SIEMENS

07 B0 A1 Shutter Actuator 982A01

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Use of the application program

Product family: Product type: Manufacturer:	Shutter Switch Siemens
Name: Description:	Shutter Blind Actuator UP 520/03 Shutter Blind Actuator, 1 x 6A, AC 230V (Relay), with BTM Inter- face
Order no.:	5WG1 520-2AB03
Name: Description:	Shutter Blind Actuator UP 520/13 Shutter Blind Actuator, 1 x 6A, AC 230V (Relay)
Order no.:	5WG1 520-2AB13
Product family: Product type:	Room controller Blind
Manufacturer:	Siemens
	Siemens Shutter Blind Actuator RS 520/23 Shutter Blind Actuator, 1 x 6A,
Manufacturer: Name:	Siemens Shutter Blind Actuator RS 520/23
Manufacturer: Name: Description:	Siemens Shutter Blind Actuator RS 520/23 Shutter Blind Actuator, 1 x 6A, AC 230V (Relay) 5WG1 520-2AB23 Solar Protection Actuator
Manufacturer: Name: Description: Order no.:	Siemens Shutter Blind Actuator RS 520/23 Shutter Blind Actuator, 1 x 6A, AC 230V (Relay) 5WG1 520-2AB23

1. Functional description

The application program "07 B0 A1 Shutter Actuator 982A01" can be used for the KNX devices listed in section "Use of the application program". These devices are briefly described in the next section.

The UP 520/03 shutter / blind actuator with mounting frame is a KNX device with one relay output and a Bus Transceiver Interface (BTI). The device is installed in a flush-mount wall box (60 mm Ø, depth 60 mm). The bus is connected via a bus terminal block. The device electronics are supplied via the bus voltage.

DELTA bus wall switches or other application units (bus device) with BTI interface are plugged onto the BTI interface of the actuator. Any bus device, which can be slipped onto a bus coupling unit (BTM) UP 117, may be slipped onto this actuator.

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The UP 520/13 shutter / blind actuator is a KNX device with one relay output. The device is installed in a flushmount wall box (60 mm Ø, depth 60 mm). The bus is connected via a bus terminal block. The device electronics are supplied via the bus voltage.

The RS 520/23 shutter / blind actuator is a KNX device with one relay output. The device is installed in an AP 118 Control Module Box or an AP 641 Room Control Box. The bus is connected via a bus terminal block. The device electronics are supplied via the bus voltage.

The JB 520/23 solar protection actuator is a KNX device with one relay output. The device is installed in a UL/NEMA junction box with minimum 4 inch length, 4 inch width and 2 inch depth. The bus is connected via a bus terminal block. The actuator electronics are supplied via the bus voltage.

These devices share the following features.

The device may be used to control blinds, shutters, awnings, windows, or doors.

The device is designed to drive one drive (motor) with electromechanical limit switches or with integrated electronics for disconnection at the limit positions.

For drives with electromechanical limit switches the actuator can be configured to detect the status of the electromechanical limit switches such that the travel time between the end positions can be measured via a synchronization run. The travel time of the blind / shutter is automatically measured from the upper end position to the lower end position and vice versa. The measurement is only reliable for drives with electromechanical limit switches.

The travel time cannot be automatically adjusted for drives with integrated electronics for disconnection at the limit positions. These drives have to be controlled via a time limit. Their travel times have to be manually measured as precisely as possible and configured in the application program.

Parallel operation of several drives on one channel requires the intermediate switching of a special separation relay. If such a separation relay is connected to the output to drive several drives in parallel, then the travel time has to be configured manually.

If the device is configured for automatic detection of the travel time, then parallel operation of several drives with electromechanical limit switches or mixed operation with drives with integrated electronics for disconnection at the limit positions is not permitted.

Detection of final positions, Automatic detection of travel times

The device can detect if the blind / shutter is in the upper or lower end position. This detection depends on the solar protection drive (motor) itself and on the wiring and specifically cannot be guaranteed for drives with integrated electronics for disconnection at the limit positions. Hence, the detection can be disabled by a parameter. If automatic detection of end positions is enabled, the travel time is set to the maximum value after a download of the configuration. If the end positions were detected successfully and the solar protection moved without interruption from the lower position to the upper position, then the parameter value for the travel time is updated and saved. The same applies to the travel time from the upper to the lower end position.

When the end position is detected, then the parameter value for the travel time extension is set to 10% of the travel time. In principal, the travel time, i.e. the time the relay contacts are closed, is determined based on the configured value or the parameter value updated based on the travel times measured between end positions

After a download of the application program respectively of addresses and parameters the solar protection must be synchronized. This is triggered when a telegram "solar protection up/down" or "central up/down" is received. The solar protection then performs a synchronization run. First it briefly moves down, then fully into the upper end position. Then it moves from the upper end position to the lower end position measuring the associated travel time. Finally, it moves from the lower end position to the upper end position measuring the associated travel time. After this procedure the solar protection is synchronized and remains in the upper end position until a motion is triggered by another telegram.

If the actuator does not detect the upper end position at the start of the synchronization run, then the measurement travels are not executed. In that case, the actuator is not synchronized. The synchronization run has to be initiated again as described above.

Any additional telegram "solar protection up/down" or "central up/down" received during the synchronization run is ignored. If a telegram "slats open/close" is received this is interpreted as stop and the solar protection is stopped without finalizing the synchronization of the actuator. The synchronization run has to be initiated again as described above.

If a message "block motion" is received during the synchronization run, then the synchronization run is aborted. It can only be initiated again, when the motion blockage is ended by a respective telegram.

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All other telegrams received after a download before and during a synchronization run are ignored.

If the solar protection shall move to the upper or lower end position in normal operation, the travel time is calculated such that the drive reaches the respective end position. The actuator stops the motion when the end position is detected. A possible short opening movement of the slats or a short lifting of a roller shade is immediately executed after stopping the motion.

When a change of the solar protection travel times of more than +5% is detected during normal operation based on the end position detection, then the travel time configuration settings are corrected and saved accordingly.

Because the electromechanical end position switch does not close at the same time the solar protection leaves the end position, it is necessary to block evaluation of the end position for this period. This "blocking period" can be configured via a parameter. Typical values for the blocking period" are 0.5 to 1.0 seconds.

The pause before a change of travel direction does not have to be configured. It is fixed at about 1 second for all channels.

Functions and objects

The application program can be configured for control of solar protection with Venetian blinds or with roller shutters / awnings.

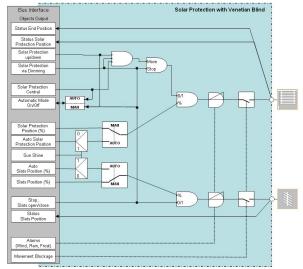
In the default configuration it provides sufficient basic functionality for simple applications in combination with five basic communication objects: three alarm objects for wind, rain, and frost, as well as two 1-bit command objects for moving the solar protection into one of the limit positions and for stopping the travel movement respectively for stepwise movement of the slats.

The following functions and the associated objects can be added and configured via the parameter window "Functions, Objects" for the channel:

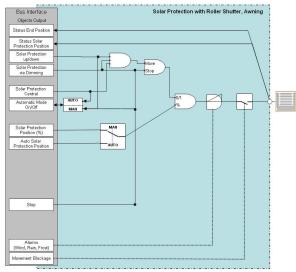
- manual / automatic or standard operation mode,
- standard operation mode with objects for solar protection position in % and slats position in %,
- automatic mode with four objects: one object to switch between automatic / manual mode, one object for centrally moving solar protection up/down as well as the 8-bit command objects for positioning of sun blinds and slats via percentage values in automatic mode,
- solar protection control via dimming,
- status message for solar protection position, slat position and end positions,

- movement into two configurable and optionally by the user amendable positions 1 and 2,
- 8-bit scene control,
- movement blockage.

The following schema shows the named features in a logical overview for Venetian blind and roller shutter *I* awning.



Solar protection via blind



Solar protection via roller shutter / awning

The functions and objects are separately described for Venetian blind and roller shutter / awning in sections 3 and 4.

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Apart from moving the solar protection into one of the two limit positions, for the channel, both the solar protection and the slats can be moved into an intermediate position using commands with a position specification in the range of 0...100 %. How exactly the desired position in percent is taken by the solar protection and the slats is determined by the drive used and the gear, not by the solar protection actuator.

The current position of the solar protection as well as the slats can be transmitted, on request or automatically after reaching a new position, via two status objects as percent value in the range 0...100% (0% = solar protection respectively slats fully open, 100% = solar protection respectively slats fully closed).

To enable a certain level of daylight to enter the room for example, it is possible to set, once the blind has been lowered into the lower final position without disruption and the limit switch has been addressed, which intermediate position the slats should then be rotated into respectively for a shutter, how long it is to be raised again.

To guarantee the uniform final positions of all the blinds on a façade, when a movement command into the lower or upper final position of the sun blind is given, the set travel time can be extended by an adjustable time to safely reach the upper or lower final position by addressing the respective limit switch.

<u>Note</u>: For a blind with horizontal slats and a standard blind drive, changing the slats position also leads to a small change of the blind position. Opening the slats is tied to a minor upward movement, closing the slats to a minor downward movement of the blind.

Normal mode or differentiation automatic / manual mode

It can be set via the "Differentiation automatic / manual mode" parameter in the "Functions, Objects" parameter window whether a distinction is to be made between automatic and manual mode or whether there is only one operating mode (standard mode).

Normal mode

During standard mode, the two 1-bit objects for controlling a Venetian blind and its slats are always available per channel. These can be supplemented by further objects via the "Functions, Objects" parameter window if required. There are further configuration settings for these partial functions

- Status messages
- Solar protection via dimming
- Alarms

- Movement blockagePosition 1 or 2
- 8-bit scene control

Differentiation automatic / manual mode

In automatic mode there is one object available per channel to switch the channel to manual or automatic mode and two 1-bit objects to control Venetian blinds and slats in manual mode.

Switching from manual operation mode to automatic operation mode and vice versa is triggered by receiving values on the following objects:

change manual mode \rightarrow automatic mode - central solar protection

- change automatic mode \rightarrow manual mode
 - solar protection up/down
 - slats open/close
 - recall / save position 1 / 2
 - recall / save 8-bit scene

Further objects can be supplemented via the parameter window "Functions, Objects" if required.

There are further configuration settings for these partial functions

- Status messages
- Solar protection via dimming
- Alarms
- Movement blockage
- Position 1 or 2
- 8-bit scene control

Manually moving a blind or adjusting its slats when the blind is in automatic mode by using the two 1-bit objects for manual operation (e.g. by using a Venetian blind pushbutton in the room) always results in an automatic switching from automatic mode to manual mode for the affected channel. All automatic commands for the channel set to manual mode are no longer carried out. This ensures that a person using a room can permanently bring his blind into a desired position that can only be changed by a superior automatic system once the channel has been switched back to automatic mode or can be superseded by the central command if this has been released for the channel.

Via the object "solar protection central Up / Down", the channel of the actuator is first of all switched to automatic mode and then moved into the specified final position. Use of this central command guarantees that the blinds in rooms that are switched to manual mode by their user and not switched back to automatic mode

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before the user leaves the room or premise can also be raised centrally at night and lowered centrally in the morning when the sun starts shining. If for a channel a roller blind positioned on the inside and serving to darken the room is to be moved only locally and manually (not automatically via a central command), then the linking of this central command with a group address has to be omitted for this channel.

In addition, for the channel, both the blinds and the slats are to be moved in automatic mode into an intermediate position using commands with a position specification in the range of 0...100 %. How exactly the desired position in percent is to be taken in by the blinds and the slats is determined by the drive used and the gear, not by this software.

When using a weather station or a shutter control unit that can send the object "Sunshine", this object can be used to block or release the adjusting of the slats on those channels for which the automatic mode is switched on and this object is released, after the blinds have been moved into the upper or lower final position.

Behavior at bus voltage failure / recovery

In the event of bus voltage failure the current positions of solar protection and slats as well as the travel time configuration is permanently saved to be restored on bus voltage recovery. Object values are not saved. Status objects are not read after a bus reset. Actions configured for execution on bus voltage failure are only executed, if no alarm or blockage is active.

Actions configured for execution on bus voltage recovery are only executed and possible new positions transmitted, if no alarm or blockage was active before bus voltage failure. The information (not the object values) about alarm and blockage before bus voltage failure is only saved for the initialization phase after bus voltage recovery. It is reset (no alarm active, no blockage active) after initialization. Consequently, if e.g. before bus voltage failure a blockage was active, the solar protection cannot be moved into a configured position on bus voltage failure or on bus voltage recovery. If after bus voltage recovery further messages to move the solar protection are received, then these are executed because the blockage present before bus voltage failure is not saved. Thus an explicit release of a blockage after bus voltage recovery is not required.

If alarm surveillance periods are configured, then these are restarted on bus voltage recovery.

The synchronization is retained on bus voltage failure and recovery. Yet, the actuator assumes that any function configured for bus voltage failure has been fully executed. If this is not the case, the calculated position may deviate from the actual position until the solar protection has been moved to an end position.

Behavior on unloading the application program

When the application program is unloaded with ETS the device does not function.

Resetting the device to factory default settings

A very long push of the programming button (> 20 s) effects a reset to factory settings. This is indicated by constant flashing for 8 seconds.

All configuration settings are lost. The building site function is re-activated.

Addressing mode

A short push of learning button (< 2 s) enables the addressing mode. This is indicated by a continuously lit programming mode LED. A second push disables this mode.

Note

A long push of the learning button (> 5 s and <20 s) enables the Connection Test for commissioning with Desigo. Any time this mode can be disabled by a short push of the learning button.

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2. Communication objects

Maximum num	ber of group addresses:	120
Maximum num	ber of associations:	120

Note

The number and names of communication objects visible can vary depending on the parameter settings.

The application program already has been loaded in the factory.

The device is configured and commissioned with Engineering Tool Software (ETS) version ETS v3.0f or higher.

With the ETS (Engineering Tool Software) the specific parameters and addresses are assigned appropriately, and downloaded into the device.

The following list shows all objects of the device for these configurations:

- Solar protection by Venetian blind without differentiation of automatic / manual mode (normal mode)
- Solar protection by Venetian blind with differentiation of automatic / manual mode
- Solar protection by roller shutter / awning without differentiation of automatic / manual mode (normal mode)
- Solar protection by roller shutter / awning with differentiation of automatic / manual mode

Which objects are visible and linkable to group addresses is defined via the functions assigned to the inputs.

