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1. Use of the application program

Product family: Lighting
 Product type: Dimmer
 Manufacturer: Siemens

Name: Universal Dimmer UP 525/31
 Catalogue no.: 5WG1 525 - 2AB31

System criteria: Can be used from ETS 2, V 1.3 onwards

2. Product description

2.1. Description of the Universal Dimmer UP 525/31

The universal dimmer operates on the leading edge or trailing edge principle and enables the switching and dimming of lamps, HV-halogen bulbs as well as NV-halogen bulbs over conventional transformers and Tronic transformers. The characteristics of the connected load are measured automatically and the suitable dimmer position is adjusted.

Short-circuit protection:

In the case of a short-circuit the output is switched off permanently.

After removal of the short-circuit the dimmer must be switched off (or isolated from the mains) initially, before it can be switched on again.

Over-temperature protection:

At too high an ambient temperature, the output switches off. After cooling, the dimmer is measured again and switches to the brightness prescribed by the KNX/EIB.

The device also has two secondary inputs which, depending on their setting, can act directly on the output (local operation, see "As delivered state) or, alternatively, as binary inputs on the Instabus also. The connected null potential switch or pushbutton contacts are read into the actuator via a common reference potential. The binary input can be sent as telegrams for switching or dimming, for shutter control, for setting values or for calling up/saving scenes.

2.2. Default Settings of the Universal Dimmer UP 525/31

- Upon delivery the dimmer is switched off. (no galvanic separation).
- On applying the bus voltage, the outputs switch off.
- On applying the bus voltage the secondary inputs control the dimming output as described in Section 3.1 Works Function Description

3. Functional overview

3.1 Works function (local operation)

In the as delivered state (unconfigured actuator), the secondary inputs act directly on the dimming output. In this way, the actuator can be used and operated 'on site' in standby mode simply by applying bus power and without using further sensors.

When creating the bus voltage the output remains switched off. The actuator responds only after approximately 400 ms to status changes of the secondary signals (delay time after bus power restorations).

Edges and signals present at the inputs are not included in the delay time after bus power restoration and are discarded and ignored.

On applying the bus voltage, the secondary inputs control the dimming output as follows:

Input)	Contact at the input...	Press ²⁾	Reaction
A	close (rising edge)	short	Switch ON 100%
		long	Brighter dimming
	open (falling edge)	short	no response
		long	Stop dimming ³⁾
B	close (rising edge)	short	Switch OFF
		long	Darker dimming
	open (falling edge)	short	no response
		long	Stop dimming ³⁾

¹⁾ You cannot press A and B at the same time

²⁾ The time starting from which a long press is executed is (time between switching and dimming), is fixed at approx. 520 ms.

³⁾ Opening the contact after a dimming cycle has started (> 520 ms) ends this immediately (Stop command). There is no reaction on opening the contact if the dimming cycle has still not been executed (< 520 ms).

In the event of a bus power failure, the actuator does not react. No time functions are active. Neither are any group addresses set.

3.2. Output functions

3.2.1 Output blocking function

The dimmer can be disabled via the bus, so that the adjusted dimming value remains constant during an active blocking. The actuator can be set to a configured brightness at the beginning and end of the blocking (refer also to the parameter description for the blocking function).

A blocking function activated before a bus power failure is always de-activated after bus power is restored. The output is switched off and indicates no reaction during the delay after the bus power is restored. However, the actuator can be controlled via the bus. Updates to the blocking object

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during the delay will be saved and only executed after the delay has ended.

3.2.2 8-bit scene control

The application program enables up to 8 scenes to be configured. Scenes are recalled via the 8-bit communication object.

Timer functions cannot be executed within a scene.

3.2.3 Fault reports

The dimmer can send different 1-bit messages to the bus if there is a fault.

Short circuit message

If the actuator detects a short circuit on the load side, it switches the connected load automatically after approx. 7 seconds in trailing edge mode (capacitive and resistive loads) and after approx. 100 ms in leading edge mode (inductive loads) remaining off.

Also, at the time of switching off, an ON telegram will be forwarded via the status object *Status short circuit, output*. The short circuit report will be enabled by the parameter setting *Report short circuit* = "Yes" and the corresponding communication object will be activated.

After the short circuit is repaired, the dimmer must first of all be switched off via the bus, to prevent an unintentional switching on again. This switching off can be implemented either by an "OFF" switching command or by a dimming value = 0 (also by a light scene).

The load is switched on again in the usual way by a bus operation. If there is then no longer a short circuit, an OFF telegram is sent via the status object *Status short circuit, output* after approx. 7 seconds. If there is still a short circuit, the report remains active. Alternatively, switching the mains on and off, a load failure or a bus reset causes a short circuit report to be returned.

Load failure report

If the dimmer detects an interruption to the current path on the load side (e.g. filament in a bulb defective or mains fuse in a transformer blown) or a power failure with connected load, the actuator can send a 1-bit load failure message to the bus. An ON telegram is also generated as soon as a fault is detected. The report function is enabled by the parameter setting *Report load failure* = "Yes" and the communication object is switched visibly.

Only if the load failure has been raised again (e.g. bulb or fuse exchanged defective), is an OFF telegram transferred via the status object *Load failure, output*. At the end of a load failure, the universal dimmer UP 525/31 is measured again and sets the brightness previously set or that tracked during the failure.

Note

- **Load failure and short circuit message will be used**

If both the short circuit and the load failure message are used, the report telegrams behave as follows:

1. Load failure → 2nd short circuit

If a load failure is transferred via the status object *Load failure, output* ([1], ON), the actuator sends an OFF telegram to the bus immediately after this via the status object *Status short circuit, output*.

This guarantees that a short circuit message transferred previously by a load failure is reset (for example by switching the mains power off).

1. Short circuit → 2nd load failure

If a short circuit is transferred via the status object *Status short circuit, output* ([1], ON), the actuator sends an OFF telegram to the bus immediately after this via the status object *Load failure, output*. This guarantees that a load failure message transferred previously by a short circuit is reset.

- **Fault reports and switching status/dimming status:**

Because a short circuit leads to switching off of the connected lighting means, this fault also has an effect on the brightness status of the dimmer. Accordingly, if there is a short circuit, an "OFF" switching message and/or a "0" value feedback is transferred to the bus. After rectifying the fault and switching back on, the actuator updates the feedback to reflect the set brightness.

A load failure does not lead to automatic disconnection of the load and therefore has no effect on the dimmer's switching status and/or its value feedback.

- **Fault reports and bus power failure/restoration.**

Short circuit and load failure reports will be updated to reflect their status and sent to the bus after bus power is restored. However, there will only be a bus transfer after the "Bus power restoration delay" has timed out, if it has been set. You can set a general telegram rate restriction. In this case, no telegrams about the reporting objects will be sent in the first 17 seconds following bus power restoration.

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3.2.4 Switching status/Dimming status

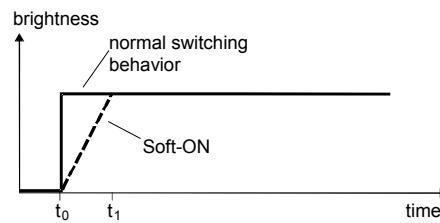
If the switching status of the universal dimmer changes from "OFF" to "ON" or from "ON" to "OFF", then a corresponding switching telegram will be sent to the bus via the status object *Switching status - status object*. If the "Soft-ON-function" is enabled and started, an "ON" status telegram will be sent once at the beginning of the dimming cycle. If the "Soft-OFF-function" is enabled and started, an "ON" status telegram will be sent at the beginning of the dimming cycle. Only if the dimming cycle has ended will an "OFF" status telegram be generated. If the "Soft-OFF-function" has been started by a timed out time dimmer function, only after the dimming cycle has ended will an "OFF" status telegram be sent to the bus. A corresponding switching status telegram will also be sent when the switching object value is updated ("OFF" to "OFF" or "ON" to "ON")!

As soon as a dimming value is received via the dimming value object or stipulated by the switching or dimming object and this dimming value is set as a constant (dimming cycle ended), a telegram will be sent via the *Switching status, output* object or via the *Dimming status, output* (depending on the *Report status parameter*). No feedback will be generated during object value updates of the dimming object (e.g. value "70" to value "70")!

