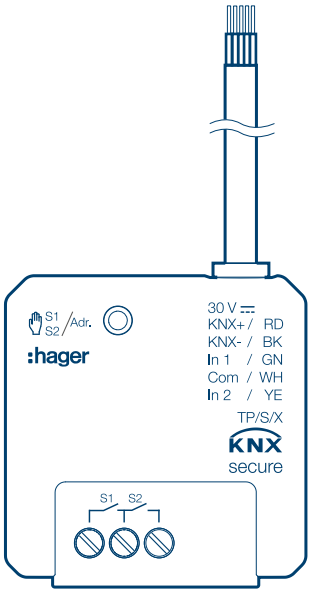
Application description

KNX Building system technology

Output 2 fold , Input 2 fold, flush



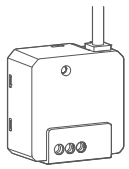
Output module 2x 6A /230V~, 2 inputs, flush mounted, KNX Secure

TYBS692F

:hager

EN

Product overview

	Reference no.	Product designation	Application software ref.	TP device / Radio device
	TYBS692F	Output module 2x 6A /230V~, 2 inputs, flush mounted, KNX Secure	STYBS692F	▬

Subject to technical changes!

Content

1. General

1.1 About this guide

This document describes the operation and parameterisation of KNX devices with the aid of the Engineering Tool Software ETS. The devices are parameterised by the ETS and the required settings for operation are made during the first installation.

1.2 About the program

The application programmes are compatible with ETS5 or ETS6 and are always available in their latest version on our Internet website.

ETS version	File extension of compatible products	File extension of compatible projects
ETS 5 (v 5.6.0 ou plus)	*.knxprod	*.knxproj
ETS 6 (v 6.0.0 ou plus)	*.knxprod	*.knxproj

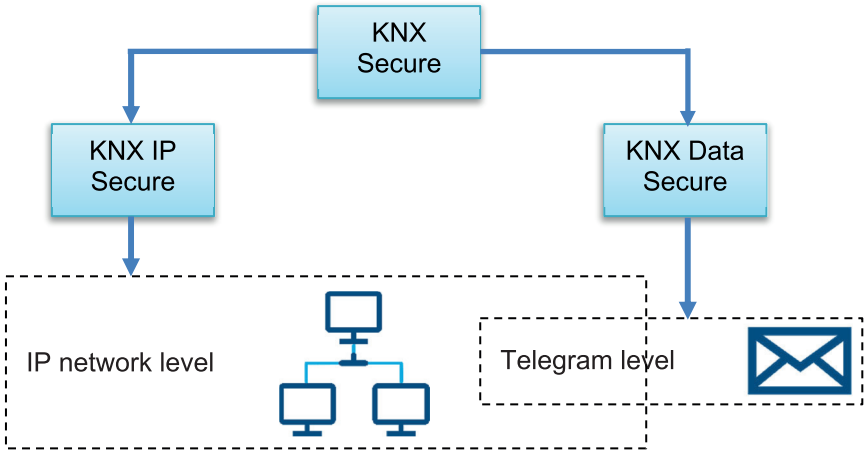
- **ETS Application designation**

Application	Product designation	Application designation
STYBS692F v1.0	TYBS692F	Output module 2x 6A /230V~, 2 inputs, flush mounted, KNX Secure

1.3 Connexion KNX secure

KNX Secure devices are able to encrypt and decrypt telegrams, thus adding an extra level of security to a KNX installation. This level of security can be used both during the commissioning of KNX installations as for KNX installations at runtime.

There are two types of encryption:
- KNX IP Secure : Telegrams are entirely encrypted and applied only to the KNX IP medium. This encryption must be used for KNX installations using an external IP network such as the Internet.
- KNX Data Secure : Telegrams are partly encrypted and applied to any KNX communication medium. This encryption can be used for the KNX IP medium, but only for the part of the KNX installation that is not exposed to an external IP network.



The device is KNX Data Secure capable and can be configured in the ETS project. A device certificate, which is attached to the front to the device, is required for safe commissioning. During mounting, it is recommended to remove the certificate from the device and to store it securely.
Note: It is also possible to commission the device without KNX Data-Secure. In this case, the device is not secured and behaves like other KNX devices.

Note: During the configuration of products in Secure mode, if one of the products mentioned below is installed, it is recommended to replace it by its Secure version:

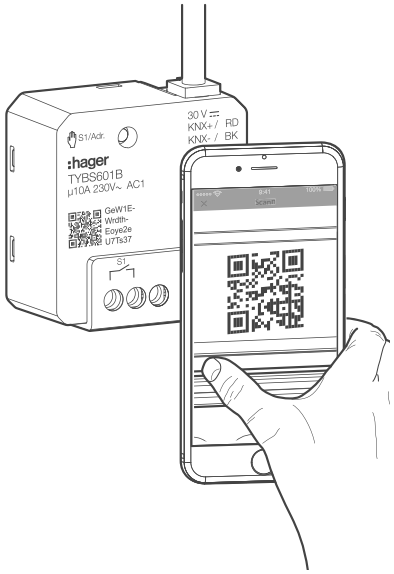
- Replace the reference TYF120 (KNX/IP Interface) with the reference TYFS120
- Replace the reference TH101 (USB modular data interface) with the reference TYFS122

Commissioning of the KNX Secure mode

The device is mounted and connected ready for use.

1. Activate the secure commissioning mode in ETS.
2. Enter or scan the device certificate to add it to the project in ETS.

Note: To scan the QR code, a high-resolution camera must be used.



3. Record all passwords and keep them in a safe place.
4. Remove the certificate from the device (QR code) and keep it in a safe place with the passwords.

Master-Reset

The master reset restores the basic device setting.

The reset allows :

- deleting the encryption key
- deleting of the BCU password
- application of the default settings
- the application of a default individual address (15.15.255).

The device must then be recommissioned with the ETS. The manual mode is possible.

In case of Secure mode, a reinitialization deactivates the security of the device. It can then be used again with the device certificate.

How do I perform a Master Reset?

1. Switch off the device by removing the bus connection or disconnecting the power supply to the system
2. Press and hold the lighted push button
3. Switch on the device again by connecting the bus connection or by switching on the power supply to the system.

The address LED lights up. After 5 seconds the LED flashes.

4. Release the address button.

The address LED lights up permanently while the master reset is in progress.

After several seconds, the LED lights off, indicating that the reset is complete. The device restarts.

Updating the firmware

The device can be updated. Firmware updates can be easily performed with the Hager ETS App. This application is free of charge and can be used on site or remotely.

How to update?
1. Login to **my.knx.org**
2. Create a new account or login with your existing account
3. Search for the **Hager Service** application
4. Add to basket
5. Go to the basket and click on Order
6. Select billing and shipping addresses
7. Click on Go to Payment
8. Confirm payment (free)Se connecter à **my.knx.org**

The application is now available in your account.

9. Download the application and the licence to update.

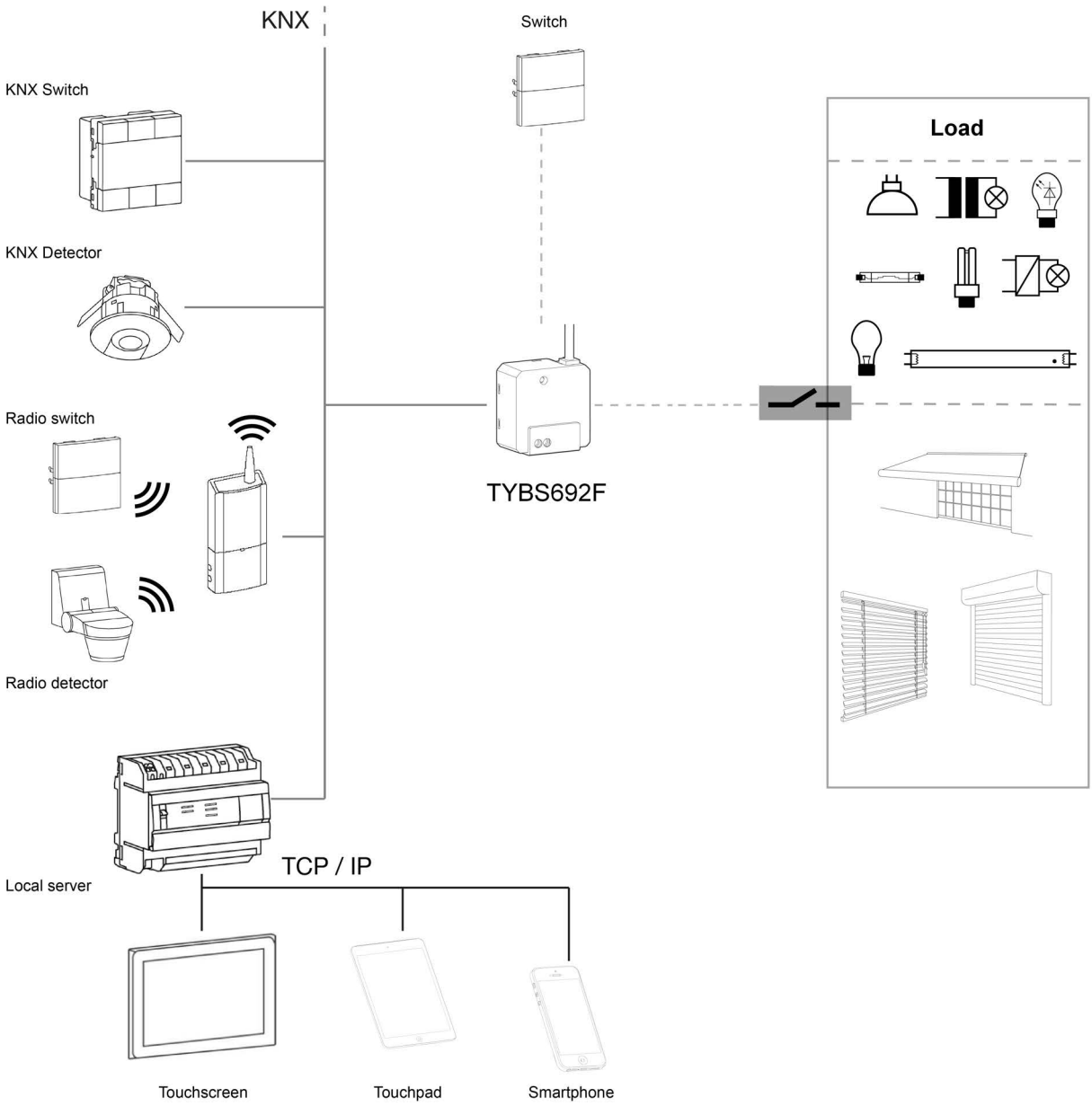
In the ETS project:
10. Start the application from the **Apps** tab
11. Select the device to be updated
12. Select the latest available firmware version
13. Load the device with the firmware
14. After loading is complete, activate the proprietary firmware

The device will update and restart.

2. General Description

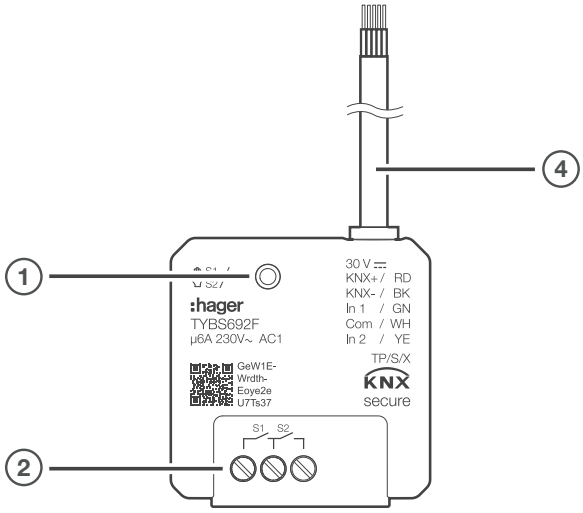
2.1 Installation of the device

2.1.1 Overview presentation



2.1.2 Description of the device

- TYBS692F



(1) Illuminated button Manual mode/programming button
(2) Load connection
(3) KNX bus connection cable / connection inputs

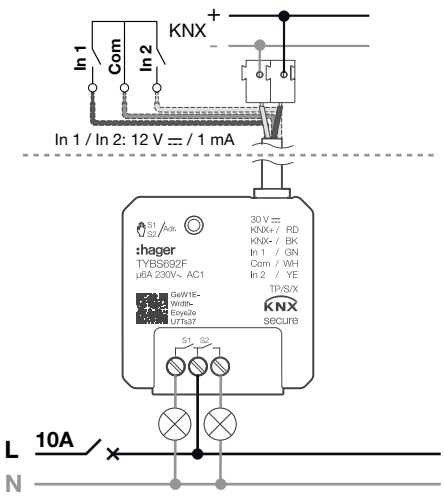
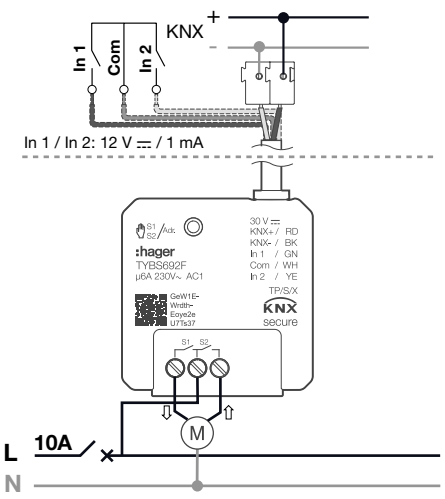
2.1.3 Physical addressing

In order to perform the physical addressing or to check whether or not the bus is connected, press the lighted push button (see chapter 2.1.2 for the button location).

Light on = bus connected and ready for physical addressing.

Programming mode is activated, until the physical address is transferred from ETS. Pressing the button again, exits programming mode. Physical addressing can be carried out in automatic or manual mode.

2.1.4 Connection

TYBS692F	
Connection of the loads to switch	Connection from the motor
	

2.2 Function modules of the application

The switch actuators of the devices can be used in 2 different modes.

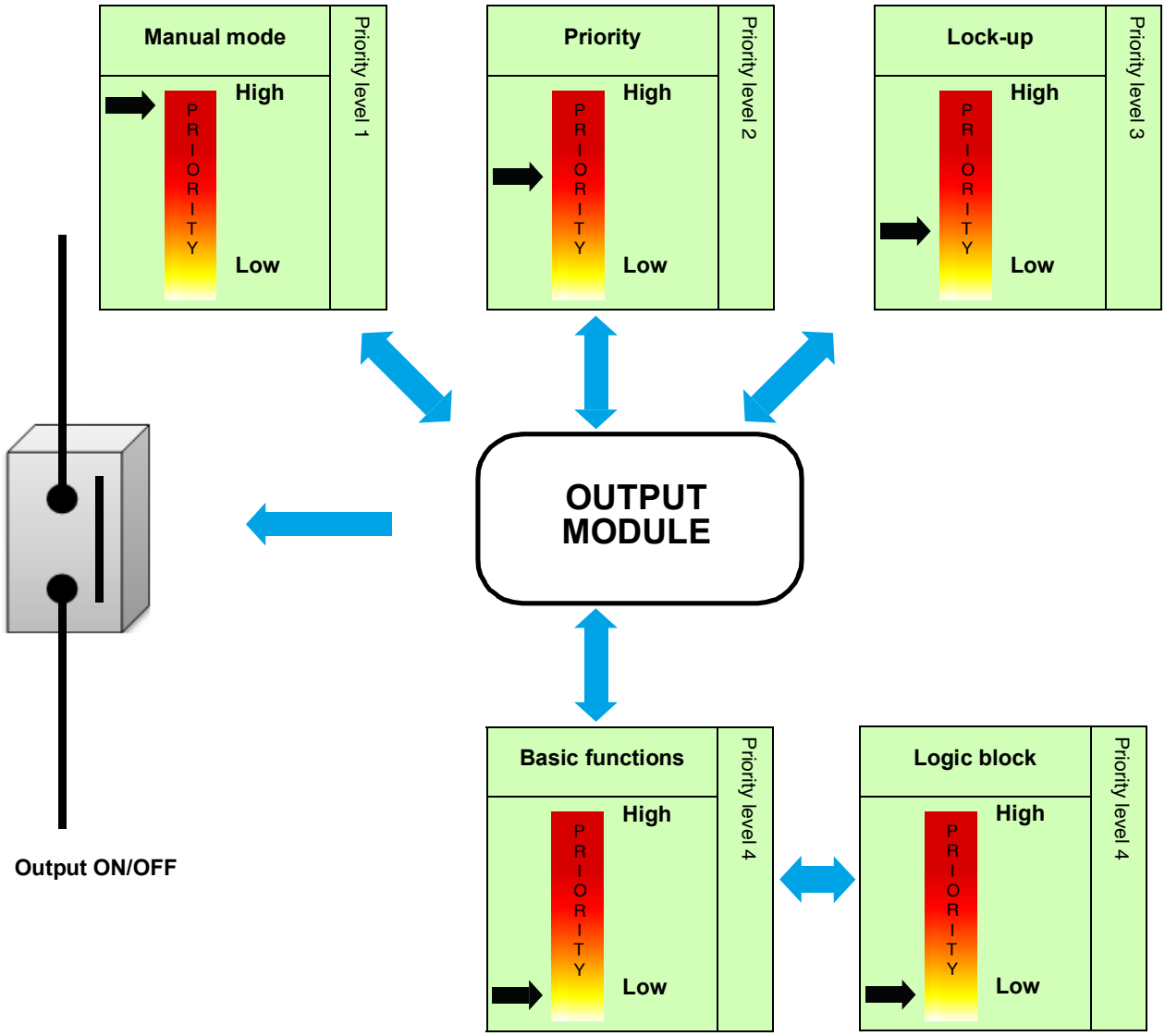
ON/OFF
- Each switching contact is used separately to switch a load.

Shutter/blind
- Each pair of outputs constitutes a shutter and blind channel.

A mix of the two operating modes is possible.

Warning: The devices are delivered in ON/OFF operating mode. When connecting shutters or blinds, ensure that both contacts are not turned on at the same time!

2.2.1 ON/OFF



2.2.1.1 Functions for each switching channel

The applications allow individual configuration of the device outputs. The most important functions are:

- ON/OFF

An output can be switched on or off using the ON/OFF function. The command can come from switches, buttons or other control inputs.

- Timer

The Timer function is used to switch an output on or off for a programmable period. According to the selected operating mode of the timer, the output can be turned ON or OFF for a determined period of time. The timer may be interrupted before expiry of the delay time. A programmable Cut-OFF pre-warning announces the end of the delay time by a 1-second inversion of the output status. The timer duration can be modified via the bus KNX.

- Time limited toggle switch

The Time-limited OFF function is a switching function that automatically switches off after a configurable delay time.
Application: Lighting of store rooms, cellars, sheds etc.

- Priority

The Priority function is used to force the output into a defined state. The Priority function is controlled with a 2-bit command.
Priority: Manual mode > **Priority** > Lock-up > Basic function.
Only a Priority OFF command authorizes the output for control.
Application: Keeping lighting on for security reasons.

- Lock-up

The Lock-up function is used to lock the output in a predefined state.
Priority: Manual mode > Priority > **Lock-up** > Basic function.
The Lock-up prevents actuation until an unlock command has been received. The Lock-up duration can be set.

- Scene

The Scene function is used to switch groups of outputs into a configurable predefined state. A scene is activated by receipt of a 1-byte command. Each output can be included in 64 different scenes.

- Preset

The Preset function is used to switch an output into various predefined states. The Preset function is activated via an object in 1-bit format. Each output can be controlled via 2 Preset objects.

- Delay

The Delay functions are used to activate the outputs with a switching or tripping delay or with a switching and tripping delay.

- Timer/toggle switch changeover

The Timer/toggle switch changeover function is used to switch between a Timer and a Toggle switch function applied to the communication object ON/OFF.

- Hours counter

The Hours Counter function is used to count the overall operating time of an output in the ON or OFF state. The counter setpoint can be programmed and altered via an object.

2.2.1.2 Additional functions

The applications configure the general functions of the devices. The following functions apply to the entire device:

- Status indication

The behaviour of the status indication of each switching channel can be configured for the entire device. The Status indication sends the switching status of the individual output contact on the KNX bus.

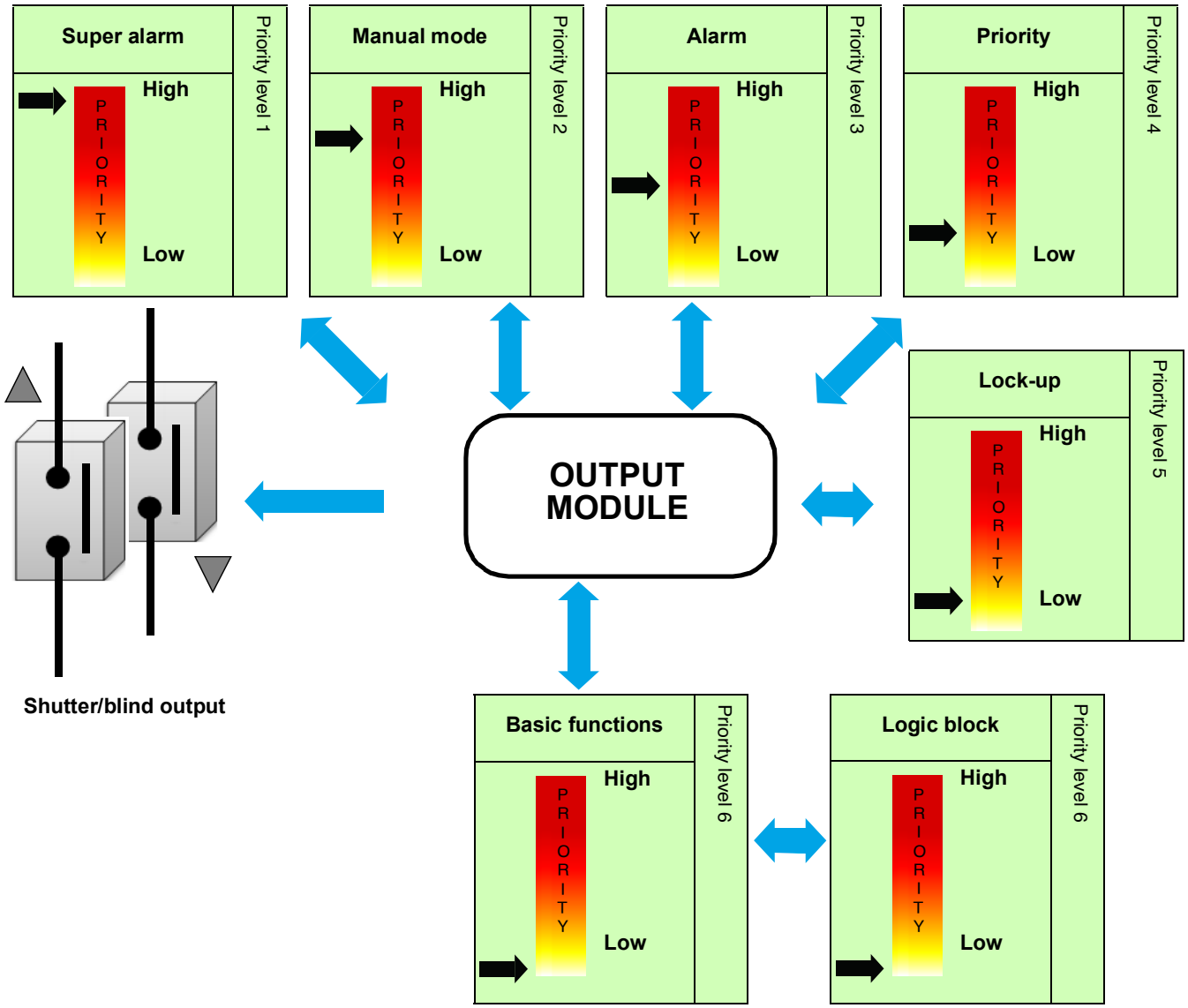
- Logic block

The Logic function is used to control an output depending on the result of a logic operation. This command has the lowest priority. The result of the function can be output on the KNX bus and can directly control one or more outputs. There are 2 logic blocks per device with up to 4 inputs available.

- Diagnosis

The Device diagnosis function allows notifications about the operating state of the device to be sent via the KNX bus. This information is sent periodically and/or on status change.

2.2.2 Shutter/blind



2.2.2.1 Functions for each shutter/blind channel

The applications allow individual configuration of the device outputs. The most important functions are:

- Up/down

The UP/DOWN function is used to run up or down shutters, blinds, awnings, etc. This function can also be used to open and close electric blinds. The command can be given by touch sensors (long press), switches or automatically.

- Slat position/Stop

The Slat position/Stop function is used to adjust the slats of a blind or to stop its ongoing movement. This function can be used to alter the shade and the incidence of light from outside. The control command may be issued by a push button, for example: A short press on UP/DOWN buttons.

- Position in %

The Position function is used to bring a shutter or blind to a desired position, which is entered in % lock.

- Scene

The Scene function is used to switch groups of outputs into a configurable predefined state. A scene is activated by receipt of a 1-byte command. Pressing a push button activates a scene. Each output can be included in 64 different scenes.

- Preset

The Preset function is used to switch an output into various predefined states. The Preset function is activated via an object in 1-bit format.

- Sun protection

The Sun protection function is used to set the brightness in a room according to the amount of daylight. In general, the position values are sent by an external device (For example, a weather station).

- Lock-up

The Lock-up function is used to lock the output in a predefined state.
Priority: Super alarm > Manual mode > Alarm > Priority > **Lock-up** > Basic function.
The Lock-up prevents actuation until an unlock command has been received. The Lock-up duration can be set.

- Priority

The Priority function is used to force the output into a defined state.
Priority: Super alarm > Manual mode > Alarm > **Priority** > Lock-up > Basic function.
Only a Priority OFF command authorizes the output for control.
Application: Maintaining a hanging position for security reasons.

- Alarm

With the Alarm function a shutter or blind can be positioned in a configurable predefined state. Up to 3 alarm functions are possible.
Priority: Super alarm > Manual mode > **Alarm** > Priority > Lock-up > Basic function.
The alarm prevents any actuation until an alarm cancellation command has been received.

* Default value

2.2.2.2 Additional functions

The applications configure the general functions of the devices. The following functions apply to the entire device:

- Super alarm

This function is used to set all the outputs of the device into a configurable blocked state. All other functions, including manual mode, will be locked. Only a command to cancel the Super alarm will authorize the other commands.
Application: Block all blinds for window cleaning.

- Status indication

The behaviour of the Status indication of each shutter/blind channel can be configured for the entire device.
Using the Status indication function, the following can be sent via the bus:

- Position in % indication: Indicates the position of the shutter or blind.
- Slat angle indication in %: Indicates the slat pitch of the blind.
- Upper or lower position reached: Indicates arrival at the upper or lower position.

- Logic block

The Logic function is used to control an output depending on the result of a logic operation. This command has the lowest priority. The result of the function can be output on the KNX bus and can directly control one or more outputs. There are 2 logic blocks per device with up to 4 inputs available.

- Diagnosis

The Device diagnosis function allows notifications about the operating state of the device to be sent via the KNX bus. This information is sent periodically and/or on status change.

* Default value

2.2.3 Input

The command organs connected to inputs (remote switch, switch, automation) enable lighting, shutters, blinds, heating and scenes commands.

The most important functions are:

- Toggle switch

The Toggle switch function consists in inverting the output status after each press.

- ON/OFF

The ON/OFF function a lighting, rolling shutter or heating circuit to be switched on or off. The command can come from switches, push-buttons or automations.

- Timer

The Timer function enables a lighting, rolling shutter or heating circuit to be switched on or off for a programmable length of time. A short press on the push-button re-launches the timer. The timer can be interrupted before the end of the time by a long press. A programmable Cut-OFF pre-warning announces the end of the delay time by a 1-second inversion of the output status.

- Shutter/blind

This function enables a rolling shutter or a blind to be controlled from 2 push-buttons. The Up/Down command (**Up/Down** object) is issued by a long press on the button. The Stop/Tilt function issues the object **Tilt/Stop** (short press).

- Dimming

This function enables a light to be dimmed from one or two input contacts. The ON/OFF function issues the object **ON/OFF** (short press). The Dimming function issues the object **Dimming** (long press).

- Heating

This function enables a heating or air-conditioning instruction (Auto, Comfort, Economy, Night setpoint, Frost protection) to be selected. The command can come from switches, push-buttons or automations.

- Priority

The Priority function enables an input to be forced into a defined state. The priority action depends on the type of application commanded: Lighting ON/OFF, Rolling shutter, Heating.

- Scene

This function enables scenes to be saved or selected. These concern different types of output (lighting, blind, shutter, heating) to create ambiances or scenarios (leaving scenario, reading ambiance etc.).

- Alarms

The wind, rain and freeze Alarm functions enable alarms to be issued on a cyclical basis to the bus from automations (anemometer, rain detector, twilight switch, etc.).

- Automatic control

The Automatic control function enables an output to be controlled in parallel to the standard control. An additional command object (Automatic control deactivation) is used to activate or deactivate Automatic control.

- Load shedding

The Load shedding function is used to force an output to OFF. Load shedding is activated by receipt of a 1-byte command. At the end of load shedding, the output is switched to the theoretical status without Load shedding (memorisation).

- Windows contact

The Window contact function enables the window opening/closing information to be sent to the KNX bus.

- Tariff

The Tariff function enables T1/T2 tariff information to be sent to the KNX bus.

* Default value

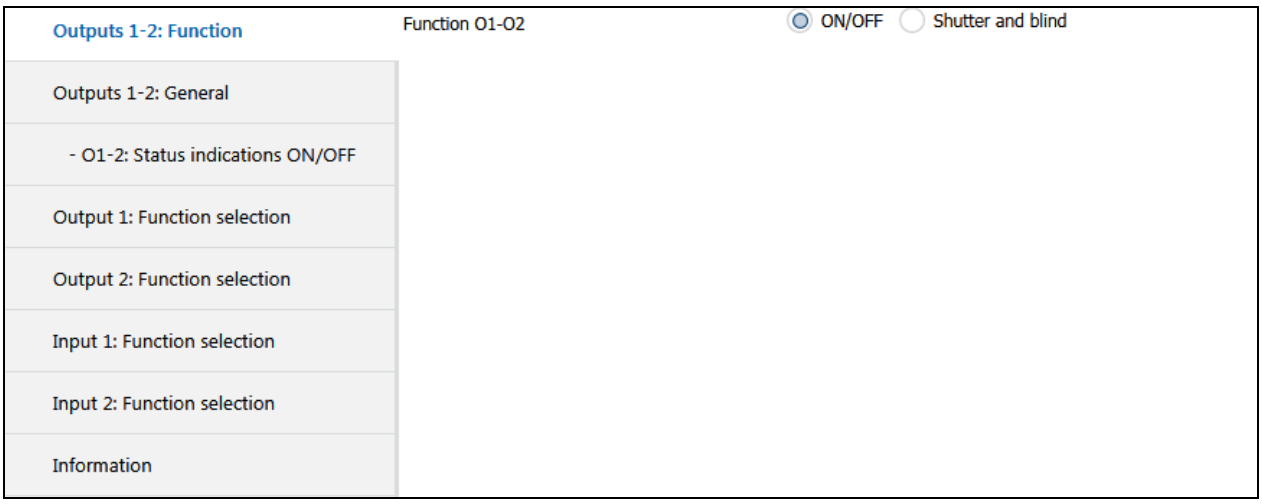
3. Parameters

3.1 Closing type for the outputs

This configuration window is used to set the Closing type for the outputs.
Parameter description:

ON/OFF
- Each switching contact is used separately to switch a load.

Shutter/blind
- Each pair of outputs constitutes a shutter and blind channel.



Parameter	Description	Value
Function Ox-Oy	The outputs are used as ON/OFF switches. The outputs are used for shutters and blinds. One output for raising and one output for lowering.	**ON/OFF*** Shutter and blind

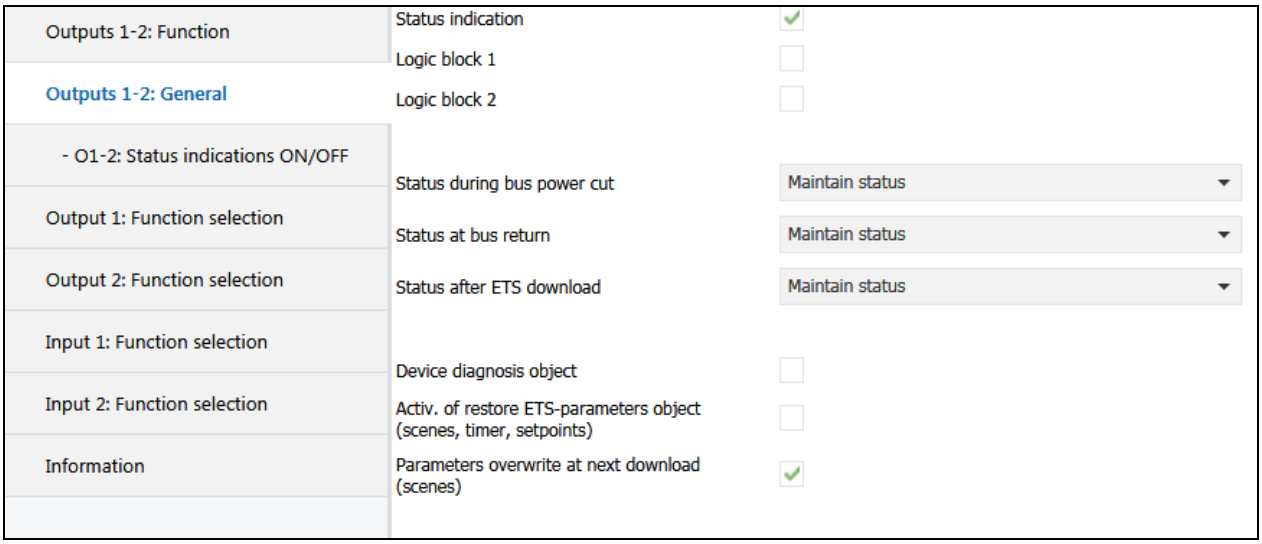
The assignment of the outputs is carried out following:

	ON/OFF	Shutter and blind
Function O1-O2	Output 1: ON/OFF Output 2: ON/OFF	Output 1-2: Shutter and blind

* Default value

3.2 Definition of the general parameters

This configuration window is used for general configuration of the device.



3.2.1 Activation of the Status indication: ON/OFF

Parameter	Description	Value
Status indication	The Status indications parameter register is hidden.	Not active
	The Status indications parameter register is displayed.	**Active***

For configuration see section: Status indication ON/OFF.

3.2.2 Activation of the logic blocks: ON/OFF

Parameter	Description	Value
Logic block 1	Communication object and parameter register Logic block 1 are hidden.	**Not active***
	Communication object and parameter register Logic block 1 are displayed.	Active

For configuration see section: Logic block : ON/OFF.
Note: The parameters and objects are identical for block 2 ; Only the terms will be adjusted.

For logic block 1

Communication objects:

60 - Logic block 1 - Input 1 (1 bit - 1.002 DPT_Bool)

64 - Logic block 1 - Logic result (1 bit - 1.002 DPT_Bool)

For logic block 2

Communication objects:

66 - Logic block 2 - Input 1 (1 bit - 1.002 DPT_Bool)

70 - Logic block 2 - Logic result (1 bit - 1.002 DPT_Bool)

* Default value

3.2.3 Status during bus power cut or download: ON/OFF

Parameter	Description	Value
Status during bus power cut	The output status remains unchanged during a bus power cut.	**Maintain status***
	The output is turned on when there is a bus power cut.	ON
	The output is turned off when there is a bus power cut.	OFF

Parameter	Description	Value
Status at bus return	The output status remains unchanged during at bus return.	**Maintain status***
	The output is switched on at bus return.	ON
	The output is switched off at bus return.	OFF

Note: The device will reboot on bus return. The Priority functions that were present before the bus power cut, are no longer active (Priority, Lock-up).

Parameter	Description	Value
Status after ETS download	The output status remains unchanged after ETS download.	**Maintain status***
	The output is switched on after ETS download.	ON
	The output is switched off after ETS download.	OFF

Note: During ETS-parameters download, the outputs remain unchanged.

3.2.4 Super alarm: Shutter

Parameter	Description	Value
Super alarm	Activation of the Super alarm is not possible.	Not active
	Activation of the Super alarm is possible without time limit.	**Active***
	The Super alarm can be activated for a duration that is configurable via the ETS parameters. After expiry of the time limit, the Super alarm is no longer active.	Time limited

Communication objects: **71 - Outputs 1-2 - Super alarm** (1 bit - 1.005 DPT_Alarm)

For configuration see section: Super alarm.

* Default value

3.2.5 Activation of the Status indication: Shutter

Parameter	Description	Value
Status indication	The Status indications parameter register is hidden.	Not active
	The Status indications parameter register is displayed.	**Active***

For configuration see section: Status indication Shutter.

3.2.6 Activation of the logic blocks: Shutter

Parameter	Description	Value
Logic block 1	Communication object and parameter register Logic block 1 are hidden.	**Not active***
	Communication object and parameter register Logic block 1 are displayed.	Active

For configuration see section: Logic block : Shutter.
Note: The parameters and objects are identical for block 2 ; Only the terms will be adjusted.

For logic block 1

Communication objects: **76 - Logic block 1 - Input 1** (1 bit - 1.002 DPT_Bool)

80 - Logic block 1 - Logic result (1 bit - 1.002 DPT_Bool)

For logic block 2

Communication objects: **82 - Logic block 2 - Input 1** (1 bit - 1.002 DPT_Bool)

86 - Logic block 2 - Logic result (1 bit - 1.002 DPT_Bool)

* Default value

3.2.7 Status during bus power cut or download: Shutter

Parameter	Description	Value
Status during bus power cut	Maintain the position before the bus power cut.	**Maintain status***
	Shutter or blind open.	Up
	Shutter or blind closed.	Down

Parameter	Description	Value
Status after bus power cut	Maintain the position before the bus power cut.	**Maintain status***
	Shutter or blind open.	Up
	Shutter or blind closed.	Down
	Run to a specific position.	Specific position

Note: The device will reboot on bus return. The priority functions that were present before the bus power cut, are no longer active (Super alarm, Alarm, Priority, Lock-up).

Parameter	Description	Value
Position after bus power cut	This parameter defines the position to run the shutter or blind to, after the KNXbus power cut.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Status after bus power cut** parameter has the following value: **Specific position**.*

Parameter	Description	Value
Slat angle (0-100%)	This parameter defines the slat position of the blind that is set after a KNX bus power cut.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Status after bus power cut** parameter has the following value: **Specific position**.*

Parameter	Description	Value
Status after ETS download	Maintain the position before download.	**Maintain status***
	Shutter or blind open.	Up
	Shutter or blind closed.	Down
	Run to a specific position.	Specific position

Note: During ETS-parameters download, the outputs remain unchanged.

Parameter	Description	Value
Position after download	This parameter defines the position to run the shutter or blind to, after download of the ETS parameters.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Status after download** parameter has the following value: **Specific position**.*

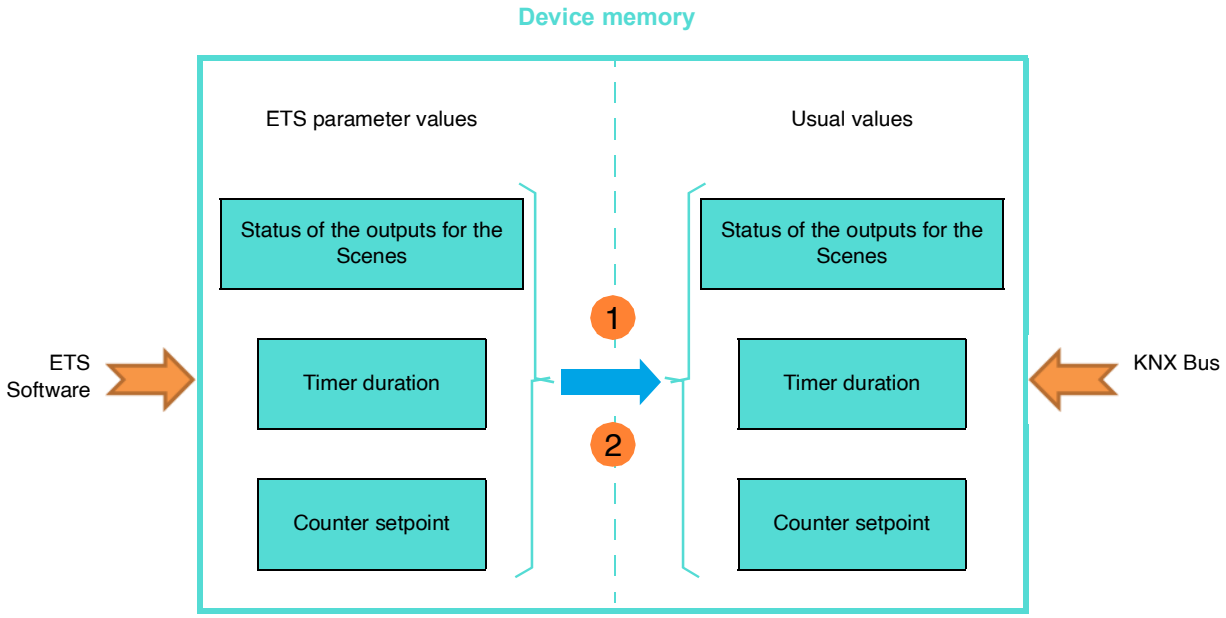
Parameter	Description	Value
Slat angle (0-100%)	This parameter defines the slat position of the blind that is set after download of the ETS-parameters.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Status after download** parameter has the following value: **Specific position**.*

3.2.8 Restore ETS-Parameters

There are 2 types of parameters in the device:
- Parameters that can only be changed via ETS.
- Parameters that can be changed via ETS or via the KNX bus.

For parameters that can be changed via ETS and via the KNX bus, 2 values are stored in the device memory: The value corresponding to the ETS-parameter and the currently used value.



1 **Receipt of the value 1 on the object, Resets the ETS parameter values**: Current parameter values are replaced by the ETS-parameter values.