The objects and associated parameter settings are described with the functions.

Solar protection by Venetian blind without differentiation of automatic / manual mode (normal mode)

No.	Object nan	ne	Function	Number of bits	Flags
1	Channel A	8-bit scene	recall / save	1 byte	CW
2	Channel A	position	recall	1 bit	CW
3	Channel A	position	save	1 bit	CW
7	Channel A	wind alarm	on / off	1 bit	CRWT
8	Channel A	precipitation alarm	on / off	1 bit	CRWT
9	Channel A	frost alarm	on / off	1 bit	CRWT
10	Channel A	movement blockage	on / off	1 bit	CRWT
13	Channel A	solar protection position	0100%	1 byte	CRW
14	Channel A	slat position	0100%	1 byte	CRW
16	Channel A	solar protection	up / down	1 bit	CRW
17	Channel A	stop / slats	open / close	1 bit	CRW
	Channel A dimming	solar protection via	open / close via on / off	1 bit	CRW
18	Channel A dimming	solar protection via	up / down via brighter / darker	4 bit	CRW
21	Channel A position	status solar protection	0100%	1 byte	CRWT
22	Channel A	status slat position	0100%	1 byte	CRWT
23	Channel A	status upper end position	on / off	1 bit	CRWT
24	Channel A	status bottom end position	on / off	1 bit	CRWT

Solar protection by Venetian blind with differentiation of automatic / manual mode

No.	Object name	Function	Number of bits	Flags
1	Channel A 8-bit scene	recall / save	1 byte	CW
2	Channel A position	recall	1 bit	CW
3	Channel A position	save	1 bit	CW
4	Channel A solar protection central	up / down	1 bit	CRW
5	Channel A automatic mode	On / off	1 bit	CRWT
6	Channel A sunshine	On / off	1 bit	CRW
7	Channel A wind alarm	On / off	1 bit	CRWT
8	Channel A precipitation alarm	On / off	1 bit	CRWT
9	Channel A frost alarm	On / off	1 bit	CRWT
10	Channel A movement blockage	On / off	1 bit	CRWT
11	Channel A automatic mode solar	0100%	1 byte	CRW
	protection position		-	
12	Channel A automatic mode slat	0100%	1 byte	CRW
	position			
16	Channel A solar protection	up/down	1 bit	CRW
17	Channel A stop / slats	open / close	1 bit	CRW
	Channel A solar protection via	open / close	1 bit	CRW
	dimming	via on / off		
18	Channel A solar protection via dimming	up / down via	4 bit	CRW
		brighter /		
		darker		
20	Channel A status automatic mode	on / off	1 bit	CRWT
21	Channel A status solar protection	0100%	1 byte	CRWT
	position			
22	Channel A status slat position	0100%	1 byte	CRWT
23	Channel A status upper end position	on / off	1 bit	CRWT
24	Channel A status bottom end position	on / off	1 bit	CRWT

GAMMA <u>instabus</u> Application program description

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Solar protection by roller shutter / awning without differentiation of automatic / manual mode (normal mode)

No.	Object nan	ne	Function	Number of bits	Flags
1	Channel A	8-bit scene	recall / save	1 byte	CW
2	Channel A	position	recall	1 bit	CW
3	Channel A	position	save	1 bit	CW
7	Channel A	wind alarm	on / off	1 bit	CRWT
8	Channel A	precipitation alarm	on / off	1 bit	CRWT
9	Channel A	frost alarm	on / off	1 bit	CRWT
10	Channel A	movement blockage	on / off	1 bit	CRWT
13	Channel A	solar protection position	0100%	1 byte	CRW
16	Channel A	solar protection	up / down	1 bit	CRW
17	Channel A	stop	open / close	1 bit	CRW
18	Channel A dimming	solar protection via	up / down via brighter / darker	4 bit	CRW
21	Channel A position	status solar protection	0100%	1 byte	CRWT
23	Channel A	status upper end position	on / off	1 bit	CRWT
24	Channel A position	status bottom end	on / off	1 bit	CRWT

Solar protection by roller shutter / awning with differentiation of automatic / manual mode

No.	Object nan	ne	Function	Number of bits	Flags
1	Channel A	8-bit scene	recall / save	1 byte	CW
2	Channel A	position	recall	1 bit	CW
3	Channel A	position	save	1 bit	CW
4	Channel A	solar protection central	up / down	1 bit	CRW
5	Channel A	automatic mode	on / off	1 bit	CRWT
7	Channel A	wind alarm	on / off	1 bit	CRWT
8	Channel A	precipitation alarm	on / off	1 bit	CRWT
9	Channel A	frost alarm	on / off	1 bit	CRWT
10	Channel A	movement blockage	on / off	1 bit	CRWT
11	Channel A	automatic mode solar	0100%	1 byte	CRW
	protection	position			
16	Channel A	solar protection	up / down	1 bit	CRW
17	Channel A	stop	open / close	1 bit	CRW
18	Channel A dimming	solar protection via	up / down via brighter / darker	4 bit	CRW
20	Channel A	status automatic mode	on / off	1 bit	CRWT
21	Channel A position	status solar protection	0100%	1 byte	CRWT
23	Channel A	status upper end position	on / off	1 bit	CRWT
24	Channel A position	status bottom end	on / off	1 bit	CRWT

3. Functions (Objects, Parameter), Blind

Configuration of the objects and parameters for channels A and B is done identically and thus is only described once.

Each actuator output can be configured individually with the following partial functions:

- Basic function
- Normal mode
- Manual / automatic mode
- Solar protection via dimming
- Status messages
- Alarms
- Movement blockage
- Position 1 or 2
- 8-bit scene control

The following sections describe the functions, which can be configured for the channel, including the associated objects and parameter settings.

Note

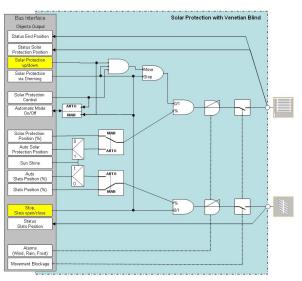
The number and names of the parameter windows in the ETS menu may vary as they are controlled via parameter settings.

Another parameter window may appear if due to dynamically added parameters the space in the first parameter window is exhausted.

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Basic function



Function blind, basic function

Objects

Obj	Object name	Function	Туре	Flags
16	Channel A solar protection	up / down	1 bit	CRW

The Up / Down movement of the blind for the corresponding channel is initiated via these objects. The blind is raised on receipt of a logical 0 and lowered on receipt of a logical 1. The motor of the blind remains switched on until either a stop command is received or the set travel time including the prolongation time has elapsed and the final position must therefore have been reached.

If the blind moves without any intermediate stop from the upper to the lower final position (Down) via this object and a "Slats position after blind DOWN in percent" has been set, the slats are opened accordingly. During automatic mode, the receipt of a telegram to one of these objects always effects automatic switching from automatic to manual mode for the channel in question. All automatic mode commands for a channel being in manual mode then are not executed.

Obj	Object name	Function	Туре	Flags
17	Channel A stop /	open / close	1 bit	CRW
	slats			

Parameter "Channel A Functions, Objects"

Channel A Functions, Objects	ChannelA Fun	actions, Objects
Channel A Blind	Solar protection by	blind
	8-bit scene control	No
	Object save / recall position 1, 2	No
	Object movement blockage	No
	Solar protection control via dimming	No
	Differentiation automatic / manual mode	No
	Object Solar protection position (height) % in standard mode	No
	Object slat position % in standard mode	No
	Objecte status upper / lower end position	No

This parameter window provides selection of the basic function (solar protection via Venetian blind or roller shutter/awning) and further functions of this actuator output. This includes

- whether an 8-bit scene control shall be added for this output channel,
- whether positioning of the blind in two preset positions shall be added for this output channel,
- whether a movement blockage shall be added for this output channel,
- whether control via dimming up/down shall be added for this output channel,
- whether manual and automatic operation mode shall be differentiated,
- whether the blind and / or the slats shall be controlled via percentage telegrams,
- whether reaching the upper or lower limit position shall be indicated via objects.

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Parameter	Settings	
Solar protection by	blind;	
roller shutter, awning This parameter is used to set whether a drive for a Venetian blind or a shutter or an awning is connected to the channel. It a shutter or awning drive is connected, then the specia objects and parameters for Venetian blinds and their slats are not shown.		

The parameter "Solar protection by" shall be set to "blind".

Parameter "Channel A Blind"

Channel A Functions, Objects	Channel A Blind			
Channel A Blind	Enable detection of end position	Yes	¥	
	End position dead time [0.1s]	10	÷	
	Time for changing slat position from vertical to horizontal [0.1s]	5	÷	
	Time for changing slat position from vertical to start of travel [0.1s]	10	÷	
	Slat position after blind DOW/N in percent (0%=open) (0100)	20	÷	
	Number of step commands from vertical to horizontal slat position in manual mode	2	÷	
	Behavior in case of wind alarm (P3)	move upwards	•	
	Monitoring time for wind alarm	disabled	•	
	Behavior in case of rain alarm (P2)	move upwards	•	
	Monitoring time for rain alarm	disabled	•	
	Behaviorin case of frost alarm (P1)	move upwards	•	
	Monitoring time for frost alarm	disabled	Ŧ	
	Behavior at bus voltage failure	no action	•	
	Behavior at bus voltage recovery	no action	•	

Parameter	Settings	
Enable detection of end position	No; Yes	
This parameter determines whether the automatic enceposition detection is used. If it is used, it must be ensured that the connected sola protection reliably supports this. If this cannot be guaranteed i.e. the detection is not always reliably possible (e.g. signal cross-talk because of long cables, electronic end position detection), then detection of end position has to be disabled In that case, the travel times have to be determined. If the parameter is set to "No" then, after a download with ETS on the first control command the solar protection briefly moves down and then moves up into the upper end position.		
End position dead time	10;	
[0,1s]	550	
This parameter is visible, if the parameter "Enable detection of end position" is set to "Yes". This parameter determines how long, after the end position has been left, the end position is not evaluated. This dead time is necessary because the end position switches is not		

time is necessary because the end position switches is not closed immediately after the end position has been left. Typical values are 0.5 to 1.0 seconds.

	Settings				
Travel time of solar protec-	300;				
tion from upper end posi-	3300				
tion to bottom end position					
in seconds [3300]					
	e parameter "Enable detection				
of end position" is set to "No".					
	travel time of the solar protec-				
tion from the upper to the lowe Note:	er end position.				
	is enabled this parameter is set				
during initialization of the device	ce.				
Travel time of solar protec-	300;				
tion from bottom end	3300				
position to upper end	5500				
position in seconds [3300]					
	e parameter "Enable detection				
of end position" is set to "No".					
	travel time of the solar protec-				
tion from the lower to the uppe	er end position.				
Note:	is enabled this parameter is set				
during initialization of the device					
Prolongation of in-motion	no additional time;				
time by	120 seconds				
time by	20 seconds				
This parameter is visible, if th	e parameter "Enable detection				
of end position" is set to "No".	,				
	f, when the solar protection				
	e travel time shall be extended				
	by an additional time to ensure that the solar protection				
reaches the end position and the drive motor is turned off by					
	he drive motor is turned off by				
the end position limit switches.	he drive motor is turned off by				
the end position limit switches. Time for changing slat	he drive motor is turned off by				
the end position limit switches. Time for changing slat position from vertical to	he drive motor is turned off by				
the end position limit switches. Time for changing slat position from vertical to horizontal [0,1s]	he drive motor is turned off by 5; 0100				
the end position limit switches. Time for changing slat position from vertical to horizontal [0,1s] This parameter determines the	he drive motor is turned off by 5; 0100 time it takes to move the slats				
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the end position limit switches. Time for changing slat position from vertical to horizontal [0,1s] This parameter determines the of the Venetian blind from cor horizontal slat position (=0%) <u>Note:</u> This time is to be determing If the value 0 (or 1) is set, the vi- changing salt position from ver All parameter values then refer i.e. from vertical to start of travel from vertical to horizontal or from If both parameters ("Time for vertical to horizontal" and "Tif from vertical to start of travel" all following parameters them range (from vertical to start of travel"	 be drive motor is turned off by 5; 0100 time it takes to move the slats npletely closed (=100%) to the in the range from 0.2s to 10s. Ined as accurately as possible. alue of the parameter "Time for rtical to start of travel" is used. to the full slat motion range – el. Either the active slat range is om vertical to start of motion. If changing slat position from me for changing salt position are set to the same value, then refer to the full slat motion travel). 				
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the end position limit switches. Time for changing slat position from vertical to horizontal [0,1s] This parameter determines the of the Venetian blind from cor horizontal slat position (=0%) <u>Note:</u> This time is to be determind If the value 0 (or 1) is set, the with changing salt position from ver All parameter values then refer i.e. from vertical to start of trave This allows for two alternatives from vertical to horizontal or for vertical to horizontal" and "Ti from vertical to start of trave!" all following parameters them range (from vertical to start of If both parameters are not different slat positions can occu	 be drive motor is turned off by 5; 0100 time it takes to move the slats npletely closed (=100%) to the in the range from 0.2s to 10s. Ined as accurately as possible. alue of the parameter "Time for rtical to start of travel" is used. to the full slat motion range – el. Either the active slat range is powertical to start of motion. If changing slat position from me for changing salt position are set to the same value, then refer to the full slat motion travel). 				

