

12 A1S2 Blind, 2 × inputs 207301

1. Use of the application program

2. Product description

- 2.1. Description of the blind actuator UP 520/31
- 2.2. Delivered with the blind actuator UP 520/31

3. Functional overview

- 3.1. Works function (local operation)
- 3.2. Output functions
 - 3.2.1 Sun protection function
 - 3.2.2 Alarm function
 - 3.2.3 Behaviour on bus power failure
 - 3.2.4 Behaviour on bus power restoration
 - 3.2.5 Priority for manual operation and sun protection function
- 3.3. Functions of the inputs
 - 3.3.1. How the inputs work
 - 3.3.2. ON/OFF/toggle switching
 - 3.3.3. Value setting
 - 3.3.4. Dimming
 - 3.3.5. Blind control
 - 3.3.6. Scene control
 - 3.3.7. Inputs blocking function
 - 3.3.8. Behaviour on bus power restoration

4. Communication objects

- 4.1. Communication objects overview
- 4.2. Output, objects
- 4.3. Inputs, objects for switching
- 4.4. Objects for dimming inputs
- 4.5. Inputs, objects for blind
- 4.6. Inputs, setting objects for 8-bit values
- 4.7. Recall objects for scenes inputs
- 4.8. Recall/save objects for scenes inputs
- 4.9. Inputs, Block objects for input

5. Parameters

- 5.1. Introduction to parameter windows
- 5.2. "General" parameters window
- 5.3. "Output, general" parameters window
- 5.4. "Output, travel times" parameters window
- 5.5. "Output, sun protection function" parameters window
- 5.6. "Output, alarm function" parameters window
- 5.7. "Input" parameters window
 - 5.7.1. Switching input
 - 5.7.2. Dimming input
 - 5.7.3. Blind input
 - 5.7.4. 8-bit value sensor input
 - 5.7.4.1. Value setting
 - 5.7.4.2. Recall scene
 - 5.7.4.3. Recall/save scene
- 5.8. "Block input" parameters window
 - 5.8.1. Block switching
 - 5.8.2. Block dimming
 - 5.8.3. Block blind
 - 5.8.4. Block set value
 - 5.8.5. Block recall scene
 - 5.8.6. Block recall/save scene

12 A1S2 Blind, 2x Inputs 207301

1. Use of the application program

Product family: Blind
 Product type: Switch
 Manufacturer: Siemens

Name: Blind actuator UP 520/31
 Order no.: 5WG1 520 - 2AB31

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

2. Product description

2.1. Description of the blind actuator UP 520/31

The blind actuator receives telegrams from sensors via the Instabus and, with its output, controls a blind or roller blind motor. Both actuator travel directions are mechanically interlocked. The actuator also affords the option to drive up blind or roller blind and slat positions with sun protection or position telegrams. On receiving an alarm message (e.g. storm), the actuator can drive up the blinds or roller blinds into a default alarm setting and lock them there.

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 blind control, for setting values or for recalling/saving scenes.

2.2. As delivered state

In the as delivered state (unconfigured actuator), the inputs act directly on the output.

See point 3.1: Works function.

3. Functional overview

3.1 Works function (local operation)

In the as delivered state (unconfigured actuator), the secondary inputs act directly on the blind 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.

- On delivery, the switching status of the outputs is not defined.
- On applying the bus voltage, the relays trip.
- No travel direction is powered on applying the bus voltage (Stop).
- After bus power is recovered, the actuator responds only after approx. 400 ms to the change of status of the input signals (delay according to bus power restoration). Edges and signals present at the inputs are not included in the delay and are discarded.
- On applying the bus voltage, the inputs control the blind output as follows:

Input*	Operation	Reaction
A	short	Stop/Slat UP
	long	Travel UP
B	short	Stop/Slat DOWN
	long	Travel DOWN

*) If A and B are operated concurrently, no telegram is sent
 (→ Furthermore, there is accordingly no reaction)

- It is always the last controlled input signal which is executed.
- In the event of a bus power failure, the actuator does not react. Neither is any group addresses pre-programmed.
- If the blind actuator is in the unconfigured state, a *pause interval for change of direction of 1 second is set in the factory.*
- The *blind travel time* for the blind output is set to approx. 63 seconds
- The *slat travel time* is set to approx. 0.5 seconds.

12 A1S2 Blind, 2x Inputs 207301**3.2. Output functions****3.2.1 Sun protection function**

The actuator has a sun protection function for the blind output. The sun protection function can be enabled via a separate object.

The behaviour of the blind output at the beginning and end of a sun protection function can be determined.

Behaviour on beginning a sun protection function:

The sun protection function is executed in three steps.

1. **Reference run** into the up end position, even if the blind or roller blind is already in the up end stop. A reference run will be made with the configured travel time. (see 5.4 *Travel time on blind command*)

If the sun protection is set to 100%, it will drive directly into the down end position without a reference run!

2. **Positioning the blind/roller blind:**
The actuator positions the blind or roller blind in the default sun protection position. To compute the necessary downward travel time, the actuator uses precisely the same *Travel time for blind command* as that configured in the ETS. (see 5.4)
3. **Positioning the slats:**
Only for the "Function = Blind" are the slats then positioned on sun protection travel according to the configured slat position. To compute the necessary slat travel time, the actuator uses precisely the same *Travel time for slat command* as that configured in the ETS. (see 5.4)

Note

Be aware that the actuator has been designed to control the most common types of blind. The actuator assumes that the slats are closed completely while the blind is travelling downwards and that the slats are open while it is travelling upwards.
In *Function = Roller*, there is no slat positioning for sun protection.