2 **Download of the ETS application:** Current parameter values are replaced by the ETS parameter values on download.

Parameter	Description	Value
Activ. of restore ETS-parameters object (scenes, timer, setpoints)	The **Restore ETS-params settings** communication object is hidden. The **Restore ETS-params settings** communication object is displayed. On receipt of a 1 on this object, the parameters** that are adjustable via the bus are overwritten with values set in the ETS before the last download.	**Not active*** Active

** Output status for scene X, Timer duration, Hours counter setpoint, Current setpoint 1 and 2, Counter value setpoint.

Communication object: **87 - Outputs 1-2 : ON/OFF- Restore ETS-params settings** (1 bit - 1.015 DPT_Reset)

* Default value

3.2.9 Activation of the Device diagnosis object

Parameter	Description	Value
Device diagnosis object	The **Device diagnosis** parameter register and the associated communication object is hidden.	**Not active***
	The **Device diagnosis** parameter register and the associated communication object are displayed.	Active

Communication object: **89 - Outputs 1-2 - Diagnosis** (6 bytes - Specific)

For configuration see section: Diagnosis.

3.2.10 Parameters overwrite at next download

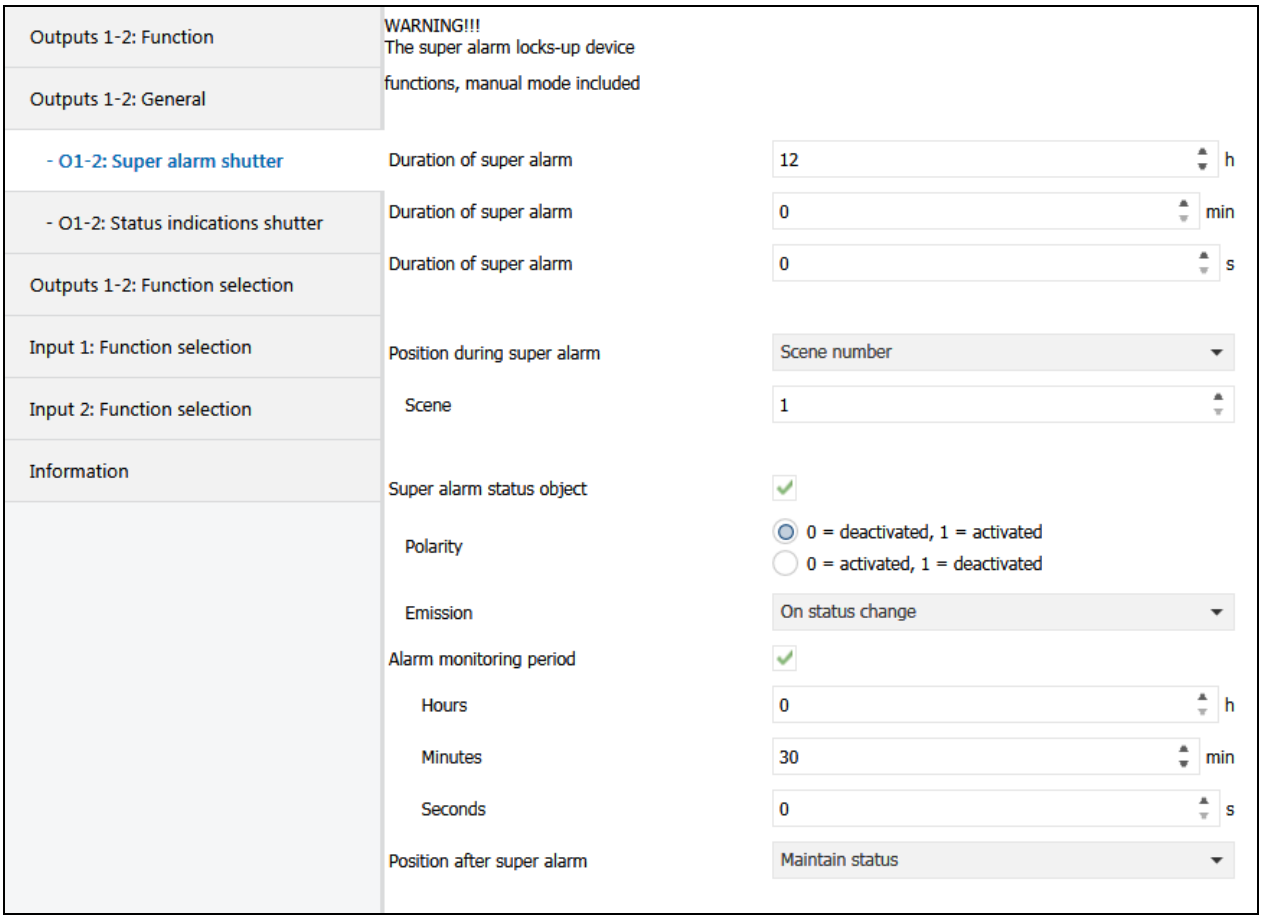
Parameter	Description	Value
Parameters overwrite at next download (scenes)	The parameter values stored in the device will remain in the device at the next download.	**Not active***
	The parameter values stored in the device will be overwritten with the ETS configured values at the next download.	Active

* Default value

3.3 Super alarm

This function is used to block all the outputs of the device in a configurable state. All other functions, including manual mode, will be locked. Only a command to cancel the Super alarm will authorize the other commands. The super alarm is activated on receipt of a 1 on the **Super alarm** communication object.

The behaviour is determined by the following parameters:



3.3.1 Duration activation and position

Parameter	Description	Value
Duration of super alarm	This parameter defines the time during which the super alarm is active.	**12** hours: 0 to 23 h **0** minutes: 0 to 59 min **0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Super alarm** parameter has the following value: **Time limited**.*

* Default value

Parameter	Description	Value
Position during super alarm	During the super alarm, the shutter/blind output:	
	Not changed.	**Maintain status***
	Closes the Up contact.	Up
	Closes the down contact.	Down
	Opens the 2 contacts.	Stop
	Runs to a specific position.	Specific position
	Runs to a position set in a scene.	Scene number

Parameter	Description	Value
Position (0-100%)	This parameter defines the position to run the shutter or blind to during the super alarm.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Position during super alarm** parameter has the following value: **Specific position**.*

Parameter	Description	Value
Slat angle (0-100%)	This parameter defines the slat position of the blind that is set during the super alarm.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Position during super alarm** parameter has the following value: **Specific position**.*

Parameter	Description	Value
Scene	This parameter defines the scene number that is to be applied during the super alarm.	Scene 1 ... 64 Default value: **1**

The outputs respond according to the scene numbers and associated parameters.
*Note: This parameter is only visible if the **Position during super alarm** parameter has the following value: **Scene number**.*

3.3.2 Super alarm status indication

Parameter	Description	Value
Super alarm status object	This parameter is used to authorize the **Super alarm status** object. This object allows the status of the super alarm to be sent from the device on the KNX bus.	**Not active*** Active

Communication object: **72 - Outputs 1-2: Shutter - Super alarm status** (1 bit - 1.011 DPT_State)

* Default value

Parameter	Description	Value
Polarity	The **Super alarm status** object sends:	
	0 = When the super alarm is deactivated 1 = When the super alarm is activated	**0 = Not active,** **1 = Active***
	0 = When the super alarm is activated 1 = When the super alarm is deactivated	0 = Active, 1 = Not active

*Note: This parameter is only visible if the **Super alarm status indication object** parameter has the following value: **Active**.*

Parameter	Description	Value
Emission	The object **Super alarm status** will be sent on:	
	Activation or deactivation of the super alarm.	**On status change***
	Periodically after a configurable time.	Periodically
	On activation or deactivation of the super alarm and periodically.	On status change and periodically

*Note: This parameter is only visible if the **Super alarm status indication object** parameter has the following value: **Active**.*

Parameter	Description	Value
Hours (h)	This parameter determines the time between the individual transmissions of the **Super alarm status** object.	**0** hours: 0 to 23 h
Minutes (min)		**10** minutes: 0 to 59 min
Seconds (s)		**0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Emission** parameter has the following value: **Periodically** or **On status change and periodically**.*

3.3.3 Alarm monitoring period

Parameter	Description	Value
Alarm monitoring period	The **Super alarm** object:	
	Expects no periodic signal.	**Not active***
	Expects a periodic 0 signal.	Active
	If this signal remains off, the super alarm is automatically activated and the shutters/blinds are run to the position set by the **Position during super alarm** parameter.	

Parameter	Description	Value
Hours (h)	This parameter defines the maximum time between 2 signals on the Super alarm communication object.	**0** hours: 0 to 23 h
Minutes (min)		**10** minutes: 0 to 59 min
Seconds (s)		**0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Alarm monitoring period** parameter has the following value: **Active**.*

3.3.4 Position after super alarm

Parameter	Description	Value
Position after super alarm	After the super alarm, the shutter/blind output:	
	Not changed.	**Maintain status***
	Closes the Up contact.	Up
	Closes the down contact.	Down
	Runs to a specific position.	Specific position
	Runs to a position set in a scene.	Scene number
	Returns to the position before super alarm.	Position before super alarm
	Runs to the position that would be active according to other communication objects if no super alarm had taken place.	Theoretical status without super alarm

*Note: On setting the **Theoretical status without super alarm**, the Up/Down and slat step commands are not saved.*

Parameter	Description	Value
Position (0-100%)	This parameter defines the position to run the shutter or blind to after the super alarm.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Position after super alarm** parameter has the following value: **Specific position**.*

Parameter	Description	Value
Slat angle (0-100%)	This parameter defines the slat position that is to be applied after the super alarm.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Position after super alarm** parameter has the following value: **Specific position**.*

Parameter	Description	Value
Scene	This parameter defines the scene number that is to be activated after the super alarm.	Scene 1 ... 64 Default value: **1**

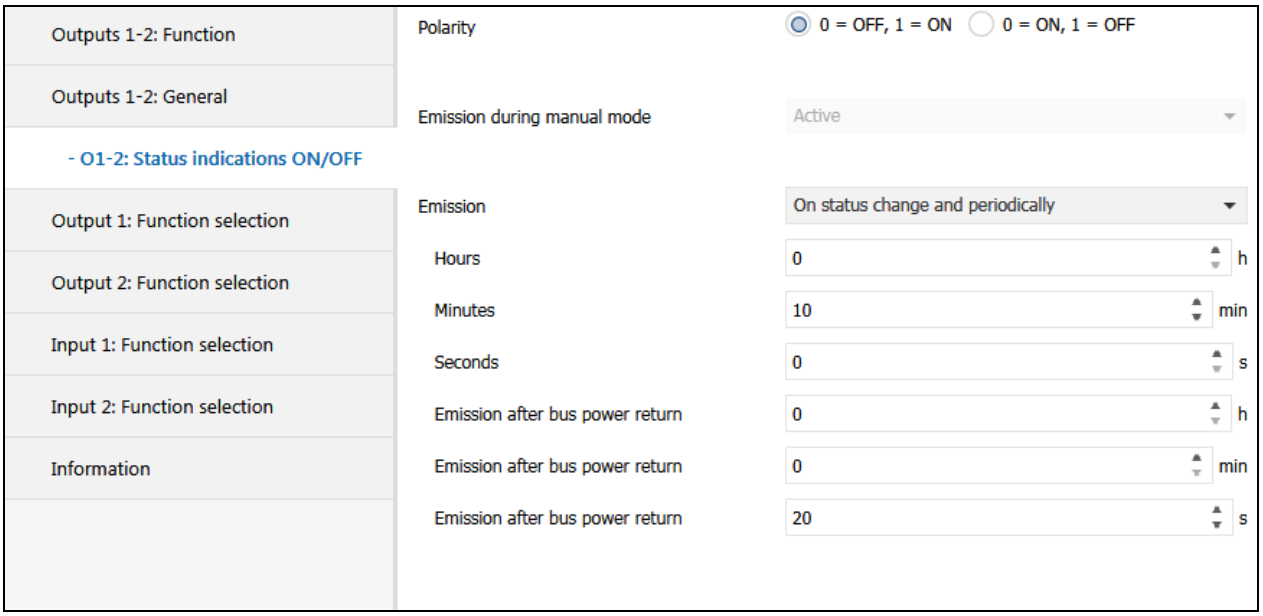
The outputs respond according to the scene numbers and associated parameters.
*Note: This parameter is only visible if the **Position after super alarm** parameter has the following value: **Scene number**.*

* Default value

3.4 Status indication

The status Indication function specifies the status of the output contact.

3.4.1 Status indication ON/OFF



Parameter	Description	Value
Polarity	The **Status indication ON/OFF** communication object sends:	
	0 = For an open output contact 1 = For a closed output contact	**0 = OFF,** **1 = ON***
	0 = For a closed output contact 1 = For an open output contact	0 = ON, 1 = OFF

*Note: If the Blinking function is activated, the above parameter is ignored and replaced by the **Output status during Blinking function** parameter.*

Parameter	Description	Value
Emission during manual mode	The **Status indication ON/OFF** communication object sends:	
	Values if the output status is switched in manual mode.	**Active***
	No values if the output status is swithched in manual mode.	Not active

Parameter	Description	Value
Emission	The **Status indication ON/OFF** communication object is sent:	
	On each output change.	**On status change***
	Periodically after a configurable time.	Periodically
	On output change and periodically after a configurable time.	On status change and periodically

* Default value

Parameter	Description	Value
Hours (h) Minutes (min) Seconds (s)	This parameter determines the time between the individual transmissions of the **Status indication ON/OFF** object.	**0** hours: 0 to 23 h **10** minutes: 0 to 59 min **0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Emission** parameter has the following value: **Periodically** or **On status change and periodically**.*

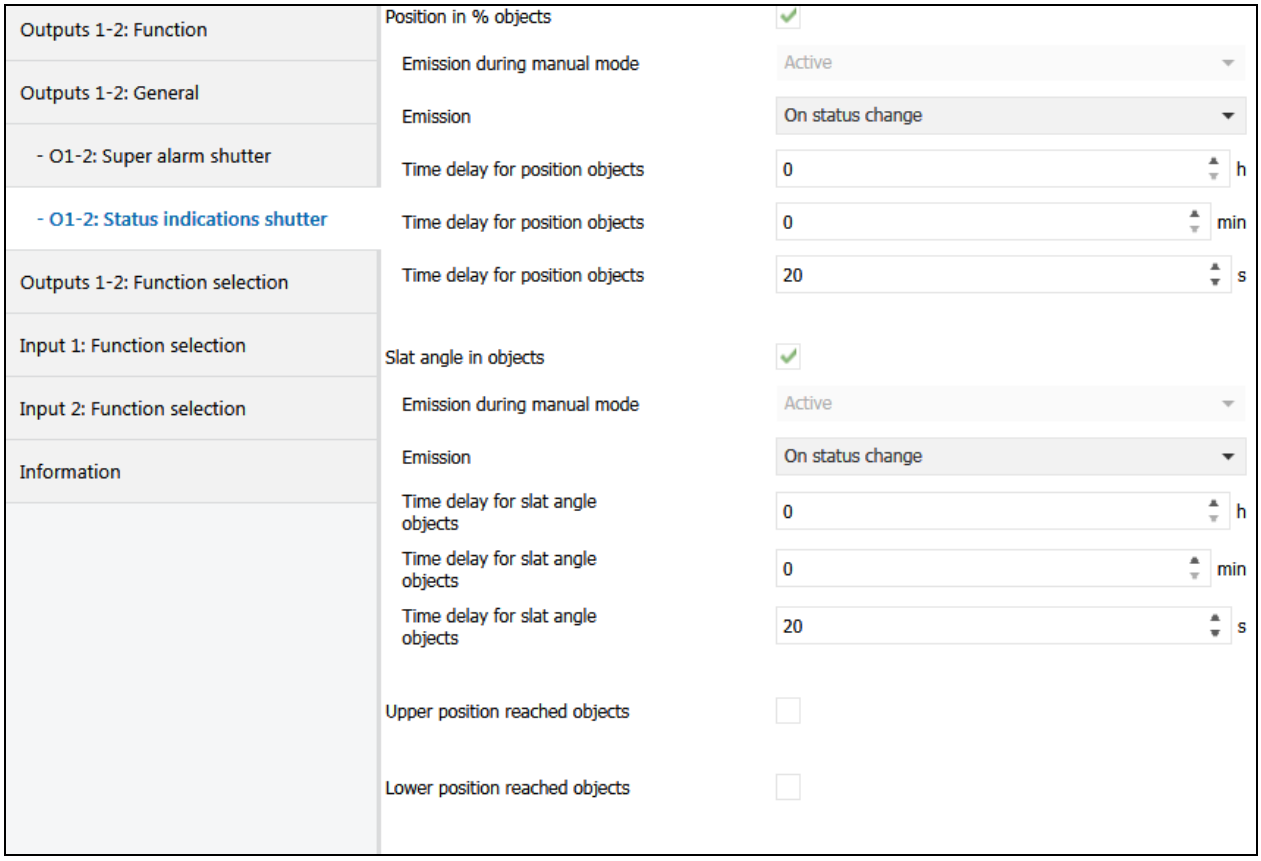
Parameter	Description	Value
Emission after bus power return	This parameter determines the delay for emission of the **Status indication ON/OFF** object on return of the KNX bus after a power cut.	**0** hours: 0 to 23 h **0** minutes: 0 to 59 min **20** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
Note: This parameter can be used to optimize the bus load after the return of the KNX bus voltage.

3.4.2 Status indication Shutter

Using the Status indication function, the following can be sent via the bus:
- Position in % indication: Indicates the position of the shutter or blind.
- Slat angle indication in %: Indicates the slat pitch of the blind.
- Upper or lower position reached: Indicates that the shutter or blind has reached the upper or lower position.

The conditions for emission of the object values are on a change in the output, periodically or both of these simultaneously.



* Default value

3.4.2.1 Position in % indication object

Parameter	Description	Value
Position in % objects	This parameter is used to display all the **Position in % indication** object related parameters.	**Active***
		Not active

Parameter	Description	Value
Emission position objects during manual mode	The **Position in % indication** object sends:	
	Values after a change of position in manual mode.	Active
	No values after a change of position in manual mode.	**Not active***

Parameter	Description	Value
Emission	The **Position in % indication** communication object is sent:	
	After each position change.	**On status change***
	Periodically after a configurable time.	Periodically
	After a position change and periodically after a configurable time.	On status change and periodically

Parameter	Description	Value
Hours (h)	This parameter determines the time between the individual transmissions of the **Position in % indication** object.	**0** hours: 0 to 23 h
Minutes (min)		**30** minutes: 0 to 59 min
Seconds (s)		**0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Emission** parameter has the following value: **Periodically** or **On status change and periodically**.*

Parameter	Description	Value
Time delay for position objects	This parameter determines the delay for emission of the **Position in % indication** object on return of the KNX bus after a power cut.	**1** hours: 0 to 23 h
		0 minutes: 0 to 59 min
		0 seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
Note: This parameter can be used to optimize the bus load after the return of the KNX bus voltage.

* Default value

3.4.2.2 Slat angle in % objects

Parameter	Description	Value
Slat angle in % objects	This parameter is used to display all the **Slat angle indication in %** object related parameters.	**Active*** Not active

Parameter	Description	Value
Emission during manual mode	The **Slat angle indication in %** object sends:	
	Values after a change of position in manual mode.	Active
	No values after a change of position in manual mode.	**Not active***

Parameter	Description	Value
Emission	The **Slat angle indication in %** communication object is sent:	
	After each position change.	**On status change***
	Periodically after a configurable time.	Periodically
	After a position change and periodically after a configurable time.	On status change and periodically

Parameter	Description	Value
Hours (h)	This parameter determines the time between the individual transmissions of the **Slat angle indication in %** objects.	**0** hours: 0 to 23 h
Minutes (min)		**30** minutes: 0 to 59 min
Seconds (s)		**0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Emission** parameter has the following value: **Periodically** or **On status change and periodically**.*

Parameter	Description	Value
Time delay for slat angle objects	This parameter determines the delay for emission of the **Slat angle indication in %** object on return of the KNX bus after a power cut.	**0** hours: 0 to 23 h **0** minutes: 0 to 59 min **10** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
Note: This parameter can be used to optimize the bus load after the return of the KNX bus voltage.

3.4.2.3 Upper position reached object

Parameter	Description	Value
Upper position reached objects	This parameter is used to display all the **Upper position reached** object related parameters.	Active **Not active***

Parameter	Description	Value
Polarity	The **Upper position reached** object sends:	
	0 on leaving the upper position 1 on reaching the upper position	**0 = Position not reached,** **1 = Position reached***
	0 on reaching the upper position 1 on leaving the upper position	0 = Position reached, 1 = Position not reached

Parameter	Description	Value
Emission during manual mode	The **Upper position reached** object sends:	
	Values on reaching the end position in manual mode.	Active
	No values on reaching the end position in manual mode.	**Not active***

Parameter	Description	Value
Emission	The **Upper position reached** object sends:	
	On reaching or leaving the final position.	**On status change***
	Periodically after a configurable time.	Periodically
	After a position change and periodically after a configurable time.	On status change and periodically

Parameter	Description	Value
Hours (h)	This parameter determines the time between the individual transmissions of the **Upper position reached** object.	**0** hours: 0 to 23 h
Minutes (min)		**30** minutes: 0 to 59 min
Seconds (s)		**0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Emission** parameter has the following value: **Periodically** or **On status change and periodically**.*

Parameter	Description	Value
Time delay for upper position objects	This parameter determines the delay for emission of the **Upper position reached** object on return of the KNX bus after a power cut.	**0** hours: 0 to 23 h **0** minutes: 0 to 59 min **20** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
Note: This parameter can be used to optimize the bus load after the return of the KNX bus voltage.

* Default value

3.4.2.4 Lower position reached object

Parameter	Description	Value
Lower position reached objects	This parameter is used to display all the **Lower position reached** object related parameters.	Active **Not active***

Parameter	Description	Value
Polarity	The **Lower position reached** object sends:	
	0 on leaving the lower position 1 on reaching the lower position	**0 = Position not reached,** **1 = Position reached***
	0 on reaching the lower position 1 on leaving the lower position	0 = Position reached, 1 = Position not reached

Parameter	Description	Value
Emission during manual mode	The **Lower position reached** object sends:	
	Values on reaching the end position in manual mode.	Active
	No values on reaching the end position in manual mode.	**Not active***

Parameter	Description	Value
Emission	The **Lower position reached** communication object is sent:	
	On reaching or leaving the final position.	**On status change***
	Periodically after a configurable time.	Periodically
	After a position change and periodically after a configurable time.	On status change and periodically

Parameter	Description	Value
Hours (h)	This parameter determines the time between the individual transmissions of the **Lower position reached** object.	**0** hours: 0 to 23 h
Minutes (min)		**30** minutes: 0 to 59 min
Seconds (s)		**0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Emission** parameter has the following value: **Periodically** or **On status change and periodically**.*

Parameter	Description	Value
Time delay for lower position objects	This parameter determines the delay for emission of the **Lower position reached** object on return of the KNX bus after a power cut.	**0** hours: 0 to 23 h **0** minutes: 0 to 59 min **20** seconds: 0 to 59 s

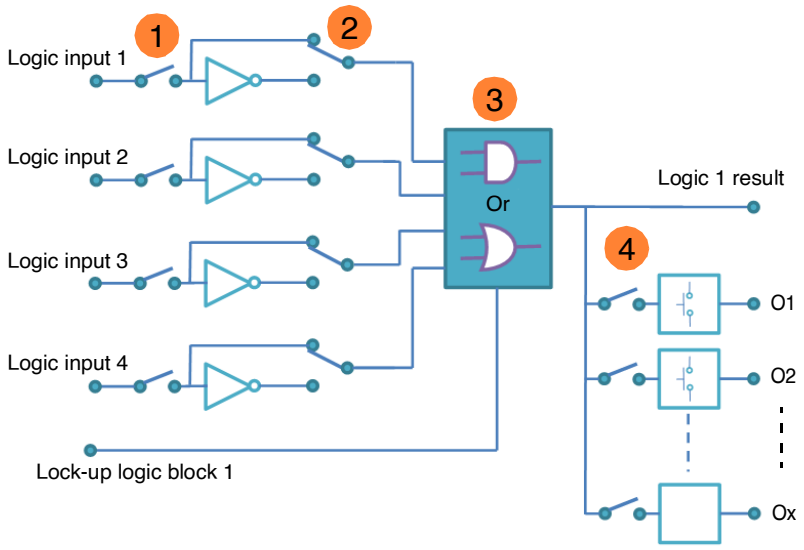
Note: The smallest executable time is 1 second.
Note: This parameter can be used to optimize the bus load after the return of the KNX bus voltage.

* Default value

3.5 Logic block

The Logic function is used to control an output depending on the result of a logic operation. This command has the lowest priority. The result of the function can be output on the KNX bus and may directly relate to the status of one or more outputs. 2 logic blocks are available for each device.

Operating principle of the logic block:

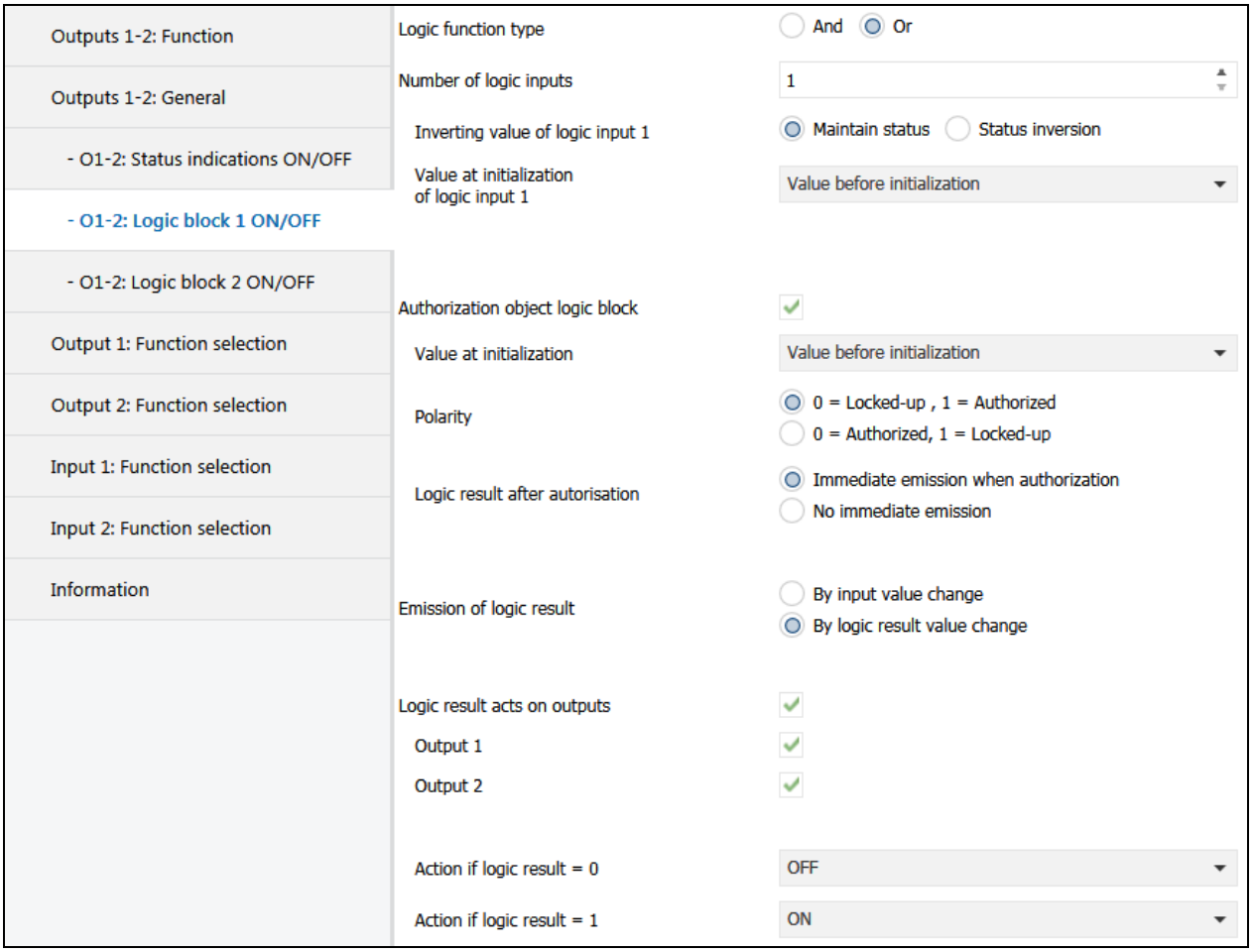


1. Logic input number: Allows authorization of the logic input
2. Logic input value: Inverted, yes or no
3. Type of logic function (AND or OR): Selection of the logic function
4. The logic result is applied to outputs: Selection of the outputs concerned by the logic operation

* Default value

3.5.1 Logic block : ON/OFF

The behaviour is determined by the following parameters:
Note: The description of the parameters is given for logic block 1. The parameters and objects are identical for logic block 2 ; Only the terms will be adjusted.



3.5.1.1 Configuration of the Logic function

Parameter	Description	Value
Logic function type	The input objects are:	
	OR linked.	**Or***
	AND linked.	And

For logic table see: Appendix.

* Default value

Parameter	Description	Value
Number of logic inputs	This parameter determines the number of inputs of the logic block. Up to 4 inputs can be used.	**1*** 2 3 4

Communication objects:

Block 1
- **61 - Logic block 1 - Input 2** (1 bit - 1.002 DPT_Bool)
- **62 - Logic block 1 - Input 3** (1 bit - 1.002 DPT_Bool)
- **63 - Logic block 1 - Input 4** (1 bit - 1.002 DPT_Bool)

Block 2
- **67 - Logic block 2 - Input 2** (1 bit - 1.002 DPT_Bool)
- **68 - Logic block 2 - Input 3** (1 bit - 1.002 DPT_Bool)
- **69 - Logic block 2 - Input 4** (1 bit - 1.002 DPT_Bool)

Parameter	Description	Value
Inverting value of logic input x	The value of logic input x works on the logic block: With its object value (0=0, 1=1). With inverted object value (0=1, 1=0).	 **Maintain status*** Status inversion

x = 1 to 4

Parameter	Description	Value
Value at initialization of logic input x	On initialization of the device after a download or after return of the bus power, the value of the logic input is: Set to 0. Set to 1. Set according to the value of the logic input before the initialization occurred.	 0 1 **Value before initialization***

x = 1 to 4

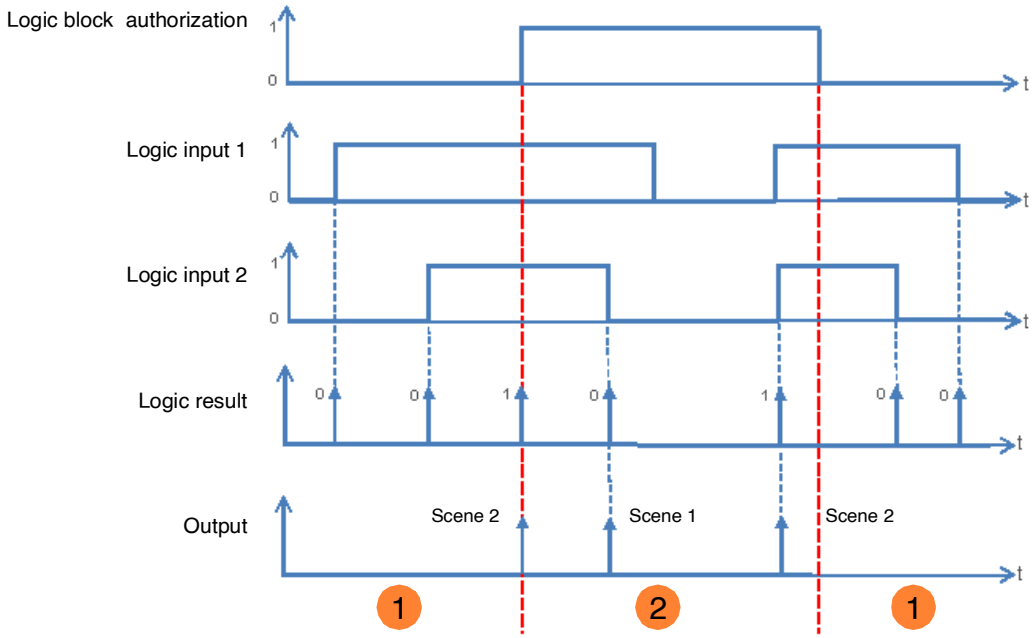
* Default value

3.5.1.2 Logic block authorization

Principle of logic block authorization:

The parameters are set as follows:

- Logic block authorization: 0 = Locked-up, 1 = Authorized.
- Action if logic result = 0 : Scene 1.
- Action if logic result = 1 : Scene 2.
- Logic input 1 and 2 are AND-linked.
- Emission of logic result: By input value change.



1 The logic result has no influence on the outputCurrent values.

2 The commands from the logic result are executed.

*Note: The commands from the logic result are executed immediately after authorization, according to the **Logic result after authorization** parameter.*

Parameter	Description	Value
Authorization object logic block	The **Logic block 1 – Authorization** communication object and related parameters are hidden.	**Not active***
	The **Logic block 1 – Authorization** communication object and related parameters are displayed.	Active

Note: If the logic block is locked the logic operation is not processed.

Communication objects:

Block 1 **59 - Logic block 1 - Authorization** (1 bit - 1.003 DPT_Enable)

Block 2 **65 - Logic block 2 - Authorization** (1 bit - 1.003 DPT_Enable)

* Default value

Parameter	Description	Value
Value at initialization	On initialization of the device after a download or after return of the bus power, the value of the **Logic block 1 – Authorization** object is:	
	Set to 0.	0
	Set to 1.	1
	Set according to the value that the object had before initialization.	**Value before initialization***

*Note: This parameter is only visible if the **Authorization object logic block** parameter has the following value: **Active**.*

Parameter	Description	Value
Polarity	On receipt of a value on the **Logic block 1 – Authorization** object, this is:	
	Locked-up on object value 1.	0 = Authorized, 1 = Locked-up
	Locked-up on object value 0.	**0 = Locked-up, 1 = Authorized***

*Note: This parameter is only visible if the **Authorization object logic block** parameter has the following value: **Active**.*

Parameter	Description	Value
Logic result after autorisation	On authorization of the logic block:	
	The value of the Logic result is immediately determined.	**Immediate emission when authorization***
	The value of the logic result is first determined after receipt of a value on a logic input.	No immediate emission

*Note: This parameter is only visible if the **Authorization object logic block** parameter has the following value: **Active**.*

3.5.1.3 Logic result

Parameter	Description	Value
Emission of logic result	The **Logic result** object will be sent on:	
	Each receipt of a telegram on one of the logic inputs.	By input value change
	A change in the value of the logic result.	**By logic result value change***

Parameter	Description	Value
Logic result acts on outputs	The logic results acts:	
	Only on the **Logic result** communication object.	**Not active***
	On the **Logic result** communication object and directly on one or more outputs.	Active

The status of the affected outputs is determined by the parameter **action on logic result = x**.

* Default value

Parameter	Description	Value
Output 1 ... x	The output relationship with the **Logic result** is:	
	Directly dependent.	**Yes***
	Independent.	No

*Note: This parameter is only visible if the **Logic result acts on outputs** parameter has the following value: **Active.***

Parameter	Description	Value
Action if logic result = 0	On the outputs that are directly dependent on Logic result, if the output value = 0, the status:	
	Not changed.	Maintain status
	Is switched to the opposite status.	Inversion
	Selectively switched on.	ON
	Selectively switched off.	**OFF***
	Starts timer mode.	Timer start
	Stops timer mode.	Timer stop
	Starts one of the 64 scenes.	Scene number
	Adopts the default value given by the parameter **Status if preset 1 object = 0**.	Preset 1
	Adopts the default value given by the parameter **Status if preset 2 object = 0**.	Preset 2

Note: The Timer mode, Scene function or Preset function of the selected output must be configured. If this is not the case, the status remains unchanged.

Parameter	Description	Value
Scene if logic result = 0	This parameter determines the scene number that is activated if the logic result is 0 after re-evaluation.	Scene 1 ... 64 Default value: **1**

The outputs respond according to the scene numbers and associated parameters.
*Note: This parameter is only visible if the **Action if logic result = 0** parameter has the following value: **Scene number**.*

* Default value

Parameter	Description	Value
Action if logic result = 1	On the outputs that are directly dependent on Logic result, if the output value = 1, the status:	
	Not changed.	Maintain status
	Is switched to the opposite status.	Inversion
	Selectively switched on.	**ON***
	Selectively switched off.	OFF
	Starts timer mode.	Timer start
	Stops timer mode.	Timer stop
	Starts one of the 64 scenes.	Scene number
	Adopts the default value given by the parameter **Status if preset 1 object = 1**.	Preset 1
	Adopts the default value given by the parameter **Status if preset 2 object = 1**.	Preset 2

Note: The Timer mode, Scene function or Preset function of the selected output must be configured. If this is not the case, the status remains unchanged.

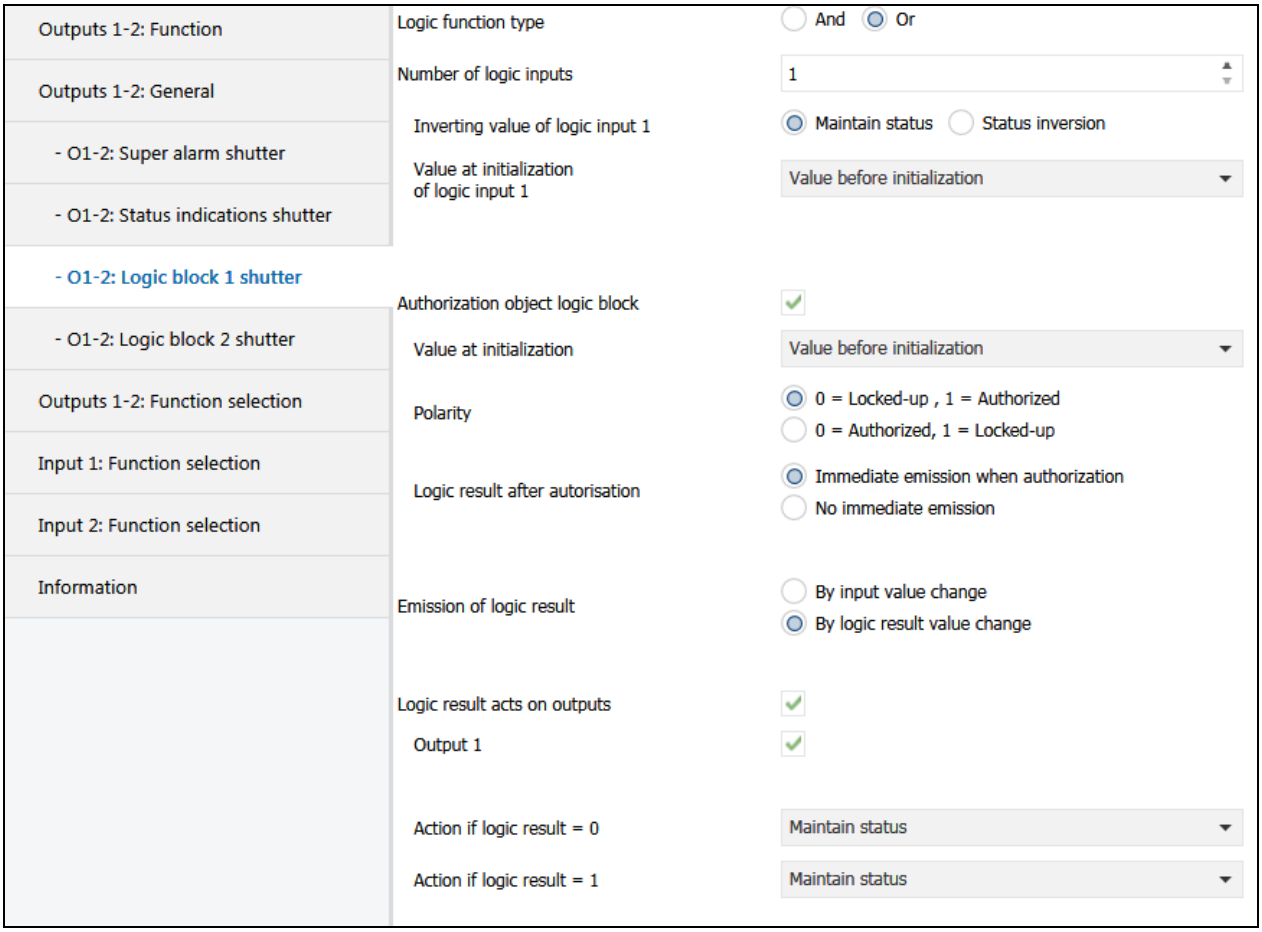
Parameter	Description	Value
Scene if logic result = 1	This parameter determines the scene number that is activated if the logic result is 1 after re-evaluation.	Scene 1 ... 64 Default value: **2**

The outputs respond according to the scene numbers and associated parameters.
*Note: This parameter is only visible if the **Action if logic result = 1** parameter has the following value: **Scene number**.*

* Default value

3.5.2 Logic block : Shutter

The behaviour is determined by the following parameters:
Note: The description of the parameters is given for logic block 1. The parameters and objects are identical for logic block 2 ; Only the terms will be adjusted.



3.5.2.1 Configuration of the Logic function

Parameter	Description	Value
Logic function type	The input objects are:	
	OR linked.	**Or***
	AND linked.	And

For logic table see: Appendix.