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Demonstern	Catting			
Parameter	Settings			
Time for changing slat position from vertical to	10; 3125			
start of travel [0,1s]				
This parameter determines the time it takes to move the slats of the Venetian blind from completely closed to the slat position at which the upward travel of the Venetian blind begins, in the range from 0.3s to 12.5s. Opening the slats, they can be rotated beyond the horizontal position (i.e. turned backwards so that they are again partially closed). <u>Note:</u> This time is to be determined as accurately as possible.				
Slat position after blind	20;			
DOWN in percent (0% = open) [0100]	0100			
This parameter only appears if the "Solar shading as" para- meter is set to "Venetian blind". After an uninterrupted movement of the Venetian blind from the upper to the lower limit position via one of the corre- sponding objects, the slats are adjusted from their vertical position to the position specified in this parameter. 0% = slats completely opened (horizontal) 100% = slats completely closed (vertical) <u>Note:</u> With Venetian blinds it is a prerequisite that they move				
downwards with closed slats. Number of step commands	2:			
from vertical to horizontal 2; slat position in manual mode				
This parameter is used to set the move the slats from the verti This number is taken into acco of the slats, i.e. the slats are position has changed by a p corresponds to at least one step	cal to the horizontal position. unt in the sun tracking control e only re-adjusted if the sun percentage value (angle) that			
Behaviour at bus voltage	move upwards			
failure	move downwards; no action;			
	stop (for testing)			
This parameter determines how bus voltage failure.	v the actuator channel acts on			
Behaviour at bus voltage	move upwards;			
recovery	move downwards;			
	move to %-value;			
	no action;			
stop (for testing)				
This parameter determines how the actuator channel acts on bus voltage recovery. Note:				
Note: On bus voltage recovery the assumption is that the action configured for bus voltage failure was fully completed. If "move upwards" is configured for bus voltage failure and the bus voltage returns before the solar protection could fully open, then the status of the solar protection is set to "upper end position" at the start even if the end position has not (yet) been reached. In this case the status message can deviate from the true position.				

Parameter	Settings	
Value solar protection	0;	
position	0100	
This parameter is visible, if the parameter "Behaviour at bus voltage recovery" is set to "move to %-value". This parameter determines the position the solar protection shall move to on bus voltage recovery.		
Value slat position	0;	
	0100	
This parameter is visible, if the parameter "Behaviour at bus voltage recovery" is set to "move to %-value". This parameter determines the position the slats shall move to on bus voltage recovery.		

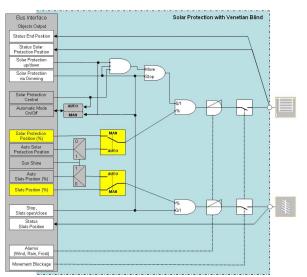
The additional parameters are covered in the sections for the partial functions

- Solar protection / slat position (normal mode)
- Manual / automatic mode
- Status messages
- Solar protection via dimming
- Alarms
- Movement blockage
- Position 1 or 2
- 8-bit scene control

Update: http://www.siemens.com/gamma-td

GAMMA <u>instabus</u> Application program description

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Solar protection / slat position (normal mode)

Function blind, solar protection / slat position

Objects

Obj	Object name	Function	Туре	Flags
13	Channel A solar protec-	0100%	1	CRW
	tion position		byte	
This	object is visible, if the pare	ameter "Diff	erentiati	ion auto-
	c / manual mode" is set			
	ect status solar protection po			
	g this object, the blind of th		0	nnel can
	oved into a chosen position			
	positions can be transmitted			0
kept	55 using this object. The foll	owing defin		ave to be
0		nd fully Up		
255	()	nd fully Dow	n	
As s	oon as the blind position s			biect has
	reached, the slat position			
"Slat	s position" object belonging	to the resp	ective c	hannel is
	matically restored.			
	e of the final positions is to			
	is automatically extended b	· ·	5	
so that the reaching of the upper or lower final position is				
0	anteed by addressing the lim			4
Once the slat adjustment has been completed or the final				
position has been reached, the object value of all status				
objects (status blind and slats position together with status end position up / down) is updated and, if set correspondingly,				
transmitted via the bus.				

objects (status blind and slats position together with statu end position up / down) is updated and, if set correspondingly	Obj	Object nam	e	Function	Туре	Flags
This object is visible, if the parameter "Differentiation automatic / manual mode" is set to "No" and the paramete "Object slat position in % in standard mode" is set to "Yes". Using this object, the slats of the corresponding channel can be moved into a chosen position in standard mode. The slats adjustment may cause the height of the Venetian blind to vary slightly. Slat positions can be transmitted as EIS6 in a value range of 0 to 255 using this object. The following definitions have to be kept: 0 (=0%) Slats fully open (horizontal) 255 (=100%) Slats fully closed (vertical) As soon as the slats adjustment has been completed or the final position has been reached, the object value of all statu objects (status blind and slats position together with statu end position up / down) is updated and, if set correspondingly	14	Channel A	slat position	0100%	•	CRW
 matic / manual mode" is set to "No" and the parameter "Object slat position in % in standard mode" is set to "Yes". Using this object, the slats of the corresponding channel can be moved into a chosen position in standard mode. The slats adjustment may cause the height of the Venetian blind to vary slightly. Slat positions can be transmitted as EIS6 in a value range of 0 to 255 using this object. The following definitions have to be kept: 0 (=0%) Slats fully open (horizontal) 255 (=100%) Slats fully closed (vertical) As soon as the slats adjustment has been completed or the final position has been reached, the object value of all statu objects (status blind and slats position together with statuend position up / down) is updated and, if set correspondingly 					byte	
 "Object slat position in % in standard mode" is set to "Yes". Using this object, the slats of the corresponding channel can be moved into a chosen position in standard mode. The slats adjustment may cause the height of the Venetian blind to vary slightly. Slat positions can be transmitted as EIS6 in a value range of 0 to 255 using this object. The following definitions have to be kept: 0 (=0%) Slats fully open (horizontal) 255 (=100%) Slats fully closed (vertical) As soon as the slats adjustment has been completed or th final position has been reached, the object value of all statu objects (status blind and slats position together with statuend position up / down) is updated and, if set correspondingly 	This	object is visi	ble, if the para	ameter "Diffe	erentiati	ion auto-
Using this object, the slats of the corresponding channel can be moved into a chosen position in standard mode. The slats adjustment may cause the height of the Vene- tian blind to vary slightly. Slat positions can be transmitted as EIS6 in a value range of 0 to 255 using this object. The following definitions have to be kept: 0 (=0%) Slats fully open (horizontal) 255 (=100%) Slats fully closed (vertical) As soon as the slats adjustment has been completed or th final position has been reached, the object value of all statu objects (status blind and slats position together with statu end position up / down) is updated and, if set correspondingly	mati	c / manual	mode" is set	to "No" and	d the p	arameter
can be moved into a chosen position in standard mode. The slats adjustment may cause the height of the Vene- tian blind to vary slightly. Slat positions can be transmitted as EIS6 in a value range of 0 to 255 using this object. The following definitions have to be kept: 0 (=0%) Slats fully open (horizontal) 255 (=100%) Slats fully closed (vertical) As soon as the slats adjustment has been completed or th final position has been reached, the object value of all statu objects (status blind and slats position together with statu end position up / down) is updated and, if set correspondingly	"Obje	ect slat positio	on in % in stand	lard mode" is	s set to "	'Yes".
The slats adjustment may cause the height of the Vene- tian blind to vary slightly. Slat positions can be transmitted as EIS6 in a value range of 0 to 255 using this object. The following definitions have to be kept: 0 (=0%) Slats fully open (horizontal) 255 (=100%) Slats fully closed (vertical) As soon as the slats adjustment has been completed or th final position has been reached, the object value of all statu objects (status blind and slats position together with statu end position up / down) is updated and, if set correspondingly	Using	g this object,	the slats of the	correspondi	ng chani	nel
tian blind to vary slightly. Slat positions can be transmitted as EIS6 in a value range of 0 to 255 using this object. The following definitions have to be kept: 0 (=0%) Slats fully open (horizontal) 255 (=100%) Slats fully closed (vertical) As soon as the slats adjustment has been completed or th final position has been reached, the object value of all statu objects (status blind and slats position together with statu end position up / down) is updated and, if set correspondingly	can b	e moved into	o a chosen posit	ion in standa	ard mod	e.
Slat positions can be transmitted as EIS6 in a value range of 0 to 255 using this object. The following definitions have to be kept: 0 (=0%) Slats fully open (horizontal) 255 (=100%) Slats fully closed (vertical) As soon as the slats adjustment has been completed or the final position has been reached, the object value of all statu objects (status blind and slats position together with statu end position up / down) is updated and, if set correspondingly	The s	lats adjustme	ent may cause t	he height of	the Ven	e-
of 0 to 255 using this object. The following definitions have to be kept: 0 (=0%) Slats fully open (horizontal) 255 (=100%) Slats fully closed (vertical) As soon as the slats adjustment has been completed or th final position has been reached, the object value of all statu objects (status blind and slats position together with statu end position up / down) is updated and, if set correspondingly	tian k	plind to vary s	slightly.			
have to be kept: 0 (=0%) Slats fully open (horizontal) 255 (=100%) Slats fully closed (vertical) As soon as the slats adjustment has been completed or th final position has been reached, the object value of all statu objects (status blind and slats position together with statu end position up / down) is updated and, if set correspondingly	Slat p	ositions can	be transmitted	as ElS6 in a v	/alue rar	nge
0 (=0%) Slats fully open (horizontal) 255 (=100%) Slats fully closed (vertical) As soon as the slats adjustment has been completed or the final position has been reached, the object value of all statu objects (status blind and slats position together with statu end position up / down) is updated and, if set correspondingly	of 0 t	o 255 using	this object. The	following de	efinition	S
255 (=100%) Slats fully closed (vertical) As soon as the slats adjustment has been completed or th final position has been reached, the object value of all statu objects (status blind and slats position together with statu end position up / down) is updated and, if set correspondingly	have	to be kept:				
As soon as the slats adjustment has been completed or th final position has been reached, the object value of all statu objects (status blind and slats position together with statu end position up / down) is updated and, if set correspondingly	0	0 (=0%) Slats fully open (horizontal)				
final position has been reached, the object value of all statu objects (status blind and slats position together with statu end position up / down) is updated and, if set correspondingly	255					
final position has been reached, the object value of all statu objects (status blind and slats position together with statu end position up / down) is updated and, if set correspondingly	As soon as the slats adjustment has been completed or the					
end position up / down) is updated and, if set correspondingly	final position has been reached, the object value of all status					
	objects (status blind and slats position together with status					
	end position up / down) is updated and, if set correspondingly,					
transmitted via the bus.						
Note:						

After bus voltage recovery this object is always set to zero.

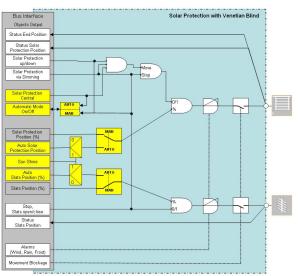
Parameter "Channel A Functions, Objects"

Parameter	Settings	
Differentiation automatic / manual mode	No; Yes	
For <u>normal mode</u> this parameter must be set to "No". This parameter determines whether a distinction is to be made between automatic and manual mode. If this parameter is set to "Yes", then the objects are supplemented to switch be- tween automatic and manual mode and for the central control of all sun blind actuators as well as one object per channel to move the blind and one to adjust the slats via percentage values in automatic mode. The differentiation between automatic and manual mode is required if, for example, the blind slats are to follow up the position of the sun via com- mands from the weather station (sun tracking control), but the user of the room shall be able to stop this.		
Object status solar protection No; position in % Yes		
This parameter only appears in standard mode if the parame- ter "Distinction automatic / manual mode" is set to "No". It is used to set whether communication objects to adjust the blind position shall be available in standard mode.		
Object slat position % inNo;standard modeYes		
This parameter only appears in standard mode if the parame- ter "Distinction automatic / manual mode" is set to "No". It is used to set whether communication objects to adjust the blind position shall be available in standard mode.		

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Manual / automatic mode



Function blind, manual / automatic mode

Objects

Obj	Object name	Function	Туре	Flags
4	Channel A solar protec- tion central	Up / Down	1 bit	CRW
If a telegram is received at this object, all channels of the Venetian blind actuator that are enabled for this object are first of all switched to "Automatic mode" (if released in the parameter setting) and then the blinds are moved by all channels simultaneously. If a logical 0 is received, then the blind is raised (opened); if a logical 1 is received, then it is lowered (closed). If Venetian blinds travel into the lower final position via this object, the slats position stipulated via the "Slats position after blind DOWN in percent" parameter is then approached automatically.				
5	Channel A automatic mode	on / off	1 bit	CRWT
automatic mode				

Obj	Object name	Function	Туре	Flags
6	Channel A sunshine	on / off	1 bit	CRW
When using a shutter control unit, this object serves to release or block the slats positioning and possibly to travel the blinds into the upper or lower limit position additionally. To do this, this object sunshine must be linked to the corresponding object of the shutter control unit or of the weather station. If a telegram is received for this object, then all blinds of those channels for which automatic mode is switched On will be moved at the same time, and subsequently the positioning of the blinds and slats via percentage commands will be released or blocked. If a log. 0 is received, then the blinds will be moved to the upper limit position (opened) and the positioning of blinds and slats via percentage commands will be blocked; if a log. 1 is received, then the blinds will be moved to the lower limit position (closed) and the positioning of blinds and slats via percentage commands will be released. If a Venetian blind is moved into the lower limit position, then the slats are subse- quently rotated into the position specified by the "Slats				
positi 11	on after blind DOWN in per Channel A autom. mode, solar protection position	cent" paramete 0100%	er. 1 byte	CRW
Using this object, the blind of the corresponding channel can only be moved into a chosen position in <u>automatic mode</u> . If the channel is in "manual mode", a movement command is not executed but is stored and executed after switching back to automatic mode. Blind positions can be transmitted as EIS6 in a value range of 0 to 255 using this object. The following definitions have to be				
time so th guara adjus reach slats		by the set pro oper or lower f limit switch. I or the final po tatus objects (s tus end positio	longatio final pos Once th osition ha status bl n up / d	n time, sition is e blind as been ind and own) is

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Obj	Object name	Function	Туре	Flags
12	Channel A automatic mode slat position	0100%	1 byte	CRW
Using this object, the slats of the corresponding channel can only be moved into a chosen position in automatic mode. If the channel is in "manual mode", the movement command is not executed but is stored and executed after switching back to automatic mode. The slat adjustment may cause the height of the blind to vary slightly. Slat positions can be transmitted as EIS6 in a value range of 0 to 255 using this object. The following definitions				
have to be kept: 0 (=0%) Slats fully open (horizontal) 255 (=100%) Slats fully closed (vertical) As soon as the slat adjustment has been completed or the final position has been reached, the object value of all status objects (status blind and slat position together with status end position up / down) is updated and, if set correspondingly, transmitted via the bus.				