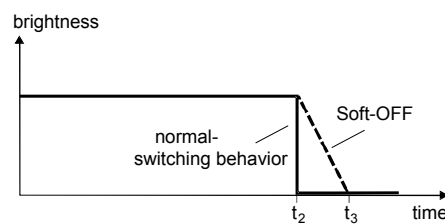
The status will also be updated after bus power is restored, after the set delay has elapsed, and transferred actively to the bus. If telegram rate restriction has been approved, no telegram will be sent via the status object within 17 seconds of the bus power being restored. The feedback will be saved and executed after the 17 seconds delay has elapsed. If necessary, viewing software can read out the object status (set the L-flag!).

3.2.5 Time functions

Soft – ON - function

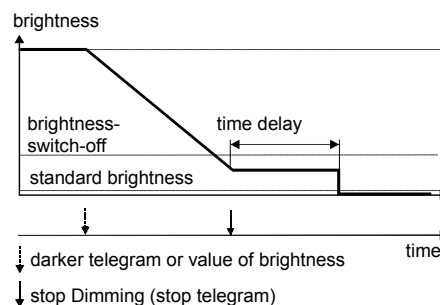


Soft – OFF - function



Off delay

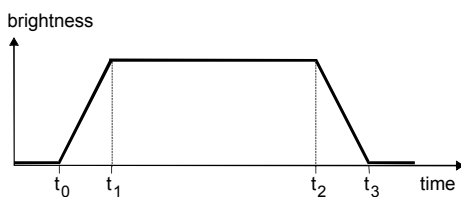
Off delay is used to switch off the output only after a variable delay following receipt of an outgoing telegram.



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Timer mode (stairwell automation)

The timer function can automate the stairwell. The variable time (timer mode ON duration) begins with the output being switched on at time (t_0). The function then switches off the output after the time has elapsed. The Soft – ON – function ($t_0 - t_1$) and the Soft – OFF – function ($t_2 - t_3$) can also be produced in conjunction with the timer function given as required.



The timer function can be triggered again by an ON telegram.
The timer function can be interrupted by an OFF telegram.

3.2.6 Behaviour on bus power failure

You can vary the behaviour of the output if the bus power fails. Various dimming values can be set. These will be triggered upon a failure of the bus power.

A blocking function or forced control enabled before a bus power failure is always disabled after bus power is restored.

→ Parameter settings: see section 5

3.2.7 Behaviour on bus power restoration

Just as with 3.2.6, you can set the output dimming value on restoration of the bus power.

If the setting is "Dimming value before bus power failure", the dimming value which was active before bus power failure is set. The value will be saved in non-volatile EEPROM. The value is "0" after configuration by the ETS.

The set behaviour on bus power restoration will only be implemented after the set "Bus power restoration delay" time (see "General" settings window) has elapsed!

The output will not show any response during this delay period.

If telegram rate restriction has been approved, no telegram will be sent via the "Output status" object within 17 seconds of the bus power being restored.

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3.3 Input functions

3.3.1 How the inputs work

The dimmer has two secondary inputs, whereby input A and input B, depending on the setting, can act directly on the output (works function) or alternatively both inputs can act on the KNX/EIB Instabus as independent binary inputs.

Effect directly on the output

On applying the bus voltage, the secondary inputs control the dimming output as follows:

Input	Contact at the input...	Press ²⁾	Reaction
A	close (rising edge)	short	Switch ON
		long	Brighter dimming
	open (falling edge)	short	no response
		long	Stop dimming ¹⁾
B	close (rising edge)	short	Switch OFF
		long	Darker dimming
	open (falling edge)	short	no response
		long	Stop dimming ¹⁾

Refer also to point 3.1 Works function

Effect separately to the bus

The dimmer inputs act independently of the output and separately from each other on the KNX/EIB.

Depending on the settings, you can vary the "Switch", "Dim", "Blind" or 8-bit value sensor (Value/Scene) functions (see "Parameter description"). If you set "Not used", the corresponding input is de-activated.

If "Switch" is set, you can link an input object with the output switching object. This is how the actuator can also control its own inputs even while the inputs are acting to the bus (e.g. during group control of a number of switching actuators).

3.3.2 On/Off/toggle switching

The "Switch" function is produced with the "Input switching" objects .

In each case, two objects (A and B) are available for each input. The objects can be triggered with the functions

Switch ON

Switch OFF

Switch TOGGLE

with

rising edge (switch status change from 0 to 1)

or

falling edge (switch status change from 1 to 0).

Sending input objects cyclically

Input objects can be sent cyclically, depending on the object value.

The object value tracked internally or externally in the switching objects is always transmitted. Therefore the object value is also transferred cyclically if a rising/falling edge is assigned "no response"!

The cyclical sending is effected directly after restoration of the bus power, if the set value of the telegram after restoration of the bus power corresponds to the object value setting for cyclical sending. If telegram rate limitation is approved, then cyclical transmission will not start for at least 17 seconds. During active blocking, no transmissions are made via the blocked input.

→ Communication objects: see section 4.4

→ Parameter settings: see section 5

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3.3.5 Blind control

The "Blind control" function is produced with the "Slat, input..." objects and the "Blind, input..." (for A and B respectively) objects.

The "Slat, input..." object is used to send the "Slat Open/Closed" or "Stop blind movement" commands

The "Blind input..." object is used to send "Blind Up/Down" movement commands

Blind control by holding down the pushbutton for a shorter or longer period

Switching objects are triggered by holding down the pushbutton for a shorter or longer period.

Holding down → blind object (MOVE commands)

Objects can be populated with the functions

Move command UP

Move command DOWN

Move command TOGGLE.

Tapping → Slat object (STEP commands)

Objects can be populated with the functions

STEP command UP (only in combination with Move command UP)

STEP command DOWN (only in combination with Move command DOWN)

STEP command toggle (only in combination with Move command toggle).

The time from which a press on the pushbutton is interpreted as being held down can be set ("Long press on pushbutton" parameter).

You can choose the pushbutton operating concept

→ Communication objects: see section 4.4

→ Parameter settings: see section 5

3.3.6 Scene control

The "Scene control setting" function is produced with the "Input scene..." objects. One object is available for each input (A and B) respectively.

You can recall predefined scenes with this function, or define and save scenes yourself.

Recall scene

When calling up a setting as a scene, you can call up a light scene. The set light scene numbers are sent immediately on a rising, falling or rising and falling edges.

Recall/save scene

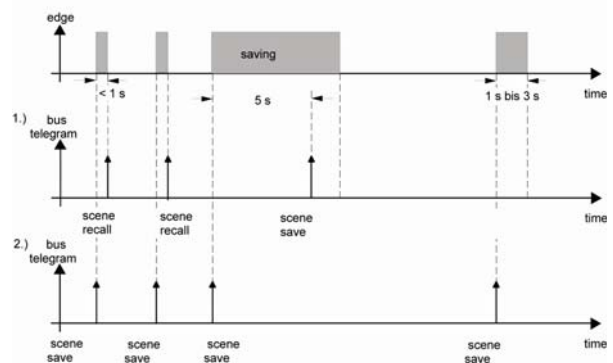
When a setting is called up/saved as a scene, you can generate a save telegram, depending on the light scene to be sent.

When this is done, the corresponding save telegram is sent while the NO contact (rising edge) or the NC contact (falling edge) is held down. In this case, the time for a hold-down can be set (but not < 5 seconds). If the pushbutton is held down for a short duration < 1 second, the set scene number is sent (without a save telegram). If the pushbutton is held down for more than 1 second but less than 5 seconds, then no telegram is triggered.

There is also an option to send a save telegram only without calling up a light scene first. In this case, you must set the parameter "Only save function = YES".

Examples of recalling and saving scenes:

- 1.) only save function = NO
- 2.) only save function = YES



→ Communication objects: see section 4.4

→ Parameter settings: see section 5

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The inputs blocking function is produced with the "Block input ..." objects. A blocking object is available for each input (A and B) respectively.

A given response can be produced at each input at the beginning or at the end of a blocking. You can also set "No response". Only in this case will dimming or blind control processes in train, or value settings, be ended before the blocking function is activated. In every other case, the set command will be sent immediately the blocking begins. Furthermore, during active blocking, edges or signals at the corresponding inputs will not be analyzed!