* Default value

Parameter	Description	Value
Number of logic inputs	This parameter determines the number of inputs of the logic block. Up to 4 inputs can be used.	**1*** 2 3 4

Communication objects:

Block 1
- **77 - Logic block 1 - Input 2** (1 bit - 1.002 DPT_Bool)
- **78 - Logic block 1 - Input 3** (1 bit - 1.002 DPT_Bool)
- **79 - Logic block 1 - Input 4** (1 bit - 1.002 DPT_Bool)

Block 2
- **83 - Logic block 2 - Input 2** (1 bit - 1.002 DPT_Bool)
- **84 - Logic block 2 - Input 3** (1 bit - 1.002 DPT_Bool)
- **85 - Logic block 2 - Input 4** (1 bit - 1.002 DPT_Bool)

Parameter	Description	Value
Inverting value of logic input x	The value of logic input x works on the logic block: With its object value (0=0, 1=1). With inverted object value (0=1, 1=0).	 **Maintain status*** Status inversion

x = 1 to 4

Parameter	Description	Value
Value at initialization of logic input x	On initialization of the device after a download or after return of the bus power, the value of the logic input is: Set to 0. Set to 1. Set according to the value of the logic input before the initialization occurred.	 0 1 **Value before initialization***

x = 1 to 4

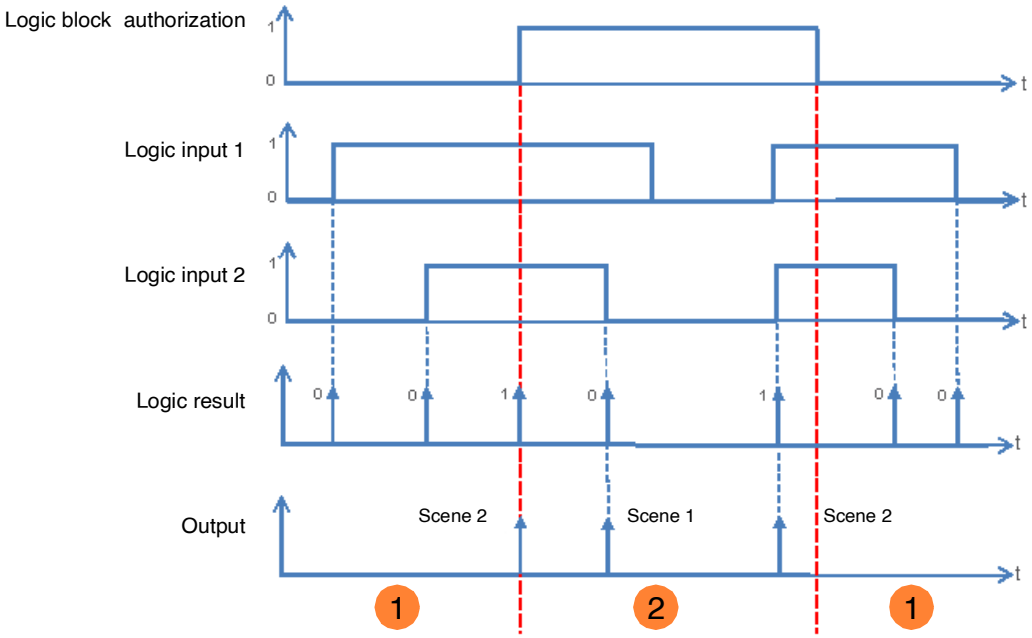
* Default value

3.5.2.2 Logic block authorization

Principle of logic block authorization:

The parameters are set as follows:

- Logic block authorization: 0 = Locked-up, 1 = Authorized.
- Action if logic result = 0 : Scene 1.
- Action if logic result = 1 : Scene 2.
- Logic input 1 and 2 are AND-linked.
- Emission of logic result: By input value change.



1 The logic result has no influence on the outputCurrent values.

2 The commands from the logic result are executed.

*Note: The commands from the logic result are executed immediately after authorization, according to the **Logic result after authorization** parameter.*

Parameter	Description	Value
Authorization object logic block	The **Logic block 1 – Authorization** communication object and related parameters are hidden.	**Not active***
	The **Logic block 1 – Authorization** communication object and related parameters are displayed.	Active

Note: If the logic block is locked the logic operation is not processed.

Communication objects:

Block 1 **75 - Logic block 1 - Authorization** (1 bit - 1.003 DPT_Enable)

Block 2 **81 - Logic block 2 - Authorization** (1 bit - 1.003 DPT_Enable)

* Default value

Parameter	Description	Value
Value at initialization	On initialization of the device after a download or after return of the bus power, the value of the **Logic block 1 – Authorization** object is:	
	Set to 0.	0
	Set to 1.	1
	Set according to the value that the object had before initialization.	**Value before initialization***

*Note: This parameter is only visible if the **Authorization object logic block** parameter has the following value: **Active**.*

Parameter	Description	Value
Polarity	On receipt of a value on the **Logic block 1 – Authorization** object, this is:	
	Locked-up on object value 1.	0 = Authorized, 1 = Locked-up
	Locked-up on object value 0.	**0 = Locked-up, 1 = Authorized***

*Note: This parameter is only visible if the **Authorization object logic block** parameter has the following value: **Active**.*

Parameter	Description	Value
Logic result after autorisation	On authorization of the logic block:	
	The value of the Logic result is immediately determined.	**Immediate emission when authorization***
	The value of the logic result is first determined after receipt of a value on a logic input.	No immediate emission

*Note: This parameter is only visible if the **Authorization object logic block** parameter has the following value: **Active**.*

3.5.2.3 Logic result

Parameter	Description	Value
Emission of logic result	The **Logic result** object will be sent on:	
	Each receipt of a telegram on one of the logic inputs.	By input value change
	A change in the value of the logic result.	**By logic result value change***

Parameter	Description	Value
Logic result acts on outputs	The logic results acts:	
	Only on the **Logic result** communication object.	**Not active***
	On the **Logic result** communication object and directly on one or more outputs.	Active

The status of the affected outputs is determined by the parameter **action on logic result = x**.

Parameter	Description	Value
Output 1 ... x	The output relationship with the **Logic result** is:	
	Directly dependent.	**Yes***
	Independent.	No

*Note: This parameter is only visible if the **Logic result acts on outputs** parameter has the following value: **Active.***

Parameter	Description	Value
Action if logic result = 0	Outputs that are directly dependent on **Logic 1 result** will, on output value 0:	
	Not changed.	**Maintain status***
	Closes the Up contact.	Up
	Closes the down contact.	Down
	Opens the 2 contacts.	Stop
	Runs to a specific position.	Specific position
	Runs to a position set in a scene.	Scene number
	Run to the default position set in the **Status if preset 1 object = 0** parameter	Preset 1
	Run to the default position set in the **Status if preset 2 object = 0** parameter	Preset 2

Note: The Scene function or Preset function of the selected output must be configured. If this is not the case, the status remains unchanged.

Parameter	Description	Value
Position (0-100%)	This parameter determines the position of the shutter or blind to be activated if the logic result is 0 after re-evaluation.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Action if logic result = 0** parameter has the following value: **Specific position**.*

Parameter	Description	Value
Slat angle (0-100%)	This parameter determines the slat position of the blind to be set if the logic result is 0 after re-evaluation.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Action if logic result = 0** parameter has the following value: **Specific position**.*

Parameter	Description	Value
Scene if logic result = 0	This parameter determines the scene number that is activated if the logic result is 0 after re-evaluation.	Scene 1 ... 64 Default value: **1**

The outputs respond according to the scene numbers and associated parameters.
*Note: This parameter is only visible if the **Action if logic result = 0** parameter has the following value: **Scene number**.*

Parameter	Description	Value
Action if logic result = 1	Outputs that are directly dependent on **Logic 1 result** will, on output value 1:	
	Not changed.	**Maintain status***
	Closes the Up contact.	Up
	Closes the down contact.	Down
	Opens the 2 contacts.	Stop
	Runs to a specific position.	Specific position
	Runs to a position set in a scene.	Scene number
	Run to the default position set in the **Status if preset 1 object = 0** parameter	Preset 1
	Run to the default position set in the **Status if preset 2 object = 0** parameter	Preset 2

Note: The Scene function or Preset function of the selected output must be configured. If this is not the case, the status remains unchanged.

Parameter	Description	Value
Position (0-100%)	This parameter determines the position of the shutter or blind to be activated if the logic result is 1 after re-evaluation.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Action if logic result = 1** parameter has the following value: **Specific position**.*

Parameter	Description	Value
Slat angle (0-100%)	This parameter determines the slat position of the blind to be set if the logic result is 1 after re-evaluation.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Action if logic result = 1** parameter has the following value: **Specific position**.*

* Default value

Parameter	Description	Value
Scene if logic result = 1	This parameter determines the scene number that is activated if the logic result is 1 after re-evaluation.	Scene 1 ... 64 Default value: **1**

The outputs respond according to the scene numbers and associated parameters.
*Note: This parameter is only visible if the **Action if logic result = 1** parameter has the following value: **Scene number**.*

* Default value

3.6 Diagnosis

The **Device diagnosis** object allows notifications about the operating status of the device to be sent via the KNX bus. This information is sent periodically and/or on status change.
The **Device diagnosis** object allows reporting of current faults according to the device and application. It also allows sending of the position of the switch on the front of the device and the number of the output that is affected by the fault(s).

The **Device Diagnosis** object is a 6-byte object that is composed as described below:

Byte number	6 (MSB)	5		4	3	2	1 (LSB)
Use	Switch position	Application type	Output number	Error codes			

Details of the byte:

- **Bytes 1 to 4:** Correspond to the error codes**.**

MSB LSB

b31	b30	b29	b28	b27	b26	b25	b24	b23	b22	b21	b20	b19	b18	b17	b16	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
32	X	X	X	28	29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	9	X	X	X	X	X	X	X	X

N°	Faults
27	**Wrong context**: The user's parameters are not transferable. The standard parameters are restored.
28	**TP communication out of operation**: Communication via the KNX bus was not available on the previous start.
32	**Minimum switching time not complied with**: The device is equipped with a mechanism for limiting the number of switching cycles per minute of the output contact. If the user requires a number of switching cycles that is greater than this limit, this bit informs the user that his command was not carried out.
9	**Excessive number of restarts**: This bit is use for notification of repeated restarts and/or a restart triggered by a Watch-Dog. Such a restart is not necessarily apparent to the user from the function, rather it is manifest as a disturbed environment or a bad contact of the power supply.

Note: The use of the standard bit depends on the type of device used (switch actuator, dimmer, shutter/blind, etc.). Certain bit are same for all devices and others are application-specific.

- **Byte 5:** Corresponds to the application type and the number of the output affected by the error**.**

MSB LSB

b7	b6	b5	b4	b3	b2	b1	b0
Application type			Output number				
0 = Not defined 1 = Switch actuator 2 = Shutter/blind 3 = Dimmer			0 = Device error 1 = Output 1 2 = Output 2 ..... Y = Output Y				

Note: Y is the placeholder for the maximum number of outputs.

* Default value

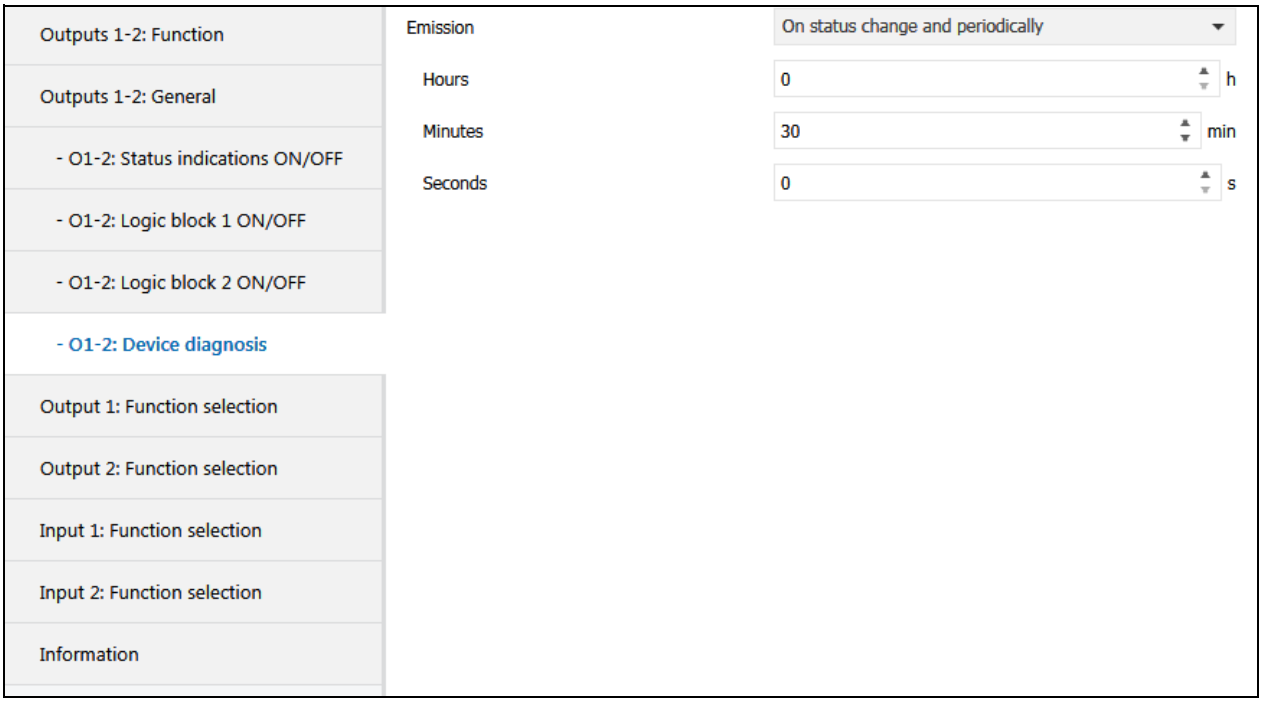
- **Byte 6**: Switch position.

MSB LSB

b7	b6	b5	b4	b3	b2	b1	b0
X	X	X	X	X	X	X	1

1: 0 = Automatic mode / 1 = Manual mode

Note: Bit marked with an x are not used.



Parameter	Description	Value
Emission	The **Device diagnosis** communication object is sent to bus: On each change. Periodically after a configurable time. On change and periodically after a configurable time.	 **On status change*** Periodically On status change and periodically

Parameter	Description	Value
Hours (h) Minutes (min) Seconds (s)	This parameter determines the time between the individual transmissions of the **Device diagnosis** object.	**0** hours: 0 to 23 h **30** minutes: 0 to 59 min **0** seconds: 0 to 59 s

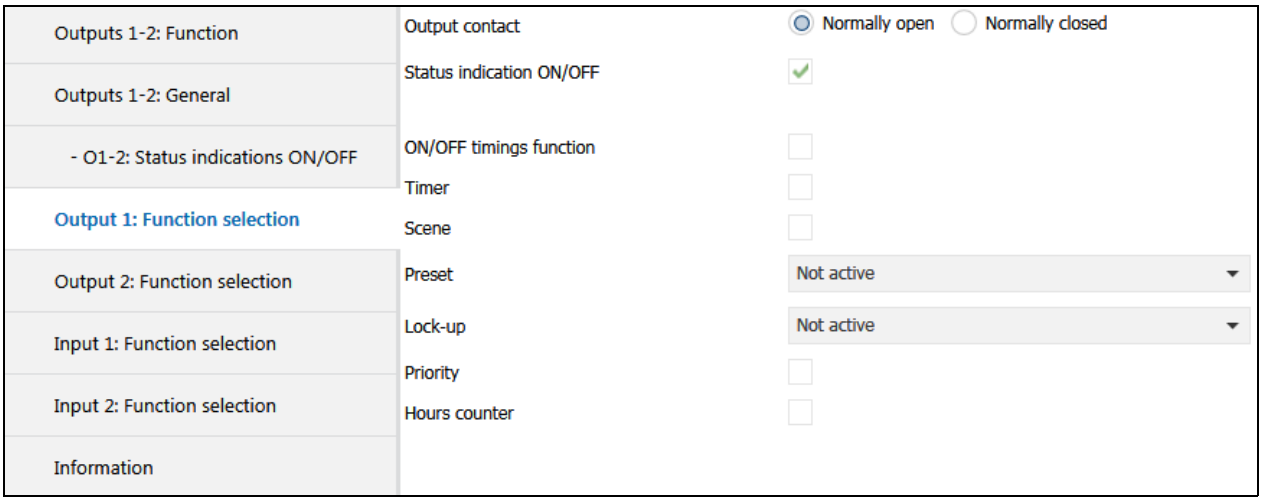
Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Emission** parameter has the following value: **Periodically** or **On status change and periodically**.*

* Default value

3.7 Functions of each switch actuator

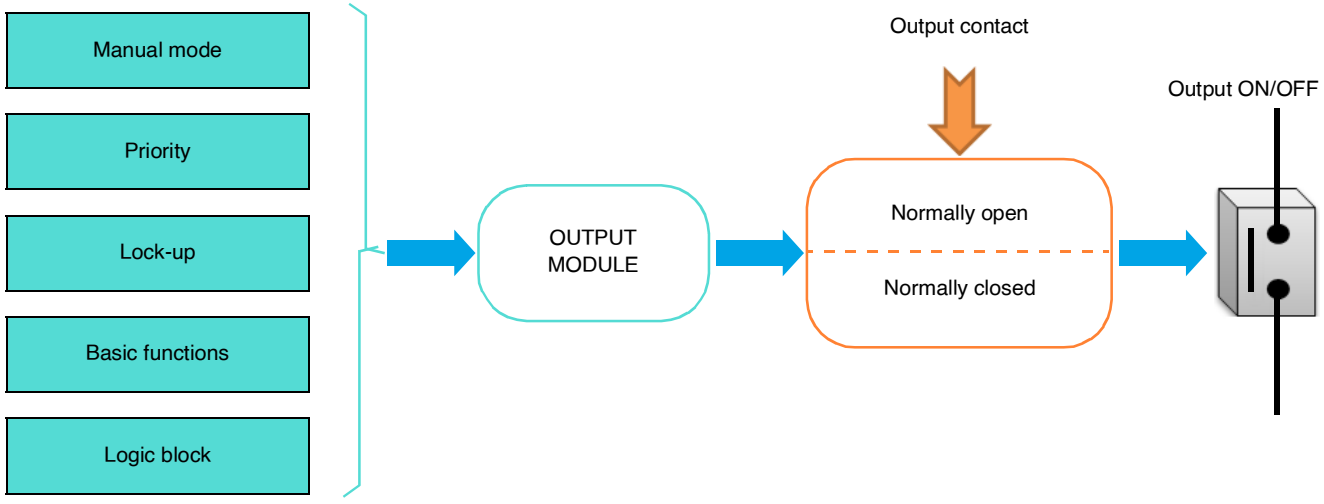
This parameter window is used to set the device outputs. These parameters are available individually for each output.

3.7.1 Function selection



Parameter	Description	Value
Output contact	On receipt of an ON command:	
	The output relay closes.	**Normally open***
	The output relay opens.	Normally closed

Principle:



* Default value

Parameter	Description	Value
Manual mode active for output 1	This output can be controlled in manual mode. This output is excluded from manual mode.	**Yes*** No

Parameter	Description	Value
Status indication ON/OFF	The **Status indication ON/OFF** communication object is: Hidden. Displayed, the status indication can be transmitted over the bus.	 No **Yes***

Communication objects:

4 - Output 1 - Status indication ON/OFF (1 bit - 1.001 DPT_Switch)

24 - Output 2 - Status indication ON/OFF (1 bit - 1.001 DPT_Switch)

*Note: The transmission conditions for the Status indication objects must be set in the parameter Register **O1-Ox**: **Status indication**.*

Parameter	Description	Value
ON/OFF timings function	The **ON/OFF timings function** tab and the associated parameters and objects are: Hidden. Displayed.	 **Not active*** Active

For configuration see section: ON/OFF timings function.

Parameter	Description	Value
Timer	The **Timer** tab and the associated parameters and objects are: Hidden. Displayed.	 **Not active*** Active

Communication objects:

5 - Output 1 - Timer (1 bit - 1.010 DPT_Start/stop)

25 - Output 2 - Timer (1 bit - 1.010 DPT_Start/stop)

For configuration see section: Timer.

Parameter	Description	Value
Scene	The **Scenes** tab and the associated parameters and objects are: Hidden. Displayed.	 **Not active*** Active

Communication objects:

7 - Output 1 - Scene (1 byte - 18.001 DPT_SceneControl)

27 - Output 2 - Scene (1 byte - 18.001 DPT_SceneControl)

For configuration see section: Scene ON/OFF.

* Default value

Parameter	Description	Value
Preset	The **Preset** tab and the associated parameters and objects are:	
	Hidden.	**Not active***
	Displayed for 1 Preset object.	Active with preset 1-level object
	Displayed for 2 Preset objects.	Active with preset 2-level objects

Note: When the value of this parameter changes, the associated parameters and group addresses are deleted.

Preset 1 communication Objets	**8 - Output 1 - Preset 1** (1 bit - 1.022 DPT_Scene_AB)
	28 - Output 2 - Preset 1 (1 bit - 1.022 DPT_Scene_AB)
Preset 2 communication Objets	**9 - Output 1 - Preset 2** (1 bit - 1.022 DPT_Scene_AB)
	29 - Output 2 - Preset 2 (1 bit - 1.022 DPT_Scene_AB)

For configuration see section: Preset ON/OFF.

Parameter	Description	Value
Lock-up	The **Lock-up** tab and the associated parameters and objects are:	
	Hidden.	**Not active***
	Displayed for 1 lock-up object.	1 lock-up object
	Displayed for 2 lock-up objects.	2 lock-up objects

Lock-up 1 communication objects	**12 - Output 1 - Lock-up 1** (1 bit - 1.003 DPT_Enable)
	32 - Output 2 - Lock-up 1 (1 bit - 1.003 DPT_Enable)
Lock-up 2 communication objects	**13 - Output 1 - Lock-up 2** (1 bit - 1.003 DPT_Enable)
	33 - Output 2 - Lock-up 2 (1 bit - 1.003 DPT_Enable)

For configuration see section: Lock-up ON/OFF.

Parameter	Description	Value
Priority	The **Priority** tab and the associated parameters and objects are:	
	Hidden.	**Not active***
	Displayed.	Active

The device responds to telegrams received via the **Priority** object, as given in the following table:

Telegram received by the priority operation object			Output behaviour
Hexadecimal Value	Binary Value		
	Bit 1 (MSB)	Bit 0 (LSB)	
00	0	0	End of the priority
01	0	1	End of the priority
02	1	0	Priority OFF
03	1	1	Priority ON

Communication objects:

15 - Output 1 - Priority (2 bit - 2.002 DPT_Bool_Control)

35 - Output 2 - Priority (2 bit - 2.002 DPT_Bool_Control)

For configuration see section: Priority ON/OFF.

Parameter	Description	Value
Hours counter	The **Hours counter** tab and the associated parameters and objects are:	
	Hidden.	**Not active***
	Displayed.	Active

A telegram can be transmitted via the **Hours counter setpoint reached** object, in accordance with a programmable setpoint.

It is also possible to reset the count value via a 1 signal on the **Reset hours counter value** object.

Communication objects:

17 - Output 1 - Hours counter value (2 bytes - 7.007 DPT_Time (h))

37 - Output 2 - Hours counter value (2 bytes - 7.007 DPT_Time (h))

18 - Output 1 - Reset hours counter value (1 bit - 1.015 DPT_Reset)

38 - Output 2 - Reset hours counter value (1 bit - 1.015 DPT_Reset)

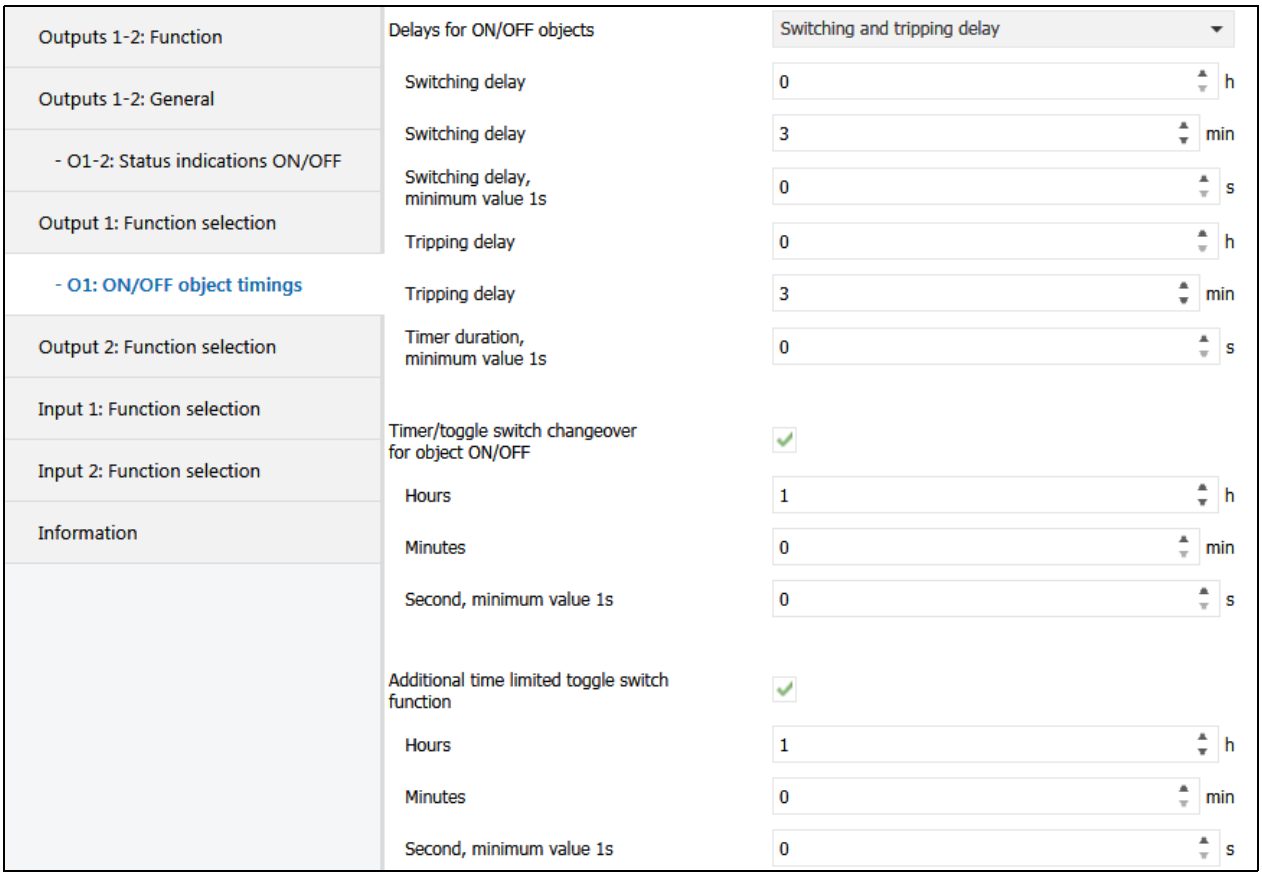
19 - Output 1 - Hours counter setpoint reached (1 bit -1.011 DPT_State)

39 - Output 2 - Hours counter setpoint reached (1 bit -1.011 DPT_State)

For configuration see section: Hours counter.

* Default value

3.7.2 ON/OFF timings function

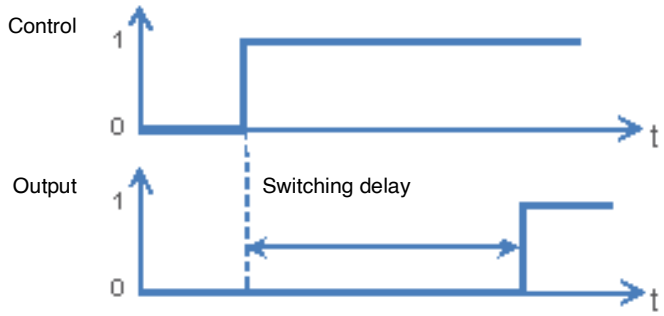


3.7.2.1 Delays for ON/OFF objects

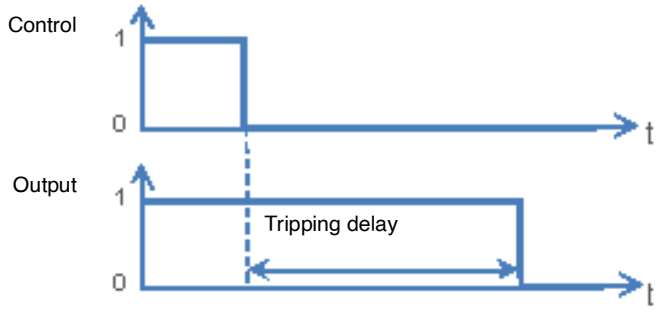
Parameter	Description	Value
Delays for ON/OFF objects	The parameters for time-delayed switching of the outputs are:	
	Hidden.	**Not active***
	Displayed for Switching delay.	Switching delay
	Displayed for Tripping delay.	Tripping delay
	Displayed for Switching and tripping delay.	Switching and tripping delay

* Default value

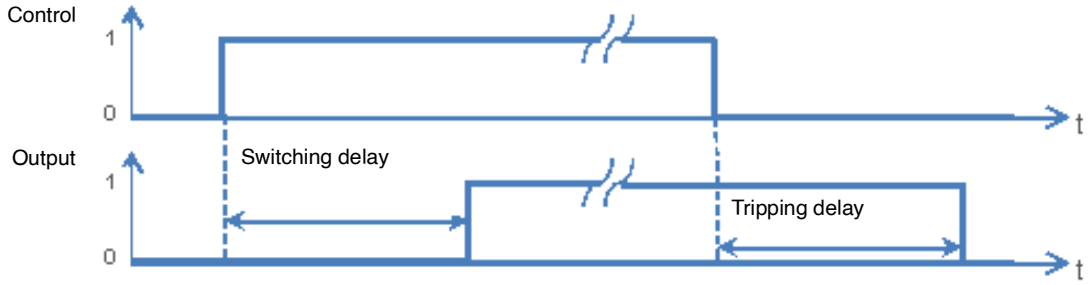
Switching delay: Allows the configuration of a delay between the switch-on command and the switching of the output contact.



Tripping delay: Allows the configuration of a delay between the switch-off command and the switching of the output contact.



Switching and tripping delay: Allows the configuration of a delay between the switch-on command and the switching of the output contact, as well as between the switch-off command and the switching of the output contact.



Parameter	Description	Value
Switching delay	This parameter defines the delay between the switch-on command and the switching of the output contact.	**0** hours: 0 to 23 h **3** minutes: 0 to 59 min **0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Delays for ON/OFF** objects parameter has the following value: **Switching delay** or **Switching and tripping delay**.*

* Default value

Parameter	Description	Value
Tripping delay	This parameter defines the delay between the switch-off command and the switching of the output contact.	**0** hours: 0 to 23 h **3** minutes: 0 to 59 min **0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Delays for ON/OFF** objects parameter has the following value: **Tripping delay** or **Switching and tripping delay**.*

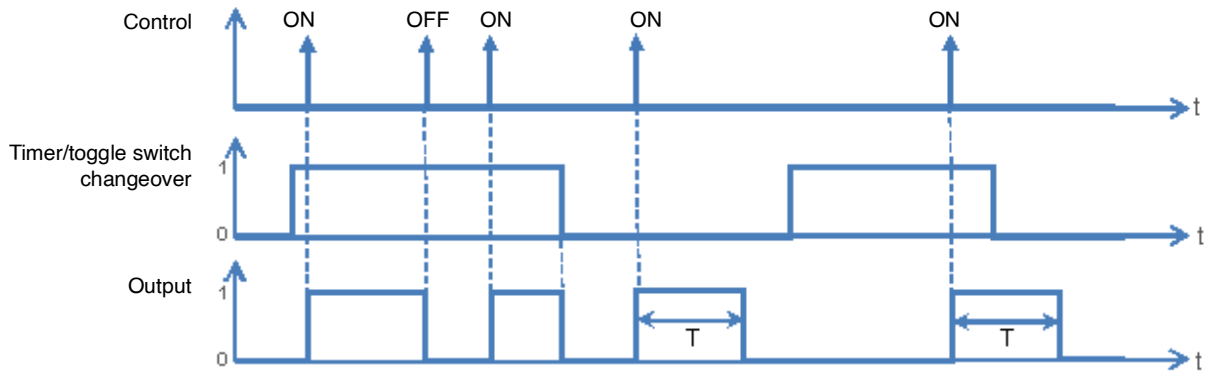
3.7.2.2 Timer/toggle switch changeover for ON/OFF object

This function switches the output channels between toggle switch and timer mode for the **ON/OFF** object.

Example: Switching function daytime and Time-limited OFF function at night.
During the day, the button is used as a switch. In the evenings, the button is used as a time-limited OFF switch, so that the light will turn off automatically.

Parameter	Description	Value
Timer/toggle switch changeover for ON/OFF object	The parameters for a switch-over between toggle switch and timer modes for the **ON/OFF** object are: Hidden. Displayed.	 **Not active*** Active

- If the **Timer/toggle switch changeover** object receives the value 1, the Toggle-switch mode function is activated. The ON/OFF switching of the output is performed as usual via the **ON/OFF** object.
- If the **Timer/toggle switch changeover** object receives the value 0, the Timer mode function is activated.
  - If the **ON/OFF** object receives the value 1, the output is switched ON. After expiry of a configurable time, the output is automatically switched OFF.
  - If the **ON/OFF** object receives the value 0, the output is switched OFF.



Communication objects: **2 - Output 1 - Timer/toggle switch changeover** (1 bit - 1.001 DPT_Switch)
22 - Output 2 - Timer/toggle switch changeover (1 bit - 1.001 DPT_Switch)

* Default value

Parameter	Description	Value
Hours (h) Minutes (min) Seconds (s)	This parameter sets the length of the timer operation, if this is activated.	**1** hours: 0 to 23 h **0** minutes: 0 to 59 min **0** seconds: 0 to 59 s

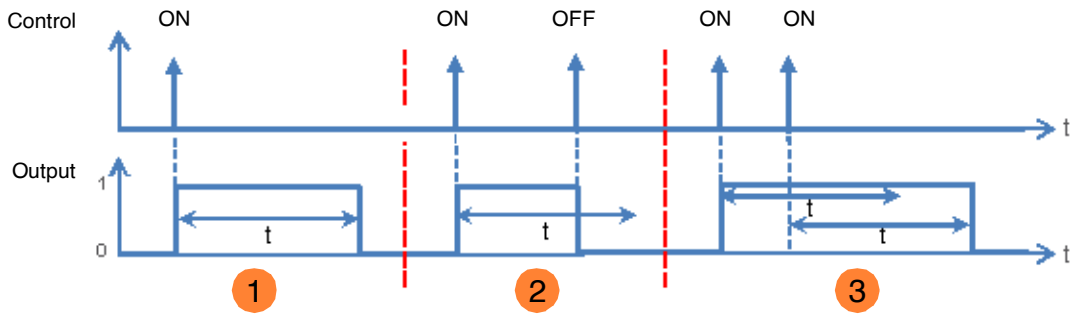
Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Timer/toggle switch changeover parameter for the ON/OFF object** has the following value: **Active**.*

3.7.2.3 Time limited toggle switch

The Time-limited OFF function enables automatic switch off after a programmable Time-limited OFF time. The output works as a normal switch actuator but is switched off after a given time for security.
Example: Attic, the lighting can be switched normally but switches off after not more than 3 hours.

Parameter	Description	Value
Additional time limited toggle switch function	The parameters for setting the **Time-limited OFF** time are: Hidden. Displayed.	 **Not active*** Active

Function diagram



1. Emission of an ON command: The output which is at ON will switch to OFF on expiry of the Time-limited OFF time.
2. Emission of an ON command: The output switches to ON.
   Emission of an OFF command before expiry of the Time-limited OFF time, t: The output switches to OFF.
3. Emission of an ON command: The output switches to ON.
   Emission of an ON command before expiry of the Time-limited OFF time, t: The output remains at ON and the Time-limited OFF time, t, is re-started.

Communication objects:

3 - Output 1 - Time limited toggle switch object (1 bit - 1.001 DPT_Switch)

23 - Output 2 - Time limited toggle switch object (1 bit - 1.001 DPT_Switch)

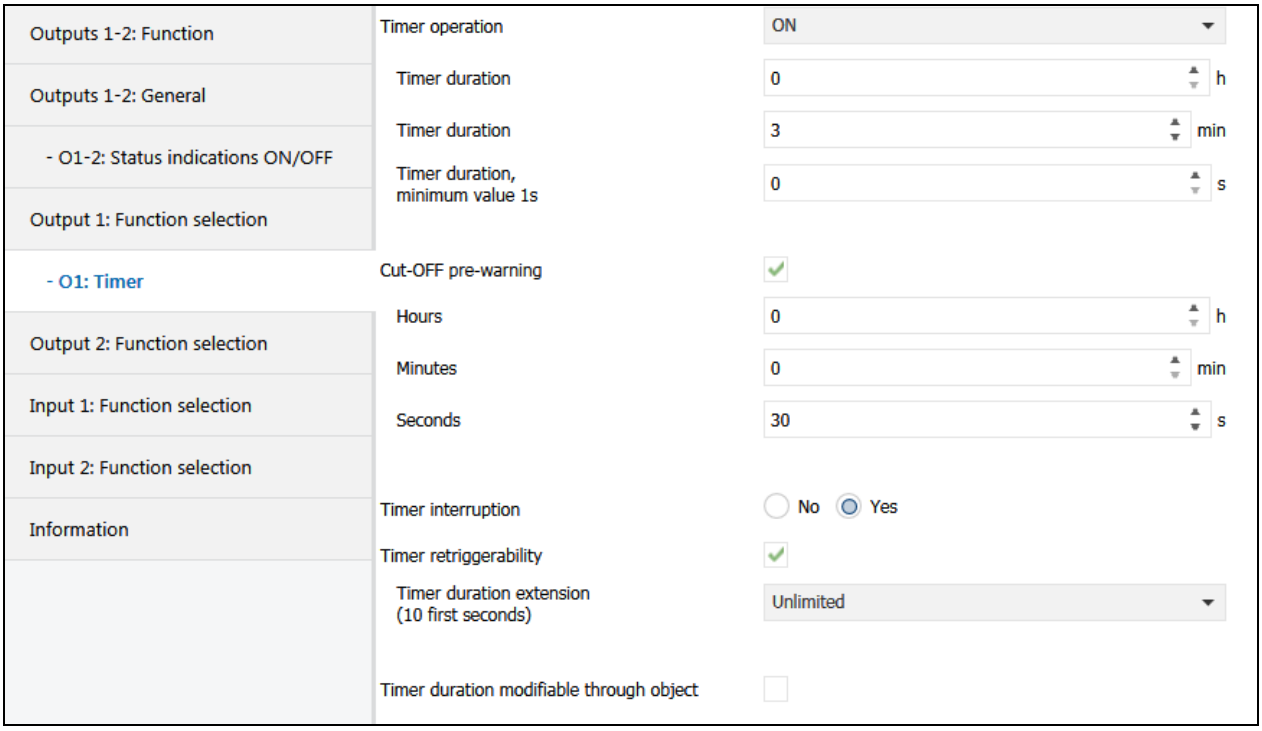
* Default value

Parameter	Description	Value
Hours (h) Minutes (min) Seconds (s)	This parameter sets the length of the timer operation for the Time-limited toggle switch, if this is activated.	**1** hours: 0 to 23 h **0** minutes: 0 to 59 min **0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Additional time limited toggle switch function** parameter has the following value: **Active**.*

3.7.3 Timer

The Timer function can switch a lighting circuit on or off for a configurable period. According to the selected operating mode of the timer, the output can be turned ON or OFF for a determined period of time. The timer may be interrupted before expiry of the delay time. A programmable Cut-OFF pre-warning announces the end of the delay time by a 1-second inversion of the output status.



3.7.3.1 Timer operation

Parameter	Description	Value
Timer operation	When the timer is active, the output for the Timer duration is: Selectively switched on. Selectively switched off. Switched alternately ON and OFF. (Blink time is configurable via additional parameters.)	 **ON*** OFF Blinking

* Default value

Parameter	Description	Value
Hours (h)	This parameter determines the timer duration.	**0** hours: 0 to 23 h
Minutes (min)		**2** minutes: 0 to 59 min
Seconds (s)		**0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.

Parameter	Description	Value
Blinking ON duration (s)	This parameter determines the closing duration of the output contact when blinking.	**5** seconds: 5 to 240 s

*Note: This parameter is only visible if the **Timer operation** parameter has the following value: **Blinking**.*

Parameter	Description	Value
Blinking OFF duration (s)	This parameter determines the opening duration of the output contact when blinking.	**5** seconds: 5 to 240 s

*Note: This parameter is only visible if the **Timer operation** parameter has the following value: **Blinking**.*

Parameter	Description	Value
Output status during blinking function	When the switch actuator is blinking, the **Status indication ON/OFF** object sends:	
	The value, 1 = ON.	**ON***
	The value, 0 = OFF.	OFF
	The values 1 and 0 alternately. (The status object blinks accordingly.)	ON/OFF

*Note: This parameter is only visible if the **Timer operation** parameter has the following value: **Blinking**.*

3.7.3.2 Cut-OFF pre-warning

Parameter	Description	Value
Cut-OFF pre-warning	Before expiry of the timer delay there is:	
	No warning.	Not active
	A warning through a 1-second inversion of the output status.	**Active***
	The lead time of this warning can be set.	

Parameter	Description	Value
Hours (h)	This parameter determines the lead time of the cut-OFF pre-warning.	**0** hours: 0 to 23 h
Minutes (min)		**0** minutes: 0 to 59 min
Seconds (s)		**30** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Cut-OFF pre-warning** parameter has the following value: **Active**.*
Note: If the lead time of the cut-OFF pre-warning is greater than the duration of the timer, the cut-OFF pre-warning is not triggered.

