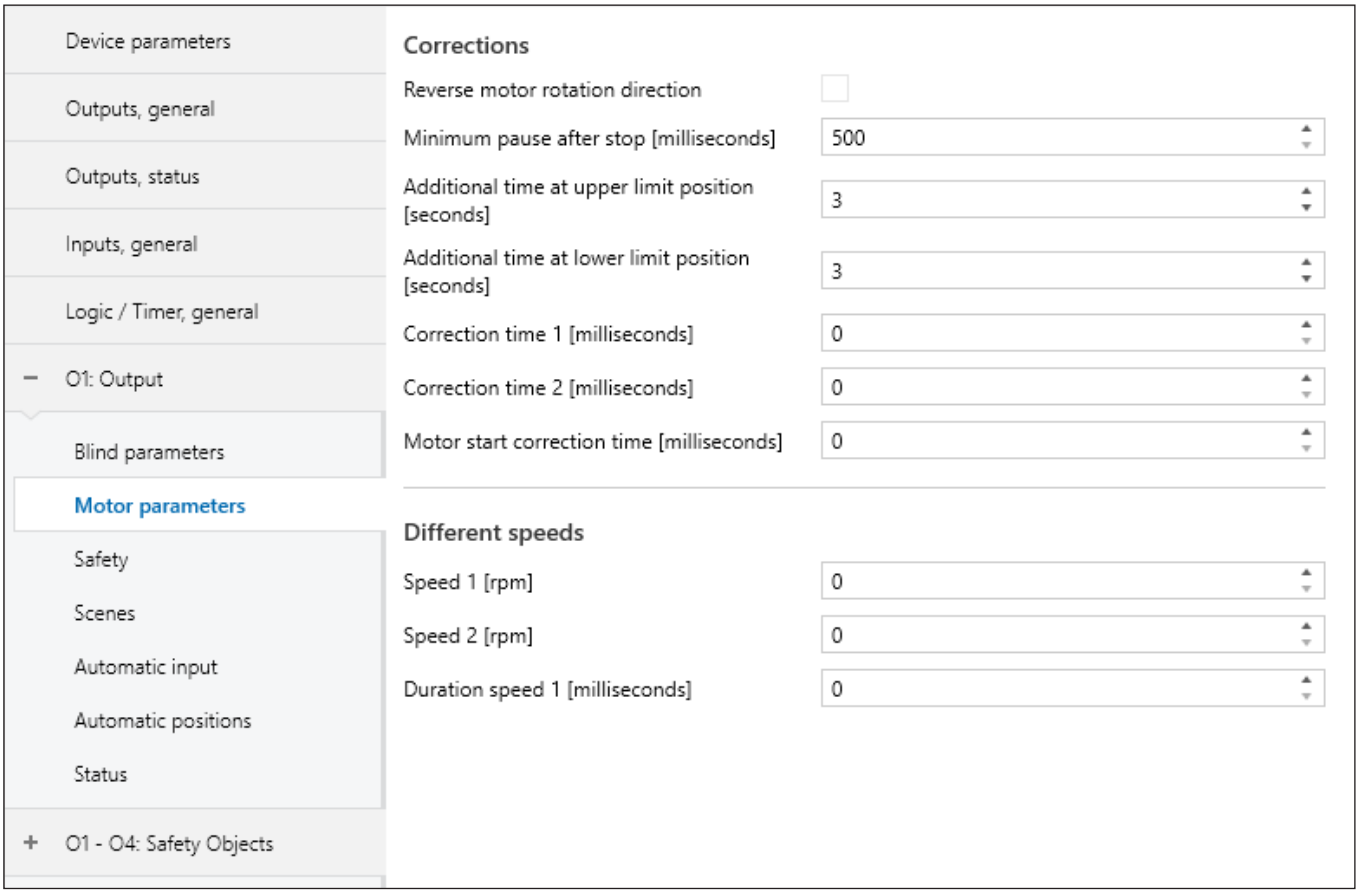


Fig. 11 Parameter dialogue: On: Output (for venetian blind/external venetian blind) → Motor parameters (for all actuators)

Parameter	Function	Values
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 following deceleration of the relay 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 following deceleration of the relay 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

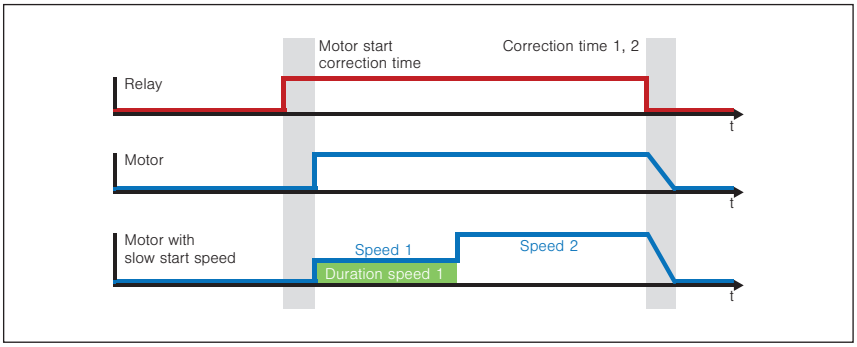


Fig. 12 Function of the correction parameters

7.2.3.3 Motor parameters (only for pro actuators)

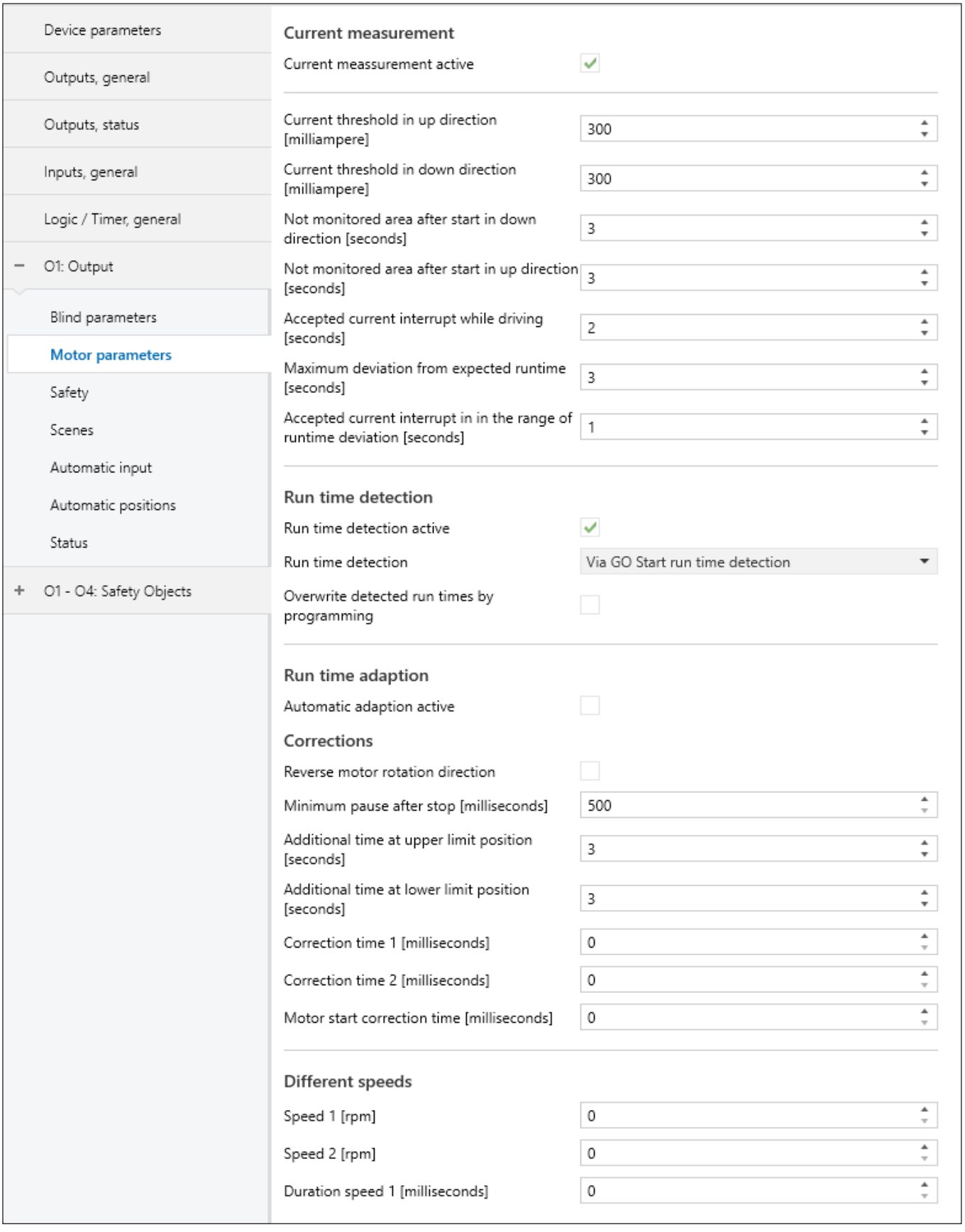


Fig. 13 Parameter dialogue: On: Output (for venetian blind/external venetian blind) → Motor parameters (only for **pro** actuators)

Parameter	Function	Values
Current measurement active	When activated, the current measurement on the relay outputs of the channel is switched on.	**No**
		Yes
Current threshold in UP direction [milliampere]	If the level falls below this threshold during the UP movement, this is classified as "no current flow" and is evaluated based on the following parameterisation.	200 : **300** : 2000
Current threshold in DOWN direction [milliampere]	If the level falls below this threshold during the DOWN movement, this is classified as "no current flow" and is evaluated based on the following parameterisation.	200 : **300** : 2000
Not monitored area after start in DOWN direction [seconds]	Not monitored area after start in DOWN direction (Figure ①). If there is a current interruption during this period, it is ignored.	0 : **3** : 20
Not monitored area after start in UP direction [seconds]	Not monitored area after start in UP direction (Figure ①). If there is a current interruption during this period, it is ignored.	0 : **3** : 20
Accepted current interrupt while driving [seconds]	Maximum permissible interruption of the current flow while driving (if the sun shading product is no longer in the monitored area after starting to move and has not yet reached the tolerance range around the end of the movement) (Figure ②).	0 : **2** : 20
Maximum deviation from expected run time [seconds]	Permissible deviation around the end of the movement. The run time may deviate from the known value by this value without a 1 being sent to the error object (Figure ③ and ④). If the run time adaptation is used, then the new value (Figure ⑤) is used for the adjustment in this case. Example: If the value is set to 3 s, then the deviation can be between -3 s to +3 s.	1 : **3** : 20
Accepted current interruption in the range of run time deviation [seconds]	Maximum permissible interruption of the current flow in the tolerance range around the end of the movement (Figure in range of ③ und ④). If this interruption is exceeded, the error object is set and the movement is terminated.	0 : **1** : 20
Run time detection active	When activated, the run time detection for the channel is switched on and ***GO start run time detection*** is enabled.	**No**
		Yes
Run time detection	Via GO start run time detection: No control mode run time detection. Can only be activated via GO start run time detection.	**Via GO Start run time detection**
	After programming or via GO Start run time detection: Always during the first movement after programming and via GO start run time detection.	After programming or via GO Start run time detection
	After voltage recovery or via GO Start run time detection: Always during the first movement after voltage recovery and via GO start run time detection.	After a voltage recovery or via GO Start run time detection
Overwrite detected run times by programming	Specifies whether values for the UP and DOWN run time, that were determined by the run time detection or run time adaptation, should be overwritten with the values from the Engineering Tool Software.	**No**
		Yes
Run time adaptation Control mode adaptation active	The control mode adaptation always corrects the run time (Figure ⑤) in the background. The value is saved every time a deviation is detected within the tolerance range. The run time is changed to the average of the last three values.	**No**
		Yes

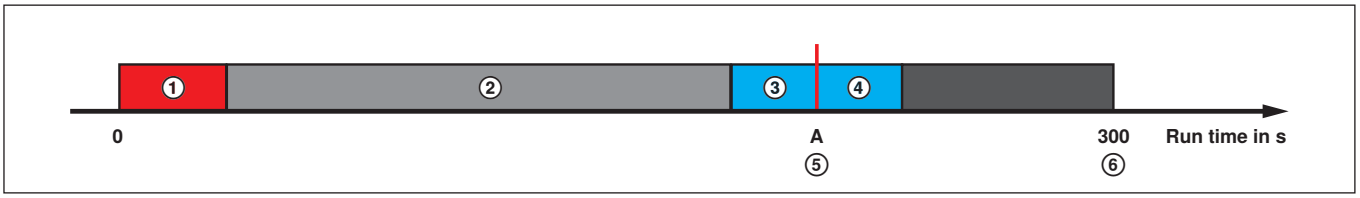


Fig. 14 Ranges of current measurement/run time functions

① Range following start that is not monitored
(parameterised separately for UP and DOWN)

② Error monitoring only (***GO Fault message***)

③ Tolerance range before current run time

④ Tolerance range after current run time

⑤ Current run time
(as parameterised: fixed or determined automatically)

⑥ Maximum adjustable run time (300 s)

For all other motor parameters for pro actuators,
see *section 7.2.3.2 on page 30*

7.2.3.4 Safety

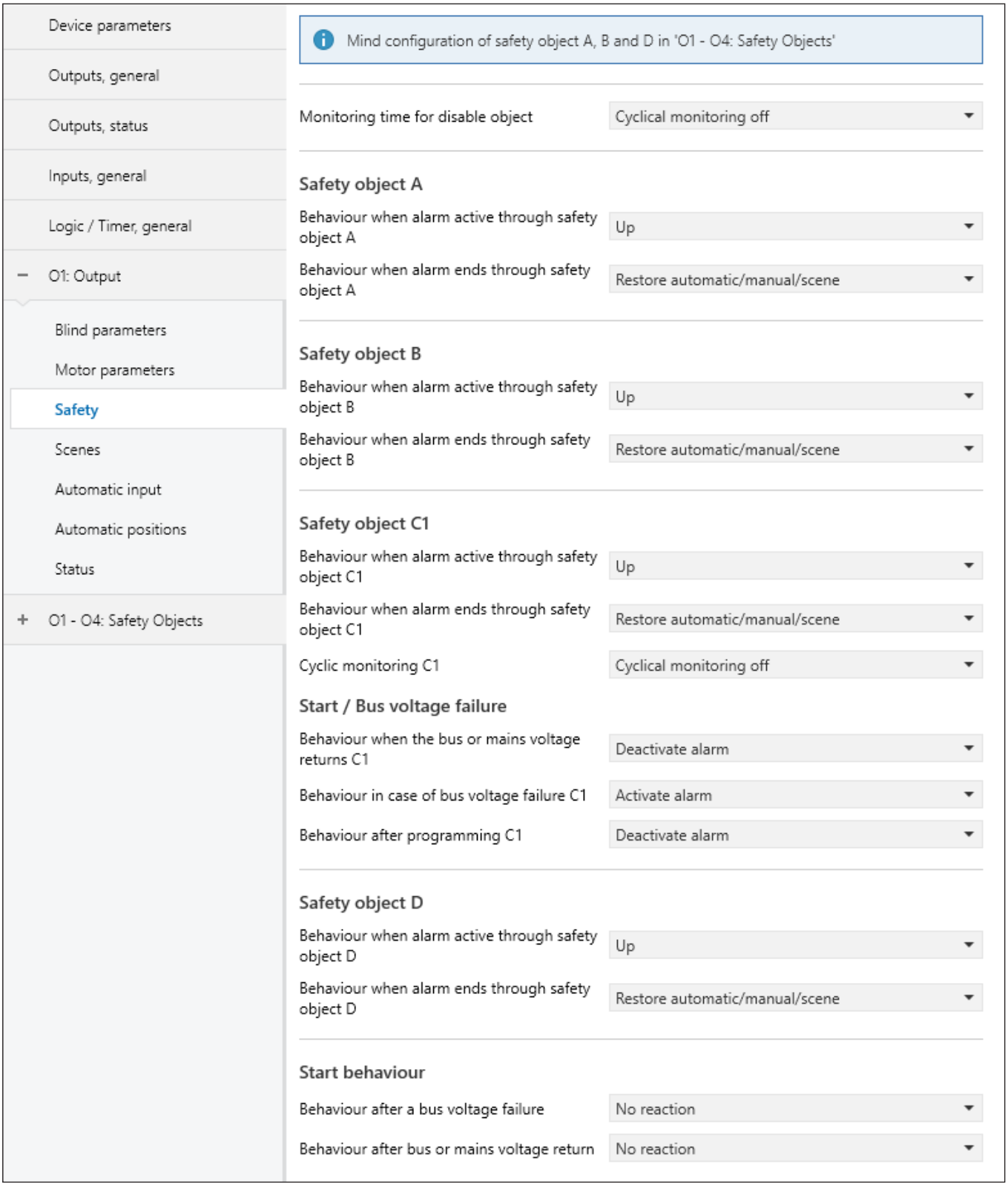


Fig. 15 Parameter dialogue: On: Output (for venetian blind/external venetian blind) → Safety

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.

Parameter	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 being received, the product control is disabled and movements are stopped. The blockage 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* is activated 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*** should be moved in case of an alarm.	**0** : 100
Slat position [%]	Slat position to which ***GO Safety object A*** should be moved in case of an alarm.	**0** : 100
Behaviour when *Alarm end* is activated 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 control mode object
		Restore Control mode/Manual/ Scenario
Blind length [%]	Blind length to which ***GO Safety object A*** should be moved in case of an alarm end.	**0** : 100
Slat position [%]	Slat position to which ***GO Safety object A*** should be moved in case of an alarm end.	**0** : 100
Behaviour when *Alarm active* is activated through safety object B	Output channels execute the move command that has been set for A*larm 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*** should be moved in case of an alarm.	**0** : 100
Slat position [%]	Slat position to which ***GO Safety object B*** should be moved in case of an alarm.	**0** : 100

Behaviour when *Alarm end* is activated 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 control mode object
		Restore Control mode/Manual/ Scenario
Blind length [%]	Blind length to which ***GO Safety object B*** should be moved in case of an alarm end.	**0** : 100
Slat position [%]	Slat position to which ***GO Safety object B*** should be moved in case of an alarm end.	**0** : 100
Behaviour when *Alarm active* is activated through safety object Cn	Output channels execute the move command that has been set for A*larm 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*** should be moved in case of an alarm.	**0** : 100
Slat position [%]	Slat position to which ***GO Safety object Cn*** should be moved in case of an alarm.	**0** : 100
Behaviour when *Alarm end* is activated 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 control mode object
		Restore Control mode/Manual/ Scenario
Blind length [%]	Blind length to which ***GO Safety object Cn*** should be moved in case of an alarm end.	**0** : 100
Slat position [%]	Slat position to which ***GO Safety object Cn*** should be moved in case of an alarm end.	**0** : 100
Cyclical monitoring Cn	Monitors whether telegrams are received on the ***GO Safety object Cn***.	**Cyclical monitoring off**
		10 seconds
		1 minute
		2 minutes
		5 minutes
		10 minutes
Behaviour when the bus or mains voltage returns Cn	This parameter defines the behaviour of ***GO Safety object Cn*** after the mains voltage returns.	**Deactivate alarm**
		Activate alarm
		No change
Behaviour in case of bus voltage failure Cn	This parameter defines the behaviour of ***GO Safety object Cn*** after the bus voltage fails.	Deactivate alarm
		Activate alarm
		No change

Behaviour after programming Cn	This parameter defines the behaviour of ***GO Safety object Cn*** after programming the actuator.	**Deactivate alarm**
		Activate alarm
		No change
Behaviour when *Alarm active* is activated through safety object D	Output channels execute the move command that has been set for A*larm 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*** should be moved in case of an alarm.	**0** : 100
Slat position [%]	Slat position to which ***GO Safety object D*** should be moved in case of an alarm.	**0** : 100
Behaviour when *Alarm end* is activated 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 control mode object
		Restore Control mode/Manual/ Scenario
Blind length [%]	Blind length to which ***GO Safety object D*** should be moved in case of an alarm end.	**0** : 100
Slat position [%]	Slat position to which ***GO Safety object D*** should be moved in case of an alarm end.	**0** : 100
Behaviour after the bus voltage failure	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

7.2.3.5 Scenarios

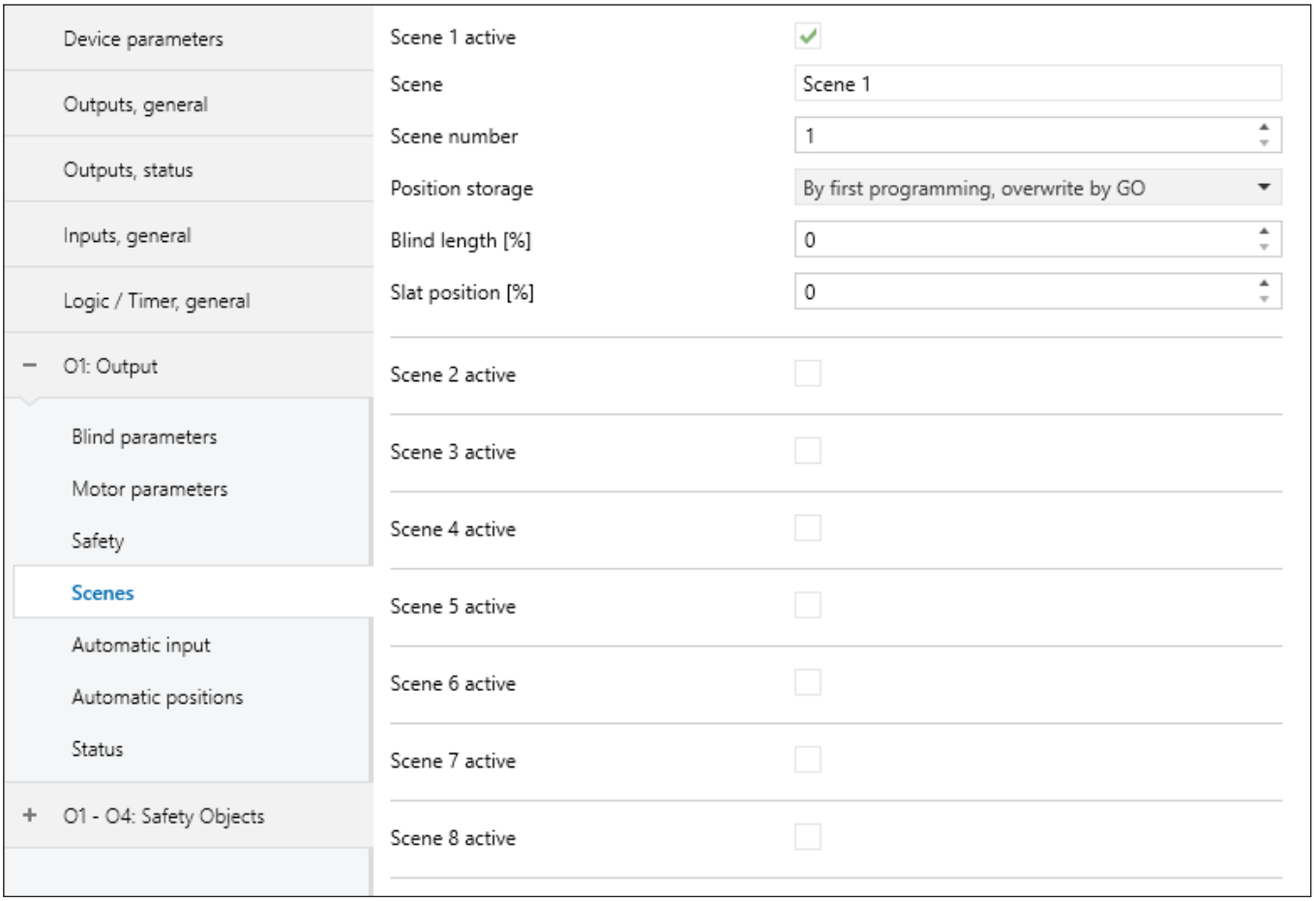


Fig. 16 Parameter dialogue: On: Output (for venetian blind/external venetian blind) → Scenarios

Parameter	Function	Values
Scenario n active (8 scenarios can be defined)	Specifies whether the scenario should be used.	**Do not use**
		Use
Scenario	Text as designation of the scenario (purely for information). The text may have a maximum of 30 characters.	**Scenario n**
Scenario number	Scenario number that must be received on ***GO Scenarios*** of the output for the scenario to be executed. Each scenario number may only be used once.	**1** : 64
Position storage	Specify during initial programming, can be overwritten via GO: The scenario position is only copied from the Engineering Tool Software parameters during the initial programming process. If the device has ever been loaded via the Engineering Tool Software, then the scenario position is not copied from the Engineering Tool Software parameters again. The scenario position can then be changed via the scenarios GO.	**Specify during initial programming, can be overwritten via GO**
	Specify during programming, can be overwritten via GO: The scenario position is copied from the Engineering Tool Software parameters following every programming process. The scenario position can then be changed via the scenarios GO.	Specify during programming, can be overwritten via GO
	Fixed value: Position is copied from the Engineering Tool Software parameters and cannot be changed via the scenarios GO.	Fixed value
Blind length [%]	Blind length to which the blind is moved when the scenario is activated.	**0** : 100
Slat position [%]	Slat position to which the blind is moved when the scenario is activated.	**0** : 100

7.2.3.6 Control mode input

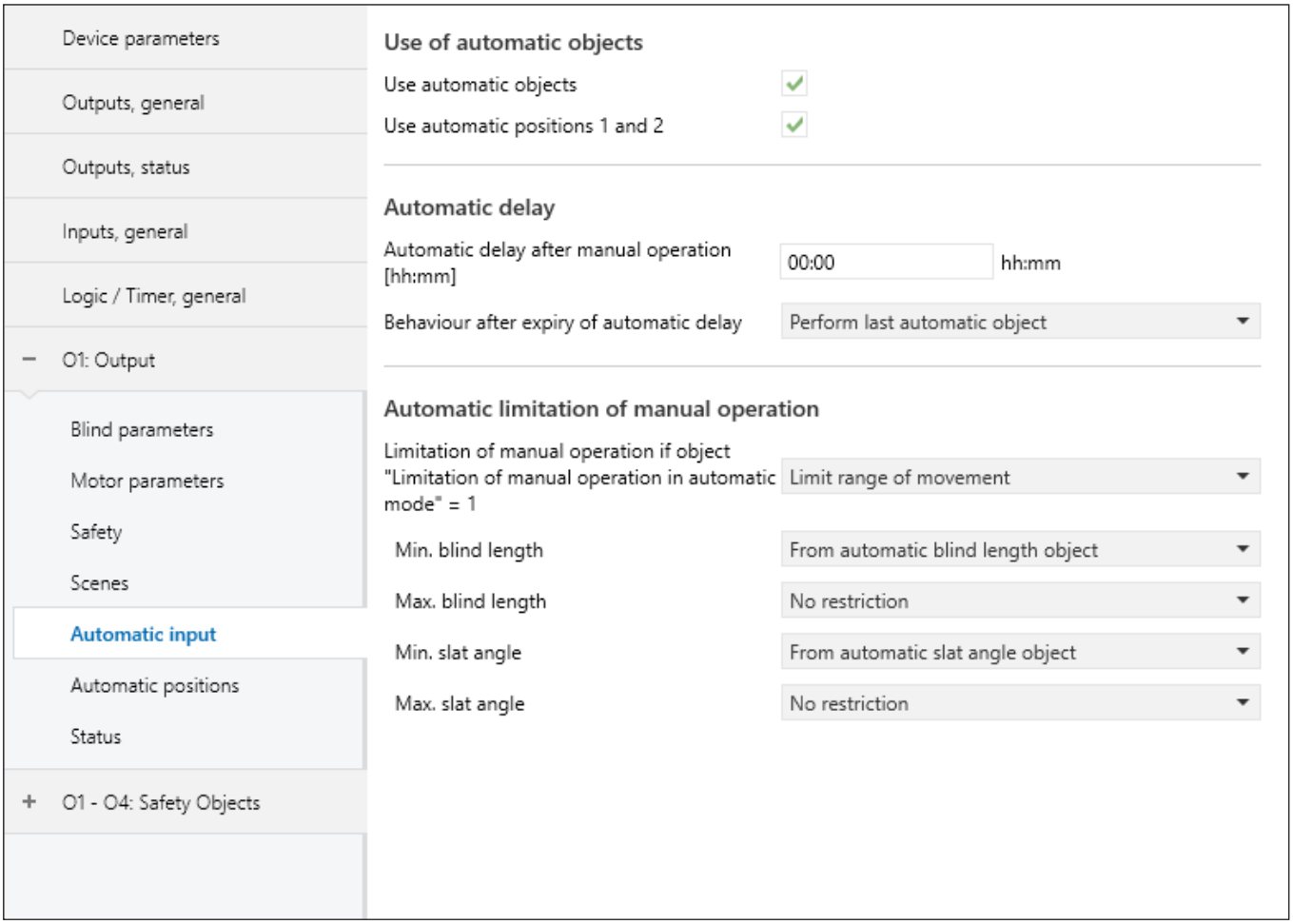


Fig. 17 Parameter dialogue: On: Output (for venetian blind/external venetian blind) → Control mode input

Parameter	Function	Values
Use control mode objects	Switches on the remaining parameters of this page and the Control mode GOs.	**No**
		Yes
Use control mode positions 1 and 2	Specifies whether *control mode positions 1 and 2* are used. Switches on additional parameters.	**No**
		Yes
Control mode delay after manual operation [hh:mm]	After a manual move command the control mode delay starts running. The last position command is repeated after this time expires.	**00:00** : 23:59
Behaviour after expiry of control mode delay	Specifies what action should take place after the control mode delay (dwell time) has expired.	No reaction
		Up
		Down
		Perform last control mode object
Limitation of manual operation if object "Limitation of manual operation in control mode" = 1	Specifies in what range the blind length may move if ***GO Limitation of manual operation in control mode*** is active.	**Disable manual operation and scenarios**
		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 control mode*** is active.	No restriction
		From control mode 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 control mode** is active.	**No restriction**
		From control mode 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 control mode** is active.	No restriction
		From control mode 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 control mode** is active.	**No restriction**
		From control mode slat angle object
		Parameterised value
Max. slat angle [%]	Value used if the parameter *Max. slat angle* has been set to *Parameterised value*	0 : **100**

7.2.3.7 Control mode positions

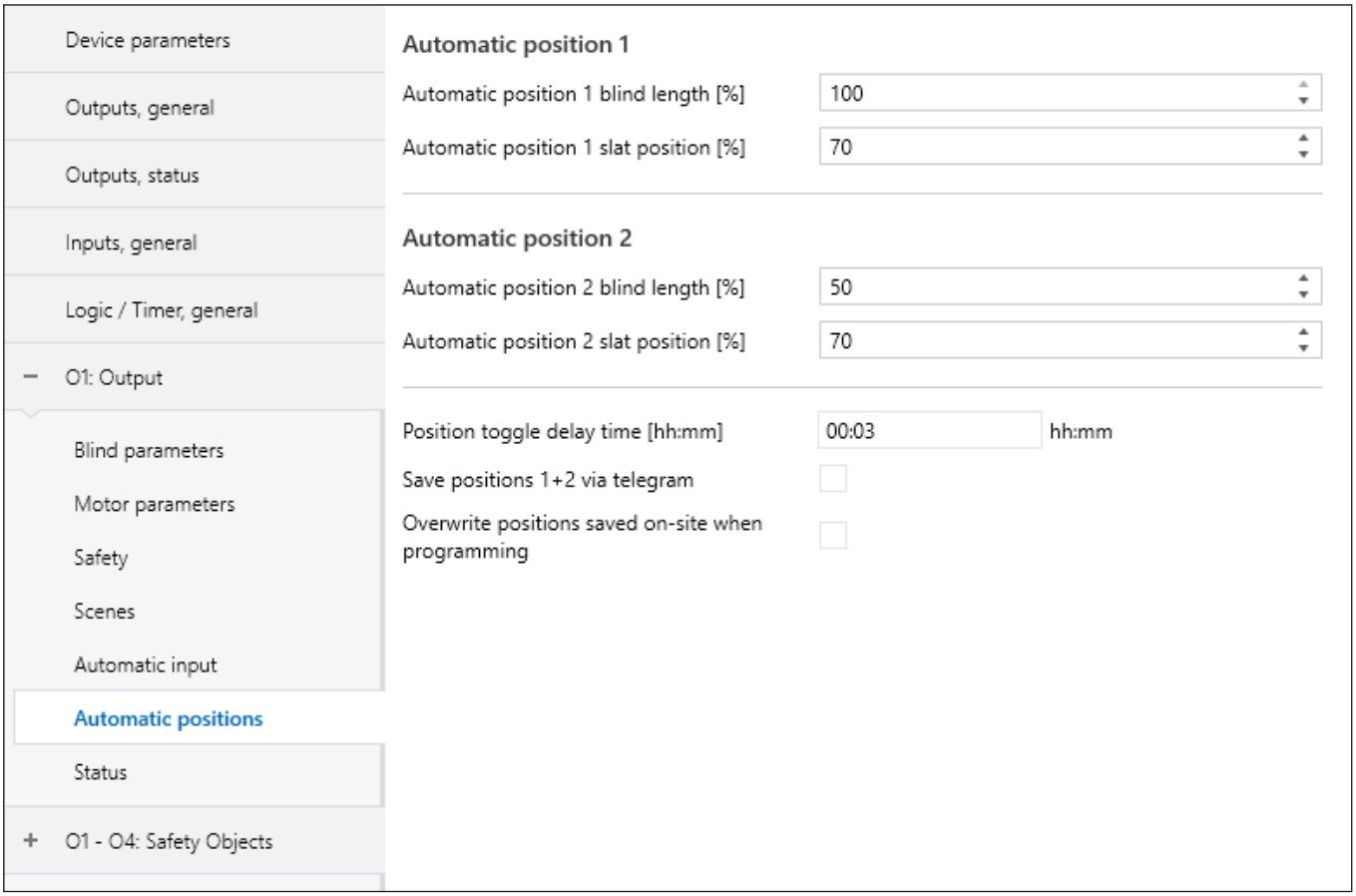


Fig. 18 Parameter dialogue: On: Output (for venetian blind/external venetian blind) → Control mode positions

Parameter	Function	Values
Control mode position 1 blind length [%]	Specifies the blind length for control mode 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**
Control mode position 1 slat position [%]	Specifies the slat position for control mode 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
Control mode position 2 blind length [%]	Specifies the blind length for control mode 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
Control mode position 2 slat position [%]	Specifies the slat position for control mode 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 Control mode position toggle***, the sun shading product moves to the position that was last received on ***Control mode blind length*/*Control mode slat position*** after the *Position toggle delay time* expires. If a telegram has not yet been received for ***Control mode blind length*/*Control mode slat position***, the sun shading product moves to the saved Position 1. If a 0-telegram is received on the ***GO Control mode position toggle***, the sun shading product moves to Position 1 after the *Position toggle delay time* expires. The *Position toggle delay time* 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**

7.2.3.8 Status

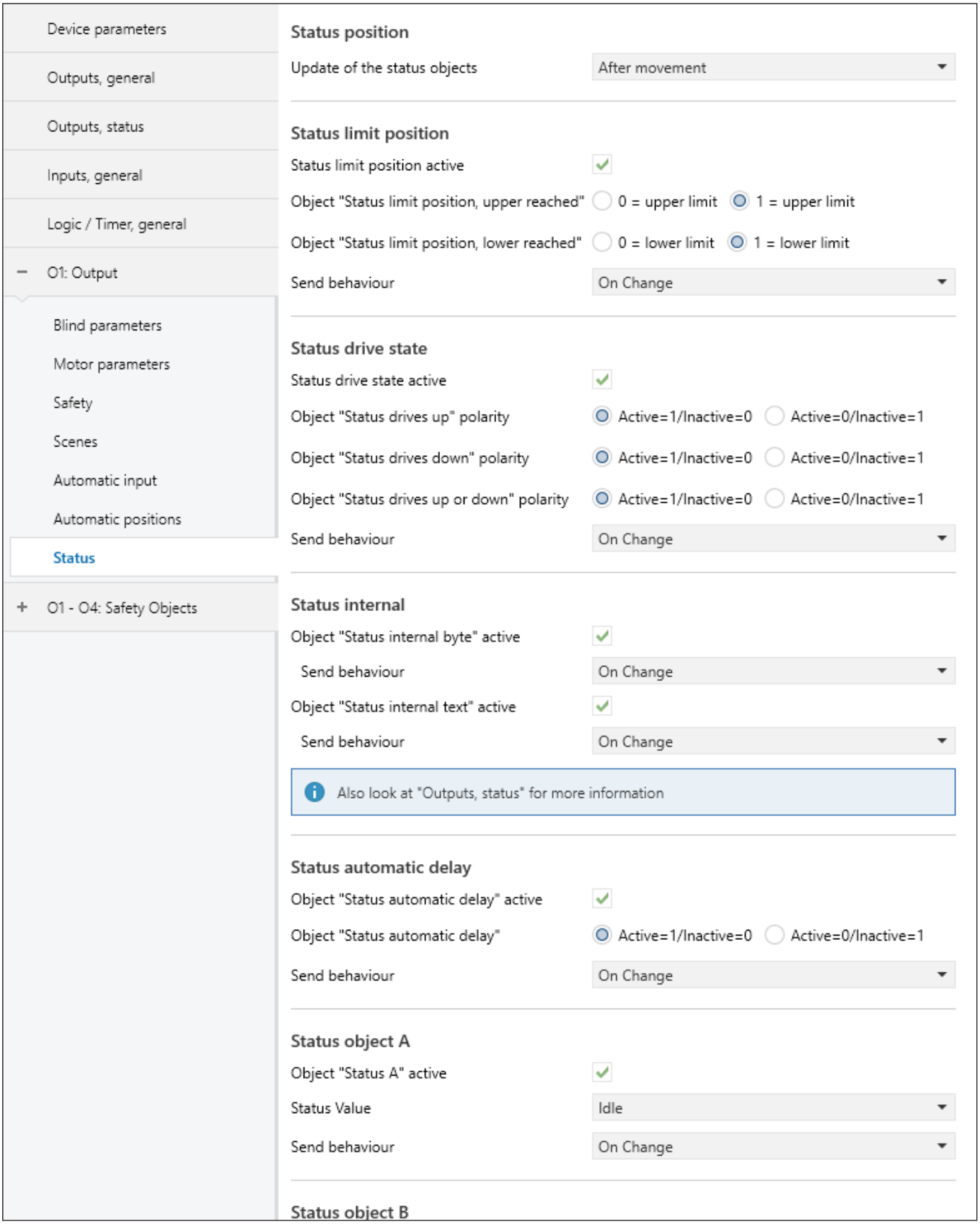


Fig. 19 Parameter dialogue: On: Output (for venetian blind/external venetian blind) → Status

Parameter	Function	Values
Status position Update of the status objects	Send behaviour of status objects for blind length and slat position	**After movement**
		During movement: 1 s interval
		During movement: 2 s interval
		During movement: 5 s interval
		During movement: 10 s interval
Status limit position Status limit position active	Activates ***GO Status limit position, upper reached*** and ***GO Status limit position, lower reached*** and the associated following three parameters.	Yes
		No
Object "Status limit position, upper reached"	Polarity of the object	0 = upper limit
		1 = upper limit
Object "Status limit position, lower reached"	Polarity of the object	0 = lower limit
		1 = lower limit
Send behaviour	Send behaviour of both objects for the limit position. With the option "Do not transmit, readable", the object value is changed although it is not sent to the bus.	Do not transmit, readable
		In case of change
		In case of change and cyclical, every 30 s to 1/5/10/30/60 minutes
Status drive state Status drive state active	Activates ***GO Status drives UP***, ***GO Status drives DOWN*** and ***GO Status drives UP or DOWN*** and the associated following four parameters.	Yes
		No
Object "Status drives UP" polarity	Polarity of the object	**Active=1/Inactive=0**
		Active=0/Inactive=1
Object "Status drives DOWN" polarity	Polarity of the object	**Active=1/Inactive=0**
		Active=0/Inactive=1
Object "Status drives UP or DOWN" polarity	Polarity of the object	**Active=1/Inactive=0**
		Active=0/Inactive=1
Send behaviour	Send behaviour of the three objects for the drive state. With the option "Do not transmit, readable", the object value is changed although it is not sent to the bus.	Do not transmit, readable
		In case of change
		In case of change and cyclical, every 30 s to 1/5/10/30/60 minutes
Status internal Object "Status internal byte" active	Activates ***GO Status internal byte*** and the associated following parameter.	Yes
		No
Send behaviour	Send behaviour of the ***GO Status internal byte***. With the option "Do not transmit, readable", the object value is changed although it is not sent to the bus.	Do not transmit, readable
		In case of change
		In case of change and cyclical, every 30 s to 1/5/10/30/60 minutes
Object "Status internal text" active	Activates ***GO Status internal text*** and the associated following parameter.	Yes
		No
Send behaviour	Send behaviour of the ***GO Status internal text***. With the option "Do not transmit, readable", the object value is changed although it is not sent to the bus.	Do not transmit, readable
		In case of change
		In case of change and cyclical, every 30 s to 1/5/10/30/60 minutes
Status control mode delay Object "Status control mode delay" active	Activates ***GO Status control mode delay active*** and the associated following two parameters.	Yes
		No
Object "Status control mode delay"	Polarity of the object	**Active=1/Inactive=0**
		Active=0/Inactive=1
Send behaviour	Send behaviour of the ***GO Status control mode delay active***. With the option "Do not transmit, readable", the object value is changed although it is not sent to the bus.	Do not transmit, readable
		In case of change
		In case of change and cyclical, every 30 s to 1/5/10/30/60 minutes

Status object A / B / C Objekt "Status A / B / C" active	Activates ***GO Status n active*** and the associated following two parameters.	Yes **No**
Status value	Condition for setting the GO	**- Idle** - Control mode delay - Idle, manual restriction - Control mode delay, manual restriction - Safety object D - Safety object C - Safety object B - Safety object A - Disable object - Idle with or without manual restriction - Control mode delay with or without manual restriction - Manual operation enabled - Manual operation disabled - Control mode and manual operation enabled - Control mode and manual operation disabled
Send behaviour	Send behaviour of the ***GO Status n active***. With the option "Do not transmit, readable", the object value is changed although it is not sent to the bus.	Do not transmit, readable **In case of change** In case of change and cyclical, every 30 s to 1/5/10/30/60 minutes

7.2.4 Output for roller shutter/textile sun shading systems

In the operating mode `Roller shutter/textile` sun shading system, the KNX secure executes the **Up and Down movements**.