Parameter "Channel A Functions, Objects"

Parameter	Settings	
Differentiation	No;	
automatic / manual mode	Yes	
For <u>automatic mode</u> this parameter must be set to "Yes". This parameter determines whether a distinction is to be made between automatic and manual mode. If this parameter is set to "Yes", then the objects are supplemented to switch be- tween automatic and manual mode and for the central control of all sun blind actuators as well as one object per channel to move the blind and one to adjust the slats via percentage values in automatic mode. The differentiation between automatic and manual mode is required if, for example, the blind slats are to follow up the position of the sun via com- mands from the weather station (sun tracking control), but the user of the room shall be able to stop this.		
	e to stop this.	
Object sunshine	No;	

Parameter "Channel A Blind"

Parameter Settings				
Min. change of value for slat	3;			
position in	345			
automatic mode (in °)				
This parameter is visible, if the parameter "Differentiation				
automatic / manual mode" is set to "Yes".				
This parameter determines what difference (in degrees) in automatic mode a new slats position received via the "Auto-				
matic mode, slats position" object has to differ from the				
current one so that the new				
The value set here is to corresp position set in a shutter contr				
that leads to the sending of a n				
If the value 0 as well as 1 or th				
the "Automatic mode, slats pos	ition" object, then the corres-			
ponding limit is always appro				
smallest possible activation tim				
of 50ms, then it depends on short impulse leads to a change				
Behaviour when sunshine =	execute automatic com-			
On	mands + move to stored			
	position;			
	blind down + execute			
	automatic commands			
This parameter only appears				
parameter is set to "enabled' actuator channel is to act wher				
"Sunshine" object with the o	biect value "1" as long as			
automatic mode has been activ				
been enabled. If automatic mo	de has not been activated for			
the affected channel, then the	telegram for this channel is			
ignored.				
"blind down + execute automa blind is moved into the lower li				
rotated into the configured position, the execution of automatic commands is released and subsequent automatic				
commands are awaited. If, while moving into the lower limit				
position, a telegram with a Venetian blind or slats position				
in percent is received, then this	s new telegram is carried out			
right away.	move to stared position ".			
"execute autom. commands + move to stored position ": The stored Venetian blind position is approached. Only the				
execution of automatic commands is released and subse-				
quent automatic commands are awaited.				

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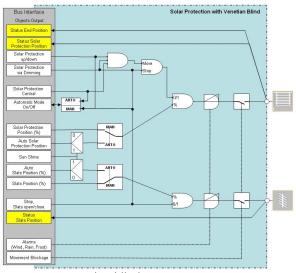
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Settings ignore automatic com-
ignore automatic com-
mands;
blind up + ignore automatic commands;
if the "Object Sunshine" It is used to set how an receiving a telegram for the ject value "O", as long as ted for it and the object has e has not been activated for telegram for this channel is The Venetian blind position
r i t

"Ignore automatic commands": The Venetian blind position remains unchanged. Only the execution of automatic commands is blocked, i.e. automatic commands for the affected channel are ignored and not carried out as long as "Sunshine = off" is set.

"blind up + ignore automatic commands": The Venetian blind is moved into the end position up and the execution of automatic commands is blocked, i.e. automatic commands for the affected channel are ignored and not carried out as long as "Sunshine = off" is set. If, while moving into the upper limit position, a telegram with a Venetian blind or slat position in percent is received, then this new telegram is already ignored.

Status messages



Function blind, status messages

<u>Objects</u>

Obj	Object name	Function	Туре	Flags
20	Channel A status automatic mode	On/Off	1 bit	CRWT
This object is only visible if the "Differentiation automatic / manual mode" parameter is set to "Yes" and the parameter "Object status automatic mode" is set to "Yes". With this object, the status of the automatic mode can be queried per channel and, depending on the configuration, may also be sent automatically in case of a change in status as well as after mains voltage recovery. The "automatic mode" operating mode is maintained in the background even during activated direct operation, move- ment blockage and alarm, and the status object set is accordingly, even if another operating mode overrides the				
	matic operation. Channel A status solar protection position	0100%	1 byte	CRWT
This object is only visible if the "Differentiation automatic / manual mode" parameter is set to "Yes" and the parameter "Object status solar protection position in % " is set to "Yes". Via this object, the position of the blind (as a percentage value) can be queried at any time or sent automatically after the travel has stopped. The upper limit position corresponds to the value 1 (= 0%) and the lower limit position to the value 255 (= 100%). The value 0 is used to indicate an unknown position (e.g. after the actuator has just been (re-)started). Updating the status object takes place for the first time when the travel time of the blind and the adjustment times of the slats have been entered and an uninterrupted travel to a limit position has taken place.				

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Obj	Object name	Function	Туре	Flags
22	Channel A status	0100%	1	CRWT
	slat position		byte	
This object is only visible if the "Differentiation automatic / manual mode" parameter is set to "Yes" and the parameter "Object status slat position in %" is set to "Yes". Via this object, the position of Venetian blind slats (as a percentage value) can be queried at any time or sent auto- matically after the slats have been adjusted. The upper slat position (slats fully opened) corresponds to the value 0 (= 0%) and the lower limit position (slats completely closed) to the value 255 (= 100%). Updating the status object takes place for the first time when the travel time of the blind and the adjustment times of the slats have been entered and an uninterrupted travel to a limit position has taken place.				
23	Channel A status upper end position	On/Off	1 bit	CRWT
This object is only visible if the "Object status upper / lower end position" parameter is set to "Yes". Via this object, a logical 1 object value reports that the blind is in the upper final position.				
24	Channel A status lower end position	On/Off	1 bit	CRWT
This object is only visible if the "Object status upper / lower end position" parameter is set to "Yes". Via this object, a logical 1 object value reports that the blind is in the lower final position.				

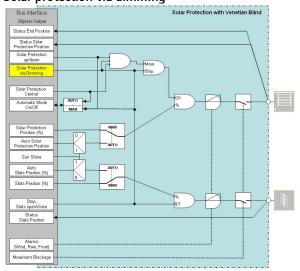
Parameter "A Functions, Objects"

Parameter	Settings	
Object status automatic mode	No ; Yes	
This parameter is only visible if the "Differentiation automatic / manual mode" parameter is set to "Yes". This parameter determines whether a communication object "Status automatic mode" is available for the channel.		
Object status solar protection No; position in % Yes		
This parameter is only visible if the "Differentiation automatic / manual mode" parameter is set to "Yes" or if the parameter "Object status solar protection position in % in normal mode" is set to "Yes". This parameter determines whether a communication object "Status solar protection position" is available for the channel.		
Object status slat position in %	No; Yes	
This parameter is only visible, if the parameter "Solar protec- tion by" is set to "blind" and if either the "Differentiation automatic / manual mode" parameter is set to "Yes" or if the parameter "Object status slat position in % in normal mode" is set to "Yes". This parameter determines whether a communication object "Status slat position" is available for the channel.		

Parameter	Settings		
Object status upper / lower end position	No; Yes; only status upper end position; only status lower end position		
This parameter determines whe communication object "Status u lower end position" is available for The object "Status upper end po position") is only equal to log. 1 bottom) end position.	oper end position" or "Status or the channel. sition" (or "Status lower end		
Send end position on / off	Yes; only send On		
This parameter is only visible, if the parameter "Object status upper / lower end position" is not set to "No". This parameter determines whether both the reaching (ON) as well as the leaving (OFF) of an end position is to be sent or whether only the reaching of an end position is to be sent.			
well as the leaving (OFF) of an	end position is to be sent or		
well as the leaving (OFF) of an	end position is to be sent or		
well as the leaving (OFF) of an whether only the reaching of an e Lower end position reached	end position is to be sent or end position is to be sent. No; Yes the parameter "Object status to "Yes" or "only status lower ching the lower end position		
well as the leaving (OFF) of an whether only the reaching of an e Lower end position reached after tilting slats up <i>This parameter is only visible, if</i> <i>upper / lower end position" is set</i> end position". This parameter determines if rea is sent or not sent as a status me	end position is to be sent or end position is to be sent. No; Yes the parameter "Object status to "Yes" or "only status lower ching the lower end position		

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Solar protection via dimming

Function blind, solar protection via dimming

Objects

Obj	Object name	Function	Туре	Flags
17	Channel A solar protection via dimming	open / close via on / off	1 bit	CRW
This object is only visible if the parameter "Solar protection control via dimming" is set to "Yes". Via this object a dimming sensor can control a solar protec- tion. On means move solar protection up, Off means move solar protection down.				
18	Channel A solar protection via dimming	up / down via brighter / darker	4 bit	CRW
This object is only visible if the parameter "Solar protection control via dimming" is set to "Yes". Via this object a dimming sensor can control a solar protec- tion. Dimming brighter means move solar protection up, dimming darker means move solar protection down. All dimming telegrams are interpreted as a change by 100% because the actuator does not know the current position. For				

this reason, only the configuration "dimming with stop telegram" makes sense for the dimming sensor.

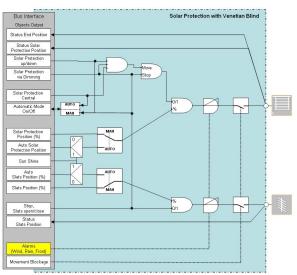
Parameter "Channel A Functions, Objects"

Parameter	Settings
Solar protection control via	No;
dimming	Yes
This parameter determines if t additional control objects. The 4-bit object must be connec object "dimming brighter/darker connected with the dimming sen Via the 4-bit object the solar up/down and via the 1-bit objec opened / closed. The 1-bit object works like the of yet with inverse values. The On equals the up telegram with object	ted with the dimming sensor ". The 1-bit object must be sor object "switching on/off". protection can be moved t the solar protection can be bject for controlling the slats, telegram with object value 1

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Alarms



Function blind, alarms

It is ensured via the objects "wind alarm", "precipitation alarm", and "frost alarm" that the blind is raised automatically in the event of a wind, rain or frost alarm and that it is prevented from being lowered via the bus when the alarm is still present.

Objects

Obj	Object name	Function	Туре	Flags
7	Channel A wind alarm	On/Off	1 bit	CRWT
This object can be linked with an alarm signal from a wind				

This object can be linked with an alarm signal from a wind sensor, which sends cyclically a logical 0 in the idle state and a logical 1 in the event of an alarm. Via the parameter "Behaviour on alarm", it can be set individually per channel whether the channel should not react to an alarm ("no action", e.g. in the case of an interior blind) or whether the Venetian blind actuator should e.g. move the outer Venetian blind connected to this channel into the upper final position in the event of a wind alarm and block movement out of this position while the wind alarm is still present. Sun blind and slat commands received during alarm operation, as well as commands for switching the automatic mode On or Off, are stored and carried out later when Alarm = 0.

The blind likewise moves to the set safety position if a time has been assigned to the parameter "Monitoring time for alarm" and no telegrams have been received during the set time interval.

Obj	Object name	Function	Туре	Flags
8	Channel A precipitation alarm	On/Off	1 bit	CRWT
This object can be linked with an alarm signal from a rain sensor, which sends cyclically a logical 0 in the idle state and a logical 1 in the event of an alarm. Via the parameter "Behav- iour on alarm", it can be set individually per channel whether the channel should not react to an alarm ("no action", e.g. in the case of an interior blind) or whether the Venetian blind actuator should e.g. move the outer Venetian blind connected to this channel into the upper final position in the event of a rain alarm and block movement out of this position while the rain alarm is still present. Sun blind and slat commands received during alarm operation, as well as commands for switching the automatic mode On or Off, are stored and carried out later when Alarm = 0. The blind likewise moves to the set safety position if a time has been assigned to the parameter "Monitoring time for alarm" and no telegrams have been received during the set time interval.				
9	Channel A frost alarm	On/Off	1 bit	CRWT
9 Channel A frost alarm On/Off 1 bit CRWT This object can be linked with an alarm signal from a frost sensor, which sends cyclically a logical 0 in the idle state and a logical 1 in the event of an alarm. Via the parameter "Behav- iour on alarm", it can be set individually per channel whether the channel should not react to an alarm ("no action", e.g. in the case of an interior blind) or whether the Venetian blind actuator should e.g. move the outer Venetian blind connected to this channel into the upper final position in the event of a frost alarm and block movement out of this position while the frost alarm is still present. Sun blind and slat commands received during alarm operation, as well as commands for switching the automatic mode On or Off, are stored and carried out later when Alarm = 0. The blind likewise moves to the set safety position if a time has been assigned to the parameter "Monitoring time for alarm" and no telegrams have been received during the set time interval.				

Parameter "Channel A Blind"

Parameter	Settings	
Behaviour in case of wind alarm (P3) move upwards; move downwards; ignore alarm (no action)		
This parameter determines ho when receiving a wind alarm that there is no pending alarm i <u>Note</u> : This alarm has the lowest priori	or when the cyclical message s omitted.	