* Default value

3.7.3.3 Configuration

Parameter	Description	Value
Timer interruption	On receiving the value 0 on the **Timer** communication object, the timing is:	
	Interrupted.	**Yes***
	Not interrupted.	No

Parameter	Description	Value
Timer retriggerability	The parameter **Timer duration extension (10 first seconds)** is:	
	Hidden.	No
	Displayed.	**Yes***

Parameter	Description	Value
Timer duration extension (10 first seconds)	If, during the first 10 seconds of the timer duration, multiple commands with the value 1 are received on the **Timer** communication object, it is:	
	Multiplied unlimited times.	**Unlimited***
	Multiplied a maximum of 1x.	1-time duration extension
	Multiplied a maximum of 2x.	2-time duration extension
	Multiplied a maximum of 3x.	3-time duration extension
	Multiplied a maximum of 4x.	4-time duration extension
	Multiplied a maximum of 5x.	5-time duration extension

Parameter	Description	Value
Timer duration modifiable through object	The **Timer duration** communication object is:	
	Hidden.	**Not active***
	Displayed, the timer duration can be transmitted via the bus.	Active

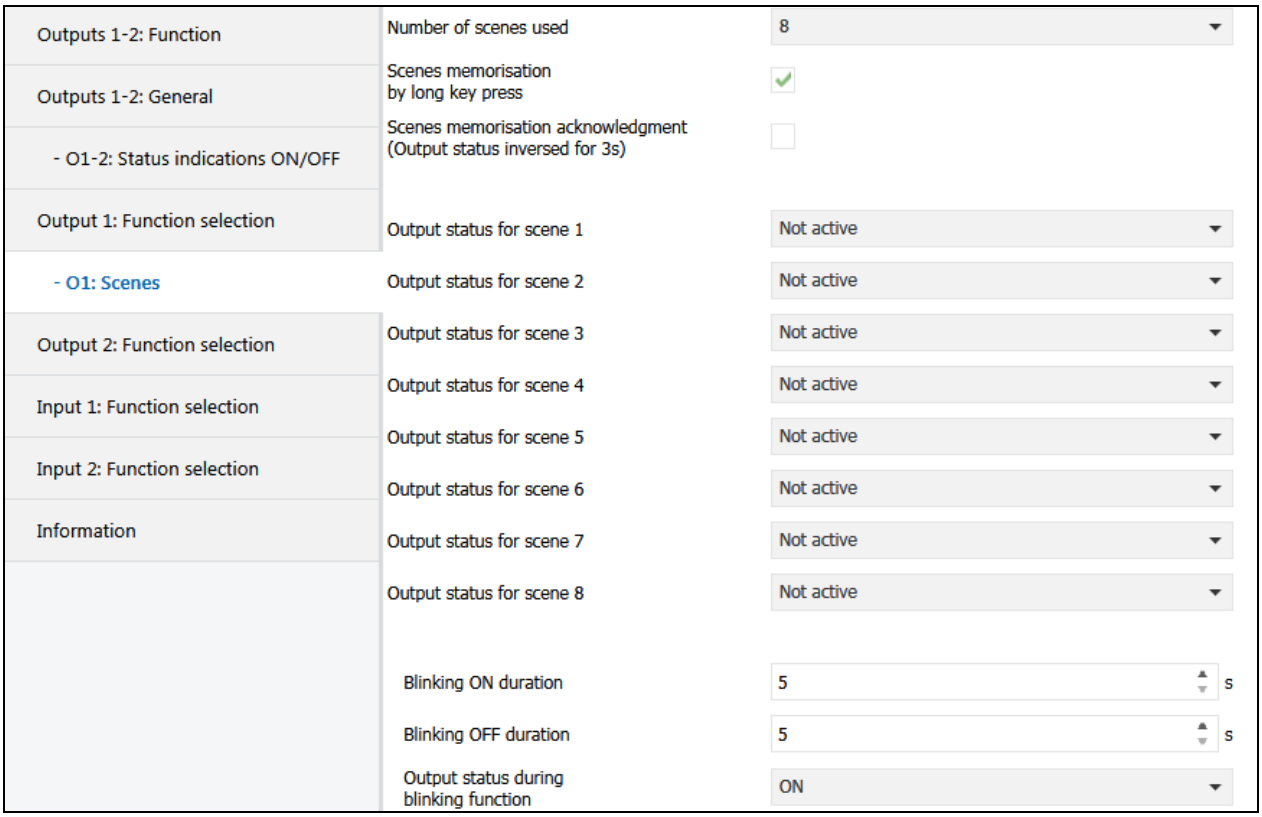
Communication objects:

6 - Output 1 - Timer duration (3 bytes - 10.001 DPT_TimeOfDay)

26 - Output 2 - Timer duration (3 bytes - 10.001 DPT_TimeOfDay)

* Default value

3.7.4 Scene



Parameter	Description	Value
Number of scenes used	This parameter determines the number of scenes used.	**8*** - 16 - 24 - 32 - 48 - 64

Note: If the Scene number received on the Scene object is greater than the maximum number of scenes, the status of the output remains unchanged.

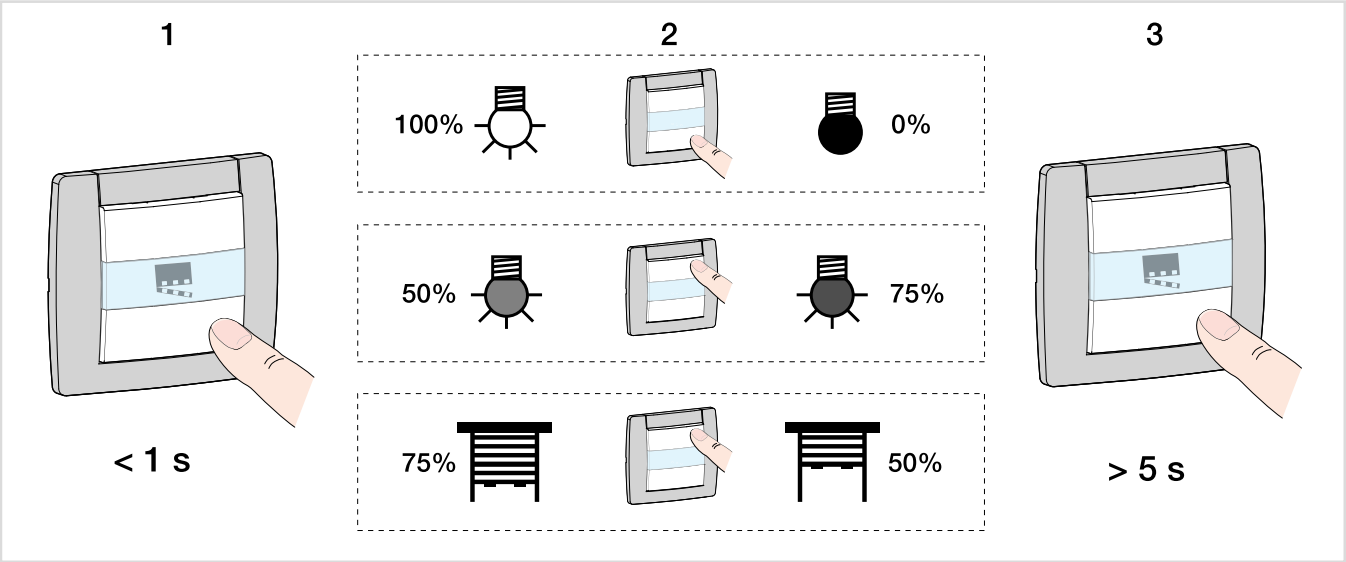
Parameter	Description	Value
Scenes memorisation by very long key press	This parameter allows learning and storing of a scene by, for example, a long press (> 5 seconds) of the corresponding push button.	Not active **Active***

Learning and storing scenes
This process is used to change and store a scene. For example, by locally pressing the key in the room or by emission of the values from a visualization.

To access and store scenes, the following values must be sent:

Scene number	**Access scene (Object value: 1 byte)**	**Store scene (Object value: 1 byte)**
1 - 64	= Scene number - 1	= Scene number + 128
Example		
1	0	128
2	1	129
3	2	130
...	...	
64	63	191

Here is the scene memorisation for local switches, for example.
- Activate scene by briefly pressing the transmitter that starts it.
- The outputs (lights, shutters, etc.) are set in the desired state using the usual local control devices (buttons, remote control, etc.).
- Memorise the status of the outputs with a press greater than 5 seconds long on the transmitter that starts the scene. The memorisation can be displayed by short-term activation of the outputs.



Parameter	Description	Value
Scenes memorisation acknowledgment	Memorisation of a scene is: Not acknowledged. Acknowledged by the output by a 3 second long inversion of the output status.	 **Not active*** Active

* Default value

Parameter	Description	Value
Output status for scene X	On activation of Scene X, the output is:	
	Not changed.	**Not active***
	Selectively switched on.	ON
	Selectively switched off.	OFF
	Switched alternately ON and OFF. (Blink time is configurable via additional parameters.)	Blinking

X = 1 to 64
*Note: Each output has up to 64 scenes available, in accordance with the **Number of scenes used** parameter.*
*Note: Local storage of the scene is not recorded if the **Output status for scene X** parameter is not active or is blinking.*

Parameter	Description	Value
Blinking ON duration (s)	This parameter determines the closing duration of the output contact when blinking.	**5** seconds: 5 to 240 s

*Note: This parameter applies to all scenes involving the respective output, which has the following value: **Blinking**.*

Parameter	Description	Value
Blinking OFF duration (s)	This parameter determines the opening duration of the output contact when blinking.	**5** seconds: 5 to 240 s

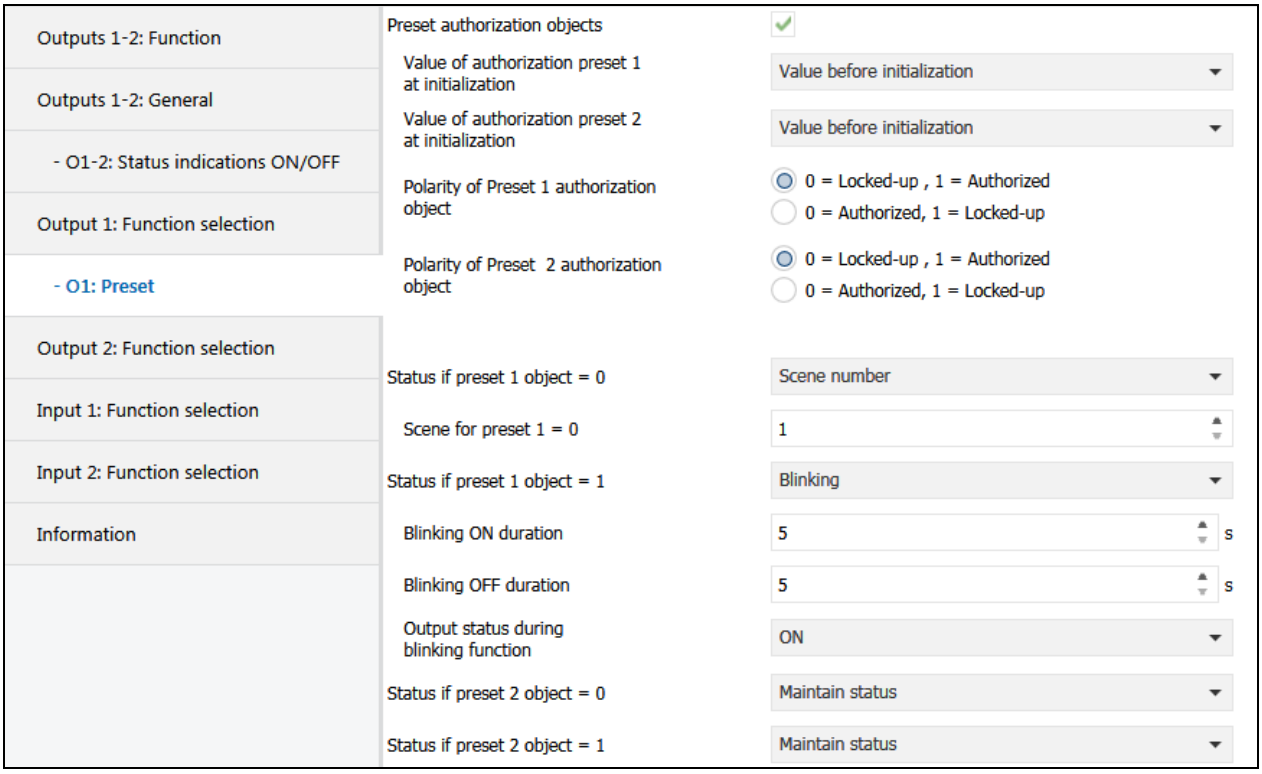
*Note: This parameter applies to all scenes involving the respective output, which has the following value: **Blinking**.*

Parameter	Description	Value
Output status during blinking function	When the switch actuator is blinking, the **Status indication ON/OFF** object sends:	
	The value, 1 = ON.	**ON***
	The value, 1 = OFF.	OFF
	The values 1 and 0 alternately. (The status object blinks accordingly.)	ON/OFF

*Note: This parameter applies to all scenes involving the respective output, which has the following value: **Blinking**.*

* Default value

3.7.5 Preset



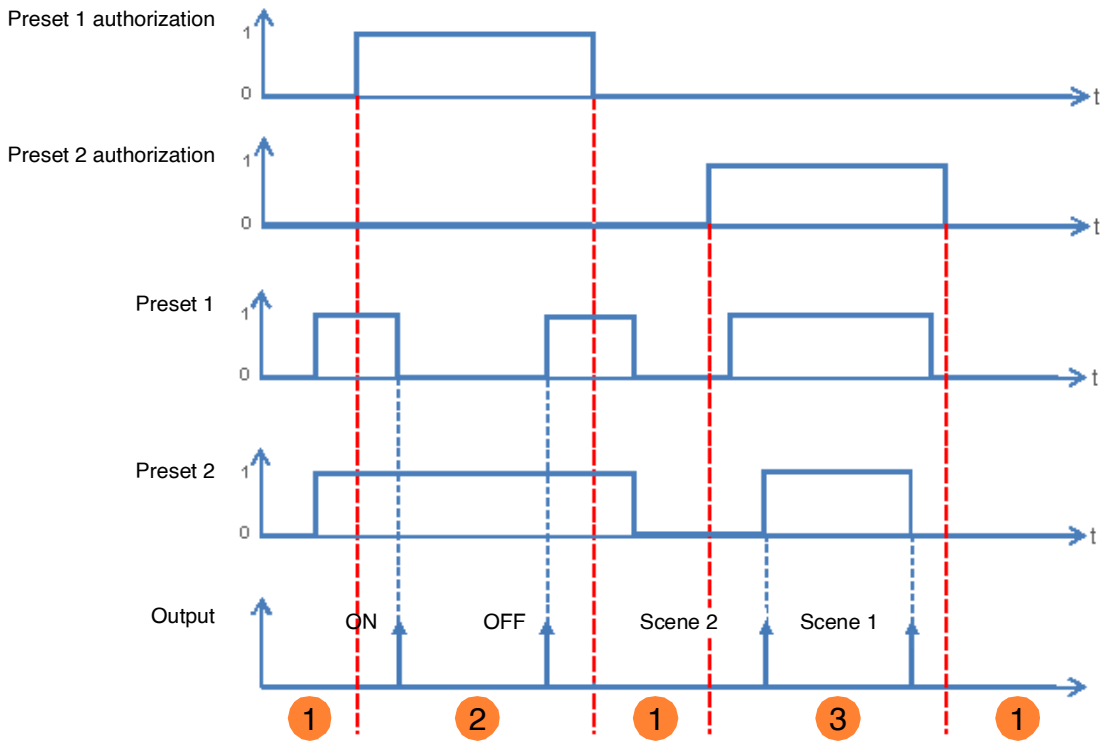
The Preset function is used to switch an output into various predefined states. The Preset function is activated via an object in 1-bit format.

Principle of Preset authorization:

The parameters are set as follows:

- Polarity of Preset 1 authorization object: 0 = Locked-up, 1 = Authorized.
- Polarity of Preset 2 authorization object: 0 = Locked-up, 1 = Authorized.
- Status if preset 1 object = 0: ON.
- Status if preset 1 object = 1: OFF.
- Status if preset 2 object = 0: Scene 1.
- Status if preset 2 object = 1: Scene 2.

* Default value



1 The preset inputs have no influence on the output.
2 The commands from Preset 1 are executed.
3 The commands from Preset 2 are executed.

Note: The commands from the Preset will not be executed immediately after authorization, but only when the value of the Preset changes.

Parameter	Description	Value
Preset authorization objects	The **Preset 1 authorization** communication object and the related parameters are:	
	Hidden.	**Not active***
	Displayed.	Active
	This object allows the authorization or lock-up of the Preset 1 function via a KNX telegram.	

*Note: The number of available Preset objects is dependent on the **Preset** parameter. A maximum of two of these objects can be available.*

* Default value

Communication objects: **10 - Output 1 - Preset 1 authorization** (1 bit - 1.003 DPT_Enable)

30 - Output 2 - Preset 1 authorization (1 bit - 1.003 DPT_Enable)

Communication objects: **11 - Output 1 - Preset 2 authorization** (1 bit - 1.003 DPT_Enable)

31 - Output 2 - Preset 2 authorization (1 bit - 1.003 DPT_Enable)

Note: The parameters and objects are identical for Preset 2 ; Only the terms will be adjusted.

Parameter	Description	Value
Value of authorization preset 1 at initialization	On initialization of the device after a download or after return of the bus power, the value of the **Preset 1 authorization** object is:	
	Set to 0.	0
	Set to 1.	1
	Set according to the value of the logic input before the initialization occurred.	**Value before initialization***

*Note: This parameter is only visible if the **Preset authorization objects** parameter has the following value: **Active**.*

Parameter	Description	Value
Polarity of Preset 1 authorization object	On receipt of a value on the **Preset 1 authorization** object, **Preset** 1:	
	Locked-up on object value 1.	**0 = Locked-up, 1 = Authorized***
	Locked-up on object value 0.	0 = Authorized, 1 = Locked-up

*Note: This parameter is only visible if the **Preset authorization objects** parameter has the following value: **Active**.*

Parameter	Description	Value
Status if preset 1 object = 0	On receipt of the value 0 on the **Preset 1** object, the output is:	
	Not changed.	**Maintain status***
	Is switched to the opposite status.	Inversion
	Selectively switched on.	ON
	Selectively switched off.	OFF
	Set to a scene value.	Scene number
	Set in blinking mode.	Blinking
	Switched to the status that was active before last receiving the value 1 on the **Preset 1** object.	Status before preset 1 = 1

Parameter	Description	Value
Scene for preset 1 = 0	This parameter determines the value of the scene if:	Scene 1 ... 64
	The **Preset 1** object has value 0.	
	The **Status if preset 1 object = 0** object has the scene value.	Default value: **1**

* Default value

Parameter	Description	Value
Status if preset 1 object = 1	On receipt of the value 1 on the **Preset 1** object, the output is:	
	Not changed.	**Maintain status***
	Is switched to the opposite status.	Inversion
	Selectively switched on.	ON
	Selectively switched off.	OFF
	Set to a scene value.	Scene number
	Set in blinking mode.	Blinking
	Switched to the status that was active before last receiving the value 1 on the **Preset 1** object.	Status before preset 1 = 0

Parameter	Description	Value
Scene for preset 1 = 1	This parameter determines the value of the scene if:	Scene 1 ... 64
	The **Preset 1** object has value 1.	
	The **Status if preset 1 object = 1** object has the scene value.	Default value: **Scene 2**

Parameter	Description	Value
Blinking ON duration (s)	This parameter determines the closing duration of the output contact when blinking.	**5** seconds: 5 to 240 s

*Note: This parameter is only visible if the **Status if preset 1 object = 0** parameter or the **Status if preset 1 object = 1** parameter has the following value: **Blinking**.*

Parameter	Description	Value
Blinking OFF duration (s)	This parameter determines the opening duration of the output contact when blinking.	**5** seconds: 5 to 240 s

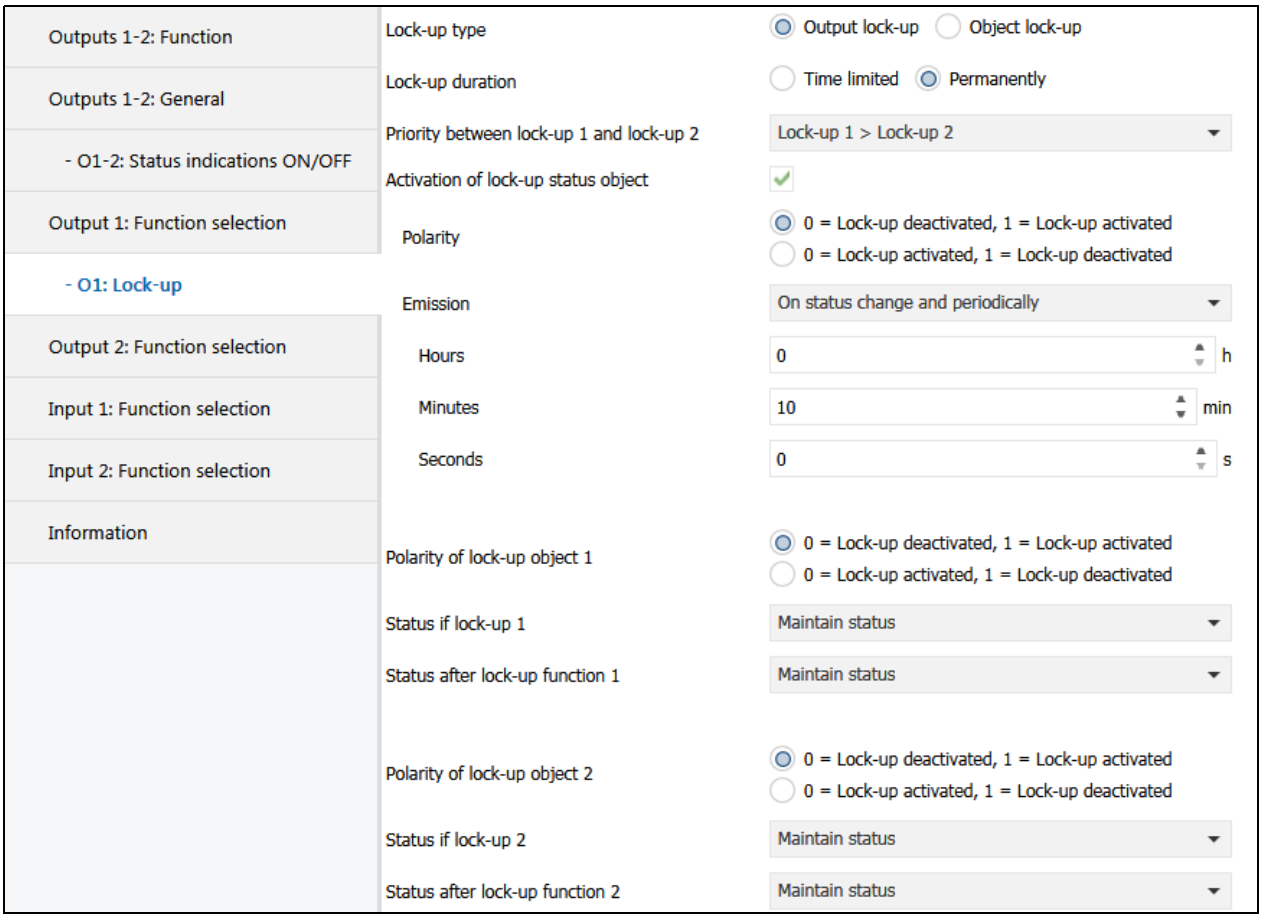
*Note: This parameter is only visible if the **Status if preset 1 object = 0** parameter or the **Status if preset 1 object = 1** parameter has the following value: **Blinking**.*

Parameter	Description	Value
Output status during blinking function	When the switch actuator is blinking, the **Status indication ON/OFF** object sends:	
	The value, 1 = ON.	**ON***
	The value, 0 = OFF.	OFF
	The values 1 and 0 alternately. (The status object blinks accordingly.)	ON/OFF

*Note: This parameter is only visible if the **Status if preset 1 object = 0** parameter or the **Status if preset 1 object = 1** parameter has the following value: **Blinking**.*

* Default value

3.7.6 Lock-up



The Lock-up function is used to lock the output in a predefined state.
Priority: Manual mode > Priority > **Lock-up** > Basic function.
The Lock-up prevents actuation until an unlock command has been received.
The Lock-up duration can be set.

Parameter	Description	Value
Lock-up type	The Lock-up acts:	
	Directly on the switch actuator. As long as the Lock-up is active, the output can only be controlled by higher priority commands.	**Output lock-up***
	On selected communication objects. As long as the Lock-up is active, the output can only be controlled via specific selectable objects.	Object lock-up

* Default value

Parameter	Description	Value
Lock-up duration	The duration of the Lock-up is	
	Not time limited, the lock-up is only authorized by means of a telegram on **Lock-up 1** object.	**Permanently***
	Is active for a limited time, the control of the output is authorized after expiry of this time.	Time limited

Parameter	Description	Value
Hours (h)	This parameter determines the activation time of the Lock-up.	**0** hours: 0 to 23 h
Minutes (min)		**15** minutes: 0 to 59 min
Seconds (s)		**0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Lock-up duration** parameter has the following value: **Time limited**.*

Parameter	Description	Value
Polarity of lock-up object 1	On receipt of a value on the **Lock-up 1** object, the lock-up:	
	Locked-up on object value 1. Is deactivated on object value 0.	**0 = Lock-up deactivated,** **1 = Lock-up activated***
	Locked-up on object value 0. Is deactivated on object value 1.	0 = Lock-up activated, 1 = Lock-up deactivated

Note: The parameters and objects are identical for Lock-up 2 ; Only the terms will be adjusted.

Parameter	Description	Value
Priority between lock-up 1 and lock-up 2	The priority between lock-up 1 and lock-up 2 is set as follows:	
	Lock-up 1 has priority over lock-up 2.	**Lock-up 1 > Lock-up 2***
	Lock-up 2 has priority over lock-up 1.	Lock-up 1 < Lock-up 2
	Lock-up 1 and lock-up 2 have the same priority.	Lock-up 1 = Lock-up 2

*Note: This parameter is only visible if the **Lock-up** parameter has the following value: **Active with 2 lock-up objects.***
Note: The priority of the Lock-up always functions in the same way, independently of the lock-up type (Output lock-up or object lock-up).

* Default value

Operating principle of the priorities:
If Lock-up 1 > Lock-up 2

Active lock-up	Activation order of Lock-up 1	Activation order of Lock-up 2
None	Lock-up 1 is activated	Lock-up 2 is activated
Lock-up 1	Lock-up 1 remains active	Despite the activation order of Lock-up 2, Lock-up 1 remains activated
Lock-up 2	Lock-up 1 is activated	Lock-up 2 remains active

If Lock-up 1 = Lock-up 2

Active lock-up	Activation order of Lock-up 1	Activation order of Lock-up 2
None	Lock-up 1 is activated	Lock-up 2 is activated
Lock-up 1	Lock-up 1 remains active	Lock-up 2 is activated
Lock-up 2	Lock-up 1 is activated	Lock-up 2 remains active

If Lock-up 1 < Lock-up 2

Active lock-up	Activation order of Lock-up 1	Activation order of Lock-up 2
None	Lock-up 1 is activated	Lock-up 2 is activated
Lock-up 1	Lock-up 1 remains active	Lock-up 2 is activated
Lock-up 2	Despite the activation order of Lock-up 1, Lock-up 2 remains activated	Lock-up 2 remains active

Parameter	Description	Value
Status if lock-up 1	If the **Lock-up type** is set to **Output lock-up**, on activation of the lock-up the output will:	
	Not changed.	**Maintain status***
	Switch to the opposite status.	Inversion
	Selectively switched on.	ON
	Selectively switched off.	OFF

Note: The parameters and objects are identical for Lock-up 2 ; Only the terms will be adjusted.

Lock-up 1 authorizes object:
The parameters listed below allow the selection of the objects for controlling the output via the nevertheless active Lock-up.
*Note: These parameters are only visible if the **Lock-up type** parameter has the following value: **Object lock-up**.*

* Default value

Parameter	Objects concerned	Value
ON/OFF	ON/OFF	Yes **No***
Scene	Scene	Yes **No***
Timer	Timer	Yes **No***
Timer/toggle switch changeover	Timer/toggle switch changeover	Yes **No***
Time limited toggle switch	Time limited toggle switch object	Yes **No***
Preset 1	Preset 1	Yes **No***
Preset 2	Preset 2	Yes **No***

Note: The parameters and objects are identical for Lock-up 2 ; Only the terms will be adjusted.

Parameter	Description	Value
Status after lock-up function 1	If the **Lock-up type** is set to **Output lock-up**, on cancellation of the lock-up the output will:	
	Not changed.	**Maintain status***
	Switch to the opposite status.	Inversion
	Selectively switched on.	ON
	Selectively switched off.	OFF
	Return to the status that was active before the lock-up.	Status before lock-up 1

Note: The application of this parameter depends on the priority of the other active functions. If a function with higher priority is active, this parameter will not be enacted. In the case where two functions with the same priority are active, the parameter of the most recently switched off function is enacted.

Note: The parameters and objects are identical for Lock-up 2 ; Only the terms will be adjusted.

Parameter	Description	Value
Activation of lock-up status object	The **Status indication lock-up** communication object is hidden.	**Not active***
	The **Status indication lock-up** communication object is displayed.	Active

Communication objects: **14 - Output 1 - Status indication lock-up** (1 bit - 1.011 DPT_State)

34 - Output 2 - Status indication lock-up (1 bit - 1.011 DPT_State)

* Default value

Parameter	Description	Value
Polarity	The **Status indication Lock-up** communication object sends:	
	0 on deactivation of the lock-up. 1 on activation of the lock-up.	**0 = Lock-up deactivated,** **1 = Lock-up activated***
	0 on activation of the lock-up. 1 on deactivation of the lock-up.	0 = Lock-up activated, 1 = Lock-up deactivated

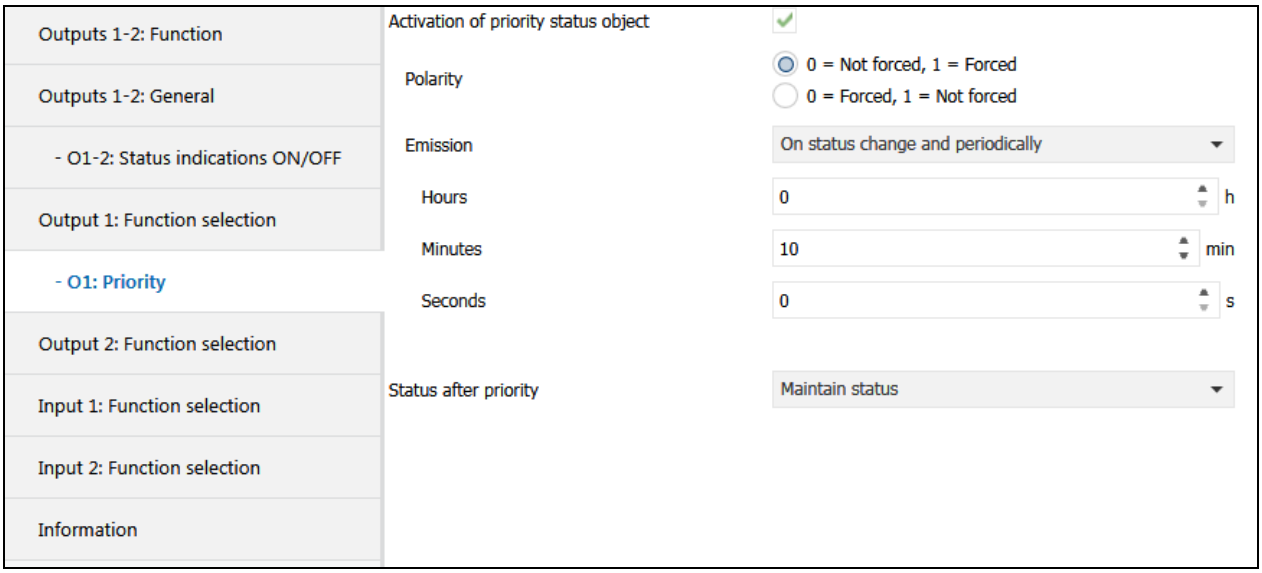
Parameter	Description	Value
Emission	The **Status indication lock-up** communication object is sent:	
	On activation and deactivation of the lock-up.	**On status change***
	Periodically after a configurable time.	Periodically
	On activation and deactivation of the lock-up and periodically after a configurable time.	On status change and periodically

*Note: This parameter is only visible if the **Activation of Lock-up status object** parameter has the following value: **Active**.*

Parameter	Description	Value
Hours (h)	This parameter determines the time between the individual transmissions of the **Status indication lock-up** object.	**0** hours: 0 to 23 h
Minutes (min)		**10** minutes: 0 to 59 min
Seconds (s)		**0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Emission** parameter has the following value: **Periodically** or **On status change and periodically**.*

3.7.7 Priority



The Priority is used to force the output into a predefined state.
Priority: Manual mode > **Priority** > Lock-up > Basic function.
No other command is taken into account when the Priority is active. Only by ending the Priority are other commands again permitted.

* Default value

Parameter	Description	Value
Activation of priority status object	The **Status indication priority** communication object and related parameters are hidden.	**Not active***
	The **Status indication priority** communication object and related parameters are displayed.	Active

Communication objects: **16 - Output 1 - Status indication priority** (1 bit - 1.011 DPT_State)

36 - Output 2 - Status indication priority (1 bit - 1.011 DPT_State)

Parameter	Description	Value
Polarity	The **Status indication priority** communication object sends:	
	0 on deactivation of the Priority. 1 on activation of the Priority.	**0 = Not forced,** **1 = Forced***
	0 on activation of the Priority. 1 on deactivation of the Priority.	0 = Forced, 1 = Not forced

*Note: This parameter is only visible if the **Activation of priority status object** parameter has the following value: **Active**.*

Parameter	Description	Value
Emission	The **Status indication priority** communication object is sent:	
	On activation and deactivation of the Priority.	**On status change***
	Periodically after a configurable time.	Periodically
	On activation and deactivation of the Priority and periodically after a configurable time.	On status change and periodically

*Note: This parameter is only visible if the **Activation of priority status object** parameter has the following value: **Active**.*

Parameter	Description	Value
Hours (h)	This parameter determines the time between the individual transmissions of the **Status indication priority** object.	**0** hours: 0 to 23 h
Minutes (min)		**10** minutes: 0 to 59 min
Seconds (s)		**0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Emission** parameter has the following value: **Periodically** or **On status change and periodically.***

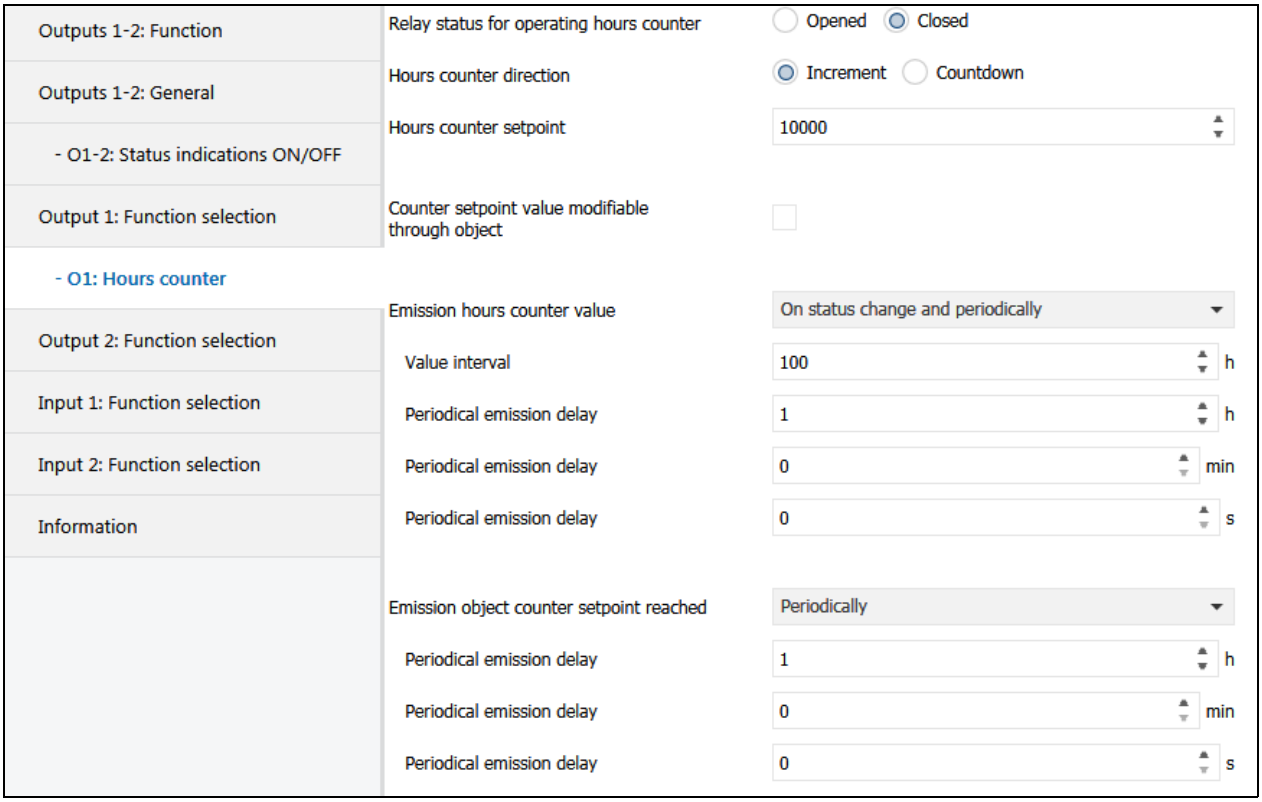
* Default value

Parameter	Description	Value
Status after priority	At the end of the priority, the output is:	
	Not changed.	**Maintain status***
	Switch to the opposite status.	Inversion
	Selectively switched on.	ON
	Selectively switched off.	OFF
	Switched back to the status before priority was activated.	Status before priority
	Switched to the status which would be active according to other communication objects if the priority had not taken place.	Theoretical status without priority

Note: The application of this parameter depends on the priority of the other active functions. If a function with higher priority is active, this parameter will not be enacted. In the case where two functions with the same priority are active, the parameter of the most recently switched off function is enacted.

3.7.8 Hours counter

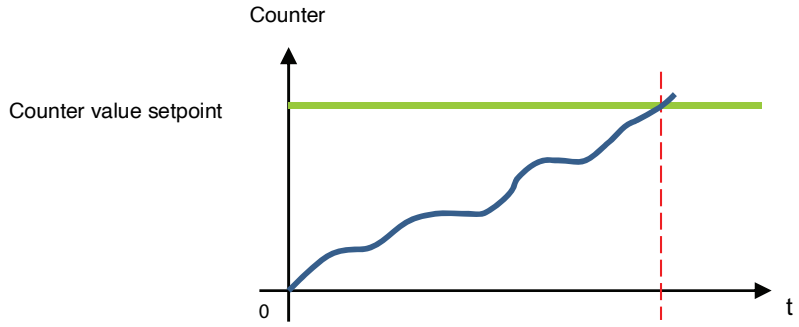
The Hours Counter function is used to count the overall operating time of an output in the ON or OFF state. The operating hours counter setpoint can be programmed and altered via an object.



Parameter	Description	Value
Relay status for operating hours counter	The hours counter runs if:	
	The output is closed.	**Closed***
	The output is open.	Opened

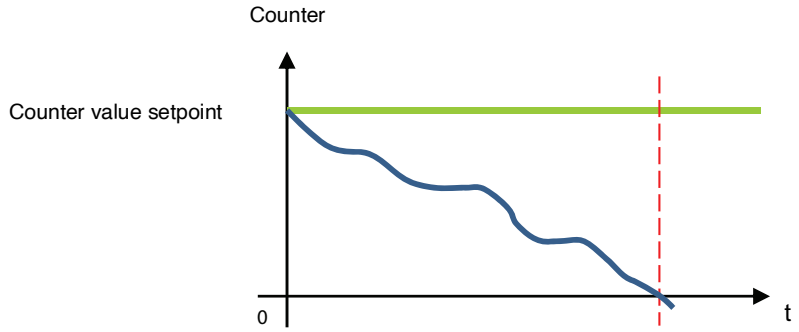
Parameter	Description	Value
Hours counter direction	The hours counter counts:	
	Growing.	**Increment***
	Decreasing.	Countdown

Increment:



The counter starts to count up from the value 0. As soon as the counter setpoint (**Hours counter setpoint** object) is reached, the **Hours counter setpoint reached** object is set to 1 and sent to the bus.

Countdown:



The counter starts to count down from the operating hours counter setpoint (**Hours counter setpoint** object). As soon as the counter reaches 0, the **Hours counter setpoint reached** is set to 1 and sent to the bus.

Parameter	Description	Value
Hours counter setpoint	This parameter determines the value of the hours counter.	1 ... **10000*** ... 65535

An incrementing counter starts at 0 and counts up until it reaches the setpoint value.
A countdown counter starts to count at the setpoint value and counts down until it has arrived at 0.

Parameter	Description	Value
Counter setpoint value modifiable through object	The **Hours counter setpoint** communication object is hidden.	**Not active***
	The **Hours counter setpoint** communication object is displayed. The value can be changed via the KNX bus.	Active

Communication objects: **20 - Output 1 - Hours counter setpoint** (2 bytes - 7.007 DPT_Time (h))

40 - Output 2 - Hours counter setpoint (2 bytes - 7.007 DPT_Time (h))

Parameter	Description	Value
Emission hours counter value	The **Hours counter value** communication object is sent:	
	On each change.	**On status change***
	Periodically after a configurable time.	Periodically
	On change and periodically after a configurable time.	On status change and periodically

Parameter	Description	Value
Value interval (h)	This parameter specifies the value interval (in hours) for the sending frequency of the **Hours counter setpoint** object.	1 ... 1**00*** ... 65535 (hours)

*Note: If the value interval is 200 hours, then the **Hours counter setpoint** object is sent each time the Operating h. counter value is increased by 200 hours.*
*Note: This parameter is only visible if the **Emission hours counter value** parameter has the following value: **Periodically** or **On status change and periodically.***

Parameter	Description	Value
Periodical emission delay	This parameter determines the time between the individual transmissions of the **Hours counter setpoint** object.	**1** hours: 0 to 23 h
		0 minutes: 0 to 59 min
		0 seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Emission hours counter value** parameter has the following value: **Periodically** or **On status change and periodically.***

Parameter	Description	Value
Emission object counter setpoint reached	The **Hours counter setpoint** reached communication object is sent:	
	On reaching the counter setpoint.	On status change
	Periodically after a configurable time.	**Periodically***
	On reaching the counter setpoint and periodically after a configurable time.	On status change and periodically

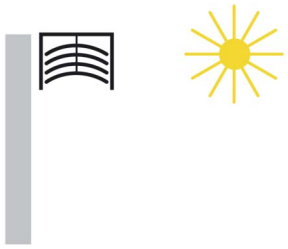
Parameter	Description	Value
Periodical emission delay	This parameter determines the time between the individual transmissions of the **Hours counter setpoint reached** object.	**1** hours: 0 to 23 h
		0 minutes: 0 to 59 min
		0 seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the Object **Emission counter setpoint reached** parameter has the following value: **Periodically** or **On status change and periodically.***

* Default value

3.8 Functions for each shutter/blind output

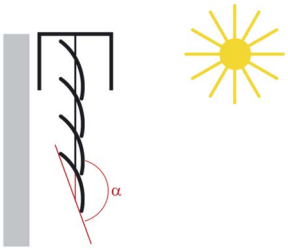
Slat position for horizontal slats
The blind drive actuators have 2 limit position switches and can be run to a Sun protection position using a position setting in percent. The value of 0% is used to control the upper position (i.e. Sun protection fully open) or is reported as a status.