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

7.2.4.1 Blind parameters

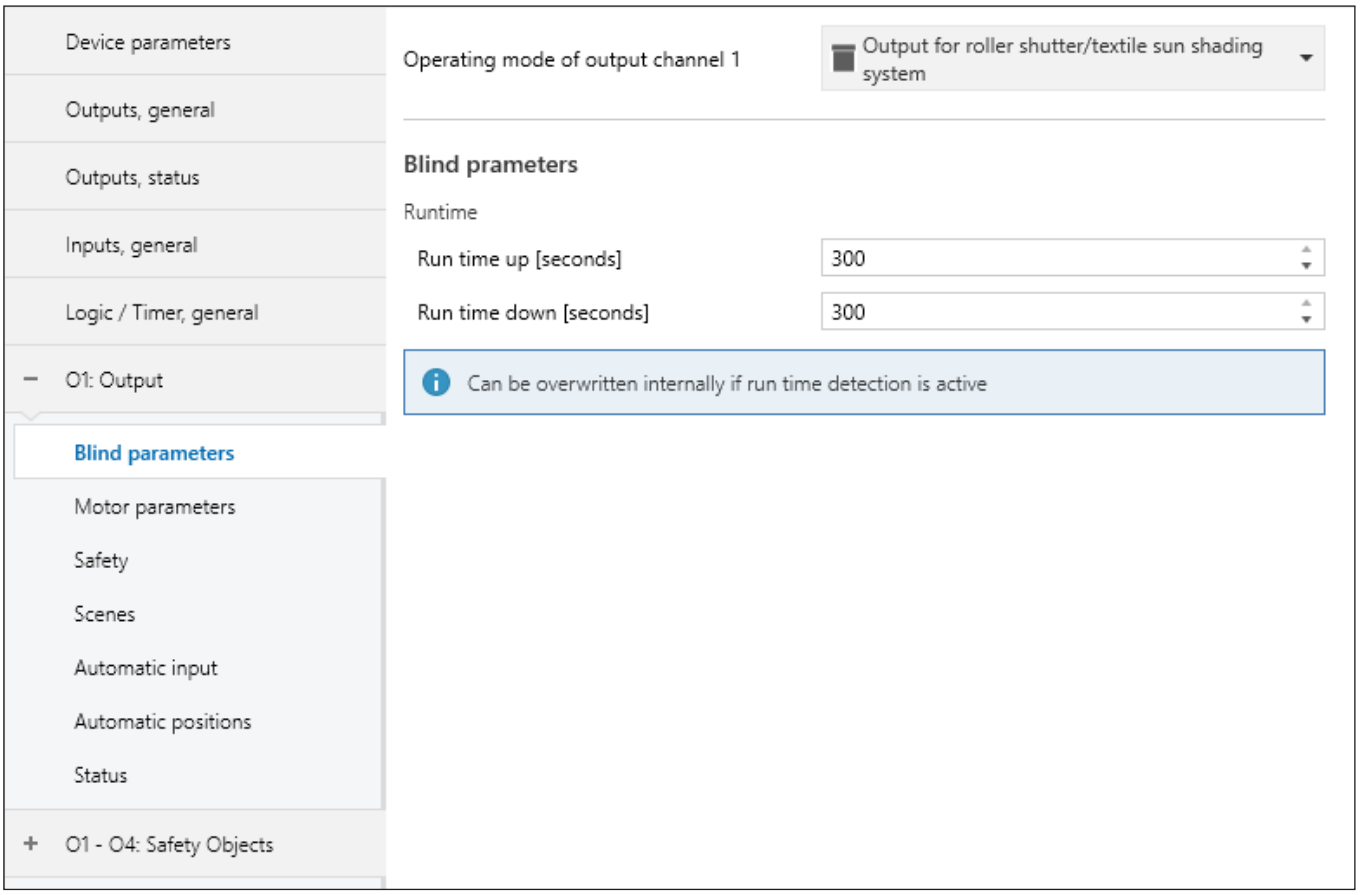


Fig. 20 Parameter dialogue: On: Output (for roller shutter/textile sun shading system) → Blind parameters

Parameter	Function	Values
Operating mode of output channel n	Operating mode of the output, distinction made between various sun shading product types (see following chapters)	**Output for venetian blind/external venetian blind**
		Output for roller shutter/ textile sun shading system
		Output for awning with ZIP guidance
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. (Value can be overwritten if run time detection is active)	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. (Value can be overwritten if run time detection is active)	0 : **300**

7.2.4.2 Motor parameters (for all actuators)

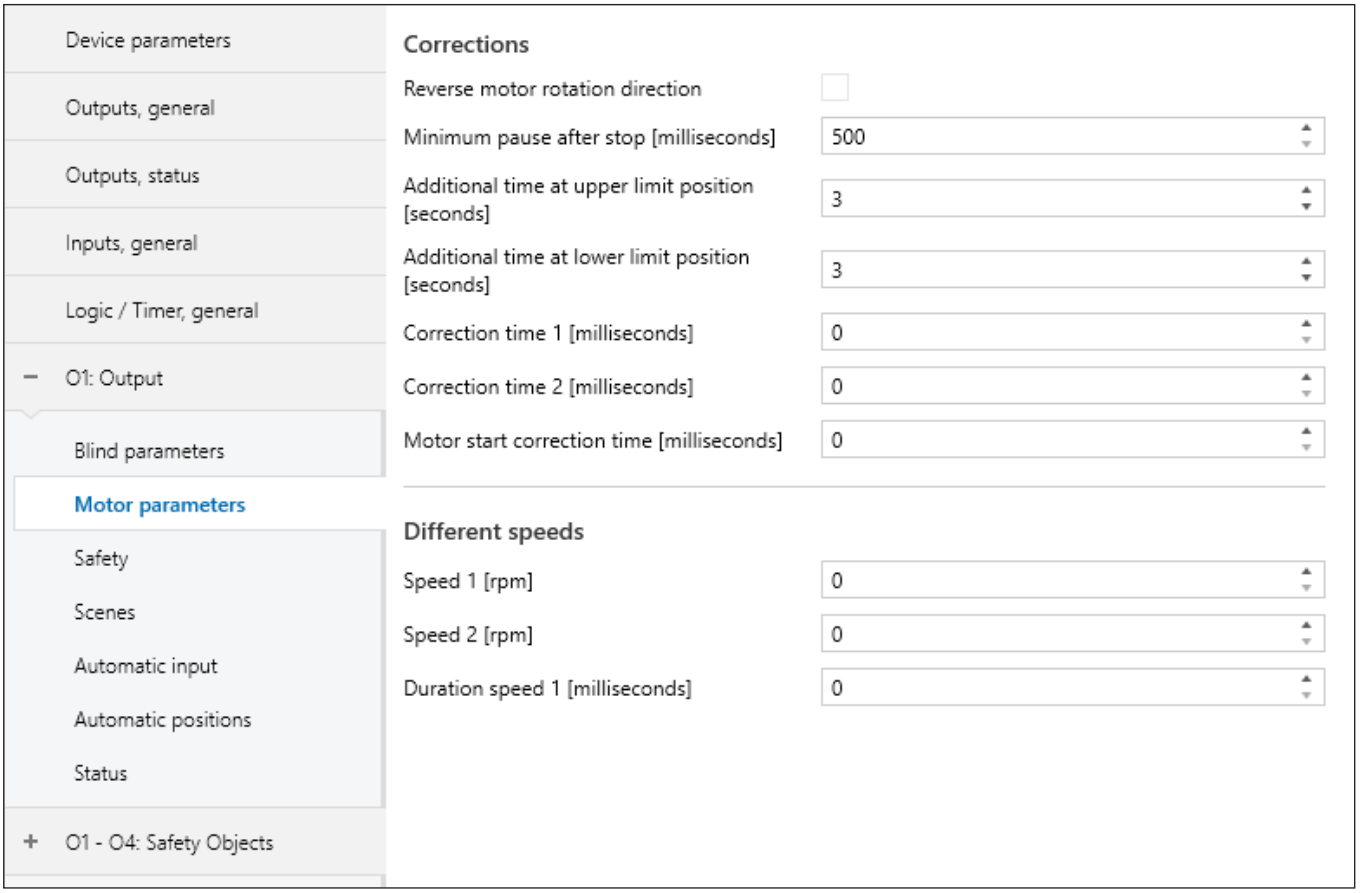


Fig. 21 Parameter dialogue: On: Output (for roller shutter/textile sun shading system) → Motor parameters (for all actuators)

Parameter	Function	Values
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 following deceleration of the relay 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 following deceleration of the relay 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

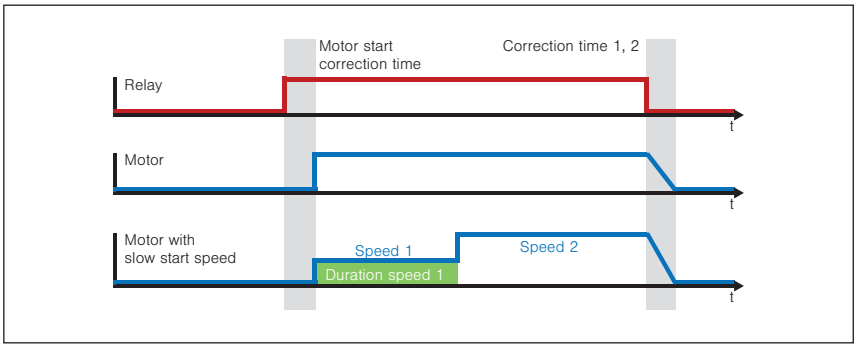


Fig. 22 Function of the correction parameters

7.2.4.3 Motor parameters (only for pro actuators)

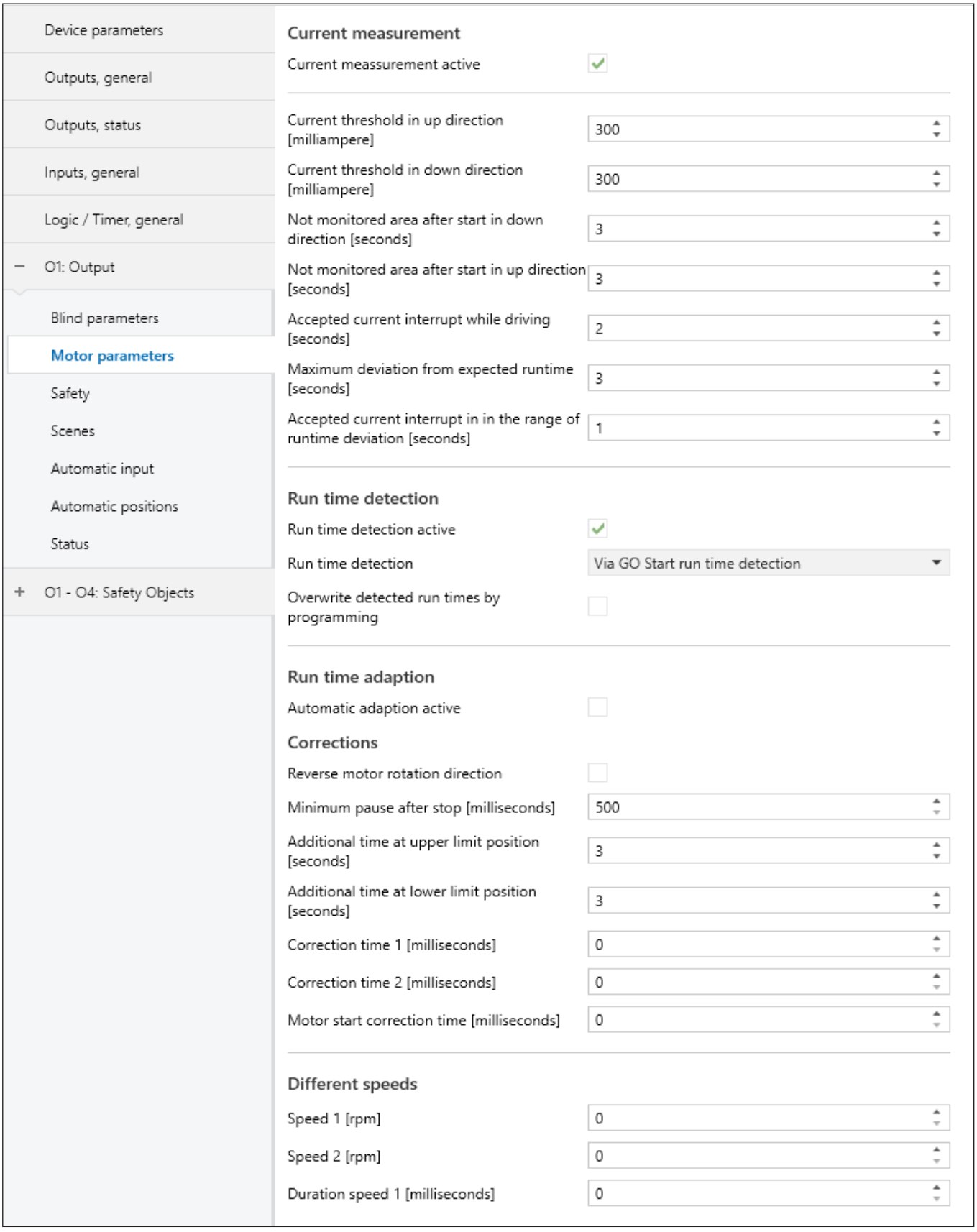


Fig. 23 Parameter dialogue: On: Output (for roller shutter/textile sun shading system) → Motor parameters (for **pro** actuators)

Parameter	Function	Values
Current measurement active	When activated, the current measurement on the relay outputs of the channel is switched on.	**No**
		Yes
Current threshold in UP direction [milliampere]	If the level falls below this threshold during the UP movement, this is classified as "no current flow" and is evaluated based on the following parameterisation.	200 : **300** : 2000
Current threshold in DOWN direction [milliampere]	If the level falls below this threshold during the DOWN movement, this is classified as "no current flow" and is evaluated based on the following parameterisation.	200 : **300** : 2000
Not monitored area after start in DOWN direction [seconds]	Not monitored area after start in DOWN direction (Figure ①). If there is a current interruption during this period, it is ignored.	0 : **3** : 20
Not monitored area after start in UP direction [seconds]	Not monitored area after start in UP direction (Figure ①). If there is a current interruption during this period, it is ignored.	0 : **3** : 20
Accepted current interrupt while driving [seconds]	Maximum permissible interruption of the current flow while driving (if the sun shading product is no longer in the monitored area after starting to move and has not yet reached the tolerance range around the end of the movement) (Figure ②).	0 : **2** : 20
Maximum deviation from expected run time [seconds]	Permissible deviation around the end of the movement. The run time may deviate from the known value by this value without an error being entered (Figure ③ and ④). If the run time adaptation is used, then the new value (Figure ⑤) is used for the adjustment in this case. Example: If the value is set to 3 s, then the deviation can be between -3 s to +3 s.	1 : **3** : 20
Accepted current interruption in the range of run time deviation [seconds]	Maximum permissible interruption of the current flow in the tolerance range around the end of the movement (Figure in range of ③ und ④).	0 : **1** : 20
Run time detection active	When activated, the run time detection for the channel is switched on and GO start run time detection is enabled.	**No**
		Yes
Run time detection	Via GO start run time detection: No control mode run time detection. Can only be activated via "Start run time detection" object.	**Via GO Start run time detection**
	After programming or via GO Start run time detection: Always during the first movement after programming.	After programming or via GO Start run time detection
	After voltage recovery or via GO Start run time detection: Always during the first movement after voltage recovery.	After a voltage recovery or via GO Start run time detection
Overwrite detected run times by programming	Specifies whether values for the UP and DOWN run time, that were determined by the run time detection or run time adaptation, should be overwritten with the values from the Engineering Tool Software.	**No**
		Yes
Run time adaptation Control mode adaptation active	The control mode adaptation always corrects the run time (Figure ⑤) in the background. The value is saved every time a deviation is detected within the tolerance range. The run time is changed to the average of the last three values.	**No**
		Yes

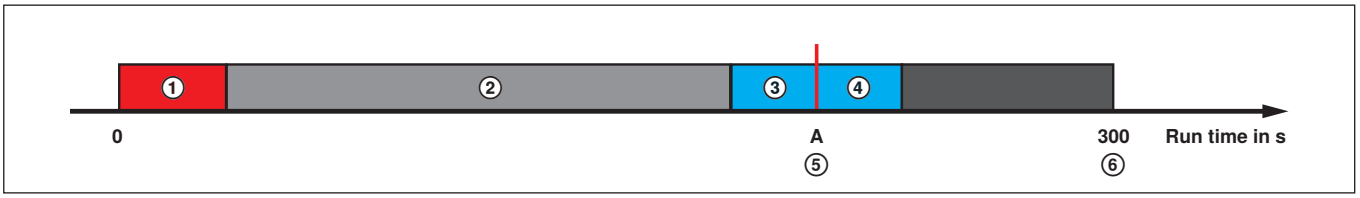


Fig. 24 Ranges of current measurement/run time functions

① Range following start that is not monitored
(parameterised separately for UP and DOWN)

② Error monitoring only (***GO Fault message***)

③ Tolerance range before current run time

④ Tolerance range after current run time

⑤ Current run time
(as parameterised: fixed or determined automatically)

⑥ Maximum adjustable run time (300 s)

For all other motor parameters for pro actuators,
see section *7.2.4.2 on page 49*

7.2.4.4 Safety

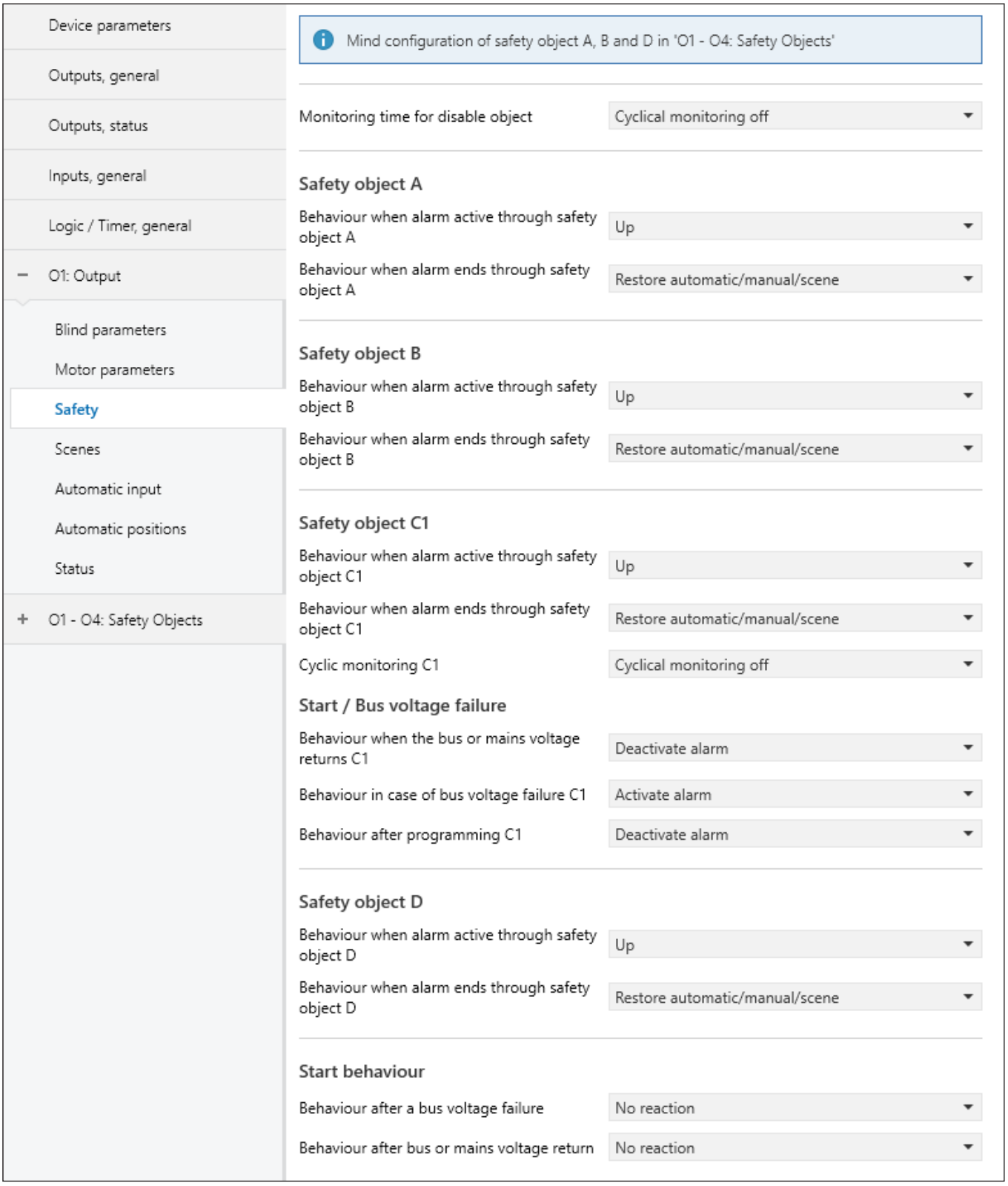


Fig. 25 Parameter dialogue: On: Output (for roller shutter/textile sun shading system) → Safety

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.

Parameter	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 being received, the product control is disabled and movements are stopped. The blockage 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* is activated 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*** should be moved in case of an alarm.	**0** : 100
Behaviour when *Alarm end* is activated 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 control mode object
		Restore Control mode/Manual/ Scenario
Blind length [%]	Blind length to which ***GO Safety object A*** should be moved in case of an alarm end.	**0** : 100
Behaviour when *Alarm active* is activated through safety object B	Output channels execute the move command that has been set for A*larm 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*** should be moved in case of an alarm.	**0** : 100
Behaviour when *Alarm end* is activated 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 control mode object
		Restore Control mode/Manual/ Scenario
Blind length [%]	Blind length to which ***GO Safety object B*** should be moved in case of an alarm end.	**0** : 100

Behaviour when *Alarm active* is activated through safety object Cn	Output channels execute the move command that has been set for A*larm 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*** should be moved in case of an alarm.	**0** : 100
Behaviour when *Alarm end* is activated 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 control mode object
		Restore Control mode/Manual/ Scenario
Blind length [%]	Blind length to which ***GO Safety object Cn*** should be moved in case of an alarm end.	**0** : 100
Cyclical monitoring Cn	Monitors whether telegrams are received on the ***GO Safety object Cn***.	**Cyclical monitoring off**
		10 seconds
		1 minute
		2 minutes
		5 minutes
		10 minutes
Behaviour when the bus or mains voltage returns Cn	This parameter defines the behaviour of ***GO Safety object Cn*** after the mains voltage returns.	**Deactivate alarm**
		Activate alarm
		No change
Behaviour in case of bus voltage failure Cn	This parameter defines the behaviour of ***GO Safety object Cn*** after the bus voltage fails.	Deactivate alarm
		Activate alarm
		No change
Behaviour after programming Cn	This parameter defines the behaviour of ***GO Safety object Cn*** after programming the actuator.	**Deactivate alarm**
		Activate alarm
		No change
Behaviour when *Alarm active* is activated 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*** should be moved in case of an alarm.	**0** : 100
Behaviour when *Alarm end* is activated 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 control mode object
		Restore Control mode/Manual/ Scenario

Blind length [%]	Blind length to which ***GO Safety object D*** should be moved in case of an alarm end.	**0** : 100
Behaviour after the bus voltage failure	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

7.2.4.5 Scenarios

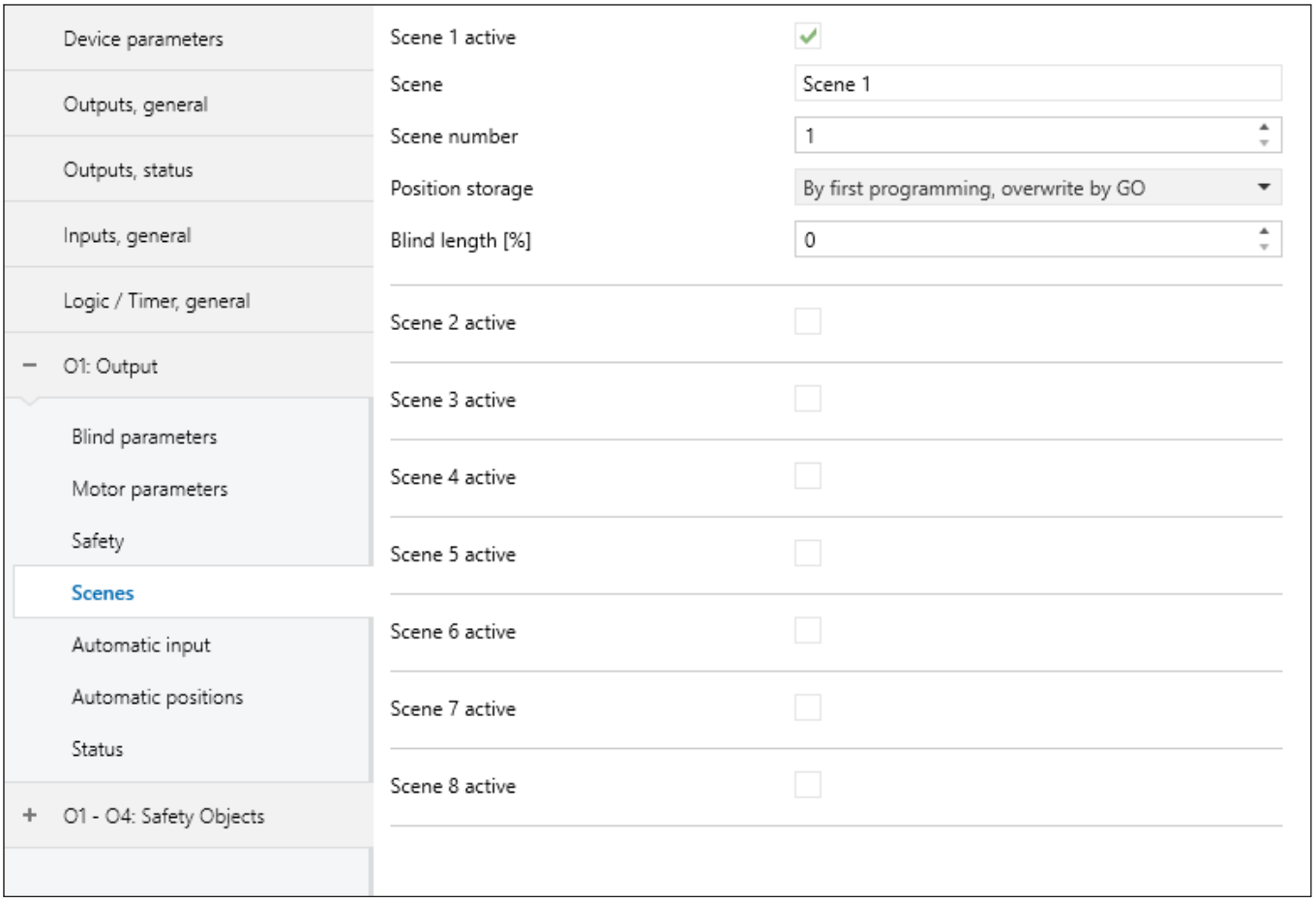


Fig. 26 Parameter dialogue: On: Output (for roller shutter/textile sun shading system) → Scenarios

Parameter	Function	Values
Scenario n active (8 scenarios can be defined)	Specifies whether the scenario should be used.	**Do not use**
		Use
Scenario	Text as designation of the scenario (purely for information). The text may have a maximum of 30 characters.	**Scenario n**
Scenario number	Scenario number that must be received on ***GO Scenarios*** of the output for the scenario to be executed. Each scenario number may only be used once.	**1** : 64
Position storage	Specify during initial programming, can be overwritten via GO: The scenario position is only copied from the Engineering Tool Software parameters during the initial programming process. If the device has ever been loaded via the Engineering Tool Software, then the scenario position is not copied from the Engineering Tool Software parameters again. The scenario position can then be changed via the scenarios GO.	**Specify during initial programming, can be overwritten via GO**
	Specify during programming, can be overwritten via GO: The scenario position is copied from the Engineering Tool Software parameters following every programming process. The scenario position can then be changed via the scenarios GO.	Specify during programming, can be overwritten via GO
	Fixed value: Position is copied from the Engineering Tool Software parameters and cannot be changed via the scenarios GO.	Fixed value
Blind length [%]	Blind length to which the blind is moved when the scenario is activated.	**0** : 100

7.2.4.6 Control mode input

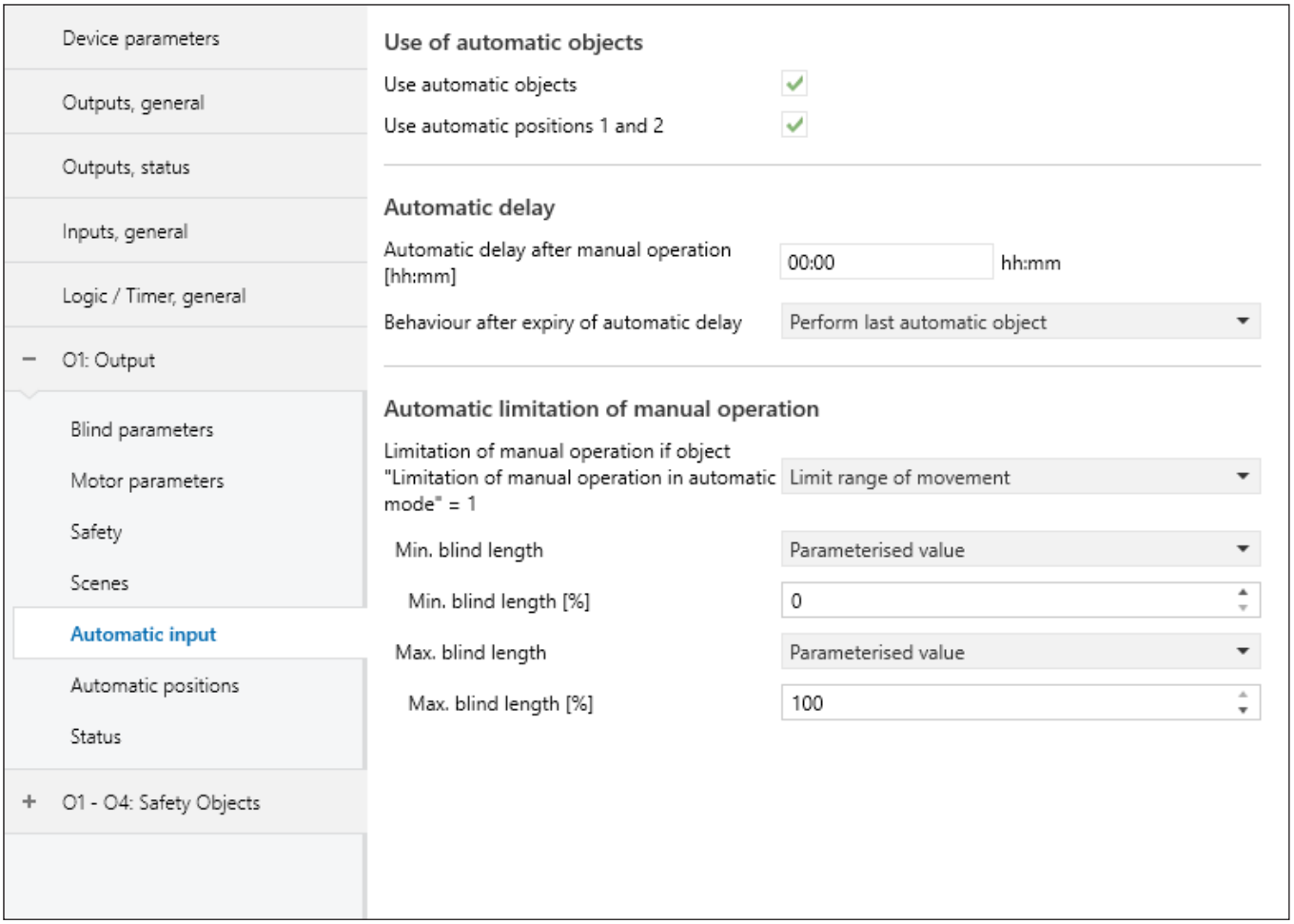


Fig. 27 Parameter dialogue: On: Output (for roller shutter/textile sun shading system) → Control mode input

Parameter	Function	Values
Use control mode objects	Switches on the remaining parameters of this page and the Control mode GOs.	**No**
		Yes
Use control mode positions 1 and 2	Specifies whether *control mode positions 1 and 2* are used. Switches on additional parameters.	**No**
		Yes
Control mode delay after manual operation [hh:mm]	After a manual move command the control mode delay starts running. The last position command is repeated after this time expires.	**00:00** : 23:59
Behaviour after expiry of control mode delay	Specifies what action should take place after the control mode delay (dwell time) has expired.	No reaction
		Up
		Down
		Perform last control mode object
Limitation of manual operation if object "Limitation of manual operation in control mode" = 1	Specifies in what range the blind length may move if ***GO Limitation of manual operation in control mode*** is active.	**Disable manual operation and scenarios**
		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 control mode*** is active.	No restriction
		From control mode 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 control mode** is active.	**No restriction**
		From control mode blind length object
		Parameterised value
Max. blind length [%]	Value used if the parameter *Max. blind length* has been set to *Parameterised value*	0 : **100**

7.2.4.7 Control mode positions

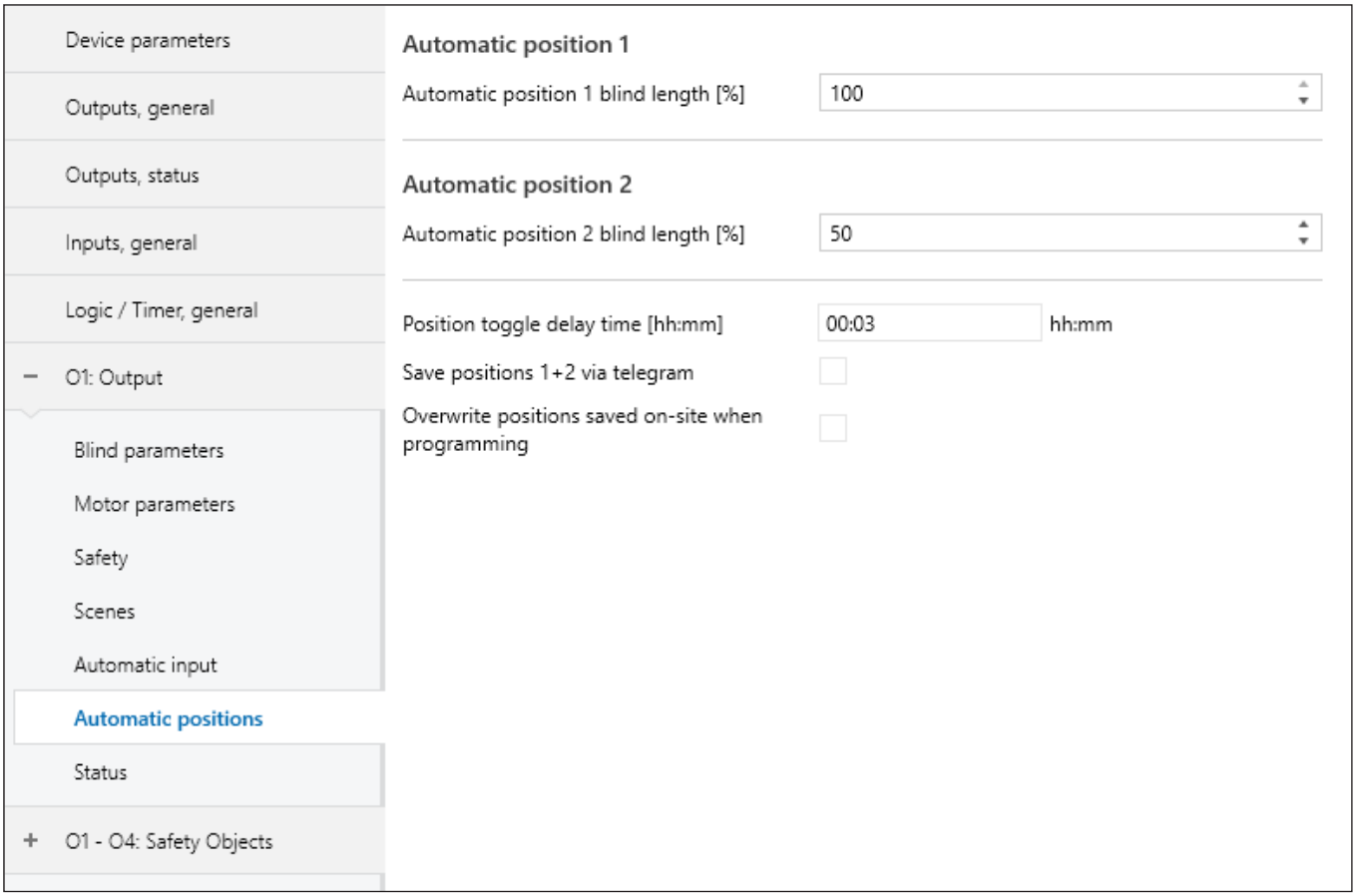


Fig. 28 Parameter dialogue: On: Output (for roller shutter/textile sun shading system) → Control mode positions

Parameter	Function	Values
Control mode position 1 blind length [%]	Specifies the blind length for control mode 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**
Control mode position 2 blind length [%]	Specifies the blind length for control mode 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 Control mode position toggle***, the sun shading product moves to the position that was last received on ***Control mode blind length/Control mode slat position*** after the *Position toggle delay time* expires. If a telegram has not yet been received for ***Control mode blind length/Control mode slat position***, the sun shading product moves to the saved Position 1. If a 0-telegram is received on the ***GO Control mode position toggle***, the sun shading product moves to Position 1 after the *Position toggle delay time* expires. The *Position toggle delay time* 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**