Updates to blocking objects (blocking or unblocking) result on each occasion in transmission of the set corresponding command "Behaviour at the beginning or at the end of the blocking".

During active blocking, no transmissions are made via the blocked input.

If [a transmission] was sent cyclically before activating the blocking function, then it is no longer sent cyclically at the end of blocking if "No response" is set! In this case, the object value will be resent cyclically only following an update to the switching object. In every other case, the object value will be retransmitted cyclically after the blocking ends.

→ Communication objects: see section 4.4

→ Parameter settings: see section 5

3.3.8 Behaviour on bus power restoration

You can determine separately for each input whether there will be a response, or what the response will be, on recovering bus power. Therefore, you can send a defined telegram to the bus, depending on the input signal or on whether forced control is in operation.

The set "Delay after bus power recovery" must only run until the set response has been obtained!

Edges and signals present at the inputs are not included in the delay and are discarded. As a rule, the delay time is set for all inputs and for the output as well.

You can set a general telegram rate restriction. In this case, no telegram will be sent in the first 17 seconds following bus power restoration.

You should note that the set "Delay on bus power restoration" is also active during this period and the set behaviour on bus power recovery does not occur if the delay times out within the first 17 seconds!

→ Communication objects: see section 4.4

→ Parameter settings: see section 5

4. Communication objects**4.1 Communication objects overview**

Maximum number of group addresses: 26

Maximum number of assignments: 27

Objects for outputs:

Obj	Object name	Function	Type
0	Dimming On/Off, output	On/Off	1 bit
3	Dimming, output	Brighter/darker	4 bit
4	Brightness, Output	Set 8-bit	1 byte
5	Switching status, output	On/Off	1 bit
6	Dimming value status, output	Set 8-bit	1 byte
7	Blocking, output	Unblocking/blocking	1 bit
11	Scene, output	Recall/save 8-bit scene	1 byte
12	Short circuit state, output	1=shor circuit	1 bit
13	Load failure, output	Load failure Yes/No	1 bit

Objects for inputs:

Obj	Object name	Function	Type
1	Switching, input A object A.1	On/Off/Toggle	1 bit
1	Dimming ON/OFF, input A	On/Off	1 bit
1	Slat-Position, input A	Open/Close	1 bit
1	Value, input A	Set 8-bit value	1 byte
1	Scene, input A	Recall 8-bit scene	1 byte
1	Scene, input A	Recall/save 8-bit scene	1 byte
2	Switching, input B, object B.1	On/Off/Toggle	1 bit
2	Dimming ON/OFF, input B	On/Off	1 bit
2	Slat-Position, input B	Open/Close	1 bit
2	Value, input B	Set 8-bit value	1 byte
2	Scene, input B	Recall 8-bit scene	1 byte
2	Scene, input B	Recall/save 8-bit scene	1 byte
9	Switching, input A, object A.2	On/Off/Toggle	1 bit
9	Dimming, input A	brighter/darker	4 bit
9	Venetian blind, input A	Up/Down	1 bit
10	Switching, input B, object B0.2	On/Off/Toggle	1 bit
10	Dimming, input B	brighter/darker	4 bit
10	Venetian blind, input B	Up/Down	1 bit
17	Blocking, input A	Enabling/Disabling	1 bit
18	Blocking, input B	Enabling/Disabling	1 bit

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4.2. Output, objects

Obj	Object name	Function	Type	Flag
0	Dimming On/Off, output	On/Off	1 bit	CW
Switching telegrams (in this case Dimming On/Off) are received via the group address linked with this object. [0]: Dimming Off [1]: Dimming On This object is always active.				

Obj	Object name	Function	Type	Flag
3	Dimming, output	Brighter/darker	4 bit	CW
Dimming telegrams are received via the group address linked with this object. The telegram must contain the brighter/darker information (bit 3), and the dimming increment information (bits 0,1,2).				
This object is always active.				

Obj	Object name	Function	Type	Flag
4	Brightness, output	8-bit value	1 byte	CW
8-bit values are received or sent as dimming values via the group address linked with this object. Note <ul style="list-style-type: none"> The current dimming value is tracked internally. If the parameter <i>Report status (Dimming value) = No</i>, then the current dimming value is transferred with the transfer flag if the dimming value changes! If the <i>Dimming status, output object is enabled (Report status (Dimming value) = Yes)</i>, there is no active feedback via the Brightness object. 				

Obj	Object name	Function	Type	Flag
5	Switching status, output	On/Off	1 bit	CW
The switching status is sent via the group address linked with this object. [0]: Off [1]: On The object is only enabled if the parameter <i>Report status (Switching) = Yes</i>				

Obj	Object name	Function	Type	Flag
6	Dimming status, output	Set 8-bit	1 byte	CT
The dimming status is sent as an 8-bit value via the group address linked with this object. The object is only enabled if the parameter <i>Report status (Dimming value) = Yes</i>				

Obj	Object name	Function	Type	Flag
7	Blocking, output	Enabling/Disabling	1 bit	CW
Blocking telegrams are received via the group address linked with this object. The allocation of logical 0 and logical 1 can be set. The object is only enabled if the <i>Blocking function</i> parameter = Yes.				

Obj	Object name	Function	Type	Flag
11	Scene, output	8-bit scene recall/save	1 byte	CW
8-bit scene telegrams are received via the group address linked with this object.				

Obj	Object name	Function	Type	Flag
12	Short circuit state, output	1=short circuit	1 bit	CT
The short circuit status is sent via the group address linked with this object. [1]: Short circuit Yes [0]: Short circuit No				

Obj	Object name	Function	Type	Flag
13	Load failure, output	Load failure Yes/No	1 bit	CT
The load failure status is sent via the group address linked with this object. [1]: Load failure Yes [0]: Load failure No				

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4.3. Inputs, objects for switching

Obj	Object name	Function	Type	Flag
1	Switching, Input A Object A.1	On/Off/Toggle	1 bit	CWT
2	Switching, Input B, Object B0.1	On/Off/Toggle	1 bit	CWT
9	Switching, Input A Object A.2	On/Off/Toggle	1 bit	CWT
10	Switching, Input B, Object B.2	On/Off/Toggle	1 bit	CWT

Switching telegrams are sent via the group address linked with this object (1 - On, 0 = Off).
 This object is only active if:
 - *Input action* parameter = separately on bus
 - *Input A function* parameter = switch
 (or *Input B function* = switch)
 The parameters for this object are described under section 5.

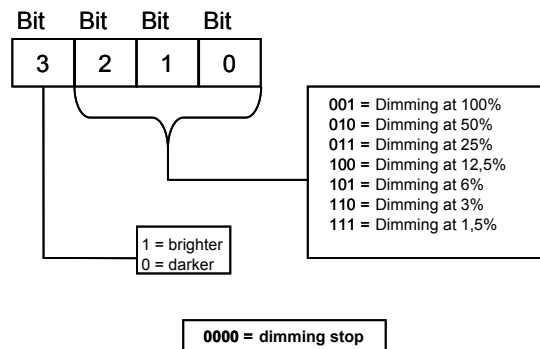
4.4. Inputs, objects for dimming

Obj	Object name	Function	Type	Flag
1	Dimming ON/OFF, Input A	On/Off	1 bit	CWT
2	Dimming ON/OFF, Input B	On/Off	1 bit	CWT

Switching telegrams are sent via the group address linked with this object (1 - On, 0 = Off).
 This object is only active if:
 - *Input action* parameter = separately on bus
 - *Input A function* parameter = dimming
 (or *Input B function* = dimming)
 The parameters for this object are described under section 5.

Obj	Object name	Function	Type	Flag
9	Dimming, Input A	brighter/darker	4 bit	CT
10	Dimming, Input B	brighter/darker	4 bit	CT

Dimming telegrams are sent via the group address linked with this object. The telegram contains the brighter/darker information (bit 3), and the dimming increment information (bits 0,1,2).



This object is only active if:
 - *Input action* parameter = separately on bus
 - *Input A function* parameter = dimming
 (or *Input B function* = dimming)
 The parameters for this object are described under section 5.