Sun protection open (Upper position: 0%)

Object: Position in %

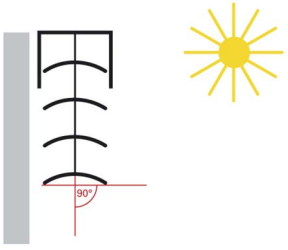
If the lower position is to be approached, then this will be sent to the blinds as Sun protection position 100% or on reaching the lower position (i.e. Sun protection completely closed). The position will be reported using this value. If a blind is run from the upper position, the slats initially tilt into an almost vertical position and then the sun protection runs with closed slats to the lower position.
When the blind is located at the lower position and the slats are fully closed, then this slat position is described as vertical and equal to 100%. Normally, however, fully closed slats have no exactly vertical position (α = 180°) but rather form a small angle with the vertical.



Sun protection closed slats (Lower position: 100%, Slat angle: 100%)

Object: Position in %

From their vertical position (completely closed, 100%) the slats can be adjusted to their horizontal position (fully open, 0% and = 90°) The blind drive used thus determines whether this adjustment can be carried out using many small steps or whether it is only possible via a few large steps (As with most standard drives).

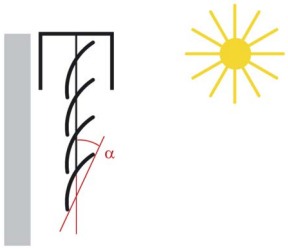


Slat position horizontal (0%, α = 90°)

Object: Slat angle in %

For standard blinds, the slats can be adjusted continuously to the horizontal position or until the slat adjustment ends and the raising of the blind begins. The slats then form an angle of between 0° and 90° with the vertical.

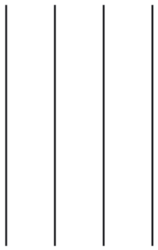
* Default value



Slat position at the start of moving the blind (Up)

Object: Slat angle in %

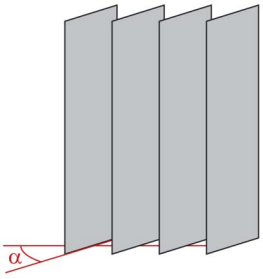
Slat position for vertical slats
If an interior shade or privacy shield with vertical slats is controlled via a blind actuator, then the position in which the slats are fully open is controlled or reported as the 0% slat position. The slats then form an angle of 90° with the direction of travel from Shade fully open to Shade fully closed.



Fully opened vertical slats (Slat angle 0%)

Object: Slat angle in %

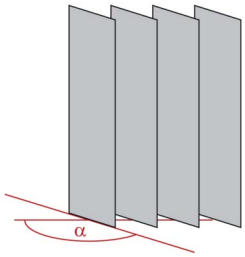
If the slats are fully closed, this position will be controlled and reported as slat position 100%. This is the position to which the shade is run from its side limit position in front of the window. The angle that the slats then form with the direction of movement is therefore a little > 0°.



Fully closed vertical slats (Slat angle 100%)

Object: Slat angle in %

If the shade is then driven back (i.e. opened), then the vertical slats are turned to a position that is somewhat smaller than 180°.

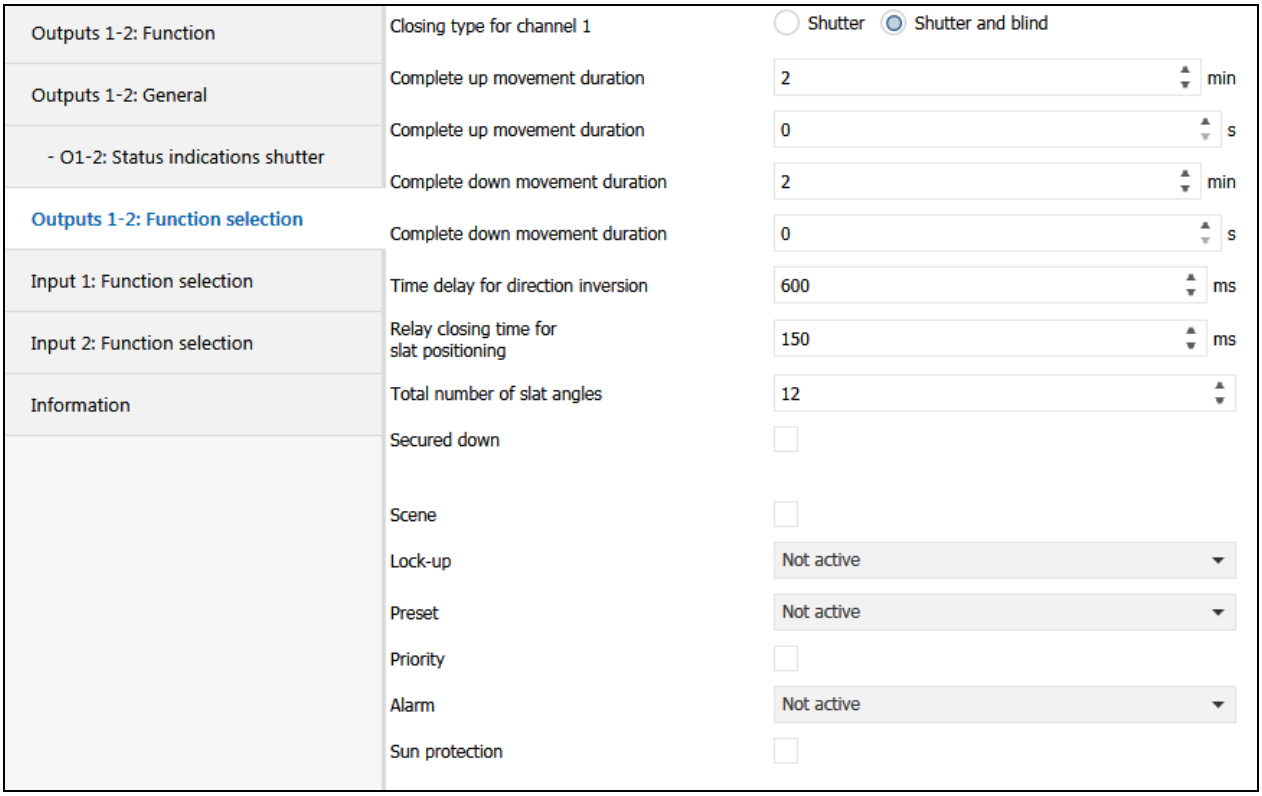


Vertical slats at the start of moving UP

* Default value

3.8.1 Function selection

These parameters are available individually for each output (Pair).



Parameter	Description	Value
Closing type for channel x	This parameter defines the operating mode used for the affected outputs. An operating mode of the shutter and blind type gives access to additional parameters to control the slat pitch.	**Shutter*** Shutter and blind

x = 1 to 8

Note: These objects are always visible.

Communication objects:

1 - Outputs 1-2 - Up/Down (Long key-press) (1 bit - 1.008 DPT_UpDown)

2 - Outputs 1-2 - Step/stop control (Short press) (1 bit - 1.007 DPT_Step)

3 - Outputs 1-2 - Position in % (1 byte - 5.001 DPT_Scaling)

*Note: These objects are only visible if the **Closing type for channel x** parameter has the following value: **Shutter and blind**.*

Communication objects:

4 - Outputs 1-2 - Slat angle (0-100%) (1 byte - 5.001 DPT_Scaling)

Parameter	Description	Value
Complete up movement duration	This parameter defines the time taken, during which the contact must be closed, to reach the upper position.	**2** minutes: 0 to 59 min **0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.

* Default value

Parameter	Description	Value
Complete down movement duration	This parameter defines the time taken, during which the contact must be closed, to reach the lower position.	**2** minutes: 0 to 59 min **0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.

Parameter	Description	Value
Time delay for direction inversion (ms)	This parameter defines how long the shutter or blind must be stopped before the direction of motion can be reversed. During this time, 2 output contacts are open.	300 ... **600*** ... 10000 ms

Parameter	Description	Value
Relay closing time for slat positioning (ms)	This parameter defines how long the contacts must be closed in order to perform an elementary angle step for the slats.	50 ... **150*** ... 10000 ms

*Note: These objects are only visible if the **Closing type for channel x** parameter has the following value: **Shutter and blind**.*

Parameter	Description	Value
Total number of slat angles	This parameter defines the total number of elementary slat steps available for adjusting the slats from the inclined downwards position to be inclined upwards position.	1 ... **12*** ... 60

*Note: Before setting the **Total number of slat angles** parameter, it is essential to first set the closed contact duration for an elementary slat step.*
*Note: These objects are only visible if the **Closing type for channel x** parameter has the following value: **Shutter and blind**.*

Parameter	Description	Value
Secured down	In manual mode, the down contact remains closed only as long as the manual button is being pressed.	**Not active*** Active

Note: This function is also used in order to give the command to close a swimming pool cover, which for safety reasons also requires a continuous button press.

Parameter	Description	Value
Manual mode active for output X	With this parameter, manual mode can be authorized for the output.	**Yes*** No

X = 1 to 8

Parameter	Description	Value
Status indication	This parameter allows the display of different status indication objects of the outputs concerned.	**Yes*** No

* Default value

Parameter	Description	Value
Status indication position in %	This parameter authorizes the **Position in % indication** object.	**Not active*** Active

Communication objects: **5 - Outputs 1-2 - Position in % indication** (1 byte - 5.001 DPT_Scaling)

Parameter	Description	Value
Status indication slat angle in %	This parameter authorizes the **Slat angle indication in %** object.	**Not active*** Active

*Note: This parameter is only visible if the **Closing type for channel x** parameter has the following value: **Shutter and blind**.*

Communication objects: **6 - Outputs 1-2 - Slat angle indication in %** (1 byte - 5.001 DPT_Scaling)

Parameter	Description	Value
Status indication upper position reached	This parameter authorizes the **Upper position reached** object.	**Not active*** Active

Communication objects: **7 - Outputs 1-2 - Upper position reached** (1 bit - 1.002 DPT_Bool)

Parameter	Description	Value
Status indication lower position reached	This parameter authorizes the **Lower position reached** object.	**Not active*** Active

Communication objects: **8 - Outputs 1-2 - Lower position reached** (1 bit - 1.002 DPT_Bool)

Parameter	Description	Value
Scene	The **Scenes** tab and the associated parameters and objects are: Hidden. Displayed.	 **Not active*** Active

Communication objects: **9 - Outputs 1-2 - Scene** (1 byte - 18.001 DPT_SceneControl)

For configuration see section: Scene Shutter.

* Default value

Parameter	Description	Value
Lock-up	The **Lock-up** tab and the associated parameters and objects are:	
	Hidden.	**Not active***
	Displayed for 1 lock-up object.	1 lock-up object
	Displayed for 2 lock-up objects.	2 lock-up objects

Lock-up 1 communication objects	**14 - Outputs 1-2 - Lock-up 1** (1 bit - 1.003 DPT_Enable)
Lock-up 2 communication objects	**15 - Outputs 1-2 - Lock-up 2** (1 bit - 1.003 DPT_Enable)

For configuration see section: Lock-up Shutter.

Parameter	Description	Value
Preset	The **Preset** tab and the associated parameters and objects are:	
	Hidden.	**Not active***
	Displayed for 1 Preset object.	Active with preset 1-level object
	Displayed for 2 Preset objects.	Active with preset 2-level objects

Note: When the value of this parameter changes, the associated parameters and group addresses are deleted.

Preset 1 communication Objets	**10 - Outputs 1-2 - Preset 1** (1 bit - 1.022 DPT_Scene_AB)
Preset 2 communication Objets	**11 - Outputs 1-2 - Preset 2** 1 bit - 1.022 DPT_Scene_AB)

For configuration see section: Preset Shutter.

Parameter	Description	Value
Priority	The **Priority** tab and the associated parameters and objects are:	
	Hidden.	**Not active***
	Displayed.	Active

* Default value

The device responds to telegrams received via the **Priority** object, as given in the following table:

Telegram received by the priority operation object			Output behaviour
Hexadecimal Value	Binary Value		
	Bit 1 (MSB)	Bit 0 (LSB)	
00	0	0	End of the priority
01	0	1	End of the priority
02	1	0	Priority OFF
03	1	1	Priority ON

Communication objects: **17 - Outputs 1-2 - Priority** (2 bit - 2.002 DPT_Bool_Control)

For configuration see section: Priority Shutter.

Parameter	Description	Value
Alarm	The **Alarm** tab and the associated parameters and objects are:	
	Hidden.	**Not active***
	Displayed for 1 alarm object	1 alarm object
	Displayed for 2 alarm objects	2 alarm objects
	Displayed for 3 alarm objects	3 alarm objects

Communication objects: **19 - Outputs 1-2 - Alarm 1** (1 bit- 1.005 DPT_Alarm)
20 - Outputs 1-2 - Alarm 2 (1 bit- 1.005 DPT_Alarm)
21 - Outputs 1-2 - Alarm 3 (1 bit- 1.005 DPT_Alarm)

For configuration see section: Alarm.

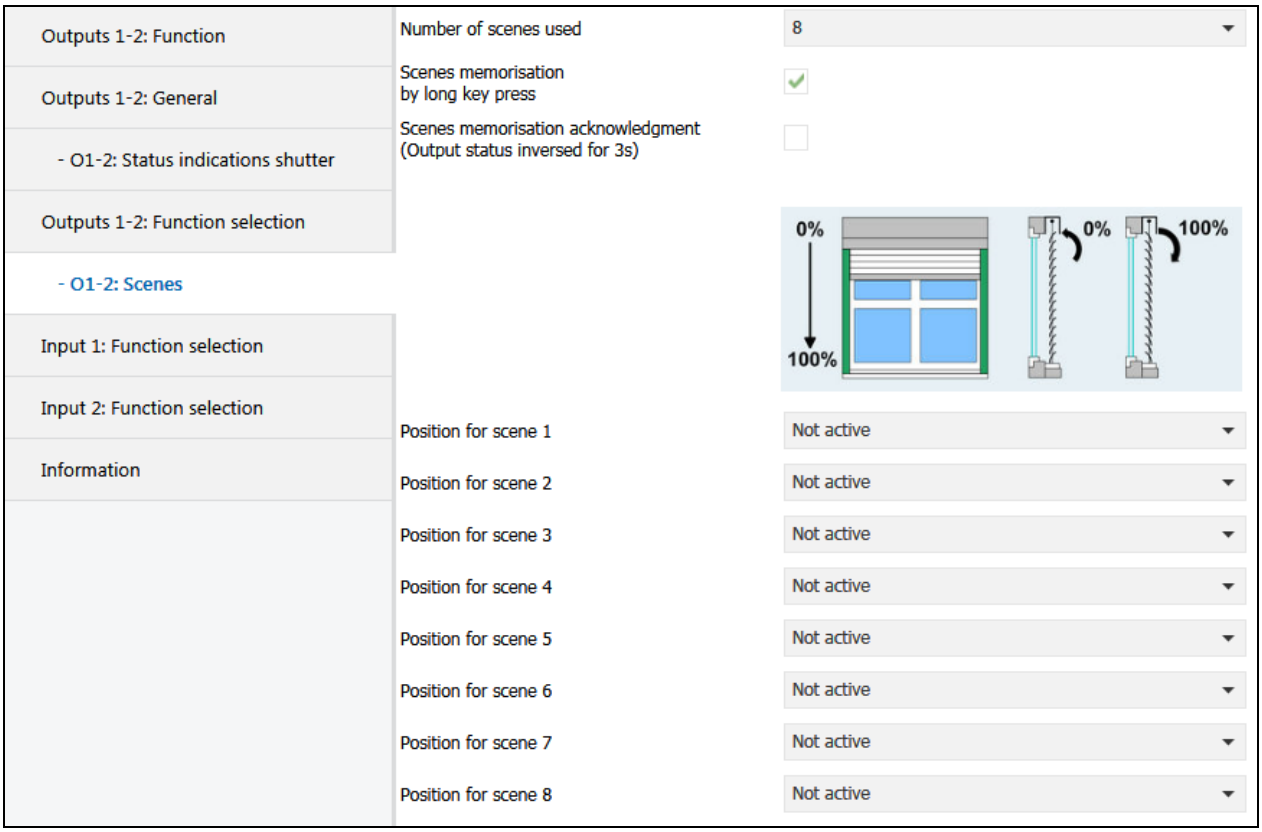
Parameter	Description	Value
Sun protection	The **Reactivate sun protection** tab and the associated parameters and objects are:	
	Hidden.	**Not active***
	Displayed.	Active

Communication objects: **23 - Outputs 1-2 - Sun protection position %** (1 byte - 5.001 DPT_Scaling)
24 - Outputs 1-2 - Slat angle (0-100%) (1 byte - 5.001 DPT_Scaling)

For configuration see section: Sun protection.

* Default value

3.8.2 Scene



Parameter	Description	Value
Number of scenes used	This parameter determines the number of scenes used.	**8*** - 16 - 24 - 32 - 48 - 64

Note: If the Scene number received on the Scene object is greater than the maximum number of scenes, the status of the output remains unchanged.

Parameter	Description	Value
Scenes memorisation by very long key press	This parameter allows learning and storing of a scene by, for example, a long press (> 5 seconds) of the corresponding push button.	Not active **Active***

Learning and storing scenes
This process is used to change and store a scene. For example, by locally pressing the key in the room or by emission of the values from a visualization.

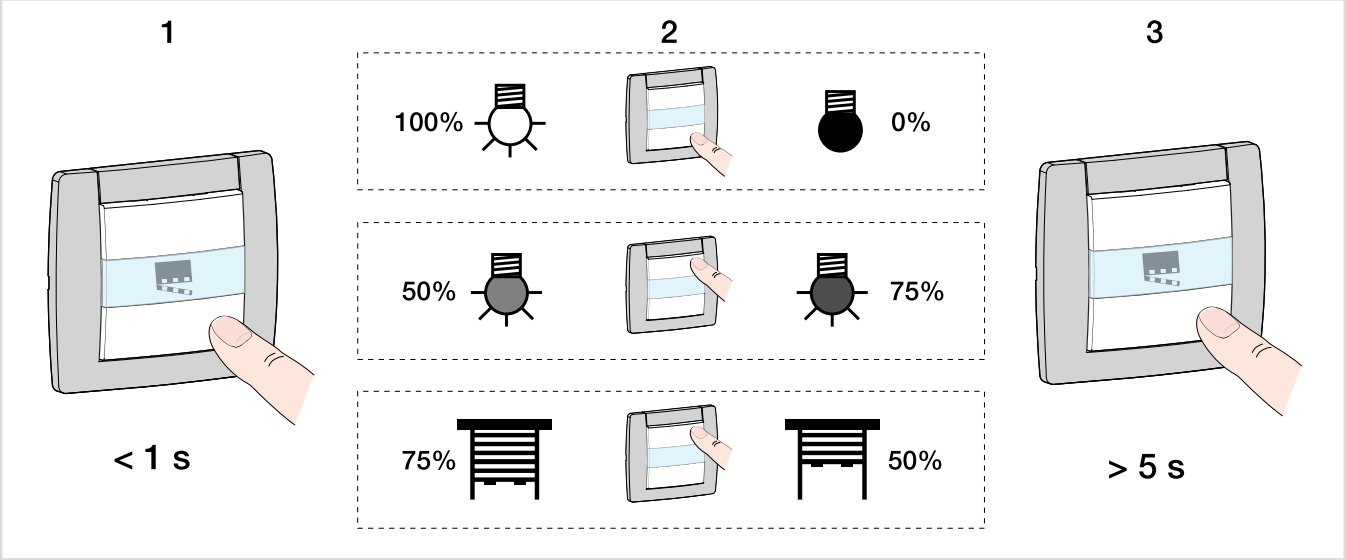
To access and store scenes, the following values must be sent:

Scene number	**Access scene (Object value: 1 byte)**	**Store scene (Object value: 1 byte)**
1 - 64	= Scene number - 1	= Scene number + 128
Example		
1	0	128
2	1	129
3	2	130
...	...	
64	63	191

* Default value

Here is the scene memorisation for local switches, for example.

- Activate scene by briefly pressing the transmitter that starts it.
- The outputs (lights, shutters, etc.) are set in the desired state using the usual local control devices (buttons, remote control, etc.).
- Memorise the status of the outputs with a press greater than 5 seconds long on the transmitter that starts the scene. The memorisation can be displayed by short-term activation of the outputs.



Parameter	Description	Value
Scenes memorisation acknowledgment	Memorisation of a scene is:	
	Not acknowledged.	**Not active***
	Acknowledged by the output by a 3 second long inversion of the output status.	Active

Parameter	Description	Value
Position for scene X	On activation of Scene X, the output is:	
	Not changed.	**Not active***
	Closes the Up contact.	Up
	Closes the down contact.	Down
	Runs to a specific position.	Specific position
	Reactivate the sun protection function.	Sun protection reactivation
	Lock-up the Sun protection function.	Deactivation sun protection

X = 1 to 64

*Note: Each output has up to 64 scenes available, in accordance with the **Number of scenes used** parameter.*

Note: The Sun protection function of the selected output must be configured. If this is not the case, the status remains unchanged. If this is not the case, the status remains unchanged.

*Note: Local storage of the scene is not recorded if the **Position for scene X** parameter is not active.*

* Default value

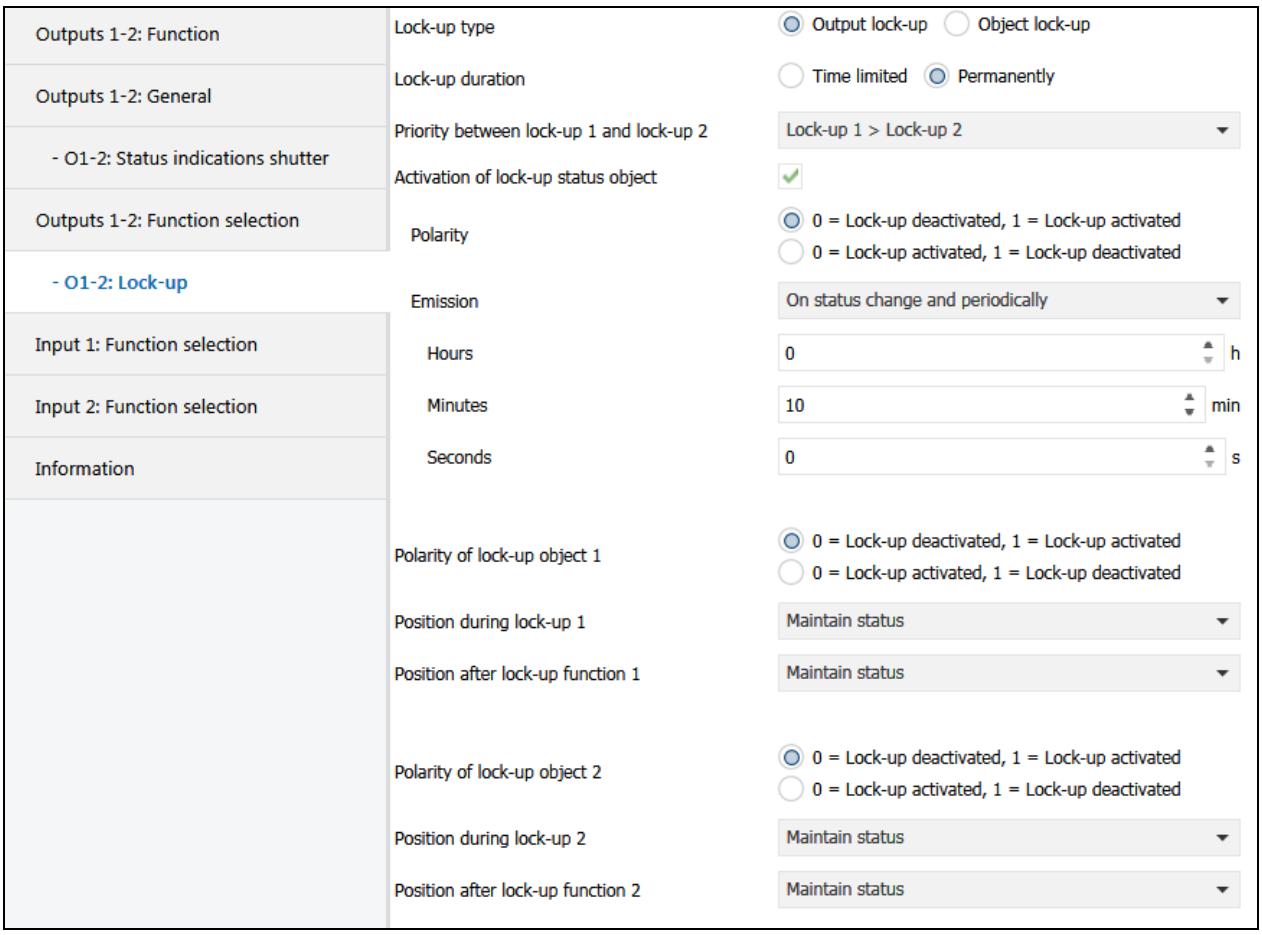
Parameter	Description	Value
Position (0-100%)	This parameter defines the position to run the shutter or blind to for scene X.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Position for scene X** parameter has the following value: **Specific position**.*

Parameter	Description	Value
Slat angle (0-100%)	This parameter defines the slat position of the blind to be used for scene X.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Position for scene X** parameter has the value **Specific position** and if the **Closing type for channel** parameter has the value **blind**.*

3.8.3 Lock-up



The Lock-up function is used to lock the output in a predefined state.
Priority: Manual mode > Priority > **Lock-up** > Basic function.
The Lock-up prevents actuation until an unlock command has been received.
The Lock-up duration can be set.

* Default value

Parameter	Description	Value
Lock-up type	The Lock-up acts:	
	Directly on the switch actuator. As long as the Lock-up is active, the output can only be controlled by higher priority commands.	**Output lock-up***
	On selected communication objects. As long as the Lock-up is active, the output can only be controlled via specific selectable objects.	Object lock-up

Parameter	Description	Value
Lock-up duration	The duration of the Lock-up is	
	Not time limited, the lock-up is only authorized by means of a telegram on **Lock-up 1** object.	**Permanently***
	Is active for a limited time, the control of the output is authorized after expiry of this time.	Time limited

Parameter	Description	Value
Hours (h)	This parameter determines the activation time of the Lock-up.	**0** hours: 0 to 23 h
Minutes (min)		**15** minutes: 0 to 59 min
Seconds (s)		**0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Lock-up duration** parameter has the following value: **Time limited**.*

Parameter	Description	Value
Polarity of lock-up object 1	On receipt of a value on the **Lock-up 1** object, the lock-up:	
	Is activated on object value 1. Is deactivated on object value 0.	**0 = Lock-up deactivated,** **1 = Lock-up activated***
	Is activated on object value 0. Is deactivated on object value 1.	0 = Lock-up activated, 1 = Lock-up deactivated

Note: The parameters and objects are identical for Lock-up 2 ; Only the terms will be adjusted.

Parameter	Description	Value
Priority between lock-up 1 and lock-up 2	The priority between lock-up 1 and lock-up 2 is set as follows:	
	Lock-up 1 has priority over lock-up 2.	**Lock-up 1 > Lock-up 2***
	Lock-up 2 has priority over lock-up 1.	Lock-up 1 < Lock-up 2
	Lock-up 1 and lock-up 2 have the same priority.	Lock-up 1 = Lock-up 2

*Note: This parameter is only visible if the **Lock-up** parameter has the following value: **Active with 2 lock-up objects.***
Note: The priority of the Lock-up always functions in the same way, independently of the lock-up type (Output lock-up or object lock-up).

* Default value

Operating principle of the priorities:
If Lock-up 1 > Lock-up 2

Active lock-up	Activation order of Lock-up 1	Activation order of Lock-up 2
None	Lock-up 1 is activated	Lock-up 2 is activated
Lock-up 1	Lock-up 1 remains active	Despite the activation order of Lock-up 2, Lock-up 1 remains activated
Lock-up 2	Lock-up 1 is activated	Lock-up 2 remains active

If Lock-up 1 = Lock-up 2

Active lock-up	Activation order of Lock-up 1	Activation order of Lock-up 2
None	Lock-up 1 is activated	Lock-up 2 is activated
Lock-up 1	Lock-up 1 remains active	Lock-up 2 is activated
Lock-up 2	Lock-up 1 is activated	Lock-up 2 remains active

If Lock-up 1 < Lock-up 2

Active lock-up	Activation order of Lock-up 1	Activation order of Lock-up 2
None	Lock-up 1 is activated	Lock-up 2 is activated
Lock-up 1	Lock-up 1 remains active	Lock-up 2 is activated
Lock-up 2	Despite the activation order of Lock-up 1, Lock-up 2 remains activated	Lock-up 2 remains active

Parameter	Description	Value
Position during lock-up 1	During Lock-up 1, the shutter/blind output:	
	Not changed.	**Maintain status***
	Closes the Up contact.	Up
	Closes the down contact.	Down
	Opens the 2 contacts.	Stop
	Runs to a specific position.	Specific position

Note: The parameters and objects are identical for Lock-up 2 ; Only the terms will be adjusted.

Parameter	Description	Value
Position (0-100%)	This parameter defines the position to run the shutter or blind to.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Position during lock-up 1] parameter has the following value**: **Specific position**.*

Parameter	Description	Value
Slat angle (0-100%)	This parameter defines the slat position to use for the blind.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Position during lock-up 1** parameter has the value **Specific position** and if the **Closing type for channel** parameter has the value **blind**.*

Lock-up 1 authorizes object:
The parameters listed below allow the selection of the objects for controlling the output via the nevertheless active Lock-up.
*Note: These parameters are only visible if the **Lock-up type** parameter has the following value: **Object lock-up**.*

Parameter	Objects concerned	Value
Up/down	Up/Down (long key-press)	Yes **No***
Slat angle/stop	Step/stop (short press)	Yes **No***
Scene	Scene	Yes **No***
Position in %	Position in %	Yes **No***
Slat angle in %	Slat angle in %	Yes **No***
Sun protection position in %	Sun protection position in %	Yes **No***
Sun protection slat angle in %	Slat angle (0-100%)	Yes **No***
Preset 1	Preset 1	Yes **No***
Preset 2	Preset 2	Yes **No***

Note: The parameters and objects are identical for Lock-up 2 ; Only the terms will be adjusted.

Parameter	Description	Value
Position after lock-up function 1	After lock-up 1, the shutter/blind output:	
	Not changed.	**Maintain status***
	Closes the Up contact.	Up
	Closes the down contact.	Down
	Runs to a specific position.	Specific position
	Returns to the position before lock-up 1.	Status before lock-up
	Runs to the position which would be active according to other communication objects if lock-up 1 had not taken place.	Theoretical status without lock-up function 1

*Note: On **Theoretical status without lock-up function 1**, the Up/Down and slat step commands are not saved.*
Note: The parameters and objects are identical for Lock-up 2 ; Only the terms will be adjusted.

Parameter	Description	Value
Position (0-100%)	This parameter defines the position to run the shutter or blind to.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Position after lock-up function 1** parameter has the following value: **Specific position**.*

* Default value

Parameter	Description	Value
Slat angle (0-100%)	This parameter defines the slat position to use for the blind.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Position after lock-up function 1** parameter has the value **Specific position** and if the **Closing type for channel** parameter has the value **blind**.*

Parameter	Description	Value
Activation of lock-up status object	The **Status indication lock-up** communication object is hidden.	**Not active***
	The **Status indication lock-up** communication object is displayed.	Active

Communication objects: **16 - Outputs 1-2 - Status indication lock-up** (1 bit - 1.011 DPT_State)

Parameter	Description	Value
Polarity	The **Status indication Lock-up** communication object sends:	
	0 on deactivation of the lock-up. 1 on activation of the lock-up.	**0 = Lock-up deactivated,** **1 = Lock-up activated***
	0 on activation of the lock-up. 1 on deactivation of the lock-up.	0 = Lock-up activated, 1 = Lock-up deactivated

Parameter	Description	Value
Emission	The **Status indication lock-up** communication object is sent:	
	On activation and deactivation of the lock-up.	**On status change***
	Periodically after a configurable time.	Periodically
	On activation and deactivation of the lock-up and periodically after a configurable time.	On status change and periodically

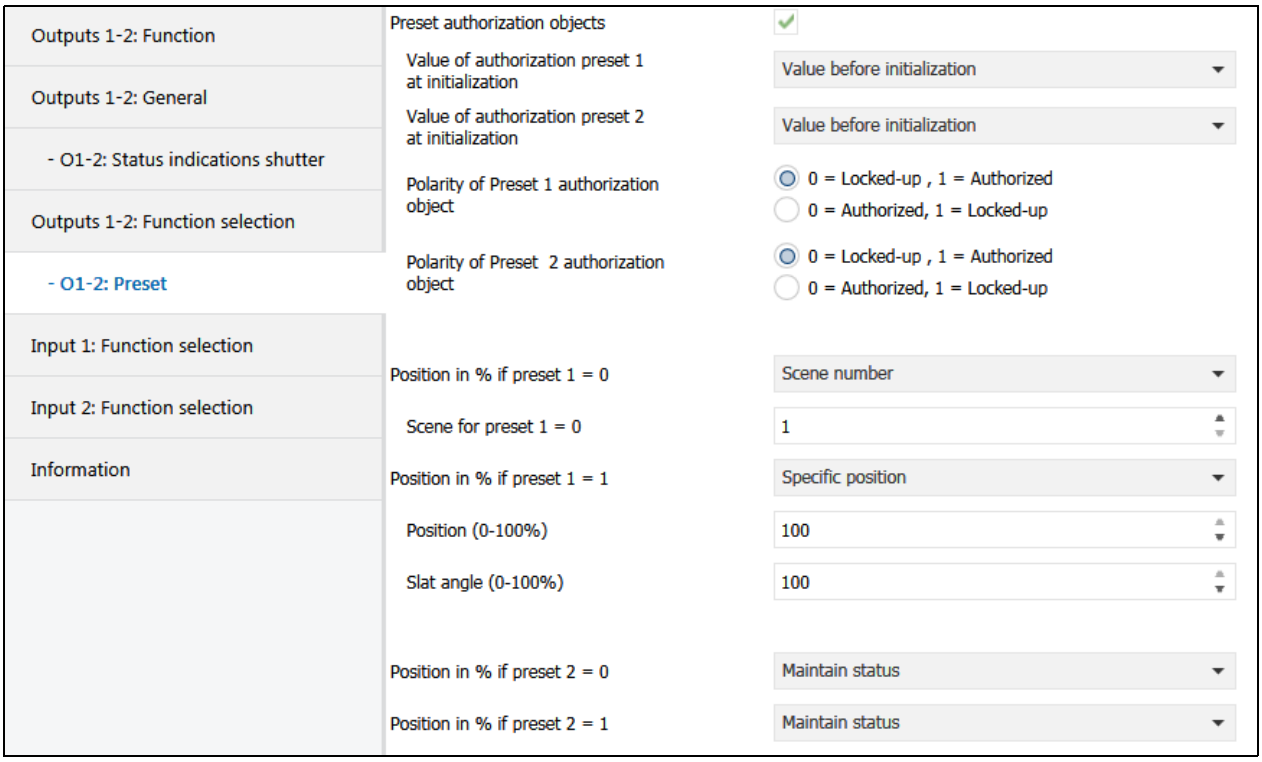
*Note: This parameter is only visible if the **Activation of Lock-up status object** parameter has the following value: **Active**.*

Parameter	Description	Value
Hours (h)	This parameter determines the time between the individual transmissions of the **Status indication lock-up** object.	**0** hours: 0 to 23 h
Minutes (min)		**10** minutes: 0 to 59 min
Seconds (s)		**0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Emission** parameter has the following value: **Periodically** or **On status change and periodically**.*

* Default value

3.8.4 Preset



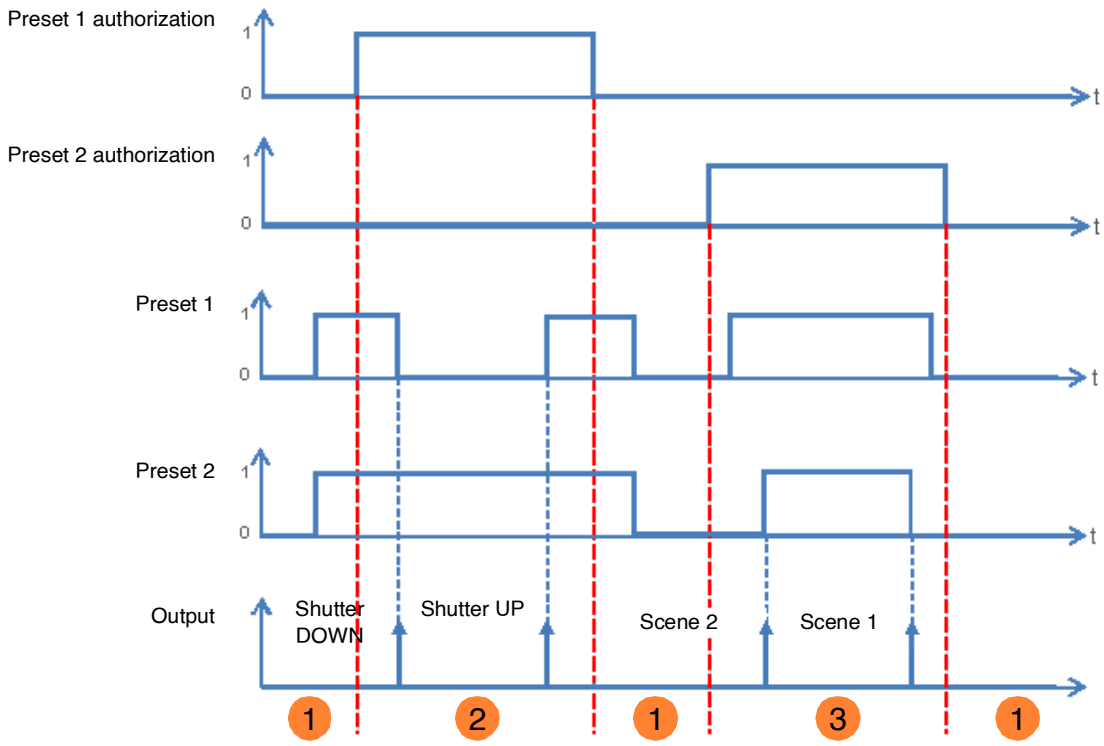
The Preset function is used to switch an output into various predefined states. The Preset function is activated via an object in 1-bit format.

Principle of Preset authorization:

The parameters are set as follows:

- Polarity of Preset 1 authorization object: 0 = Locked-up, 1 = Authorized.
- Polarity of Preset 2 authorization object: 0 = Locked-up, 1 = Authorized.
- Position in % if preset 1 = 0: Shutter DOWN.
- Position in % if preset 1 = 1: Shutter UP.
- Position in % if preset 2 = 0: Scene 1.
- Position in % if preset 2 = 1: Scene 2.

* Default value



1 The preset inputs have no influence on the output.

2 The commands from Preset 1 are executed.

3 The commands from Preset 2 are executed.

Note: The commands from the Preset will not be executed immediately after authorization, but only when the value of the Preset changes.

Parameter	Description	Value
Preset authorization objects	The **Preset 1 authorization** communication object and the related parameters are:	
	Hidden.	**Not active***
	Displayed.	Active
	This object allows the authorization or lock-up of the Preset 1 function via a KNX telegram.	

*Note: The number of available Preset objects is dependent on the **Preset** parameter. A maximum of two of these objects can be available.*

Communication objects: **12 - Outputs 1-2 - Preset 1 authorization** (1 bit - 1.003 DPT_Enable)

13 - Outputs 1-2 - Preset 2 authorization (1 bit - 1.003 DPT_Enable)

Note: The parameters and objects are identical for Preset 2 ; Only the terms will be adjusted.