7.2.4.8 Status

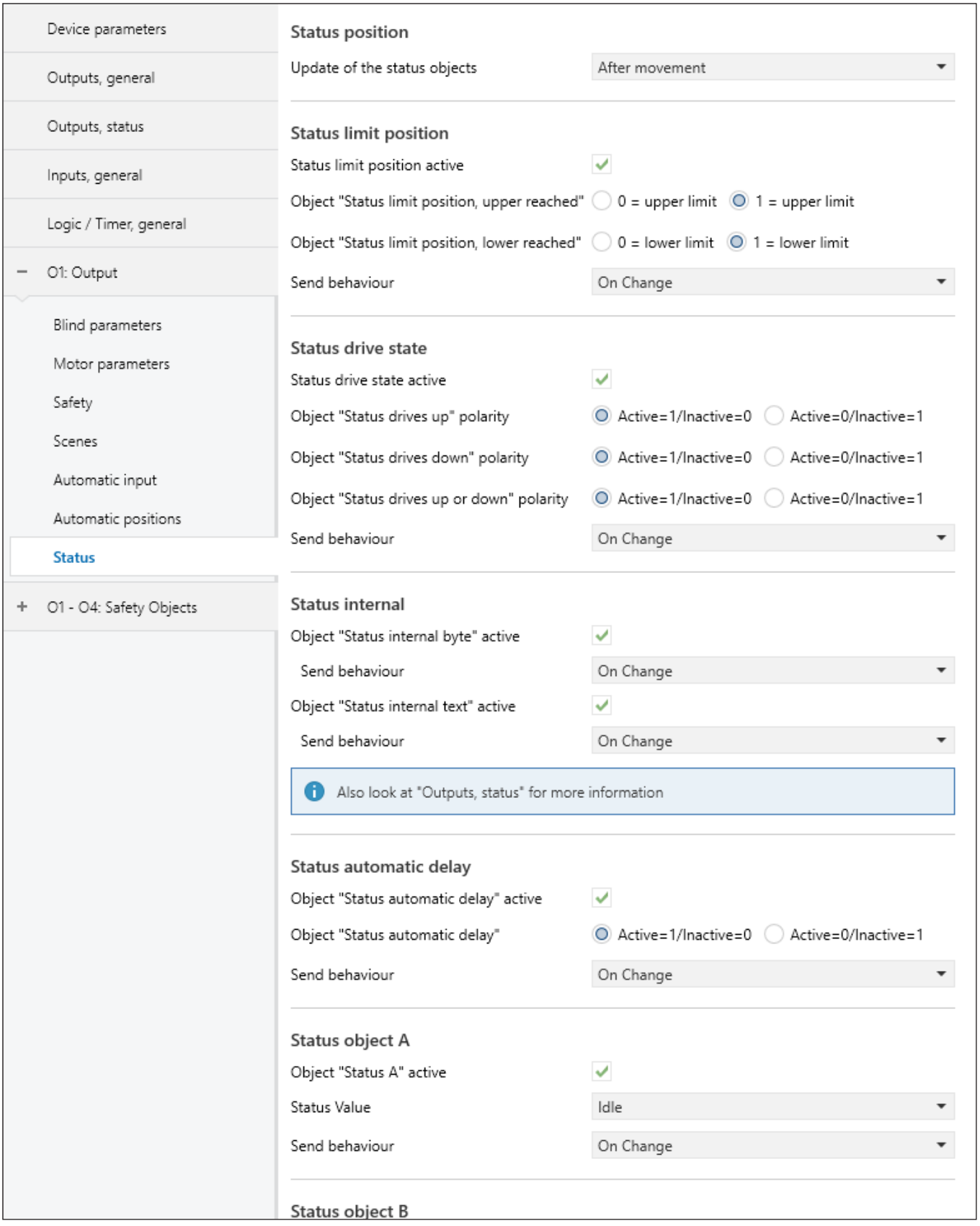


Fig. 29 Parameter dialogue: On: Output (for roller shutter/textile sun shading system) → Status

Parameter	Function	Values
Status position Update of the status objects	Send behaviour of status objects for blind length and slat position	**After movement**
		During movement: 1 s interval
		During movement: 2 s interval
		During movement: 5 s interval
		During movement: 10 s interval
Status limit position Status limit position active	Activates ***GO Status limit position, upper reached*** and ***GO Status limit position, lower reached*** and the associated following three parameters.	Yes
		No
Object "Status limit position, upper reached"	Polarity of the object	0 = upper limit
		1 = upper limit
Object "Status limit position, lower reached"	Polarity of the object	0 = lower limit
		1 = lower limit
Send behaviour	Send behaviour of both objects for the limit position. With the option "Do not transmit, readable", the object value is changed although it is not sent to the bus.	Do not transmit, readable
		In case of change
		In case of change and cyclical, every 30 s to 1/5/10/30/60 minutes
Status drive state Status limit position active	Activates ***GO Status drives UP***, ***GO Status drives DOWN*** and ***GO Status drives UP or DOWN*** and the associated following four parameters.	Yes
		No
Object "Status drives UP" polarity	Polarity of the object	**Active=1/Inactive=0**
		Active=0/Inactive=1
Object "Status drives DOWN" polarity	Polarity of the object	**Active=1/Inactive=0**
		Active=0/Inactive=1
Object "Status drives UP or DOWN" polarity	Polarity of the object	**Active=1/Inactive=0**
		Active=0/Inactive=1
Send behaviour	Send behaviour of the three objects for the drive state. With the option "Do not transmit, readable", the object value is changed although it is not sent to the bus.	Do not transmit, readable
		In case of change
		In case of change and cyclical, every 30 s to 1/5/10/30/60 minutes
Status internal Object "Status internal byte" active	Activates ***GO Status internal byte*** and the associated following parameter.	Yes
		No
Send behaviour	Send behaviour of the ***GO Status internal byte***. With the option "Do not transmit, readable", the object value is changed although it is not sent to the bus.	Do not transmit, readable
		In case of change
		In case of change and cyclical, every 30 s to 1/5/10/30/60 minutes
Object "Status internal text" active	Activates ***GO Status internal text*** and the associated following parameter.	Yes
		No
Send behaviour	Send behaviour of the ***GO Status internal text***. With the option "Do not transmit, readable", the object value is changed although it is not sent to the bus.	Do not transmit, readable
		In case of change
		In case of change and cyclical, every 30 s to 1/5/10/30/60 minutes
Status control mode delay Object "Status control mode delay" active	Activates ***GO Status control mode delay active*** and the associated following two parameters.	Yes
		No
Object "Status control mode delay"	Polarity of the object	**Active=1/Inactive=0**
		Active=0/Inactive=1
Send behaviour	Send behaviour of the ***GO Status control mode delay active***. With the option "Do not transmit, readable", the object value is changed although it is not sent to the bus.	Do not transmit, readable
		In case of change
		In case of change and cyclical, every 30 s to 1/5/10/30/60 minutes

Status object A / **B** / **C** Objekt "Status A / B / C" active	Activates ***GO Status n active*** and the associated following two parameters.	Yes
		No
Status value	Condition for setting the GO	**- Idle** - Control mode delay - Idle, manual restriction - Control mode delay, manual restriction - Safety object D - Safety object C - Safety object B - Safety object A - Disable object - Idle with or without manual restriction - Control mode delay with or without manual restriction - Manual operation enabled - Manual operation disabled - Control mode and manual operation enabled - Control mode and manual operation enabled - Control mode and manual operation disabled
Send behaviour	Send behaviour of the ***GO Status n active***. With the option "Do not transmit, readable", the object value is changed although it is not sent to the bus.	Do not transmit, readable
		In case of change
		In case of change and cyclical, every 30 s to 1/5/10/30/60 minutes

7.2.5 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 secure executes the **Up/Down movements**. As long as a safety object is active, the UP command remains active, 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 *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.

7.2.5.1 Blind parameters

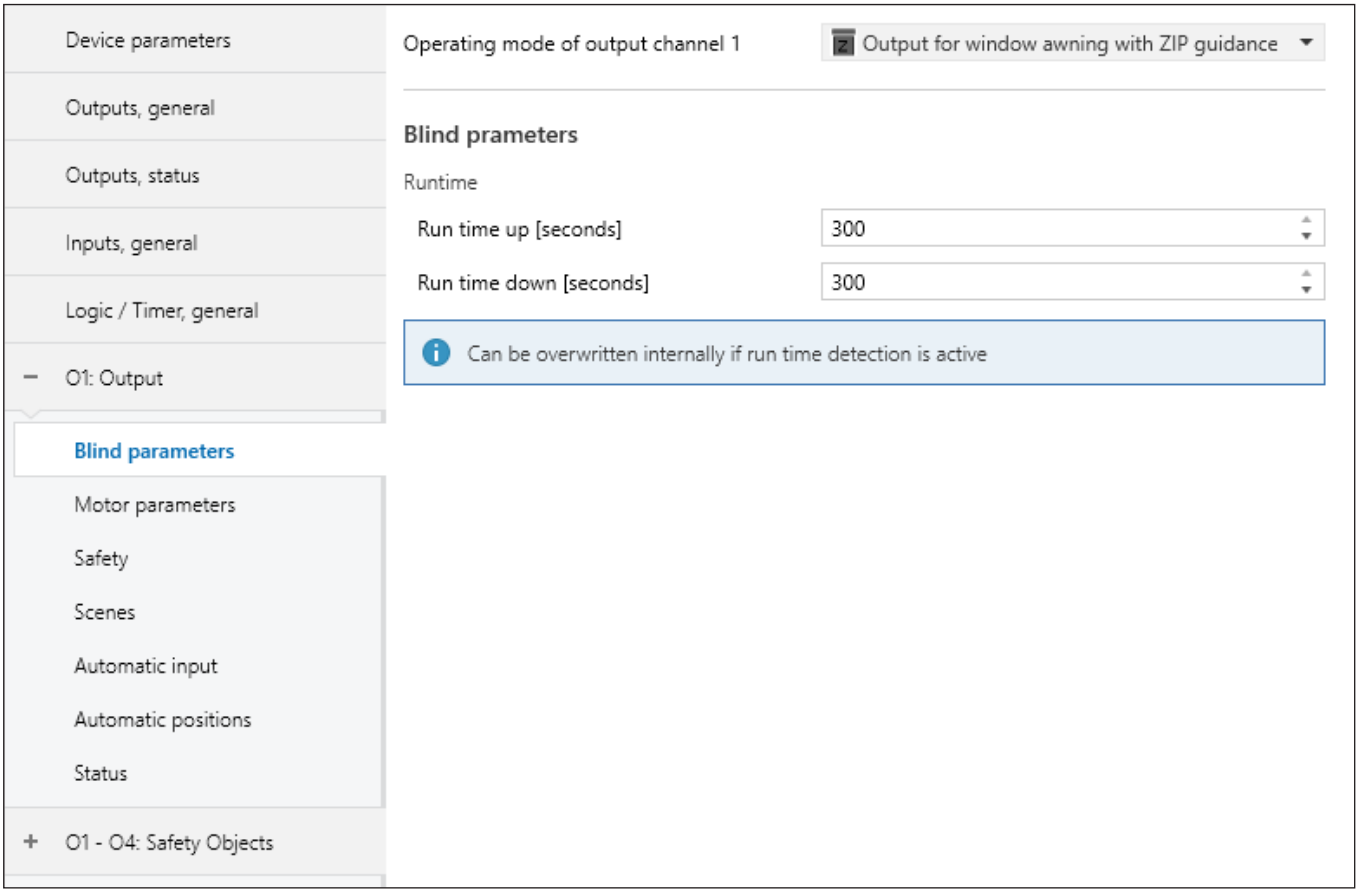


Fig. 30 Parameter dialogue: On: Output (for window awnings with ZIP guidance) → Blind parameters

Parameter	Function	Values
Operating mode of output channel n	Operating mode of the output, distinction made between various sun shading product types (see following chapters)	**Output for venetian blind/external venetian blind**
		Output for roller shutter/ textile sun shading system
		Output for awning ZIP guidance
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. (Value can be overwritten if run time detection is active)	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. (Value can be overwritten if run time detection is active)	0 : **300**

7.2.5.2 Motor parameters (for all actuators)

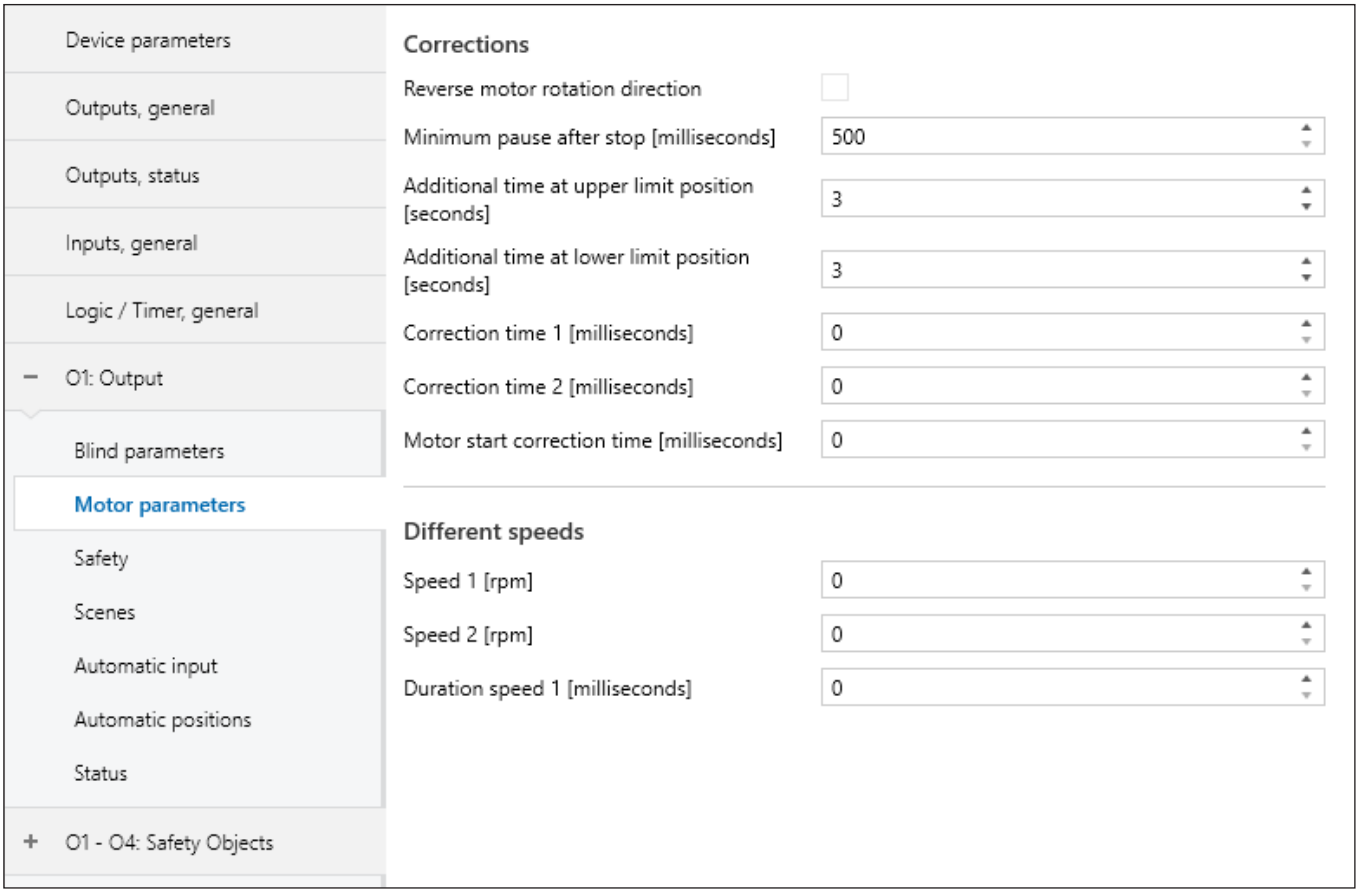


Fig. 31 Parameter dialogue: On: Output (for window awnings with ZIP guidance) → Motor parameters (for all actuators)

Parameter	Function	Values
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 following deceleration of the relay 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 following deceleration of the relay 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

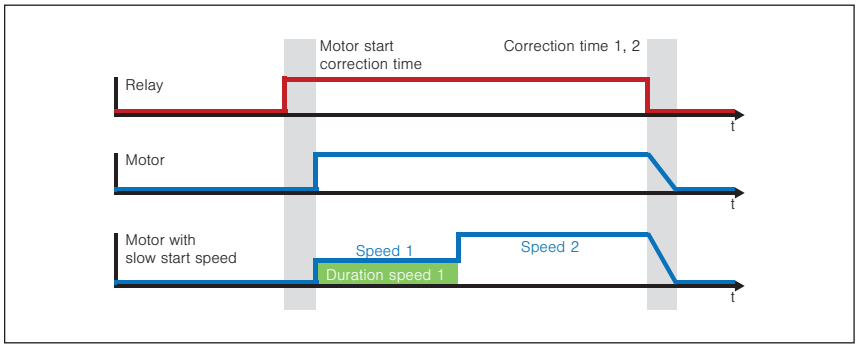


Fig. 32 Function of the correction parameters

7.2.5.3 Motor parameters (only for pro actuators)

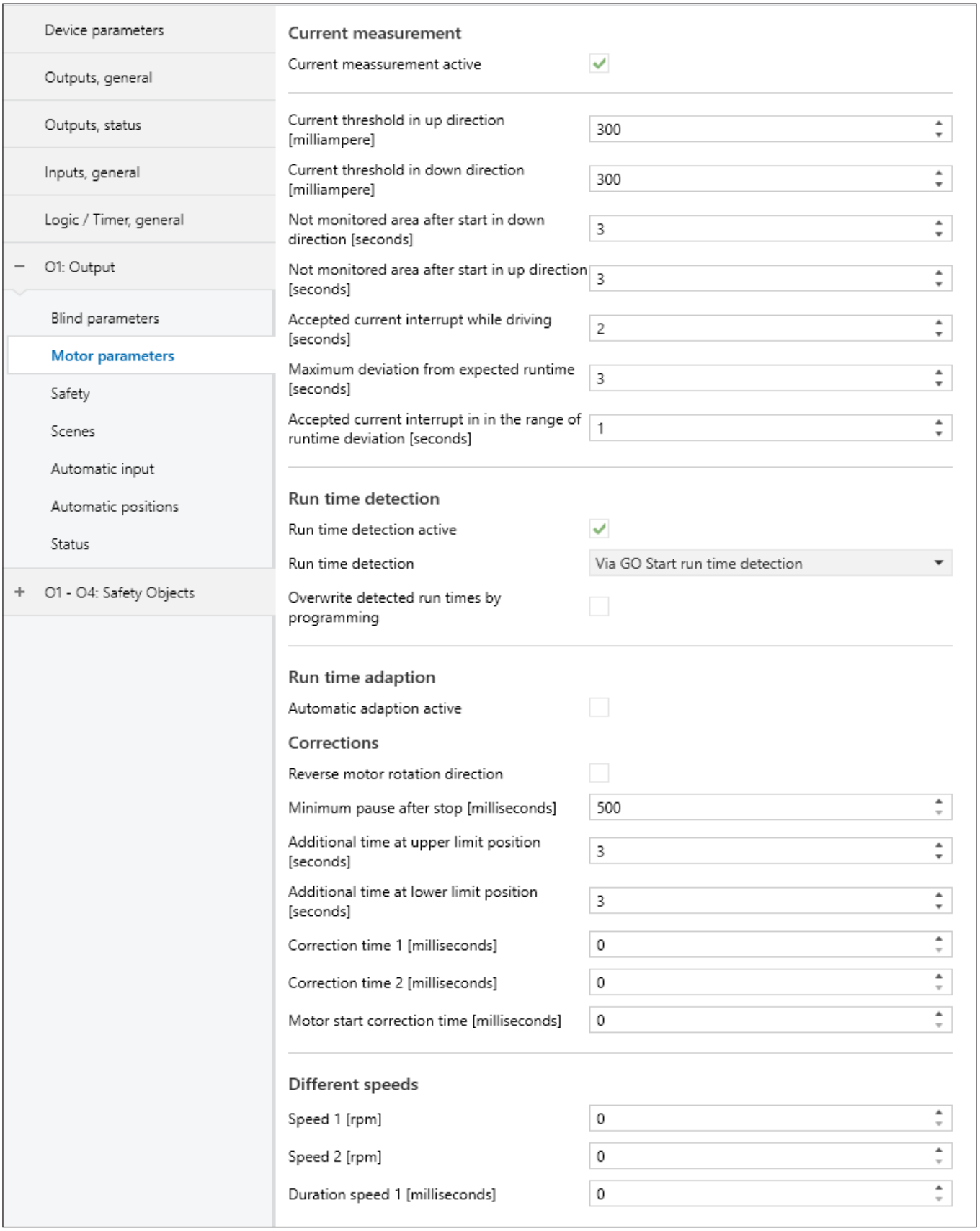


Fig. 33 Parameter dialogue: On: Output (for window awnings with ZIP guidance) → Motor parameters (for **pro** actuators)

Parameter	Function	Values
Current measurement active	When activated, the current measurement on the relay outputs of the channel is switched on.	**No**
		Yes
Current threshold in UP direction [milliampere]	If the level falls below this threshold during the UP movement, this is classified as "no current flow" and is evaluated based on the following parameterisation.	200 : **300** : 2000
Current threshold in DOWN direction [milliampere]	If the level falls below this threshold during the DOWN movement, this is classified as "no current flow" and is evaluated based on the following parameterisation.	200 : **300** : 2000
Not monitored area after start in DOWN direction [seconds]	Not monitored area after start in DOWN direction (Figure ①). If there is a current interruption during this period, it is ignored.	0 : **3** : 20
Not monitored area after start in UP direction [seconds]	Not monitored area after start in UP direction (Figure ①). If there is a current interruption during this period, it is ignored.	0 : **3** : 20
Accepted current interrupt while driving [seconds]	Maximum permissible interruption of the current flow while driving (if the sun shading product is no longer in the monitored area after starting to move and has not yet reached the tolerance range around the end of the movement) (Figure ②).	0 : **2** : 20
Maximum deviation from expected run time [seconds]	Permissible deviation around the end of the movement. The run time may deviate from the known value by this value without an error being entered (Figure ③ and ④). If the run time adaptation is used, then the new value (Figure ⑤) is used for the adjustment in this case. Example: If the value is set to 3 s, then the deviation can be between -3 s to +3 s.	1 : **3** : 20
Accepted current interruption in the range of run time deviation [seconds]	Maximum permissible interruption of the current flow in the tolerance range around the end of the movement (Figure in range of ③ und ④).	0 : **1** : 20
Run time detection active	When activated, the run time detection for the channel is switched on and GO start run time detection is enabled.	**No**
		Yes
Run time detection	Via GO start run time detection: No control mode run time detection. Can only be activated via "Start run time detection" object.	**Via GO Start run time detection**
	After programming or via GO Start run time detection: Always during the first movement after programming.	After programming or via GO Start run time detection
	After voltage recovery or via GO Start run time detection: Always during the first movement after voltage recovery.	After a voltage recovery or via GO Start run time detection
Overwrite detected run times by programming	Specifies whether values for the UP and DOWN run time, that were determined by the run time detection or run time adaptation, should be overwritten with the values from the Engineering Tool Software.	**No**
		Yes
Run time adaptation Control mode adaptation active	The control mode adaptation always corrects the run time (Figure ⑤) in the background. The value is saved every time a deviation is detected within the tolerance range. The run time is changed to the average of the last three values.	**No**
		Yes

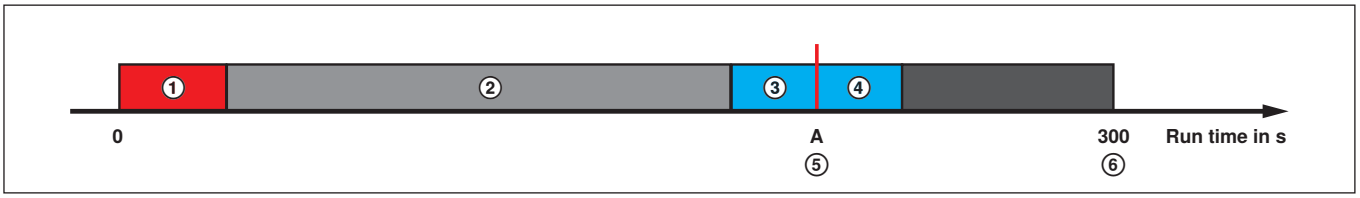


Fig. 34 Ranges of current measurement/run time functions

① Range following start that is not monitored
(parameterised separately for UP and DOWN)

② Error monitoring only (***GO Fault message***)

③ Tolerance range before current run time

④ Tolerance range after current run time

⑤ Current run time
(as parameterised: fixed or determined automatically)

⑥ Maximum adjustable run time (300 s)

For all other motor parameters for pro actuators,
see *section 7.2.5.2 on page 68*

7.2.5.4 Safety

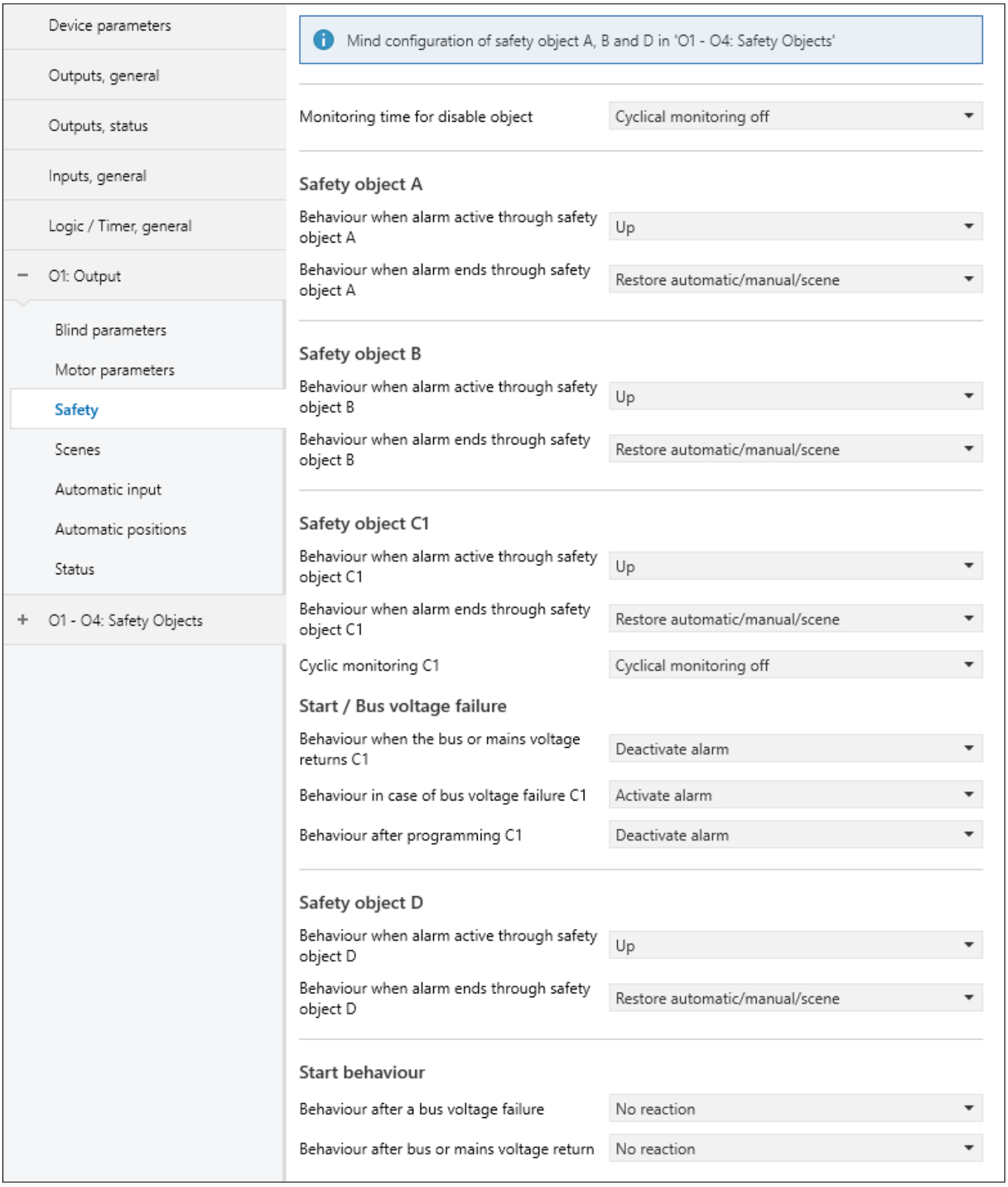


Fig. 35 Parameter dialogue: On: Output (for window awnings with ZIP guidance) → Safety

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.

Parameter	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 being received, the product control is disabled and movements are stopped. The blockage 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* is activated 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*** should be moved in case of an alarm.	**0** : 100
Behaviour when *Alarm end* is activated 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 control mode object
		Restore Control mode/Manual/ Scenario
Blind length [%]	Blind length to which ***GO Safety object A*** should be moved in case of an alarm end.	**0** : 100
Behaviour when *Alarm active* is activated 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*** should be moved in case of an alarm.	**0** : 100
Behaviour when *Alarm end* is activated 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 control mode object
		Restore Control mode/Manual/ Scenario
Blind length [%]	Blind length to which ***GO Safety object B*** should be moved in case of an alarm end.	**0** : 100

Behaviour when *Alarm active* is activated 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*** should be moved in case of an alarm.	**0** : 100
Behaviour when *Alarm end* is activated 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 control mode object
		Restore Control mode/Manual/ Scenario
Blind length [%]	Blind length to which ***GO Safety object Cn*** should be moved in case of an alarm end.	**0** : 100
Cyclical monitoring Cn	Monitors whether telegrams are received on the ***GO Safety object Cn***.	**Cyclical monitoring off**
		10 seconds
		1 minute
		2 minutes
		5 minutes
		10 minutes
Behaviour when the bus or mains voltage returns Cn	This parameter defines the behaviour of ***GO Safety object Cn*** after the mains voltage returns.	**Deactivate alarm**
		Activate alarm
		No change
Behaviour in case of bus voltage failure Cn	This parameter defines the behaviour of ***GO Safety object Cn*** after the bus voltage fails.	Deactivate alarm
		Activate alarm
		No change
Behaviour after programming Cn	This parameter defines the behaviour of ***GO Safety object Cn*** after programming the actuator.	**Deactivate alarm**
		Activate alarm
		No change
Behaviour when *Alarm active* is activated 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*** should be moved in case of an alarm.	**0** : 100
Behaviour when *Alarm end* is activated 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 control mode object
		Restore Control mode/Manual/ Scenario

Blind length [%]	Blind length to which ***GO Safety object D*** should be moved in case of an alarm end.	**0** : 100
Behaviour after the bus voltage failure	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

7.2.5.5 Scenarios

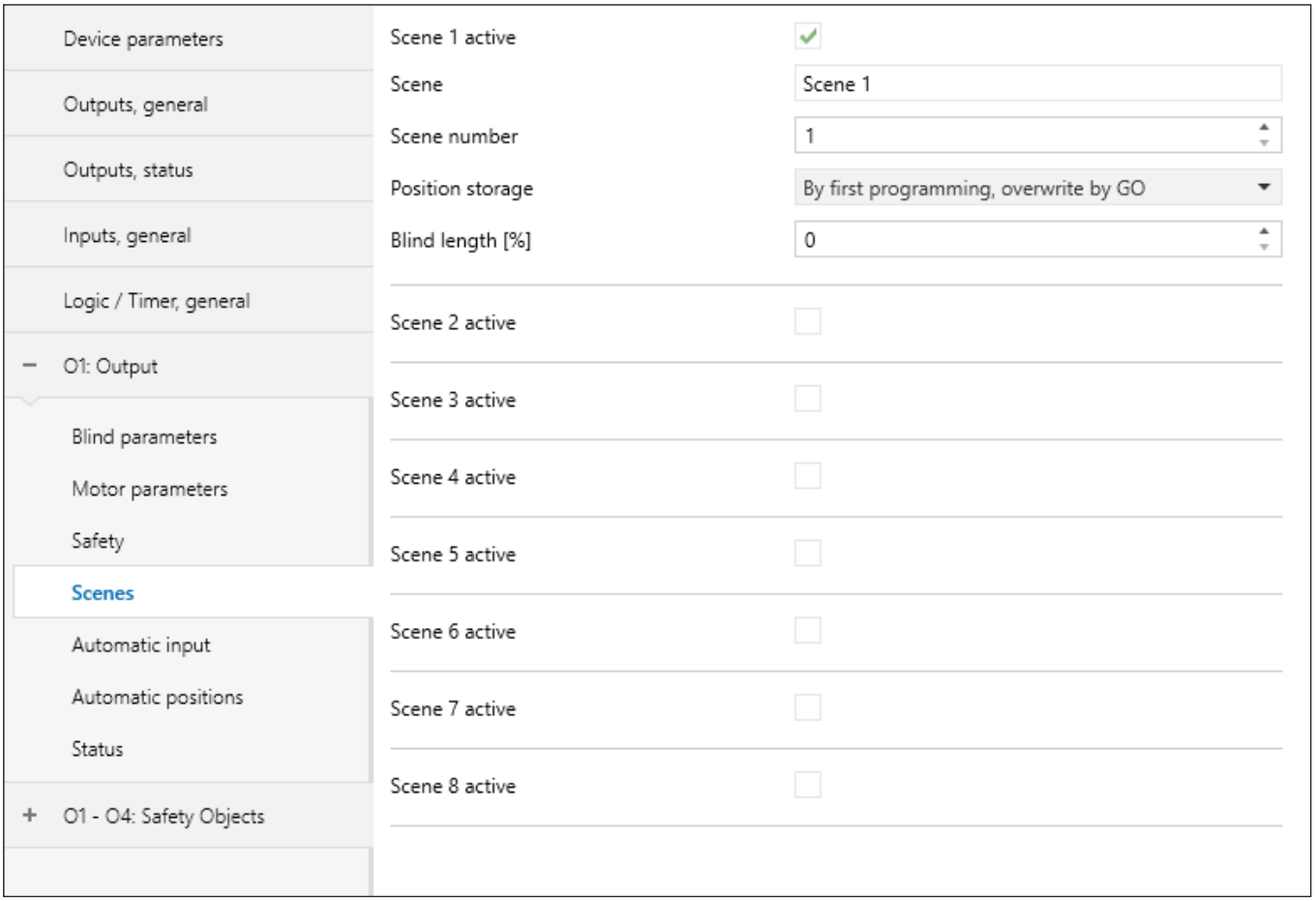


Fig. 36 Parameter dialogue: On: Output (for window awnings with ZIP guidance) → Scenarios

Parameter	Function	Values
Scenario n active (8 scenarios can be defined)	Specifies whether the scenario should be used.	**Do not use**
		Use
Scenario	Text as designation of the scenario (purely for information). The text may have a maximum of 30 characters.	**Scenario n**
Scenario number	Scenario number that must be received on ***GO Scenarios*** of the output for the scenario to be executed. Each scenario number may only be used once.	**1** : 64
Position storage	Specify during initial programming, can be overwritten via GO: The scenario position is only copied from the Engineering Tool Software parameters during the initial programming process. If the device has ever been loaded via the Engineering Tool Software, then the scenario position is not copied from the Engineering Tool Software parameters again. The scenario position can then be changed via the scenarios GO.	**Specify during initial programming, can be overwritten via GO**
	Specify during programming, can be overwritten via GO: The scenario position is copied from the Engineering Tool Software parameters following every programming process. The scenario position can then be changed via the scenarios GO.	Specify during programming, can be overwritten via GO
	Fixed value: Position is copied from the Engineering Tool Software parameters and cannot be changed via the scenarios GO.	Fixed value
Blind length [%]	Blind length to which the blind is moved when the scenario is activated.	**0** : 100

7.2.5.6 Control mode input

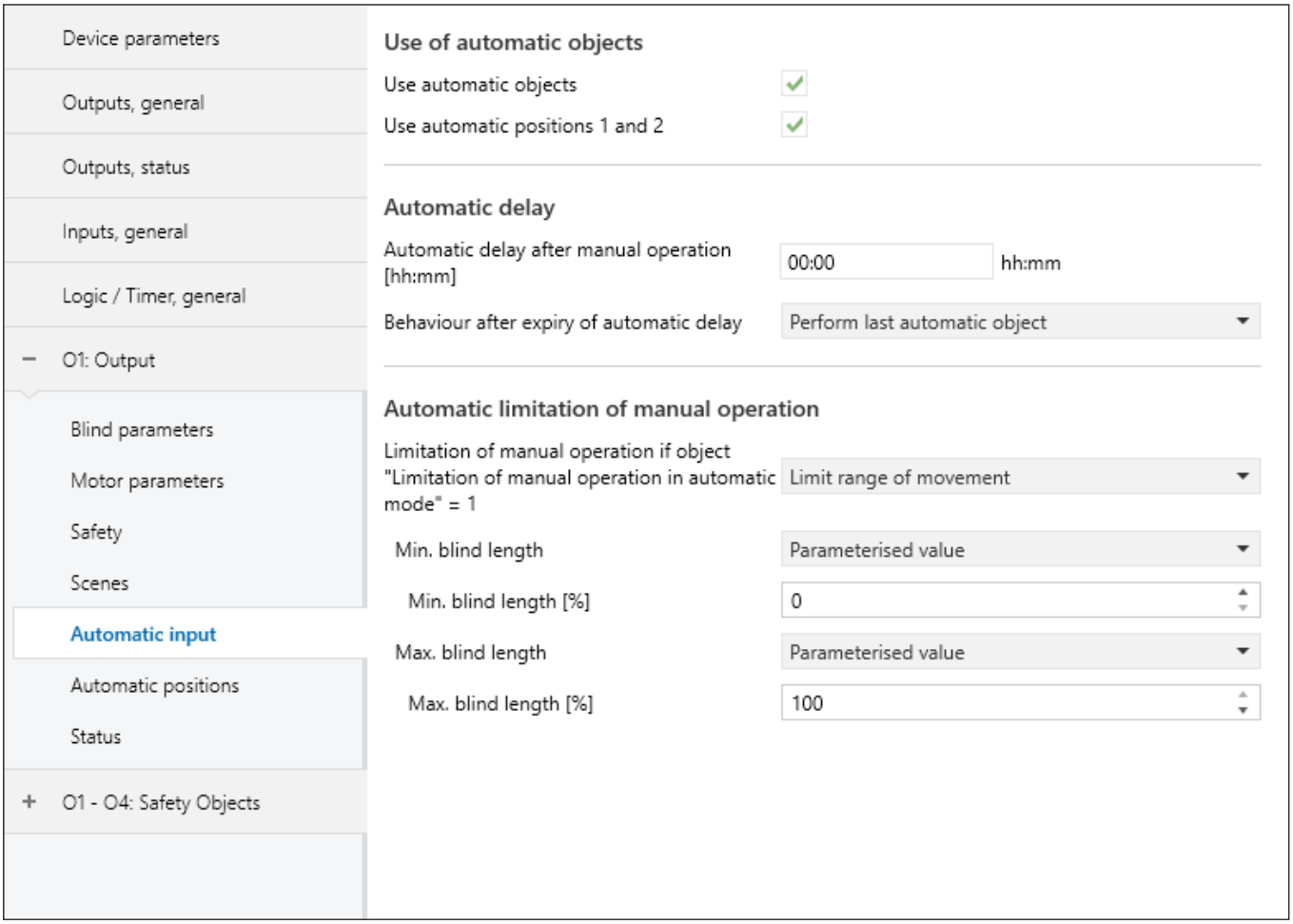


Fig. 37 Parameter dialogue: On: Output (for window awnings with ZIP guidance) → Control mode input

Parameter	Function	Values
Use control mode objects	Switches on the remaining parameters of this page and the Control mode GOs.	**No**
		Yes
Use control mode positions 1 and 2	Specifies whether *control mode positions 1 and 2* are used. Switches on additional parameters.	**No**
		Yes
Control mode delay after manual operation [hh:mm]	After a manual move command the control mode delay starts running. The last position command is repeated after this time expires.	**00:00** : 23:59
Behaviour after expiry of control mode delay	Specifies what action should take place after the control mode delay (dwell time) has expired.	No reaction
		Up
		Down
		Perform last control mode object
Limitation of manual operation if object "Limitation of manual operation in control mode" = 1	Specifies in what range the blind length may move if ***GO Limitation of manual operation in control mode*** is active.	**Disable manual operation and scenarios**
		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 control mode*** is active.	No restriction
		From control mode 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 control mode** is active.	**No restriction**
		From control mode blind length object
		Parameterised value
Max. blind length [%]	Value used if the parameter *Max. blind length* has been set to *Parameterised value*	0 : **100**