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4.5. Inputs, objects for blind

Obj	Object name	Function	Type	Flag
1	Slat-Position, Input A	Open/Close	1 bit	CT
2	Slat-Position, Input B	Open/Close	1 bit	CT

The following commands are sent via the group address linked with this object.

- 0 = Slat up (1 slat adjustment increment) or Stop moving blind (if blind moving)
- 1 = Slat down (1 slat adjustment increment) or Stop moving blind (if blind moving)

This object is only active if:

- *Input action* parameter = separately on bus
- *Input A function* parameter = blind (or *Input B function* = blind)

The parameters for this object are described under section 5.

Obj	Object name	Function	Type	Flag
9	Venetian blind, Input A	Up/Down	1 bit	CT
10	Venetian blind, Input B	Up/Down	1 bit	CT

Shutter commands are sent via the group address linked with this object. (0 = Up, 1 = Down)

This object is only active if:

- *Input action* parameter = separately on bus
- *Input A function* parameter = blind (or *Input B function* = blind)

The parameters for this object are described under section 5.

4.6. Inputs, setting objects for 8-bit values

Obj	Object name	Function	Type	Flag
1	Value, Input A	Set 8-bit value	1 byte	CT
2	Value, Input B	Set 8-bit value	1 byte	CT

Value telegrams (0...255) are sent via the group address linked with this object.

This object is only active if:

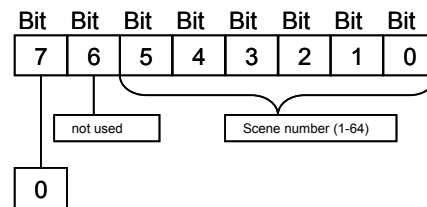
- *Input action* parameter = separately on bus
- *Input A function* parameter = 8-bit value sensor (or *Input B function* = 8-bit value sensor)
- *Function as* parameter = Set value

The parameters for this object are described under section 5.

4.7. Inputs, call up objects for scenes

Obj	Object name	Function	Type	Flag
1	Scene, Input A	8-bit Scene recall	1 byte	CT
2	Scene, Input B	8-bit Scene recall	1 byte	CT

Telegrams recalling scenes (1...64) are sent via the group address linked with this object.



This object is only active if:

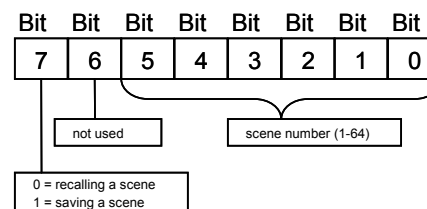
- *Input action* parameter = separately on bus
- *Input A function* parameter = 8-bit value sensor (or *Input B function* = 8-bit value sensor)
- *Function as* parameter = call up scene

The parameters for this object are described under section 5.

4.8 Inputs, objects for recalling/saving scenes

Obj	Object name	Function	Type	Flag
1	Scene, Input A	Recall/save 8-bit scene	1 byte	CT
2	Scene, Input B	Recall/save 8-bit scene	1 byte	CT

Telegrams recalling and saving scenes (1...64) are sent via the group address linked with this object.



This object is only active if:

- *Input action* parameter = separately on bus
- *Input A function* parameter = 8-bit value sensor (or *Input B function* = 8-bit value sensor)
- *Function as* parameter = call up/save scene

The parameters for this object are described under section 5.

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Obj	Object name	Function	Type	Flag
17	Blocking Input A	Enabling/Disabling	1 bit	CW
18	Blocking Input B	Enabling/Disabling	1 bit	CW

Blocking commands are sent via the group address linked with this object. The allocation of logical 0 and logical 1 can be set. This object is only active if:

- *Input action* parameter = separately on bus
- *Blocking function* parameter = active

The parameters for this object are described under section 5.

5. Parameter descriptions**5.1. Introduction to parameter windows**

Parameter windows are used to set the desired behaviour of the inputs and the behaviour of the outputs.

5.2 "General" parameters window

Parameters	Settings
Operation mode of inputs	Directly to output (A > ON / B > OFF) Inputs acting separately on bus
Determines whether the actuator inputs act directly on the switching output (works function) or alternatively on both inputs independently as binary inputs on the KNX/EIB.	
Only when "Action = separately on bus" are the parameter cards visible at the inputs! The setting "Input action = directly on output" is the default setting.	

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<p><i>Applies only to:</i> <i>Input action = directly on output (A → ON/B → OFF)</i></p>	
Parameters	Settings
Delay on bus voltage recovery Base	130 ms/260 ms/520 ms/ 1s/2.1s/4.2s/8.4s/ 17s/34s/ 1.1min/2.2min/4.5min/ 9min/18 min/35min/ 1.2 hours
<p>This value determines the time basis (<i>basis</i>) of the delay period. <i>Delay = Basis × factor</i> (Default setting: 1s × 17 = 17s)</p> <p>After bus power is recovered, the switching actuator application program can be blocked for a set time until the corresponding responses are completed. During this time, signals present at the inputs are not analyzed and the switching outputs are uncontrolled! Neither will any report be made until the delay time has elapsed.</p>	
Delay on bus voltage recovery Factor (3 ... 127)	3 ... 17 ... 127
<p>This value determines the delay time factor (<i>factor</i>). <i>Delay = Basis × factor</i> (Default setting: 1s × 17 = 17s)</p>	
Debouncing time for binary inputs (10 ... 255) × 0.5ms	10 ... 60 ... 255
<p>This value determines the time factor (<i>factor</i>) for the software debounce time. This is common to all binary inputs. The time set here is used to analyze a signal edge at the input with a delay. <i>Debounce time = 0.5 ms × factor</i> (Default setting: 0.5 ms · 60 = 30 ms)</p>	
Limit number of telegrams	enabled disabled
<p>Telegram rate limitation can be blocked or unblocked. If telegram rate limitation is unblocked, in principle no telegrams will be sent in the first 17 seconds after bus power is recovered!</p>	
Telegrams per 17 s	30, 60, 100, 127
<p>If telegram rate limitation is unblocked, the maximum number of telegrams in 17 seconds can be set at this point.</p>	

5.3. Parameter window "Output, General"

Parameters	Settings
Basic brightness (brightness value=1) (depending on lamp)	level 1 level 2 level 3 (incandescent lamps) level 4 Stufe 5 (standard halogen) level 6 level 7 level 8
<p>Matching the basic brightness (lowest dimming increment/dimming value = 1) to local conditions. Increment one has the darkest basic brightness.</p>	
Behaviour on bus voltage failure	OFF Basic brightness 10% 20% 30% 40% 50% 60% 70% 80% 90% Maximum dimming value No change
<p>Determines the behaviour on bus power failure.</p>	
Behaviour on bus voltage recovery	Switch OFF Basic brightness 10% 20% 30% 40% 50% 60% 70% 80% 90% Maximum dimming value Brightness value at bus voltage failure
<p>Determines the behaviour on bus power restoration.</p>	

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Parameters	Settings
Starting value	Basic brightness 10% 20% 30% 40% 50% 60% 70% 80% 90% Maximum dimming value Retained brightness value
Determines the switching on brightness on receiving an ON telegram via the object 0. If the setting is "Dimming value before the last switch off", the dimming value which was active via the switching object before the last switching off is set when switching on the dimming value. If the actuator was already switched off before the last switching off (Dimming value = 0) or the device was configured by the ETS, the "Brightness before the last switching off" = "1" (Default brightness) is set.	
Dimming value	jump dimming
Determines whether a dimming value received via object 4 is dimmed in or triggered directly.	
Time between 2 out of 255 dimming steps Base	0.5 ms 8 ms 2.1 s 130 ms 33 s
Determines the timebase which is used for dimming 2 of the 255 dimming increments. The relative dimming speed is set by changing the frequency of the dimming increments. $Time = Factor \times basis$	
Time between 2 out of 255 dimming steps Factor (3 ... 255)	3... 24 ...255
Time factor for the time between two dimming increments. Default setting: 24 x 0.5 ms = 12 ms	