Behaviour at the end of the sun protection function

At the end of a sun protection function, the actuator enables the blind output directly for the setting *Travel UP* or *Travel DOWN* and moves into the corresponding end position. If the behaviour at the end of a sun protection function is configured to *No reaction* or *Stop*, no new movement is started. If sun protection is again disabled by *No reaction* during a downward sun protection position movement, the movement is still executed in full. If sun protection is again disabled by *Stop* during a downward sun protection position movement, the movement is interrupted immediately.

Notes on the sun protection function

- Sun protection movements including the reference movement before sun protection cannot be triggered retrospectively.
- After the bus voltage returns, the sun protection function is always disabled.
- A change of the sun protection object from *inactive* to *inactive* indicates no reaction. An update from *active* to *active* then restarts the sun protection function only if this had been interrupted previously, for example by an alarm function.
- The alarm function interrupts the sun protection function. An alarm-locked output cannot be affected by a sun protection function.
- A sun protection function acts again only after disabling the alarm locking and after a new telegram update to the sun protection object on the blind output.

→ Communication objects: see section 4.4

→ Parameter settings: see section 5

3.2.2 Alarm function

The actuator has an alarm function which can be enabled by two alarm objects. The blind output can be assigned separately to the first or the second alarm object or, alternatively, to both objects.

If the output is to react on both objects, the alarm objects will be interlinked by means of a logical OR. In this case, alarm locking will be enabled for as long as one of the objects is active. Similarly, the output channel will then be re-enabled only if both objects are disabled.

The polarity of the alarm objects can be set separately.

Alarm reaction

The behaviour of the blind output at the beginning and end of an alarm function can be determined.

Cyclical monitoring

Alarm objects can be monitored cyclically in common on the entry of telegrams.

→ Communication objects: see section 4.4

→ Parameter settings: see section 5

12 A1S2 Blind, 2x Inputs 207301**3.2.3 Behaviour on bus power failure**

You can vary the behaviour of the output if the bus power fails. The variable parameters are explained more precisely under the parameter *Reaction on bus power failure*.

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

3.2.4 Behaviour on bus power restoration

Just as with 3.2.3, you can set the output state of the output on restoration of the bus power. The variable parameters are explained more precisely under the parameter *Reaction on bus power restoration*.

→ Parameter settings: see section 5

3.2.5 Priority for manual operation and sun protection function

Of the bus-controlled functions, the alarm function has the highest priority.

If the sun protection function is generally enabled, the parameter *Priorities* on the map *Output, General* can define the priority analysis. It can also set the telegram analysis for the sun protection object and the slat or blind objects (manual operation). Operating the actuator via the inputs with manual operation is similar.

Individual cases are explained in the parameter description of the parameter *Priorities*.

Parameter settings: see section 5

3.3 Input functions**3.3.1 How the inputs work**

The blind actuator has two secondary inputs, whereby input A, depending on the setting, can act directly on the output switching (local operation) or alternatively both inputs can act on the KNX/EIB Instabus as independent binary inputs.

Acting directly on the output (A > UP/B > DOWN)

In the as delivered state (unprogrammed actuator) input A acts directly on the switching 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.

Input A acts exclusively internally on the actuator output switching. Input A operates the output switching. In this case, input B is not used. At the same time, the "Input A edge analysis" is defined by a separate parameter, so that a pushbutton or a switch can be connected.

The relay output works by considering this parameter, according to the relay mode setting, as a NO contact (C) or a NC contact (O) as follows:

Edge analysis	Contact at the input	Mode	Relay switching status
Pushbutton rising: TOGGLE falling: --	closed (rising edge)	C/O	Contact switches TOGGLE*
	open (falling edge)	C/O	No reaction
Switch rising: ON falling: OFF	closed (rising edge)	C	Contact closes
	open (falling edge)	C	Contact opens
	closed (rising edge)	O	Contact opens
	open (falling edge)	O	Contact closes
Switch rising: TOGGLE falling: toggle	closed (rising edge)	C/O	Contact switches TOGGLE*
	open (falling edge)	C/O	Contact switches TOGGLE*

*: The object value of the switching object (object number "0") is toggled. A NO contact is closed at "1" and open at "0". A NC contact is closed at "0" and open at "1".

With direct action, the secondary inputs do not have their own settings, so that the parameter cards for the inputs are hidden. After bus power restoration, the actuator then responds only on a secondary signals status change, if the set "Delay after bus power recovery" time has elapsed. 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 telegrams are sent on the Instabus within the first 17 seconds, for example during control via input A and an approved "Output status" object.

12 A1S2 Blind, 2x Inputs 207301**Effect separately on the bus**

The switching actuator inputs act independently of the switching 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 on the bus (e.g. during group control of a number of switching actuators).

→ Parameter settings: see section 5

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 reaction"!

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

→ Parameter settings: see section 5

12 A1S2 Blind, 2x Inputs 207301

3.3.3 Value setting

The "Value setting" function is produced with the "Input value" objects. There is one object available for each input.