7.2.5.7 Control mode positions

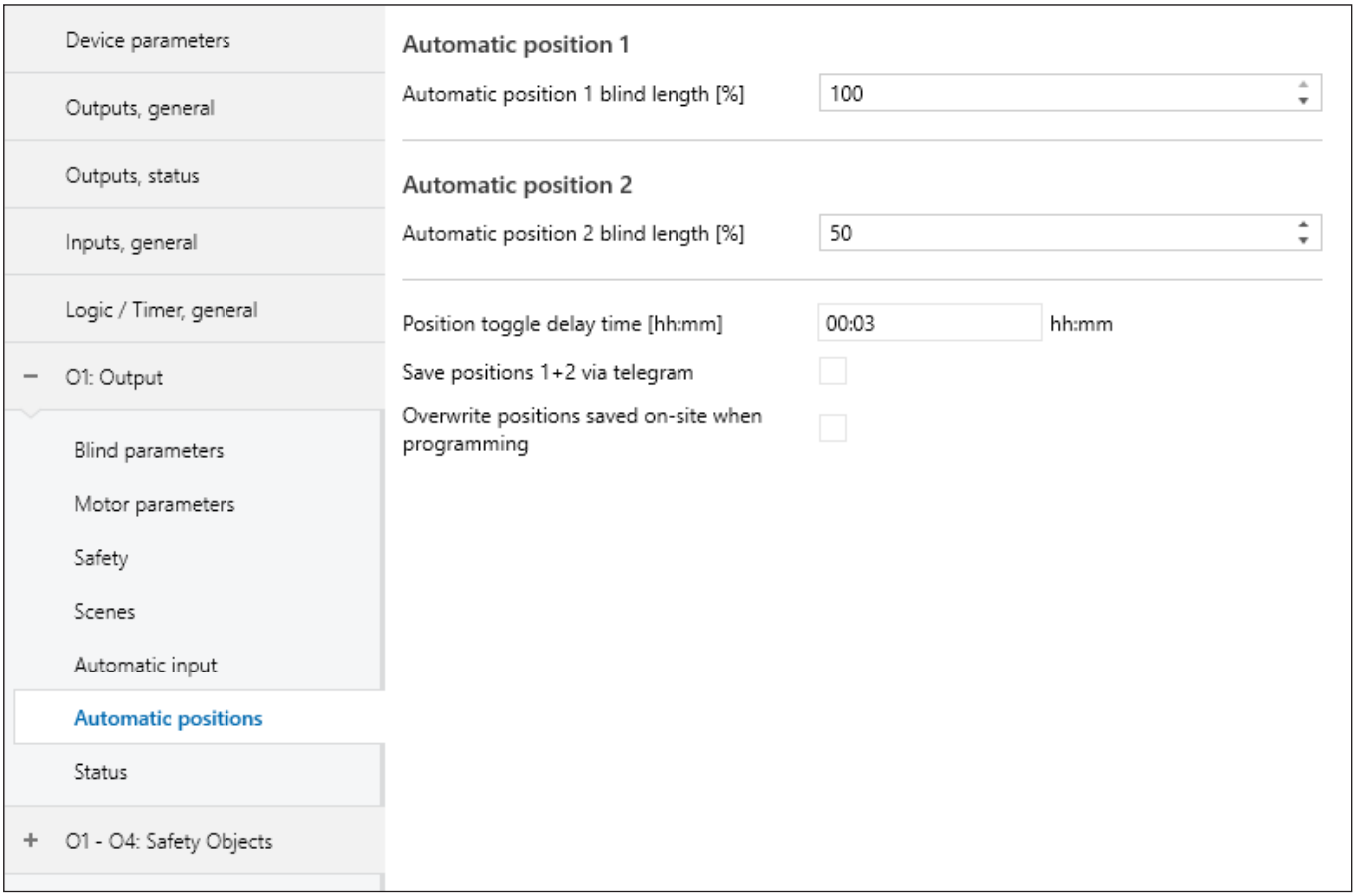


Fig. 38 Parameter dialogue: On: Output (for window awnings with ZIP guidance) → Control mode positions

Parameter	Function	Values
Control mode position 1 blind length [%]	Specifies the blind length for control mode 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**
Control mode position 2 blind length [%]	Specifies the blind length for control mode 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 Control mode position toggle***, the sun shading product moves to the position that was last received on ***Control mode blind length*/*Control mode slat position*** after the *Position toggle delay time* expires. If a telegram has not yet been received for ***Control mode blind length*/*Control mode slat position***, the sun shading product moves to the saved Position 1. If a 0-telegram is received on the ***GO Control mode position toggle***, the sun shading product moves to Position 1 after the *Position toggle delay time* expires. The *Position toggle delay time* 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**

7.2.5.8 Status

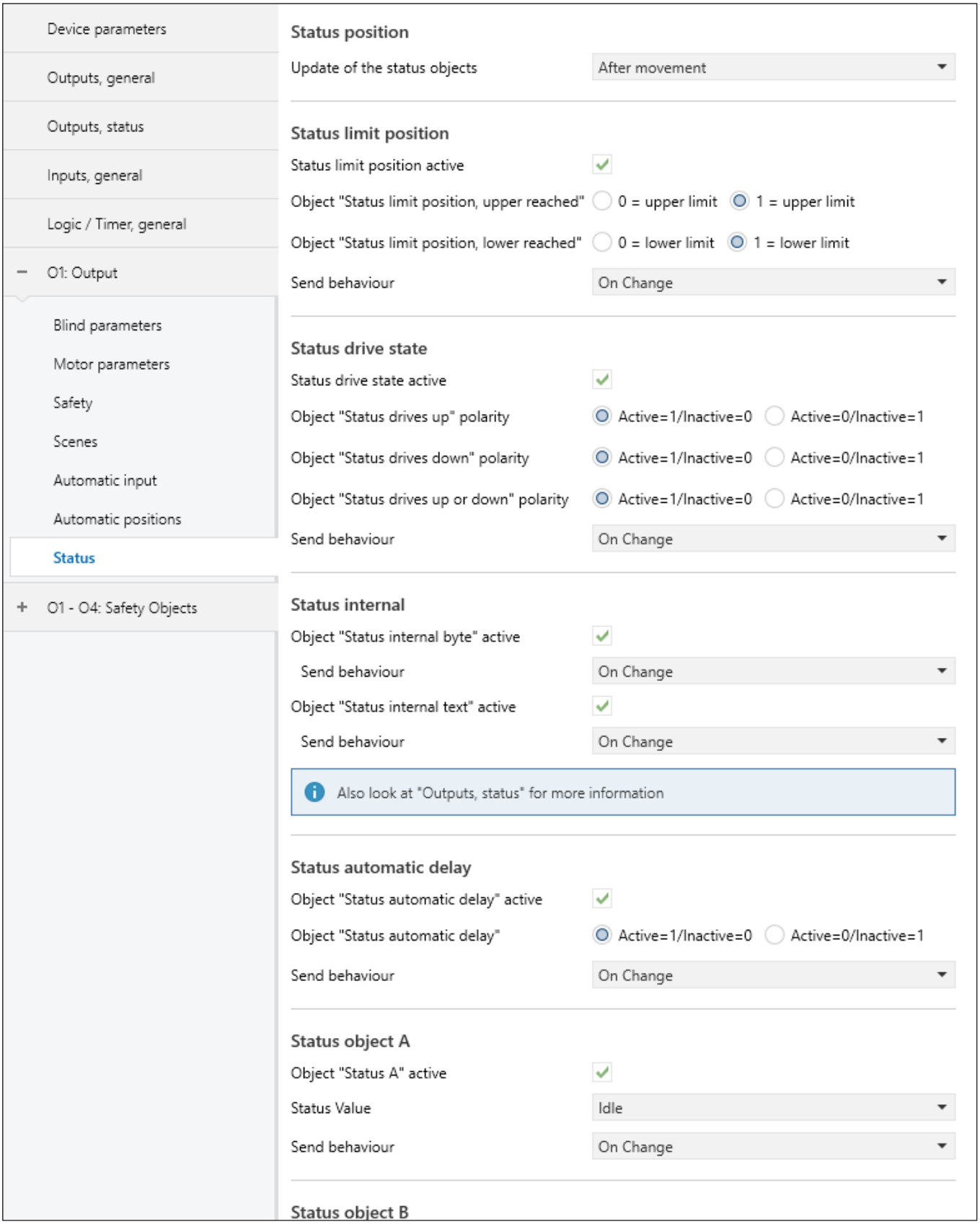


Fig. 39 Parameter dialogue: On: Output (for window awnings with ZIP guidance) → Status

Parameter	Function	Values
Status position Update of the status objects	Send behaviour of status objects for blind length and slat position	**After movement**
		During movement: 1 s interval
		During movement: 2 s interval
		During movement: 5 s interval
		During movement: 10 s interval
Status limit position Status limit position active	Activates ***GO Status limit position, upper reached*** and ***GO Status limit position, lower reached*** and the associated following three parameters.	Yes
		No
Object "Status limit position, upper reached"	Polarity of the object	0 = upper limit
		1 = upper limit
Object "Status limit position, lower reached"	Polarity of the object	0 = lower limit
		1 = lower limit
Send behaviour	Send behaviour of both objects for the limit position. With the option "Do not transmit, readable", the object value is changed although it is not sent to the bus.	Do not transmit, readable
		In case of change
		In case of change and cyclical, every 30 s to 1/5/10/30/60 minutes
Status drive state Status limit position active	Activates ***GO Status drives UP***, ***GO Status drives DOWN*** and ***GO Status drives UP or DOWN*** and the associated following four parameters.	Yes
		No
Object "Status drives UP" polarity	Polarity of the object	**Active=1/Inactive=0**
		Active=0/Inactive=1
Object "Status drives DOWN" polarity	Polarity of the object	**Active=1/Inactive=0**
		Active=0/Inactive=1
Object "Status drives UP or DOWN" polarity	Polarity of the object	**Active=1/Inactive=0**
		Active=0/Inactive=1
Send behaviour	Send behaviour of the three objects for the drive state. With the option "Do not transmit, readable", the object value is changed although it is not sent to the bus.	Do not transmit, readable
		In case of change
		In case of change and cyclical, every 30 s to 1/5/10/30/60 minutes
Status internal Object "Status internal byte" active	Activates ***GO Status internal byte*** and the associated following parameter.	Yes
		No
Send behaviour	Send behaviour of the ***GO Status internal byte***. With the option "Do not transmit, readable", the object value is changed although it is not sent to the bus.	Do not transmit, readable
		In case of change
		In case of change and cyclical, every 30 s to 1/5/10/30/60 minutes
Object "Status internal text" active	Activates ***GO Status internal text*** and the associated following parameter.	Yes
		No
Send behaviour	Send behaviour of the ***GO Status internal text***. With the option "Do not transmit, readable", the object value is changed although it is not sent to the bus.	Do not transmit, readable
		In case of change
		In case of change and cyclical, every 30 s to 1/5/10/30/60 minutes
Status control mode delay Object "Status control mode delay" active	Activates ***GO Status control mode delay active*** and the associated following two parameters.	Yes
		No
Object "Status control mode delay"	Polarity of the object	**Active=1/Inactive=0**
		Active=0/Inactive=1
Send behaviour	Send behaviour of the ***GO Status control mode delay active***. With the option "Do not transmit, readable", the object value is changed although it is not sent to the bus.	Do not transmit, readable
		In case of change
		In case of change and cyclical, every 30 s to 1/5/10/30/60 minutes

Status object A / B / C Objekt "Status A / B / C" active	Activates ***GO Status n active*** and the associated following two parameters.	Yes **No**
Status value	Condition for setting the GO	**- Idle** - Control mode delay - Idle, manual restriction - Control mode delay, manual restriction - Safety object D - Safety object C - Safety object B - Safety object A - Disable object - Idle with or without manual restriction - Control mode delay with or without manual restriction - Manual operation enabled - Manual operation disabled - Control mode and manual operation enabled - Control mode and manual operation enabled - Control mode and manual operation disabled
Send behaviour	Send behaviour of the ***GO Status n active***. With the option "Do not transmit, readable", the object value is changed although it is not sent to the bus.	Do not transmit, readable **In case of change** In case of change and cyclical, every 30 s to 1/5/10/30/60 minutes

7.3 Inputs

Depending on the device, the KNX secure devices have 8 or 16 binary inputs.

- ▶ Inputs are activated in **Inputs, general**.
  Depending on the required operating mode, the inputs (input terminals) can be parameterised individually or in pairs.
- ▶ The **In.n: Input** menus are displayed as soon as the corresponding inputs have been activated. If a name was assigned to the input, this is displayed instead of the designation "Input".

The inputs support different operating modes:

Inputs, general Operating mode	**In.n: Input** Operating mode	**Description**
Inputs in pairs	Sunblind push button	Section *7.3.2 on page 88*
Inputs in pairs	Two button dimming	Section *7.3.3 on page 90*
Inputs single	Switch (on/off)	Section *7.3.4 on page 92*
Inputs single	Toggle	Section *7.3.5 on page 94*
Inputs single	Edge evaluation	Section *7.3.6 on page 96*
Inputs single	Push button (short/long)	Section *7.3.7 on page 98*
Inputs single	Scenarios push button	Section *7.3.8 on page 101*
Inputs single	One button dimming	Section *7.3.9 on page 103*

7.3.1 Inputs, general

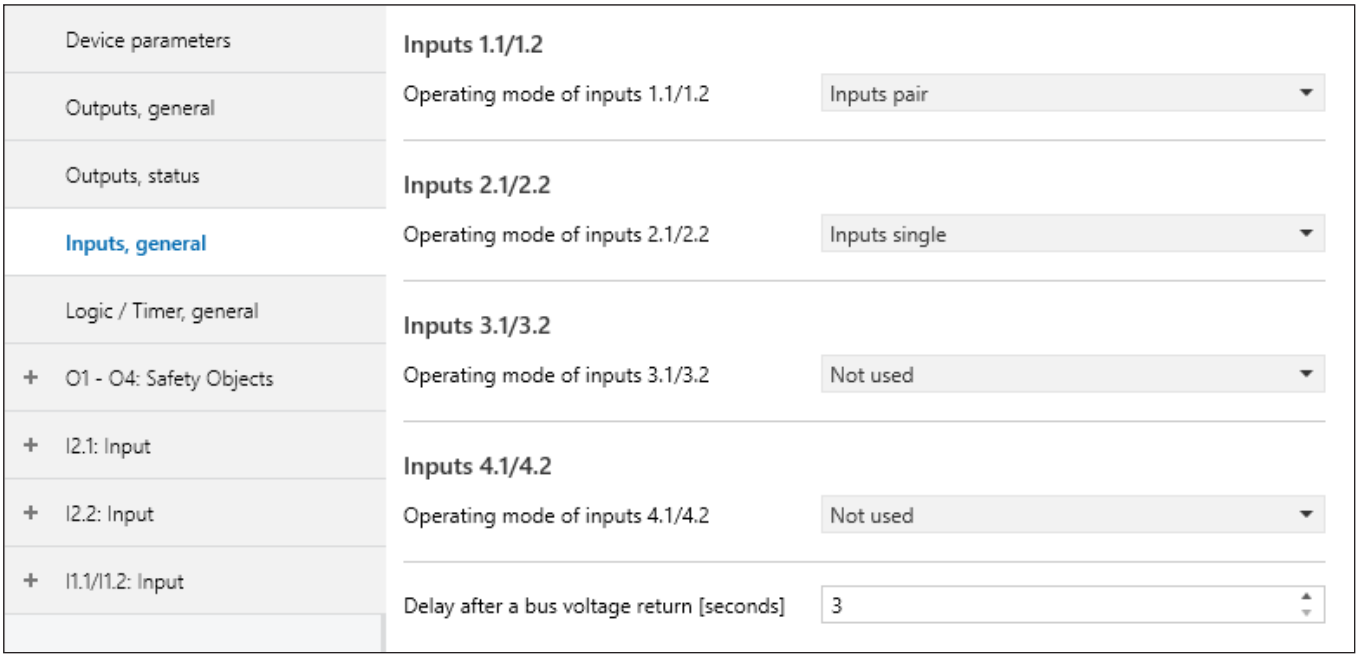


Fig. 40 Parameter dialogue: Inputs → Inputs, general

Parameter	Function	Values
Operating mode Inputs n.1/n.2	Specifies the operating mode of a pair of inputs. The operating modes S*unblind push button* and *Two button dimming* require two inputs. The other operating modes require just one input each.	**Not used**
		Inputs single
		Inputs in pairs
Delay after a bus voltage return [seconds]	This parameter determines how much time must pass between the return of the bus voltage and the sending of the first telegram.	**3** : 255

7.3.2 Sunblind push button input

Behaviour based on KNX standard for a sunblind push button. Sends commands to a 1-bit GO for the raising/lowering and a 1-bit GO for the Up/Down step based on the operation and parameterised operating behaviour.

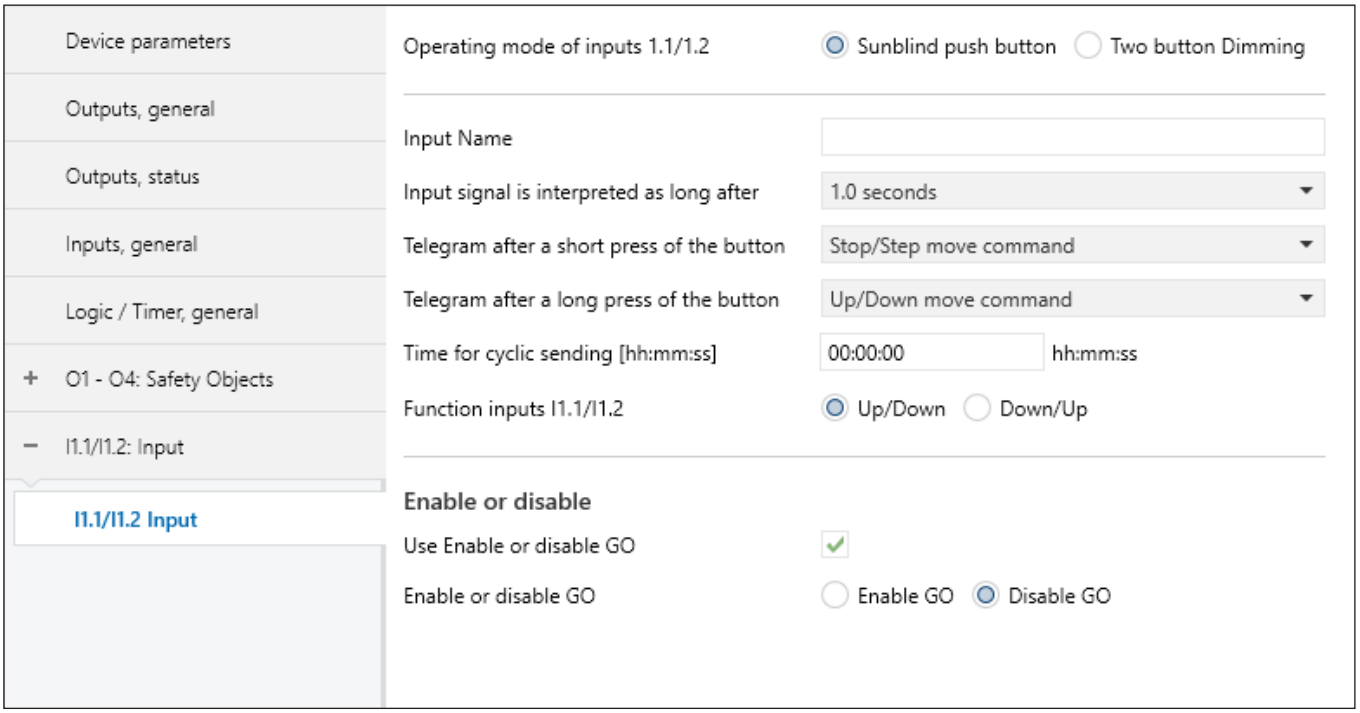


Fig. 41 Parameter dialogue: Inputs → Input n.1/n.2 Sunblind push button

Parameter	Function	Values
Operating mode Inputs n.1/n.2	Specifies the operating mode of a pair of inputs.	**Sunblind push button**
		Two button dimming
Input name	A name for the input can be specified here so that it is easier to assign.	Text (max. 80 characters)
Input signal is interpreted as long after	If the push button is pressed for at least the set time, the telegram for a long keystroke is sent after the set time. If the button is pressed for a shorter time, the telegram for a short keystroke 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 a short keystroke	If the Up contact was briefly closed, the ***GO Stop/Step move command*** sends a 0-telegram. If the Down contact was briefly closed, the ***GO Stop/Step move command*** sends a 1-telegram.	No move command
		Up/Down move command
		Stop/Step move command
Telegram after a long keystroke	If the Up contact was closed for a long time, the ***GO Up/Down move command*** sends a 0-telegram. If the Down contact was closed for a long time, the ***GO Up/Down 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 long keystroke 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 keystroke.	**00:00:00** : 23:59:59
Function inputs n.1/n.2	The function of both input terminals can be swapped here, if necessary.	**Up/Down**
		Down/Up
Use Enable or disable GO	Specifies whether an enable or disable object should be used.	Yes
		No
Enable or disable GO	Specifies whether an enable object (1 enable, 0 disable) or a disable object (0 enable, 1 disable) should be used.	Enable GO
		Disable GO

7.3.3 Two button dimming input

Behaviour based on KNX standard for two button dimmer. Sends commands to a 4-bit GO for dimming and a 1-bit GO for switching based on the operation and parameterised operating behaviour.

Start-Stop-Dimming:

- ► After a long keystroke on the input, a dimming command to "increase by 100%" or "reduce by 100%" is sent. If the edge is changed from High→Low (button is released), a Stop command is sent.
- ► After a short keystroke, ON or OFF is sent on the ON/OFF GO.

Step dimming:

- ► After a long keystroke on the input, a dimming command to "increase by n%" or "reduce by n%" is sent (value n can be parameterised in steps). The command is repeated during the parameterised interval.
- ► After a short keystroke, ON or OFF is sent on the ON/OFF GO.

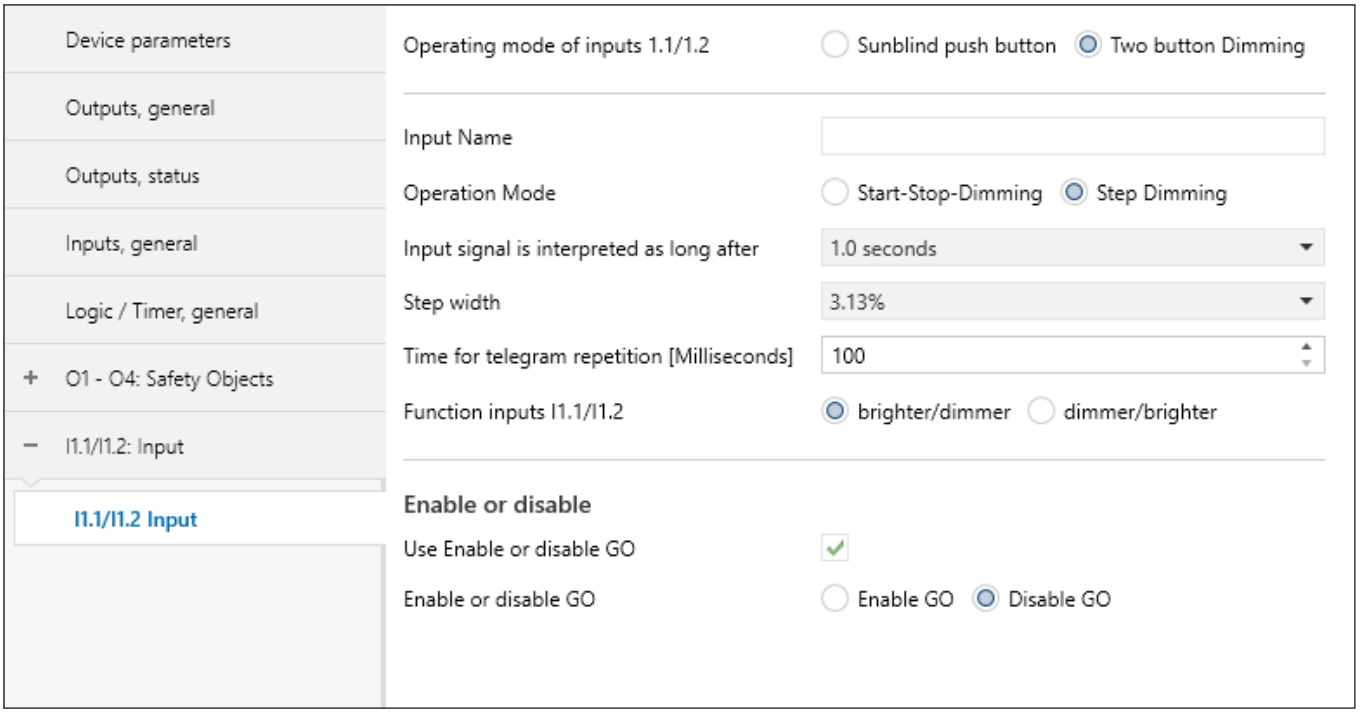


Fig. 42 Parameter dialogue: Inputs → Input n.1/n.2 Two button dimming

Parameter	Function	Values
Operating mode Inputs n.1/n.2	Specifies the operating mode of a pair of inputs.	**Sunblind push button**
		Two button dimming
Input name	A name for the input can be specified here so that it is easier to assign.	Text (max. 80 characters)
Operating mode	Specifies the operating mode of the dimming function.	**Start-Stop-Dimming**
		Step dimming
Input signal is interpreted as long after	If the push button is pressed for at least the set time, the telegram for a long keystroke is sent after the set time. If the button is pressed for a shorter time, the telegram for a short keystroke 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
Step size	This parameter is only displayed for Step dimming operating mode. The step width of a dimming step is specified in percent (e.g. 25% step width equates to a total of 4 dimming steps).	100.00%
		50.00%
		25.00%
		12.5%
		6.25%
		3.13%
		1.56%
Time for telegram repetition [Milliseconds]	This parameter is only displayed for Step dimming operating mode. Telegrams can be sent repeatedly as long as the connected contact is closed. The interval between two consecutive repeats can be parameterised here.	**100** : 5000
Function inputs n.1/n.2	The function of both input terminals can be swapped here, if necessary.	**brighter/dimmer**
		dimmer/brighter
Use Enable or disable GO	Specifies whether an enable or disable object should be used.	Yes
		No
Enable or disable GO	Specifies whether an enable object (1 enable, 0 disable) or a disable object (0 enable, 1 disable) should be used.	Enable GO
		Disable GO

7.3.4 Switch (on/off) input

Specifies the current input level via a 1-bit GO.

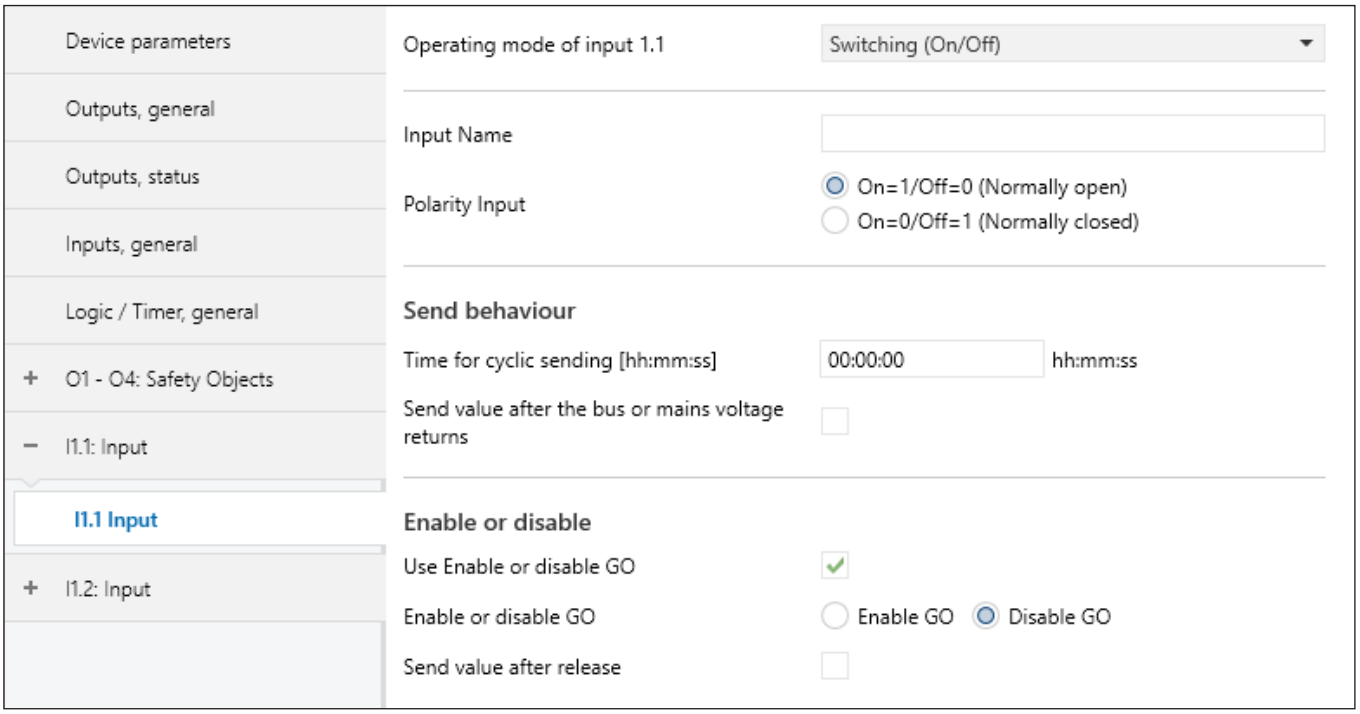


Fig. 43 Parameter dialogue: Inputs → Input In.n Switch (on/off)

Parameter	Function	Values
Operating mode input n.1	Specifies the operating mode of an input.	**Not used**
		Switch (on/off)
		Toggle
		Edge evaluation
		Push button (short/long)
		Scenarios push button
		One button dimming
Input name	A name for the input can be specified here so that it is easier to assign.	Text (max. 80 characters)
Polarity input	The polarity of the input can be changed here, if necessary, depending on whether a closing aid or opening aid is connected.	**On=1/Off=0 (closing aid connected)**
		On=0/Off=1 (opening aid connected)
Time for cyclic sending [hh:mm:ss]	Telegrams after a long keystroke 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 keystroke.	**00:00:00** : 23:59:59
Send value after the bus or mains voltage returns	Specifies whether a value should be sent to the object after a voltage recovery.	Yes
		No
Use Enable or disable GO	Specifies whether an enable or disable object should be used.	Yes
		No
Enable or disable GO	Specifies whether an enable object (1 enable, 0 disable) or a disable object (0 enable, 1 disable) should be used.	Enable GO
		Disable GO
Transmit value after enable	Specifies whether a value should be sent to the object after an enable.	Yes
		No

7.3.5 Toggle input

Changes the value of the GO when an edge is changed on the physical input. Which edges are evaluated can be parameterised.

A separate input object can be displayed. In this case, the GO that is used for sending is not read and inverted. A value from a separate GO is used instead.

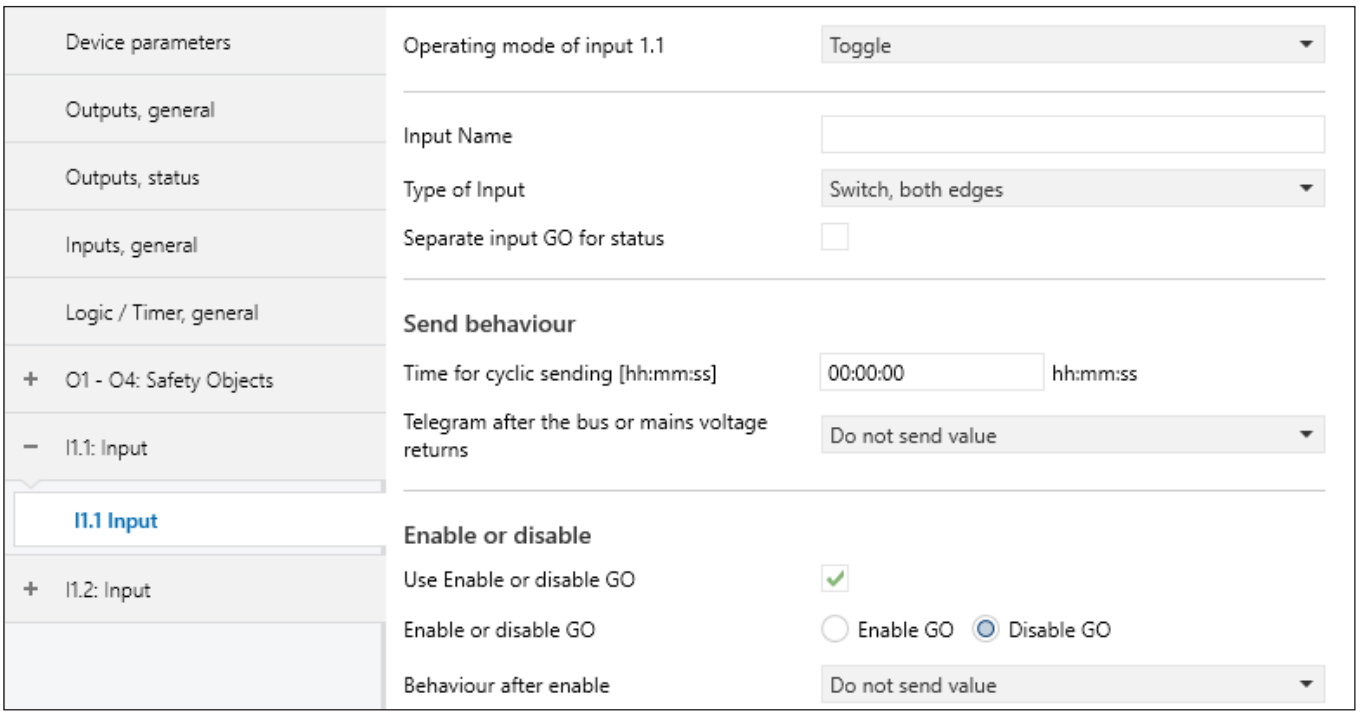


Fig. 44 Parameter dialogue: Inputs → Input In.n Toggle

Parameter	Function	Values
Operating mode input n.1	Specifies the operating mode of an input.	**Not used**
		Switch (on/off)
		Toggle
		Edge evaluation
		Push button (short/long)
		Scenarios push button
		One button dimming
Input name	A name for the input can be specified here so that it is easier to assign.	Text (max. 80 characters)
Type of input	Here you can specify which switching edges should be evaluated at the input.	**Switch, both edges**
		Push button, falling edge
		Push button, rising edge
Separate input object for status	Specifies whether the status should be evaluated via a separate input object.	Yes
		No
Time for cyclic sending [hh:mm:ss]	Telegrams after a long keystroke 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 keystroke.	**00:00:00** : 23:59:59
Telegram after the bus or mains voltage returns	Specifies whether a value should be sent to the object after a voltage recovery.	**Do not transmit value**
		Send ON telegram
		Send OFF telegram
Use Enable or disable GO	Specifies whether an enable or disable object should be used.	Yes
		No
Enable or disable GO	Specifies whether an enable object (1 enable, 0 disable) or a disable object (0 enable, 1 disable) should be used.	Enable GO
		Disable GO
Transmit value after enable	Specifies whether a value should be sent to the object after an enable.	Yes
		No

7.3.6 Edge evaluation input

Freely parameterisable input in which the behaviour can be set for every edge change.

Different GO types can be used:
- ▶ Bit
- ▶ Byte value
- ▶ Scenario

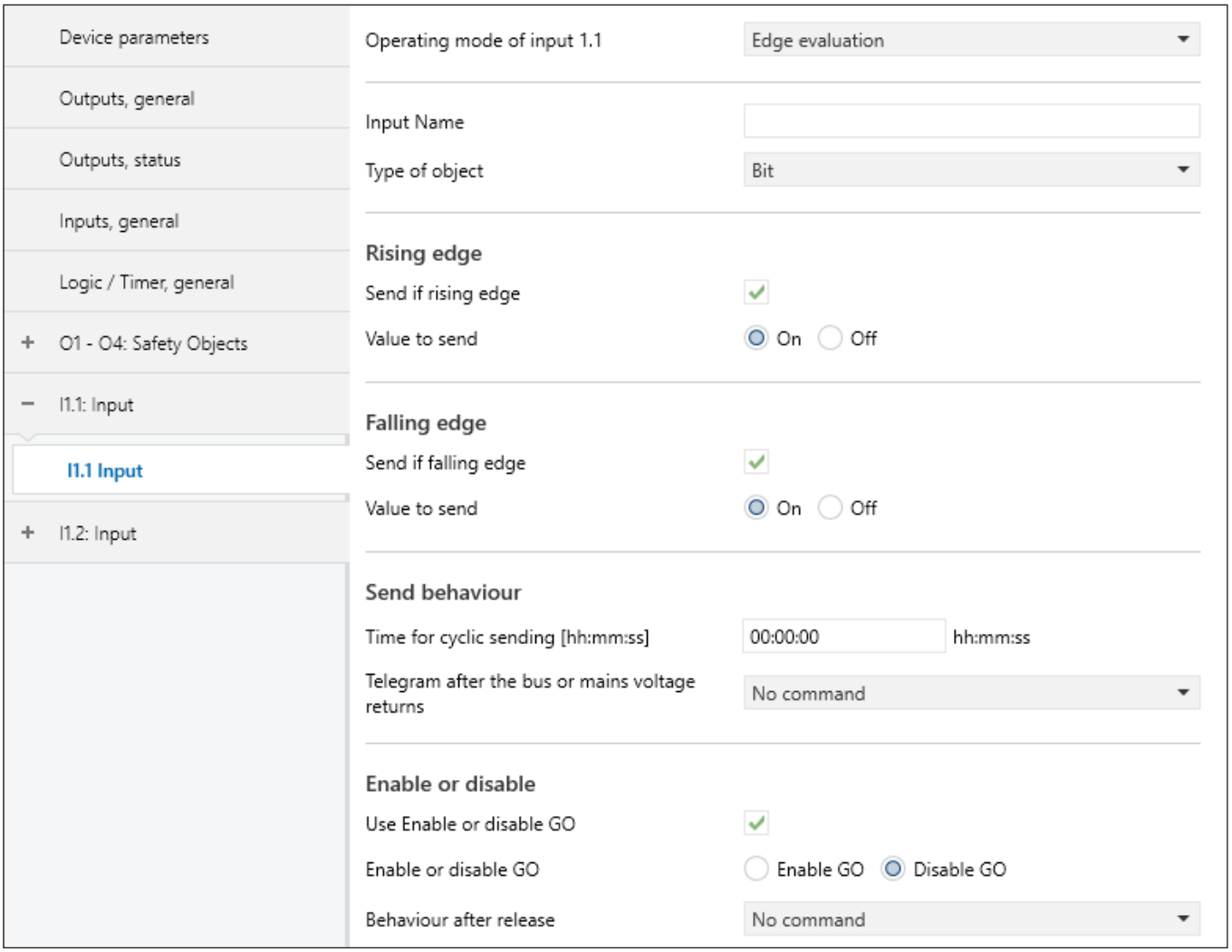


Fig. 45 Parameter dialogue: Inputs → Input In.n Edge evaluation

Parameter	Function	Values
Operating mode input n.1	Specifies the operating mode of an input.	**Not used**
		Switch (on/off)
		Toggle
		Edge evaluation
		Push button (short/long)
		Scenarios push button
		One button dimming
Input name	A name for the input can be specified here so that it is easier to assign.	Text (max. 80 characters)
Type of object	Specifies the type of object to be sent.	**Bit**
		Byte
		Scenario
Send if rising edge	Specifies whether an object should be sent for a rising edge.	**Yes**
		No
Rising edge Value to send	Value that is sent for a rising edge. Options that are suitable for the set type of object are displayed.	Object type Bit: **on**/off
		Type of object Byte: 0...**128**...255
		Type of object Scenario: **1**...64
Scenarios function	This parameter is only displayed for the scenario type of object. Specifies whether the scenario should be executed or learned.	**Execute**
		Learn
Send if falling edge	Specifies whether an object should be sent for a falling edge.	**Yes**
		No
Rising edge Value to send	Value that is sent for a rising edge. Options that are suitable for the set type of object are displayed.	Object type Bit: **on**/off
		Type of object Byte: 0...**128**...255
		Type of object Scenario: **1**...64
Scenarios function	This parameter is only displayed for the scenario type of object. Specifies whether the scenario should be executed or learned.	**Execute**
		Learn
Time for cyclic sending [hh:mm:ss]	Telegrams after a long keystroke 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 keystroke.	**00:00:00** : 23:59:59
Telegram after the bus or mains voltage returns	Specifies whether a value should be sent to the object after a voltage recovery.	**No command**
		Value of falling edge
		Value of rising edge
		Value of current input state
Use Enable or disable GO	Specifies whether an enable or disable object should be used.	Yes
		No
Enable or disable GO	Specifies whether an enable object (1 enable, 0 disable) or a disable object (0 enable, 1 disable) should be used.	Enable GO
		Disable GO
Behaviour after enable	Specifies whether a value should be sent to the object after an enable.	**No command**
		Value of falling edge
		Value of rising edge
		Value of current input state

7.3.7 Push button input (short/long)

Freely parameterisable input that can distinguish between long and short keystrokes. The time for the long keystroke can be set here. Two GOs (output A and output B) can be displayed at the same time for which a value can be set for the long and short keystroke.