Parameters	Settings
Shut-off function	Yes No
Determines whether the dimmer is to switch off on reaching a dimming value which is below a variable switch-off dimming value.	
Shut-off at brightness value below	5% (corresponds to brightn. value = 13) 10% (corresponds to brightn. value = 25) ... 90% (corresponds to brightn. value = 230) 95% (corresponds to brightn. value = 242) Max. brightn. (corresp. brightn. value = 255)
On reaching a dimming value which is below this switch-off dimming value, the dimmer switches off after a configurable delay.	
Delay until shut-off Base	0.5 ms 8 ms 2.1 s 130 ms 33 s
Basic switch-off delay. $Delay = Basis \times factor$	
Delay until shut-off Factor (3...255)	3... 10 ...255
Switch-off delay factor. Default setting: 10 x 130 ms = 1.3 s	

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5.4. Parameter window "Output, Enable"

Parameters	Settings
Time functions	Yes No
Determines whether the parameters are to be enabled for the soft and/or time dimmer functions.	
Blocking function	Yes No
Determines whether the parameters for the blocking function are to be enabled.	
Scenes	Yes No
Determines whether the parameters for the light scene function are to be enabled.	
Report switching status	Yes No
Determines whether the switching status is to be fed back.	
Value response object available	Yes No
Determines whether the dimming value is to be fed back via the value status object (YES) or via the dimming value object (NO). If feedback is via the dimming value object, the transfer flag must be set!	
Report short-circuit	Yes No
Determines whether a short circuit is to be reported.	
Report load failure	Yes No
Determines whether a load failure or a mains power failure is to be reported.	

5.5. Parameter window "Output, Time functions"

Parameters	Settings
Soft-ON function	Yes No
Determines whether the Soft-ON-function is switched on.	
Soft-ON time for a dimming step Base	0.5 ms 8 ms 2.1 s 130 ms 33 s
Setting for a slow switch on: Dimming until the set switch-on brightness is reached (cannot be retrigged).	
$t_1 - t_0$: time for Soft-ON Time base for a dimming increment with Soft-ON $\text{Time} = \text{Basis} \times \text{factor}$	
Soft-ON time for a dimming step Factor (3...255)	3...24...255
Time factor for a dimming increment with Soft-ON Default setting: $24 \times 0.5 \text{ ms} = 12 \text{ ms}$	

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Parameters	Settings
Soft-OFF function	Yes No
Determines whether the Soft-OFF-function is switched on.	
Soft-OFF time for a dimming step Base	0.5 ms 8 ms 2.1 s 130 ms 33 s
Setting for a slow switch off: Dimming down until switch off is reached (cannot be retrIGGERED).	
<p>normal switching behavior</p> <p>Soft-OFF</p> <p>t₂ t₃ time</p>	
t ₃ - t ₂ : time for Soft-OFF Time base for a dimming increment with Soft-OFF Time = Basis × factor	
Soft-OFF time for a dimming step Factor (3...255)	3...24...255
Time factor for a dimming increment with Soft-OFF Default setting: 24 × 0.5 ms = 12 ms	

Parameters	Settings
Timer function	Yes No
If the timer is on, a time switching function is started with switch-on ("ON"-telegram). After the set delay has elapsed, the dimmer is switched off automatically (can be retrIGGERED). Soft-ON and Soft-OFF functions can also be enabled. Time mode can be interrupted prematurely by an OFF command.	
<p>brightness</p> <p>t₀ t₁ t₂ t₃ time</p>	
t ₁ - t ₀ : time for Soft-ON (optional) t ₂ - t ₁ : time between ON and OFF t ₃ - t ₂ : time for Soft-OFF (optional)	
Time between ON and OFF Base	0.5 ms 8 ms 2.1 s 130 ms 33 s
Delay = Basis × factor	
Time between ON and OFF Factor (3...255)	3...80...255
Delay = Basis × factor Default setting: 80 × 130 ms = 10.4 s	

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5.6. Parameter window "Output, Blocking"

Parameters	Settings
Polarity of blocking object	interlocking =1 (enabling = 0) interlocking =0 (enabling = 1)
<i>Blocking =1 (Enabled = 0):</i> The dimmer is blocked if the blocking object = 1. <i>Blocking =0 (Enabled = 1):</i> The dimmer is blocked if the blocking object = 0.	
Behaviour at the beginning of blocking	OFF Basic brightness 10% 20% 30% 40% 50% 60% 70% 80% 90% Maximum brightness No action Retained brightness value
Determines which dimming value is set at the output at the beginning of blocking. If the setting is "No action", the current dimming value remains set. If the setting is "Dimming value before the last switch off", the dimming value which was active via the switching object before the last switching off is set at the beginning of the blocking. If the actuator was already switched off before the last switching off (Dimming value = 0) or the device was programmed by the ETS, the "Dimming value before the last switching off" = "1" (Default brightness) is set.	

Parameters	Settings
Behaviour at the end of blocking	Switch OFF Basic brightness 10% 20% 30% 40% 50% 60% 70% 80% 90% Maximum dimming value No action Dimming value before the last switch-off Tracked dimming value
Determines which dimming value is set at the output at the end of blocking. If the setting is "No action", the current dimming value remains set. If the setting is "Dimming value before the last switch off", the dimming value which was active via the switching object before the last switching off is set at the beginning of the blocking. If the actuator was already switched off before the last switching off (Dimming value = 0) or the device was programmed by the ETS, the "Dimming value before the last switching off" = "1" (Default brightness) is set. If the setting is "Tracked dimming value", bus telegrams received during the active blocking (via the switching, dimming or dimming value objects) are also registered. The dimming value tracked in this way or active before the blocking function is set at the end of blocking.	

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5.7. Parameter window "Output, Scenes"

Parameters	Settings
Representation of scene values	As numerical values (0...255) As a percentage
This parameter determines how the configurable light scene values are depicted. This parameter acts identically on all scenes (1-8). <i>in percent:</i> The dimming values are depicted in fixed percentage steps. <i>as values (0...255):</i> The depiction is in decimal figures. The dimming values 0 to 255 can be assigned to light scenes continuously.	

Applies likewise to scenes 2 - 8:

Parameters	Settings
Brightness for scene 1 (as numerical value)	0...255
Setting for the dimming value with scene 1. Applies only for "Depiction of light scene values = as values (0...255)"! <i>The default settings are different for each scene!</i>	
<i>See the following table:</i>	
Scene 1: 0	Scene 5: 102
Scene 2: 1	Scene 6: 154
Scene 3: 23	Scene 7: 204
Scene 4: 51	Scene 8: 255
Brightness for scene 1 (as a percentage)	OFF Basic brightness 10% 20% 30% 40% 50% 60% 70% 80% 90% Maximum dimming value
Setting for the dimming value with scene 1. Applies only for "Depiction of light scene values = in percent!" <i>The default settings are different for each scene!</i>	
<i>See the following table:</i>	
Scene 1: OFF	Scene 5: 40%
Scene 2: Dimming value for default brightness	Scene 6: 60%
Scene 3: 10%	Scene 7: 80%
Scene 4: 20%	Scene 8: maximum dimming value

Parameters	Settings
Storage function	Yes No
Determines whether a set brightness at the dimmer can be saved as a light scene. This parameter acts identically on all scenes (1-8).	

5.8. "Input" parameters window

*Applies only to:
Operation mode of inputs = inputs acting separately on bus*

Parameters	Settings
Function of input A	no function switching dimming Venetian blind 8-bit value transmitter (value/scene)
Determines the input A function.	

*Applies only to:
Function of input A = no function*
→ No further parameters!