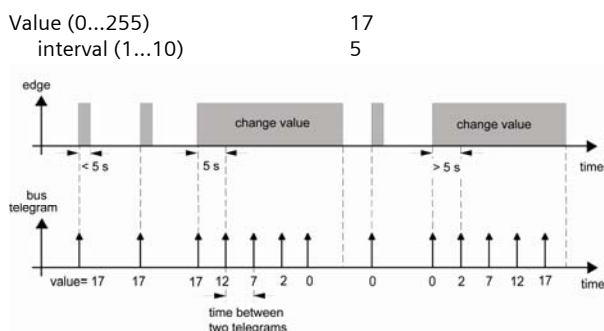
The Value function can also be triggered by sending the value with

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

Varying the value to be set by holding the pushbutton down

The value to be sent can be varied by holding the pushbutton down (> 5 seconds), if the value is to be sent on a rising or falling edge. For this purpose, the configured value is incremented each time by the set interval and then sent. After releasing the input, the last value sent remains saved. When the pushbutton is next held down, the direction of the value adjustment changes.

Example:



Note:

→ There is no over- or underrun when setting values! Whenever an adjustment to maximum (255) or minimum (0) value is reached, no more telegrams are sent.

→ To ensure that, during a value adjustment, the controlled lighting is switched off or switched on at the maximum, the thresholds (values "0" and "255") are always transferred when the thresholds of the variable range are reached. This also occurs when the set interval does not take these values into account directly (see above example: Interval = 5; value "2" is transferred, then value "0").

To ensure that the original starting value can be reset during the fresh adjustment (change of setting direction), the first value shift in this case is not the same as the set interval (see above example: interval = 5; value "0" is transferred, then values "2", "7", etc.).

→ When setting the values, the newly set value is stored in RAM.

After a bus power failure or a bus reset, the set values are replaced by the values set in the ETS originally.

→ Communication objects: see section 4

→ Parameter settings: see section 5

3.3.4 Dimming

The "Dimming" function is produced with the "Dimming ON/OFF, input..." objects and the dimming, input..."(for A and B respectively)" objects.

The dimming object "Dimming ON/OFF input..." is used to send On/Off telegrams

The "Dimming, Input ..." object is used to send dimming telegrams.

You can use the various settings to choose the pushbutton operating philosophy:

-1-pushbutton dimming

-2-pushbutton dimming

(for more details, see Parameters, section 5)

Dimming by holding down the pushbutton for a shorter or longer period

Objects can be triggered by holding the pushbutton down for a shorter or longer period.

Holding down → Object "Dimming brighter/darke"

The time for telegram repetitions can be set while holding the pushbutton down.

When the pushbutton is released (falling edge), you can send a dimming stop telegram.

You can set the interval at which brighter or darker dimming occurs.

Tapping → Object "Dimming I/O"

Objects can be populated with the functions

Dimming I/O ON

Dimming I/O OFF

Dimming I/O TOGGLE.

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

→ Communication objects: see section 4

→ Parameter settings: see section 5

12 A1S2 Blind, 2x Inputs 207301

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

→ 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

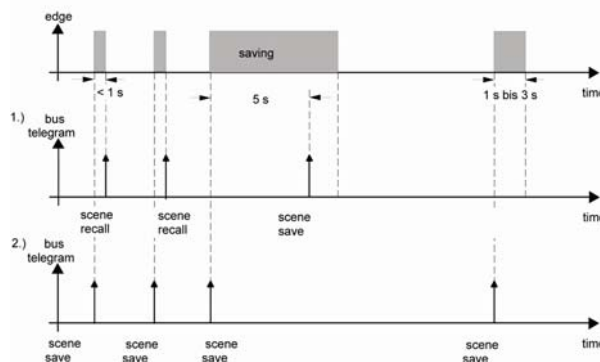
When a setting is called up/saved as a scene, you can generate a save telegram, depending on the light scene to be sent.

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

12 A1S2 Blind, 2x Inputs 207301**3.3.7 Inputs blocking function**

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 reaction can be produced at each input at the beginning or at the end of a blocking. You can also set "No reaction". 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 reaction" 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 re-transmitted cyclically after the blocking ends.

→ Communication objects: see section 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 reaction, or what the reaction 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 reaction 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

→ 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	Slats, output	Open/Close	1 bit
4	Venetian blind, output	Up/Down	1 bit
12	Alarm 1, output	On/Off	1 bit
13	Alarm 2, output	On/Off	1 bit
14	Sun protection	active/inactive	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 A	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 B.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

12 A1S2 Blind, 2x Inputs 207301

4.2. Output, objects

Obj	Object name	Function	Type	Flag
0	Slats, output	Open/Close	1 bit	CW
<p>STEP commands are received via the group address linked with this object.</p> <p>This is a stop if the blind is in motion and a slat increment in the corresponding direction if the blind is stationary.</p> <p>[0]: Slat up (1 slat adjustment increment) or Stop moving blind (if blind moving)</p> <p>[1]: Slat down (1 slat adjustment increment) or Stop moving blind (if blind moving)</p> <p>This object is always active.</p>				

Obj	Object name	Function	Type	Flag
4	Venetian blind, output	Up/Down	1 bit	CW
<p>Move commands are received via the group address linked with this object.</p> <p>[0]: Up</p> <p>[1]: Down</p> <p>This object is always active.</p>				

Obj	Object name	Function	Type	Flag
12	Alarm 1, output	On/Off	1 bit	CW
13	Alarm 2, output	On/Off	1 bit	CW
<p>Alarm commands are received via the group addresses linked with this object.</p> <p>This object is only active if the parameter <i>Alarm</i> is set to <i>enabled</i>.</p> <p>The reaction to [0] or [1] can be set as described under 5.6.</p>				