Different GO types can be used:
- ▶ Bit
- ▶ Byte value
- ▶ Scenario

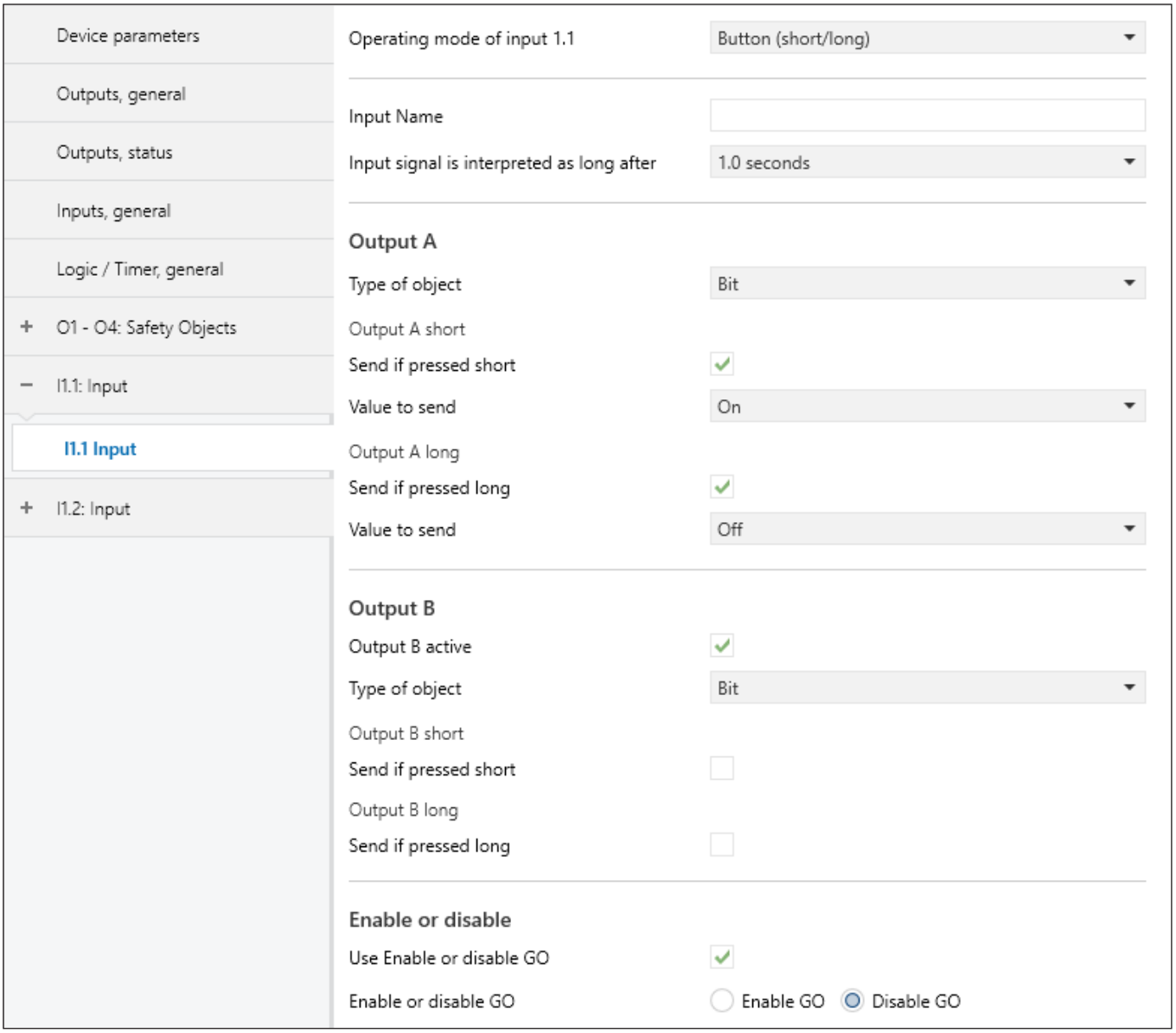


Fig. 46 Parameter dialogue: Inputs → Input In.n Push button (short/long)

Parameter	Function	Values
Operating mode input n.1	Specifies the operating mode of an input.	**Not used**
		Switch (on/off)
		Toggle
		Edge evaluation
		Push button (short/long)
		Scenarios push button
		One button dimming
Input name	A name for the input can be specified here so that it is easier to assign.	Text (max. 80 characters)
Input signal is interpreted as long after	If the push button is pressed for at least the set time, the telegram for a long keystroke is sent after the set time. If the button is pressed for a shorter time, the telegram for a short keystroke 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
Output A Type of object	Specifies the type of object to be sent for output A.	**Bit**
		Byte
		Scenario
Output A short Send for short keystroke	Specifies whether an object should be sent for a short keystroke.	**Yes**
		No
Output A short Value to send	Value sent after a short keystroke. Options that are suitable for the set type of object are displayed.	Object type Bit: **on**/**off**/Toggle
		Type of object Byte: 0...**128**...255
		Type of object Scenario: **1**...64
Scenarios function	This parameter is only displayed for the scenario type of object. Specifies whether the scenario should be executed or learned.	**Execute**
		Learn
Output A long Send for long keystroke	Specifies whether an object should be sent for a long keystroke.	**Yes**
		No
Output A long Value to send	Value sent after a long keystroke. Options that are suitable for the set type of object are displayed.	Object type Bit: on/**off**/Toggle
		Type of object Byte: 0...**128**...255
		Type of object Scenario: **1**...64
Scenarios function	This parameter is only displayed for the scenario type of object. Specifies whether the scenario should be executed or learned.	**Execute**
		Learn
Output B Output B active	Specifies whether output B should also be used.	**Yes**
		No
Output B Type of object	Specifies the type of object to be sent for output B.	**Bit**
		Byte
		Scenario

Output B short Send for short keystroke	Specifies whether an object should be sent for a short keystroke.	**Yes**
		No
Output B short Value to send	Value sent after a short keystroke. Options that are suitable for the set type of object are displayed.	Object type Bit: **on**/**off**/Toggle
		Type of object Byte: 0...**128**...255
		Type of object Scenario: **1**...64
Scenarios function	This parameter is only displayed for the scenario type of object. Specifies whether the scenario should be executed or learned.	**Execute**
		Learn
Output B long Send for long keystroke	Specifies whether an object should be sent for a long keystroke.	**Yes**
		No
Output B long Value to send	Value sent after a long keystroke. Options that are suitable for the set type of object are displayed.	Object type Bit: on/**off**/Toggle
		Type of object Byte: 0...**128**...255
		Type of object Scenario: **1**...64
Scenarios function	This parameter is only displayed for the scenario type of object. Specifies whether the scenario should be executed or learned.	**Execute**
		Learn
Use Enable or disable GO	Specifies whether an enable or disable object should be used.	Yes
		No
Enable or disable GO	Specifies whether an enable object (1 enable, 0 disable) or a disable object (0 enable, 1 disable) should be used.	Enable GO
		Disable GO

7.3.8 Scenarios push button input

The input can differentiate between a long and short keystroke and send the "learn" or "execute" command for a parameterised scenario number following a long or short keystroke.

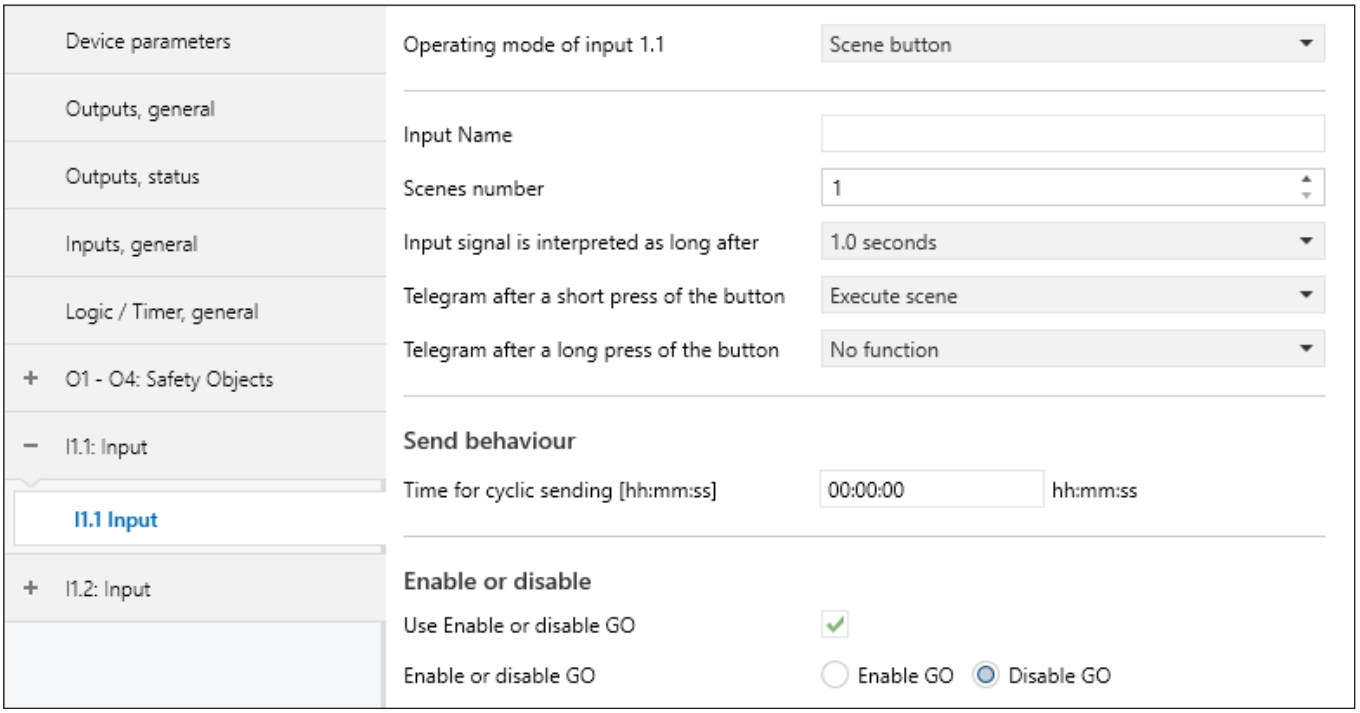


Fig. 47 Parameter dialogue: Inputs → Input In.n Scenario push button

Parameter	Function	Values
Operating mode input n.1	Specifies the operating mode of an input.	**Not used**
		Switch (on/off)
		Toggle
		Edge evaluation
		Push button (short/long)
		Scenarios push button
		One button dimming
Input name	A name for the input can be specified here so that it is easier to assign.	Text (max. 80 characters)
Scenario number	Specifies the scenario number for the input.	**1** : 64
Input signal is interpreted as long after n seconds	If the push button is pressed for at least the set time, the telegram for a long keystroke is sent after the set time. If the button is pressed for a shorter time, the telegram for a short keystroke 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 a short keystroke	Value sent after a short keystroke.	No function
		Execute scenario
		Learn scenario
Telegram after a long keystroke	Value sent after a long keystroke.	**No function**
		Execute scenario
		Learn scenario
Time for cyclic sending [hh:mm:ss]	Telegrams after a long keystroke 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 keystroke.	**00:00:00** : 23:59:59
Use Enable or disable GO	Specifies whether an enable or disable object should be used.	**Yes**
		No
Enable or disable GO	Specifies whether an enable object (1 enable, 0 disable) or a disable object (0 enable, 1 disable) should be used.	Enable GO
		Disable GO

7.3.9 One button dimming input

Behaviour based on KNX standard for one button dimmer. Sends commands to a 4-bit GO for dimming and a 1-bit GO for switching based on the operation and parameterised operating behaviour.

Start-Stop-Dimming:

- ▶ After a long keystroke on the input, a dimming command to "increase by 100%" is sent. If the edge is changed from High→Low (button is released), a Stop command is sent. After the next long keystroke, a dimming command to "reduce by 100%" is sent, etc.
- ▶ After a short keystroke, ON or OFF (alternately) is sent on the ON/OFF GO. Instead of sending the value alternately, a separate input object can be displayed here from which the value will be inverted and sent after every short keystroke.

Step dimming:

- ▶ After a long keystroke on the input, a dimming command to "increase by n%" is sent (value n can be parameterised in steps). The command is repeated during the parameterised interval. The dimming direction changes if the button is released and then actuated again ("reduce by n%" command).
- ▶ After a short keystroke, ON or OFF (alternately) is sent on the ON/OFF GO. Instead of sending the value alternately, a separate input object can be displayed here from which the value will be inverted and sent after every short keystroke.

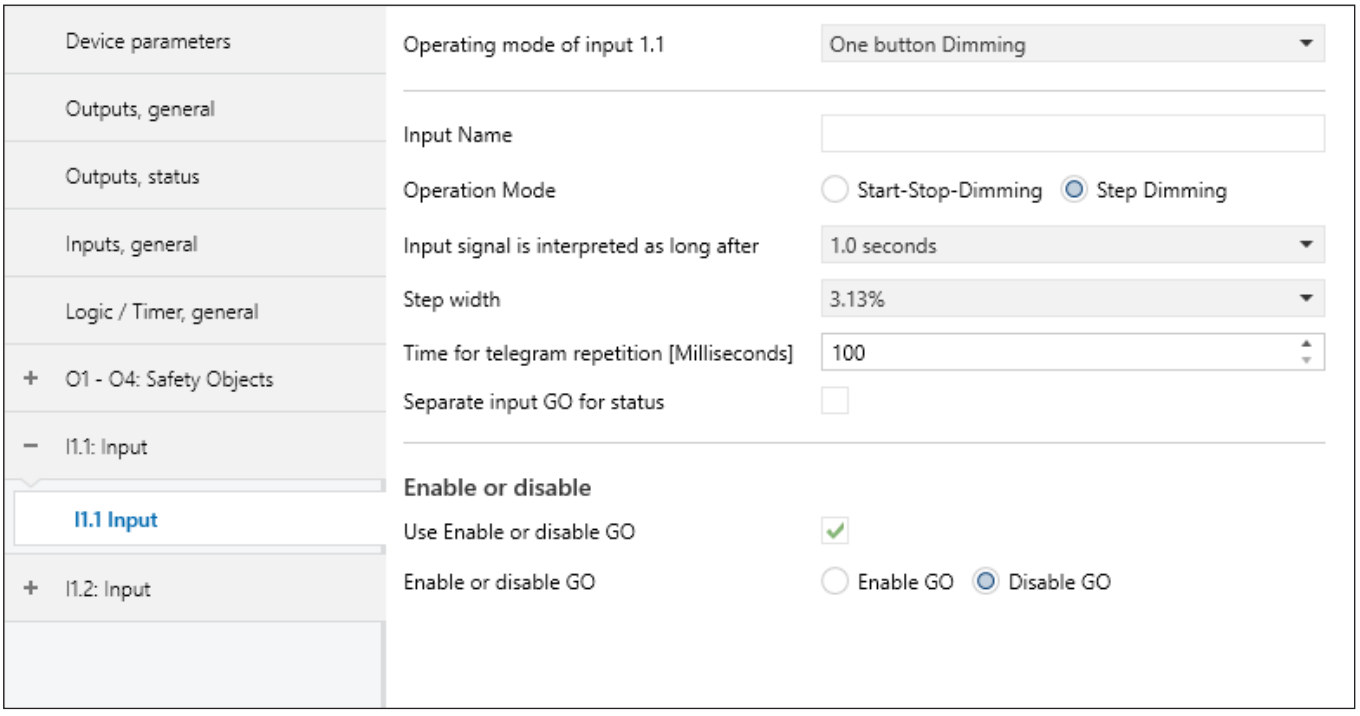


Fig. 48 Parameter dialogue: Input → Input In.n One button dimming

Parameter	Function	Values
Operating mode input n.1	Specifies the operating mode of an input.	**Not used**
		Switch (on/off)
		Toggle
		Edge evaluation
		Push button (short/long)
		Scenarios push button
		One button dimming
Input name	A name for the input can be specified here so that it is easier to assign.	Text (max. 80 characters)
Operating mode	Specifies the operating mode of the dimming function.	**Start-Stop-Dimming**
		Step dimming
Input signal is interpreted as long after n seconds	If the push button is pressed for at least the set time, the telegram for a long keystroke is sent after the set time. If the button is pressed for a shorter time, the telegram for a short keystroke 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
Step size	This parameter is only displayed for Step dimming operating mode. The step width of a dimming step is specified in percent (e.g. 25% step width equates to a total of 4 dimming steps).	100.00%
		50.00%
		25.00%
		12.5%
		6.25%
		3.13%
		1.56%
Time for telegram repetition [Milliseconds]	This parameter is only displayed for Step dimming operating mode. Telegrams can be sent repeatedly as long as the connected contact is closed. The interval between two consecutive repeats can be parameterised here.	**100** : 5000
Separate input object for status	Specifies whether the dimming status should be evaluated via a separate input object.	Yes
		No
Use Enable or disable GO	Specifies whether an enable or disable object should be used.	**Yes**
		No
Enable or disable GO	Specifies whether an enable object (1 enable, 0 disable) or a disable object (0 enable, 1 disable) should be used.	Enable GO
		Disable GO

7.4 Logic/timer

There are 16 functions. For each of these functions, you can select whether they should not be used, should be used as a logical link or as a timer.

Bit objects, scenario numbers or value pairs made up of the blind length/slat position can be used as the output objects.

7.4.1 Logic/timer, general

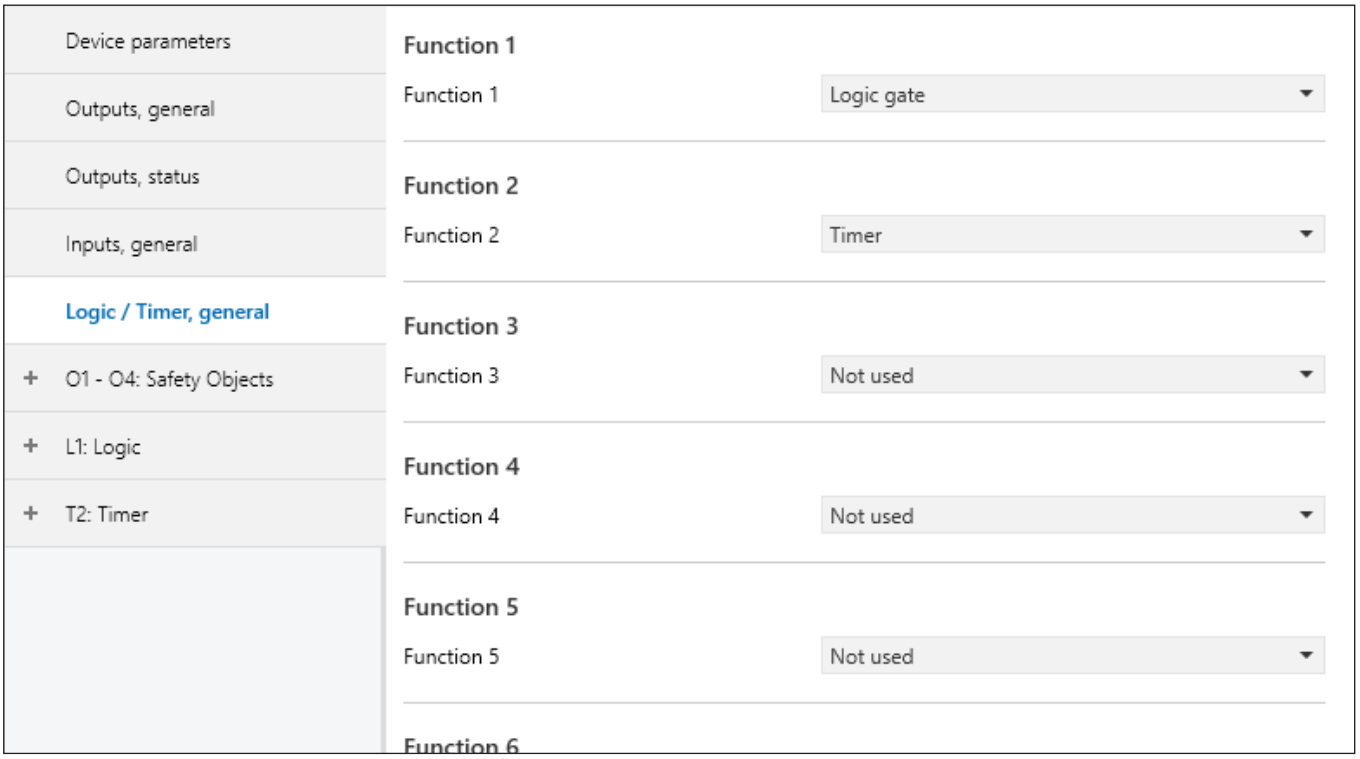


Fig. 49 Parameter dialogue: Logic/timer, general

Parameter	Function	Values
Function n	Specifies the operating mode of a function.	**Not used**
		Logical linking
		Timer

7.4.2 Logical linking

The logical links (AND/OR/XOR) provide up to 4 inputs. Each of these inputs can be inverted (before processing).

The invert result can also be inverted again.

Input 1 and 2 are always displayed, input 3 and 4 can be displayed in addition.

The output can be sent cyclically, only in the event of a change or not at all (value is set in the GO, but is not sent and can be read). Sending can also be limited to an edge change, for example, only when the linking result switches from 0 to 1.

In addition, a setting can be implemented to specify whether the output GO should only be sent once all of the used inputs have been specified at least once. Otherwise, inputs that have not been specified yet will be processed with the preset start value.

As is the case with the inputs, the enable/disable GO can be used.

The type of output can be selected:

Bit object
Bit type group object is displayed.
Result of the linking is issued directly as a bit value.

Scenario
Scenario type group object is displayed.
A scenario command consisting of the scenario number and learn/execute can be sent for each of the TRUE and FALSE results.

Blind length and slat position
Two GOs for the blind length and slat position are displayed.
A combination of the blind length and slat position can be sent for each of the TRUE and FALSE results.

If more than two inputs are used, the XOR function behaves as illustrated in the following truth table:

In3	In2	In1	In0	Out
0	0	0	0	0
0	0	0	**1**	**1**
0	0	**1**	0	**1**
0	0	1	1	0
0	**1**	0	0	**1**
0	1	0	1	0
0	1	1	0	0
0	1	1	1	0
1	0	0	0	**1**
1	0	0	1	0
1	0	1	0	0
1	0	1	1	0
1	1	0	0	0
1	1	0	1	0
1	1	1	0	0
1	1	1	1	0

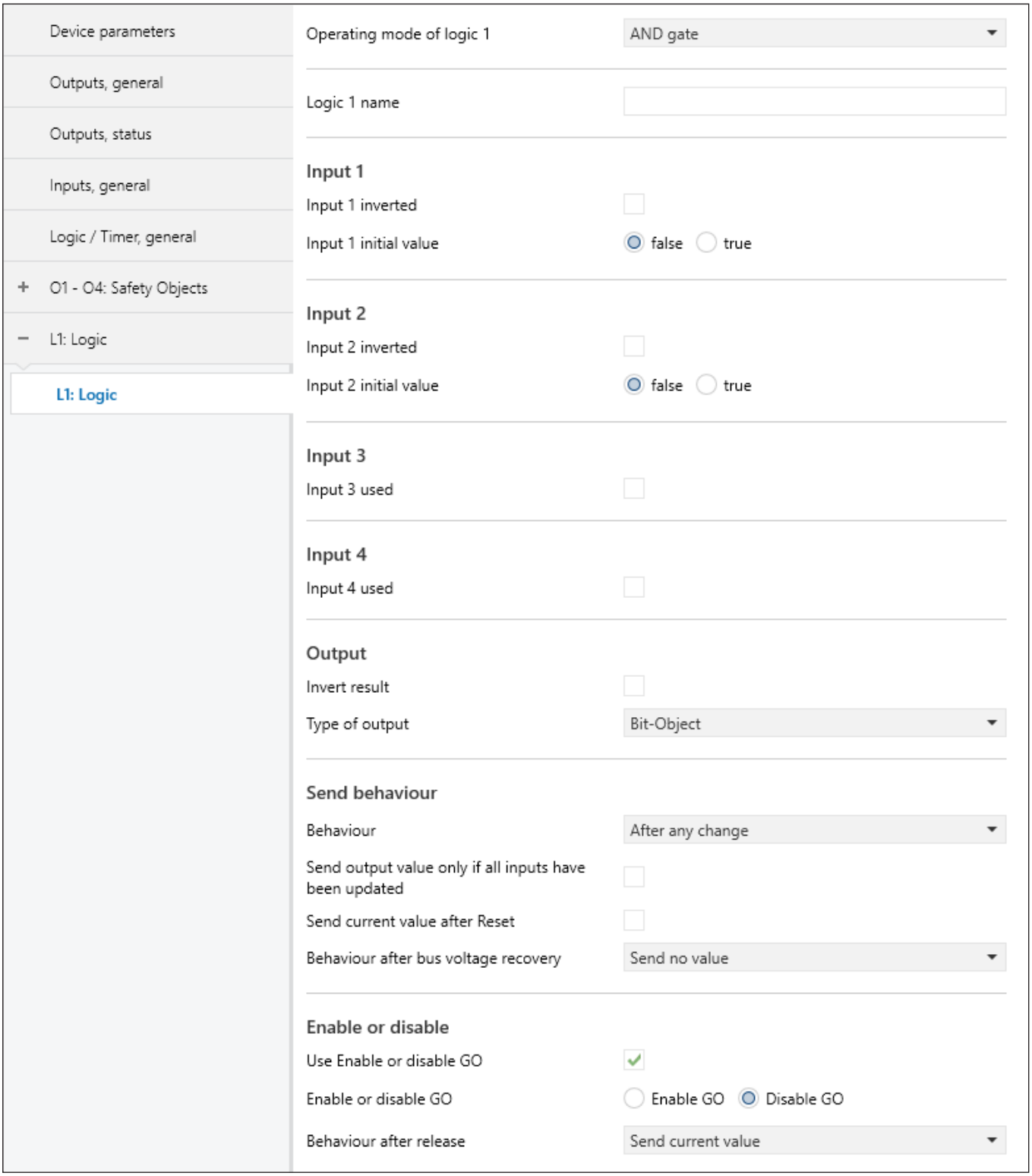


Fig. 50 Parameter dialogue: Logic/Timer → Function n → Logical linking

Parameter	Function	Values
Operating mode logic n	Specifies the operating mode of the logic function.	**AND link**
		OR link
		XOR link
Logic n name	A name for the logic function can be specified here so that it is easier to assign.	Text (max. 80 characters)
Input n inverted	Specifies whether the value at the input should be inverted.	Yes
		No
Input n initial value	Specifies with which value the logical link should start at the input.	**false**
		true
Invert linking result	Specifies whether the result of the link should be inverted.	Yes
		No
Type of output	Type of telegrams issued at the output of the logical link.	**Bit object**
		Scenario
		Blind length and slat position
Scenario function	This parameter is only displayed for the *Scenario* type of output. It can be set separately for the state of the output (true/false). Specifies whether the scenario should be executed or learned.	Execute scenario
		Learn scenario
Scenario number	This parameter is only displayed for the *Scenario* type of output. It can be set separately for the state of the output (true/false). Specifies the scenario number that should be sent.	**1** : 64
Blind length [%]	This parameter is only displayed for the output type *Blind length and slat position*. It can be set separately for the state of the output (true/false). Value for the blind length in percent that is sent.	**0** : 100
Slat position [%]	This parameter is only displayed for the output type *Blind length and slat position*. It can be set separately for the state of the output (true/false). Value for the slat position in percent that is sent.	**0** : 100
Behaviour	Specifies whether an object should be sent on the output.	Do not transmit
		Only send following change from 0 to 1
		Only send following change from 1 to 0
		Send after any change
		Send after any update
		Send after any update and cyclically
Send output value only if all inputs have been updated	Specifies whether the current output value should only be sent if a value was actively recorded on all of the inputs of the logical link.	Yes
		No
Send current value after reset	Specifies whether the current output value of the logical link should be sent after a reset.	Yes
		No
Behaviour after bus voltage recovery	Specifies which value should be sent after a bus voltage recovery.	**Do not transmit value**
		Send current value
		Send value "Output true"
		Send value "Output false"
Use Enable or disable GO	Specifies whether an enable or disable object should be used.	**Yes**
		No

Enable or disable GO	Specifies whether an enable object (1 enable, 0 disable) or a disable object (0 enable, 1 disable) should be used.	Enable GO
		Disable GO
Behaviour after enable	Specifies which value should be sent to the object after an enable.	Do not transmit value
		Send current value
		Set current value in GO but do not transmit

7.4.3 Timer

The timer function is controlled via the GO and sends values to the output GOs following start/stop/expiry.

The timer setting has a time range of seconds from 0 to 23:59:59

- The *Retrigger* parameter determines whether the timer should start at 0 again or whether the new start command should be ignored if a start command is issued when the timer is already running.

- The parameters can be set to determine how the timer should react at what edge change on the Start/Stop GO

- The type of output can be selected:

  Bit object
  Bit type group object is displayed.

  Scenario
  Scenario type group object is displayed.
  A scenario command consisting of the scenario number and learn/execute can be sent.

  Blind length and slat position
  Two GOs for the blind length and slat position are displayed.

- There are three timer events:

  Start (can be initiated via GO Start/Stop)

  Stop (can be initiated via GO Start/Stop)

  Expiry of the timer

  For each of the three events, you can specify separately whether the output GO should be recorded and, if so, with which value.

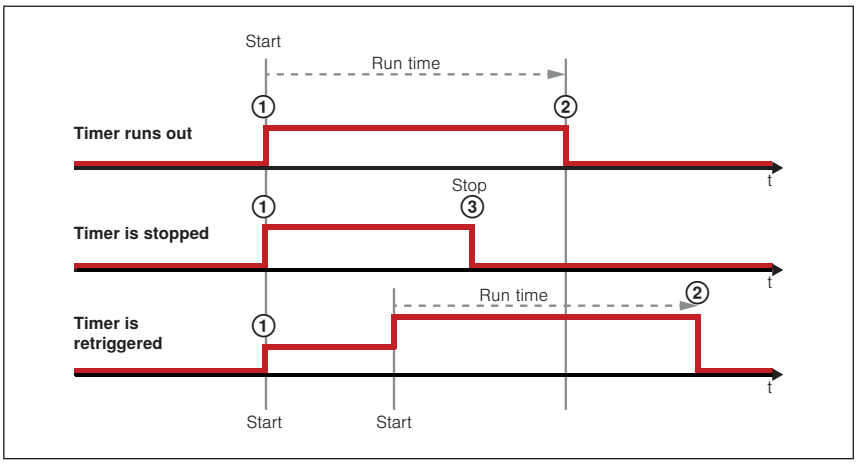


Fig. 51 Function of the timer

① Value at start

② Value at expiry

③ Value at stop

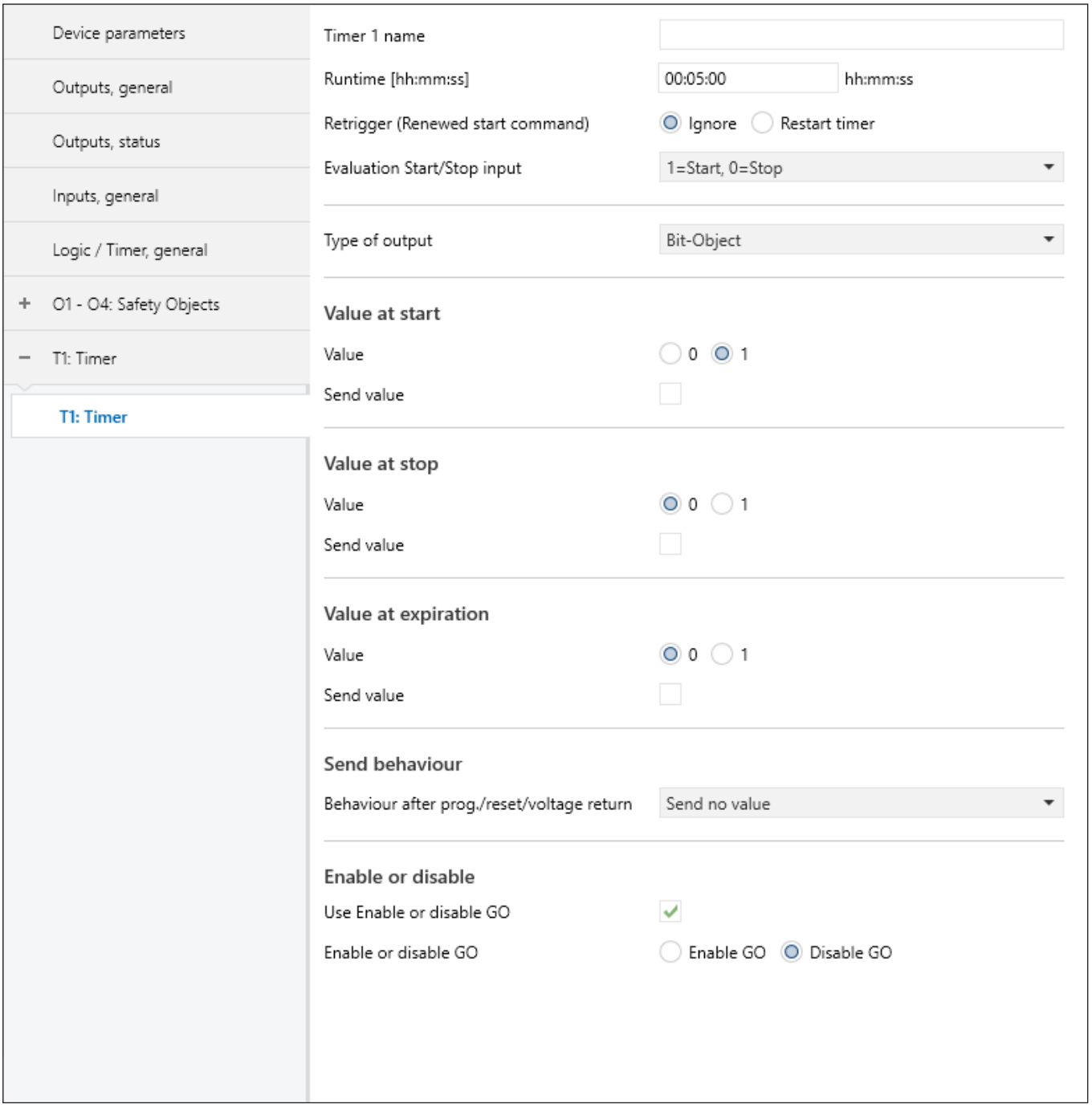


Fig. 52 Parameter dialogue: Logic/Timer → Function n → Timer

Parameter	Function	Values
Timer n name	A name for the timer can be specified here so that it is easier to assign.	Text (max. 80 characters)
Run time [hh:mm:ss]	Run time for the timer function	00:00:00 : **00:05:00** : 23:59:59
Retrigger (renewed start command)	Specifies whether the timer can be restarted at zero if there is a new start command during the run time.	**Ignore**
		Restart timer
Evaluation Start/Stop input	The logic of the Start/Stop input is specified here.	**1=Start, 0=Stop**
		0=Start, 1=Stop
		1=Start, 0 Ignore
		0=Start, 1 Ignore
		1=Start/Stop
		0=Start/Stop
		0 or 1=Start/Stop
Type of output	Type of telegrams issued at the output of the timer	**Bit object**
		Scenario
		Blind length and slat position
Value	This parameter is only displayed for the **Bit object** type of output. It can be set separately for the state of the timer (**at start/at stop/upon expiry**). Specifies which value should be sent for the relevant state of the timer.	0 (default for stop and expiry)
		1 (default for start)
Transmit value	This parameter is only displayed for the **Bit object** type of output. It can be set separately for the state of the timer (**at start/at stop/upon expiry**). Specifies whether a value should be sent for the relevant state of the timer.	Yes
		No
Scenario function	This parameter is only displayed for the **Scenario** type of output. It can be set separately for the state of the timer (**at start/at stop/upon expiry**). Specifies whether the scenario should be executed or learned for the relevant state of the timer.	**Execute scenario**
		Learn scenario
Scenario number	This parameter is only displayed for the **Scenario** type of output. It can be set separately for the state of the timer (**at start/at stop/upon expiry**). Specifies which scenario number should be sent for the relevant state of the timer.	**1** : 64
Transmit value	This parameter is only displayed for the **Scenario** type of output. It can be set separately for the state of the timer (**at start/at stop/upon expiry**). Specifies whether a value should be sent for the relevant state of the timer.	Yes
		No
Blind length [%]	This parameter is only displayed for the output type **Blind length and slat position**. It can be set separately for the state of the timer (**at start/at stop/upon expiry**). Value for the blind length in percent that is sent for the relevant state of the timer.	**0** : 100

Slat position [%]	This parameter is only displayed for the output type **Blind length and slat position**. It can be set separately for the state of the timer (**at start/at stop/upon expiry**). Value for the slat position in percent that is sent for the relevant state of the timer.	**0** : 100
Transmit value	This parameter is only displayed for the output type **Blind length and slat position**. It can be set separately for the state of the timer (**at start/at stop/upon expiry**). Specifies whether a value should be sent for the relevant state of the timer.	Yes
		No
Behaviour after prog./reset/bus return	Specifies whether an object should be sent on the output.	**Do not transmit value**
		Send value "Start"
		Send value "Stop"
		Send value "Expired"
Use Enable or disable GO	Specifies whether an enable or disable object should be used.	**Yes**
		No
Enable or disable GO	Specifies whether an enable object (1 enable, 0 disable) or a disable object (0 enable, 1 disable) should be used.	Enable GO
		Disable GO

7.5 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 on safety objects

The safety objects ***A***, ***B*** and ***D*** are available once for the actuator. The safety object ***C*** is available once for each output (***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 *7.5.1*.