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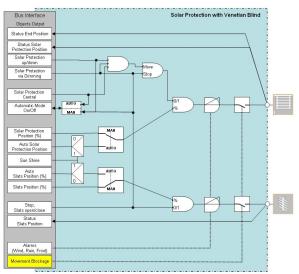
Parameter	Settings			
Monitoring time for wind	disabled;			
alarm	1 minute; 2 minutes;			
	3 minutes; 4 minutes;			
	5 minutes; 7 minutes;			
	10 minutes; 15 minutes;			
	30 minutes; 60 minutes			
This parameter is visible, if the	e parameter ″ Behaviour in case			
of wind alarm (P3)" is not set to				
•	o the wind alarm object of this			
channel.				
	ty or the bus cable to it is dis- to the damage or destruction of			
	o prevent this, the actuator can			
	tector assigned to the actuator			
or to a channel is sending telec				
If the setting "disabled" is assig	ned to the parameter "Monitor-			
	e cyclical sending of the alarm			
	wise, this parameter determines			
	one telegram with a logical 0			
	m object. If no telegrams are during the "Monitoring time for			
	to logical 1 inside the actuator,			
	actuator channel is moved into			
the set position according to	the "Behaviour on alarm" pa-			
	t position (even when alarm			
	received cyclically again) until a			
telegram with a movement cor				
	e.g. after bus voltage recovery),			
the monitoring time is only started after the first reception of the "Alarm" object.				
If no message is received via the alarm object within the				
configured monitoring time, then the alarm is also triggered				
after a download or new start.				
Behaviour in case of rain	move upwards;			
alarm (P2)	move downwards;			
	ignore alarm (no action)			
	ow the actuator channel acts			
	when the cyclical message that			
there is no pending alarm is omitted.				
Nata				
<u>Note</u> : This alarm has the middle prior				
This alarm has the middle prior	ity of the three possible alarms.			
This alarm has the middle prior Monitoring time for rain	ity of the three possible alarms. disabled;			
This alarm has the middle prior	ity of the three possible alarms. disabled; 1 minute; 2 minutes;			
This alarm has the middle prior Monitoring time for rain	ity of the three possible alarms. disabled;			
This alarm has the middle prior Monitoring time for rain	ity of the three possible alarms. disabled; 1 minute; 2 minutes; 3 minutes; 4 minutes;			
This alarm has the middle prior Monitoring time for rain	ity of the three possible alarms. disabled; 1 minute; 2 minutes; 3 minutes; 4 minutes; 5 minutes; 7 minutes;			
This alarm has the middle prior Monitoring time for rain alarm	ity of the three possible alarms. disabled; 1 minute; 2 minutes; 3 minutes; 4 minutes; 5 minutes; 7 minutes; 10 minutes; 15 minutes;			
This alarm has the middle prior Monitoring time for rain alarm This parameter is visible, if the of rain alarm (P2)" is not set to	ity of the three possible alarms. disabled; 1 minute; 2 minutes; 3 minutes; 4 minutes; 5 minutes; 7 minutes; 10 minutes; 15 minutes; 30 minutes; 60 minutes e parameter " Behaviour in case "ignore alarm (no action)".			
This alarm has the middle prior Monitoring time for rain alarm This parameter is visible, if the of rain alarm (P2)" is not set to This monitoring time applies t	ity of the three possible alarms. disabled; 1 minute; 2 minutes; 3 minutes; 4 minutes; 5 minutes; 7 minutes; 10 minutes; 15 minutes; 30 minutes; 60 minutes e parameter " Behaviour in case			
This alarm has the middle prior Monitoring time for rain alarm This parameter is visible, if the of rain alarm (P2)" is not set to This monitoring time applies t of this channel.	ity of the three possible alarms. disabled; 1 minute; 2 minutes; 3 minutes; 4 minutes; 5 minutes; 7 minutes; 10 minutes; 15 minutes; 30 minutes; 60 minutes e parameter " Behaviour in case "ignore alarm (no action)". o the precipitation alarm object			
This alarm has the middle prior Monitoring time for rain alarm This parameter is visible, if the of rain alarm (P2)" is not set to This monitoring time applies t of this channel. The explanations for the param	ity of the three possible alarms. disabled; 1 minute; 2 minutes; 3 minutes; 4 minutes; 5 minutes; 7 minutes; 10 minutes; 15 minutes; 30 minutes; 60 minutes e parameter " Behaviour in case "ignore alarm (no action)".			
This alarm has the middle prior Monitoring time for rain alarm This parameter is visible, if the of rain alarm (P2)" is not set to This monitoring time applies t of this channel. The explanations for the paran alarm" apply likewise.	ity of the three possible alarms. disabled; 1 minute; 2 minutes; 3 minutes; 4 minutes; 5 minutes; 7 minutes; 10 minutes; 15 minutes; 30 minutes; 60 minutes e parameter " Behaviour in case "ignore alarm (no action)". o the precipitation alarm object meter "Monitoring time for wind			
This alarm has the middle prior Monitoring time for rain alarm This parameter is visible, if the of rain alarm (P2)" is not set to This monitoring time applies t of this channel. The explanations for the param alarm" apply likewise. Behaviour in case of frost	ity of the three possible alarms. disabled; 1 minute; 2 minutes; 3 minutes; 4 minutes; 5 minutes; 7 minutes; 10 minutes; 15 minutes; 30 minutes; 60 minutes e parameter " Behaviour in case "ignore alarm (no action)". o the precipitation alarm object meter "Monitoring time for wind move upwards ;			
This alarm has the middle prior Monitoring time for rain alarm This parameter is visible, if the of rain alarm (P2)" is not set to This monitoring time applies t of this channel. The explanations for the paran alarm" apply likewise.	ity of the three possible alarms. disabled; 1 minute; 2 minutes; 3 minutes; 4 minutes; 5 minutes; 7 minutes; 10 minutes; 15 minutes; 30 minutes; 60 minutes e parameter " Behaviour in case "ignore alarm (no action)". o the precipitation alarm object meter "Monitoring time for wind move upwards; move downwards;			
This alarm has the middle prior Monitoring time for rain alarm This parameter is visible, if the of rain alarm (P2)" is not set to This monitoring time applies t of this channel. The explanations for the paran alarm" apply likewise. Behaviour in case of frost alarm (P1)	ity of the three possible alarms. disabled; 1 minute; 2 minutes; 3 minutes; 4 minutes; 5 minutes; 7 minutes; 10 minutes; 15 minutes; 30 minutes; 60 minutes e parameter " Behaviour in case "ignore alarm (no action)". o the precipitation alarm object meter "Monitoring time for wind move upwards; ignore alarm (no action)			
This alarm has the middle prior Monitoring time for rain alarm This parameter is visible, if the of rain alarm (P2)" is not set to This monitoring time applies t of this channel. The explanations for the paran alarm" apply likewise. Behaviour in case of frost alarm (P1) This parameter determines h	ity of the three possible alarms. disabled; 1 minute; 2 minutes; 3 minutes; 4 minutes; 5 minutes; 7 minutes; 10 minutes; 15 minutes; 30 minutes; 60 minutes e parameter " Behaviour in case "ignore alarm (no action)". o the precipitation alarm object meter "Monitoring time for wind move upwards; move downwards;			

Parameter	Settings	
that there is no pending alarm is omitted. <u>Note</u> : This alarm has the highest priority of the three possible alarms.		
Monitoring time for frost alarm disabled; 1 minute; 2 minutes; 3 minutes; 4 minutes; 5 minutes; 7 minutes; 10 minutes; 15 minutes; 30 minutes; 60 minutes		
30 minutes; 60 minutes This parameter is visible, if the parameter " Behaviour in case of frost alarm (P1)" is not set to "ignore alarm (no action)". This monitoring time applies to the frost alarm object of this channel. The explanations for the parameter "Monitoring time for wind alarm" apply likewise.		

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Movement blockage



Function blind, movement blockage

Via the object "Movement blockage" the movement of the solar protection can be locked at any time (e.g. for cleaning the outdoor solar protection.

The "Movement blockage" object has a higher priority than the "Alarm" objects, i.e. if the movement blockage object is set to logical 1 then the sun blind can also not be moved via an alarm object changing to a logical 1. However, if an alarm signal is still present after the blockage has been ended, then the channel in question moves automatically into the set safety position. In all other respects the behaviour of the "Movement blockage" object corresponds to that of the "Alarm" object.

Objects

Obj	Object name	Function	Туре	Flags
10	Channel A movement blockage	On/Off	1 bit	CRWT

If a logical 1 is received via this object, then movement of the blind via bus telegrams is blocked until a logical 0 is received via this object. This object can therefore be used e.g. while the outer Venetian blinds are being cleaned to prevent the blinds from being raised e.g. by a time switch so that the cleaning staff are not endangered, or when the window is open, to prevent an internal blind from being lowered and damaged as a result or to prevent a roller shutter from being lowered when the patio door is open and thus locking out the occupants.

Movement blockage = 1 has the highest priority and cannot be overridden by an alarm. Alarm commands, automatic mode commands for sun blind and slat positioning, commands to switch automatic mode On or Off as well as orders

Obj	Object name	Function	Туре	Flags	
for th	for the "Blinds centrally" object or for one of the "Channel x,				
blind	blind centrally" objects or one of the "Channel x, sunshine"				
objec	objects received with Movement blockage = 1 are stored and				
carrie	carried out later when Movement blockage = 0.				

Parameter "Channel A Functions, Objects"

Parameter	Settings
Object movement blockage	No;
	Yes
unlocking motion of the so "Movement blockage" object is	f an object for locking and lar protection is available. A visible if "Yes" is selected. ockage is active, the actuator

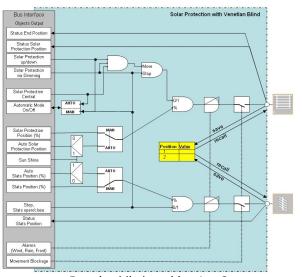
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Position 1 or 2



Function blind, position 1 or 2

Objects

Obj	Object name	Function	Туре	Flags
2	Channel A position	recall	1 bit	CW
This and the following object make it possible for a person using a room with a pair of bus pushbuttons allocated to the function "Program / recall 1-bit scene", to program a desired position of the blind and its slats by pressing the correspond- ing bus pushbutton for at least 1 s and to recall the pro- grammed position of the blind and its slats automatically by briefly pressing this button. With this object, two desired intermediate positions of the blind connected to the respective channel as well as its slats can be recalled automatically. To make this possible, these settings first need to have been programmed via the follow- ing object. On receiving a "0" telegram, the blind and slat setting stored in position 1 is approached; on receiving a "1" telegram, the blind and slat setting stored in position 2 is approached.				
3	Channel A position	save	1 bit	CW
Via this object, the programming of two desired intermediate positions of the blind connected to this channel as well as its slats can be initiated. The programmed (stored) positions can subsequently be approached again (recalled) via the preced- ing object at any time. Successfully programming a position is only possible if the travel time of the sun blind and the adjustment of the slats have been specified and the status objects for the blind and slats positions have been synchronised with reference movements into the upper limit position. On receiving a "0"-telegram, the current states of the "Status				

Obj	Object name	Function	Туре	Flags
	hine position" and "Statu			
queried and stored as position 1. Position 2 is stored accord-				
ingly after receiving a "1"-telegram.				

Parameter "Channel A Functions, Objects"

Parameter	Settings	
Object save / recall position	No;	
1,2	Yes	
This parameter determines if the actuator channel has one		
object each for saving and recalling position 1 / 2.		
The objects are visible if "Yes" is	selected.	

Parameter "Channel A Position"

Positions 1, 2 configurable by user	No	<u>•</u>
Preset value for solar protection position 1 in $\%$	0	<u>+</u>
Preset value for slat position 1 in $\ensuremath{\mathfrak{T}}$	0	<u>+</u>
Preset value for solar protection position 2 in $\%$	0	*
Preset value for slat position 2 in %	0	÷

The following parameters are presented in a separate parameter window if the parameter "Object save *I* recall position 1, 2" is set to "Yes".

Parameter	Settings	
Positions 1, 2 configurable	No;	
by user	Yes	
This parameter applies to both positions 1 / 2.		
If the value "No" is selected then the positions are not configu-		
rable (via a position telegram) and the associated communica-		
tion object for saving is not visible. The following parameter		
values for "solar protection position" and "slat position" cannot		
be changed during operation.		

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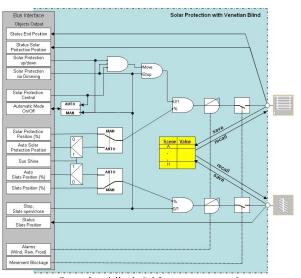
Parameter	Settings		
Delete saved position values for position 1	No; Yes		
This parameter is visible, if the parameter "Positions 1, 2 configurable by user" is set to "Yes". This parameter determines if the position values saved in the device for position 1 are deleted (setting "Yes") or not (setting "No") with a download. If "No" is selected then the saved values are not replaced during configuration of the device with ETS. If "Yes" is selected then further parameters determine if the respective position shall be preset or not. If it shall be preset then a further parameter for the solar protection height and, if applicable, the slat position in percent can be entered. If it shall not be preset then the position first has to be set during			
operation by a corresponding m If "Yes" is selected then the follo			
Preset position 1	No; Yes		
This parameter is visible, if the parameter "Positions 1, 2 configurable by user" is set to "Yes" and the parameter "Delete saved position values for position 1" is set to "Yes". This parameter determines if the position (solar protection and slat position) can be preset. If "Yes" is selected then the following two parameters appear.			
Preset value for solar 0; protection position 1 in % 0100			
This parameter is visible, if the parameter "Preset position 1" is set to "Yes". This parameter determines the preset value for the solar protection position of position 1.			
	0; 0100		
is set to "Yes".	e parameter "Preset position 1" ne preset value for the slats		
Delete saved position values for position 2	No; Yes		
This parameter is visible, if the parameter "Positions 1, 2 configurable by user" is set to "Yes". This parameter determines if the position values saved in the device for position 2 are deleted (setting "Yes") or not (setting "No") with a download. If "No" is selected then the saved values are not replaced during configuration of the device with ETS. If "Yes" is selected then further parameters determine if the respective position shall be preset or not. If it shall be preset then a further parameter for the solar protection height and, if applicable, the slat position in percent can be entered. If it shall not be preset then the position first has to be set during operation by a corresponding message (save position). If "Yes" is selected then the following parameters appear.			
Preset position 2	No; Yes		
This parameter is visible, if t	the parameter "Positions 1, 2		

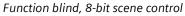
Parameter	Settings		
configurable by user" is set to "Yes" and the parameter "Delete saved position values for position 2" is set to "Yes". This parameter determines if the position (solar protection and slat position) can be preset. If "Yes" is selected then the following two parameters appear.			
Preset value for solar	0;		
protection position 2 in % 0100			
This parameter is visible, if the parameter "Preset position 2" is set to "Yes". This parameter determines the preset value for the solar protection position of position 2.			
Preset value for slat position	0;		
2 in %	0100		
This parameter is visible, if the parameter "Preset position 2" is set to "Yes". This parameter determines the preset value for the slats position of position 2.			