Obj	Object name	Function	Type	Flag
14	Sun protection	active/inactive	1 bit	CW
<p>Active/Inactive commands are received via the group address linked with this object.</p> <p>This object is only active if the parameter <i>Sun protection</i> is set to <i>enabled</i>.</p> <p>The reaction to [0] or [1] can be set as described under 5.5.</p>				

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 B.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
<p>Switching telegrams are sent via the group address linked with this object (1 - On, 0 = Off).</p> <p>This object is only active if:</p> <ul style="list-style-type: none"> - <i>Input action</i> parameter = separately on bus - <i>Input A function</i> parameter = switch (or <i>Input B function</i> = switch) <p>The parameters for this object are described under section 5.</p>				

12 A1S2 Blind, 2x Inputs 207301

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).
Fehler! Es ist nicht möglich, durch die Bearbeitung von Feldfunktionen Objekte zu erstellen.
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.

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

Blind 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.

12 A1S2 Blind, 2x Inputs 207301

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.

Bit Bit Bit Bit Bit Bit Bit Bit
7 6 5 4 3 2 1 0

Not used scene number (1-64)

0

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

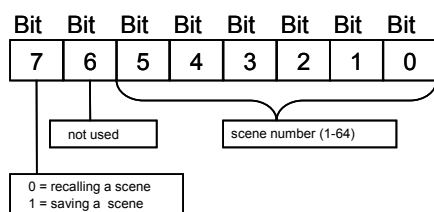
The parameters for this object are described under section 5.

12 A1S2 Blind, 2x Inputs 207301

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.

4.9 Inputs, Block objects for input

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. Parameters

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 > UP / B > DOWN) Inputs acting separately on bus
Determines whether the actuator inputs act directly on the output (local operation, refer also to works function) or alternatively on both inputs independently as binary inputs on the KNX/EIB.	
<u>Acting directly on the output (A > UP/B > DOWN)</u> This is as delivered ex works. The actuator is functional in the works function. For a more detailed description, refer to 3.3.1	
<u>separately on bus:</u> The individual inputs can be configured. The parameter maps are only visible in this setting. For a more detailed description of the inputs, refer to 3.3.1	

12 A1S2 Blind, 2x Inputs 207301

<i>Applies only to:</i> <i>Input action = directly on output (A → UP/B → DOWN)</i>	
Parameters	Settings
Delay on bus voltage recovery Base	130 ms/260 ms/520 ms/ 1s/2.1s/4.2s/8.4s/ 1.1 min/2.2 min/4.5 min/9 min/18 min/36 min/1.2 hours
This value determines the time basis (<i>basis</i>) of the delay period. <u>Delay = Basis × factor</u> (Default setting: 1s × 17 = 17s) After bus power is recovered, the switching actuator application program can be blocked for a set time until the corresponding reactions 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.	
Delay on bus voltage recovery Factor (3 ... 127)	3 ... 17 ... 127
This value determines the delay time factor (<i>factor</i>). <u>Delay = Basis × factor</u> (Default setting: 1s × 17 = 17s)	
Debouncing time for binary inputs Factor (10 ... 255) × 0.5 ms	10 ... 60 ... 255
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. <u>Debounce time = 0.5 ms × factor</u> (Default setting: 0.5 ms · 60 = 30 ms)	
Limit number of telegrams	enabled disabled
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!	
Telegrams per 17 s	30, 60, 100, 127
If telegram rate limitation is unblocked, the maximum number of telegrams in 17 seconds can be set at this point.	

5.3 "Output, General" parameters window

Parameters	Settings
Function	Venetian blind roller blinds
<u>Blind:</u> Actuators control the Venetian blinds <u>Roller blind:</u> Actuators control the roller blinds	
Alarm	disabled enabled
<u>blocked:</u> The alarm function, with both its objects, is blocked <u>unblocked:</u> The alarm function, with both its objects, is unblocked	
Sun protection function	disabled enabled
<u>blocked:</u> The sun protection function with its object is blocked <u>unblocked:</u> The sun protection function with its object is unblocked	
Behaviour on bus voltage failure	moving up moving down stop no reaction
The reaction of the output to a bus power failure is determined as follows: <u>Travel UP:</u> The roller or Venetian blind moves up. <u>Travel DOWN:</u> The roller or Venetian blind moves down. <u>Stop:</u> The roller or Venetian blind stops. <u>No reaction:</u> There is no reaction.	
Behaviour on bus voltage recovery	moving up moving down stop
The reaction of the output to a bus power restoration is determined as follows: <u>Travel UP:</u> The roller or Venetian blind moves up. <u>Travel DOWN:</u> The roller or Venetian blind moves down. <u>Stop:</u> The roller or Venetian blind stops.	