Example

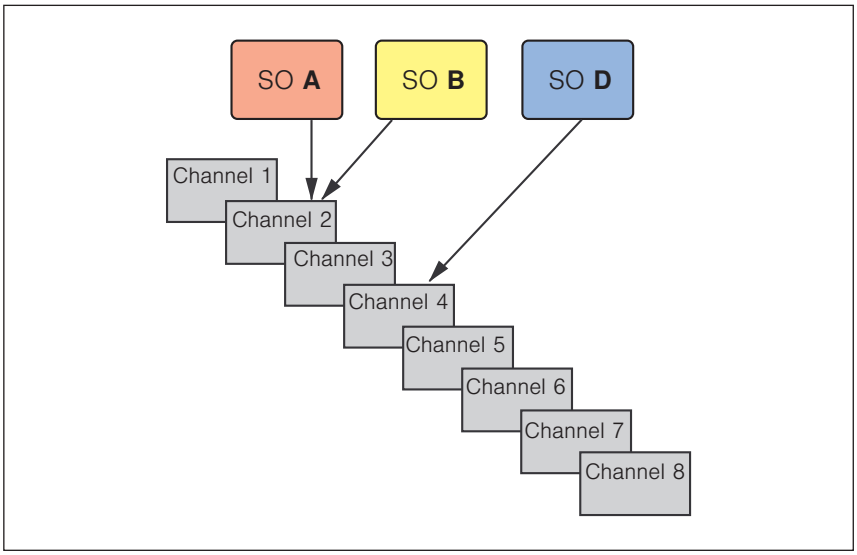


Fig. 53 Allocation example

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

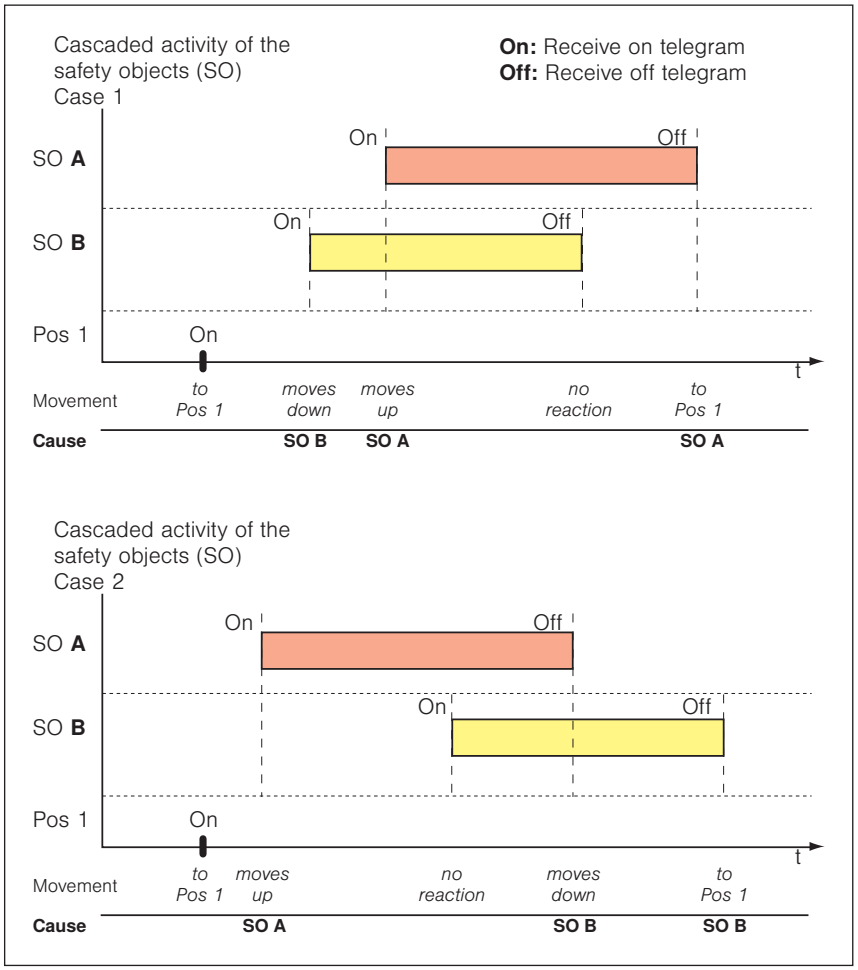


Fig. 54 Example: Behaviour of the safety objects

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.

7.5.1 Order of priorities

In descending order:

- ***GO Disable object***
  (highest priority, stops all movements 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 control mode*** *
- ***GO Move to blind length manually***
  GO Move to slat position manually
  GO Scenarios
- Control mode delay after manual operation
- ***GO Move to blind length in control mode***
  GO Move to slat position in control mode
  GO Move to control mode position 1
  GO Move to control mode 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 control mode*** and the parameterisation of the control mode input.

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

7.5.2 Safety objects - Settings in the parameter dialogue

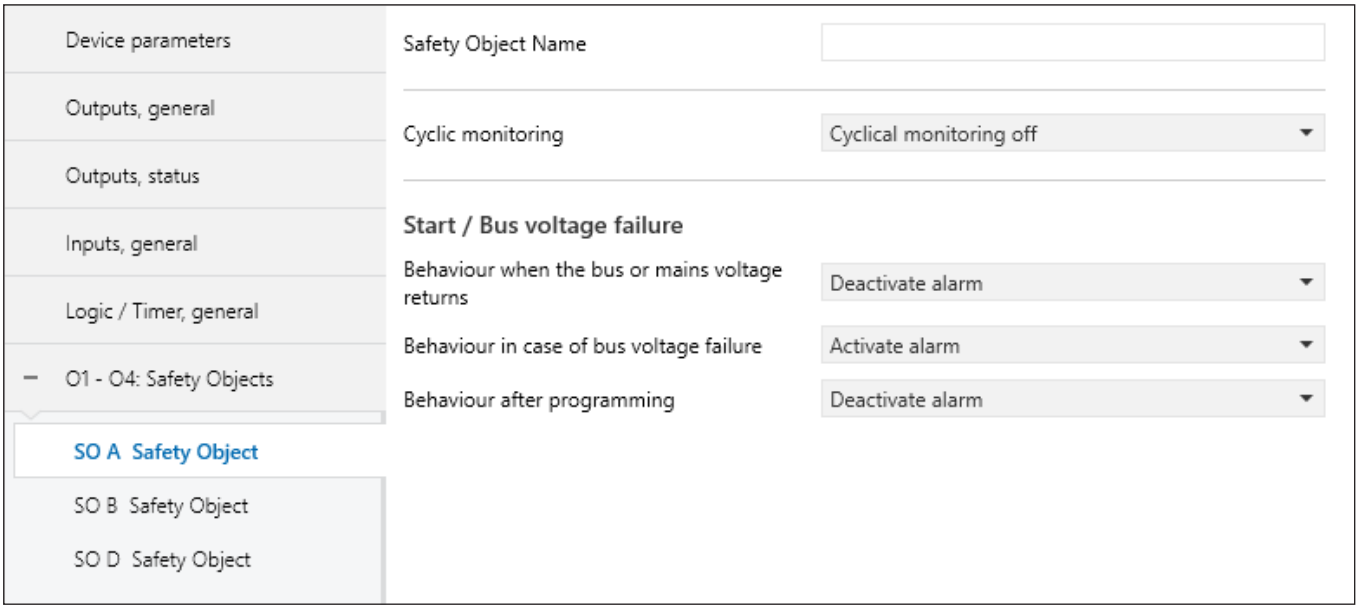


Fig. 55 Parameter dialogue: Safety objects

Parameter	Function	Values
Safety object name	A name for the safety object can be specified here so that it is easier to assign.	Text (max. 80 characters)
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

The KNX secure sun shading actuators have a number of 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.

8.1 Overview

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

The group objects 326 to 437 for the logic and timer functions are listed twice in the table to provide a better overview. The logic functions are listed first followed by the timer functions.

[1] only in operating mode *Venetian blind/external venetian blind*
[2] only for devices from the *pro* series

No.	Name	Object function	Length	Flags	Data type
1	A1: output	Up/Down move command	1 bit	C, W	1-bit, 1.008 Up/Down
2	A1: output	Stop/Step move command	1 bit	C, W	1-bit, 1.007 Step
3	A1: output	Move to blind length manually	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
4	A1: output	Move to slat position manually [1]	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
5	A1: output	Safety object C1	1 bit	C, W	1-bit, 1.005 Alarm
6	A1: output	Scenarios	1 byte	C, W	Scenarios check, 18.001 Scenarios check
7	A1: output	Disable scenarios	1 bit	C, W	1-bit, 1.003 Enable
8	A1: output	Enable control mode objects	1 bit	C, W	1-bit, 1.003 Enable
9	A1: output	Move to blind length in control mode	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
10	A1: output	Move to slat position in control mode [1]	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
11	A1: output	Move to control mode position 1	1 bit	C, W	1-bit, 1.002 Boolean
12	A1: output	Move to control mode position 2	1 bit	C, W	1-bit, 1.002 Boolean
13	A1: output	Save control mode position 1	1 bit	C, W	1-bit, 1.002 Boolean
14	A1: output	Save control mode position 2	1 bit	C, W	1-bit, 1.002 Boolean
15	A1: output	Control mode position toggle	1 bit	C, W	1-bit, 1.002 Boolean
16	A1: output	Limitation of manual operation in control mode	1 bit	C, W	1-bit, 1.003 Enable
17	A1: output	Blind length status	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
18	A1: output	Slat position status [1]	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
19	A1: output	Status limit position, upper reached	1 bit	C, R, T	1-bit, 1.002 Boolean
20	A1: output	Status limit position, lower reached	1 bit	C, R, T	1-bit, 1.002 Boolean
21	A1: output	Status drives UP	1 bit	C, R, T	1-bit, 1.002 Boolean
22	A1: output	Status drives DOWN	1 bit	C, R, T	1-bit, 1.002 Boolean
23	A1: output	Status drives UP or DOWN	1 bit	C, R, T	1-bit, 1.002 Boolean
24	A1: output	Status internal byte	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
25	A1: output	Status internal text	14 bytes	C, R, T	Character set, 16.001 characters (ISO 8859-1)
26	A1: output	Status control mode delay active	1 bit	C, R, T	1-bit, 1.002 Boolean

No.	Name	Object function	Length	Flags	Data type
27	A1: output	Status A	1 bit	C, R, T	1-bit, 1.002 Boolean
28	A1: output	Status B	1 bit	C, R, T	1-bit, 1.002 Boolean
29	A1: output	Status C	1 bit	C, R, T	1-bit, 1.002 Boolean
30	A1: output	Disable object	1 bit	C, W	1-bit, 1.005 Alarm
31	A1: output	Start run time detection [2]	1 bit	C, W	1-bit, 1.010 Start/Stop
32	A1: output	Fault message [2]	1 bit	C, R, T	1-bit, 1.001 Switch
33	A2: output	Up/Down move command	1 bit	C, W	1-bit, 1.008 Up/Down
34	A2: output	Stop/Step move command	1 bit	C, W	1-bit, 1.007 Step
35	A2: output	Move to blind length manually	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
36	A2: output	Move to slat position manually [1]	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
37	A2: output	Safety object C1	1 bit	C, W	1-bit, 1.005 Alarm
38	A2: output	Scenarios	1 byte	C, W	Scenarios check, 18.001 Scenarios check
39	A2: output	Disable scenarios	1 bit	C, W	1-bit, 1.003 Enable
40	A2: output	Enable control mode objects	1 bit	C, W	1-bit, 1.003 Enable
41	A2: output	Move to blind length in control mode	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
42	A2: output	Move to slat position in control mode [1]	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
43	A2: output	Move to control mode position 1	1 bit	C, W	1-bit, 1.002 Boolean
44	A2: output	Move to control mode position 2	1 bit	C, W	1-bit, 1.002 Boolean
45	A2: output	Save control mode position 1	1 bit	C, W	1-bit, 1.002 Boolean
46	A2: output	Save control mode position 2	1 bit	C, W	1-bit, 1.002 Boolean
47	A2: output	Control mode position toggle	1 bit	C, W	1-bit, 1.002 Boolean
48	A2: output	Limitation of manual operation in control mode	1 bit	C, W	1-bit, 1.003 Enable
49	A2: output	Blind length status	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
50	A2: output	Slat position status [1]	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
51	A2: output	Status limit position, upper reached	1 bit	C, R, T	1-bit, 1.002 Boolean
52	A2: output	Status limit position, lower reached	1 bit	C, R, T	1-bit, 1.002 Boolean
53	A2: output	Status drives UP	1 bit	C, R, T	1-bit, 1.002 Boolean
54	A2: output	Status drives DOWN	1 bit	C, R, T	1-bit, 1.002 Boolean
55	A2: output	Status drives UP or DOWN	1 bit	C, R, T	1-bit, 1.002 Boolean
56	A2: output	Status internal byte	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
57	A2: output	Status internal text	14 bytes	C, R, T	Character set, 16.001 characters (ISO 8859-1)
58	A2: output	Status control mode delay active	1 bit	C, R, T	1-bit, 1.002 Boolean
59	A2: output	Status A	1 bit	C, R, T	1-bit, 1.002 Boolean
60	A2: output	Status B	1 bit	C, R, T	1-bit, 1.002 Boolean
61	A2: output	Status C	1 bit	C, R, T	1-bit, 1.002 Boolean
62	A2: output	Disable object	1 bit	C, W	1-bit, 1.005 Alarm
63	A2: output	Start run time detection [2]	1 bit	C, W	1-bit, 1.010 Start/Stop
64	A2: output	Fault message [2]	1 bit	C, R, T	1-bit, 1.001 Switch
65	A3: output	Up/Down move command	1 bit	C, W	1-bit, 1.008 Up/Down
66	A3: output	Stop/Step move command	1 bit	C, W	1-bit, 1.007 Step

No.	Name	Object function	Length	Flags	Data type
67	A3: output	Move to blind length manually	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
68	A3: output	Move to slat position manually [1]	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
69	A3: output	Safety object C1	1 bit	C, W	1-bit, 1.005 Alarm
70	A3: output	Scenarios	1 byte	C, W	Scenarios check, 18.001 Scenarios check
71	A3: output	Disable scenarios	1 bit	C, W	1-bit, 1.003 Enable
72	A3: output	Enable control mode objects	1 bit	C, W	1-bit, 1.003 Enable
73	A3: output	Move to blind length in control mode	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
74	A3: output	Move to slat position in control mode [1]	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
75	A3: output	Move to control mode position 1	1 bit	C, W	1-bit, 1.002 Boolean
76	A3: output	Move to control mode position 2	1 bit	C, W	1-bit, 1.002 Boolean
77	A3: output	Save control mode position 1	1 bit	C, W	1-bit, 1.002 Boolean
78	A3: output	Save control mode position 2	1 bit	C, W	1-bit, 1.002 Boolean
79	A3: output	Control mode position toggle	1 bit	C, W	1-bit, 1.002 Boolean
80	A3: output	Limitation of manual operation in control mode	1 bit	C, W	1-bit, 1.003 Enable
81	A3: output	Blind length status	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
82	A3: output	Slat position status [1]	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
83	A3: output	Status limit position, upper reached	1 bit	C, R, T	1-bit, 1.002 Boolean
84	A3: output	Status limit position, lower reached	1 bit	C, R, T	1-bit, 1.002 Boolean
85	A3: output	Status drives UP	1 bit	C, R, T	1-bit, 1.002 Boolean
86	A3: output	Status drives DOWN	1 bit	C, R, T	1-bit, 1.002 Boolean
87	A3: output	Status drives UP or DOWN	1 bit	C, R, T	1-bit, 1.002 Boolean
88	A3: output	Status internal byte	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
89	A3: output	Status internal text	14 bytes	C, R, T	Character set, 16.001 characters (ISO 8859-1)
90	A3: output	Status control mode delay active	1 bit	C, R, T	1-bit, 1.002 Boolean
91	A3: output	Status A	1 bit	C, R, T	1-bit, 1.002 Boolean
92	A3: output	Status B	1 bit	C, R, T	1-bit, 1.002 Boolean
93	A3: output	Status C	1 bit	C, R, T	1-bit, 1.002 Boolean
94	A3: output	Disable object	1 bit	C, W	1-bit, 1.005 Alarm
95	A3: output	Start run time detection [2]	1 bit	C, W	1-bit, 1.010 Start/Stop
96	A3: output	Fault message [2]	1 bit	C, R, T	1-bit, 1.001 Switch
97	A4: output	Up/Down move command	1 bit	C, W	1-bit, 1.008 Up/Down
98	A4: output	Stop/Step move command	1 bit	C, W	1-bit, 1.007 Step
99	A4: output	Move to blind length manually	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
100	A4: output	Move to slat position manually [1]	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
101	A4: output	Safety object C1	1 bit	C, W	1-bit, 1.005 Alarm
102	A4: output	Scenarios	1 byte	C, W	Scenarios check, 18.001 Scenarios check
103	A4: output	Disable scenarios	1 bit	C, W	1-bit, 1.003 Enable
104	A4: output	Enable control mode objects	1 bit	C, W	1-bit, 1.003 Enable

No.	Name	Object function	Length	Flags	Data type
105	A4: output	Move to blind length in control mode	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
106	A4: output	Move to slat position in control mode [1]	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
107	A4: output	Move to control mode position 1	1 bit	C, W	1-bit, 1.002 Boolean
108	A4: output	Move to control mode position 2	1 bit	C, W	1-bit, 1.002 Boolean
109	A4: output	Save control mode position 1	1 bit	C, W	1-bit, 1.002 Boolean
110	A4: output	Save control mode position 2	1 bit	C, W	1-bit, 1.002 Boolean
111	A4: output	Control mode position toggle	1 bit	C, W	1-bit, 1.002 Boolean
112	A4: output	Limitation of manual operation in control mode	1 bit	C, W	1-bit, 1.003 Enable
113	A4: output	Blind length status	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
114	A4: output	Slat position status [1]	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
115	A4: output	Status limit position, upper reached	1 bit	C, R, T	1-bit, 1.002 Boolean
116	A4: output	Status limit position, lower reached	1 bit	C, R, T	1-bit, 1.002 Boolean
117	A4: output	Status drives UP	1 bit	C, R, T	1-bit, 1.002 Boolean
118	A4: output	Status drives DOWN	1 bit	C, R, T	1-bit, 1.002 Boolean
119	A4: output	Status drives UP or DOWN	1 bit	C, R, T	1-bit, 1.002 Boolean
120	A4: output	Status internal byte	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
121	A4: output	Status internal text	14 bytes	C, R, T	Character set, 16.001 characters (ISO 8859-1)
122	A4: output	Status control mode delay active	1 bit	C, R, T	1-bit, 1.002 Boolean
123	A4: output	Status A	1 bit	C, R, T	1-bit, 1.002 Boolean
124	A4: output	Status B	1 bit	C, R, T	1-bit, 1.002 Boolean
125	A4: output	Status C	1 bit	C, R, T	1-bit, 1.002 Boolean
126	A4: output	Disable object	1 bit	C, W	1-bit, 1.005 Alarm
127	A4: output	Start run time detection [2]	1 bit	C, W	1-bit, 1.010 Start/Stop
128	A4: output	Fault message [2]	1 bit	C, R, T	1-bit, 1.001 Switch
129	A5: output	Up/Down move command	1 bit	C, W	1-bit, 1.008 Up/Down
130	A5: output	Stop/Step move command	1 bit	C, W	1-bit, 1.007 Step
131	A5: output	Move to blind length manually	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
132	A5: output	Move to slat position manually [1]	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
133	A5: output	Safety object C1	1 bit	C, W	1-bit, 1.005 Alarm
134	A5: output	Scenarios	1 byte	C, W	Scenarios check, 18.001 Scenarios check
135	A5: output	Disable scenarios	1 bit	C, W	1-bit, 1.003 Enable
136	A5: output	Enable control mode objects	1 bit	C, W	1-bit, 1.003 Enable
137	A5: output	Move to blind length in control mode	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
138	A5: output	Move to slat position in control mode [1]	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
139	A5: output	Move to control mode position 1	1 bit	C, W	1-bit, 1.002 Boolean
140	A5: output	Move to control mode position 2	1 bit	C, W	1-bit, 1.002 Boolean
141	A5: output	Save control mode position 1	1 bit	C, W	1-bit, 1.002 Boolean
142	A5: output	Save control mode position 2	1 bit	C, W	1-bit, 1.002 Boolean
143	A5: output	Control mode position toggle	1 bit	C, W	1-bit, 1.002 Boolean

No.	Name	Object function	Length	Flags	Data type
144	A5: output	Limitation of manual operation in control mode	1 bit	C, W	1-bit, 1.003 Enable
145	A5: output	Blind length status	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
146	A5: output	Slat position status [1]	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
147	A5: output	Status limit position, upper reached	1 bit	C, R, T	1-bit, 1.002 Boolean
148	A5: output	Status limit position, lower reached	1 bit	C, R, T	1-bit, 1.002 Boolean
149	A5: output	Status drives UP	1 bit	C, R, T	1-bit, 1.002 Boolean
150	A5: output	Status drives DOWN	1 bit	C, R, T	1-bit, 1.002 Boolean
151	A5: output	Status drives UP or DOWN	1 bit	C, R, T	1-bit, 1.002 Boolean
152	A5: output	Status internal byte	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
153	A5: output	Status internal text	14 bytes	C, R, T	Character set, 16.001 characters (ISO 8859-1)
154	A5: output	Status control mode delay active	1 bit	C, R, T	1-bit, 1.002 Boolean
155	A5: output	Status A	1 bit	C, R, T	1-bit, 1.002 Boolean
156	A5: output	Status B	1 bit	C, R, T	1-bit, 1.002 Boolean
157	A5: output	Status C	1 bit	C, R, T	1-bit, 1.002 Boolean
158	A5: output	Disable object	1 bit	C, W	1-bit, 1.005 Alarm
159	A5: output	Start run time detection [2]	1 bit	C, W	1-bit, 1.010 Start/Stop
160	A5: output	Fault message [2]	1 bit	C, R, T	1-bit, 1.001 Switch
161	A6: output	Up/Down move command	1 bit	C, W	1-bit, 1.008 Up/Down
162	A6: output	Stop/Step move command	1 bit	C, W	1-bit, 1.007 Step
163	A6: output	Move to blind length manually	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
164	A6: output	Move to slat position manually [1]	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
165	A6: output	Safety object C1	1 bit	C, W	1-bit, 1.005 Alarm
166	A6: output	Scenarios	1 byte	C, W	Scenarios check, 18.001 Scenarios check
167	A6: output	Disable scenarios	1 bit	C, W	1-bit, 1.003 Enable
168	A6: output	Enable control mode objects	1 bit	C, W	1-bit, 1.003 Enable
169	A6: output	Move to blind length in control mode	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
170	A6: output	Move to slat position in control mode [1]	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
171	A6: output	Move to control mode position 1	1 bit	C, W	1-bit, 1.002 Boolean
172	A6: output	Move to control mode position 2	1 bit	C, W	1-bit, 1.002 Boolean
173	A6: output	Save control mode position 1	1 bit	C, W	1-bit, 1.002 Boolean
174	A6: output	Save control mode position 2	1 bit	C, W	1-bit, 1.002 Boolean
175	A6: output	Control mode position toggle	1 bit	C, W	1-bit, 1.002 Boolean
176	A6: output	Limitation of manual operation in control mode	1 bit	C, W	1-bit, 1.003 Enable
177	A6: output	Blind length status	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
178	A6: output	Slat position status [1]	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
179	A6: output	Status limit position, upper reached	1 bit	C, R, T	1-bit, 1.002 Boolean
180	A6: output	Status limit position, lower reached	1 bit	C, R, T	1-bit, 1.002 Boolean
181	A6: output	Status drives UP	1 bit	C, R, T	1-bit, 1.002 Boolean
182	A6: output	Status drives DOWN	1 bit	C, R, T	1-bit, 1.002 Boolean

No.	Name	Object function	Length	Flags	Data type
183	A6: output	Status drives UP or DOWN	1 bit	C, R, T	1-bit, 1.002 Boolean
184	A6: output	Status internal byte	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
185	A6: output	Status internal text	14 bytes	C, R, T	Character set, 16.001 characters (ISO 8859-1)
186	A6: output	Status control mode delay active	1 bit	C, R, T	1-bit, 1.002 Boolean
187	A6: output	Status A	1 bit	C, R, T	1-bit, 1.002 Boolean
188	A6: output	Status B	1 bit	C, R, T	1-bit, 1.002 Boolean
189	A6: output	Status C	1 bit	C, R, T	1-bit, 1.002 Boolean
190	A6: output	Disable object	1 bit	C, W	1-bit, 1.005 Alarm
191	A6: output	Start run time detection [2]	1 bit	C, W	1-bit, 1.010 Start/Stop
192	A6: output	Fault message [2]	1 bit	C, R, T	1-bit, 1.001 Switch
193	A7: output	Up/Down move command	1 bit	C, W	1-bit, 1.008 Up/Down
194	A7: output	Stop/Step move command	1 bit	C, W	1-bit, 1.007 Step
195	A7: output	Move to blind length manually	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
196	A7: output	Move to slat position manually [1]	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
197	A7: output	Safety object C1	1 bit	C, W	1-bit, 1.005 Alarm
198	A7: output	Scenarios	1 byte	C, W	Scenarios check, 18.001 Scenarios check
199	A7: output	Disable scenarios	1 bit	C, W	1-bit, 1.003 Enable
200	A7: output	Enable control mode objects	1 bit	C, W	1-bit, 1.003 Enable
201	A7: output	Move to blind length in control mode	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
202	A7: output	Move to slat position in control mode [1]	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
203	A7: output	Move to control mode position 1	1 bit	C, W	1-bit, 1.002 Boolean
204	A7: output	Move to control mode position 2	1 bit	C, W	1-bit, 1.002 Boolean
205	A7: output	Save control mode position 1	1 bit	C, W	1-bit, 1.002 Boolean
206	A7: output	Save control mode position 2	1 bit	C, W	1-bit, 1.002 Boolean
207	A7: output	Control mode position toggle	1 bit	C, W	1-bit, 1.002 Boolean
208	A7: output	Limitation of manual operation in control mode	1 bit	C, W	1-bit, 1.003 Enable
209	A7: output	Blind length status	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
210	A7: output	Slat position status [1]	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
211	A7: output	Status limit position, upper reached	1 bit	C, R, T	1-bit, 1.002 Boolean
212	A7: output	Status limit position, lower reached	1 bit	C, R, T	1-bit, 1.002 Boolean
213	A7: output	Status drives UP	1 bit	C, R, T	1-bit, 1.002 Boolean
214	A7: output	Status drives DOWN	1 bit	C, R, T	1-bit, 1.002 Boolean
215	A7: output	Status drives UP or DOWN	1 bit	C, R, T	1-bit, 1.002 Boolean
216	A7: output	Status internal byte	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
217	A7: output	Status internal text	14 bytes	C, R, T	Character set, 16.001 characters (ISO 8859-1)
218	A7: output	Status control mode delay active	1 bit	C, R, T	1-bit, 1.002 Boolean
219	A7: output	Status A	1 bit	C, R, T	1-bit, 1.002 Boolean
220	A7: output	Status B	1 bit	C, R, T	1-bit, 1.002 Boolean
221	A7: output	Status C	1 bit	C, R, T	1-bit, 1.002 Boolean

No.	Name	Object function	Length	Flags	Data type
222	A7: output	Disable object	1 bit	C, W	1-bit, 1.005 Alarm
223	A7: output	Start run time detection [2]	1 bit	C, W	1-bit, 1.010 Start/Stop
224	A7: output	Fault message [2]	1 bit	C, R, T	1-bit, 1.001 Switch
225	A8: output	Up/Down move command	1 bit	C, W	1-bit, 1.008 Up/Down
226	A8: output	Stop/Step move command	1 bit	C, W	1-bit, 1.007 Step
227	A8: output	Move to blind length manually	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
228	A8: output	Move to slat position manually [1]	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
229	A8: output	Safety object C1	1 bit	C, W	1-bit, 1.005 Alarm
230	A8: output	Scenarios	1 byte	C, W	Scenarios check, 18.001 Scenarios check
231	A8: output	Disable scenarios	1 bit	C, W	1-bit, 1.003 Enable
232	A8: output	Enable control mode objects	1 bit	C, W	1-bit, 1.003 Enable
233	A8: output	Move to blind length in control mode	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
234	A8: output	Move to slat position in control mode [1]	1 byte	C, W	8-bit unsigned, 5.001 percent (0...100%)
235	A8: output	Move to control mode position 1	1 bit	C, W	1-bit, 1.002 Boolean
236	A8: output	Move to control mode position 2	1 bit	C, W	1-bit, 1.002 Boolean
237	A8: output	Save control mode position 1	1 bit	C, W	1-bit, 1.002 Boolean
238	A8: output	Save control mode position 2	1 bit	C, W	1-bit, 1.002 Boolean
239	A8: output	Control mode position toggle	1 bit	C, W	1-bit, 1.002 Boolean
240	A8: output	Limitation of manual operation in control mode	1 bit	C, W	1-bit, 1.003 Enable
241	A8: output	Blind length status	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
242	A8: output	Slat position status [1]	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
243	A8: output	Status limit position, upper reached	1 bit	C, R, T	1-bit, 1.002 Boolean
244	A8: output	Status limit position, lower reached	1 bit	C, R, T	1-bit, 1.002 Boolean
245	A8: output	Status drives UP	1 bit	C, R, T	1-bit, 1.002 Boolean
246	A8: output	Status drives DOWN	1 bit	C, R, T	1-bit, 1.002 Boolean
247	A8: output	Status drives UP or DOWN	1 bit	C, R, T	1-bit, 1.002 Boolean
248	A8: output	Status internal byte	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
249	A8: output	Status internal text	14 bytes	C, R, T	Character set, 16.001 characters (ISO 8859-1)
250	A8: output	Status control mode delay active	1 bit	C, R, T	1-bit, 1.002 Boolean
251	A8: output	Status A	1 bit	C, R, T	1-bit, 1.002 Boolean
252	A8: output	Status B	1 bit	C, R, T	1-bit, 1.002 Boolean
253	A8: output	Status C	1 bit	C, R, T	1-bit, 1.002 Boolean
254	A8: output	Disable object	1 bit	C, W	1-bit, 1.005 Alarm
255	A8: output	Start run time detection [2]	1 bit	C, W	1-bit, 1.010 Start/Stop
256	A8: output	Fault message [2]	1 bit	C, R, T	1-bit, 1.001 Switch
257	A1 - A8: Run time detection	Start run time detection (all outputs) [2]	1 bit	C, W	1-bit, 1.010 Start/Stop
258	A1 - A8: Run time detection	Fault message (all outputs) [2]	1 bit	C, R, T	1-bit, 1.001 Switch
259	A1 - A8: SO A	Safety object A (all outputs)	1 bit	C, W	1-bit, 1.005 Alarm
260	A1 - A8: SO B	Safety object B (all outputs)	1 bit	C, W	1-bit, 1.005 Alarm

No.	Name	Object function	Length	Flags	Data type
261	A1 - A8: SO D	Safety object D (all outputs)	1 bit	C, W	1-bit, 1.005 Alarm
262	I1: Input I1.1: Input	Sunblind push button operating mode: Up/Down move command Two button dimming operating mode: Dimming On/Off Switch (on/off) operating mode: Switch 1.1 Toggle operating mode: Toggle 1.1 Edge evaluation operating mode: Edge bit 1.1 Edge byte 1.1 Edge scenario 1.1 Push button (short/long) operating mode: Push button (short/long) bit A 1.1 Push button (short/long) byte A 1.1 Push button (short/long) scenario A 1.1 Scenarios push button operating mode: Scenarios push button 1.1 One button dimming operating mode: Dimming on/off 1.1	1 bit 1 bit 1 bit 1 bit 1 bit 1 byte 1 byte 1 bit 1 byte 1 byte 1 byte 1 bit	C, T C, W, T C, W, T C, W, T C, T C, T C, T C, W, T C, T C, T C, T C, W, T	1-bit, 1.008 Up/Down 1-bit, 1.001 Switch 1-bit, 1.002 Boolean 1-bit, 1.002 Boolean 1-bit, 1.002 Boolean 8-bit unsigned, 5.010 counting impulses Scenario control, 18.001 scenario control 1-bit, 1.002 Boolean 8-bit unsigned, 5.010 counting impulses Scenario control, 18.001 scenario control Scenario control, 18.001 scenario control 1-bit, 1.001 Switch
263	I1: Input I1.1: Input	Sunblind push button operating mode: Stop/Step move command Two button dimming operating mode: Relative dimming Switch operating mode: Enable/disable 1.1 Toggle operating mode: Toggle status 1.1 Edge evaluation operating mode: Enable/disable 1.1 Push button (short/long) operating mode: Push button (short/long) bit B 1.1 Push button (short/long) byte B 1.1 Push button (short/long) scenario B 1.1 Scenarios push button operating mode: Enable/disable 1.1 One button dimming operating mode: Relative dimming 1.1	1 bit 4 bit 1 bit 1 bit 1 bit 1 bit 1 byte 1 byte 1 bit 4 bit	C, T C, T C, W C, W, U C, W C, W, T C, T C, T C, W C, W, T	1-bit, 1.007 Step 3-bit controlled, 3.007 Dimmer step 1-bit, 1.003 Enable 1-bit, 1.002 Boolean 1-bit, 1.003 Enable 1-bit, 1.002 Boolean 8-bit unsigned, 5.010 counting impulses Scenario control, 18.001 scenario control 1-bit, 1.002 Boolean 3-bit controlled, 3.007 Dimmer step
264	I1: Input I1.1: Input	Sunblind push button operating mode: Enable/disable Two button dimming operating mode: Enable/disable Switch operating mode: – Toggle operating mode: Enable/disable 1.1 Edge evaluation operating mode: – Push button (short/long) operating mode: Enable/disable 1.1 Scenarios push button operating mode: – One button dimming operating mode: Dimming status 1.1	1 bit 1 bit 1 bit 1 bit 1 bit	C, W C, W C, W C, W C, W, U	1-bit, 1.003 Enable 1-bit, 1.003 Enable 1-bit, 1.003 Enable 1-bit, 1.003 Enable 1-bit, 1.002 Boolean
265	I1.1: Input	One button dimming operating mode: Enable/disable 1.1	1 bit	C, W	1-bit, 1.003 Enable
266	I1.2: Input	Sunblind push button operating mode: – Two button dimming operating mode: – Switch (on/off) operating mode: Switch 1.2 Toggle operating mode: Toggle 1.2 Edge evaluation operating mode: Edge bit 1.2 Edge byte 1.2 Edge scenario 1.2 Push button (short/long) operating mode: Push button (short/long) bit A 1.2 Push button (short/long) byte A 12 Push button (short/long) scenario A 1.2 Scenarios push button operating mode: Scenarios push button 1.2 One button dimming operating mode: Dimming on/off 1.2	 1 bit 1 bit 1 bit 1 byte 1 byte 1 bit 1 byte 1 byte 1 byte 1 bit	 C, W, T C, W, T C, T C, T C, T C, W, T C, T C, T C, T C, W, T	 1-bit, 1.002 Boolean 1-bit, 1.002 Boolean 1-bit, 1.002 Boolean 8-bit unsigned, 5.010 counting impulses Scenario control, 18.001 scenario control 1-bit, 1.002 Boolean 8-bit unsigned, 5.010 counting impulses Scenario control, 18.001 scenario control Scenario control, 18.001 scenario control 1-bit, 1.001 Switch

No.	Name	Object function	Length	Flags	Data type
267	I1.2: Input	Switch operating mode: Enable/disable 1.2	1 bit	C, W	1-bit, 1.003 Enable
		Toggle operating mode: Toggle status 1.2	1 bit	C, W, U	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Enable/disable 1.2	1 bit	C, W	1-bit, 1.003 Enable
		Push button (short/long)			
		operating mode: Push button (short/long) bit B 1.2	1 bit	C, W, T	1-bit, 1.002 Boolean
		Push button (short/long) byte B 1.2	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario B 1.2	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Enable/disable 1.2	1 bit	C, W	1-bit, 1.002 Boolean
		One button dimming operating mode: Relative dimming 1.2	4 bit	C, W, T	3-bit controlled, 3.007 Dimmer step
268	I1.2: Input	Sunblind push button operating mode: –			
		Two button dimming operating mode: –			
		Switch operating mode: –			
		Toggle operating mode: Enable/disable 1.2	1 bit	C, W	1-bit, 1.003 Enable
		Edge evaluation operating mode: –			
		Push button (short/long) operating mode: Enable/disable 1.2	1 bit	C, W	1-bit, 1.003 Enable
		Scenarios push button operating mode: –			
		One button dimming operating mode: Dimming status 1.2	1 bit	C, W, U	1-bit, 1.002 Boolean
269	I1.2: Input	One button dimming operating mode: Enable/disable 1.2	1 bit	C, W	1-bit, 1.003 Enable
270	I2: Input	Sunblind push button operating mode: Up/Down move command	1 bit	C, T	1-bit, 1.008 Up/Down
		Two button dimming operating mode: Dimming On/Off	1 bit	C, W, T	1-bit, 1.001 Switch
		Switch (on/off) operating mode: Switch 2.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Toggle operating mode: Toggle 2.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Edge bit 2.1	1 bit	C, T	1-bit, 1.002 Boolean
		Edge byte 2.1	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Edge scenario 2.1	1 byte	C, T	Scenario control, 18.001 scenario control
	I2.1: Input	Push button (short/long)			
		operating mode: Push button (short/long) bit A 2.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Push button (short/long) byte A 2.1	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario A 2.1	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Scenarios push button 2.1	1 byte	C, T	Scenario control, 18.001 scenario control
		One button dimming operating mode: Dimming on/off 2.1	1 bit	C, W, T	1-bit, 1.001 Switch
271	I2: Input	Sunblind push button operating mode: Stop/Step move command	1 bit	C, T	1-bit, 1.007 Step
		Two button dimming operating mode: Relative dimming	4 bit	C, T	3-bit controlled, 3.007 Dimmer step
		Switch operating mode: Enable/disable 2.1	1 bit	C, W	1-bit, 1.003 Enable
		Toggle operating mode: Toggle status 2.1	1 bit	C, W, U	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Enable/disable 2.1	1 bit	C, W	1-bit, 1.003 Enable
		Push button (short/long)			
		operating mode: Push button (short/long) bit B 2.1	1 bit	C, W, T	1-bit, 1.002 Boolean
	I2.1: Input	Push button (short/long) byte B 2.1	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario B 2.1	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Enable/disable 2.1	1 bit	C, W	1-bit, 1.002 Boolean
		One button dimming operating mode: Relative dimming 2.1	4 bit	C, W, T	3-bit controlled, 3.007 Dimmer step
272	I2: Input	Sunblind push button operating mode: Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
		Two button dimming operating mode: Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
		Switch operating mode: –			
		Toggle operating mode: Enable/disable 2.1	1 bit	C, W	1-bit, 1.003 Enable
	I2.1: Input	Edge evaluation operating mode: –			
		Push button (short/long) operating mode: Enable/disable 2.1	1 bit	C, W	1-bit, 1.003 Enable
		Scenarios push button operating mode: –			
		One button dimming operating mode: Dimming status 2.1	1 bit	C, W, U	1-bit, 1.002 Boolean
273	I2.1: Input	One button dimming operating mode: Enable/disable 2.1	1 bit	C, W	1-bit, 1.003 Enable

No.	Name	Object function	Length	Flags	Data type
274	I2.2: Input	Sunblind push button operating mode: – Two button dimming operating mode: – Switch (on/off) operating mode: Switch 2.2 Toggle operating mode: Toggle 2.2 Edge evaluation operating mode: Edge bit 2.2 Edge byte 2.2 Edge scenario 2.2 Push button (short/long) operating mode: Push button (short/long) bit A 2.2 Push button (short/long) byte A 12 Push button (short/long) scenario A 2.2 Scenarios push button operating mode: Scenarios push button 2.2 One button dimming operating mode: Dimming on/off 2.2	 1 bit 1 bit 1 bit 1 byte 1 byte 1 bit 1 byte 1 byte 1 byte 1 bit	 C, W, T C, W, T C, T C, T C, T C, W, T C, T C, T C, T C, W, T	 1-bit, 1.002 Boolean 1-bit, 1.002 Boolean 1-bit, 1.002 Boolean 8-bit unsigned, 5.010 counting impulses Scenario control, 18.001 scenario control 1-bit, 1.002 Boolean 8-bit unsigned, 5.010 counting impulses Scenario control, 18.001 scenario control Scenario control, 18.001 scenario control 1-bit, 1.001 Switch
275	I2.2: Input	Switch operating mode: Enable/disable 2.2 Toggle operating mode: Toggle status 2.2 Edge evaluation operating mode: Enable/disable 2.2 Push button (short/long) operating mode: Push button (short/long) bit B 2.2 Push button (short/long) byte B 2.2 Push button (short/long) scenario B 2.2 Scenarios push button operating mode: Enable/disable 2.2 One button dimming operating mode: Relative dimming 2.2	1 bit 1 bit 1 bit 1 bit 1 byte 1 byte 1 bit 4 bit	C, W C, W, U C, W C, W, T C, T C, T C, W C, W, T	1-bit, 1.003 Enable 1-bit, 1.002 Boolean 1-bit, 1.003 Enable 1-bit, 1.002 Boolean 8-bit unsigned, 5.010 counting impulses Scenario control, 18.001 scenario control 1-bit, 1.002 Boolean 3-bit controlled, 3.007 Dimmer step
276	I2.2: Input	Sunblind push button operating mode: – Two button dimming operating mode: – Switch operating mode: – Toggle operating mode: Enable/disable 2.2 Edge evaluation operating mode: – Push button (short/long) operating mode: Enable/disable 2.2 Scenarios push button operating mode: – One button dimming operating mode: Dimming status 2.2	 1 bit 1 bit 1 bit	 C, W C, W C, W, U	 1-bit, 1.003 Enable 1-bit, 1.003 Enable 1-bit, 1.002 Boolean
277	I2.2: Input	One button dimming operating mode: Enable/disable 2.2	1 bit	C, W	1-bit, 1.003 Enable
278	I3: Input I3.1: Input	Sunblind push button operating mode: Up/Down move command Two button dimming operating mode: Dimming On/Off Switch (on/off) operating mode: Switch 3.1 Toggle operating mode: Toggle 3.1 Edge evaluation operating mode: Edge bit 3.1 Edge byte 3.1 Edge scenario 3.1 Push button (short/long) operating mode: Push button (short/long) bit A 3.1 Push button (short/long) byte A 3.1 Push button (short/long) scenario A 3.1 Scenarios push button operating mode: Scenarios push button 3.1 One button dimming operating mode: Dimming on/off 3.1	1 bit 1 bit 1 bit 1 bit 1 bit 1 byte 1 byte 1 bit 1 byte 1 byte 1 byte 1 bit	C, T C, W, T C, W, T C, W, T C, T C, T C, T C, W, T C, T C, T C, T C, W, T	1-bit, 1.008 Up/Down 1-bit, 1.001 Switch 1-bit, 1.002 Boolean 1-bit, 1.002 Boolean 1-bit, 1.002 Boolean 8-bit unsigned, 5.010 counting impulses Scenario control, 18.001 scenario control 1-bit, 1.002 Boolean 8-bit unsigned, 5.010 counting impulses Scenario control, 18.001 scenario control Scenario control, 18.001 scenario control 1-bit, 1.001 Switch