* Default value

Parameter	Description	Value
Value of authorization preset 1 at initialization	On initialization of the device after a download or after return of the bus power, the value of the **Preset 1 authorization** object is:	
	Set to 0.	0
	Set to 1.	1
	Set according to the value of the logic input before the initialization occurred.	**Value before initialization***

*Note: This parameter is only visible if the **Preset authorization objects** parameter has the following value: **Active**.*

Parameter	Description	Value
Polarity of Preset 1 authorization object	On receipt of a value on the **Preset 1 authorization** object, **Preset** 1:	
	Locked-up on object value 1.	**0 = Locked-up, 1 = Authorized***
	Locked-up on object value 0.	0 = Authorized, 1 = Locked-up

*Note: This parameter is only visible if the **Preset authorization objects** parameter has the following value: **Active**.*

Parameter	Description	Value
Position in % if preset 1 = 0	During **Preset 1 = 0**, the shutter/blind output:	
	Not changed.	**Maintain status***
	Closes the Up contact.	Up
	Closes the down contact.	Down
	Opens the 2 contacts.	Stop
	Runs to a specific position.	Specific position
	Runs to a position set in a scene.	Scene number
	Reactivate the sun protection function.	Activate sun protection
	Lock-up the Sun protection function.	Deactivation sun protection
	Runs back to the position for Preset 1 = 1	Status before preset 1 = 1

Parameter	Description	Value
Position (0-100%)	This parameter defines the position to run the shutter or blind to.	**0*** ... 100

*Note: This parameter is only visible if the **Position in % if preset 1 = 0** parameter has the following value: **Specific position**.*

* Default value

Parameter	Description	Value
Slat angle (0-100%)	This parameter defines the slat position to use for the blind.	**0*** ... 100

*Note: This parameter is only visible if the **Position in % if preset 1 = 0** parameter has the value **Specific position** and if the **Closing type for channel** parameter has the value **blind**.*

Parameter	Description	Value
Scene number for preset 1 = 0	This parameter determines the value of the scene if: The **Preset 1** object has value 0. The **Status if preset 1 object = 0** object has the scene value.	Scene 1 ... 64 Default value: **1**

Parameter	Description	Value
Position in % if preset 1 = 1	During **Preset 1 = 0**, the shutter/blind output	
	Not changed.	**Maintain status***
	Closes the Up contact.	Up
	Closes the down contact.	Down
	Opens the 2 contacts.	Stop
	Runs to a specific position.	Specific position
	Runs to a position set in a scene.	Scene number
	Reactivate the sun protection function.	Activate sun protection
	Lock-up the Sun protection function.	Deactivation sun protection
	Runs back to the position for Preset 1 = 0	Status before preset 1 = 0

Parameter	Description	Value
Position (0-100%)	This parameter defines the position to run the shutter or blind to.	**0*** ... 100

Note: This parameter is only visible if the **Position in % if preset 1 = 1** parameter has the following value: **Specific position**.

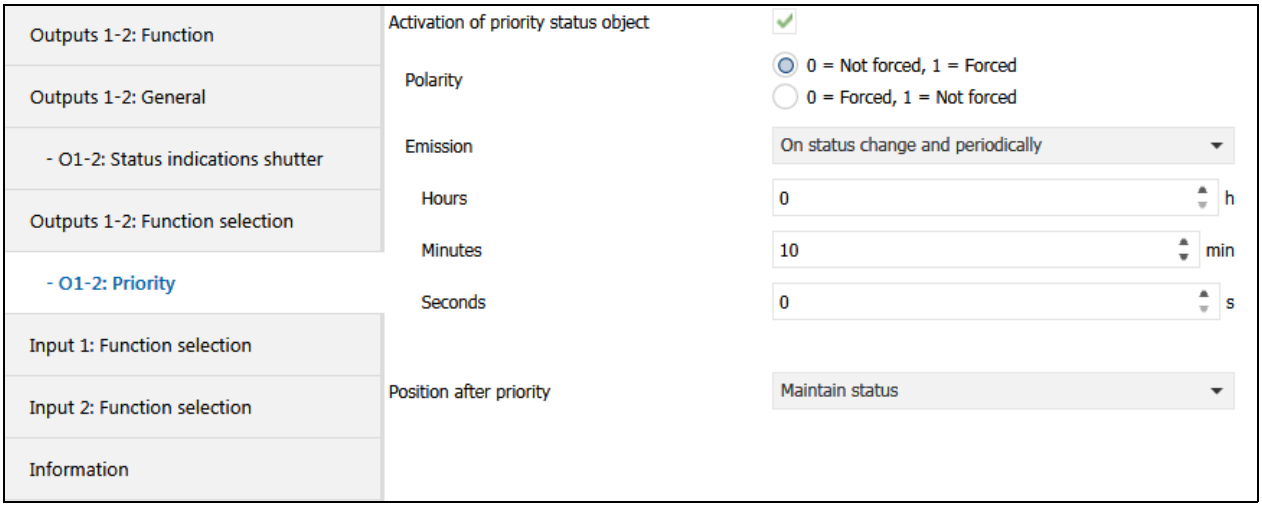
Parameter	Description	Value
Slat angle (0-100%)	This parameter defines the slat position to use for the blind.	**0*** ... 100

*Note: This parameter is only visible if the **Position in % if preset 1 = 1** parameter has the value **Specific position** and if the **Closing type for channel** parameter has the value **blind**.*

* Default value

Parameter	Description	Value
Scene number for preset 1 = 1	This parameter determines the value of the scene if: The **Preset 1** object has value 1. The **Status if preset 1 object = 1** object has the scene value.	Scene 1 ... 64 Default value: **2**

3.8.5 Priority



The Priority is used to force the output into a predefined state.
Priority: Manual mode > **Priority** > Lock-up > Basic function.
No other command is taken into account when the Priority is active. Only by ending the Priority are other commands again permitted.

Parameter	Description	Value
Activation of priority status object	The **Status indication priority** communication object and related parameters are hidden. The **Status indication priority** communication object and related parameters are displayed.	**Not active*** Active

Communication objects: **18 - Outputs 1-2 - Status indication priority** (1 bit - 1.011 DPT_State)

Parameter	Description	Value
Polarity	The **Status indication priority** communication object sends: 0 on deactivation of the Priority. 1 on activation of the Priority. 0 on activation of the Priority. 1 on deactivation of the Priority.	 **0 = Not forced,** **1 = Forced*** 0 = Forced, 1 = Not forced

*Note: This parameter is only visible if the **Activation of priority status object** parameter has the following value: **Active**.*

* Default value

Parameter	Description	Value
Emission	The **Status indication priority** communication object is sent:	
	On activation and deactivation of the Priority.	**On status change***
	Periodically after a configurable time.	Periodically
	On activation and deactivation of the Priority and periodically after a configurable time.	On status change and periodically

*Note: This parameter is only visible if the **Activation of priority status object** parameter has the following value: **Active**.*

Parameter	Description	Value
Hours (h)	This parameter determines the time between the individual transmissions of the **Status indication priority** object.	**0** hours: 0 to 23 h
Minutes (min)		**10** minutes: 0 to 59 min
Seconds (s)		**0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Emission** parameter has the following value: **Periodically** or **On status change and periodically.***

Parameter	Description	Value
Position after priority	After Priority, the shutter/blind output:	
	Not changed.	**Maintain status***
	Closes the Up contact.	Up
	Closes the down contact.	Down
	Runs to a specific position.	Specific position
	Returns to the Position before priority.	Status before priority
	Runs to the position which would be active according to other communication objects if the priority had not taken place.	Theoretical status without priority

Parameter	Description	Value
Position (0-100%)	This parameter defines the position to run the shutter or blind to on disappearing of the priority.	0 ... **5*** ... 100

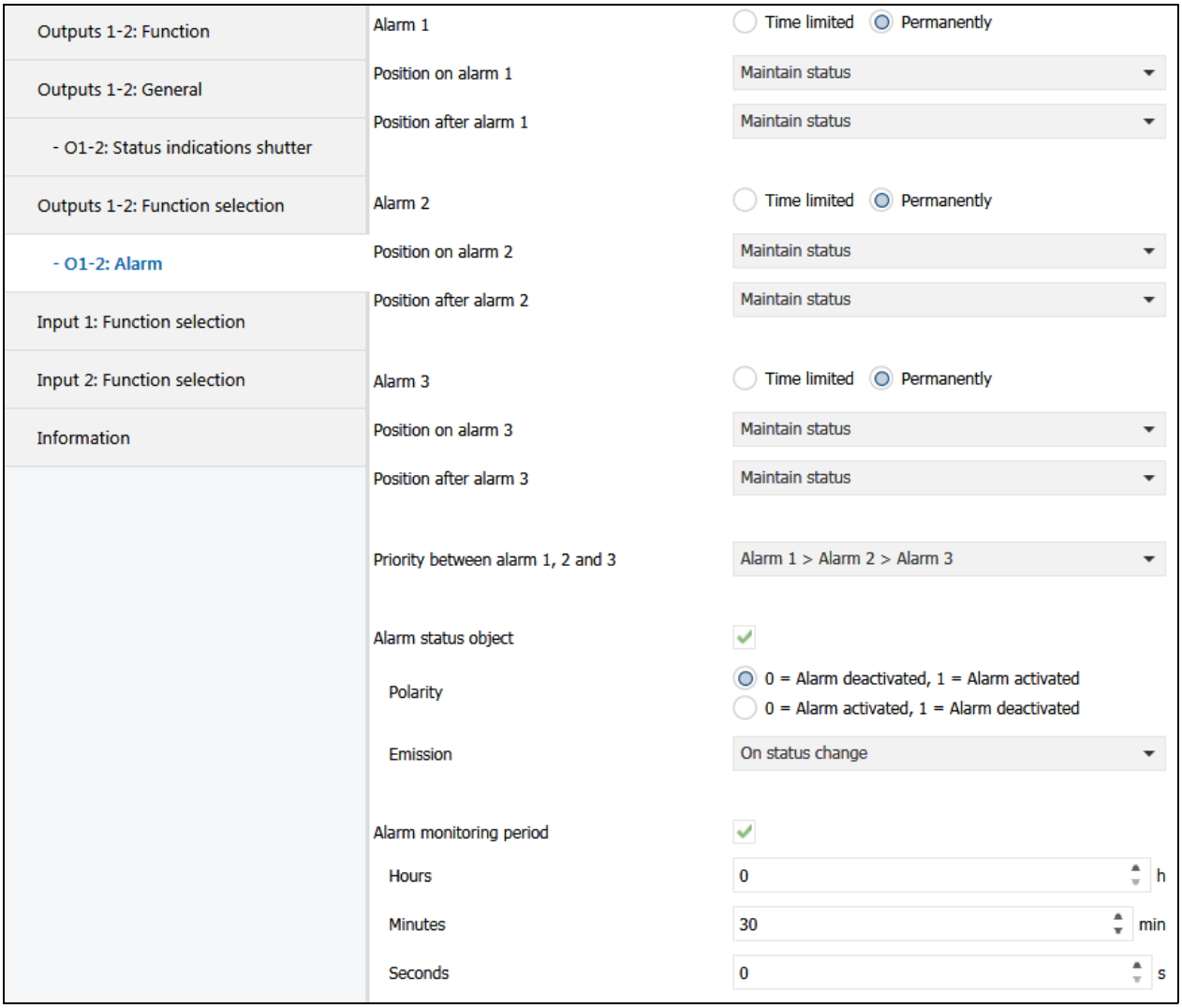
*Note: This parameter is only visible if the **Position after priority** parameter has the following value: **Specific position**.*

Parameter	Description	Value
Slat angle (0-100%)	This parameter defines the slat position to apply to the blind on disappearing of the priority.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Position after priority** parameter has the value **Specific position** and if the **Closing type** for channel parameter has the value **blind**.*

* Default value

3.8.6 Alarm



3.8.6.1 Alarm 1 to 3

Parameter	Description	Value
Alarm X	This parameter defines whether the Alarm function is active permanently or time-limited.	**Permanently*** Time limited

Permanently: The function is active until receipt of an alarm cancellation.
Time limited: The function is activated for a given period. At the end of this delay, the alarm is no longer active. To switch the Alarm function on again for a given period, a new activation of the function is required.

* Default value

Parameter	Description	Value
Hours (h) Minutes (min) Seconds (s)	This parameter determines the activation time of the Alarm function.	**0** hours: 0 to 23 h **30** minutes: 0 to 59 min **0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Alarm X** parameter has the following value: **Time limited**.*

Parameter	Description	Value
Position on alarm X	On Alarm X, the shutter/blind output:	
	Not changed.	**Maintain status***
	Closes the Up contact.	Up
	Closes the down contact.	Down
	Opens the 2 contacts.	Stop
	Runs to a specific position.	Specific position
	Runs to a position set in a scene.	Scene number

X = 1 to 3

Parameter	Description	Value
Position (0-100%)	This parameter defines the position to run the shutter or blind to on triggering of the relevant alarms.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Position on alarm X** parameter has the following value: **Specific position**.*

Parameter	Description	Value
Slat angle (0-100%)	This parameter defines the slat position to apply to the blind on triggering of the relevant alarm.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Position on alarm X** parameter has the value **Specific position** and if the **Closing type** for channel parameter has the value **blind**.*

Parameter	Description	Value
Scene	This parameter defines the scene number to be activated on triggering of the relevant alarm.	Scene 1 ... 64 Default value: **1**

X = 1 to 3
The outputs respond according to the scene numbers and associated parameters.
*Note: This parameter is only visible if the **Position on alarm X** parameter has the following value: **Scene**.*

* Default value

Parameter	Description	Value
Position after alarm X	After Alarm X, the shutter/blind output:	
	Not changed.	**Maintain status***
	Closes the Up contact.	Up
	Closes the down contact.	Down
	Opens the 2 contacts.	Stop
	Runs to a specific position.	Specific position
	Runs to a position set in a scene.	Scene number
	Returns to the Position before alarm.	Position before alarm
	Runs to the position which would be active according to other communication objects if the alarm had not taken place.	Theoretical status without alarm X

X = 1 to 3

Parameter	Description	Value
Position (0-100%)	This parameter defines the position to run the shutter or blind to on disappearing of the relevant alarms.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Position after alarm X** parameter has the following value: **Specific position**.*

Parameter	Description	Value
Slat angle (0-100%)	This parameter defines the slat position to apply to the blind on disappearing of the relevant alarm.	0 ... **5*** ... 100

*Note: This parameter is only visible if the **Position after alarm X** parameter has the value **Specific position** and if the **Closing type** for channel parameter has the value **blind**.*

Parameter	Description	Value
Scene	This parameter defines the scene number to be activated on disappearing of the relevant alarm.	Scene 1 ... 64 Default value: **1**

X = 1 to 3

The outputs respond according to the scene numbers and associated parameters.
*Note: This parameter is only visible if the **Position after alarm X** parameter has the following value: **Scene**.*

If several alarms triggered at the same time, the commands associated with the highest priority alarm are executed. The following parameters allow definition of this priority according to the alarm number.

Parameter	Description	Value
Priority between alarm 1 and 2	This parameter defines the priority between 2 alarm functions.	**Alarm 1 > Alarm 2***
		Alarm 2 > Alarm 1

*Note: This parameter is only visible if the **Alarm** parameter has the following value: **2 alarm objects**.*

Parameter	Description	Value
Priority between alarm 1, 2 and 3	This parameter defines the priority between 3 alarm functions.	**Alarm 1 > Alarm 2 > Alarm 3***
		Alarm 1 > Alarm 3 > Alarm 2
		Alarm 2 > Alarm 1 > Alarm 3
		Alarm 2 > Alarm 3 > Alarm 1
		Alarm 3 > Alarm 1 > Alarm 2
		Alarm 3 > Alarm 2 > Alarm 1

*Note: This parameter is only visible if the **Alarm** parameter has the following value: **3 alarm objects**.*

3.8.6.2 Alarm status indication

Parameter	Description	Value
Alarm status object	This parameter is used to authorize the **Alarm status** object. This object allows the status of the alarm to be sent from the device over the KNX bus.	**Not active***
		Active

Communication objects: **22 - Outputs 1-2 - Alarm status indication** (1 bit - 1.011 DPT_State)

Parameter	Description	Value
Polarity	The **Alarm status** object sends:	
	0 if no alarm is active. 1 if one of the three alarms is active.	**0 = Alarm deactivated,** **1 = Alarm activated***
	1 if no alarm is active. 0 if one of the three alarms is active.	0 = Alarm activated, 1 = Alarm deactivated

Parameter	Description	Value
Emission	The **Alarm status indication** communication object is sent:	
	On activation and deactivation of the alarm.	**On status change***
	Periodically after a configurable time.	Periodically
	On activation and deactivation of the alarm and periodically after a configurable time.	On status change and periodically

*Note: This parameter is only visible if the **Alarm status object** parameter has the following value: **Active**.*

Parameter	Description	Value
Hours (h)	This parameter determines the time between the individual transmissions of the **Status indication lock-up** object.	**0** hours: 0 to 23 h
Minutes (min)		**30** minutes: 0 to 59 min
Seconds (s)		**0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Emission** parameter has the following value: **Periodically** or **On status change and periodically**.*

* Default value

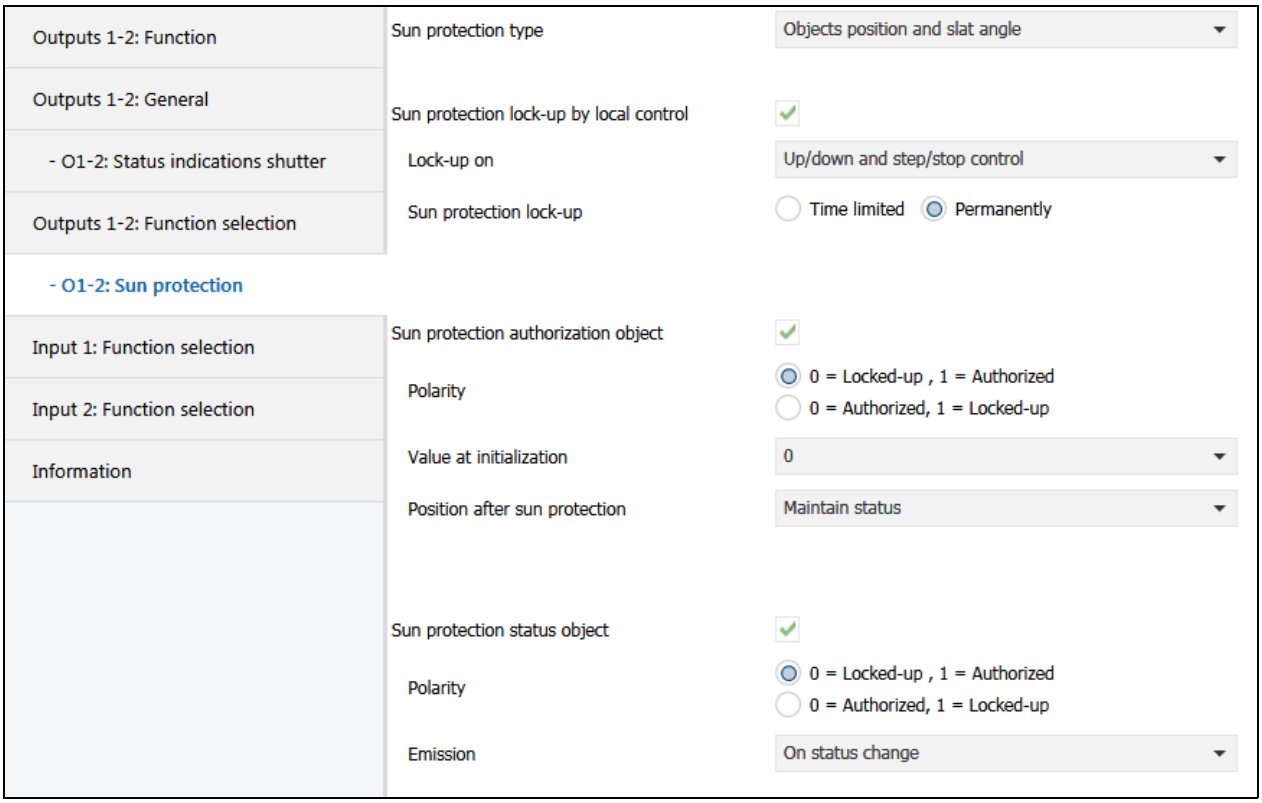
3.8.6.3 Alarm monitoring period

Parameter	Description	Value
Alarm monitoring period	The **Alarm 1-3** objects Expect no periodic signal. Expect a periodic 0 signal. If this signal remains off, the super alarm is automatically activated the shutters/blinds are run to the position set by the **Position on Alarm X** parameter.	 **Not active*** Active

Parameter	Description	Value
Hours (h) Minutes (min) Seconds (s)	This parameter defines the maximum time between 2 signals on the Super alarm communication object.	**0** hours: 0 to 23 h **15** minutes: 0 to 59 min **0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Alarm monitoring period** parameter has the following value: **Active**.*

3.8.7 Sun protection

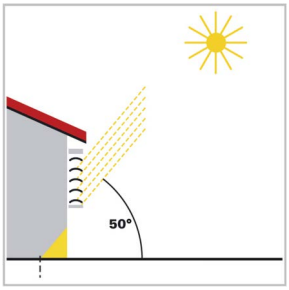


* Default value

General description of the sun protection controls:
Shade trim and slat adjustments
Using the shade trim control the Sun protection is not run all the way down but rather just so far down that only a configurable strip of sunshine (e.g. 50 cm) enters the room (e.g. 50 cm). In this way, users at the bottom of the window can see out and plants on the windowsill will receive sunshine.

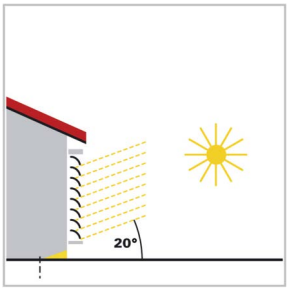
Note: The shade trim adjustment is only usable with sun protection that runs from the top to the bottom (Such as shutters, textile sun protection or blinds with horizontal slats). This function is not usable for a sun protection that is pulled from one side to the other or pulled in front of a window from both sides.

During slat adjustment, the horizontal slats of the blinds are not fully closed; rather they are matched to the sun condition and set automatically in such a way that the sun cannot shine directly into the room.
However diffuse daylight can enter the room between the slats and so provide glare-free room lighting. Slat adjustment of an external blind prevents the entry of heat from sunshine into the room and, at the same time, reduces the cost of electricity for room lighting.



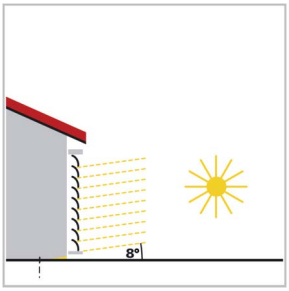
Sun protection at high sun elevations

The sun protection is only partially closed and automatically driven so far down that the sun can only shine into the room as far as the maximum permitted penetration depth.
The slats can be made almost horizontal without the sun shining directly into the room.



Sun protection at medium sun elevations

The sun protection will automatically be lowered so that the maximum penetration depth of sunshine into the room is not exceeded.
The slats are automatically closed so far that the sun cannot shine directly into the room. Diffuse daylight, however, can still continue to enter and so provide lighting for the room (daylight use).



Sun protection at low sun elevations

The sun protection is automatically lowered almost completely, so that the sun cannot shine too far into the room.
The slats are automatically closed to an extent where the sun cannot shine directly into the room.

* Default value

Parameter	Description	Value
Sun protection type	An external sun protection control sends the following commands for the positioning of the blinds:	
	Positioning and slat adjustments.	**Objects position and slat angle***
	Positioning only.	Position object only
	Slat adjustment only.	Slat angle object only

*Note: These objects are only visible if the **Sun protection type** parameter has the following value: **Objects position and slat angle** or **Position object only**.*

Communication objects: **23 - Outputs 1-2 - Sun protection position %** (1 byte - 5.001 DPT_Scaling)

*Note: These objects are only visible if the **Sun protection type** parameter has the following value: **Objects position and slat angle** or **Slat angle object only**.*

Communication objects: **24 - Outputs 1-2 - Pos. lamelles poursuite sol. %** (1 byte - 5.001 DPT_Scaling)

Parameter	Description	Value
Sun protection lock-up by local control	This parameter allows lock-up of the **Sun protection position in %** object and the **sun protection slat position in %** after operation of the shutter/blind with local KNX controls. When this function is activated, the **Sun protection reactivation** object is also displayed. This allows a reactivation of both sun protection objects.	**Not active*** Active

Communication objects: **26 - Outputs 1-2 - Sun protection reactivation** (1 bit - 1.003 DPT_Enable)

Parameter	Description	Value
Lock-up on	This parameter specifies on which local control commands the sun protection will lock up:	
	Only after Up/Down (long key-press) commands.	Up/down control
	Only after slat step (short key-press) commands.	Step/stop control
	After Up/Down and slat step command.	**Up/down and step/stop control***
	After all basic commands.	All basic controls

*Note: This parameter is only visible if the **Deactivate sun protection by local control** parameter has the following value: **Active**.*
Note: All basic commands means the commands with the lowest priority (Scenes, Preset, etc...).

* Default value

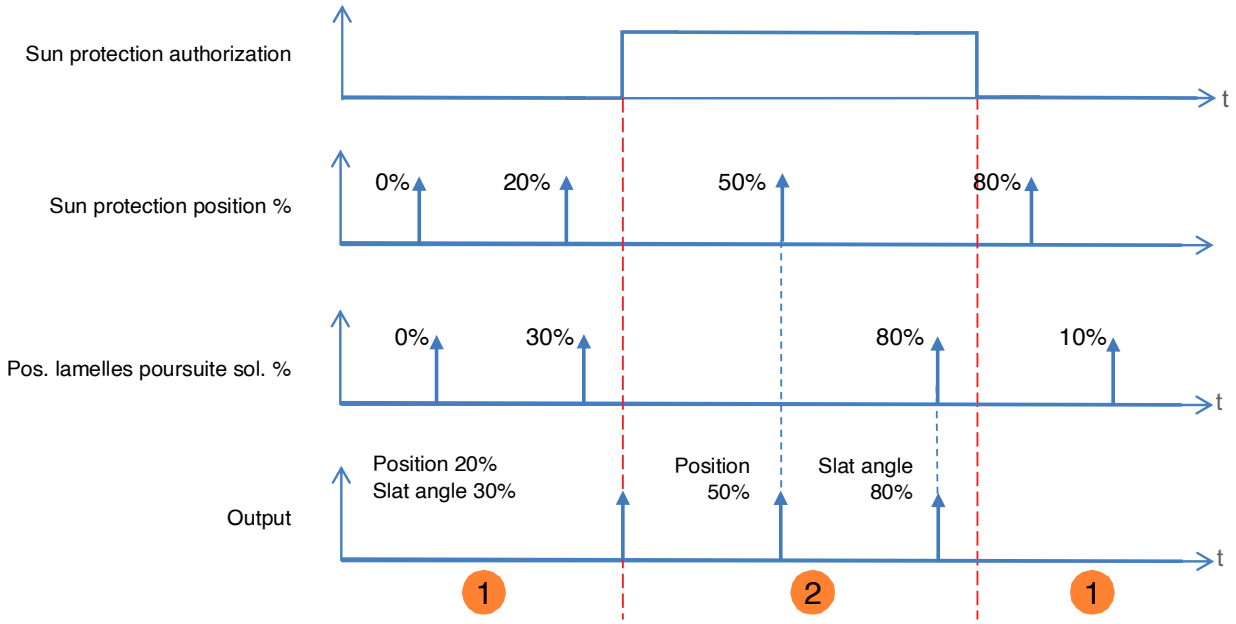
Parameter	Description	Value
Sun protection lock-up	This parameter defines whether the Sun protection function is permanently activated or time-limited. The lock-up is active until it receives a 0 or 1 signal on the **Sun protection reactivation** object. The lock-up is active for a configurable time. After expiry of which the sun protection objects are again processed.	**Permanently*** Time limited

Parameter	Description	Value
Sun protection authorization object	With this parameter, the device's **Sun protection authorization** object can be activated or deactivated.	**Not active*** Active

Communication objects: **25 - Outputs 1-2 - Sun protection authorization** (1 bit - 1.003 DPT_Enable)

Principle of the Sun protection authorization function

The parameters are set as follows:
Sun protection authorization: 0 = Locked-up, 1 = Authorized



1 The Sun protection function has no effect on the output.
2 The commands from the sun protection functions are executed.

Note: The sun protection function commands will be executed immediately on authorization.

Parameter	Description	Value
Polarity	This parameter defines how the device reacts on receipt of a telegram to the **Sun protection authorization** object:	
	0 = Sun protection locked-up (OFF) 1 = Sun protection authorized (ON)	**0 = Locked-up, 1 = Authorized***
	0 = Sun protection authorized (ON) 1 = Sun protection locked-up (OFF)	0 = Authorized, 1 = Locked-up

*Note: This parameter is only visible if the **Sun protection authorization object** parameter has the following value: **Active**.*

Parameter	Description	Value
Value at initialization	On initialization of the device after a download or after return of the bus power, the value of the **Sun protection authorization** object is:	
	Set to 0.	**0***
	Set to 1.	1
	Set according to the value that the object had before initialization.	Value before initialization

Parameter	Description	Value
Position after sun protection	After lock-up of the sun protection due to a 0 on the **Sun protection authorization** object, the output is:	
	Not changed.	**Maintain status***
	Closes the Up contact.	Up
	Closes the down contact.	Down
	Runs to a specific position.	Specific position
	Runs to a position set in a scene.	Scene number
	Run to the position before the priority.	Position before sun protection

Parameter	Description	Value
Position (0-100%)	This parameter defines the position to run the shutter or blind to.	**0*** ... 100

*Note: This parameter is only visible if the **Position after sun protection** has the value **Specific position** and if the **Sun protection type** parameter has the value **Position and Slat position object** or **only position object**.*

Parameter	Description	Value
Slat angle (0-100%)	This parameter defines the slat position to use for the blind.	**0*** ... 100

*Note: This parameter is only visible if the **Position after sun protection** has the value **Specific position** and if the **Sun protection type** parameter has the value **Position and Slat position object** or **Position only object**.*

Parameter	Description	Value
Scene	This parameter defines the scene number that is to be activated after the sun protection.	Scene 1 ... 64 Default value: **1**

The outputs respond according to the scene numbers and associated parameters.
*Note: This parameter is only visible if the **Position after sun protection** parameter has the following value: **Scene**.*

Parameter	Description	Value
Sun protection status object.	This parameter is used to authorize the **Sun protection status** object. This object allows the status of the sun protection to be sent from the device to the KNX bus.	**Not active*** Active

Communication objects: **27 - Outputs 1-2 - Sun protection status** (1 bit - 1.011 DPT_State)

Parameter	Description	Value
Polarity	This parameter defines the polarity of the **Sun protection status**: 0 = Sun protection locked-up 1 = Sun protection authorized 0 = Sun protection authorized 1 = Sun protection locked-up	 **0 = Locked-up, 1 = Authorized*** 0 = Authorized, 1 = Locked-up

*Note: This parameter is only visible if the **Sun protection status object** parameter has the following value: **Active**.*

Parameter	Description	Value
Emission	The **Sun protection status** communication object is sent: On activation and deactivation of the lock-up. Periodically after a configurable time. On activation and deactivation of the lock-up and periodically after a configurable time.	 **On status change*** Periodically On status change and periodically

*Note: This parameter is only visible if the **Sun protection status object** parameter has the following value: **Active**.*

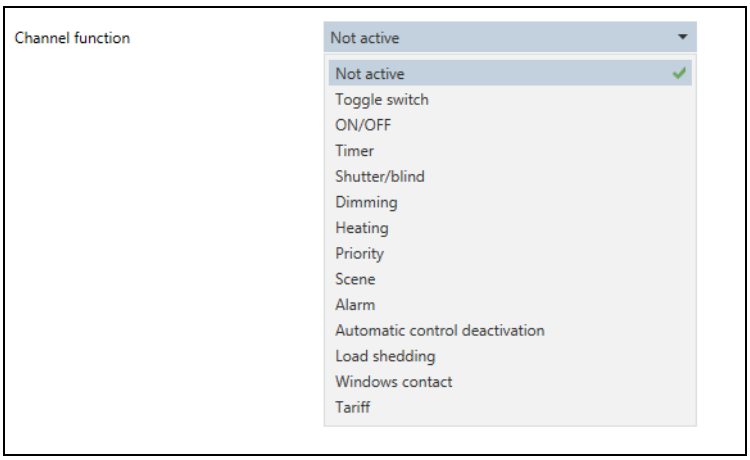
Parameter	Description	Value
Hours (h) Minutes (min) Seconds (s)	This parameter determines the time between the individual transmissions of the **Sun protection status** objects.	**0** hours: 0 to 23 h **30** minutes: 0 to 59 min **0** seconds: 0 to 59 s

Note: The smallest executable time is 1 second.
*Note: This parameter is only visible if the **Emission** parameter has the following value: **Periodically** or **On status change and periodically**.*

* Default value

3.9 Input operation mode

This configuration enables the input operating mode to be defined. These parameters are available for each input individually.



The input default value is not active.

The following parameters are available:

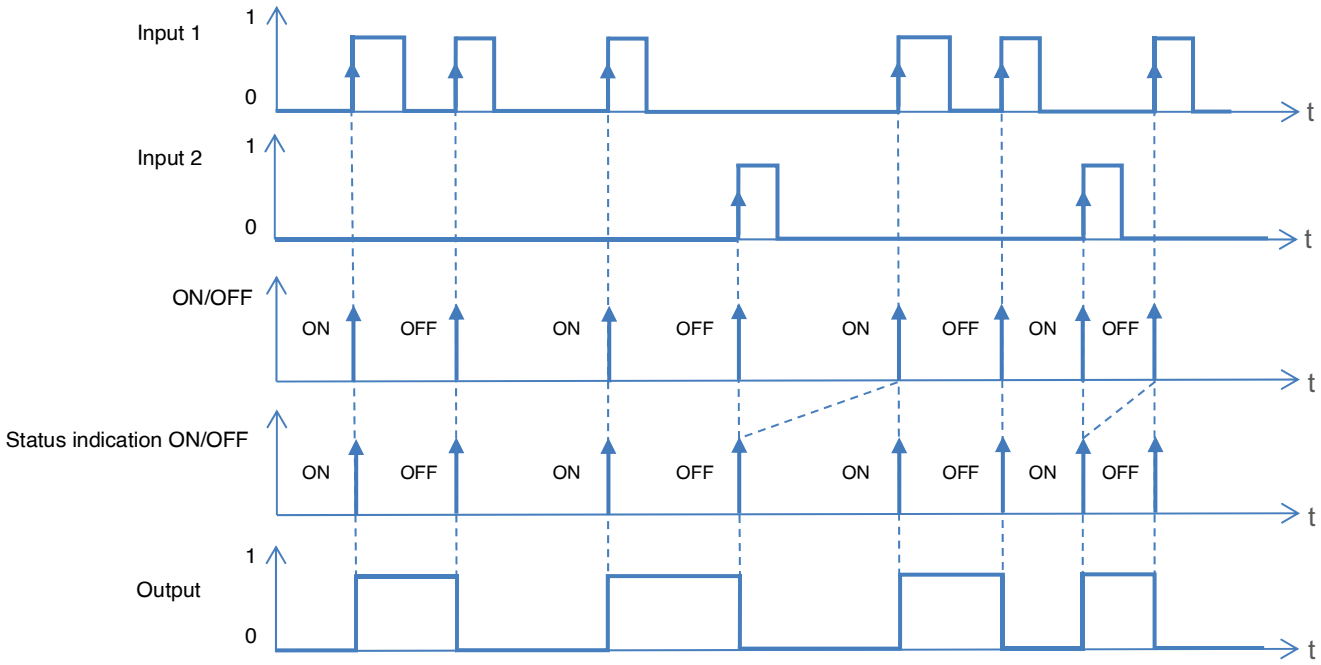
- Toggle switch
- ON/OFF
- Timer
- Shutter/blind
- Dimming
- Heating
- Priority
- Scene
- Alarm
- Automatic control deactivation
- Load shedding
- Windows contact
- Tariff

* Default value

3.9.1 Toggle switch

This function enables a lighting circuit or any other load to be commanded to switch on or off. Each time the push-button is pressed the output status is inverted.
Description: After a press on the push-button, according to the object **Indication of ON/OFF status** an ON or OFF command will be issued to the bus via the object **ON/OFF**..

Operating principle:



Communication objects:

41 - Input 1 - Status indication ON/OFF (1 Bit – 1.001 DPT_Switch)

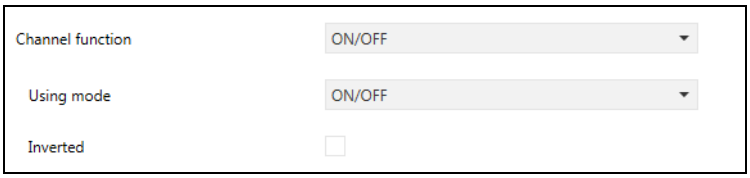
42 - Input 1 - ON/OFF (1 Bit – 1.001 DPT_Switch)

49 - Input 2 - Status indication ON/OFF (1 Bit – 1.001 DPT_Switch)

50 - Input 2 - ON/OFF (1 Bit – 1.001 DPT_Switch)

3.9.2 ON/OFF

An output can be switched on or off using the ON/OFF function. The command can come from switches, push-buttons or automations.



* Default value

Parameter	Description	Value
Using mode	This parameter defines the commands issued at changes of the input status.	ON/-, OFF/-, **ON/OFF***, OFF/ON, -/ON, -/OFF

*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

The operation of the input contact may be configured according to whether the contact is open or closed (ON, OFF).

6 different combinations are available:

Function by press	Function on release
ON	-
OFF	-
ON	OFF
OFF	ON
-	ON
-	OFF

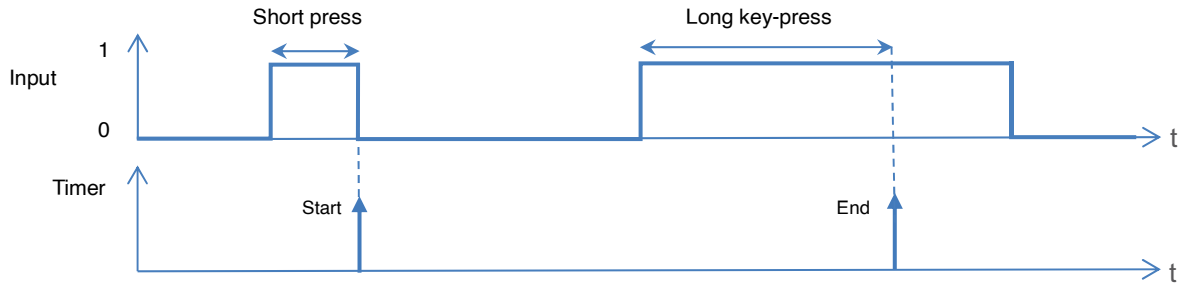
Communication objects: **41 - Input 1 - ON/OFF** (1 Bit – 1.001 DPT_Switch)

50 - Input 2 - ON/OFF (1 Bit – 1.001 DPT_Switch)

3.9.3 Timer

The Timer function enables a lighting, rolling shutter or heating circuit to be switched on or off for a programmable length of time. A short press on the push-button re-launches the timer. The timer can be interrupted before the end of the time by a long press.

Operating principle:



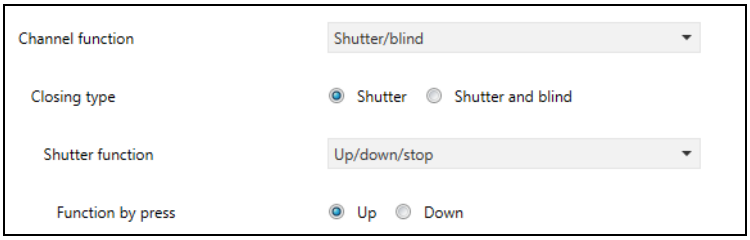
Communication objects: **41 - Input 1 - Timer** (1 Bit – 1.001 DPT_Switch)

50 - Input 2 - Timer (1 Bit – 1.001 DPT_Switch)

* Default value

3.9.4 Shutter and blind

This function enables a rolling shutter or a blind to be controlled from 2 push-buttons. The Up/Down command (**Up/Down** object) is issued by a long press on the button. The Stop/Tilt function issues the object **Tilt/Stop** (short press).



Parameter	Description	Value
Closing type	This parameter defines the operating mode used for the affected outputs. An operating mode of the shutter and blind type gives access to additional parameters to control the slat pitch.	**Shutter*** Shutter and blind

■ Shutter

Parameter	Description	Value
Shutter function	The shutter command works:	
	Using the input contact programmed to up or down.	**Up/down/stop***
	According to whether the input contact is open or closed.	Switch for shutter control
	According to a position value in % on pressing and releasing the input contact.	Position (0-100%)

- Up/down/stop

This function corresponds to the shutter command on 2 buttons.

Parameter	Description	Value
Function by press	On shutting the input contact, the order issued is:	
	Opening the rolling shutter.	**Up***
	Closing the rolling shutter.	Down

*Note: This parameter is only visible when the parameter **Shutter function** has the value: **Up/down/stop**.*

- Switch for shutter control

Parameter	Description	Value
Using mode	This parameter defines the commands issued at changes of the input status.	Up/- Down/- **Up/down*** Down/Up -/Up -/Down Up/stop Stop/up

*Note: This parameter is only visible when the parameter **Shutter function** has the value: **Switch for shutter control**.*

* Default value

The operation of the input contact may be configured according to whether the contact is open or closed (Up, Down).

6 different combinations are available:

Function by press	Function on release
Up	-
Down	-
Up	Down
Down	Up
-	Up
-	Down
Up	Stop
Stop	Up

*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

Communication objects:

42 - Input 1 - Up/down (1 Bit – 1.008 DPT_UpDown)

43 - Input 1 - Stop (short press) (1 Bit – 1.017 DPT_Trigger)

50 - Input 2 - Up/down (1 Bit – 1.008 DPT_UpDown)

51 - Input 2 - Stop (short press) (1 Bit – 1.017 DPT_Trigger)

- Position (0-100%)

This function enables the object **Position in %** to be issued according to 2 types of event. These 2 events correspond to the open or closed status of the input contact. Additional parameters define the positions for the 2 events.