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8-bit scene control





Objects

Obj	Object name	Function	Туре	Flags
1	Channel A 8-bit scene	recall /	1 byte	CW
		save		
(restornumber number If Bit have autor progressive switc Succe the t slats slat move	this object, the 8-bit scene ored) or programmed (stor per. If Bit 7 is set to log. 1, 1 7 is set to log. 0, then the s any meaning at this poin matic mode is activated (ramming or recalling a hing to manual mode (auto essfully programming a bl ravel time of the blind an have been specified, the s positions have been syr ement into the upper final noving.	ed). Bit 05 c then the scene scene is recalle t and must be automatic mode = ind position is ind position is ind the adjustn tatus objects inchronised w	contain t e is prog ed. Bit 6 e set to ode = C atically = Off). s only p nent tin for the l	the scene rammed. does not log. 0. If 0n), then leads to ossible if ne of the blind and reference

Parameter "Channel A Functions, Objects"

Parameter	Settings
8-bit scene control	No; Yes
Use this parameter to set wh incorporated in the actuator corresponding communication window "8-bit scenes" are ado scene numbers per output char	is to be enabled. If so, the n object and the parameter led for assignment of up to 8

Parameter "Channel A 8-bit Scenes"

8-bit scenes configurable by user	No	
Link 1 with scene [064] (0=disabled)	0	
Link 2 with scene [064] (0=disabled)	0	
Link 3 with scene [064] (0=disabled)	0	<u>±</u>
Link 4 with scene [064] (0=disabled)	0	-
Link 5 with scene [064] (0=disabled)	0	1
Link 6 with scene [064] (0=disabled)	0	1
Link 7 with scene [064] (0=disabled)	0	-
Link 8 with scene [064] (0=disabled)	0	

The following parameters appear in a separate parameter window if "8-bit scene control" is set to "Yes".

Parameter	Settings	
8-bit scenes configurable by user	No; Yes	
This parameter applies to all 8 s	cene links.	
If "No" is selected the scenes are not configurable (via a scene telegram) by the user. The position values for "solar protection position" and "slat position" preset with the following parame- ters cannot be changed by the user during operation.		
Link 1 with scene [064] (0=disabled)	0; 064	
Via this parameter the selected channel can be linked with a scene number in the range 1 to 64. "0" means "not assigned to a scene" (link is not used).		
<u>Notes</u> :		
If a scene is recalled before the positions of solar protection and slats were saved for this scene and this channel then the solar protection moves to the upper end position.		
Successfully saving a scene/position is not possible before the travel time of the solar protection and the tilting time of the slats are valid.		
If automatic operation mode is active (automatic mode = On) then saving or recalling a scene automatically switches the operation mode to manual (automatic mode = Off).		
Link 2 with scene [064] (0=disabled)	0; 064	
see Link 1		
and so on until		

Link 8 with scene [064]	0;
(0=disabled)	064
see Link 1	

Additionally, these parameters for setting scene values are available for each scene.

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Parameter	Settings	
Link 1: delete saved scene	No;	
values	Yes	
This parameter is only visible for parameter " 8-bit scenes config and if the parameter "Link 1 wit is set to a value no equal to zer	urable by user" is set to "Yes" th scene [064] (0=disabled)"	
This parameter determines if the position value for link 1 saved in the device is deleted with a download (setting "Yes") or not (setting "No").		
If this parameter is set to "No" then the saved scene values are not deleted when the configuration is downloaded to the device using the ETS.		
If "Yes" is selected then further parameters determine if the respective scene shall be preset or not. If it shall be preset then a further parameter for the solar protection height and, if applicable, the slat position in percent can be entered. If it shall not be preset then the position first has to be set during operation by a corresponding message (save position). If "Yes" is selected then the following parameters appear.		
Link 1: preset scene values	No; Yes	
protection and slat position) for "Yes") or not (setting "No"). If this parameter is set to "No" to not deleted when the config device using the ETS. If the positions of solar protection scene and this channel then th upper end position. The scene operation by a corresponding m If "Yes" is selected then two fue which the solar protection heil position in percent can be enter If "Yes" is selected then the follow	if the position values (solar or link 1 shall be preset (setting then the saved scene values are uration is downloaded to the scene is recalled before the and slats were saved for this e solar protection moves to the settings must be saved during nessage (save scene). urther parameters appear, with ight and, if applicable, the slat red. owing two parameters appear.	
Solar protection position (height) in %	0; 0100	
This parameter is visible, if the parameters "Link 1: delete saved scene values" and "Link 1: preset scene values" are set to "Yes" or the parameter "8-bit scenes configurable by user" is set to "No". This parameter determines the preset value for the solar protection position of the scene.		
Slat position in %	0;	
saved scene values" and "Link to "Yes" or the parameter "8-bit set to "No" .	0100 ne parameters " Link 1: delete 1: preset scene values" are set scenes configurable by user" is he preset value for the slat	

4. Functions (Objects, Parameters), roller shutter / awning

Configuration of the objects and parameters for channels A and B is done identically and thus is only described once.

Each actuator output can be configured individually with the following partial functions:

- Basic function
- Normal mode
- Manual / automatic mode
- Solar protection via dimming
- Status messages
- Alarms
- Movement blockage
- Position 1 or 2
- 8-bit scene control

The following sections describe the functions, which can be configured for the channel, including the associated objects and parameter settings.

Note

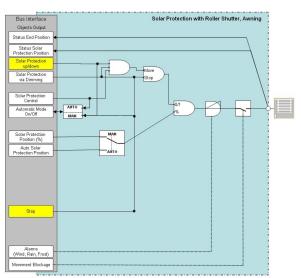
The number and names of the parameter windows in the ETS menu may vary as they are controlled via parameter settings.

Another parameter window may appear if due to dynamically added parameters the space in the first parameter window is exhausted.

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Basic function



Function roller shutter/awning, basic function

Objects

Obj	Object name	Function	Туре	Flags
16	Channel A solar protection	on / off	1 bit	CRW

The Up / Down movement of the blind for the corresponding channel is initiated via these objects. The blind is raised on receipt of a logical 0 and lowered on receipt of a logical 1. The motor of the blind remains switched on until either a stop command is received or the set travel time including the prolongation time has elapsed and the final position must therefore have been reached.

If the blind moves without any intermediate stop from the upper to the lower final position (Down) via this object and a "Slats position after blind DOWN in percent" has been set, the slats are opened accordingly.

During automatic mode, the receipt of a telegram to one of these objects always effects automatic switching from automatic to manual mode for the channel in question. All automatic mode commands for a channel being in manual mode then are not executed.

Obj	Object name	Function	Туре	Flags
17	Channel A Stop / slats	open / close	1 bit	CRW
respective conta slats close The effect for the	nese objects, the moven ective channel regardl ains a logical 0 or a logic are opened by one ste d by one step on receipt receipt of a telegram ts automatic switching ne channel in question. channel being operated	ess of whet al 1. If the blir of a logical 1. to one of the from automatic All automatic	her the nd is statio of a logic ese object ic to manu c mode co	telegram mary, the cal 0 and cs always ual mode ommands

Parameter "Channel A Functions, Objects"

hannel A Functions, Objects	Channel AF	unctions, Objects
hannel A Roller shutter	Solar protection by	roller shutter, awning
	8-bit scene control	No
	Object save / recall position 1, 2	No
	Solar protection control via dimming	No
	Object movement blockage	No
	Differentiation automatic / manual mode	No
	Object Solar protection position (height) % in standard mode	No
	Objecte status upper / lower end position	No

This parameter window provides selection of the basic function (solar protection via Venetian blind or roller shutter/awning) and further functions of this actuator output. This includes

- whether an 8-bit scene control shall be added for this output channel,
- whether positioning of the blind in two preset positions shall be added for this output channel,
- whether a movement blockage shall be added for this output channel,
- whether control via dimming up/down shall be added for this output channel,
- whether manual and automatic operation mode shall be differentiated,
- whether the blind and / or the slats shall be controlled via percentage telegrams,
- whether reaching the upper or lower limit position shall be indicated via objects.

Parameter	Settings	
Solar protection by	ection by blind;	
	roller shutter, awning	
This parameter is used to set whether a drive for a Venetian		
blind or a shutter or an awning	is connected to the channel. If	
a shutter or awning drive is connected, then the special		
objects and parameters for Ve	netian blinds and their slats are	

not shown.

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The parameter "Solar protection by" shall be set to "roller shutter / awning".

Parameter "Channel A Roller shutter"

annel A Functions, Objects		A Rollershutter	
annel A. Roller shutter	Enable detection of end position	Yes	2
	End position dead time [0.1s]	10	3
	Roller shutter position after roller shutter DOWN in percent (0%=open) [0100]	90	3
	Step-by-step motion [0.1s] (Travel time for 1 step)	0	
	Behavior in case of wind alarm (P3)	move upwards	
	Monitoring time for wind alarm	disabled	
	Behavior in case of rain alarm (P2)	move upwards	3
	Monitoring time for rain alarm	disabled	3
	Behavior in case of frost alarm (P1)	move upwards	3
	Monitoring time for frost alarm	disabled	3
	Behavior at bus voltage failure	no action	1
	Behavior at bus voltage recovery	no action	

Parameter	Settings
Enable detection of end position	No; Yes
position detection is used. If it is used, it must be ensu protection reliably supports this i.e. the detection is not alway cross-talk because of long ca detection), then detection of e In that case, the travel times ha If the parameter is set to "No" th	ve to be determined. nen, after a download with ETS, d the solar protection briefly
End position dead time [0,1s]	10; 550
this parameter is visible if th	a narameter "Enable detection
has been left, the end position time is necessary because the	w long, after the end position on is not evaluated. This dead e end position switches is not end position has been left.
of end position" is set to "Yes". This parameter determines ho has been left, the end position time is necessary because the closed immediately after the	w long, after the end position on is not evaluated. This dead e end position switches is not end position has been left.

Darameter	Sattings	
Parameter	Settings	
Travel time of solar protec-	300;	
tion from bottom end	3300	
position to upper end position in seconds [3300]		
This parameter is visible, if the parameter "Enable detection		
	e parameter Enable detection	
of end position" is set to "No".	travel time of the color protoc	
This parameter determines the travel time of the solar protec- tion from the lower to the upper end position.		
Note:		
	is enabled this parameter is set	
during initialization of the device		
Prolongation of in-motion	no additional time	
time by	120 seconds	
,	20 seconds	
This parameter is visible, if the	e parameter "Enable detection	
of end position" is set to "No".		
	f, when the solar protection	
moves to the end position, the		
5	sure that the solar protection	
	he drive motor is turned off by	
the end position limit switches.		
Roller shutter position after	90;	
roller shutter DOWN in	0100	
percent		
(0% = open) [0100]		
This parameter only appears i		
meter is set to "roller shutter / a		
the upper to the lower limit	nent of the roller shutter from	
	utter is moved from the lower	
end position to the position spe		
0% = roller shutter comp		
100% = roller shutter comp	5	
With this setting the roller shut		
travelling from the upper to the	lower end position, so that	
light can enter the room through the roller shutter bars.		
Step-by-step motion	0;	
[0,1 s](Travel time for 1	0100	
step)		
This parameter determines w		
having been stopped by a sh		
further short button press commands ("0") or whether it shall		
move step by step with each short button press.		
If a value other than zero ("0") is set, then that value deter-	
mines the duration of the step i		
Behaviour at bus voltage	move upwards;	
failure	move downwards;	
	no action; stop (for testing)	
This parameter determines how	stop (for testing)	
bus voltage failure.		
<u>2</u>	movoupwards	
Behaviour at bus voltage	move upwards; move downwards;	
recovery		
	move to %-value; no action:	
	,	
	stop (for testing)	

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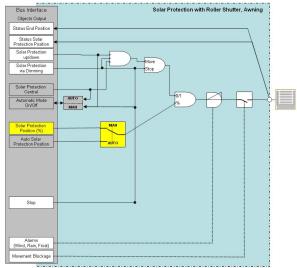
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Parameter	Settings		
This parameter determines how the actuator channel acts on			
bus voltage recovery.			
	Note:		
5 ,	assumption is that the action		
configured for bus voltage failu	5		
	d for bus voltage failure and the ne solar protection could fully		
	olar protection is set to "upper		
	if the end position has not (yet)		
been reached. In this case th	e status message can deviate		
from the true position.			
Value solar protection 0;			
position 0100			
This parameter is visible, if the parameter "Behaviour at bus			
This parameter is visible, if the	e parameter benaviour at bus		
voltage recovery" is set to "mov	re to %-value".		
voltage recovery" is set to "mov	e to %-value". e position the solar protection		

The additional parameters are covered in the sections for the partial functions

- Solar protection position (normal mode)
- Manual / automatic mode
- Status messages
- Solar protection via dimming
- Alarms
- Movement blockage
- Position 1 or 2
- 8-bit scene control

Solar protection position (normal mode)



Function roller shutter/awning, solar protection position

<u>Objects</u>

Obj	Object name	Function	Туре	Flags	
13	Channel A position of	0100%	1	CRW	
	solar protection		byte		
	object is visible, if the pare				
	c / manual mode" is set				
-	ect status solar protection po				
	g this object, the blind of th oved into a chosen position		0	innel can	
	positions can be transmitte			ande of 0	
	55 using this object. The following the foll				
kept	5,	ionnig aonni			
0		nd fully Up			
255	(=100%) Bli	nd fully Dow	n		
	oon as the blind position s				
	reached, the slat position				
	position" object belonging	to the resp	ective c	hannel is	
	matically restored. e of the final positions is to	ho annroach	ad the	sot traval	
	time is automatically extended by the set prolongation time, so that the reaching of the upper or lower final position is				
	guaranteed by addressing the limit switch.				
Önce	Once the slat adjustment has been completed or the final				
position has been reached, the object value of all status					
objects (status blind and slats position together with status					
	position up / down) is update	ed and, if set	corresp	ondingly,	
trans	mitted via the bus.				

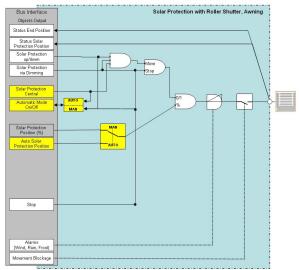
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Parameter "Channel A Functions, Objects"

Parameter	Settings	
Differentiation automatic / manual mode	No; Yes	
For <u>normal mode</u> this parameter This parameter determines wheth between automatic and manual to "Yes", then the objects are tween automatic and manual mo of all sun blind actuators as well move the blind via percentage via differentiation between autom required if, for example, the so follow up the position of the s weather station (shadow edge t of the room shall be able to stop	must be set to "No". mer a distinction is to be made mode. If this parameter is set supplemented to switch be- ide and for the central control as one object per channel to alues in automatic mode. The matic and manual mode is plar protection position is to sun via commands from the racking control), but the user	
Object solar protection position (height) % in stand- ard mode	No; Yes	
This parameter only appears in standard mode if the parame- ter "Distinction automatic / manual mode" is set to "No". It is used to set whether communication objects to adjust the		

blind position shall be available in standard mode.