5.8.1 Input switching

*Applies only to:
Function of input A = switching*

Parameters	Settings
Command on rising edge Input A, object A.1	no reaction ON OFF Toggle
Determines the command which is sent on a rising edge via the object A.1. <i>TOGGLE: The object value is switched.</i>	
Command on falling edge Input A, object A.1	no reaction ON OFF Toggle
Determines the command which is sent on a falling edge via the object A.1. <i>TOGGLE: The object value is switched.</i>	
Command on rising edge Input A, object A.2	no reaction ON OFF Toggle
Determines the command which is sent on a rising edge via the object A.2. <i>TOGGLE: The object value is switched.</i>	
Command on falling edge Input A, object A.2	ON OFF Toggle
Determines the command which is sent on a falling edge via the object A.2. <i>TOGGLE: The object value is switched.</i>	

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<i>Applies only to:</i> <i>Function of input A = switching</i>	
Parameters	Settings
Behaviour on bus voltage recovery	no reaction transmit current input status send ON telegram send OFF telegram
<p>You can determine which response should occur after bus power is recovered. The set delay after bus power restoration must only run until the response set here has been obtained. No reaction: There is no reaction. Send current input status: The current input status of the inputs corresponding to settings for rising and falling edges is sent. Send ON telegram: An ON is sent. Send OFF telegram: An OFF is sent.</p>	
Cyclical transmission	No cyclical sending Repeat when ON Repeat when OFF Repeat when ON and OFF
<p>You can send the object value cyclically, depending on its value, via the switching objects. <u>No cyclical sending</u>: There is no cyclical sending. Repeat for ON: There is cyclical sending if the object value is "ON". Repeat for OFF: There is cyclical sending if the object value is "OFF". Repeat for ON and OFF: Sending is always cyclical, regardless of the object value.</p>	

<i>Applies only to:</i> <i>Cyclical transmission = repeat when ...</i>	
Parameters	Settings
Time base for cyclical transmission Input A, object A.1	1s / 2.1s / 4.2s / 8,4s / 17s / 34s / 1.1 min / 2.2min / 4.5min / 9 min / 18min / 35min / 1.2h
<p>Determines the time basis for cyclical sending via the object A.1. <u>Time = Basis × factor</u></p>	
Time base for cyclical transmission Input A, object A.2	1s / 2.1s / 4.2s / 8,4s / 17s / 34s / 1.1 min / 2.2min / 4.5min / 9 min / 18min / 35min / 1.2h No cyclical transmission via switching object A.2
<p>Determines the time basis for cyclical sending via the object A.2. <u>Time = Basis × factor</u> <u>No cyclical sending via input A, object A.2</u> Cyclical sending via the object A.2 can be blocked with this setting.</p>	
Time factor for cyclical transmission Input A, Objects A.1 and A.2 (3 ... 127)	3 ... 60 ... 127
<p>Determines the time factor for cyclical sending via both switching objects. <u>Time = Basis × factor</u> (Default setting: 1s × 60 = 60s)</p>	

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5.8.2 Input dimming

<i>Applies only to:</i> <i>Function of input A = dimming</i>	
Parameters	Settings
Operation	Single-button operation: brighter/darker (TOGGLE) Double-button operation: brighter (ON) Double-button operation: darker (OFF) Double-button operation: brighter (TOGGLE) Double-button operation: darker (TOGGLE)
<p>Determines the reaction at the input on a rising edge.</p> <p><u>1 pushbutton; brighter/darker (toggle):</u> A short press on a pushbutton at the input toggles the object value of the switched object and sends a corresponding telegram. Holding down the pushbutton for a longer period triggers a dimming telegram (brighter/darker). The dimming direction is only saved internally and toggles on subsequent dimming processes.</p> <p><u>2 pushbuttons; brighter (ON):</u> A short operation on a pushbutton at the input triggers an ON telegram; a long pushbutton operation triggers a dimming telegram (brighter).</p> <p><u>2 pushbuttons; darker (OFF):</u> A short operation on a pushbutton at the input triggers an OFF telegram; a long operation triggers a dimming telegram (darker).</p> <p><u>2 pushbuttons; brighter (toggle):</u> A short operation on a pushbutton at the input toggles the object value of the switched object and sends a corresponding telegram; a long operation triggers a dimming telegram (brighter).</p> <p><u>2 pushbuttons; darker (toggle):</u> A short operation on a pushbutton at the input toggles the object value of the switched object and sends a corresponding telegram; a long operation triggers a dimming telegram (darker).</p>	

<i>Applies only to:</i> <i>Function of input A = dimming</i>	
Parameters	Settings
Long push button action min.	130 ms 260 ms 520 ms 1s
Time from which the dimming function ("holding down") is executed. $Time = Basic \times factor$	
Long push button action min.	4 ... 127
Factor (4 ... 127)	
Time from which the dimming function ("holding down") is executed. $Time = Basic \times factor$ (Default setting: 130 ms x 4 = 520 ms)	
Behaviour on bus voltage recovery	No reaction Send ON telegram Send OFF telegram
<p>You can determine which response should occur after bus power is recovered.</p> <p>If a delay following bus power recovery is set, this time must only elapse when the response set here has occurred.</p> <p><u>No reaction:</u> There is no reaction.</p> <p><u>Send ON telegram:</u> An ON is sent.</p> <p><u>Send OFF telegram:</u> An OFF is sent.</p>	
Transmit stop telegram	Yes No
When a pushbutton at the input is released (falling edge) one or no stop telegram will be sent.	
Repeat telegram	Yes No
Cyclical dimming telegrams are repeated during a long press.	

<i>Applies only to Operation:</i> = <i>Single-button operation: brighter/darker (Toggle)</i> = <i>Double-button operation: brighter (ON)</i> = <i>Double-button operation: brighter (Toggle)</i>	
Parameters	Settings
Increase brightness by	100%; 50%; 25%; 12,5%; 6%; 3%; 1,5%
You can dim by a maximum of X% brighter with a dimming telegram. This parameter determines the maximum dimming interval for a dimming telegram.	

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Applies only to Operation:
 = Single-button operation: brighter/darker (Toggle)
 = Double-button operation: darker (OFF)
 = Double-button operation: darker (Toggle)

Parameters	Settings
Decrease brightness by	100%; 50%; 25%; 12,5%; 6%; 3%; 1,5%

You can dim by a maximum of X% darker with a dimming telegram. This parameter determines the maximum dimming interval for a dimming telegram.

Applies only to:
 Repeat Telegramm = YES

Parameters	Settings
Time between two telegrams	130 ms 260 ms 520 ms
Base	1s

Time basis between two telegrams at a set telegram repetition rate. A new dimming telegram is sent each time this period elapses.
 Time = Basic × factor

Time between two telegrams Factor (3 ... 127)	3 ... 10 ... 127
--	------------------

Time factor between two telegrams at a set telegram repetition rate. A new dimming telegram is sent each time this period elapses.
 Time = Basic × factor
 (Default setting: 130 ms × 10 = 1.3s)

5.8.3 Blind input

Applies only to:
 Function of input A = blind

Parameters	Settings
Command on rising edge	No function up down toggle

Determines the reaction at the input on a rising edge.
Not used: The input is de-activated.
UP: Telegram triggered on,
 - short press of the pushbutton: STEP telegram (UP),
 longer press on the pushbutton: MOVE telegram (up)
DOWN: Telegram triggered on,
 - short press of the pushbutton: STEP telegram (DOWN),
 longer press on the pushbutton: MOVE telegram (down)
TOGGLE: Telegram triggered on,
 - short press of the pushbutton: STEP telegram (toggle),
 Several sequential STEP telegrams are switched in the same direction.
 longer press on the pushbutton: MOVE telegram (toggle)

Behaviour on bus voltage recovery	No reaction up down
-----------------------------------	---------------------------

You can determine which response should occur after bus power is recovered.
No reaction: There is no reaction.
UP: A MOVE (UP) is sent.
DOWN: A MOVE (DOWN) is sent.
Note: If a delay following bus power recovery is set, this time must only elapse when the response set here has occurred.