No.	Name	Object function	Length	Flags	Data type
279	I3: Input I3.1: Input	Sunblind push button operating mode: Stop/Step move command	1 bit	C, T	1-bit, 1.007 Step
		Two button dimming operating mode: Relative dimming	4 bit	C, T	3-bit controlled, 3.007 Dimmer step
		Switch operating mode: Enable/disable 3.1	1 bit	C, W	1-bit, 1.003 Enable
		Toggle operating mode: Toggle status 3.1	1 bit	C, W, U	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Enable/disable 3.1	1 bit	C, W	1-bit, 1.003 Enable
		Push button (short/long) operating mode: Push button (short/long) bit B 3.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Push button (short/long) byte B 3.1	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario B 3.1	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Enable/disable 3.1	1 bit	C, W	1-bit, 1.002 Boolean
		One button dimming operating mode: Relative dimming 3.1	4 bit	C, W, T	3-bit controlled, 3.007 Dimmer step
280	I3: Input I3.1: Input	Sunblind push button operating mode: Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
		Two button dimming operating mode: Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
		Switch operating mode: –			
		Toggle operating mode: Enable/disable 3.1	1 bit	C, W	1-bit, 1.003 Enable
		Edge evaluation operating mode: –			
		Push button (short/long) operating mode: Enable/disable 3.1	1 bit	C, W	1-bit, 1.003 Enable
		Scenarios push button operating mode: –			
		One button dimming operating mode: Dimming status 3.1	1 bit	C, W, U	1-bit, 1.002 Boolean
281	I3.1: Input	One button dimming operating mode: Enable/disable 3.1	1 bit	C, W	1-bit, 1.003 Enable
282	I3.2: Input	Sunblind push button operating mode: –			
		Two button dimming operating mode: –			
		Switch (on/off) operating mode: Switch 3.2	1 bit	C, W, T	1-bit, 1.002 Boolean
		Toggle operating mode: Toggle 3.2	1 bit	C, W, T	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Edge bit 3.2	1 bit	C, T	1-bit, 1.002 Boolean
		Edge byte 3.2	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Edge scenario 3.2	1 byte	C, T	Scenario control, 18.001 scenario control
		Push button (short/long) operating mode: Push button (short/long) bit A 3.2	1 bit	C, W, T	1-bit, 1.002 Boolean
		Push button (short/long) byte A 12	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario A 3.2	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Scenarios push button 3.2	1 byte	C, T	Scenario control, 18.001 scenario control
		One button dimming operating mode: Dimming on/off 3.2	1 bit	C, W, T	1-bit, 1.001 Switch
283	I3.2: Input	Switch operating mode: Enable/disable 3.2	1 bit	C, W	1-bit, 1.003 Enable
		Toggle operating mode: Toggle status 3.2	1 bit	C, W, U	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Enable/disable 3.2	1 bit	C, W	1-bit, 1.003 Enable
		Push button (short/long) operating mode: Push button (short/long) bit B 3.2	1 bit	C, W, T	1-bit, 1.002 Boolean
		Push button (short/long) byte B 3.2	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario B 3.2	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Enable/disable 3.2	1 bit	C, W	1-bit, 1.002 Boolean
		One button dimming operating mode: Relative dimming 3.2	4 bit	C, W, T	3-bit controlled, 3.007 Dimmer step
284	I3.2: Input	Sunblind push button operating mode: –			
		Two button dimming operating mode: –			
		Switch operating mode: –			
		Toggle operating mode: Enable/disable 3.2	1 bit	C, W	1-bit, 1.003 Enable
		Edge evaluation operating mode: –			
		Push button (short/long) operating mode: Enable/disable 3.2	1 bit	C, W	1-bit, 1.003 Enable
		Scenarios push button operating mode: –			
		One button dimming operating mode: Dimming status 3.2	1 bit	C, W, U	1-bit, 1.002 Boolean
285	I3.2: Input	One button dimming operating mode: Enable/disable 3.2	1 bit	C, W	1-bit, 1.003 Enable

No.	Name	Object function	Length	Flags	Data type
286	I4: Input I4.1: Input	Sunblind push button operating mode: Up/Down move command	1 bit	C, T	1-bit, 1.008 Up/Down
		Two button dimming operating mode: Dimming On/Off	1 bit	C, W, T	1-bit, 1.001 Switch
		Switch (on/off) operating mode: Switch 4.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Toggle operating mode: Toggle 4.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Edge bit 4.1	1 bit	C, T	1-bit, 1.002 Boolean
		Edge byte 4.1	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Edge scenario 4.1	1 byte	C, T	Scenario control, 18.001 scenario control
		Push button (short/long)			
		operating mode: Push button (short/long) bit A 4.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Push button (short/long) byte A 4.1	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario A 4.1	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Scenarios push button 4.1	1 byte	C, T	Scenario control, 18.001 scenario control
		One button dimming operating mode: Dimming on/off 4.1	1 bit	C, W, T	1-bit, 1.001 Switch
287	I4: Input I4.1: Input	Sunblind push button operating mode: Stop/Step move command	1 bit	C, T	1-bit, 1.007 Step
		Two button dimming operating mode: Relative dimming	4 bit	C, T	3-bit controlled, 3.007 Dimmer step
		Switch operating mode: Enable/disable 4.1	1 bit	C, W	1-bit, 1.003 Enable
		Toggle operating mode: Toggle status 4.1	1 bit	C, W, U	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Enable/disable 4.1	1 bit	C, W	1-bit, 1.003 Enable
		Push button (short/long)			
		operating mode: Push button (short/long) bit B 4.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Push button (short/long) byte B 4.1	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario B 4.1	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Enable/disable 4.1	1 bit	C, W	1-bit, 1.002 Boolean
		One button dimming operating mode: Relative dimming 4.1	4 bit	C, W, T	3-bit controlled, 3.007 Dimmer step
288	I4: Input I4.1: Input	Sunblind push button operating mode: Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
		Two button dimming operating mode: Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
		Switch operating mode: –			
		Toggle operating mode: Enable/disable 4.1	1 bit	C, W	1-bit, 1.003 Enable
		Edge evaluation operating mode: –			
		Push button (short/long) operating mode: Enable/disable 4.1	1 bit	C, W	1-bit, 1.003 Enable
		Scenarios push button operating mode: –			
		One button dimming operating mode: Dimming status 4.1	1 bit	C, W, U	1-bit, 1.002 Boolean
289	I4.1: Input	One button dimming operating mode: Enable/disable 4.1	1 bit	C, W	1-bit, 1.003 Enable
290	I4.2: Input	Sunblind push button operating mode: –			
		Two button dimming operating mode: –			
		Switch (on/off) operating mode: Switch 4.2	1 bit	C, W, T	1-bit, 1.002 Boolean
		Toggle operating mode: Toggle 4.2	1 bit	C, W, T	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Edge bit 4.2	1 bit	C, T	1-bit, 1.002 Boolean
		Edge byte 4.2	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Edge scenario 4.2	1 byte	C, T	Scenario control, 18.001 scenario control
		Push button (short/long)			
		operating mode: Push button (short/long) bit A 4.2	1 bit	C, W, T	1-bit, 1.002 Boolean
		Push button (short/long) byte A 12	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario A 4.2	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Scenarios push button 4.2	1 byte	C, T	Scenario control, 18.001 scenario control
		One button dimming operating mode: Dimming on/off 4.2	1 bit	C, W, T	1-bit, 1.001 Switch

No.	Name	Object function	Length	Flags	Data type
291	I4.2: Input	Switch operating mode: Enable/disable 4.2	1 bit	C, W	1-bit, 1.003 Enable
		Toggle operating mode: Toggle status 4.2	1 bit	C, W, U	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Enable/disable 4.2	1 bit	C, W	1-bit, 1.003 Enable
		Push button (short/long)			
		operating mode: Push button (short/long) bit B 4.2	1 bit	C, W, T	1-bit, 1.002 Boolean
		Push button (short/long) byte B 4.2	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario B 4.2	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Enable/disable 4.2	1 bit	C, W	1-bit, 1.002 Boolean
		One button dimming operating mode: Relative dimming 4.2	4 bit	C, W, T	3-bit controlled, 3.007 Dimmer step
292	I4.2: Input	Sunblind push button operating mode: –			
		Two button dimming operating mode: –			
		Switch operating mode: –			
		Toggle operating mode: Enable/disable 4.2	1 bit	C, W	1-bit, 1.003 Enable
		Edge evaluation operating mode: –			
		Push button (short/long) operating mode: Enable/disable 4.2	1 bit	C, W	1-bit, 1.003 Enable
		Scenarios push button operating mode: –			
		One button dimming operating mode: Dimming status 4.2	1 bit	C, W, U	1-bit, 1.002 Boolean
293	I4.2: Input	One button dimming operating mode: Enable/disable 4.2	1 bit	C, W	1-bit, 1.003 Enable
294	I5: Input	Sunblind push button operating mode: Up/Down move command	1 bit	C, T	1-bit, 1.008 Up/Down
		Two button dimming operating mode: Dimming On/Off	1 bit	C, W, T	1-bit, 1.001 Switch
		Switch (on/off) operating mode: Switch 5.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Toggle operating mode: Toggle 5.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Edge bit 5.1	1 bit	C, T	1-bit, 1.002 Boolean
		Edge byte 5.1	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Edge scenario 5.1	1 byte	C, T	Scenario control, 18.001 scenario control
	I5.1: Input	Push button (short/long)			
		operating mode: Push button (short/long) bit A 5.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Push button (short/long) byte A 5.1	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario A 5.1	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Scenarios push button 5.1	1 byte	C, T	Scenario control, 18.001 scenario control
		One button dimming operating mode: Dimming on/off 5.1	1 bit	C, W, T	1-bit, 1.001 Switch
295	I5: Input	Sunblind push button operating mode: Stop/Step move command	1 bit	C, T	1-bit, 1.007 Step
		Two button dimming operating mode: Relative dimming	4 bit	C, T	3-bit controlled, 3.007 Dimmer step
		Switch operating mode: Enable/disable 5.1	1 bit	C, W	1-bit, 1.003 Enable
		Toggle operating mode: Toggle status 5.1	1 bit	C, W, U	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Enable/disable 5.1	1 bit	C, W	1-bit, 1.003 Enable
		Push button (short/long)			
		operating mode: Push button (short/long) bit B 5.1	1 bit	C, W, T	1-bit, 1.002 Boolean
	I5.1: Input	Push button (short/long) byte B 5.1	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario B 5.1	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Enable/disable 5.1	1 bit	C, W	1-bit, 1.002 Boolean
		One button dimming operating mode: Relative dimming 5.1	4 bit	C, W, T	3-bit controlled, 3.007 Dimmer step
296	I5: Input	Sunblind push button operating mode: Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
		Two button dimming operating mode: Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
		Switch operating mode: –			
		Toggle operating mode: Enable/disable 5.1	1 bit	C, W	1-bit, 1.003 Enable
	I5.1: Input	Edge evaluation operating mode: –			
		Push button (short/long) operating mode: Enable/disable 5.1	1 bit	C, W	1-bit, 1.003 Enable
		Scenarios push button operating mode: –			
		One button dimming operating mode: Dimming status 5.1	1 bit	C, W, U	1-bit, 1.002 Boolean
297	I5.1: Input	One button dimming operating mode: Enable/disable 5.1	1 bit	C, W	1-bit, 1.003 Enable

No.	Name	Object function	Length	Flags	Data type
298	I5.2: Input	Sunblind push button operating mode: – Two button dimming operating mode: – Switch (on/off) operating mode: Switch 5.2 Toggle operating mode: Toggle 5.2 Edge evaluation operating mode: Edge bit 5.2 Edge byte 5.2 Edge scenario 5.2 Push button (short/long) operating mode: Push button (short/long) bit A 5.2 Push button (short/long) byte A 12 Push button (short/long) scenario A 5.2 Scenarios push button operating mode: Scenarios push button 5.2 One button dimming operating mode: Dimming on/off 5.2	 1 bit 1 bit 1 bit 1 byte 1 byte 1 bit 1 byte 1 byte 1 byte 1 bit	 C, W, T C, W, T C, T C, T C, T C, W, T C, T C, T C, T C, W, T	 1-bit, 1.002 Boolean 1-bit, 1.002 Boolean 1-bit, 1.002 Boolean 8-bit unsigned, 5.010 counting impulses Scenario control, 18.001 scenario control 1-bit, 1.002 Boolean 8-bit unsigned, 5.010 counting impulses Scenario control, 18.001 scenario control Scenario control, 18.001 scenario control 1-bit, 1.001 Switch
299	I5.2: Input	Switch operating mode: Enable/disable 5.2 Toggle operating mode: Toggle status 5.2 Edge evaluation operating mode: Enable/disable 5.2 Push button (short/long) operating mode: Push button (short/long) bit B 5.2 Push button (short/long) byte B 5.2 Push button (short/long) scenario B 5.2 Scenarios push button operating mode: Enable/disable 5.2 One button dimming operating mode: Relative dimming 5.2	1 bit 1 bit 1 bit 1 bit 1 byte 1 byte 1 bit 4 bit	C, W C, W, U C, W C, W, T C, T C, T C, W C, W, T	1-bit, 1.003 Enable 1-bit, 1.002 Boolean 1-bit, 1.003 Enable 1-bit, 1.002 Boolean 8-bit unsigned, 5.010 counting impulses Scenario control, 18.001 scenario control 1-bit, 1.002 Boolean 3-bit controlled, 3.007 Dimmer step
300	I5.2: Input	Sunblind push button operating mode: – Two button dimming operating mode: – Switch operating mode: – Toggle operating mode: Enable/disable 5.2 Edge evaluation operating mode: – Push button (short/long) operating mode: Enable/disable 5.2 Scenarios push button operating mode: – One button dimming operating mode: Dimming status 5.2	 1 bit 1 bit 1 bit	 C, W C, W C, W, U	 1-bit, 1.003 Enable 1-bit, 1.003 Enable 1-bit, 1.002 Boolean
301	I5.2: Input	One button dimming operating mode: Enable/disable 5.2	1 bit	C, W	1-bit, 1.003 Enable
302	I6: Input I6.1: Input	Sunblind push button operating mode: Up/Down move command Two button dimming operating mode: Dimming On/Off Switch (on/off) operating mode: Switch 6.1 Toggle operating mode: Toggle 6.1 Edge evaluation operating mode: Edge bit 6.1 Edge byte 6.1 Edge scenario 6.1 Push button (short/long) operating mode: Push button (short/long) bit A 6.1 Push button (short/long) byte A 6.1 Push button (short/long) scenario A 6.1 Scenarios push button operating mode: Scenarios push button 6.1 One button dimming operating mode: Dimming on/off 6.1	1 bit 1 bit 1 bit 1 bit 1 bit 1 byte 1 byte 1 bit 1 byte 1 byte 1 byte 1 bit	C, T C, W, T C, W, T C, W, T C, T C, T C, T C, W, T C, T C, T C, T C, W, T	1-bit, 1.008 Up/Down 1-bit, 1.001 Switch 1-bit, 1.002 Boolean 1-bit, 1.002 Boolean 1-bit, 1.002 Boolean 8-bit unsigned, 5.010 counting impulses Scenario control, 18.001 scenario control 1-bit, 1.002 Boolean 8-bit unsigned, 5.010 counting impulses Scenario control, 18.001 scenario control Scenario control, 18.001 scenario control 1-bit, 1.001 Switch

No.	Name	Object function	Length	Flags	Data type
303	I6: Input I6.1: Input	Sunblind push button operating mode: Stop/Step move command	1 bit	C, T	1-bit, 1.007 Step
		Two button dimming operating mode: Relative dimming	4 bit	C, T	3-bit controlled, 3.007 Dimmer step
		Switch operating mode: Enable/disable 6.1	1 bit	C, W	1-bit, 1.003 Enable
		Toggle operating mode: Toggle status 6.1	1 bit	C, W, U	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Enable/disable 6.1	1 bit	C, W	1-bit, 1.003 Enable
		Push button (short/long) operating mode: Push button (short/long) bit B 6.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Push button (short/long) byte B 6.1	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario B 6.1	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Enable/disable 6.1	1 bit	C, W	1-bit, 1.002 Boolean
		One button dimming operating mode: Relative dimming 6.1	4 bit	C, W, T	3-bit controlled, 3.007 Dimmer step
304	I6: Input I6.1: Input	Sunblind push button operating mode: Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
		Two button dimming operating mode: Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
		Switch operating mode: –			
		Toggle operating mode: Enable/disable 6.1	1 bit	C, W	1-bit, 1.003 Enable
		Edge evaluation operating mode: –			
		Push button (short/long) operating mode: Enable/disable 6.1	1 bit	C, W	1-bit, 1.003 Enable
		Scenarios push button operating mode: –			
		One button dimming operating mode: Dimming status 6.1	1 bit	C, W, U	1-bit, 1.002 Boolean
305	I6.1: Input	One button dimming operating mode: Enable/disable 6.1	1 bit	C, W	1-bit, 1.003 Enable
306	I6.2: Input	Sunblind push button operating mode: –			
		Two button dimming operating mode: –			
		Switch (on/off) operating mode: Switch 6.2	1 bit	C, W, T	1-bit, 1.002 Boolean
		Toggle operating mode: Toggle 6.2	1 bit	C, W, T	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Edge bit 6.2	1 bit	C, T	1-bit, 1.002 Boolean
		Edge byte 6.2	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Edge scenario 6.2	1 byte	C, T	Scenario control, 18.001 scenario control
		Push button (short/long) operating mode: Push button (short/long) bit A 6.2	1 bit	C, W, T	1-bit, 1.002 Boolean
		Push button (short/long) byte A 12	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario A 6.2	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Scenarios push button 6.2	1 byte	C, T	Scenario control, 18.001 scenario control
		One button dimming operating mode: Dimming on/off 6.2	1 bit	C, W, T	1-bit, 1.001 Switch
307	I6.2: Input	Switch operating mode: Enable/disable 6.2	1 bit	C, W	1-bit, 1.003 Enable
		Toggle operating mode: Toggle status 6.2	1 bit	C, W, U	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Enable/disable 6.2	1 bit	C, W	1-bit, 1.003 Enable
		Push button (short/long) operating mode: Push button (short/long) bit B 6.2	1 bit	C, W, T	1-bit, 1.002 Boolean
		Push button (short/long) byte B 6.2	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario B 6.2	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Enable/disable 6.2	1 bit	C, W	1-bit, 1.002 Boolean
		One button dimming operating mode: Relative dimming 6.2	4 bit	C, W, T	3-bit controlled, 3.007 Dimmer step
308	I6.2: Input	Sunblind push button operating mode: –			
		Two button dimming operating mode: –			
		Switch operating mode: –			
		Toggle operating mode: Enable/disable 6.2	1 bit	C, W	1-bit, 1.003 Enable
		Edge evaluation operating mode: –			
		Push button (short/long) operating mode: Enable/disable 6.2	1 bit	C, W	1-bit, 1.003 Enable
		Scenarios push button operating mode: –			
		One button dimming operating mode: Dimming status 6.2	1 bit	C, W, U	1-bit, 1.002 Boolean
309	I6.2: Input	One button dimming operating mode: Enable/disable 6.2	1 bit	C, W	1-bit, 1.003 Enable

No.	Name	Object function	Length	Flags	Data type
310	I7: Input I7.1: Input	Sunblind push button operating mode: Up/Down move command	1 bit	C, T	1-bit, 1.008 Up/Down
		Two button dimming operating mode: Dimming On/Off	1 bit	C, W, T	1-bit, 1.001 Switch
		Switch (on/off) operating mode: Switch 7.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Toggle operating mode: Toggle 7.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Edge bit 7.1	1 bit	C, T	1-bit, 1.002 Boolean
		Edge byte 7.1	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Edge scenario 7.1	1 byte	C, T	Scenario control, 18.001 scenario control
		Push button (short/long) operating mode: Push button (short/long) bit A 7.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Push button (short/long) byte A 7.1	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario A 7.1	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Scenarios push button 7.1	1 byte	C, T	Scenario control, 18.001 scenario control
		One button dimming operating mode: Dimming on/off 7.1	1 bit	C, W, T	1-bit, 1.001 Switch
311	I7: Input I7.1: Input	Sunblind push button operating mode: Stop/Step move command	1 bit	C, T	1-bit, 1.007 Step
		Two button dimming operating mode: Relative dimming	4 bit	C, T	3-bit controlled, 3.007 Dimmer step
		Switch operating mode: Enable/disable 7.1	1 bit	C, W	1-bit, 1.003 Enable
		Toggle operating mode: Toggle status 7.1	1 bit	C, W, U	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Enable/disable 7.1	1 bit	C, W	1-bit, 1.003 Enable
		Push button (short/long) operating mode: Push button (short/long) bit B 7.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Push button (short/long) byte B 7.1	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario B 7.1	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Enable/disable 7.1	1 bit	C, W	1-bit, 1.002 Boolean
		One button dimming operating mode: Relative dimming 7.1	4 bit	C, W, T	3-bit controlled, 3.007 Dimmer step
312	I7: Input I7.1: Input	Sunblind push button operating mode: Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
		Two button dimming operating mode: Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
		Switch operating mode: –			
		Toggle operating mode: Enable/disable 7.1	1 bit	C, W	1-bit, 1.003 Enable
		Edge evaluation operating mode: –			
		Push button (short/long) operating mode: Enable/disable 7.1	1 bit	C, W	1-bit, 1.003 Enable
		Scenarios push button operating mode: –			
		One button dimming operating mode: Dimming status 7.1	1 bit	C, W, U	1-bit, 1.002 Boolean
313	I7.1: Input	One button dimming operating mode: Enable/disable 7.1	1 bit	C, W	1-bit, 1.003 Enable
314	I7.2: Input	Sunblind push button operating mode: –			
		Two button dimming operating mode: –			
		Switch (on/off) operating mode: Switch 7.2	1 bit	C, W, T	1-bit, 1.002 Boolean
		Toggle operating mode: Toggle 7.2	1 bit	C, W, T	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Edge bit 7.2	1 bit	C, T	1-bit, 1.002 Boolean
		Edge byte 7.2	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Edge scenario 7.2	1 byte	C, T	Scenario control, 18.001 scenario control
		Push button (short/long) operating mode: Push button (short/long) bit A 7.2	1 bit	C, W, T	1-bit, 1.002 Boolean
		Push button (short/long) byte A 12	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario A 7.2	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Scenarios push button 7.2	1 byte	C, T	Scenario control, 18.001 scenario control
		One button dimming operating mode: Dimming on/off 7.2	1 bit	C, W, T	1-bit, 1.001 Switch

No.	Name	Object function	Length	Flags	Data type
315	I7.2: Input	Switch operating mode: Enable/disable 7.2	1 bit	C, W	1-bit, 1.003 Enable
		Toggle operating mode: Toggle status 7.2	1 bit	C, W, U	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Enable/disable 7.2	1 bit	C, W	1-bit, 1.003 Enable
		Push button (short/long)			
		operating mode: Push button (short/long) bit B 7.2	1 bit	C, W, T	1-bit, 1.002 Boolean
		Push button (short/long) byte B 7.2	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario B 7.2	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Enable/disable 7.2	1 bit	C, W	1-bit, 1.002 Boolean
		One button dimming operating mode: Relative dimming 7.2	4 bit	C, W, T	3-bit controlled, 3.007 Dimmer step
316	I7.2: Input	Sunblind push button operating mode: –			
		Two button dimming operating mode: –			
		Switch operating mode: –			
		Toggle operating mode: Enable/disable 7.2	1 bit	C, W	1-bit, 1.003 Enable
		Edge evaluation operating mode: –			
		Push button (short/long) operating mode: Enable/disable 7.2	1 bit	C, W	1-bit, 1.003 Enable
		Scenarios push button operating mode: –			
		One button dimming operating mode: Dimming status 7.2	1 bit	C, W, U	1-bit, 1.002 Boolean
317	I7.2: Input	One button dimming operating mode: Enable/disable 7.2	1 bit	C, W	1-bit, 1.003 Enable
318	I8: Input	Sunblind push button operating mode: Up/Down move command	1 bit	C, T	1-bit, 1.008 Up/Down
		Two button dimming operating mode: Dimming On/Off	1 bit	C, W, T	1-bit, 1.001 Switch
		Switch (on/off) operating mode: Switch 8.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Toggle operating mode: Toggle 8.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Edge bit 8.1	1 bit	C, T	1-bit, 1.002 Boolean
		Edge byte 8.1	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Edge scenario 8.1	1 byte	C, T	Scenario control, 18.001 scenario control
	I8.1: Input	Push button (short/long)			
		operating mode: Push button (short/long) bit A 8.1	1 bit	C, W, T	1-bit, 1.002 Boolean
		Push button (short/long) byte A 8.1	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario A 8.1	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Scenarios push button 8.1	1 byte	C, T	Scenario control, 18.001 scenario control
		One button dimming operating mode: Dimming on/off 8.1	1 bit	C, W, T	1-bit, 1.001 Switch
319	I8: Input	Sunblind push button operating mode: Stop/Step move command	1 bit	C, T	1-bit, 1.007 Step
		Two button dimming operating mode: Relative dimming	4 bit	C, T	3-bit controlled, 3.007 Dimmer step
		Switch operating mode: Enable/disable 8.1	1 bit	C, W	1-bit, 1.003 Enable
		Toggle operating mode: Toggle status 8.1	1 bit	C, W, U	1-bit, 1.002 Boolean
		Edge evaluation operating mode: Enable/disable 8.1	1 bit	C, W	1-bit, 1.003 Enable
		Push button (short/long)			
		operating mode: Push button (short/long) bit B 8.1	1 bit	C, W, T	1-bit, 1.002 Boolean
	I8.1: Input	Push button (short/long) byte B 8.1	1 byte	C, T	8-bit unsigned, 5.010 counting impulses
		Push button (short/long) scenario B 8.1	1 byte	C, T	Scenario control, 18.001 scenario control
		Scenarios push button operating mode: Enable/disable 8.1	1 bit	C, W	1-bit, 1.002 Boolean
		One button dimming operating mode: Relative dimming 8.1	4 bit	C, W, T	3-bit controlled, 3.007 Dimmer step
320	I8: Input	Sunblind push button operating mode: Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
		Two button dimming operating mode: Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
		Switch operating mode: –			
		Toggle operating mode: Enable/disable 8.1	1 bit	C, W	1-bit, 1.003 Enable
	I8.1: Input	Edge evaluation operating mode: –			
		Push button (short/long) operating mode: Enable/disable 8.1	1 bit	C, W	1-bit, 1.003 Enable
		Scenarios push button operating mode: –			
		One button dimming operating mode: Dimming status 8.1	1 bit	C, W, U	1-bit, 1.002 Boolean
321	I8.1: Input	One button dimming operating mode: Enable/disable 8.1	1 bit	C, W	1-bit, 1.003 Enable

No.	Name	Object function	Length	Flags	Data type
322	I8.2: Input	Sunblind push button operating mode: – Two button dimming operating mode: – Switch (on/off) operating mode: Switch 8.2 Toggle operating mode: Toggle 8.2 Edge evaluation operating mode: Edge bit 8.2 Edge byte 8.2 Edge scenario 8.2 Push button (short/long) operating mode: Push button (short/long) bit A 8.2 Push button (short/long) byte A 12 Push button (short/long) scenario A 8.2 Scenarios push button operating mode: Scenarios push button 8.2 One button dimming operating mode: Dimming on/off 8.2	 1 bit 1 bit 1 bit 1 byte 1 byte 1 bit 1 byte 1 byte 1 byte 1 bit	 C, W, T C, W, T C, T C, T C, T C, W, T C, T C, T C, T C, W, T	 1-bit, 1.002 Boolean 1-bit, 1.002 Boolean 1-bit, 1.002 Boolean 8-bit unsigned, 5.010 counting impulses Scenario control, 18.001 scenario control 1-bit, 1.002 Boolean 8-bit unsigned, 5.010 counting impulses Scenario control, 18.001 scenario control Scenario control, 18.001 scenario control 1-bit, 1.001 Switch
323	I8.2: Input	Switch operating mode: Enable/disable 8.2 Toggle operating mode: Toggle status 8.2 Edge evaluation operating mode: Enable/disable 8.2 Push button (short/long) operating mode: Push button (short/long) bit B 8.2 Push button (short/long) byte B 8.2 Push button (short/long) scenario B 8.2 Scenarios push button operating mode: Enable/disable 8.2 One button dimming operating mode: Relative dimming 8.2	1 bit 1 bit 1 bit 1 bit 1 byte 1 byte 1 bit 4 bit	C, W C, W, U C, W C, W, T C, T C, T C, W C, W, T	1-bit, 1.003 Enable 1-bit, 1.002 Boolean 1-bit, 1.003 Enable 1-bit, 1.002 Boolean 8-bit unsigned, 5.010 counting impulses Scenario control, 18.001 scenario control 1-bit, 1.002 Boolean 3-bit controlled, 3.007 Dimmer step
324	I8.2: Input	Sunblind push button operating mode: – Two button dimming operating mode: – Switch operating mode: – Toggle operating mode: Enable/disable 8.2 Edge evaluation operating mode: – Push button (short/long) operating mode: Enable/disable 8.2 Scenarios push button operating mode: – One button dimming operating mode: Dimming status 8.2	 1 bit 1 bit 1 bit	 C, W C, W C, W, U	 1-bit, 1.003 Enable 1-bit, 1.003 Enable 1-bit, 1.002 Boolean
325	I8.2: Input	One button dimming operating mode: Enable/disable 8.2	1 bit	C, W	1-bit, 1.003 Enable
	L1: Logic	**The group objects 326 to 437 for the logic and timer functions are listed twice in the table to provide a better overview. The timer functions are listed afterwards.**			
326	L1: Logic	Input 1	1 bit	C,W,T,U	1-bit, 1.002 Boolean
327	L1: Logic	Input 2	1 bit	C,W,T,U	1-bit, 1.002 Boolean
328	L1: Logic	Input 3	1 bit	C,W,T,U	1-bit, 1.002 Boolean
329	L1: Logic	Input 4	1 bit	C,W,T,U	1-bit, 1.002 Boolean
330	L1: Logic	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
331	L1: Logic	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	 1 byte	 C, R, T	 8-bit unsigned, 5.001 percent (0...100%)
332	L1: Logic	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
333	L2: Logic	Input 1	1 bit	C,W,T,U	1-bit, 1.002 Boolean
334	L2: Logic	Input 2	1 bit	C,W,T,U	1-bit, 1.002 Boolean
335	L2: Logic	Input 3	1 bit	C,W,T,U	1-bit, 1.002 Boolean
336	L2: Logic	Input 4	1 bit	C,W,T,U	1-bit, 1.002 Boolean

No.	Name	Object function	Length	Flags	Data type
337	L2: Logic	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
338	L2: Logic	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
339	L2: Logic	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
340	L3: Logic	Input 1	1 bit	C,W,T,U	1-bit, 1.002 Boolean
341	L3: Logic	Input 2	1 bit	C,W,T,U	1-bit, 1.002 Boolean
342	L3: Logic	Input 3	1 bit	C,W,T,U	1-bit, 1.002 Boolean
343	L3: Logic	Input 4	1 bit	C,W,T,U	1-bit, 1.002 Boolean
344	L3: Logic	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
345	L3: Logic	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
346	L3: Logic	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
347	L4: Logic	Input 1	1 bit	C,W,T,U	1-bit, 1.002 Boolean
348	L4: Logic	Input 2	1 bit	C,W,T,U	1-bit, 1.002 Boolean
349	L4: Logic	Input 3	1 bit	C,W,T,U	1-bit, 1.002 Boolean
350	L4: Logic	Input 4	1 bit	C,W,T,U	1-bit, 1.002 Boolean
351	L4: Logic	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
352	L4: Logic	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
353	L4: Logic	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
354	L5: Logic	Input 1	1 bit	C,W,T,U	1-bit, 1.002 Boolean
355	L5: Logic	Input 2	1 bit	C,W,T,U	1-bit, 1.002 Boolean
356	L5: Logic	Input 3	1 bit	C,W,T,U	1-bit, 1.002 Boolean
357	L5: Logic	Input 4	1 bit	C,W,T,U	1-bit, 1.002 Boolean
358	L5: Logic	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
359	L5: Logic	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
360	L5: Logic	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
361	L6: Logic	Input 1	1 bit	C,W,T,U	1-bit, 1.002 Boolean
362	L6: Logic	Input 2	1 bit	C,W,T,U	1-bit, 1.002 Boolean
363	L6: Logic	Input 3	1 bit	C,W,T,U	1-bit, 1.002 Boolean
364	L6: Logic	Input 4	1 bit	C,W,T,U	1-bit, 1.002 Boolean

No.	Name	Object function	Length	Flags	Data type
365	L6: Logic	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
366	L6: Logic	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
367	L6: Logic	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
368	L7: Logic	Input 1	1 bit	C,W,T,U	1-bit, 1.002 Boolean
369	L7: Logic	Input 2	1 bit	C,W,T,U	1-bit, 1.002 Boolean
370	L7: Logic	Input 3	1 bit	C,W,T,U	1-bit, 1.002 Boolean
371	L7: Logic	Input 4	1 bit	C,W,T,U	1-bit, 1.002 Boolean
372	L7: Logic	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
373	L7: Logic	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
374	L7: Logic	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
375	L8: Logic	Input 1	1 bit	C,W,T,U	1-bit, 1.002 Boolean
376	L8: Logic	Input 2	1 bit	C,W,T,U	1-bit, 1.002 Boolean
377	L8: Logic	Input 3	1 bit	C,W,T,U	1-bit, 1.002 Boolean
378	L8: Logic	Input 4	1 bit	C,W,T,U	1-bit, 1.002 Boolean
379	L8: Logic	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
380	L8: Logic	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
381	L8: Logic	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
382	L9: Logic	Input 1	1 bit	C,W,T,U	1-bit, 1.002 Boolean
383	L9: Logic	Input 2	1 bit	C,W,T,U	1-bit, 1.002 Boolean
384	L9: Logic	Input 3	1 bit	C,W,T,U	1-bit, 1.002 Boolean
385	L9: Logic	Input 4	1 bit	C,W,T,U	1-bit, 1.002 Boolean
386	L9: Logic	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
387	L9: Logic	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
388	L9: Logic	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
389	L10: Logic	Input 1	1 bit	C,W,T,U	1-bit, 1.002 Boolean
390	L10: Logic	Input 2	1 bit	C,W,T,U	1-bit, 1.002 Boolean
391	L10: Logic	Input 3	1 bit	C,W,T,U	1-bit, 1.002 Boolean
392	L10: Logic	Input 4	1 bit	C,W,T,U	1-bit, 1.002 Boolean

No.	Name	Object function	Length	Flags	Data type
393	L10: Logic	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
394	L10: Logic	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
395	L10: Logic	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
396	L11: Logic	Input 1	1 bit	C,W,T,U	1-bit, 1.002 Boolean
397	L11: Logic	Input 2	1 bit	C,W,T,U	1-bit, 1.002 Boolean
398	L11: Logic	Input 3	1 bit	C,W,T,U	1-bit, 1.002 Boolean
399	L11: Logic	Input 4	1 bit	C,W,T,U	1-bit, 1.002 Boolean
400	L11: Logic	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
401	L11: Logic	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
402	L11: Logic	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
403	L12: Logic	Input 1	1 bit	C,W,T,U	1-bit, 1.002 Boolean
404	L12: Logic	Input 2	1 bit	C,W,T,U	1-bit, 1.002 Boolean
405	L12: Logic	Input 3	1 bit	C,W,T,U	1-bit, 1.002 Boolean
406	L12: Logic	Input 4	1 bit	C,W,T,U	1-bit, 1.002 Boolean
407	L12: Logic	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
408	L12: Logic	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
409	L12: Logic	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
410	L13: Logic	Input 1	1 bit	C,W,T,U	1-bit, 1.002 Boolean
411	L13: Logic	Input 2	1 bit	C,W,T,U	1-bit, 1.002 Boolean
412	L13: Logic	Input 3	1 bit	C,W,T,U	1-bit, 1.002 Boolean
413	L13: Logic	Input 4	1 bit	C,W,T,U	1-bit, 1.002 Boolean
414	L13: Logic	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
415	L13: Logic	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
416	L13: Logic	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
417	L14: Logic	Input 1	1 bit	C,W,T,U	1-bit, 1.002 Boolean
418	L14: Logic	Input 2	1 bit	C,W,T,U	1-bit, 1.002 Boolean
419	L14: Logic	Input 3	1 bit	C,W,T,U	1-bit, 1.002 Boolean
420	L14: Logic	Input 4	1 bit	C,W,T,U	1-bit, 1.002 Boolean

No.	Name	Object function	Length	Flags	Data type
421	L14: Logic	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
422	L14: Logic	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
423	L14: Logic	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
424	L15: Logic	Input 1	1 bit	C,W,T,U	1-bit, 1.002 Boolean
425	L15: Logic	Input 2	1 bit	C,W,T,U	1-bit, 1.002 Boolean
426	L15: Logic	Input 3	1 bit	C,W,T,U	1-bit, 1.002 Boolean
427	L15: Logic	Input 4	1 bit	C,W,T,U	1-bit, 1.002 Boolean
428	L15: Logic	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
429	L15: Logic	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
430	L15: Logic	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
431	L16: Logic	Input 1	1 bit	C,W,T,U	1-bit, 1.002 Boolean
432	L16: Logic	Input 2	1 bit	C,W,T,U	1-bit, 1.002 Boolean
433	L16: Logic	Input 3	1 bit	C,W,T,U	1-bit, 1.002 Boolean
434	L16: Logic	Input 4	1 bit	C,W,T,U	1-bit, 1.002 Boolean
435	L16: Logic	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
436	L16: Logic	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
437	L16: Logic	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
	T1: Timer	**The group objects 326 to 437 for the logic and timer functions are listed twice in the table to provide a better overview. The logic functions are detailed before this section.**			
326	T1: Timer	Start/Stop	1 bit	C, W, T	1-bit, 1.002 Boolean
327	T1: Timer	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
328	T1: Timer	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
329	T1: Timer	–			
330	T1: Timer	–			
331	T1: Timer	–			
332	T1: Timer	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable

No.	Name	Object function	Length	Flags	Data type
333	T2: Timer	Start/Stop	1 bit	C, W, T	1-bit, 1.002 Boolean
334	T2: Timer	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
335	T2: Timer	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	 1 byte	 C, R, T	 8-bit unsigned, 5.001 percent (0...100%)
336	T2: Timer	–			
337	T2: Timer	–			
338	T2: Timer	–			
339	T2: Timer	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
340	T3: Timer	Start/Stop	1 bit	C, W, T	1-bit, 1.002 Boolean
341	T3: Timer	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
342	T3: Timer	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	 1 byte	 C, R, T	 8-bit unsigned, 5.001 percent (0...100%)
343	T3: Timer	–			
344	T3: Timer	–			
345	T3: Timer	–			
346	T3: Timer	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
347	T4: Timer	Start/Stop	1 bit	C, W, T	1-bit, 1.002 Boolean
348	T4: Timer	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
349	T4: Timer	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	 1 byte	 C, R, T	 8-bit unsigned, 5.001 percent (0...100%)
350	T4: Timer	–			
351	T4: Timer	–			
352	T4: Timer	–			
353	T4: Timer	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
354	T5: Timer	Start/Stop	1 bit	C, W, T	1-bit, 1.002 Boolean
355	T5: Timer	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)