Manual / automatic mode



Function roller shutter/awning, manual / automatic mode

<u>Objects</u>

Obj	Object name	Function	Туре	Flags	
4	Channel A solar protection central	Up / Down	1 bit	CRW	
Vene first parar chan blind lowe posit "Slats	If a telegram is received at this object, all channels of the Venetian blind actuator that are enabled for this object are first of all switched to "Automatic mode" (if released in the parameter setting) and then the blinds are moved by all channels simultaneously. If a logical 0 is received, then the blind is raised (opened); if a logical 1 is received, then it is lowered (closed). If Venetian blinds travel into the lower final position via this object, the slats position stipulated via the "Slats position after blind DOWN in percent" parameter is then approached automatically.				
5	Channel A automatic mode	on / off	1 bit	CRWT	
switc and " = ma	automatic mode With these objects, the corresponding channels can be switched between the operating modes "Automatic mode" and "Manual mode". The object value (1 = automatic mode, 0 = manual mode) of these objects is updated when the channel operating mode is changed and can be gueried via the bus.				

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Obj	Object name	Function	Туре	Flags
11	Channel A autom. mode solar protection position	0100%	1 byte	CRW
only the c not e to au Blind to 25	Using this object, the blind of the corresponding channel can only be moved into a chosen position in <u>automatic mode</u> . If the channel is in "manual mode", a movement command is not executed but is stored and executed after switching back to automatic mode. Blind positions can be transmitted as EIS6 in a value range of 0 to 255 using this object. The following definitions have to be			<u>node</u> . If nand is ng back ge of 0
kept: 0 (=0%) Blind fully Up 255 (=100%) Blind fully Down If one of the final positions is to be approached, the set travel time is automatically extended by the set prolongation time, so that the reaching of the upper or lower final position is guaranteed by addressing the limit switch. Once the blind adjustment has been completed or the final position has been reached, the object value of all status objects (status blind and				

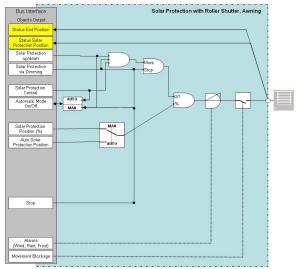
slats position together with status end position up / down) is

updated and, if set correspondingly, transmitted via the bus

Parameter "Channel A Functions, Objects"

Parameter	Settings
Differentiation	No;
automatic / manual mode	Yes
For <u>automatic mode</u> this parame This parameter determines wheth between automatic and manual to "Yes", then the objects are tween automatic and manual mo of all sun blind actuators as well move the blind via percentage va differentiation between autom required if, for example, the blin of the sun via commands from edge tracking control), but the u to stop this.	ner a distinction is to be made mode. If this parameter is set supplemented to switch be- de and for the central control as one object per channel to alues in automatic mode. The atic and manual mode is d is to follow up the position the weather station (shadow

Status messages



Function roller shutter/awning, status note

<u>Objects</u>

Obj	Object name	Function	Туре	Flags	
20	Channel A status	On/Off	1 bit	CRWT	
	automatic mode				
This	object is only visible if th	e "Differentiat	ion auto	omatic /	
	ual mode" parameter is se			rameter	
	ect status automatic mode				
	this object, the status of				
	ed per channel and, dep				
_	also be sent automatically		hange i	n status	
	ell as after mains voltage re				
	'automatic mode" operatir	5			
	ground even during activ : blockage and alarm, a				
	dingly, even if another c				
	matic operation.	perating moe	e oveni	ues une	
21	Channel A status solar	0 100%	1	CRWT	
21	protection position	0100 //	byte	CIUT	
This	object is only visible if th	e "Differentiat		omatic /	
	ual mode" parameter is se				
	ect status solar protection p				
Via t	his object, the position o	f the blind (a	is a per	centage	
value	value) can be queried at any time or sent automatically after				
the travel has stopped. The upper limit position corresponds					
to the value 0 (= 0%) and the lower limit position to the					
	value 255 (= 100%).				
	Updating the status object takes place for the first time when				
	the travel time of the blind and the adjustment times of the				
	have been entered and an	uninterrupted	travel to	o a limit	
posit	ion has taken place.				

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Obj	Object name	Function	Туре	Flags
23	Channel A status	On/Off	1 bit	CRWT
	upper end position			
This object is only visible if the "Object status upper / lower end position" parameter is set to "Yes". Via this object, a logical 1 object value reports that the blind is in the upper final position.				
24	Channel A status lower end position	On/Off	1 bit	CRWT
This object is only visible if the "Object status upper / lower end position" parameter is set to "Yes". Via this object, a logical 1 object value reports that the blind is in the lower final position.				

Parameter "A Functions, Objects"

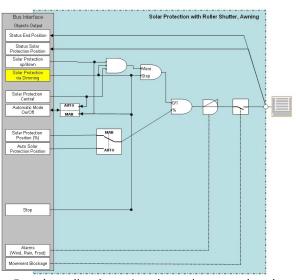
Parameter	Settings			
Object status automatic mode	No;			
	Yes			
This parameter is only visible if the "Differentiation automatic				
/manual mode" parameter is set				
This parameter determines whe "Status automatic mode" is availa				
Object status solar protection position in %	No; Yes			
This parameter is only visible if a / manual mode" parameter is se				
"Object status solar protection p				
is set to "Yes".				
This parameter determines whe	ther a communication object			
"Status solar protection position"				
Object status upper / lower	No;			
end position	Yes;			
	only status upper end			
	position;			
	only status lower end			
	position			
This parameter determines wh				
communication object "Status u lower end position" is available for				
The object "Status upper end po				
position") is only equal to log. 1				
bottom) end position.				
Send end position On / Off	Yes;			
•	only send On			
This parameter is only visible, if	the parameter "Object status			
upper / lower end position" is not	t set to "No".			
This parameter determines whet	5.,			
well as the leaving (OFF) of an end position is to be sent or				
whether only the reaching of an end position is to be sent.				

Parameter	Settings		
Lower end position reached	No;		
after tilting slats up	Yes		
upper / lower end position" is set end position". This parameter determines if rea	s only visible, if the parameter "Object status d position" is set to "Yes" or "only status lower letermines if reaching the lower end position nt as a status message after moving the blind sition has been finished		
Send status objects	Only on read request; on change of status and on read request		
Depending on the parameter s sent automatically every time the read request.	5 ,		

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Solar protection via dimming



Function roller shutter/awning, solar protection via dimming

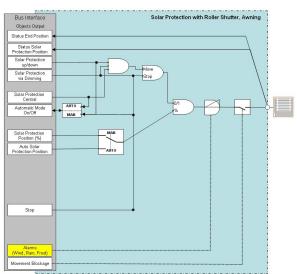
Objects

Obj	Object name	Function	Туре	Flags2
18	Channel A solar protection via dimming	up / down via brighter / darker	4 bit	CRW
This object is only visible if the parameter "Solar protection control via dimming" is set to "Yes". Via this object a dimming sensor can control a solar protec- tion. Dimming brighter means move solar protection up, dimming darker means move solar protection down.				
beca this	dimming darker means move solar protection down. All dimming telegrams are interpreted as a change by 100% because the actuator does not know the current position. For this reason, only the configuration "dimming with stop telegram" makes sense for the dimming sensor.			

Parameter "Channel A Functions, Objects"

Parameter	Settings
Solar protection control via dimming	No; Yes
This parameter determines if additional control object. The 4-bit object must be connec object "dimming brighter/darker" protection can be moved up/dow	ted with the dimming sensor . Via the 4-bit object the solar





Function roller shutter/awning, alarms

It is ensured via the objects "wind alarm", "precipitation alarm", and "frost alarm" that the blind is raised automatically in the event of a wind, rain or frost alarm and that it is prevented from being lowered via the bus when the alarm is still present.

Objects

time interval.

Obj	Object name	Function	Туре	Flags	
7	Channel A wind alarm	On/Off	1 bit	CRWT	
senso logica iour of the c actua to th wind receir switc carrie The l	, , , , , , , , , , , , , , , , , , ,				

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Obj	Object name	Function	Туре	Flags
8	Channel A	On/Off	1 bit	CRWT
	precipititation alarm			
	object can be linked with			
	or, which sends cyclically a l al 1 in the event of an alar			
	on alarm", it can be set ind			
	hannel should not react to			
	ase of an interior blind) o			
	itor should e.g. move the or is channel into the upper fi			
	alarm and block movement			
	alarm is still present. Su			
	ved during alarm operatio hing the automatic mode			
	ed out later when Alarm = 0		are stor	eu anu
	plind likewise moves to the		sition i	f a time
	been assigned to the para			
alarm" and no telegrams have been received during the set				
		been leceived	uunny	the set
time	interval.		-	
time 9	interval. Channel A frost alarm	On/Off	1 bit	CRWT
time 9 This	interval.	On/Off an alarm sigr	1 bit nal from	CRWT a frost
time 9 This senso logica	interval. Channel A frost alarm object can be linked with or, which sends cyclically a l al 1 in the event of an alar	On/Off an alarm sigr ogical 0 in the m. Via the pa	1 bit nal from idle sta rameter	CRWT a frost te and a "Behav-
time 9 This senso logica iour o	interval. Channel A frost alarm object can be linked with or, which sends cyclically a l al 1 in the event of an alar on alarm", it can be set ind	On/Off an alarm sigr ogical 0 in the m. Via the pa ividually per c	1 bit nal from idle sta rameter hannel v	CRWT a frost te and a "Behav- whether
time 9 This sense logica iour o the c	interval. Channel A frost alarm object can be linked with or, which sends cyclically a l al 1 in the event of an alar on alarm", it can be set ind hannel should not react to	On/Off an alarm sigr ogical 0 in the m. Via the pa ividually per c an alarm ("nc	1 bit nal from idle sta rameter hannel v action"	CRWT a frost te and a "Behav- whether ', e.g. in
time 9 This sense logica iour o the c the c	interval. Channel A frost alarm object can be linked with or, which sends cyclically a l al 1 in the event of an alar on alarm", it can be set ind	On/Off an alarm sigr ogical 0 in the m. Via the pa ividually per c an alarm ("nc r whether the	1 bit nal from idle star rameter hannel o action" Venetia	CRWT a frost te and a "Behav- whether , e.g. in an blind
time 9 This sense logica iour o the c actua to th	interval. Channel A frost alarm object can be linked with or, which sends cyclically a l al 1 in the event of an alar on alarm", it can be set ind hannel should not react to case of an interior blind) o ator should e.g. move the o is channel into the upper fi	On/Off an alarm sigr ogical 0 in the m. Via the pa ividually per c an alarm ("no r whether the uter Venetian inal position ir	1 bit nal from idle star rameter hannel v action" Venetia blind co n the ev	CRWT a frost te and a "Behav- whether , e.g. in an blind nnected ent of a
time 9 This sense logica iour of the c the c actua to th frost	interval. Channel A frost alarm object can be linked with or, which sends cyclically a l al 1 in the event of an alar on alarm", it can be set ind hannel should not react to case of an interior blind) o ator should e.g. move the o is channel into the upper fi alarm and block movement	On/Off an alarm sigr ogical 0 in the m. Via the pa ividually per c an alarm ("no r whether the uter Venetian inal position in t out of this po	1 bit nal from idle star rameter hannel n action" Venetia blind co n the ev ssition w	CRWT a frost te and a "Behav- whether , e.g. in an blind nnected ent of a while the
time 9 This sense logica iour of the c actua to th frost frost	interval. Channel A frost alarm object can be linked with or, which sends cyclically a l al 1 in the event of an alar on alarm", it can be set ind hannel should not react to case of an interior blind) o itor should e.g. move the o is channel into the upper fi alarm and block movement alarm is still present. Su	On/Off an alarm sigr ogical 0 in the m. Via the pa ividually per c an alarm ("no r whether the uter Venetian inal position in t out of this po in blind and	1 bit nal from idle star rameter hannel w action" Venetia blind co the ev wsition w slat cor	CRWT a frost te and a "Behav- whether , e.g. in an blind nnected ent of a while the mmands
time 9 This sense logica iour of the c the c actua to th frost frost receiv	interval. Channel A frost alarm object can be linked with or, which sends cyclically a l al 1 in the event of an alar on alarm", it can be set ind hannel should not react to case of an interior blind) o ator should e.g. move the o is channel into the upper fi alarm and block movement	On/Off an alarm sigr ogical 0 in the m. Via the pa ividually per c an alarm ("no r whether the uter Venetian inal position in t out of this po in blind and n, as well as	1 bit nal from idle star rameter hannel w action" Venetia blind con the ev sition w slat cor comma	CRWT a frost te and a "Behav- whether , e.g. in an blind nnected ent of a while the nmands inds for
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time 9 This sense logication the c the c actuat to the frost frost receive switc carrie The b has b	interval. Channel A frost alarm object can be linked with or, which sends cyclically a l al 1 in the event of an alar on alarm", it can be set ind hannel should not react to case of an interior blind) o tor should e.g. move the or is channel into the upper fi alarm and block movement alarm is still present. Su ved during alarm operatio hing the automatic mode ed out later when Alarm = C	On/Off an alarm sigr ogical 0 in the m. Via the pa ividually per c an alarm ("noc r whether the uter Venetian inal position in t out of this po in blind and n, as well as On or Off,). e set safety po ameter "Moni	1 bit idle star rameter hannel v action" Venetia blind con stat cor sistion w slat cor comma are stor osition if toring t	CRWT a frost te and a "Behav- whether , e.g. in an blind nnected ent of a thile the nmands for red and f a time ime for

Parameter	Settings
ehaviour in case of wind larm (P3) move upwards ; move downwards; ignore alarm (no action)	
This parameter determines how the actuator channel acts when receiving a wind alarm or when the cyclical message that there is no pending alarm is omitted. <u>Note</u> : This alarm has the lowest priority of the three possible alarms.	