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Parameters	Settings
Operating concept	step – move – step move – step
Determines the telegram sequence after pressing a pushbutton (rising edge).	
<u>Step – move – step:</u>	
<p>A STEP is sent with a rising edge and the time T1 (time between tapping and holding down the button) is started. This STEP is used to stop a running constant movement. If a falling edge is detected within T1, the binary input does not send another telegram.</p> <p>If no falling edge was detected during T1, the binary input sends a MOVE automatically when T1 times out and starts the time T2 (slat adjustment time). If a falling edge is then detected within T2, the binary input sends a STEP. This function is used for slat setting. T2 should equal the time for a slat to turn thru 180°.</p>	
<u>Move – step:</u>	
<p>With a rising edge at the input, a MOVE is sent and the time T1 (slat adjustment time) is started. If a falling edge is detected within T1, the binary input sends a STEP. This function is used for slat setting. T1 should equal the time for a slat to turn thru 180°.</p>	

Parameters	Settings
Slat adjustment time	130 ms/260 ms/520ms
Base	1s / 2.1s / 4.2s / 8.4s / 17s / 34s
Time during which a MOVE telegram for setting the slats can be ended by releasing the pushbutton at the input. Time = Basis × factor	
Slat adjustment time	3 ... 20 ... 127
Factor (3 ... 127)	
Time during which a MOVE telegram for setting the slats can be ended by releasing the pushbutton at the input. Time = Basis × factor (Default setting: 130ms x 20 = 2.6s)	

<i>Applies only to:</i>	
<i>Operating concept = step – move – step</i>	
Parameters	Settings
Long push button action	130 ms/260 ms/520ms
min.	1s/2.1s/4.2s/8.4s
Base	17s/34s
Time from which a long pushbutton action is executed. Time = Basis × factor	
Long push button action	4 ... 127
min. Factor (4... 127)	
Time from which a long pushbutton action is executed. Time = Basis × factor (Default setting: 130 ms x 4 = 520 ms)	

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5.8.4 Input 8-bit value (value/scene)

<i>Applies only to: Function of A = 8-bit value sensor (value/scene)</i>	
Parameters	Settings
Function as	Setting value Recall scene Scene recall / save
Determines the function to be executed.	

5.8.4.1 Set value

<i>Applies only to: Function as = set value</i>	
Parameters	Settings
Transmit value	On rising edge (push button as n.o. contact) On falling edge (push button as n.c. contact) On rising and falling edge (switch)
Determines the edge on which the set value will be sent.	
Behaviour on bus voltage recovery	No reaction Reaction as with rising edge Reaction as with falling edge Transmit current input status
You can determine which response should occur after bus power is recovered. If a delay following bus power recovery is set, this time must only elapse when the response set here has occurred. <i>No reaction:</i> There is no reaction. <i>Reaction as with rising edge:</i> The value set for a rising edge is sent. This is only possible with: Send value for = rising edge (pushbutton as NO contact) Send value for = rising and falling edges (switch) <i>Reaction as with falling edge:</i> The value set for a falling edge is sent. This is only possible with: Send value for = falling edge (pushbutton as NC contact) Send value for = rising and falling edges (switch) Send current input status: The current input status of the inputs corresponding to settings for rising and falling edges is sent. This is only possible with: Send value for = rising and falling edges (switch)	

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*Applies only to:
Transmit value = on rising edge (pushbutton as NO contact)*

Parameters	Settings
Value on rising edge (0 ... 255)	0 ... 100 ... 255
Determines the value which will be sent on a rising edge.	
Value change by long press	Yes No
With a long pushbutton action (< 5 s) the current value can be reduced or increased cyclically by the set increment (see below) and sent. After this value is set, the last value sent remains saved. This parameter determines whether you can set a value.	

*Applies only to:
Transmit value = on falling edge (pushbutton as NC contact)*

Parameters	Settings
Value on falling edge (0 ... 255)	0 ... 255
Determines the value which will be sent on a falling edge.	
Value change by long press	Yes No
With a long pushbutton action (< 5 s) the current value can be reduced or increased cyclically by the set increment (see below) and sent. After this value is set, the last value sent remains saved. This parameter determines whether you can set a value.	

*Applies only to:
Transmit value = on rising and falling edges (switch)*

Parameters	Settings
Value on rising edge (0 ... 255)	0 ... 100 ... 255
Determines the value which will be sent on a rising edge.	
Value on falling edge (0 ... 255)	0 ... 255
Determines the value which will be sent on a falling edge.	

*Applies only to:
Value change by long press = Yes*

Parameters	Settings
Time between two telegrams Base	130 ms 260 ms 520 ms 1s
Time basis for the time between two cyclical telegrams with value setting.	
Time between two telegrams Factor (3 ... 127)	3 ... 127
Time factor for the time between two cyclical telegrams with value setting. Time = Basis × factor (Default setting: 520 ms × 3 = 1.56s)	
Step width (1 ... 10)	1 ... 10
Increment by which the set value is reduced or increased with the button held down.	

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5.8.4.2 Recall scene

<i>Applies only to: Function as = recall scene</i>	
Parameters	Settings
Transmit scene number	On rising edge (push button as n.o. contact) On falling edge (push button as n.c. contact) On rising and falling edge (switch)
Determines the edge on which a configured scene will be sent.	
Behaviour on bus voltage recovery	No reaction Reaction as with rising edge Reaction as with falling edge Transmit current input status
<p>You can determine which response should occur after bus power is recovered.</p> <p>If a delay following bus power recovery is set, this time must only elapse when the response set here has occurred.</p> <p><u>No reaction:</u> There is no reaction.</p> <p><u>Reaction as with rising edge:</u> The scene set for a rising edge must be sent.</p> <p>This is only possible with: Send scene number for = rising edge (pushbutton as NO contact) Send scene number for = rising and falling edges (switch) Reaction as with falling edge: The scene set for a falling edge must be sent.</p> <p>This is only possible with: Send scene number for = falling edge (pushbutton as NC contact) Send scene number for = rising and falling edges (switch) Send current input status: The current input status of the inputs corresponding to settings for rising and falling edges is sent.</p> <p>This is only possible with: Send scene number for = rising and falling edges (switch)</p>	

<i>Applies only to: Transmit scene number = on rising edge (pushbutton as NO contact)</i>	
Parameters	Settings
Scene on rising edge (1 ... 64)	1 ... 64
Determines the scene which will be sent on a rising edge.	

<i>Applies only to: Transmit scene number = on falling edge (pushbutton as NC contact)</i>	
Parameters	Settings
Scene on falling edge (1 ... 64)	1 ... 64
Determines the scene which will be sent on a falling edge.	

<i>Applies only to: Transmit scene number = on rising and falling edges (switch)</i>	
Parameters	Settings
Scene on rising edge (1 ... 64)	1 ... 64
Determines the scene which will be sent on a rising edge.	
Scene on falling edge (1 ... 64)	1 ... 64
Determines the scene which will be sent on a falling edge.	

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5.8.4.3 Recall / save scene

<i>Applies only to:</i> <i>Function as = recall/save scene</i>	
Parameters	Settings
Transmit scene number	On rising edge (push button as n.o. contact) On falling edge (push button as n.c. contact)
Determines the edge on which the set value will be sent.	
Behaviour on bus voltage recovery	No reaction Reaction as with rising edge Reaction as with falling edge
You can determine which response should occur after bus power is recovered. If a delay following bus power recovery is set, this time must only elapse when the response set here has occurred. <i>No reaction:</i> There is no reaction. <i>Reaction as with rising edge:</i> The scene set for a rising edge must be sent. This is only possible with: Send scene number for = rising edge (pushbutton as NO contact) Reaction as with falling edge: The scene set for a falling edge must be sent. This is only possible with: Send scene number for = falling edge (pushbutton as NC contact)	
Storage function only	Yes No
You can only send a save telegram without calling up a light scene beforehand. <i>Only save function = No:</i> If a rising or falling edge is detected at the input (dependent on the settings), the timer starts. If it is released again within the first second, the corresponding light scene is called up directly. If the pushbutton operation is longer, the save telegram is sent after 5 seconds. <i>only save function = Yes:</i> The save telegram is sent directly after detecting the corresponding edge.	

<i>Applies only to:</i> <i>Storage function only = No</i>	
Parameters	Settings
Time between two telegrams Base	130 ms 260 ms 520 ms 1 s
Time basis for the time to hold the pushbutton down in order to send a save telegram. Time = Basic × factor	
Time of a long press for storage Factor (x ... 127)	24 ... 38 ... 127 13 ... 19 ... 127 9 ... 10 ... 127 4 ... 5 ... 127
<i>Note:</i> The factor range is dependent on the set basis. Only times > 3 seconds can be set this way.	
Time factor for the time to hold the pushbutton down in order to send a save telegram. Time = Basis × factor Default setting: 520 ms × 10 = 5.2 s	

<i>Applies only to:</i> <i>Transmit scene number = on rising edge (pushbutton as NO contact)</i>	
Parameters	Settings
Scene on rising edge (1 ... 64)	1 ... 64
Determines the scene which will be sent on a rising edge.	