12 A1S2 Blind, 2x Inputs 207301

*Applies only to: Function = Blind
Sun protection function = unblocked*

Parameters	Settings
Priorities	same priority for manual control and sun protection manual control higher than sun protection sun protection higher than manual control

Of the bus-controlled functions, the alarm function always has the highest priority.
 If the sun protection function is generally enabled, the parameter *Priorities* on the map *Output, General* can define the priority analysis. It can also set the telegram analysis for the sun protection object and the slat or blind objects (manual operation). Operating the actuator via the inputs with manual operation is similar.
same priority for manual operation and sun protection:
 This configuration can interrupt a sun protection function by means of a slat or a blind command. In this case, the configured *Behaviour at the end of automatic sun protection is not run*. Sun protection is not re-run automatically. The sun-protection function is restarted only if an "active" object update occurs, depending on the polarity.
Manual operation via sun protection function:

At this setting, a slat or a blind command interrupts automatic sun protection. Furthermore, the configured *Behaviour at the end of automatic sun protection is not run*; neither is it possible to restart the sun protection function. Only if the Venetian or roller blind has been moved into the up end position by an uninterrupted blind command (Movement enabled) can the sun protection function be enabled. As long as movement enabled has not been started or is still incomplete, attempts to enable the sun protection function will be rejected.

Note

→ After bus power restoration or after programming the device, a movement enabled into the up end position is needed before the sun protection function can be enabled!
 This enabling can be effected by an automatic upward movement after bus power restoration, for example
 (*Reaction on bus power restoration = Move UP*).
 → An alarm function has no effect on a sun protection enabling!

Sun protection function via manual operation:
 At this setting, you cannot interrupt an enabled sun protection function by means of a slat or a blind command. A manual operation is then only re-run if automatic sun protection is completely disabled.

5.4 "Output, Times" parameters window

Parameters	Settings
Movement time slat Time base	8 ms / 130 ms / 2.1 s / 33 s
Time factor (0...255) (0 = only stop)	0... 64 ...255

The time for a slat command can be determined by both parameters. At the same time, the time entered here for a Venetian blind should equal approx. ¼ of the complete movement time for the slat or, with a roller blind, the movement time to open a roller blind shell.

Definition of the time for a step when adjusting a slat:
 $Time = Basis \times factor$
 (Default setting: Time = 8 ms × 64 = **512 ms**)

The slat command (Step) is used to vary the slat angle of a Venetian blind or to set the 'slot setting' for a roller blind. You usually enable a slat command by operating a blind sensor (tapping a pushbutton) and this allows manual intervention in the hanging control. If the actuator receives a slat command while the Venetian or roller blind is moving, the blind actuator stops movement immediately.

[0]:
 If the factor is set to "0", the blind, if it is moving, simply stops on receiving a slat command. If the hanging is not moving, there is in this case no reaction.

12 A1S2 Blind, 2x Inputs 207301

Parameters	Settings
Movement time blind Time base	8 ms / 130 ms / 2.1 s / 33 s
Time factor (0...255) (0 = infinite)	0...30...255

The blind command is set by both parameters. The time should also be long enough for the Venetian or roller blind to be in an end position after the blind command has ended. Accordingly, the time to set is to be at least as long as the movement time from the down to the up end position. We recommend that you add a time margin of approximately 20%.

Definition of the time for a blind command when moving the blind: $\text{Time} = \text{Basis} \times \text{factor}$
(Default setting: $\text{Time} = 2.1 \text{ ms} \times 30 = 64 \text{ s}$)

The blind command (Move) is used to vary the Venetian or roller blind height. A blind command can be enabled by holding down a blind sensor (pushbutton) or, for example, by a higher level timer and in theory stopped by receiving a slat command. An uninterrupted blind command moves the Venetian or roller blind into the end positions (completely open or completely closed).

A blind command in theory moves the blind for the full movement time, depending on the direction of movement, regardless of which position the Venetian or roller blind is.

A blind command can be retriggered by receiving a new blind command.

[0]:
If the time factor is set to "0", the output for a blind command is powered continuously, depending on the direction of movement. This setting may be needed for some drives (consult the motor manufacturer's data).
An 'unending' blind command can also be interrupted by a slat command.

Applies only to:
Sun protection function = unblocked
Function = Venetian blind

Parameters	Settings
Blind movement time Time base	8 ms / 130 ms / 2.1 s / 33 s
Time factor (0...255)	0...30...255

Determines the drive movement time from the up end position to the down end position. The configured time is used to compute the percentage sun protection value.

Definition: $\text{Time} = \text{Basis} \times \text{factor}$
(Default setting: $\text{Time} = 2.1 \text{ ms} \times 30 = 63 \text{ s}$)

Parameters	Settings
Slat movement time Time base	8 ms / 130 ms / 2.1 s / 33 s
Time factor (0...255)	0...30...255

Determines the drive movement time from the up end position to the down end position. The configured time is used to compute the percentage sun protection value.

Definition: $\text{Time} = \text{Basis} \times \text{factor}$
(Default setting: $\text{Time} = 130 \text{ ms} \times 30 = 3.9 \text{ s}$)

Applies only to:
Sun protection function = unblocked
Function = Roller blind

Parameters	Settings
Blind movement time Time base	8 ms / 130 ms / 2.1 s / 33 s
Time factor (0...255)	0...30...255

Determines the drive movement time from the up end position to the down end position. The configured time is used to compute the percentage sun protection value.