Parameter	Settings	
Monitoring time for	disabled;	
wind alarm	1 minute; 2 minutes;	
	3 minutes; 4 minutes;	
	5 minutes; 7 minutes;	
	10 minutes; 15 minutes;	
	30 minutes; 60 minutes	
This parameter is visible, if the parameter "Behaviour in case of wind alarm (P3)" is not set to "ignore alarm (no action)". This monitoring time applies to the wind alarm object of this channel. If e.g. a wind detector is faulty or the bus cable to it is dis- rupted, gusts of wind can lead to the damage or destruction of an exterior solar protection. To prevent this, the actuator car monitor whether the wind detector assigned to the actuator or to a channel is sending telegrams cyclically. If the setting "disabled" is assigned to the parameter "Monitor- ing time for wind alarm", the cyclical sending of the alarm object is not monitored. Otherwise, this parameter determines within which period at least one telegram with a logical C must be received at the alarm object. If no telegrams are received at the alarm object during the "Monitoring time for alarm", then this object is set to logical 1 inside the actuator i.e. the blind connected to the actuator channel is moved into the set position according to the "Behaviour on alarm" pa- rameter and remains in that position (even when alarm telegrams with a logical 0 are received cyclically again) until a telegram with a movement command is received. After a restart of the device (e.g. after bus voltage recovery), the monitoring time is only started after the first reception of the "Alarm" object.		
	a the alarm object within the hen the alarm is also triggered	
Behaviour in case of rain	move upwards ;	
alarm (P2)	move downwards;	
	ignore alarm (no action)	
This parameter determines how the actuator channel acts when receiving a rain alarm or when the cyclical message that there is no pending alarm is omitted. Note:		
	ity of the three possible alarms.	
Monitoring time for	disabled;	
rain alarm	1 minute; 2 minutes;	
	3 minutes; 4 minutes; 5 minutes; 7 minutes;	
	5 minutes; 7 minutes; 10 minutes; 15 minutes;	
	30 minutes; 60 minutes	
This parameter is visible, if the	e parameter " Behaviour in case	
of rain alarm (P2)" is not set to		
	to the rain alarm object of this	
The explanations for the parameter "Monitoring time for wind alarm" apply likewise.		

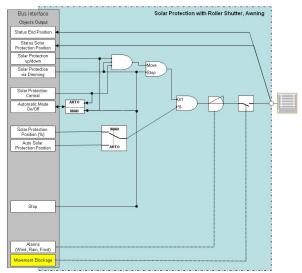
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Parameter	Settings	
Behaviour in case of frost alarm (P1)	move upwards ; move downwards; ignore alarm (no action)	
This parameter determines how the actuator channel acts when receiving a frost alarm or when the cyclical message that there is no pending alarm is omitted. <u>Note</u> : This alarm has the highest priority of the three possible alarms.		
Monitoring time for frost alarm disabled; 1 minute; 2 minutes; 3 minutes; 4 minutes; 5 minutes; 7 minutes; 10 minutes; 15 minutes; 30 minutes; 60 minutes		
This parameter is visible, if the parameter "Behaviour in case of frost alarm (P1)" is not set to "ignore alarm (no action)". This monitoring time applies to the frost alarm object of this		

channel. The explanations for the parameter "Monitoring time for wind alarm" apply likewise.

Movement blockage



Function roller shutter/awning, movement blockage

Via the object "Movement blockage" the movement of the solar protection can be locked at any time (e.g. for cleaning the outdoor solar protection).

The "Movement blockage" object has a higher priority than the "Alarm" objects, i.e. if the movement blockage object is set to logical 1 then the sun blind can also not be moved via an alarm object changing to a logical 1. However, if an alarm signal is still present after the blockage has been ended, then the channel in question moves automatically into the set safety position. In all other respects the behaviour of the "Movement blockage" object corresponds to that of the "Alarm" object.

<u>Objects</u>

Obj	Object name	Function	Туре	Flags	
	Channel A movement blockage	on / off	1 bit	CRWT	
	If a logical 1 is received via this object, then movement of the blind via bus telegrams is blocked until a logical 0 is received				

blind via bus telegrams is blocked until a logical 0 is received via this object. This object can therefore be used e.g. while the outer Venetian blinds are being cleaned to prevent the blinds from being raised e.g. by a time switch so that the cleaning staff are not endangered, or when the window is open, to prevent an internal blind from being lowered and damaged as a result or to prevent a roller shutter from being lowered when the patio door is open and thus locking out the occupants.

Movement blockage = 1 has the highest priority and cannot be overridden by an alarm. Alarm commands, automatic mode commands for sun blind and slat positioning, commands to switch automatic mode On or Off as well as orders

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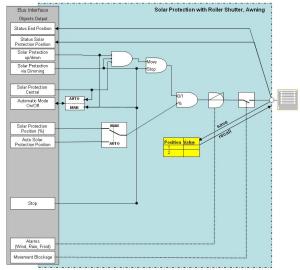
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Obj	Object name	Function	Туре	Flags
for the "Blinds centrally" object or for one of the "Channel x,				
blind centrally" objects or one of the "Channel x, sunshine"				
objects received with Movement blockage = 1 are stored and				
carrie	carried out later when Movement blockage = 0.			

Parameter "Channel A Functions, Objects"

Parameter	Settings
Object movement block- age	No; Yes
"Movement blockage" object is	lar protection is available. A

Position 1 or 2



Function roller shutter/awning, Position 1 or 2

Objects

Obj	Object name	Function	Туре	Flags
2	Channel A position	recall	1 bit	CW
This and the following object make it possible for a person using a room with a pair of bus pushbuttons allocated to the function "Program / recall 1-bit scene", to program a desired position of the blind and its slats by pressing the correspond- ing bus pushbutton for at least 1 s and to recall the pro- grammed position of the blind and its slats automatically by briefly pressing this button. With this object, two desired intermediate positions of the blind connected to the respective channel as well as its slats can be recalled automatically. To make this possible, these settings first need to have been programmed via the following object. On receiving a "0" telegram, the blind and slat setting stored in position 1 is approached; on receiving a "1" telegram, the blind and slat setting stored in position 2 is approached.				
3	Channel A position	save	1 bit	CW
Via this object, the programming of two desired intermediate positions of the blind connected to this channel as well as its slats can be initiated. The programmed (stored) positions can subsequently be approached again (recalled) via the preced- ing object at any time. Successfully programming a position is only possible if the travel time of the sun blind and the adjustment of the slats have been specified and the status objects for the blind and slats positions have been synchronised with reference move- ments into the upper limit position.				

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Obj	Object name	Function	Туре	Flags
On receiving a "0"-telegram, the current states of the "Status				
sunshine position" and "Status slats position" objects are			ects are	
queried and stored as position 1. Position 2 is stored accord-				
ingly after receiving a "1"-telegram.				

Parameter "Channel A Functions, Objects"

Parameter	Settings		
Object save / recall position	No;		
1,2	Yes		
This parameter determines if the actuator channel has one			
object each for saving and recalling position 1 / 2.			
The objects are visible if "Yes" is	selected.		

Parameter "Channel A Position"

Positions 1, 2 configurable by user	No	•
Preset value for solar protection position 1 in $\%$	0	<u>.</u>
Preset value for slat position 1 in $\%$	0	<u>*</u>
Preset value for solar protection position 2 in $\%$	0	<u></u>
Preset value for slat position 2 in %	0	<u>.</u>

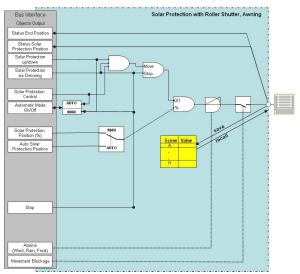
The following parameters are presented in a separate parameter window if the parameter "Object save / recall position 1, 2" is set to "Yes".

Parameter	Settings			
Positions 1, 2 configurable	No;			
by user	Yes			
This parameter applies to both positions 1 / 2. If the value "No" is selected then the positions are not configurable (via a position telegram) and the associated communication object for saving is not visible. The follow- ing parameter value for "solar protection position" cannot be changed during operation.				
Delete saved position values No; for position 1 Yes				
This parameter is visible, if the parameter "Positions 1, 2 configurable by user" is set to "Yes". This parameter determines if the position values saved in the device for position 1 are deleted (setting "Yes") or not (setting "No") with a download.				
If "No" is selected then the saved values are not replaced during configuration of the device with ETS.				
If "Yes" is selected then further parameters determine if the respective position shall be preset or not. If it shall be preset then a further parameter for the solar protection height in percent can be entered. If it shall not be preset then the position first has to be set during operation by a correspond-				

Parameter	Settings	
ing message (save position).		
If "Yes" is selected then the follo	owing parameters appear.	
Preset position 1	No;	
	Yes	
This parameter is visible, if the	ne parameter "Positions 1, 2	
configurable by user" is set t	to "Yes" and the parameter	
"Delete saved position values fo	or position 1" is set to "Yes".	
This parameter determines if t	he position (solar protection	
position) can be preset.		
If "Yes" is selected then the	following two parameters	
appear.		
Preset value for solar	0;	
protection position 1 in %	0100	
This parameter is visible, if the	parameter "Preset position 1"	
is set to "Yes".		
This parameter determines th	•	
protection position of position	1.	
	No;	
for position 2	Yes	
This parameter is visible, if th		
configurable by user" is set to "		
This parameter determines if		
the device for position 2 are of		
(setting "No") with a download.		
If "No" is selected then the sa	•	
during configuration of the dev		
If "Yes" is selected then further parameters determine if the respective position shall be preset or not. If it shall be preset		
then a further parameter for t		
percent can be entered. If it		
position first has to be set during operation by a correspond-		
ing message (save position).	5 1 5 1	
If "Yes" is selected then the following parameters appear.		
Preset position 2	No:	
·	Yes	
This parameter is visible, if the parameter "Positions 1, 2		
configurable by user" is set to "Yes" and the parameter		
"Delete saved position values for position 2" is set to "Yes".		
This parameter determines if the position (solar protection		
position) can be preset.		
If "Yes" is selected then the following parameter appears.		
Preset value for solar	0;	
protection position 2 in % 0100		
This parameter is visible, if the parameter "Positions 1, 2		
configurable by user" is set to "No" or if the parameter		
"Preset position 2" is set to "Yes".		
This parameter determines th	•	
protection position of position 2.		

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8-bit scene control



Function roller shutter/awning, 8-bit scene control

Objects

Obj	Object name	Function	Туре	Flags
1	Channel A 8-bit scene	recall /	1 byte	CW
		save		
(rest num If Bit have auto prog switc Succ the t slats slat move	this object, the 8-bit scer ored) or programmed (sto ber. If Bit 7 is set to log. 1, 7 is set to log. 0, then the any meaning at this poi matic mode is activated ramming or recalling a thing to manual mode (au essfully programming a b ravel time of the blind a have been specified, the positions have been spe ement into the upper fina- noving.	ored). Bit 05 then the scere scene is recal nt and must b (automatic m scene autor tomatic mode olind position ind the adjust status objects ynchronised	contain t ne is prog led. Bit 6 be set to node = C natically = Off. is only p ment tin for the l with a	the scene rammed. does not log. 0. If 0n), then leads to ossible if ne of the blind and reference

Parameter "Channel A Functions, Objects"

Parameter	Settings
8-bit scene control	No; Yes
Use this parameter to set whether the 8-bit scene control incorporated in the actuator is to be enabled. If so, th corresponding communication object and the parameter window "8-bit scenes" are added for assignment of up to scene numbers per output channel.	

Parameter "Channel A 8-bit Scenes"

8-bit scenes configurable by user	No	<u>•</u>
Link 1 with scene [064] (0=disabled)	0	<u>±</u>
Link 2 with scene [064] (0=disabled)	0	-
Link 3 with scene [064] (0=disabled)	0	<u>±</u>
Link 4 with scene [064] (0=disabled)	0	1
Link 5 with scene [064] (0=disabled)	0	
Link 6 with scene [064] (0=disabled)	0	
Link 7 with scene [064] (0=disabled)	0	
Link 8 with scene [064] (0=disabled)	0	

The following parameters appear in a separate parameter window if "8-bit scene control" is set to "Yes".

Parameter	Settings
8-bit configurable by user	No; Yes
This parameter applies to all 8 scene links.	
If "No" is selected the scenes are not configurable (via a scene telegram) by the user. The position values for "solar protection position" and "slat position" preset with the following parameters cannot be changed by the user during operation.	
Link 1 with scene [064] (0=disabled)	0; 064
Via this parameter the selected channel can be linked with a scene number in the range 1 to 64. "0" means "not assigned to a scene" (link is not used).	
Notes:	
If a scene is recalled before the position of the solar protection was saved for this scene and this channel then the solar protection moves to the upper end position.	
Successfully saving a scene/position is not possible before the travel time of the solar protection is valid.	
If automatic operation mode is active (automatic mode = On) then saving or recalling a scene automatically switches the	

then saving or recalling a scene automatically switches the

operation mode to manual (aut	omatic mode = Off).
Link 2 with scene [064]	0;
(0=disabled)	064
see Link 1	

and so on until

Link 8 with scene [064]	0;
(0=disabled)	064
see Link 1	

Additionally, these parameters for setting scene values are available for each scene.

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Parameter	Settings	
Link 1: delete saved scene values	No; Yes	
This parameter is only visible for an activated link, if the parameter " 8-bit scenes configurable by user" is set to "Yes" and if the parameter "Link 1 with scene [064] (0=disabled)" is set to a value no equal to zero.		
This parameter determines if the position value for link 1 saved in the device is deleted with a download (setting "Yes") or not (setting "No").		
If this parameter is set to "No" then the saved scene values are not deleted when the configuration is downloaded to the device using the ETS.		
If "Yes" is selected then further parameters determine if the respective scene shall be preset or not. If it shall be preset then a further parameter for the solar protection height in percent can be entered. If it shall not be preset then the position first has to be set during operation by a corresponding message (save position).		
If "Yes" is selected then the follo		
Link 1: preset scene values	No; Yes	
This parameter is visible, if the parameter " Link 1: delete saved scene values" is set to "Yes". This parameter determines if the position values (solar protection and slat position) for link 1 shall be preset (setting "Yes") or not (setting "No"). If this parameter is set to "No" then the saved scene values are not deleted when the configuration is downloaded to the device using the ETS. If the scene is recalled before the positions of solar protection was saved for this scene and this channel then the solar protection moves to the upper end position. The scene settings must be saved during operation by a corresponding message (save scene). If "Yes" is selected then a further parameter appears, with which the solar protection height in percent can be entered. If "Yes" is selected then the following two parameters appear.		
Solar protection position	0;	
(height) in % 0100		
This parameter is visible, if the parameters " Link 1: delete saved scene values" and "Link 1: preset scene values" are set to "Yes" or the parameter "8-bit scenes configurable by user" is set to "No".		
This parameter determines the preset value for the solar protection position of the scene.		

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Space for Notes