Parameter	Description	Value
Using mode	The shutter command operates according to a position value in %:	
	On pressing and releasing the input contact.	**Function by press/ release***
	On only pressing the input contact.	Function by press
	On only releasing the input contact.	Function on release

*Note: This parameter is only visible when the parameter **Shutter function** has the value: **Position (0-100%)**.*

Parameter	Description	Value
Position (0-100%) by press	This parameter defines the position of the rolling shutter to apply during the press.	0...**100***

*Note: This parameter is only visible when the parameter **Shutter function** has the value: **Position (0-100%)**.*

* Default value

Parameter	Description	Value
Position (0-100%) on release	This parameter defines the position of the rolling shutter to apply at release.	**0***...100

*Note: This parameter is only visible when the parameter **Shutter function** has the value: **Position (0-100%)**.*

*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

Communication objects:

42 - Input 1 - Position in % (1 Byte – 5.001 DPT_Scaling)

54 - Input 2 - Position in % (1 Byte – 5.001 DPT_Scaling)

■ Shutter and blind

Parameter	Description	Value
Blind function	The shutter/blind command operates:	
	Using the input contact programmed to up or down.	**Up/down/step/stop***
	According to the slat angle value in % on pressing and releasing the input contact.	Slat angle (0-100%)
	According to a position value in % and a slat angle in % on pressing and releasing the input contact.	Position/Slat angle (0-100%)

- Up/down/step/stop

Parameter	Description	Value
Function by press	On shutting the input contact, the order issued is:	
	Shutter or blind open.	**Up***
	Shutter or blind closed.	Down

*Note: This parameter is only visible when the parameter **Blind function** has the value: **Up/down/step/stop**.*

Communication objects:

42 - Input 1 - Up/down (1 Bit – 1.008 DPT_UpDown)

43 - Input 1 - Step/stop (short press) (1 Bit – 1.007 DPT_Step)

50 - Input 2 - Up/down (1 Bit – 1.008 DPT_UpDown)

51 - Input 2 - Step/stop (short press) (1 Bit – 1.007 DPT_Step)

- Position/Slat angle (0-100%)

This function enables the objects **Position in %** and **Slat angle in %** to be issued according to 2 types of event. These 2 events correspond to the open or closed status of the input contact. Additional parameters define the positions for the 2 events.

* Default value

Parameter	Description	Value
Using mode	The shutter/blind command operates according to a position value in % and a slat angle in %:	
	On pressing and releasing the input contact.	**Function by press/ release***
	On only pressing the input contact.	Function by press
	On only releasing the input contact.	Function on release

*Note: This parameter is only visible when the parameter **Blind function** has the value: **Slat angle (0-100%)** or **Position/Slat angle (0-100%)**.*

Parameter	Description	Value
Slat angle (0-100%) by press	This parameter defines the slat position to apply during the press.	0...**100***

*Note: This parameter is only visible when the parameter **Blind function** has the value: **Slat angle (0-100%)** or **Position/Slat angle (0-100%)**.*

Parameter	Description	Value
Slat angle (0-100%) on release	This parameter defines the slat position to apply at release.	**0***...100

*Note: This parameter is only visible when the parameter **Blind function** has the value: **Slat angle (0-100%)** or **Position/Slat angle (0-100%)**.*

*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

Parameter	Description	Value
Position (0-100%) by press	This parameter defines the blind position to apply during the press.	0...**100***

*Note: This parameter is only visible when the parameter **Blind function** has the value: **Position/Slat angle (0-100%)**.*

Parameter	Description	Value
Position (0-100%) on release	This parameter defines the blind position to apply at release.	**0***...100

*Note: This parameter is only visible when the parameter **Blind function** has the value: **Position/Slat angle (0-100%)**.*

*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

* Default value

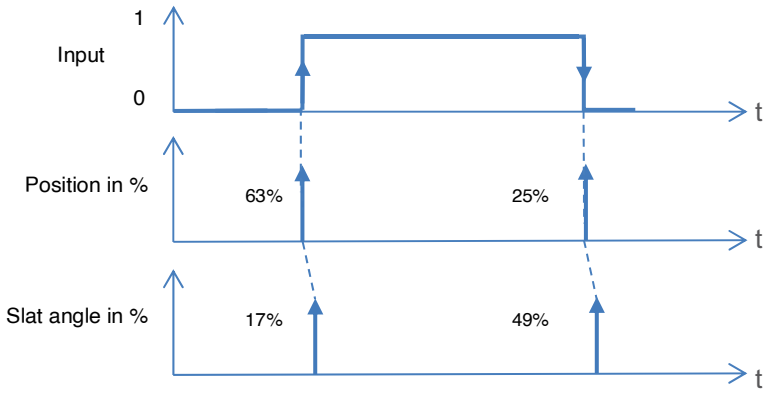
Communication objects:

46 - Input 1 - Position in % (1 Byte – 5.001 DPT_Scaling)

47 - Input 1 - Slat angle in % (1 Byte – 5.001 DPT_Scaling)

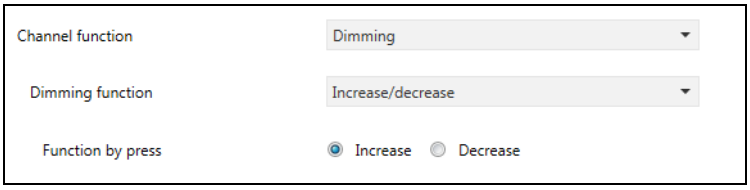
54 - Input 2 - Position in % (1 Byte – 5.001 DPT_Scaling)

55 - Input 2 - Slat angle in % (1 Byte – 5.001 DPT_Scaling)



*Note: The value of the object **Position in %** is issued before the object value **Slat angle in %** so that the output module can position the blind before tilting it.*

3.9.5 Dimming



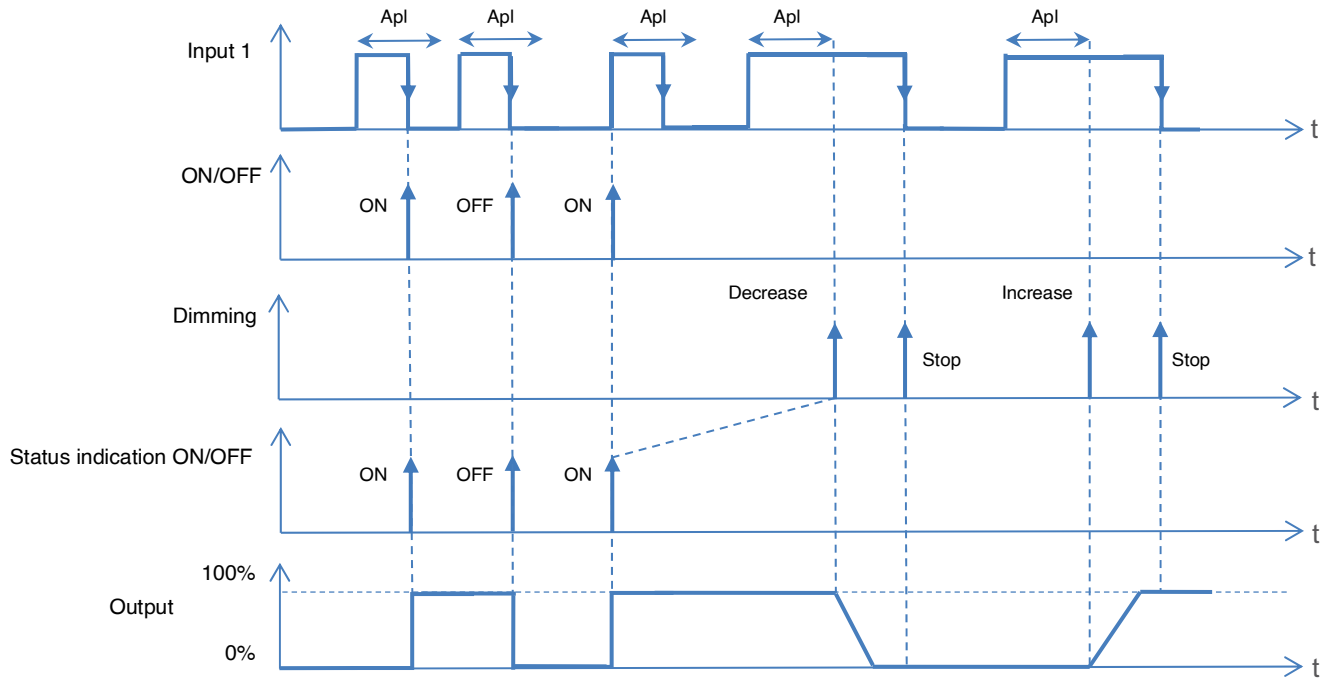
Parameter	Description	Value
Dimming function	The dimming command operates:	
	Using the input contact configured to increase or decrease (Dimming command on 2 buttons).	**Increase/decrease***
	Using the input contact configured to increase or decrease (Dimming command on 1 button).	Increase/decrease Toggle switch
	According to a brightness value in % on pressing and releasing the input contact.	Brightness value

- Increase/decrease Toggle switch

This function enables the objects **ON/OFF**, **Dimming** and **ON/OFF status indication** to be issued according to 2 types of event. These 2 events correspond to a short press enabling the ON/OFF command or long press enabling the dimming command.

* Default value

This function corresponds to the dimming command on 1 button.



Apl: Long key-press

Communication objects:

41 - Input 1 - Status indication ON/OFF (1 Bit – 1.001 DPT_Switch)

42 - Input 1 - ON/OFF (1 Bit – 1.001 DPT_Switch)

45 - Input 1 - Dimming (4 Bits – 3.007 DPT_Control_Dimming)

49 - Input 2 - Status indication ON/OFF (1 Bit – 1.001 DPT_Switch)

50 - Input 2 - ON/OFF (1 Bit – 1.001 DPT_Switch)

51 - Input 2 - Dimming (4 Bits – 3.007 DPT_Control_Dimming)

- Increase/decrease

This function enables the objects **ON/OFF** and **Dimming** to be issued according to 2 types of events. These 2 events correspond to a short press enabling the ON/OFF command or long press enabling the dimming command. Additional parameters defined the dimming direction.

This function corresponds to the dimming command on 2 buttons.

Parameter	Description	Value
Function by press	This parameter defines the dimming direction corresponding to the input.	**Increase*** Decrease

*Note: This parameter is only visible when the parameter **Dimming function** has the value: **Increase/decrease**.*

* Default value

Communication objects:

42 - Input 1 - ON/OFF (1 Bit – 1.001 DPT_Switch)

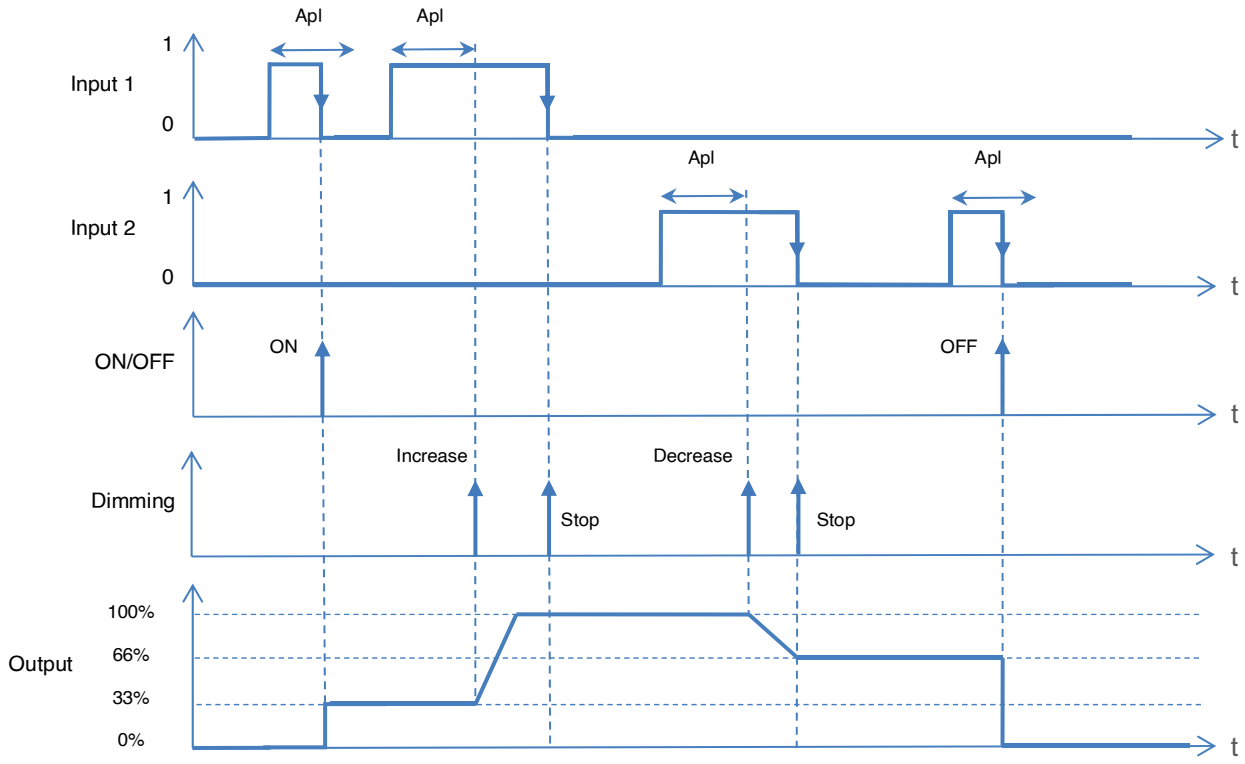
45 - Input 1 - Dimming (4 Bits – 3.007 DPT_Control_Dimming)

50 - Input 2 - ON/OFF (1 Bit – 1.001 DPT_Switch)

51 - Input 2 - Dimming (4 Bits – 3.007 DPT_Control_Dimming)

Example: Input 1: Increase

Input 2: Decrease



Apl: Long key-press

- Brightness value

Parameter	Description	Value
Using mode	The dimming command operates according to a brightness value in %:	
	On pressing and releasing the input contact.	**Function by press/ release***
	On only pressing the input contact.	Function by press
	On only releasing the input contact.	Function on release

*Note: This parameter is only visible when the parameter **Dimming function** has the value: **Brightness value**.*

* Default value

Parameter	Description	Value
Brightness value by press	This parameter defines the brightness value to apply during the press.	0...**100***

*Note: This parameter is only visible when the parameter **Dimming function** has the value: **Brightness value**.*

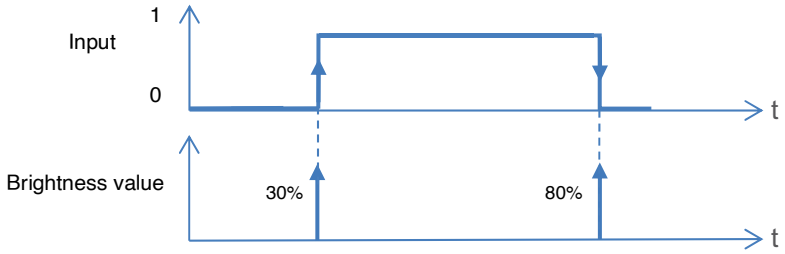
Parameter	Description	Value
Brightness value at release	This parameter defines the brightness value to apply at release.	**0***...100

*Note: This parameter is only visible when the parameter **Dimming function** has the value: **Brightness value**.*

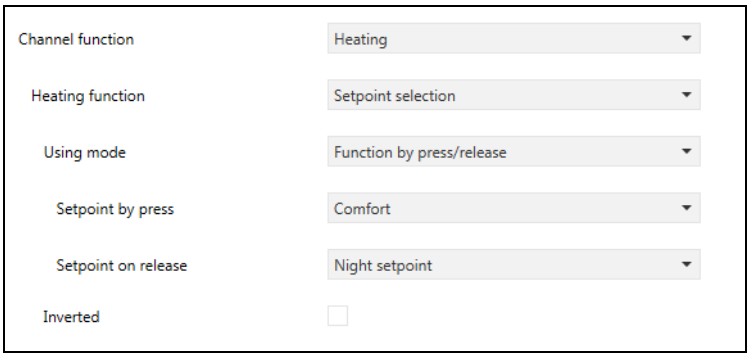
*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

Communication objects: **46 - Input 1 - Brightness value** (1 Byte – 5.001 DPT_Scaling)

54 - Input 2 - Brightness value (1 Byte – 5.001 DPT_Scaling)



3.9.6 Heating



Parameter	Description	Value
Heating function	The heating command operates	
	According to a heating instruction on pressing and releasing the input contact.	**Setpoint selection***
	Using the input contact configured in heating or cooling mode.	Heating/Cooling
	By successive presses according to an instruction value in °C.	Override setpoint

* Default value

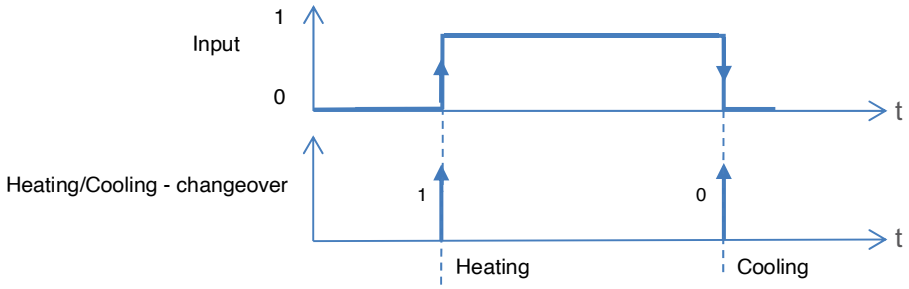
- Heating/Cooling

This function enables the object (Heating/cooling-changeover) to be issued on the KNX bus.

Communication objects: **42 - Input 1 - Heating/Cooling - changeover** (1 Bit – 1.008 DPT_UpDown)

50 - Input 2 - Heating/Cooling - changeover (1 Bit – 1.008 DPT_UpDown)

*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*



- Setpoint selection

This function enables the object **Instruction selection** to be issued according to 2 types of event. These 2 events correspond to the open or closed status of the input contact. Extra parameters define the heating instructions for 2 events.

Parameter	Description	Value
Using mode	The heating command operates according to a heating instruction:	
	On pressing and releasing the input contact.	**Function by press/release***
	On only pressing the input contact.	Function by press
	On only releasing the input contact.	Function on release

*Note: This parameter is only visible when the parameter **Heating function** has the value: **Setpoint selection**.*

Parameter	Description	Value
Setpoint by press	This parameter defines the heating instruction to apply during the press.	Auto
		Comfort*
		Standby
		Night setpoint
		Frost protection

* Default value

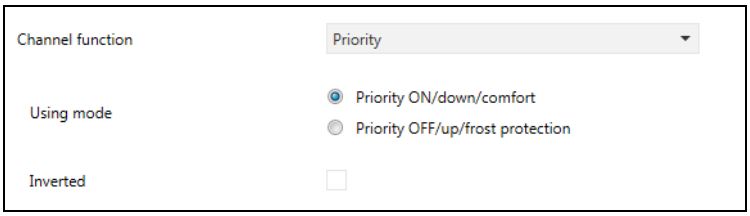
Parameter	Description	Value
Threshold at release	This parameter defines the heating instruction to apply at release.	Auto Comfort Standby **Night setpoint*** Frost protection

*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

Communication objects: **46 - Input 1 - Setpoint selection** (1 Byte – 20.102 DPT_HVAC mode)

54 - Input 2 - Setpoint selection (1 Byte – 20.102 DPT_HVAC mode)

3.9.7 Priority



The Priority function is used to force the output into a defined state.
The priority action depends on the type of application commanded: Lighting ON/OFF, Rolling shutter, Heating.
This function the priority or priority cancellation controls to be issued.
No other command is taken into account when the Priority is active. Only priority or alarm cancellation commands will be taken into account.

Parameter	Description	Value
Using mode	This parameter defines the priority type to apply during the press.	**Priority ON/down/comfort*** Priority OFF/up/frost protection

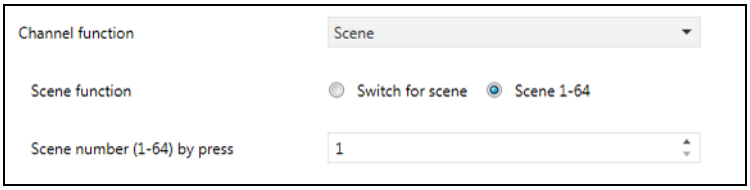
*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

Communication objects: **44 - Input 1 - Priority** (2 Bit – 2.002 DPT_Bool_Control)

52 - Input 2 - Priority (2 Bit – 2.002 DPT_Bool_Control)

3.9.8 Scene

This function enables scenes to be saved or selected. These concern different types of output (lighting, blind, shutter, heating) to create ambiances or scenarios (leaving scenario, reading ambiance etc.).



Parameter	Description	Value
Scene function	The scene command operates:	
	According to a scene number on pressing the input contact.	**Scene 1-64***
	According to a scene number on pressing and releasing the input contact.	Switch for scene

- Scene 1-64

Parameter	Description	Value
Scene number (1-64) by press	This parameter defines the scene number to apply during the press.	**1***...64

*Note: This parameter is only visible when the parameter **Scene function** has the value: Scene **1-64**.*

Communication objects: **46 - Input 1 - Scene** (1 Byte – 18.001 DPT_SceneControl)

54 - Input 2 - Scene (1 Byte – 18.001 DPT_SceneControl)

- Switch for scene

Parameter	Description	Value
Using mode	The scene number is sent	
	On pressing and releasing the input contact.	**Function by press/ release***
	On only pressing the input contact.	Function by press
	On only releasing the input contact.	Function on release

*Note: This parameter is only visible when the parameter **Scene function** has the value: **Switch for scene**.*

Parameter	Description	Value
Scene number (1-64) by press	This parameter defines the scene number to apply during the press.	**1***...64

Parameter	Description	Value
Scene number (1-64) on release	This parameter defines the scene number to apply at release.	1...**2***...64

*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

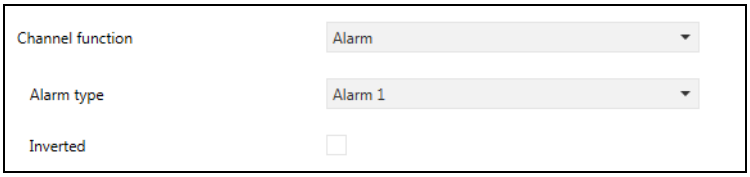
Communication objects: **46 - Input 1 - Scene** (1 Byte – 18.001 DPT_SceneControl)

54 - Input 2 - Scene (1 Byte – 18.001 DPT_SceneControl)

3.9.9 Alarm

The Alarm function issues alarms on a cyclical basis to the bus from automations (anemometer, rain detector, twilight switch etc.).

The cycle time is set to 10 minutes.



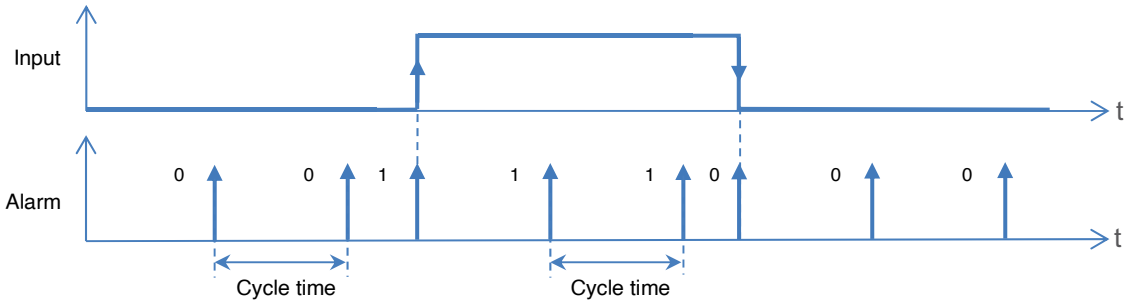
Parameter	Description	Value
Alarm type	This parameter defines the type of alarm to be issued on the KNX bus.	**Alarm 1*** Alarm 2 Alarm 3

Communication objects:

42 - Input 1 - Alarm 1 (1 Bit – 1.005 DPT_Alarm)
50 - Input 2 - Alarm 1 (1 Bit – 1.005 DPT_Alarm)

42 - Input 1 - Alarm 2 (1 Bit – 1.005 DPT_Alarm)
50 - Input 2 - Alarm 2 (1 Bit – 1.005 DPT_Alarm)

42 - Input 1 - Alarm 3 (1 Bit – 1.005 DPT_Alarm)
50 - Input 2 - Alarm 3 (1 Bit – 1.005 DPT_Alarm)



3.9.10 Automatic control deactivation

The Automatic control function enables an output to be controlled in parallel to the standard control. An additional command object (Automatic control deactivation) is used to activate or deactivate Automatic control.

*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

Communication objects: **42 - Input 1 - Automatic control deactivation** (1 Bit – 1.003 DPT_Enable)

50 - Input 2 - Automatic control deactivation (1 Bit – 1.003 DPT_Enable)

3.9.11 Load shedding

The Load shedding function is used to force an output to OFF. Load shedding is activated by receipt of a 1-byte command. At the end of load shedding, the output is switched to the theoretical status without Load shedding (memorisation).

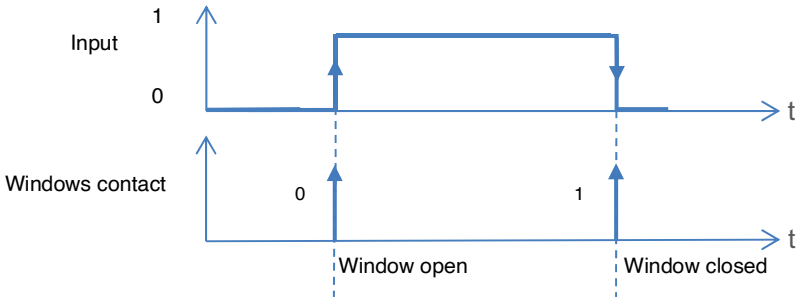
*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

Communication objects: **42 - Input 1 - Load shedding** (1 Bit – 1.002 DPT_Bool)

50 - Input 2 - Load shedding (1 Bit – 1.002 DPT_Bool)

3.9.12 Windows contact

The Window contact function enables the window opening/closing information to be sent to the KNX bus.



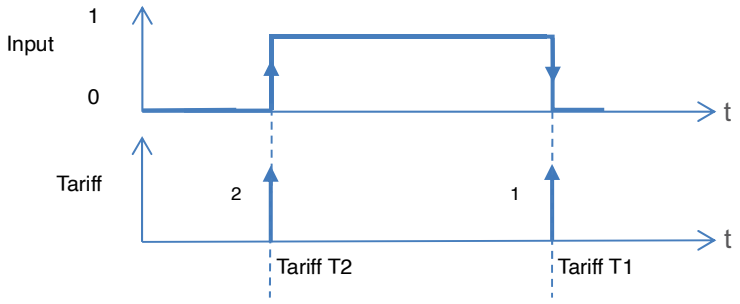
*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

Communication objects: **42 - Input 1 - Windows contact** (1 Bit – 1.019 DPT_window/door)

50 - Input 2 - Windows contact (1 Bit – 1.019 DPT_window/door)

3.9.13 Tariff

The Tariff function enables T1/T2 tariff information to be sent to the KNX bus.



*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

Communication objects: **42 - Input 1 - Tariff** (1 byte- 5.006 DPT_Tariff)

50 - Input 2 - Tariff (1 byte- 5.006 DPT_Tariff)

4. Communication objects

4.1 Communication objects General

	Number	Name	Function of the object	Length	C	R	W	T
	59	Logic block 1	Authorization	1 bit	C	R	W	-
	60	Logic block 1	Input 1	1 bit	C	R	W	-
	61	Logic block 1	Input 2	1 bit	C	R	W	-
	62	Logic block 1	Input 3	1 bit	C	R	W	-
	63	Logic block 1	Input 4	1 bit	C	R	W	-
	64	Logic block 1	Logic result	1 bit	C	R	-	T
	65	Logic block 2	Authorization	1 bit	C	R	W	-
	66	Logic block 2	Input 1	1 bit	C	R	W	-
	67	Logic block 2	Input 2	1 bit	C	R	W	-
	68	Logic block 2	Input 3	1 bit	C	R	W	-
	69	Logic block 2	Input 4	1 bit	C	R	W	-
	70	Logic block 2	Logic result	1 bit	C	R	-	T
	71	Outputs 1-2: Shutter	Super alarm	1 bit	C	R	W	-
	72	Outputs 1-2: Shutter	Super alarm status	1 bit	C	R	-	T
	75	Logic block 1	Authorization	1 bit	C	R	W	-
	76	Logic block 1	Input 1	1 bit	C	R	W	-
	77	Logic block 1	Input 2	1 bit	C	R	W	-
	78	Logic block 1	Input 3	1 bit	C	R	W	-
	79	Logic block 1	Input 4	1 bit	C	R	W	-
	80	Logic block 1	Logic result	1 bit	C	R	-	T
	81	Logic block 2	Authorization	1 bit	C	R	W	-
	82	Logic block 2	Input 1	1 bit	C	R	W	-
	83	Logic block 2	Input 2	1 bit	C	R	W	-
	84	Logic block 2	Input 3	1 bit	C	R	W	-
	85	Logic block 2	Input 4	1 bit	C	R	W	-
	86	Logic block 2	Logic result	1 bit	C	R	-	T
	87	Outputs 1-2: ON/OFF	Restore ETS-params settings	1 bit	C	R	W	-
	89	Outputs 1-2	Diagnosis	6 bytes	C	R	-	T

4.1.1 Logic block

No.	Name	Function of the object	Data type	Flags
59	Logic block 1	Authorization	1 bit - 1.003 DPT_Enable	C, R, W

This object is activated if the **Logic block 1** parameter and the **Lock-up logic block** object are active.
This object makes it possible to activate or deactivate the logic blocks of the device via the KNX bus.
Object value: Depends on the **Polarity** parameter.
0 = Locked-up, 1 = Authorized:

- If the object receives the value 0, logic block 1 is deactivated.
- If the object receives the value 1, logic block 1 is activated.

0 = Authorized, 1 = Locked-up:

- If the object receives the value 0, logic block 1 is activated.
- If the object receives the value 1, logic block 1 is deactivated.

The value of this object can be initialized at start-up of the device.

For further information, see: Logic block : ON/OFF.

No.	Name	Function of the object	Data type	Flags
75	Logic block 1	Authorization	1 bit - 1.003 DPT_Enable	C, R, W

See object No. 58

For further information, see: Logic block : Shutter.

No.	Name	Function of the object	Data type	Flags
60	Logic block 1	Input 1	1 bit - 1.002 DPT_Bool	C, R, W
61	Logic block 1	Input 2	1 bit - 1.002 DPT_Bool	C, R, W
62	Logic block 1	Input 3	1 bit - 1.002 DPT_Bool	C, R, W
63	Logic block 1	Input 4	1 bit - 1.002 DPT_Bool	C, R, W

These objects are activated in accordance with the value of the **Number of logic inputs** parameter. There may be up to a maximum of 4 of these objects.
These objects are used to produce the status of a logic input for processing of the logic operation.
The value of these objects can be initialized at start-up of the device.

For further information, see: Logic block : ON/OFF.

No.	Name	Function of the object	Data type	Flags
76	Logic block 1	Input 1	1 bit - 1.002 DPT_Bool	C, R, W
77	Logic block 1	Input 2	1 bit - 1.002 DPT_Bool	C, R, W
78	Logic block 1	Input 3	1 bit - 1.002 DPT_Bool	C, R, W
79	Logic block 1	Input 4	1 bit - 1.002 DPT_Bool	C, R, W

See object No. 59

For further information, see: Logic block : Shutter.

No.	Name	Function of the object	Data type	Flags
64	Logic block 1	Logic result	1 bit - 1.002 DPT_Bool	C, R, T
This object is activated when the **Logic block 1** parameter is active. This object enables output of the results of the logic operation via the bus. The value of the object is the result of a logic AND or OR operation, according to the status of the logic inputs. There may be up to a maximum of 4 of these objects. This result can also be directly assigned to the status of the output contact. For further information, see: Logic block : ON/OFF.				

No.	Name	Function of the object	Data type	Flags
80	Logic block 1	Logic result	1 bit - 1.002 DPT_Bool	C, R, T
See object No. 64 For further information, see: Logic block : Shutter.				

No.	Name	Function of the object	Data type	Flags
65	Logic block 2	Authorization	1 bit - 1.003 DPT_Enable	C, R, W
See object No. 59				

No.	Name	Function of the object	Data type	Flags
81	Logic block 2	Authorization	1 bit - 1.003 DPT_Enable	C, R, W
See object No. 75				

No.	Name	Function of the object	Data type	Flags
66	Logic block 2	Input 1	1 bit - 1.002 DPT_Bool	C, R, W
67	Logic block 2	Input 2	1 bit - 1.002 DPT_Bool	C, R, W
68	Logic block 2	Input 3	1 bit - 1.002 DPT_Bool	C, R, W
69	Logic block 2	Input 4	1 bit - 1.002 DPT_Bool	C, R, W
See object No. 60				

No.	Name	Function of the object	Data type	Flags
82	Logic block 2	Input 1	1 bit - 1.002 DPT_Bool	C, R, W
83	Logic block 2	Input 2	1 bit - 1.002 DPT_Bool	C, R, W
84	Logic block 2	Input 3	1 bit - 1.002 DPT_Bool	C, R, W
85	Logic block 2	Input 4	1 bit - 1.002 DPT_Bool	C, R, W
See object No. 76				

No.	Name	Function of the object	Data type	Flags
70	Logic block 2	Logic result	1 bit - 1.002 DPT_Bool	C, R, T
See object No. 64				

No.	Name	Function of the object	Data type	Flags
86	Logic block 2	Logic result	1 bit - 1.002 DPT_Bool	C, R, T
See object No. 80				

4.1.2 Super alarm

No.	Name	Function of the object	Data type	Flags
71	Outputs 1-2: Shutter	Super alarm	1 bit - 1.005 DPT_Alarm	C, R, W

This object is activated when the **Super alarm** parameter is active.
This function is used to set all the outputs of the device into a configurable blocked state.
If the object receives the value 1, all the outputs of the device are switched to a predefined status. All other functions, including manual mode, will be locked.
The function can only be ended by receipt of a telegram with the value 0.

For further information, see: Super alarm.

No.	Name	Function of the object	Data type	Flags
72	Outputs 1-2: Shutter	Super alarm status	1 bit - 1.011 DPT_State	C, R, T

This object is activated when the **Status indication super alarm** parameter is active.
This object allows the status of the super alarm to be sent over the KNX bus.
Object value: Depends on the **Polarity** parameter.

0 = activated, 1 = deactivated
- If the super alarm is deactivated, a telegram with logic value 1 is sent on the KNX bus.
- If the super alarm is activated, a telegram with logic value 0 is sent on the KNX bus.

0 = deactivated, 1 = activated
- If the super alarm is activated, a telegram with logic value 1 is sent on the KNX bus.
- If the super alarm is deactivated, a telegram with logic value 0 is sent on the KNX bus.

This object is sent periodically and/or on status change.
For further information, see: Super alarm.

4.1.3 Behaviour of the device

No.	Name	Function of the object	Data type	Flags
87	Outputs 1-2: ON/OFF	Restore ETS-params settings	1 bit - 1.015 DPT_Reset	C, R, W

This object is activated if the **Activ. of restore ETS-parameters object (scenes, timer, setpoints)** parameter is active.
This object enables the current parameter value to be replaced at any time with the ETS parameter value.
If the object receives value 1, then the output status values for the scenes, the timer duration specifications and all the counter setpoints are reset to the values sent by the last download.

For further information, see: Restore ETS-Parameters.

4.1.4 Diagnosis

No.	Name	Function of the object	Data type	Flags
89	Outputs 1-2	Diagnosis	6 bytes - Specific	C, R, T

This object is activated when the **Device diagnosis object** parameter is active.
The object enables reporting of current faults according to the device and the application used. It also allows sending of the position of the switch on the front of the device and the number of the output that is affected by the fault(s).

Byte number	6 (MSB)	5		4	3	2	1(LSB)
Use	Switch position	Application type	Output number	Error codes			

This object is sent periodically and/or on status change.

For further information, see: Diagnosis.

4.2 Output communication objects

	Number	Name	Function of the object	Length	C	R	W	T
	1	Output 1	ON/OFF	1 bit	C	R	W	-
	2	Output 1	Timer/toggle switch changeover	1 bit	C	R	W	-
	3	Output 1	Time limited toggle switch object	1 bit	C	R	W	-
	4	Output 1	Status indication ON/OFF	1 bit	C	R	-	T
	5	Output 1	Timer	1 bit	C	R	W	-
	6	Output 1	Timer duration	3 bytes	C	R	W	-
	7	Output 1	Scene	1 byte	C	R	W	-
	8	Output 1	Preset 1	1 bit	C	R	W	-
	9	Output 1	Preset 2	1 bit	C	R	W	-
	10	Output 1	Preset 1 authorization	1 bit	C	R	W	-
	11	Output 1	Preset 2 authorization	1 bit	C	R	W	-
	12	Output 1	Lock-up 1	1 bit	C	R	W	-
	13	Output 1	Lock-up 2	1 bit	C	R	W	-
	14	Output 1	Status indication lock-up	1 bit	C	R	-	T
	15	Output 1	Priority	2 bit	C	R	W	-
	16	Output 1	Status indication priority	1 bit	C	R	-	T
	17	Output 1	Hours counter value	2 bytes	C	R	-	T
	18	Output 1	Reset hours counter value	1 bit	C	R	W	-
	19	Output 1	Hours counter setpoint reached	1 bit	C	R	-	T
	20	Output 1	Hours counter setpoint	2 bytes	C	R	W	-
	21	Output 2	ON/OFF	1 bit	C	R	W	-
	22	Output 2	Timer/toggle switch changeover	1 bit	C	R	W	-
	23	Output 2	Time limited toggle switch object	1 bit	C	R	W	-
	24	Output 2	Status indication ON/OFF	1 bit	C	R	-	T
	25	Output 2	Timer	1 bit	C	R	W	-
	26	Output 2	Timer duration	3 bytes	C	R	W	-
	27	Output 2	Scene	1 byte	C	R	W	-
	28	Output 2	Preset 1	1 bit	C	R	W	-
	29	Output 2	Preset 2	1 bit	C	R	W	-
	30	Output 2	Preset 1 authorization	1 bit	C	R	W	-
	31	Output 2	Preset 2 authorization	1 bit	C	R	W	-
	32	Output 2	Lock-up 1	1 bit	C	R	W	-
	33	Output 2	Lock-up 2	1 bit	C	R	W	-
	34	Output 2	Status indication lock-up	1 bit	C	R	-	T
	35	Output 2	Priority	2 bit	C	R	W	-
	36	Output 2	Status indication priority	1 bit	C	R	-	T
	37	Output 2	Hours counter value	2 bytes	C	R	-	T
	38	Output 2	Reset hours counter value	1 bit	C	R	W	-
	39	Output 2	Hours counter setpoint reached	1 bit	C	R	-	T
	40	Output 2	Hours counter setpoint	2 bytes	C	R	W	-

4.2.1 ON/OFF

No.	Name	Function of the object	Data type	Flags
1, 21	Output x	ON/OFF	1 bit - 1.001 DPT_Switch	C, R, W

These objects are always activated. They enable switching of the output contact in accordance with the value that is sent via the KNX bus.
Object value: Object value: depends on the **Output contact** parameter.
Normally open:
- On input of an OFF command, the output relay contact opens.
- On input of an ON command, the output relay contact closes.

Normally closed:
- On input of an OFF command, the output relay contact closes.
- On input of an ON command, the output relay contact opens.

For further information, see: Function selection.

4.2.2 ON/OFF timings function

No.	Name	Function of the object	Data type	Flags
2, 22	Output x	Timer/toggle switch changeover	1 bit - 1.001 DPT_Switch	C, R, W

This object is activated if the **Timer/toggle switch changeover for ON/OFF** object parameter is active.
This object is used to switch between a toggle switch and timer switch operation on the same pushbutton.
- If the **Timer/toggle switch changeover** object receives the value 1, the Toggle-switch mode function is activated. The ON/OFF switching of the output is performed as usual via the **ON/OFF** object.
- If the **Timer/toggle switch changeover** object receives the value 0, the Timer mode function is activated.
  - If the **ON/OFF** object receives the value 1, the output is switched ON. After expiry of a configurable time, the output is automatically switched OFF.
  - If the **ON/OFF** object receives the value 0, the output is switched OFF.

Example: Switching function daytime and Time-limited OFF function at night.
During the day, the button is used as a switch. In the evenings, the button is used as a time-limited OFF switch, so that the light will turn off automatically.

For further information, see: ON/OFF timings function.

No.	Name	Function of the object	Data type	Flags
3, 23	Output x	Time limited toggle switch object	1 bit - 1.001 DPT_Switch	C, R, W

This object is activated when the **Additional time limited toggle switch function** parameter is active.
This object combines a timer function with a tripping Delay function.
- If the object receives the value 1, the output switches to ON for a configurable time period. After that period expires, the output switches to OFF.
- If the object receives the value 0, the output switches to OFF.

Note: The time-limited OFF function is generally used for lighting in cellars, attics and sheds.

For further information, see: ON/OFF timings function.

4.2.3 Status indication

No.	Name	Function of the object	Data type	Flags
4, 24	Output x	Status indication ON/OFF	1 bit - 1.001 DPT_Switch	C, R, T

This object is activated when the **Status indication ON/OFF** parameter is active.
This object allows the status of the output contact to be sent from the device over the KNX bus.
Object value: Depends on the **Polarity** parameter.

0 = ON, 1 = OFF
- If the output relay is open, a telegram with logic value 1 is sent on the KNX bus.
- If the output relay is closed, a telegram with logic value 0 is sent on the KNX bus.

0 = OFF, 1 = ON
- If the output relay is open, a telegram with logic value 0 is sent on the KNX bus.
- If the output relay is closed, a telegram with logic value 1 is sent on the KNX bus.

This object is sent periodically and/or on status change.

For further information, see: Status indication.

4.2.4 Timer

No.	Name	Function of the object	Data type	Flags
5, 25	Output x	Timer	1 bit - 1.010 DPT_Start/stop	C, R, W

This object is activated when the **Timer** parameter is active.
This object is used to activate the Timer function of the device via the KNX bus.
Object value:
- If a rising edge (0 to 1) arrives at this object, the output switches for a configurable period.
- If a falling edge (1 to 0) arrives at this object, the output remains in its current state.

Note: Depending on the configuration, the timer switching can be interrupted on the timer by a long press of the control button.
Note: Depending on the configuration, the timer duration may be reset by input of a start command during timer operation.

For further information, see: Timer.

No.	Name	Function of the object	Data type	Flags
6, 26	Output x	Timer duration	3 bytes - 10.001 DPT_TimeOfDay	C, R, W

This object is activated if the **Timer duration modifiable through object** object parameter is active.
This object can be used to configure the timer duration. The timer duration can thus be configured in accordance with a time of day.