Definition: $\text{Time} = \text{Basis} \times \text{factor}$
(Default setting: $\text{Time} = 2.1 \text{ ms} \times 30 = 63 \text{ s}$)

12 A1S2 Blind, 2x Inputs 207301

Parameters	Settings
Pause on change in direction	0.5 s / 1.0 s / 1.5 s / 2.0 s
<p>To protect the motor drive against damage, a fixed pause can be configured for each switching of movement direction. No travel direction is powered during the pause (Stop).</p> <p>The parameter determines the pause for a change to the direction of movement (switching time). The parameter setting needed can be taken from the technical documents for the motor drive used.</p> <p>The changeover time for a change to the direction of movement caused by a bus power failure is set at 125 ms.</p> <p>If the blind actuator is in the unconfigured state, a switching time of 1 second is set in the factory. (Works function 3.1)</p>	

5.5 "Output, Sun protection" parameters window

Parameters	Settings
Sun protection active at object value	1 (0= sun protection deactivated) 0 (0= sun protection deactivated)
Defines sun protection polarity	
Behaviour at the end of automatic sun protection	no reaction moving up moving down stop
<p>Determines the blind output reaction after disabling sun protection.</p> <p><u>no reaction</u> There is no reaction.</p> <p><u>Travel UP</u> The blind moves up according to the sun protection.</p> <p><u>Travel DOWN</u> The blind moves down according to the sun protection.</p> <p><u>Stop</u> The blind stops when sun protection ends.</p>	

Applies only to:
Sun protection function = unblocked
Function = Blind

Parameters	Settings
Sun protection position Blind (0...100 %)	0...50...100%
If automatic sun protection is enabled, the blind position set here is moved out to the up end position.	
Sun protection position Slat (0...100 %)	0...50...100%
If automatic sun protection is enabled, there is a move to the slat position set here.	

Applies only to:
Sun protection function = unblocked
Function = Roller blind

Parameters	Settings
Sun protection position Blind (0...0.100 %)	0...50...100%
If automatic sun protection is enabled, the roller blind position set here is moved out to the up end position.	

12 A1S2 Blind, 2x Inputs 207301

5.6 "Output, Alarm" parameters window

Parameters	Settings
Alarm function activated by	alarm object 1 alarm object 2 alarm object 1 OR 2
<p>The blind output can be assigned separately to the first or the second alarm object or, alternatively, to both objects.</p> <p><u>Alarm object 1</u> The blind output reacts only to the first alarm object.</p> <p><u>Alarm object 2</u> The blind output reacts only to the second alarm object.</p> <p><u>Alarm object 1 OR 2</u> The blind output reacts only to both alarm objects. The objects are interlinked by means of a logical OR. In this case, alarm locking will be enabled for as long as one of the objects is active. Similarly, the output channel will then be re-enabled only if both objects are disabled.</p>	
Alarm lock with object value for Alarm 1	0 (alarm unlock = 1) 1 (alarm unlock = 0)
Determines the polarity of alarm object 1.	
Alarm lock with object value for Alarm 2	0 (alarm unlock = 1) 1 (alarm unlock = 0)
Determines the polarity of alarm object 2.	
Cyclical monitoring time for alarm object	none 1 min / 2 min / 3 min / 4 min / 5 min / 6 min / 7 min / 8 min / 10 min / 11 min / 12 min / 20 min / 40 min / 1 hr / 2 hr
Setting of the monitoring time for both safety objects.	
<p>Alarm objects can be monitored cyclically in common on the entry of telegrams. The actuator expects a telegram update with monitoring enabled on both objects! If there are no telegrams during the monitoring period, the alarm function is enabled.</p> <p>Receipt of an alarm unlock disables the alarm function again.</p>	
Note	
<p>The transmitter cycle time should be less than the monitoring period set in the blind actuator, in order to ensure that at least one telegram is received within the monitoring period.</p>	

Parameters	Settings
Behaviour at the beginning of safety lock	no reaction moving up moving down
<p>Determines the blind output reaction at the beginning of an alarm function.</p> <p><u>no reaction</u> The blind does not move. The output channels will be locked in the current position.</p> <p><u>Travel UP</u> The blind moves up if there is an alarm. At these settings, the Venetian or roller blind is locked in the end position after the alarm movement ends.</p> <p><u>Travel DOWN</u> The blind moves down if there is an alarm. At these settings, the Venetian or roller blind is locked in the end position after the alarm movement ends.</p>	
Note	
<p>The alarm function has the highest priority compared with all other blind channel functions controlled via the bus. This means that all downward functions for the relevant outputs, such as a downward sun protection function or slat/blind commands, will be interrupted and the alarm function run.</p>	
Behaviour at the end of alarm lock	No reaction moving up moving down
<p>Determines the blind output reaction when an alarm is triggered.</p> <p><u>no reaction</u> The blind does not move. The output channels will be re-enabled immediately after the alarm is triggered. If enabling still occurs as a result of "no reaction" during a downward alarm move, the output will be enabled without interrupting the movement.</p> <p><u>Travel UP</u> The blind moves upwards if there is an alarm. The output channels will be re-enabled immediately after the alarm is triggered.</p> <p><u>Travel DOWN</u> The blind moves downwards if there is an alarm. The output channels will be re-enabled immediately after the alarm is triggered.</p>	
Note	
<p>A sun protection function interrupted by an alarm function will not be re-run after the alarm is triggered.</p>	

12 A1S2 Blind, 2x Inputs 207301

5.7. "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!

5.7.1 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>	

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

Parameters	Settings
Behaviour on bus voltage recovery	no reaction transmit current input status send ON telegram send OFF telegram
You can determine which reaction should occur after bus power is recovered. The set delay after bus power restoration must only run until the reaction 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.	
Cyclical transmission	No cyclical sending Repeat when ON Repeat when OFF Repeat when ON and OFF
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.	