<i>Applies only to:</i> <i>Transmit scene number = on falling edge (pushbutton as NC contact)</i>	
Parameters	Settings
Scene on falling edge (1 ... 64)	1 ... 64
Determines the scene which will be sent on a falling edge.	

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5.9 "Block input" parameters window

Parameters	Settings
Blocking function	active disabled
Use these parameters to activate the blocking function.	

The following applies only to:
Blocking function = active

5.9.1 Block switching

Applies only to: Function of input A = switching	
Parameters	Settings
Disabling object polarity	interlocking = 1 (enabling = 0) interlocking = 0 (enabling = 1)
The parameter prescribes the polarity of the blocking object.	
Behaviour at the beginning of blocking objects A.1 and A.2	No reaction ON OFF Toggle
When the blocking function is approved, both objects (A.1 + A.2) are blocked! This parameter determines the command which will be sent to begin the blocking via both objects (A.1 + A.2). TOGGLE: The object values are switched.	
Behaviour at the end of blocking objects A.1 and A.2	No reaction ON OFF Transmit current input status
When the blocking function is approved, both objects (A.1 + A.2) are blocked! This parameter determines the command which will be sent to end the blocking via both objects (A.1 + A.2). Send current input status: With this setting, the current input status of the inputs corresponding to the settings for rising and falling edges is sent.	

5.9.2 Block dimming

Applies only to: Function of input A = dimming	
Parameters	Settings
Disabling object polarity	interlocking = 1 (enabling = 0) interlocking = 0 (enabling = 1)
The parameter prescribes the polarity of the blocking object.	
Behaviour at the beginning of blocking	No reaction ON OFF Toggle
This parameter determines the command which will be sent to begin the blocking via the switching object. TOGGLE: The object values are switched.	
Behaviour at the end of blocking	No reaction OFF
This parameter determines the command which will be sent to end the blocking via the switching object.	

5.9.3 Block blind

Applies only to: Function of input A = blind	
Parameters	Settings
Disabling object polarity	interlocking = 1 (enabling = 0) interlocking = 0 (enabling = 1)
The parameter prescribes the polarity of the blocking object.	
Behaviour at the beginning of blocking	No reaction Down Up Toggle
This parameter determines the command which will be sent to begin the blocking via the long-time object. TOGGLE: The last direction of movement (saved internally) executed will be switched.	
Behaviour at the end of blocking	No reaction Down Up Toggle
This parameter determines the command which will be sent to end the blocking via the long-time object. TOGGLE: The last direction of movement (saved internally) executed will be switched.	

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5.9.4 Block set value

<p><i>Applies only to:</i> <i>Function of input A = 8-bit value sensor (value/scene)</i> <i>Function as = set value</i></p>	
Parameters	Settings
Disabling object polarity	interlocking = 1 (enabling = 0) interlocking = 0 (enabling = 1)
<p>The parameter prescribes the polarity of the blocking object.</p>	
Behaviour at the beginning of blocking	No reaction Reaction as with rising edge Reaction as with falling edge Transmit current input status
<p>This parameter determines the response which is given on blocking beginning. <u>No reaction:</u> There is no reaction. <i>Reaction as with rising edge:</i> The value set for a rising edge is sent. This is only possible with: Send value for = rising edge (pushbutton as NO contact) Send value for = rising and falling edges (switch) <u>Reaction as with falling edge:</u> The value set for a falling edge is sent. This is only possible with: Send value for = falling edge (pushbutton as NC contact) Send value for = rising and falling edges (switch) Send current input status: The current input status of the inputs corresponding to settings for rising and falling edges is sent. This is only possible with: Send value for = rising and falling edges (switch)</p>	

Parameters	Settings
Behaviour at the end of blocking	No reaction Reaction as with rising edge Reaction as with falling edge Transmit current input status
<p>This parameter determines the response which is given on blocking ending. <u>No reaction:</u> There is no reaction. <i>Reaction as with rising edge:</i> The value set for a rising edge is sent. This is only possible with: Send value for = rising edge (pushbutton as NO contact) Send value for = rising and falling edges (switch) <u>Reaction as with falling edge:</u> The value set for a falling edge is sent. This is only possible with: Send value for = falling edge (pushbutton as NC contact) Send value for = rising and falling edges (switch) Send current input status: The current input status of the inputs corresponding to settings for rising and falling edges is sent. This is only possible with: Send value for = rising and falling edges (switch)</p>	

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5.9.5 Block recall scene

<p><i>Applies only to:</i> Function of input A = 8-bit value sensor (value/scene) Function as = recall scene</p>	
Parameters	Settings
Disabling object polarity	interlocking = 1 (enabling = 0) interlocking = 0 (enabling = 1)
The parameter prescribes the polarity of the blocking object.	
Behaviour at the beginning of blocking	No reaction Reaction as with rising edge Reaction as with falling edge Transmit current input status
This parameter determines the response which is given on blocking beginning. <u>No reaction:</u> There is no reaction. <u>Reaction as with rising edge:</u> The scene set for a rising edge must be sent. This is only possible with: Send scene number for = rising edge (pushbutton as NO contact) Send scene number for = rising and falling edges (switch) Reaction as with falling edge: The scene set for a falling edge must be sent. This is only possible with: Send scene number for = falling edge (pushbutton as NC contact) Send scene number for = rising and falling edges (switch) Send current input status: The current input status of the inputs corresponding to settings for rising and falling edges is sent. This is only possible with: Send scene number for = rising and falling edges (switch)	

Parameters	Settings
Behaviour at the end of blocking	No reaction Reaction as with rising edge Reaction as with falling edge Transmit current input status
This parameter determines the response which is given on blocking ending. <u>No reaction:</u> There is no reaction. <u>Reaction as with rising edge:</u> The scene set for a rising edge must be sent. This is only possible with: Send scene number for = rising edge (pushbutton as NO contact) Send scene number for = rising and falling edges (switch) Reaction as with falling edge: The scene set for a falling edge must be sent. This is only possible with: Send scene number for = falling edge (pushbutton as NC contact) Send scene number for = rising and falling edges (switch) Send current input status: The current input status of the inputs corresponding to settings for rising and falling edges is sent. This is only possible with: Send scene number for = rising and falling edges (switch)	

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5.9.6 Blocking recall/save scene

*Applies only to:
Function of input A = 8-bit value sensor
(value/scene)
Function as = recall/save scene
Behaviour at the end of blocking = Reaction as
with rising edge*

Parameters	Settings
Disabling object polarity	interlocking = 1 (enabling = 0)
	interlocking = 0 (enabling = 1)
The parameter prescribes the polarity of the blocking object.	
Behaviour at the beginning of blocking	no reaction reaction as with rising edge
This parameter determines the response which is given on blocking beginning. <u>No reaction</u> : There is no reaction. <u>Reaction as with rising edge</u> : The scene set for a rising edge must be sent. This is only possible with: Send scene number for = rising edge (pushbutton as NO contact)	
Behaviour at the end of blocking	No reaction reaction as with rising edge
This parameter determines the response which is given on blocking ending. <u>No reaction</u> : There is no reaction. <u>Reaction as with rising edge</u> : The scene set for a rising edge must be sent. This is only possible with: Send scene number for = rising edge (pushbutton as NO contact)	

*Applies only to:
Function of input A = 8-bit value sensor
(value/scene)
Function as = recall/save scene
Behaviour at the end of blocking = Reaction as
with falling edge*

Parameters	Settings
Disabling object polarity	interlocking = 1 (enabling = 0)
	interlocking = 0 (enabling = 1)
The parameter prescribes the polarity of the blocking object.	
Behaviour at the beginning of blocking	no reaction reaction as with falling edge
This parameter determines the response which is given on blocking beginning. <u>No reaction</u> : There is no reaction. <u>Reaction as with falling edge</u> : The scene set for a falling edge must be sent. This is only possible with: Send scene number for = falling edge (pushbutton as NC contact)	
Behaviour at the end of blocking	no reaction reaction as with falling edge
This parameter determines the response which is given on blocking ending. <u>No reaction</u> : There is no reaction. <u>Reaction as with falling edge</u> : The scene set for a falling edge must be sent. This is only possible with: Send scene number for = falling edge (pushbutton as NC contact)	

→ For input B, see input A!