Byte 3 (MSB)								Byte 2								Byte 1 (LSB)							
			Hours							Minutes										Seconds					
0	0	0	H	H	H	H	H	0	0	M	M	M	M	M	M	0	0	S	S	S	S	S	S

Fields	Code	Value	Units
Hours	Binary	0 to 23 (5 bit)	Hours
Minutes	Binary	0 to 59 (6 bit)	Minutes
Seconds	Binary	0 to 59 (6 bit)	Seconds

For further information, see: Timer.

4.2.5 Scene

No.	Name	Function of the object	Data type	Flags
7, 27	Output x	Scene	1 byte - 18.001 DPT_SceneControl	C, R, W

This object is activated when the **Scene** parameter is active.
This object is used to recall or save a scene.
Details on the format of the object are given below.

7	6	5	4	3	2	1	0
Learning	Not used	Scene number					

Bit 7: 0: The scene is called / 1: The scene is saved.
Bit 6: Not used.
Bit 5 to Bit 0: Scene numbers from 0 (Scene 1) to 63 (Scene 64).

For further information, see: Scene.

4.2.6 Preset

No.	Name	Function of the object	Data type	Flags
8, 28	Output x	Preset 1	1 bit - 1.022 DPT_Scene_AB	C, R, W

This object is activated if the **Preset** has value **Active with preset 1-level object** or **Active with preset 2-level objects**.
With this object, several outputs can be set to a configurable predefined status.
Object value:
- If the object receives value 0, the values of the parameters for Preset 1 = 0 are used.
- If the object receives value 1, the values of the parameters for Preset 1 = 1 are used.

For further information, see: Preset ON/OFF.

No.	Name	Function of the object	Data type	Flags
9, 29	Output x	Preset 2	1 bit - 1.022 DPT_Scene_AB	C, R, W

This object is activated if the **Preset** parameter has value **Active with preset 2-level objects**.

See object No. 7

No.	Name	Function of the object	Data type	Flags
10, 30	Output x	Preset 1 authorization	1 bit - 1.003 DPT_Enable	C, R, W

This object is activated if the **Preset authorization objects** parameter is active.
This object allows the authorization or lock-up of the Preset 1 function via a KNX telegram.
Object value: This is dependent on the **Polarity of autorisation object Preset 1** parameter.
0 = Locked-up, 1 = Authorized:
- If the object receives the value 0, Preset 1 is deactivated.
- If the object receives the value 1, Preset 1 is activated.

0 = Authorized, 1 = Locked-up:
- If the object receives the value 0, Preset 1 is activated.
- If the object receives the value 1, Preset 1 is deactivated.

For further information, see: Preset ON/OFF.

No.	Name	Function of the object	Data type	Flags
11, 31	Output x	Preset 2 authorization	1 bit - 1.003 DPT_Enable	C, R, W
See object No. 9				

4.2.7 Lock-up

No.	Name	Function of the object	Data type	Flags
11, 31	Output x	Lock-up 1	1 bit - 1.003 DPT_Enable	C, R, W

This object is activated if the **Lock-up** has value **Active with 1 lock-up object** or **Active with 2 lock-up objects**.
This object is used to control the activation of the lock-up via the KNX bus.
Object value: This is dependent on the **Polarity of lock-up object 1** parameter.
0 = Lock-up activated, 1 = Lock-up deactivated:

- If the object receives value 0, the Lock-up is activated.
- If the object receives value 1, the Lock-up is deactivated.

0 = Lock-up deactivated, 1 = Lock-up activated:

- If the object receives value 0, the Lock-up is deactivated.
- If the object receives value 1, the Lock-up is activated.

For further information, see: Lock-up ON/OFF.

No.	Name	Function of the object	Data type	Flags
12, 32	Output x	Lock-up 2	1 bit - 1.003 DPT_Enable	C, R, W

This object is activated if the **Lock-up** parameter has value **Active with 2 lock-up objects**.

See object No. 11.

No.	Name	Function of the object	Data type	Flags
14, 34	Output x	Status indication lock-up	1 bit - 1.011 DPT_Switch	C, R, T

This object is activated when the **Activation of lock-up status object** parameter is active.
This object allows the status of the lock-up to be sent from the device over the KNX bus.
Object value: Depends on the **Polarity** parameter.
0 = Lock-up deactivated, 1 = Lock-up activated:

- If the lock-up is deactivated, a telegram with logic value 0 is sent on the KNX bus.
- If the lock-up is activated, a telegram with logic value 1 is sent on the KNX bus.

0 = Lock-up activated, 1 = Lock-up deactivated:

- If the lock-up is activated, a telegram with logic value 0 is sent on the KNX bus.
- If the lock-up is deactivated, a telegram with logic value 1 is sent on the KNX bus.

This object is sent periodically and/or on status change.
For further information, see: Lock-up ON/OFF.

4.2.8 Priority

No.	Name	Function of the object	Data type	Flags
15, 35	Output x	Priority	2 bit - 2.002 DPT_Bool_Control	C, R, W

This object is activated if the **Priority** parameter is active.
The status of the output contact is determined directly by this object.
Details on the format of the object are given below.

Telegram received by the priority operation object			Output behaviour
Hexadecimal Value	Binary Value		
	Bit 1 (MSB)	Bit 0 (LSB)	
00	0	0	End of the priority
01	0	1	End of the priority
02	1	0	Priority OFF
03	1	1	Priority ON

The first bit of this object (Bit 0) determines the status of the output contact, which should be priority controlled. The second bit activates or deactivates the Priority.

For further information, see: Priority ON/OFF.

No.	Name	Function of the object	Data type	Flags
16, 36	Output x	Status indication priority	1 bit - 1.011 DPT_State	C, R, T

This object is activated if the **Activation of priority status object** parameter is active.
This object allows the status of the Priority to be sent from the device on the KNX bus.
Object value: Depends on the **Polarity** parameter.

0 = Not forced, 1 = Forced:
- If Priority is deactivated, a telegram is sent with logic value 0.
- If Priority is activated, a telegram is sent with logic value 1.

0 = Forced, 1 = Not forced:
- If Priority is activated, a telegram is sent with logic value 0.
- If Priority is deactivated, a telegram is sent with logic value 1.

This object is sent periodically and/or on status change.
For further information, see: Priority ON/OFF.

4.2.9 Hours counter

No.	Name	Function of the object	Data type	Flags
17, 37	Output x	Hours counter value	2 bytes - 7.007 DPT_Time (h)	C, R, T
This object is activated when the **Hours counter** parameter is active. This object allows the value of the operating hours to be sent from the device on the KNX bus. The count value is saved during a power cut on the KNX bus. It is submitted after return of power to the bus or after an ETS download. Object value: 0 to 65535 hours. This object is sent periodically and/or on status change. For further information, see: Hours counter.				

No.	Name	Function of the object	Data type	Flags
18, 38	Output x	Reset hours counter value	1 bit - 1.015 DPT_Reset	C, R, W
This object is activated when the **Hours counter** parameter is active. This object enables the hours counter value to be reset. Object value: - If the object receives the value 0, the counter is not reset. - If the object receives the value 1, the counter is reset. For further information, see: Hours counter.				

No.	Name	Function of the object	Data type	Flags
19, 39	Output x	Hours counter setpoint reached	1 bit - 1.011 DPT_State	C, R, T
This object is activated when the **Hours counter** parameter is active. This object reports that the hours counter has reached its setpoint. - Incrementing counter: Counter = Counter value setpoint. - Countdown counter: Counter = 0. Object value: If the setpoint is reached, a telegram with logic value 1 is sent on the KNX bus. The count value is saved during a power cut on the KNX bus. It is submitted after return of power to the bus or after an ETS download. This object is sent periodically and/or on status change. For further information, see: Hours counter.				

No.	Name	Function of the object	Data type	Flags
20, 40	Output x	Counter value setpoint	2 bytes - 7.007 DPT_Time (h)	C, R, W
This object is activated if the **Counter setpoint value modifiable through object** object parameter is active. This object is used to initialize the counter setpoint of the hours counter via the KNX bus. Object value: 0 to 65535 hours. This object is sent periodically and/or on status change. For further information, see: Hours counter.				

4.3 Communication objects for each shutter/blind output

	Number	Name	Function of the object	Length	C	R	W	T
	1	Outputs 1-2	Up/Down (long key-press)	1 bit	C	R	W	-
	2	Outputs 1-2	Step/stop (short press)	1 bit	C	R	W	-
	3	Outputs 1-2	Position in %	1 byte	C	R	W	-
	4	Outputs 1-2	Slat angle (0-100%)	1 byte	C	R	W	-
	5	Outputs 1-2	Position in % indication	1 byte	C	R	-	T
	6	Outputs 1-2	Slat angle indication in %	1 byte	C	R	-	T
	7	Outputs 1-2	Upper position reached	1 bit	C	R	-	T
	8	Outputs 1-2	Lower position reached	1 bit	C	R	-	T
	9	Outputs 1-2	Scene	1 byte	C	R	W	-
	10	Outputs 1-2	Preset 1	1 bit	C	R	W	-
	11	Outputs 1-2	Preset 2	1 bit	C	R	W	-
	12	Outputs 1-2	Preset 1 authorization	1 bit	C	R	W	-
	13	Outputs 1-2	Preset 2 authorization	1 bit	C	R	W	-
	14	Outputs 1-2	Lock-up 1	1 bit	C	R	W	-
	15	Outputs 1-2	Lock-up 2	1 bit	C	R	W	-
	16	Outputs 1-2	Status indication lock-up	1 bit	C	R	-	T
	17	Outputs 1-2	Priority	2 bit	C	R	W	-
	18	Outputs 1-2	Status indication priority	1 bit	C	R	-	T
	19	Outputs 1-2	Alarm 1	1 bit	C	R	W	-
	20	Outputs 1-2	Alarm 2	1 bit	C	R	W	-
	21	Outputs 1-2	Alarm 3	1 bit	C	R	W	-
	22	Outputs 1-2	Alarm status object	1 bit	C	R	-	T
	23	Outputs 1-2	Sun protection position %	1 byte	C	R	W	-
	24	Outputs 1-2	Pos. lamelles poursuite sol. %	1 byte	C	R	W	-
	25	Outputs 1-2	Sun protection authorization	1 bit	C	R	W	-
	26	Outputs 1-2	Sun protection reactivation	1 bit	C	R	W	-
	27	Outputs 1-2	Sun protection status	1 bit	C	R	-	T

4.3.1 Control

No.	Name	Function of the object	Data type	Flags
1	Outputs 1-2	Up/Down (long key-press)	1 bit - 1.008 DPT_UpDown	C, R, W
These objects are always activated. It is used to control the shutter or blind in connection with the value that is sent on the KNX bus. Object value: - If the object receives value 0, the shutter or blind moves to the upper position. - If the object receives value 1, the shutter or blind moves to the lower position. For further information, see: Functions for each shutter/blind output.				

No.	Name	Function of the object	Data type	Flags
2	Outputs 1-2	Step/stop (short press)	1 bit - 1.007 DPT_Step	C, R, W
These objects are always activated. It is used to stop the movement of the shutter or blind or the tilting of the slats according to the value that is sent on the KNX bus. Object value: - Regardless of which value (0 or 1) is sent to this object, the movement of the shutter or blind will be stopped. - If the object receives the value 0, the slats will be opened by one slat step. - If the object receives the value 1, the slats will be closed by one slat step. For further information, see: Function selection.				

No.	Name	Function of the object	Data type	Flags
3	Outputs 1-2	Position in %	1 byte - 5.001 DPT_Scaling	C, R, W
These objects are always activated. It is used for positioning the shutter or blind at the desired height, in response to the value sent on the KNX bus. On the blind, the slats have the same tilt after reaching the same position as they had before the movement. If a telegram is received during the movement of the shutter or blind, the shutter will be positioned at the desired height after the originally requested position has been reached. Object value: 0 to 255 - 0 (0%): Upper position - 255 (100%): Lower position For further information, see: Function selection.				

No.	Name	Function of the object	Data type	Flags
4	Outputs 1-2	Slat angle in %	1 byte - 5.001 DPT_Scaling	C, R, W
These objects are always activated. It is used to position the shutter or blind in response to the value that is sent on the KNX bus. Object value: 0 to 255 - 0 (0%): Slats open - 255 (100%): Slats closed For further information, see: Function selection.				

4.3.2 Status indication

No.	Name	Function of the object	Data type	Flags
5	Outputs 1-2	Position in % indication	1 byte - 5.001 DPT_Scaling	C, R, T

This object is activated when the **Status indication position in %** parameter is active.
This object allows the status of the position to be sent over the KNX bus. It is sent after the position of the blind or shutter has been achieved.

Object value: 0 to 255
- 0 (0%): Upper position
- 255 (100%): Lower position

This object is sent periodically and/or on status change.
For further information, see: Status indication Shutter.

No.	Name	Function of the object	Data type	Flags
6	Outputs 1-2	Slat angle indication in %	1 byte - 5.001 DPT_Scaling	C, R, T

This object is activated when the **Status indication slat angle in %** parameter is active.
This object allows the status of the slat angle to be sent over the KNX bus. It is sent after the tilting of the blind has been achieved.

Object value: 0 to 255
- 0 (0%): Slats open
- 255 (100%): Slats closed

This object is sent periodically and/or on status change.
For further information, see: Status indication Shutter.

No.	Name	Function of the object	Data type	Flags
7	Outputs 1-2	Upper position reached	1 bit - 1.002 DPT_Bool	C, R, T

This object is activated when the **Upper position reached objects** parameter is active.
This object is used to send the status of the upper position of the shutter or blind over the KNX bus.
Object value: Depends on the **Polarity** parameter.

0 = Position not reached, 1 = Position reached
- If the upper position of the shutter or blind is not reached, a telegram is sent with a logic value of 0 on the KNX bus.
- If the upper position of the shutter or blind is reached, a telegram is sent with a logic value of 1 on the KNX bus.

0 = Position reached, 1 = Position not reached
- If the upper position of the shutter or blind is reached, a telegram is sent with a logic value of 0 on the KNX bus.
- If the upper position of the shutter or blind is not reached, a telegram is sent with a logic value of 1 on the KNX bus

This object is sent periodically and/or on status change.
For further information, see: Status indication Shutter.

No.	Name	Function of the object	Data type	Flags
8	Outputs 1-2	Lower position reached	1 bit - 1.002 DPT_Bool	C, R, T

This object is activated if the **Lower position reached objects** parameter is active.
This object is used to send the status of the lower position of the shutter or blind over the KNX bus.
Object value: Depends on the **Polarity** parameter.

0 = Position not reached, 1 = Position reached
- If the lower position of the shutter or blind is not reached, a telegram is sent with a logic value of 0 on the KNX bus.
- If the lower position of the shutter or blind is reached, a telegram is sent with a logic value of 1 on the KNX bus.

0 = Position reached, 1 = Position not reached
- If the lower position of the shutter or blind is reached, a telegram is sent with a logic value of 0 on the KNX bus.
- If the lower position of the shutter or blind is not reached, a telegram is sent with a logic value of 1 on the KNX bus

This object is sent periodically and/or on status change.
For further information, see: Status indication Shutter.

4.3.3 Scene

No.	Name	Function of the object	Data type	Flags
9	Outputs 1-2	Scene	1 byte - 18.001 DPT_SceneControl	C, R, W

This object is activated when the **Scene** parameter is active.
This object is used to recall or save a scene.
Details on the format of the object are given below.

7	6	5	4	3	2	1	0
Learning	Not used	Scene number					

Bit 7: 0: The scene is called / 1: The scene is saved.
Bit 6: Not used.
Bit 5 to Bit 0: Scene numbers from 0 (Scene 1) to 63 (Scene 64).

For further information, see: Scene Shutter.

4.3.4 Preset

No.	Name	Function of the object	Data type	Flags
10	Outputs 1-2	Preset 1	1 bit - 1.022 DPT_Scene_AB	C, R, W

This object is activated if the **Preset** has value **Active with preset 1-level object** or **Active with preset 2-level objects**.
With this object, several outputs can be set to a configurable predefined status.

Object value:
- If the object receives value 0, the values of the parameters for Preset 1 = 0 are used.
- If the object receives value 1, the values of the parameters for Preset 1 = 1 are used.

For further information, see: Preset Shutter.

No.	Name	Function of the object	Data type	Flags
11	Outputs 1-2	Preset 2	1 bit - 1.022 DPT_Scene_AB	C, R, W
This object is activated if the **Preset** parameter has value **Active with preset 2-level objects**. See object No. 10				

No.	Name	Function of the object	Data type	Flags
12	Outputs 1-2	Preset 1 authorization	1 bit - 1.003 DPT_Enable	C, R, W
This object is activated if the **Preset authorization objects** parameter is active. This object allows the authorization or lock-up of the Preset 1 function via a KNX telegram. Object value: This is dependent on the **Polarity of autorisation object Preset 1** parameter. **0 = Locked-up, 1 = Authorized**: - If the object receives the value 0, Preset 1 is deactivated. - If the object receives the value 1, Preset 1 is activated. **0 = Authorized, 1 = Locked-up**: - If the object receives the value 0, Preset 1 is activated. - If the object receives the value 1, Preset 1 is deactivated. For further information, see: Preset Shutter.				

No.	Name	Function of the object	Data type	Flags
13	Outputs 1-2	Preset 2 authorization	1 bit - 1.003 DPT_Enable	C, R, W
See object No. 12				

4.3.5 Lock-up

No.	Name	Function of the object	Data type	Flags
14	Outputs 1-2	Lock-up 1	1 bit - 1.003 DPT_Enable	C, R, W
This object is activated if the **Lock-up** has value **Active with 1 lock-up object** or **Active with 2 lock-up objects**. This object is used to control the activation of the lock-up via the KNX bus. Object value: This is dependent on the **Polarity of lock-up object 1** parameter. **0 = Lock-up activated, 1 = Lock-up deactivated**: - If the object receives value 0, the Lock-up is activated. - If the object receives value 1, the Lock-up is deactivated. **0 = Lock-up deactivated, 1 = Lock-up activated**: - If the object receives value 0, the Lock-up is deactivated. - If the object receives value 1, the Lock-up is activated. For further information, see: Lock-up Shutter.				

No.	Name	Function of the object	Data type	Flags
15	Outputs 1-2	Lock-up 2	1 bit - 1.003 DPT_Enable	C, R, W
This object is activated if the **Lock-up** parameter has value **Active with 2 lock-up objects**. See object No. 14				

No.	Name	Function of the object	Data type	Flags
16	Outputs 1-2	Status indication lock-up	1 bit - 1.011 DPT_State	C, R, T

This object is activated when the **Activation of lock-up status object** parameter is active.
This object allows the status of the lock-up to be sent from the device over the KNX bus.
Object value: Depends on the **Polarity** parameter.

0 = Lock-up deactivated, 1 = Lock-up activated:
- If the lock-up is deactivated, a telegram with logic value 0 is sent on the KNX bus.
- If the lock-up is activated, a telegram with logic value 1 is sent on the KNX bus.

0 = Lock-up activated, 1 = Lock-up deactivated:
- If the lock-up is activated, a telegram with logic value 0 is sent on the KNX bus.
- If the lock-up is deactivated, a telegram with logic value 1 is sent on the KNX bus.

This object is sent periodically and/or on status change.
For further information, see: Lock-up Shutter.

4.3.6 Priority

No.	Name	Function of the object	Data type	Flags
17	Outputs 1-2	Priority	2 bit - 2.002 DPT_Bool_Control	C, R, W

This object is activated if the **Priority** parameter is active.
The status of the output contact is determined directly by this object.
Details on the format of the object are given below.

Telegram received by the priority operation object			Output behaviour
Hexadecimal Value	Binary Value		
	Bit 1 (MSB)	Bit 0 (LSB)	
00	0	0	End of the priority
01	0	1	End of the priority
02	1	0	Priority OFF
03	1	1	Priority ON

The first bit of this object (Bit 0) determines the status of the output contact, which should be priority controlled. The second bit activates or deactivates the Priority.

For further information, see: Priority Shutter.

No.	Name	Function of the object	Data type	Flags
18	Outputs 1-2	Status indication priority	1 bit - 1.011 DPT_State	C, R, T

This object is activated if the **Activation of priority status object** parameter is active.
This object allows the status of the Priority to be sent from the device on the KNX bus.
Object value: Depends on the **Polarity** parameter.

0 = Not forced, 1 = Forced:
- If Priority is deactivated, a telegram is sent with logic value 0.
- If Priority is activated, a telegram is sent with logic value 1.

0 = Forced, 1 = Not forced:
- If Priority is activated, a telegram is sent with logic value 0.
- If Priority is deactivated, a telegram is sent with logic value 1.

This object is sent periodically and/or on status change.
For further information, see: Priority Shutter.

4.3.7 Alarm

No.	Name	Function of the object	Data type	Flags
19	Outputs 1-2	Alarm 1	1 bit - 1.005 DPT_Alarm	C, R, W

This object is only visible if the **Alarm** parameter has the following value: **1 alarm object** or **2 alarm objects** or **3 alarm objects**.
This object is used to switch the output back to the predefined settings.

Object value:
- If the object receives the value 0, the alarm is not activated.
- -If the object receives the value 1, the alarm is activated.

For further information, see: Alarm.

No.	Name	Function of the object	Data type	Flags
20	Outputs 1-2	Alarm 2	1 bit - 1.005 DPT_Alarm	C, R, W

See object No. 19

No.	Name	Function of the object	Data type	Flags
21	Outputs 1-2	Alarm 3	1 bit - 1.005 DPT_Alarm	C, R, W

See object No. 19

No.	Name	Function of the object	Data type	Flags
22	Outputs 1-2	Alarm status indication	1 bit - 1.011 DPT_State	C, R, T

This object is activated when the **Alarm status object** parameter is active.
This object allows the status of the alarm angle to be sent over the KNX bus.
Object value: Depends on the **Polarity** parameter.

0 = Alarm deactivated, 1 = Alarm activated
- If all the alarms are deactivated, a telegram with logic value 0 is sent on the KNX bus.
- If one of the three alarms is activated, a telegram with logic value 1 is sent on the KNX bus.

0 = Alarm activated, 1 = Alarm deactivated
- If one of the three alarms is activated, a telegram with logic value 0 is sent on the KNX bus.
- If all the alarms are deactivated, a telegram with logic value 1 is sent on the KNX bus.

This object is sent periodically and/or on status change.
For further information, see: Alarm.

4.3.8 Sun protection

No.	Name	Function of the object	Data type	Flags
23	Outputs 1-2	Sun protection position %	1 byte - 5.001 DPT_Scaling	C, R, W

This object is only visible if the **Sun protection type** parameter has the following value: **Objects position and slat angle** or **Position object only**.
It is used for positioning the shutter or blind at the desired height, in response to the value sent on the KNX bus.
As a general rule, this object is connected with an external device, which sends a position value to the shutter or blind in response to the elevation of the sun.

Object value: 0 to 255
- 0 (0%): Upper position
- 255 (100%): Lower position

For further information, see: Sun protection.

No.	Name	Function of the object	Data type	Flags
24	Outputs 1-2	Slat angle (0-100%)	1 byte - 5.001 DPT_Scaling	C, R, W

This object is only visible if the **Sun protection type** parameter has the following value: **Objects position and slat angle** or **Slat angle object only**.
This object is used to position the shutter or blind in response to the value that is sent on the KNX bus.
As a general rule, this object is connected with an external device, which sends a slat angle value to the blind in response to the elevation of the sun.

Object value: 0 to 255
- 0 (0%): Slats open
- 255 (100%): Slats closed

For further information, see: Sun protection.

No.	Name	Function of the object	Data type	Flags
25	Outputs 1-2	Sun protection authorization	1 bit - 1.003 DPT_Enable	C, R, W

This object is activated if the **Sun protection authorization** object parameter is active.
This object allows the sun protection status of the alarm function of the device to be activated or deactivated over the KNX bus.
Object value: Depends on the **Polarity** parameter.

0 = Locked-up, 1 = Authorized
- If the object receives the value 0, the sun protection is deactivated.
- If the object receives the value 1, the sun protection is activated.

0 = Authorized, 1 = Locked-up
- If the object receives the value 0, the sun protection is activated.
- If the object receives the value 1, the sun protection is deactivated.

For further information, see: Sun protection.

No.	Name	Function of the object	Data type	Flags
26	Outputs 1-2	Sun protection reactivation	1 bit - 1.003 DPT_Enable	C, R, W

This object is activated if the **Deactivate sun protection by local control** parameter is active.
This object is used to reactivate the sun protection of the device after a lock-up or at the end of a time-limited function, over the KNX Bus.

Object value:
- If the object receives the value 1, the sun protection is reactivated.
- If the object receives the value 0, the sun protection is permanently deactivated.

For further information, see: Sun protection.

No.	Name	Function of the object	Data type	Flags
27	Outputs 1-2	Sun protection status	1 bit - 1.011 DPT_State	C, R, T

This object is activated when the **Sun protection status object** parameter is active.
This object allows the status of the sun protection to be sent over the KNX bus.
Object value: Depends on the **Polarity** parameter.

0 = Authorized, 1 = Locked-up
- If the sun protection is deactivated, a telegram with logic value 1 is sent on the KNX bus.
- If the sun protection is activated, a telegram with logic value 0 is sent on the KNX bus.

0 = Locked-up, 1 = Authorized
- If the sun protection is activated, a telegram with logic value 1 is sent on the KNX bus.
- If the sun protection is deactivated, a telegram with logic value 0 is sent on the KNX bus.

This object is sent periodically and/or on status change.
For further information, see: Sun protection.

4.4 Communication objects by input

Channel function		Number	Name	Function of the object	Length	C	R	W	T
Toggle switch		41	Input 1	Status indication ON/OFF	1 bit	C	R	W	-
		42	Input 1	ON/OFF	1 bit	C	R	-	T
ON/OFF		42	Input 1	ON/OFF	1 bit	C	R	-	T
Timer		42	Input 1	Timer	1 bit	C	R	-	T
Shutter		42	Input 1	Up/down	1 bit	C	R	-	T
		43	Input 1	Stop (short press)	1 bit	C	R	-	T
		46	Input 1	Position in %	1 byte	C	R	-	T
Shutter/blind		42	Input 1	Up/down	1 bit	C	R	-	T
		43	Input 1	Step/stop (short press)	1 bit	C	R	-	T
		47	Input 1	Slat angle in %	1 byte	C	R	-	T
		46	Input 1	Position in %	1 byte	C	R	-	T
		47	Input 1	Slat angle in %	1 byte	C	R	-	T
Dimming		42	Input 1	ON/OFF	1 bit	C	R	-	T
		45	Input 1	Dimming	4 bit	C	R	-	T
		41	Input 1	Status indication ON/OFF	1 bit	C	R	W	-
		42	Input 1	ON/OFF	1 bit	C	R	-	T
		45	Input 1	Dimming	4 bit	C	R	-	T
		46	Input 1	Brightness value	1 byte	C	R	-	T
Heating		42	Input 1	Heating/Cooling - changeover	1 bit	C	R	-	T
		46	Input 1	Setpoint selection	1 byte	C	R	-	T
Priority		44	Input 1	Priority	2 bit	C	R	-	T
Scene		46	Input 1	Scene	1 byte	C	R	-	T
Alarm		42	Input 1	Alarm 1	1 bit	C	R	-	T
		42	Input 1	Alarm 2	1 bit	C	R	-	T
		42	Input 1	Alarm 3	1 bit	C	R	-	T
Automatic control deactivation		42	Input 1	Automatic control deactivation	1 bit	C	R	-	T
Load shedding		42	Input 1	Load shedding	1 bit	C	R	-	T
Windows contact		42	Input 1	Windows contact status	1 bit	C	R	-	T
Tariff		42	Input 1	Tariff	1 byte	C	R	-	T

Channel function		Number	Name	Function of the object	Length	C	R	W	T
Toggle switch		49	Input 2	Status indication ON/OFF	1 bit	C	R	W	-
		50	Input 2	ON/OFF	1 bit	C	R	-	T
ON/OFF		50	Input 2	ON/OFF	1 bit	C	R	-	T
Timer		50	Input 2	Timer	1 bit	C	R	-	T
Shutter		50	Input 2	Up/down	1 bit	C	R	-	T
		51	Input 2	Stop (short press)	1 bit	C	R	-	T
		54	Input 2	Position in %	1 byte	C	R	-	T
Shutter/blind		50	Input 2	Up/down	1 bit	C	R	-	T
		51	Input 2	Step/stop (short press)	1 bit	C	R	-	T
		55	Input 2	Slat angle in %	1 byte	C	R	-	T
		54	Input 2	Position in %	1 byte	C	R	-	T
		55	Input 2	Slat angle in %	1 byte	C	R	-	T
Dimming		50	Input 2	ON/OFF	1 bit	C	R	-	T
		53	Input 2	Dimming	4 bit	C	R	-	T
		49	Input 2	Status indication ON/OFF	1 bit	C	R	W	-
		50	Input 2	ON/OFF	1 bit	C	R	-	T
		51	Input 2	Dimming	4 bit	C	R	-	T
		54	Input 2	Brightness value	1 byte	C	R	-	T
Heating		50	Input 2	Heating/Cooling - changeover	1 bit	C	R	-	T
		54	Input 2	Setpoint selection	1 byte	C	R	-	T
Priority		52	Input 2	Priority	2 bit	C	R	-	T
Scene		54	Input 2	Scene	1 byte	C	R	-	T
Alarm		50	Input 2	Alarm 1	1 bit	C	R	-	T
		50	Input 2	Alarm 2	1 bit	C	R	-	T
		50	Input 2	Alarm 3	1 bit	C	R	-	T
Automatic control deactivation		50	Input 2	Automatic control deactivation	1 bit	C	R	-	T
Load shedding		50	Input 2	Load shedding	1 bit	C	R	-	T
Windows contact		50	Input 2	Windows contact status	1 bit	C	R	-	T
Tariff		50	Input 2	Tariff	1 byte	C	R	-	T

4.4.1 ON/OFF and toggle switch

No.	Name	Function of the object	Data type	Flags
42, 50	Input x	ON/OFF	1 bit - 1.001 DPT_Switch	C, R, T

This object is activated when the parameter **Channel function** has the value **Toggle switch, ON/OFF** or **Dimming**.

This object enables the ON/OFF control to be issued from the input contact on the KNX bus.
- To issue an OFF command, a telegram with a logical value 0 is issued.
- To issue an ON command, a telegram with a logical value 1 is issued.

This object is sent when there is a status change.

*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

For further information, see: ON/OFF or Toggle switch.

No.	Name	Function of the object	Data type	Flags
41, 49	Input x	Status indication ON/OFF	1 bit - 1.001 DPT_Switch	C, R, W

This object is activated when the parameter **Channel function** has the value **Toggle switch** or **Dimming**.

This object enables the status of the ON/OFF output sent to the KNX bus to be received.
- If the object receives the value 0, the status indication changes to OFF.
- If the object receives the value 1, the status indication changes to ON.

*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

For further information, see: ON/OFF or Toggle switch.

4.4.2 Timer

No.	Name	Function of the object	Data type	Flags
42, 50	Input x	Timer	1 bit - 1.001 DPT_Switch	C, R, T

This object is activated when the parameter **Channel function** has the value **Timer**.

This object enables the Timer command to be issued from the input contact on the KNX bus.
- To issue a Timer command, a telegram with a logical value 1 is issued.

For further information, see: Timer.

4.4.3 Shutter and blind

No.	Name	Function of the object	Data type	Flags
42, 50	Input x	Up/down	1 bit - 1.008 DPT_UpDown	C, R, T

This object is activated when the parameter **Channel function** has the value **Shutter/blind**.

This object enables the UP/Down command to be sent from the input contact on the KNX bus.
- To issue an Up command, a telegram with a logical value 0 is issued.
- To issue a Down command, a telegram with a logical value 1 is issued.

This object is sent when there is a status change.
*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

For further information, see: Shutter and blind.

No.	Name	Function of the object	Data type	Flags
43, 51	Input x	Stop (short press)	1 bit - 1.017 DPT_Trigger	C, R, T

This object is activated when the parameter **Channel function** has the value **Shutter/blind**.

This object enables the Stop command to be issued from the input contact on the KNX bus.
- To issue a Stop command, a telegram with a logical value 1 is issued.

This object is sent when there is a status change.
For further information, see: Shutter and blind.

No.	Name	Function of the object	Data type	Flags
46, 54	Input x	Position in %	1 byte - 5.001 DPT_Scaling	C, R, T

This object is activated when the parameter **Channel function** has the value **Shutter/blind**.
This object enables the shutter or blind position command to be issued from the input contact on the KNX bus.

Object value: 0 to 255
- 0 (0%): Upper position.
- 255 (100%): Lower position.

This object is sent when there is a status change.
For further information, see: Shutter and blind.

No.	Name	Function of the object	Data type	Flags
43, 51	Input x	Step/stop (short press)	1 bit - 1.007 DPT_Step	C, R, T

This object is activated when the parameter **Channel function** has the value **Shutter/blind**.

This object enables the Stop command to be issued from the input contact on the KNX bus.
- To issue a Stop command, a telegram with a logical value 0 or 1 is issued.
- To issue a slat opening command, a telegram with a logical value 0 is issued.
- To issue a slat closing command, a telegram with a logical value 1 is issued..

This object is sent when there is a status change.
For further information, see: Shutter and blind.

No.	Name	Function of the object	Data type	Flags
47, 55	Input x	Slat angle in %	1 byte - 5.001 DPT_Scaling	C, R, T

This object is activated when the parameter **Channel function** has the value **Shutter/blind**.
This object enables the slat angle command to be issued from the input contact on the KNX bus.

Object value: 0 to 255
- 0 (0%): Slats open.
- 255 (100%): Slats closed.

This object is sent when there is a status change.
For further information, see: Shutter and blind.

4.4.4 Dimming

No.	Name	Function of the object	Data type	Flags
45, 53	Input x	Dimming	4 bit - 3.007 DPT_Control_Dimming	C, R, T

This object is activated when the parameter **Channel function** has the value **Dimming**.
This object enables the dimming command relating to the brightness to be issued from the input contact on the KNX bus.

Object value:

b3	b2	b1	b0
C	Steps		

Data fields	Description	Code
C	Increase or reduction in brightness	0: Decrease 1: Increase
Steps	Brightness between 0% and 100% divided into steps	0: Stop 1: 100% 2: 50% 3: 25% 4: 12% 5: 6% 6: 3% 7: 1%

This object is sent when there is a status change.
For further information, see: Dimming.

No.	Name	Function of the object	Data type	Flags
46, 54	Input x	Brightness value	1 byte - 5.001 DPT_Scaling	C, R, T

This object is activated when the parameter **Channel function** has the value **Dimming**.
This object enables the brightness absolute dimming command to be issued from the input on the KNX bus.

Object value: 0 to 255: 0 = 0%, 255 = 100%.
Resolution: Approx. 0.4%.

This object is sent when there is a status change.
For further information, see: Dimming.

4.4.5 Heating

No.	Name	Function of the object	Data type	Flags
42, 50	Input x	Heating/Cooling - changeover	1 bit - 1.100 DPT_Heating/cooling	C, R, T

This object is activated when the parameter **Channel function** has the value **Heating**.

This object enables the heating system operating mode to be issued from the input contact on the KNX bus.
- To issue the heating information, a telegram with a logical value 1 is issued.
- To issue the cooling information, a telegram with logical value 0 is issued.

This object is sent when there is a status change.
*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

For further information, see: Heating.

No.	Name	Function of the object	Data type	Flags
46, 54	Input x	Setpoint selection	1 byte - 20.102 DPT_HVAC mode	C, R, T

This object is activated when the parameter **Channel function** has the value **Heating**.
This object enables the heating mode to be issued from the input contact on the KNX bus.
Depending on the status of the input contact (open or closed), a heating mode is issued for each status.

Heating mode	Value
Auto	0
Comfort	1
Standby	2
Night setpoint	3
Frost protection	4

This object is sent when there is a status change.
For further information, see: Heating.

4.4.6 Priority

No.	Name	Function of the object	Data type	Flags
44, 52	Input x	Priority	2 bit - 2.002 DPT_Bool_Control	C, R, T

This object is activated when the parameter **Channel function** has the value **Priority**.
This object enables the Priority command to be issued from the input contact on the KNX bus.

Details on the format of the object are given below.

Telegram received by the priority operation object			Output behaviour
Hexadecimal Value	Binary Value		
	Bit 1 (MSB)	Bit 0 (LSB)	
00	0	0	End of the priority
01	0	1	End of the priority
02	1	0	Priority OFF/up/frost protection
03	1	1	Priority ON/down/comfort

The first bit of this object (Bit 0) determines the status of the output contact, which should be priority controlled. The second bit activates or deactivates the Priority.

*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

For further information, see: Priority.

4.4.7 Scene

No.	Name	Function of the object	Data type	Flags
46, 54	Input x	Scene	1 byte - 18.001 DPT_SceneControl	C, R, T

This object is activated when the parameter **Channel function** has the value **Scene**.
This object enables the scene number to be issued from the input contact on the KNX bus.
It also memorises a scene.

Details on the format of the object are given below.

7	6	5	4	3	2	1	0
Learning	Not used	Scene number					

Bit 7: 0: The scene is called / 1: The scene is saved.
Bit 6: Not used.
Bit 5 to Bit 0: Scene numbers from 0 (Scene 1) to 63 (Scene 64).

For further information, see: Scene.

4.4.8 Alarm

No.	Name	Function of the object	Data type	Flags
42, 50	Input x	Alarm 1	1 bit - 1.005 DPT_Alarm	C, R, T
42, 50	Input x	Alarm 2	1 bit - 1.005 DPT_Alarm	C, R, T
42, 50	Input x	Alarm 3	1 bit - 1.005 DPT_Alarm	C, R, T

This object is activated when the parameter **Channel function** has the value **Alarm**.

This object enables the alarm command to be issued from the input contact on the KNX bus.
- To issue an inactive alarm command, a telegram with a logical value 0 is issued.
- To issue an active alarm command, a telegram with a logical value 1 is issued.

This object is sent when there is a status change.

*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

For further information, see: Alarm.

4.4.9 Automatic control

No.	Name	Function of the object	Data type	Flags
42, 50	Input x	Automatic control deactivation	1 bit - 1.003 DPT_Enable	C, R, T

This object is activated when the parameter **Channel function** has the value **Automatic control deactivation**.

This object enables the automatic control deactivation command to be issued from the input contact on the KNX bus.
- To issue an inactive automatic control command, a telegram with a logical value 0 is issued.
- To issued an active automatic control command, a telegram with a logical value 1 is issued.

This object is sent when there is a status change.

*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

For further information, see: Automatic control deactivation.

4.4.10 Load shedding

No.	Name	Function of the object	Data type	Flags
42, 50	Input x	Load shedding	1 bit - 1.002 DPT_Bool	C, R, T

This object is activated when the parameter **Channel function** has the value **Load shedding**.

This object enables the load-shedding command to be issued from the input contact on the KNX bus.
- To issue a load-shedding command (forcing the output to OFF), a telegram with a logical value 1 is issued.

This object is sent when there is a status change.

*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

For further information, see: Load shedding.

4.4.11 Windows contact

No.	Name	Function of the object	Data type	Flags
42, 50	Input x	Windows contact status	1 bit - 1.019 DPT_window/door	C, R, T

This object is activated when the parameter **Channel function** has the value **Windows contact**.

This object enables the status of a window contact to be issued from the input contact on the KNX bus.
- To signal a closed window contact, a telegram with a logical value 1 is issued.
- To signal an open window contact, a telegram with a logical value 0 is issued.

This object is sent when there is a status change.

*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

For further information, see: Windows contact.

4.4.12 Tariff

No.	Name	Function of the object	Data type	Flags
42, 50	Input x	Tariff	1 byte- 5.006 DPT_Tariff	C, R, T

This object is activated when the parameter **Channel function** has the value **Tariff**.

This object enables the tariff status to be issued from the input contact on the KNX bus.
- To issue to the tariff information T1, a telegram with a value 1 is issued.
- To issue to the tariff information T2, a telegram with a value 2 is issued.

This object is sent when there is a status change.

*Note: By default, the input operates like an NO contact (Normally open). If the parameter **Inverted** is validated, the input operates like an NC contact (Normally closed).*

For further information, see: Tariff.

5. Appendix

5.1 Specifications

5.1.1 TYBS692F

KNX Medium	TP1-256
Supply voltage KNX	21…32 V ⎓ SELV
Current consumption KNX	typ. 5 mA
Minimum switching current 230 V~	10 mA
Breaking capacity	µ10 A AC1 230/240 V~
Power dissipation	max. 0.6 W
Circuit-breaker	10 A
Surge voltage	4 kV
Maximum switching cycle rate at full load	20 switching cycle/min.
Interlock time for changing direction of travel	software-dependent
Operating altitude	max. 2000 m
Degree of contamination	2
Operating temperature	-5° ... +45 °C
Dimension	44 x 43 x 22,5 mm
Number of potential-free contacts	2
Total extension unit cable length	max 9,9 m

5.2 Table of logical operations

Input 4	Input 3	Input 2	Input 1	OR	AND
-	-	0	0	0	0
-	-	0	1	1	0
-	-	1	0	1	0
-	-	1	1	1	1
-	0	0	0	0	0
-	0	0	1	1	0
-	0	1	0	1	0
-	0	1	1	1	0
-	1	0	0	1	0
-	1	0	1	1	0
-	1	1	0	1	0
-	1	1	1	1	1
0	0	0	0	0	0
0	0	0	1	1	0
0	0	1	0	1	0
0	0	1	1	1	0
0	1	0	0	1	0
0	1	0	1	1	0
0	1	1	0	1	0
0	1	1	1	1	0
1	0	0	0	1	0
1	0	0	1	1	0
1	0	1	0	1	0
1	0	1	1	1	0
1	1	0	0	1	0
1	1	0	1	1	0
1	1	1	0	1	0
1	1	1	1	1	1

5.3 Characteristics

Device	TYBS692F
Max. number of group addresses	255
Max. number of allocations	255
Objects	89

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