12 A1S2 Blind, 2x Inputs 207301

<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 / 1.1min / 2.2min / 4.5min / 9 min / 18min / 35min / 1.2h
Determines the time basis for cyclical sending via the object A.1. <u>Time = Basis × factor</u>	
Time base for cyclical transmission Input A, object A.2	1s / 2.1s / 4.2s / 8.4s / 17s / 34s / 1.1min / 2.2min / 4.5min / 9 min / 18min / 35min / 1.2h No cyclical transmission via switching object A.2
Determines the time basis for cyclical sending via the object A.2. <u>Time = Basis × factor</u>	
No cyclical sending via input A, object A.2 Cyclical sending via the object A.2 can be blocked with this setting.	
Time factor for cyclical transmission Input A, Objects A.1 and A.2 (3 ... 127)	3 ... 60 ... 127
Determines the time factor for cyclical sending via both switching objects. <u>Time = Basis × factor</u> (Default setting: 1s × 60 = 60s)	

5.7.2 Dimming input

<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)
Determines the reaction at the input on a rising edge. <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. <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). <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). <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). <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).	

12 A1S2 Blind, 2x Inputs 207301

<i>Applies only to:</i> <i>Function of input A = dimming</i>	
Parameters	Settings
Long push button action min. Base	130 ms 260 ms 520 ms 1s
Time from which the dimming function ("holding down") is executed. $\text{Time} = \text{Basis} \times \text{factor}$	
Long push button action min. Factor (4 ... 127)	4 ... 127
Time from which the dimming function ("holding down") is executed. $\text{Time} = \text{Basis} \times \text{factor}$ (Default setting: 130 ms x 4 = 520 ms)	
Behaviour on bus voltage recovery	No reaction Send ON telegram Send OFF telegram
You can determine which reaction should occur after bus power is recovered. If a delay following bus power recovery is set, this time must only elapse when the reaction set here has occurred. <u>No reaction:</u> There is no reaction. <u>Send ON telegram:</u> An ON is sent. <u>Send OFF telegram:</u> An OFF is sent.	
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.	

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

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.	

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 Base	130 ms 260 ms 520 ms 1s
Time basis between two telegrams at a set telegram repetition rate. A new dimming telegram is sent each time this period elapses. $\text{Time} = \text{Basis} \times \text{factor}$	
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. $\text{Time} = \text{Basis} \times \text{factor}$ (Default setting: 130 ms x 10 = 1.3s)	

12 A1S2 Blind, 2x Inputs 207301

5.7.3 Blind input

<i>Applies only to:</i> 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. <i>Not used:</i> The input is de-activated. <i>UP:</i> Telegram triggered on, - short press of the pushbutton: STEP telegram (UP), longer press on the pushbutton: MOVE telegram (up) <i>DOWN:</i> Telegram triggered on, - short press of the pushbutton: STEP telegram (DOWN), longer press on the pushbutton: MOVE telegram (down) <i>TOGGLE:</i> 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 reaction should occur after bus power is recovered. <i>No reaction:</i> There is no reaction. <i>UP:</i> A MOVE (UP) is sent. <i>DOWN:</i> A MOVE (DOWN) is sent. Note: If a delay following bus power recovery is set, this time must only elapse when the reaction set here has occurred.	

Parameters	Settings
Operating concept	step – move – step move – step
Determines the telegram sequence after pressing a pushbutton (rising edge). <i>Step – move – step:</i>	
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. 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°.	
<i>Move - step:</i>	
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°.	

12 A1S2 Blind, 2x Inputs 207301

Parameters	Settings
Slat adjustment time Base	130 ms/260 ms/520ms 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 Factor (3 ... 127)	3 ... 20 ... 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)	

Applies only to:

Operating concept = step – move - step

Parameters	Settings
Long push button action min. Base	130 ms/260 ms/520ms 1s/2.1s/4.2s/8.4s 17s/34s
Time from which a long pushbutton action is executed. Time = Basis × factor	
Long push button action min. Factor (4 ... 127)	4 ... 127
Time from which a long pushbutton action is executed. Time = Basis × factor (Default setting: 130 ms x 4 = 520 ms)	

5.7.4 8-bit value sensor (value/scene)

Applies only to:

Function of input A = 8-bit value sensor (value/scene)

Parameters	Settings
Function as	Setting value Recall scene Scene recall / save
Determines the function to be executed.	

12 A1S2 Blind, 2x Inputs 207301

5.7.4.1 Set value input

<i>Applies only to:</i> <i>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
<p>You can determine which reaction 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 reaction set here has occurred.</p> <p><u>No reaction:</u> There is no reaction.</p> <p><u>Reaction as with rising edge:</u> The value set for a rising edge is sent.</p> <p>This is only possible with: Send value for = rising edge (pushbutton as NO contact) Send value for = rising and falling edges (switch)</p> <p><u>Reaction as with falling edge:</u> The value set for a falling edge is sent.</p> <p>This is only possible with: Send value for = falling edge (pushbutton as NC contact) Send value for = rising and falling edges (switch)</p> <p><u>Send current input status:</u> 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 value for = rising and falling edges (switch)</p>	

<i>Applies only to:</i> <i>Transmit value = on rising edge (pushbutton as NO contact)</i>	
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
<p>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.</p> <p>This parameter determines whether you can set a value.</p>	

<i>Applies only to:</i> <i>Transmit value = on falling edge (pushbutton as NC contact)</i>	
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
<p>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.</p> <p>This parameter determines whether you can set a value.</p>	

<i>Applies only to:</i> <i>Transmit value = on rising and falling edges (switch)</i>	
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.	