No.	Name	Object function	Length	Flags	Data type
356	T5: Timer	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
357	T5: Timer	–			
358	T5: Timer	–			
359	T5: Timer	–			
360	T5: Timer	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
361	T6: Timer	Start/Stop	1 bit	C, W, T	1-bit, 1.002 Boolean
362	T6: Timer	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
363	T6: Timer	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
364	T6: Timer	–			
365	T6: Timer	–			
366	T6: Timer	–			
367	T6: Timer	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
368	T7: Timer	Start/Stop	1 bit	C, W, T	1-bit, 1.002 Boolean
369	T7: Timer	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
370	T7: Timer	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
371	T7: Timer	–			
372	T7: Timer	–			
373	T7: Timer	–			
374	T7: Timer	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
375	T8: Timer	Start/Stop	1 bit	C, W, T	1-bit, 1.002 Boolean
376	T8: Timer	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
377	T8: Timer	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
378	T8: Timer	–			
379	T8: Timer	–			
380	T8: Timer	–			
381	T8: Timer	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable

No.	Name	Object function	Length	Flags	Data type
382	T9: Timer	Start/Stop	1 bit	C, W, T	1-bit, 1.002 Boolean
383	T9: Timer	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
384	T9: Timer	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	 1 byte	 C, R, T	 8-bit unsigned, 5.001 percent (0...100%)
385	T9: Timer	–			
386	T9: Timer	–			
387	T9: Timer	–			
388	T9: Timer	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
389	T10: Timer	Start/Stop	1 bit	C, W, T	1-bit, 1.002 Boolean
390	T10: Timer	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
391	T10: Timer	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	 1 byte	 C, R, T	 8-bit unsigned, 5.001 percent (0...100%)
392	T10: Timer	–			
393	T10: Timer	–			
394	T10: Timer	–			
395	T10: Timer	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
396	T11: Timer	Start/Stop	1 bit	C, W, T	1-bit, 1.002 Boolean
397	T11: Timer	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
398	T11: Timer	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	 1 byte	 C, R, T	 8-bit unsigned, 5.001 percent (0...100%)
399	T11: Timer	–			
400	T11: Timer	–			
401	T11: Timer	–			
402	T11: Timer	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
403	T12: Timer	Start/Stop	1 bit	C, W, T	1-bit, 1.002 Boolean
404	T12: Timer	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)

No.	Name	Object function	Length	Flags	Data type
405	T12: Timer	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
406	T12: Timer	–			
407	T12: Timer	–			
408	T12: Timer	–			
409	T12: Timer	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
410	T13: Timer	Start/Stop	1 bit	C, W, T	1-bit, 1.002 Boolean
411	T13: Timer	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
412	T13: Timer	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
413	T13: Timer	–			
414	T13: Timer	–			
415	T13: Timer	–			
416	T13: Timer	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
417	T14: Timer	Start/Stop	1 bit	C, W, T	1-bit, 1.002 Boolean
418	T14: Timer	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
419	T14: Timer	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
420	T14: Timer	–			
421	T14: Timer	–			
422	T14: Timer	–			
423	T14: Timer	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
424	T15: Timer	Start/Stop	1 bit	C, W, T	1-bit, 1.002 Boolean
425	T15: Timer	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
426	T15: Timer	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	1 byte	C, R, T	8-bit unsigned, 5.001 percent (0...100%)
427	T15: Timer	–			
428	T15: Timer	–			
429	T15: Timer	–			
430	T15: Timer	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable

No.	Name	Object function	Length	Flags	Data type
431	T16: Timer	Start/Stop	1 bit	C, W, T	1-bit, 1.002 Boolean
432	T16: Timer	Output type bit object: bit output Output type scenario: scenario output Output type blind length and slat position: blind length output	1 bit 1 byte 1 byte	C, R, T C, R, T C, R, T	1-bit, 1.001 Switch Scenario control, 18.001 scenario control 8-bit unsigned, 5.001 percent (0...100%)
433	T16: Timer	Output type bit object: – Output type scenario: – Output type blind length and slat position: slat position output	 1 byte	 C, R, T	 8-bit unsigned, 5.001 percent (0...100%)
434	T16: Timer	–			
435	T16: Timer	–			
436	T16: Timer	–			
437	T16: Timer	Enable/disable	1 bit	C, W	1-bit, 1.003 Enable
438	Device	Actuator available	1 bit	C, R, T	1-bit, 1.002 Boolean

[1] only in operating mode *Venetian blind/external venetian blind*
[2] only for devices from the *pro* series

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 outputs

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, general \ Output channel n active AND On: Output \ Blind parameters \ Operating mode of 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 tilting 1 = STOP/Close tilting	
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, general \ Output channel n active AND On: Output \ Blind parameters \ Operating mode of output channel n = output for venetian blind/external venetian blind
Safety object Cn	Activates safety position Cn	0 = No alarm 1 = Alarm	Outputs, general \ Output channel n active AND On: Output \ Blind parameters \ Operating mode of output channel n = e.g. output for venetian blind/external venetian blind
Scenarios	Execute or save scenarios	0 = Activate scenario 1 = Learn scenario 1...64 = Scenario number	
Disable scenarios	Disables all scenario call-ups of the channel. Disabled scenario commands are not executed.	0 = Enabled 1 = Disable	
Enable control mode objects	Disable the ***GO Move to control mode positions 1+2***, ***Move to blind length*** and ***Move to slat position***.	0 = Switch off	Outputs, general \ Output channel n active AND On: Output \ Blind parameters \ Operating mode of output channel n = e.g. output for venetian blind/external venetian blind AND On: Output \ Control mode input \ Use control mode objects = Yes
	Enable the ***GO Move to control mode positions 1+2***, ***Move to blind length*** and ***Move to slat position***. An ongoing control mode delay is terminated.	1 = Enable	
Move to blind length in control mode	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 in control mode [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, general \ Output channel n active AND On: Output \ Blind parameters \ Operating mode of output channel n = output for venetian blind/external venetian blind AND On: Output \ Control mode input \ Use control mode objects = Yes

Name	Object function	Values	Must be enabled in the parameter dialogue
Move to control mode position 1	If 1-telegrams are transmitted to the ***GO Move to control mode position 1***, the connected sun shading product is moved to the blind length and the slat position of control mode position 1.	0 = Move to position 0% 1 = Move to position	Outputs, general \ Output channel n active AND On: Output \ Blind parameters \ Operating mode of output channel n = e.g. output for venetian blind/external venetian blind AND On: Output \ Control mode input \ Use control mode objects = Yes AND On: Output \ Control mode input \ Use control mode positions 1 and 2 = Yes
Move to control mode position 2	If 1-telegrams are transmitted to the ***GO Move to control mode position 2***, the connected sun shading product is moved to the blind length and the slat position of control mode position 2.	0 = Move to position 0% 1 = Move to position	
Save control mode position 1	After a 1-telegram is transmitted to the ***GO Save control mode position 1***, the current blind length and slat position are saved in the Position 1 memory of the corresponding channel.	1 = Save position	Outputs, general \ Output channel n active AND On: Output \ Blind parameters \ Operating mode of output channel n = e.g. output for venetian blind/external venetian blind AND On: Output \ Control mode input \ Use control mode objects = Yes AND On: Output \ Control mode input \ Use control mode positions 1 and 2 = Yes AND On: Output \ Control mode positions \ Save positions 1 and 2 via telegram = Yes
Save control mode position 2	After a 1-telegram is transmitted to the ***GO Save control mode position 2***, the current blind length and slat position are saved in the Position 2 memory of the corresponding channel.	1 = Save position	
Control mode position toggle	After a 0-telegram to the ***GO Control mode position toggle***, the product moves to the saved control mode position 1. After a 1-telegram to the ***GO Control mode position toggle***, the product moves to the position that would result from the last received *Move to blind length in control mode* and *Move to slat position in control mode*. 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 control mode 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 resulting from the most recently received *Move to blind length in control mode* and *Move to slat position in control mode*	Outputs, general \ Output channel n active AND On: Output \ Blind parameters \ Operating mode of output channel n = e.g. output for venetian blind/external venetian blind AND On: Output \ Control mode input \ Use control mode objects = Yes AND On: Output \ Control mode input \ Use control mode positions 1 and 2 = Yes
Limitation of manual operation in control 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 control mode delay is ended.	0 = disabled 1 = enabled	Outputs, general \ Output channel n active AND On: Output \ Blind parameters \ Operating mode of output channel n = e.g. output for venetian blind/external venetian blind AND On: Output \ Control mode input \ Use control mode objects = Yes

Name	Object function	Values	Must be enabled in the parameter dialogue
Blind length status	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, general \ Output channel n active AND On: Output \ Blind parameters \ Operating mode of 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, general \ Output channel n active AND On: Output \ Blind parameters \ Operating mode of output channel n = output for venetian blind/external venetian blind
Upper status limit position reached	Reports when sun shading product is in the upper limit position. The output can be issued following a change or cyclically.	Is specified by On: Output \ Status \ Status limit positions \ Object "Status limit position, upper reached"	Outputs, general \ Output channel n active AND On: Output \ Blind parameters \ Operating mode of output channel n = e.g. output for venetian blind/external venetian blind AND On: Output \ Status \ Status limit positions \ Status limit position active = Yes
Status limit position, lower reached	Reports when sun shading product is in the lower limit position. The output can be issued following a change or cyclically.	Is specified by On: Output \ Status \ Status limit positions \ Object "Status limit position, lower reached"	
Status drives UP	Reports when sun shading product is moving UP. The output can be issued following a change or cyclically.	Is specified by On: Output \ Status \ Status drive state active \ Object "Status drives UP" polarity	Outputs, general \ Output channel n active AND On: Output \ Blind parameters \ Operating mode of output channel n = e.g. output for venetian blind/external venetian blind AND On: Output \ Status \ Status drive state \ Status drive state active = Yes
Status drives DOWN	Reports when sun shading product is moving DOWN. The output can be issued following a change or cyclically.	Is specified by On: Output \ Status \ Status drive state active \ Object "Status drives DOWN" polarity	
Status drives UP or DOWN	Reports when sun shading product is moving UP or DOWN. The output can be issued following a change or cyclically.	Is specified by On: Output \ Status \ Status drive state active \ Object "Status drives UP or DOWN" polarity	
Status internal byte	The GO sends the value specified under *Outputs, status* when the relevant state occurs. The output can be issued following a change or cyclically.	0...8 (1 byte)	Outputs, general \ Output channel n active AND On: Output \ Blind parameters \ Operating mode of output channel n = e.g. output for venetian blind/external venetian blind AND On: Output \ Status \ Status internal \ Object "Status internal byte" active = Yes
Status internal text	The GO sends the texts defined under *Outputs, status* when the relevant state occurs. The output can be issued following a change or cyclically.	Is specified by Outputs, status \ Status text	Outputs, general \ Output channel n active AND On: Output \ Blind parameters \ Operating mode of output channel n = e.g. output for venetian blind/external venetian blind AND On: Output \ Status \ Status internal \ Object "Status internal text" active = Yes

Name	Object function	Values	Must be enabled in the parameter dialogue
Status control mode delay active	The GO indicates if the control mode delay (dwell time) is still active after manual operation of the output. The send value can be parameterised. The output can be issued following a change or cyclically.	0 = disabled 1 = enabled	Outputs, general \ Output channel n active AND On: Output \ Blind parameters \ Operating mode of output channel n = e.g. output for venetian blind/external venetian blind AND On: Output \ Control mode input \ Use control mode objects = Yes AND On: Output \ Status \ Object "Status control mode delay" active = Yes
Status A Status B Status C	The relevant GO issues the state that meets the parameterised condition. The allocation of the relevant condition is concluded by the parameter *On: Output \ Status \ Status object A/B/C \ Status value.* The output can be issued following a change or cyclically.	0 = Condition not met 1 = Condition met	Outputs, general \ Output channel n active AND On: Output \ Blind parameters \ Operating mode of output channel n = e.g. output for venetian blind/external venetian blind AND On: Output \ Status \ Status object A/B/C \ Object "Status A/B/C" active = Yes
Disable object	Stops and disables all movements of the channel	0 = Enabled 1 = Disable	Outputs, general \ Output channel n active AND On: Output \ Blind parameters \ Operating mode of output channel n = e.g. output for venetian blind/external venetian blind
Start run time detection [2]	The GO Start run time detection starts the run time detection for the product connected to the output.	0 = No run time detection 1 = Start run time detection	Outputs, general \ Output channel n active AND On: Output \ Motor parameters \ Current measurement active = Yes AND On: Output \ Motor parameters \ Run time detection active = Yes
Fault message [2]	**Prerequisite:** On: Output \ Motor parameters \ Current measurement active = Yes The GO Fault message is set if the current flow is interrupted while driving (if the sun shading product is no longer in the monitored area after starting to move and has not yet reached the tolerance range around the end of the movement). (also see *Fig. 14 on page 34*: range ② and after range ④).	0 = No fault 1 = Fault	Always enabled

[1] only in operating mode *Venetian blind/external venetian blind*
[2] only for devices from the *pro* series

8.2.2 Group objects for the 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, general \ Operating mode Inputs n.1/n.2 = Inputs in pairs AND In.1/In.2: Input \ Operating mode Input n.1/n.2 = Sunblind push button
Stop/step move command	Sends Stop/Step telegram	0 = UP step 1 = DOWN step	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs in pairs AND In.1/In.2: Input \ Operating mode Input n.1/n.2 = Sunblind push button
Enable/disable	Disables sunblind push button. An ***Up/Down*** or ***Stop/Step*** telegram is always sent after a reset If TRUE has been received via the bus on ***GO Disable***, telegrams are no longer sent on the ***GOs Up/Down move command*** and ***Stop/Step move command*** until a FALSE value is received again on ***GO Disable***	0 = Enable 1 = Disable	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs in pairs AND In.1/In.2: Input \ Operating mode Input n.1/n.2 = Sunblind push button AND In.1/In.2: Input \ Use Enable or disable GO

8.2.2.2 Group objects for two button dimming input

Name	Object function	Values	Must be enabled in the parameter dialogue
Dimming on/off	Switch ON/switch OFF	0 = Off 1 = On	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs in pairs AND In.1/In.2: Input \ Operating mode Input n.1/n.2 = Two button dimming
Relative dimming	Incremental dimming / Start-Stop-Dimming	0 = Reduce 1 = Increase	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs in pairs AND In.1/In.2: Input \ Operating mode Input n.1/n.2 = Two button dimming
Enable/disable	Disables input. ***On/off*** or ***Relative dimming*** telegram is always sent after a reset If TRUE has been received via the bus on ***GO Disable***, telegrams are no longer sent on the ***GO Dimming on/off*** and ***Relative dimming*** until a FALSE value is received again on ***GO Disable***	0 = Enable 1 = Disable	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs in pairs AND In.1/In.2: Input \ Operating mode Input n.1/n.2 = Two button dimming AND In.1/In.2: Input \ Use Enable or disable GO

8.2.2.3 Group objects for switch (on/off) input

Name	Object function	Values	Must be enabled in the parameter dialogue
Switch	Switch ON/switch OFF	0 = Off 1 = On	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs single AND In.n: Input \ Input n.n operating mode = Switch (on/off)
Enable/disable	Disables input. ***Switch*** telegram is always sent after a reset If TRUE has been received via the bus on ***GO Disable***, telegrams are no longer sent on the ***GO Switch*** until a FALSE value is received again on ***GO Disable***	0 = Enable 1 = Disable	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs single AND In.n: Input \ Input n.n operating mode = Switch (on/off) AND In.n: Input \ Use Enable or disable GO

8.2.2.4 Group objects for toggle input

Name	Object function	Values	Must be enabled in the parameter dialogue
Toggle	***GO Toggle*** sends toggle telegram once or cyclically (inverted to ***GO Toggle status***)	0 = Off 1 = On	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs single AND In.n: Input \ Input n.n operating mode = Toggle
Toggle status	***GO Toggle status*** receives the actuator status (input object)	0 = Off 1 = On	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs single AND In.n: Input \ Input n.n operating mode = Toggle AND In.n: Input \ Separate input object for status
Enable/disable	Disables input. ***Toggle*** telegram is always sent after a reset If TRUE has been received via the bus on ***GO Disable***, telegrams are no longer sent on the ***GO Toggle*** until a FALSE value is received again on ***GO Disable***	0 = Enable 1 = Disable	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs single AND In.n: Input \ Input n.n operating mode = Toggle AND In.n: Input \ Use Enable or disable GO

8.2.2.5 Group objects for edge evaluation input

Name	Object function	Values	Must be enabled in the parameter dialogue
Edge bit	***GO Edge bit*** sends telegram once or cyclically	Bit/byte/scenario depending on the parameterisation	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs single AND In.n: Input \ Input n.n operating mode = edge evaluation
Enable/disable	Disables input. ***Edge bit*** telegram is always sent after a reset If TRUE has been received via the bus on ***GO Disable***, telegrams are no longer sent on the ***GO Edge bit*** until a FALSE value is received again on ***GO Disable***	0 = Enable 1 = Disable	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs single AND In.n: Input \ Input n.n operating mode = edge evaluation AND In.n: Input \ Use Enable or disable GO

8.2.2.6 Group objects for push button input (short/long)

Name	Object function	Values	Must be enabled in the parameter dialogue
Push button (short/long) bit A	Sends parameterised value for short or long keystroke.	Bit/byte/scenario depending on the parameterisation	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs single AND In.n: Input \ Input n.n operating mode = Push button (short/long)
Push button (short/long) bit B	Sends parameterised value for short or long keystroke.	Bit/byte/scenario depending on the parameterisation	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs single AND In.n: Input \ Input n.n operating mode = Push button (short/long)
Enable/disable	Disables input. ***Push button (short/long) bit A*** and ***Push button (short/long) bit B*** telegrams are always sent after a reset If TRUE has been received via the bus on ***GO Disable***, telegrams are no longer sent on the ***GO Push button (short/long) bit A*** and ***GO Push button (short/long) bit B*** until a FALSE value is received again on ***GO Disable***	0 = Enable 1 = Disable	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs single AND In.n: Input \ Input n.n operating mode = Push button (short/long) AND In.n: Input \ Use Enable or disable GO

8.2.2.7 Group objects for scenarios push button input

Name	Object function	Values	Must be enabled in the parameter dialogue
Scenarios push button	***GO Scenarios push button*** sends parameterised values	0 = Activate scenario 1 = Learn scenario 1...64 = Scenario number	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs single AND In.n: Input \ Input n.n operating mode = Scenarios push button
Enable/disable	Disables input. ***Scenarios push button*** telegram is always sent after a reset If TRUE has been received via the bus on ***GO Disable***, telegrams are no longer sent on the ***GO Scenarios push button*** until a FALSE value is received again on ***GO Disable***	0 = Enable 1 = Disable	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs single AND In.n: Input \ Input n.n operating mode = Scenarios push button AND In.n: Input \ Use Enable or disable GO

8.2.2.8 Group objects for one button dimming input

Name	Object function	Values	Must be enabled in the parameter dialogue
Dimming on/off	Switch ON/switch OFF	0 = Off 1 = On	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs single AND In.n: Input \ Input n.n operating mode = One button dimming
Relative dimming	Incremental dimming / Start-Stop-Dimming	0 = Reduce 1 = Increase	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs single AND In.n: Input \ Input n.n operating mode = One button dimming
Dimming status	Actuator status (input object)	0 = Off 1 = On	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs single AND In.n: Input \ Input n.n operating mode = One button dimming AND In.n: Input \ Separate input object for status
Enable/disable	Disables input. ***On/off*** or ***Relative dimming*** telegram is always sent after a reset If TRUE has been received via the bus on ***GO Disable***, telegrams are no longer sent on the ***GO Dimming on/off*** and ***Relative dimming*** until a FALSE value is received again on ***GO Disable***	0 = Enable 1 = Disable	Inputs, general \ Operating mode Inputs n.1/n.2 = Inputs single AND In.n: Input \ Input n.n operating mode = One button dimming AND In.n: Input \ Use Enable or disable GO

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 outputs on page 145*

8.2.4 Group objects for the logic functions

Name	Object function	Values	Must be enabled in the parameter dialogue
Input n	Up to four ***GO Input n*** with different impacts on the input value, depending on the parameterisation (see section *7.4.2 on page 106*).	0 or 1	Logic/Timer, general \ Function n = Logical linking
Output bit	***GO Output bit*** sends a 1-bit telegram for the TRUE and FALSE results. The output can be inverted.	0 = TRUE 1 = FALSE or inverted	Logic/Timer, general \ Function n = Logical linking AND Ln: Logic \ Output type = Bit object
Output scenario	***GO Output scenario*** sends a scenario command consisting of the scenario number and learn/execute for the TRUE and FALSE results.	0 = Activate scenario 1 = Learn scenario 1...64 = Scenario number	Logic/Timer, general \ Function n = Logical linking AND Ln: Logic \ Output type = Scenario
Output blind length	***GO Output blind length*** sends a position command for the TRUE and FALSE result (in conjunction with ***GO Output slat position***).	0% (top) ...100% (bottom)	Logic/Timer, general \ Function n = Logical linking AND Ln: Logic \ Output type = Blind length and slat position
Output slat position	***GO Output slat position*** sends a position command for the TRUE and FALSE result (in conjunction with ***GO Output blind length***).	0% (slat OPEN) ...100% (slat CLOSED)	Logic/Timer, general \ Function n = Logical linking AND Ln: Logic \ Output type = Blind length and slat position
Enable/disable	Disables logic function. Always sent following reset to the ***GOs Output***. If TRUE has been received via the bus on ***GO Disable***, telegrams are no longer sent on the ***GOs Output*** until a FALSE value is received again on ***GO Disable***.	0 = Enable 1 = Disable	Logic/Timer, general \ Function n = Logical linking AND Ln: Logic \ Use Enable or disable GO

8.2.5 Group objects for the timer functions

Name	Object function	Values	Must be enabled in the parameter dialogue
Start/Stop	***GO Start/Stop*** starts or stops the timer dependent on the parameterisation (see section *7.4.3 on page 110*).	0 or 1	Logic/Timer, general \ Function n = Timer
Output bit	***GO Output bit*** sends a 1-bit telegram upon start, stop or expiry of the timer.	0 or 1	Logic/Timer, general \ Function n = Timer AND Tn: Timer \ Output type = Bit object
Output scenario	***GO Output scenario*** sends a scenario command, consisting of the scenario number and learn/execute, upon start, stop or expiry of the timer.	0 = Activate scenario 1 = Learn scenario 1...64 = Scenario number	Logic/Timer, general \ Function n = Timer AND Tn: Timer \ Output type = Scenario
Output blind length	***GO Output blind length*** sends a position command upon start, stop or expiry of the timer (in conjunction with ***GO Output slat position***).	0% (top) ...100% (bottom)	Logic/Timer, general \ Function n = Timer AND Tn: Timer \ Output type = Blind length and slat position
Output slat position	***GO Output slat position*** sends a position command upon start, stop or expiry of the timer (in conjunction with ***GO Output blind length***).	0% (slat OPEN) ...100% (slat CLOSED)	Logic/Timer, general \ Function n = Timer AND Tn: Timer \ Output type = Blind length and slat position
Enable/disable	Disables timer function. Always sent following reset to the ***GOs Output***. If TRUE has been received via the bus on ***GO Disable***, telegrams are no longer sent on the ***GOs Output*** until a FALSE value is received again on ***GO Disable***.	0 = Enable 1 = Disable	Logic/Timer, general \ Function n = Timer AND Tn: Timer \ Use Enable or disable GO

8.2.6 Group objects for the device

Name	Object function	Values	Must be enabled in the parameter dialogue
Device	The ***GO Device*** indicates whether the actuator is ready for operation. The output can be issued once or cyclically.	0 or 1 Is specified by Device parameters \ Object "Actuator available" \ Object value	Device parameters \ Object "Actuator available" \ Object "Actuator available" active = Yes

9 Planning examples

9.1 Operating venetian blinds with push buttons

One venetian blind is connected to a KNX secure 8M230.16 AP and one to a KNX secure 4M230.8I REG. A sunblind push button is connected to the KNX secure 8M230.16 AP. This button is used to move both venetian blinds to any blind length and any slat position.

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

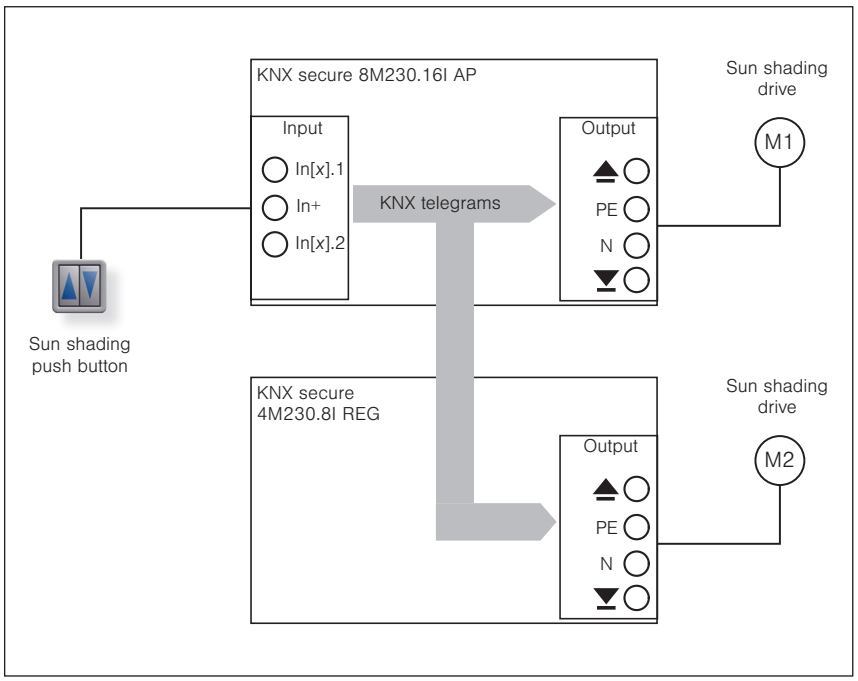


Fig. 56 "Operating venetian blinds" planning example

9.1.1 Settings

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

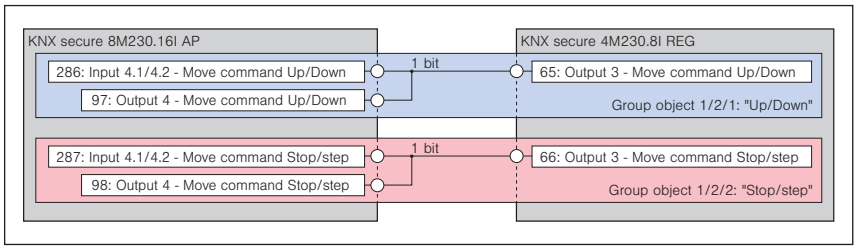


Fig. 57 Links in the "Operating venetian blinds" planning example

9.2 Connection to an automation

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

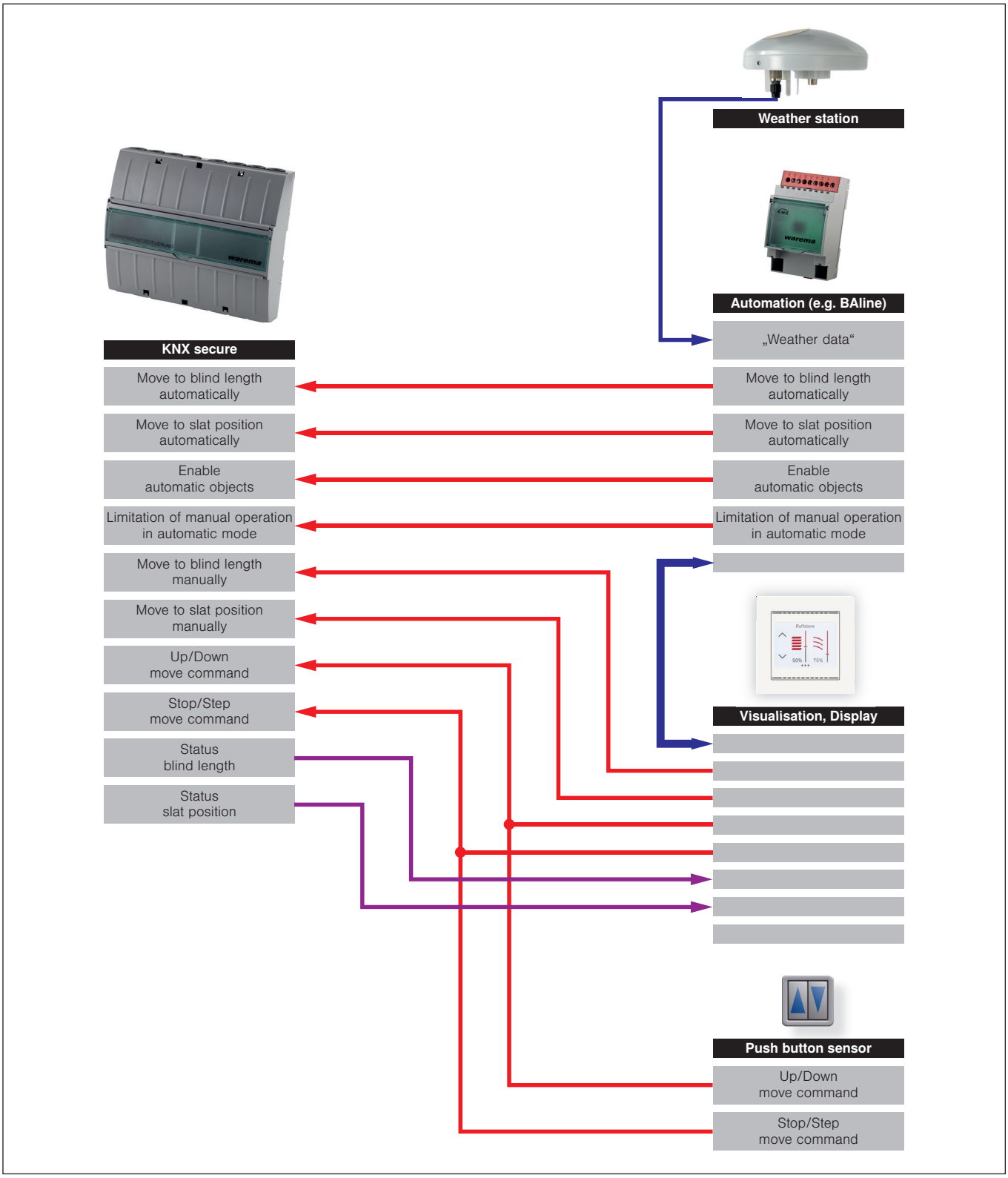


Fig. 58 "Connection to an automation" planning example

10 Control functions

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

Example After a manual move command **M**, a set control mode delay begins. If the control mode delay has elapsed, the last control mode move command **A** is executed.

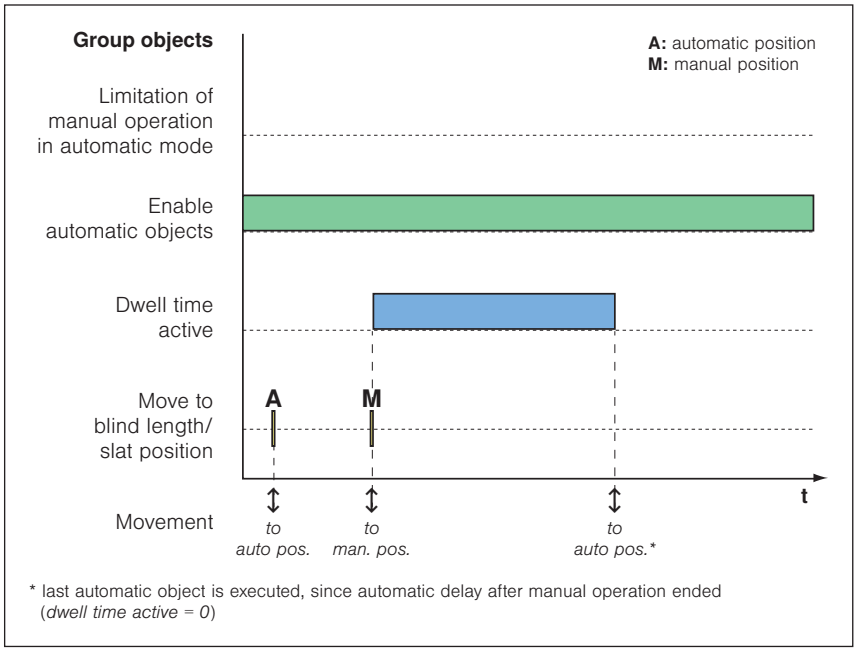


Fig. 59 Control mode objects enabled

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

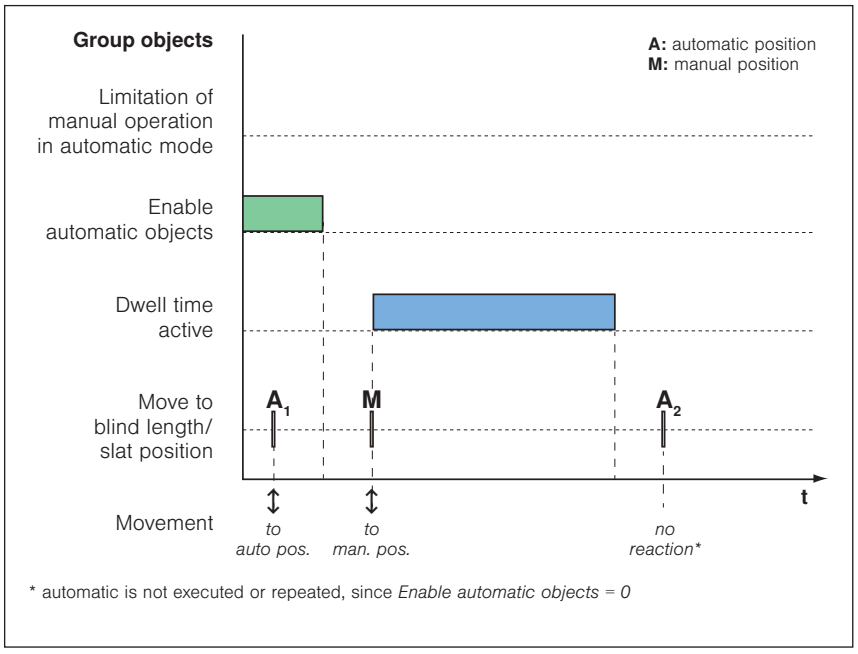


Fig. 60 Control mode objects disabled

Example If the GO ***Enable control-mode objects*** is set to 0 and then set back to 1, any still ongoing control mode delay is terminated. The last control mode move command **A** is executed.

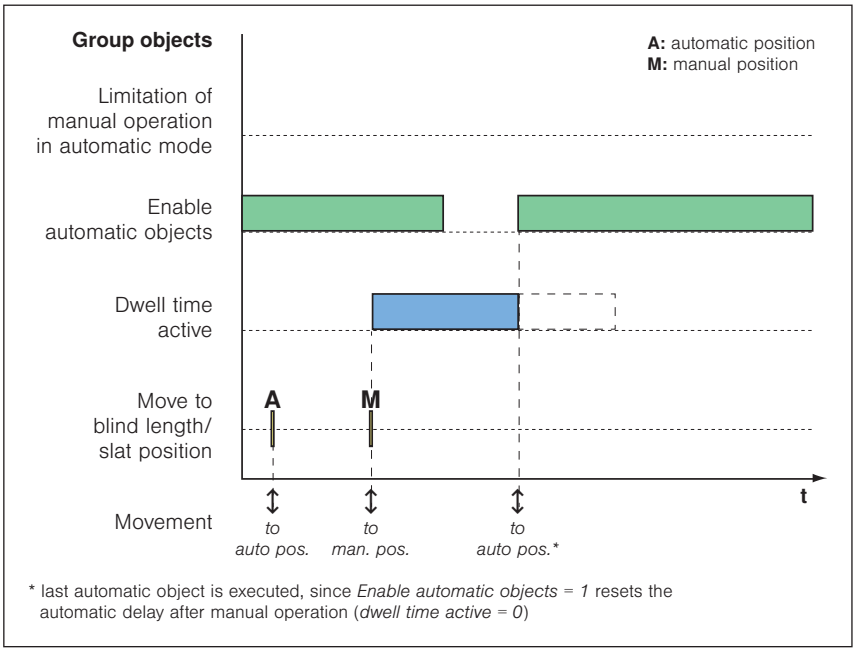


Fig. 61 Enable control mode objects during ongoing control mode delay

Example If a repeated 1 is received on the (still active) GO ***Enable control-mode objects***, any control mode delay that is still running is terminated. The last control mode move command ($\mathbf{A_2}$ in the example) is executed.

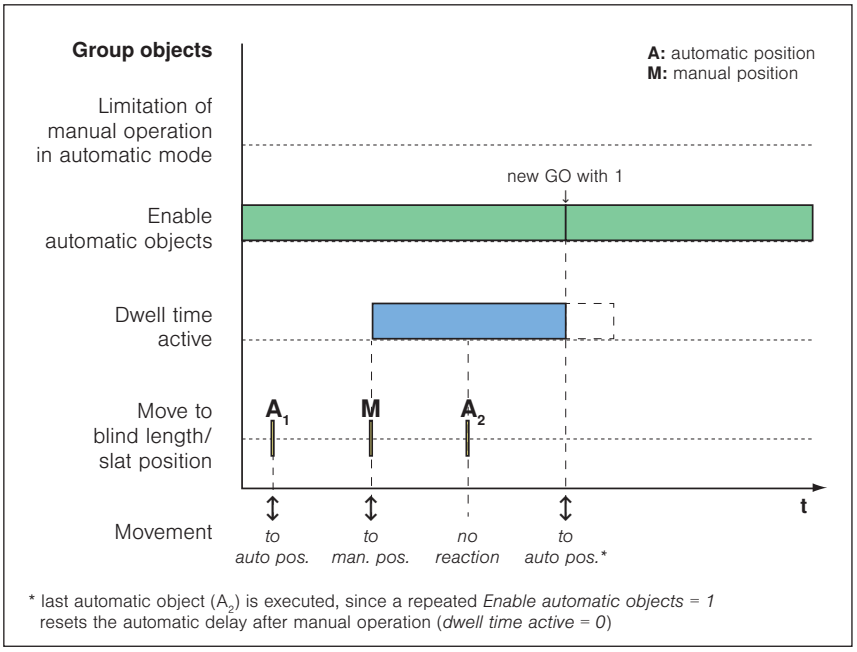


Fig. 62 Enable control mode objects with repeated GO

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

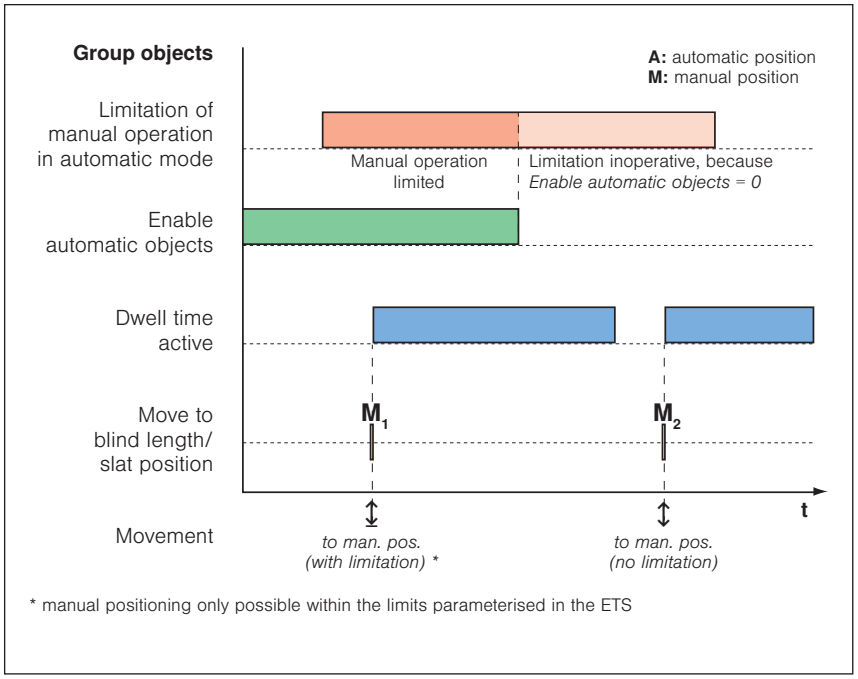


Fig. 63 Limitation of manual operation

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