12 A1S2 Blind, 2x Inputs 207301

<i>Applies only to:</i> <i>Value change by long press = Yes</i>	
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.	

5.7.4.2 Recall scene

<i>Applies only to:</i> <i>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 reaction 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 reaction set here has occurred.</p> <p><i>No reaction:</i> There is no reaction.</p> <p><i>Reaction as with rising edge:</i> The scene set for a rising edge must be sent.</p> <p>This is only possible with:</p> <p>Send scene number for = rising edge (pushbutton as NO contact)</p> <p>Send scene number for = rising and falling edges (switch)</p> <p><i>Reaction as with falling edge:</i> The scene set for a falling edge must be sent.</p> <p>This is only possible with:</p> <p>Send scene number for = falling edge (pushbutton as NC contact)</p> <p>Send scene number for = rising and falling edges (switch)</p> <p>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:</p> <p>Send scene number for = rising and falling edges (switch)</p>	

12 A1S2 Blind, 2x Inputs 207301

Applies only to:
 Transmit scene number = on rising edge
 (pushbutton as NO contact)

Parameters	Settings
Scene on rising edge (1 ... 64)	1 ... 64
Determines the scene which will be sent on a rising edge.	

Applies only to:
 Transmit scene number = on falling edge
 (pushbutton as NC contact)

Parameters	Settings
Scene on falling edge (1 ... 64)	1 ... 64
Determines the scene which will be sent on a falling edge.	

Applies only to:
 Transmit scene number = on rising and falling edges (switch)

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.	

5.7.4.3 Recall/save scene

Applies only to:
 Function as = recall/save scene

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 reaction should occur after bus power is recovered.
 If a delay following bus power recovery is set, this time must only elapse when the reaction set here has occurred.

No reaction: There is no reaction.

Reaction as with rising edge: 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.

Only save function = No:

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.

only save function = Yes:

The save telegram is sent directly after detecting the corresponding edge.

12 A1S2 Blind, 2x Inputs 207301

*Applies only to:
Storage function only = No*

Parameters	Settings
Time of a long press for storage	130 ms 260 ms
Base	520 ms 1 s

Time basis for the time to hold the pushbutton down in order to send a save telegram.
Time = Basis × factor

Parameters	Settings
Time of a long press for storage	24 ... 38 ... 127
Factor (9 ... 127)	13 ... 19 ... 127 9 ... 10 ... 127 4 ... 5 ... 127

Note: 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

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

Parameters	Settings
Scene on rising edge (1 ... 64)	1 ... 64

Determines the scene which will be sent on a rising edge.

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

Parameters	Settings
Scene on falling edge (1 ... 64)	1 ... 64

Determines the scene which will be sent on a falling edge.

5.8 "Input, Blocking" parameters window

Parameters	Settings
Blocking function	active disabled

Use these parameters to activate the blocking function.

*The following applies only to:
Blocking function = active*

5.8.1 Block switching

*Applies only to:
Input A function = 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.	

12 A1S2 Blind, 2x Inputs 207301

5.8.2 Block dimming

<i>Applies only to:</i> <i>Function of input A = dimming</i>	
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. <i>TOGGLE</i> : 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.	

5.8.3 Block blind

<i>Applies only to:</i> <i>Function of input A = blind</i>	
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. <i>TOGGLE</i> : 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. <i>TOGGLE</i> : The last direction of movement (saved internally) executed will be switched.	

5.8.4 Block set value

<i>Applies only to:</i> <i>Function of input A = 8-bit value sensor</i> <i>(value/scene)</i> <i>Function as = set value</i>	
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 reaction which is given on blocking beginning. <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)	

12 A1S2 Blind, 2x Inputs 207301

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 reaction which is given on blocking ending.</p> <p><u>No reaction:</u> There is no reaction.</p> <p><u>Reaction as with rising edge:</u> The value set for a rising edge is sent.</p> <p>This is only possible with: Send value for = rising edge (pushbutton as NO contact) Send value for = rising and falling edges (switch)</p> <p><u>Reaction as with falling edge:</u> The value set for a falling edge is sent.</p> <p>This is only possible with: Send value for = falling edge (pushbutton as NC contact) Send value for = rising and falling edges (switch)</p> <p>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 value for = rising and falling edges (switch)</p>	

5.8.5 Block recall scene

<p><i>Applies only to:</i> <i>Function of input A = 8-bit value sensor (value/scene)</i> <i>Function as = recall scene</i></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
<p>This parameter determines the reaction which is given on blocking beginning.</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)</p> <p><u>Reaction as with falling edge:</u> 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)</p> <p>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>	

12 A1S2 Blind, 2x Inputs 207301

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 reaction 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) <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) 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)</p>	

5.8.6 Blocking recall/save scenes

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
<p>This parameter determines the reaction 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)</p>	
Behaviour at the end of blocking	No reaction reaction as with rising edge
<p>This parameter determines the reaction 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)</p>	

12 A1S2 Blind, 2x Inputs 207301

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 reaction which is given on blocking beginning. <u>No reaction:</u> There is no reaction. <i>Reaction as with falling edge:</i> 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 reaction which is given on blocking ending. <u>No reaction:</u> There is no reaction. <i>Reaction as with falling edge:</i> 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!