

## 11 A1 Shutter 510205

### Devices Employing the Program

Product family: Shutter

Product type: Switch

Manufacturer: Siemens

Name: Shutter Switch GE 521

Order-no.: 5WG1 521-4AB02

### Application Description

This application program allows you to control the output of a shutter switch GE 521 where the louvres of the connected venetian blinds can be moved via the object "up/down" while the louvres are adjusted via the object "Louvres". On sending a telegram to adjusting the louvres while the blind is raised (up) or lowered (down), the blind is halted instead. On reaching an extremel position blinds are halted automatically.

The safety object allows you to connect an air speed sensor to the shutter switch to protect the venetian blinds against storm damage.

### Communication Objects

Phys.Addr.	Program			
no.	Function	object name	Type	
01.01.024	11 A1 Shutter 510205			
0	Up / Down	Shutter, Channel A	1 Bit	
1	Open / Closed	Louvres, Channel A	1 Bit	
2	Not used	not used	1 Bit	
3	Not used	not used	1 Bit	
4	Safety	Safety	1 Bit	

### Note:

The order of the entries may vary from the above due to individual customization of the table.

Obj	Function	Object name	Type	Flags
0	Up / Down	Shutter, Channel A	1-bit	CWU
This object is used to moving the blinds (up/down) via channel A. On receiving a logical "1" the blinds are lowered (down), on a "0" they are raised (up).				
1	Open / Closed	Louvres, Channel A	1-bit	CWU
This object is used to adjusting the louvres via channel A. On receiving a logical "1" the louvres are turned downwards (close), on a "0" they are turned upwards (open).				
2	Not used	not used	1-bit	CWU
This object is ignored				
3	Not used	not used	1-bit	CWU
This object is ignored				

Obj	Function	Object name	Type	Flags
4	Safety	Safety	1-bit	CWU
This object can be assigned the group address of e.g. an air speed sensor. In case of a storm alarm the air speed sensor sends a logical "1". Otherwise it cyclically sends a "0". On receiving a storm alarm, the shutter switch moves the blinds to their safety position (parameter "Safety position") and locks them against operation. If the air speed sensor fails and no "0" telegrams are sent, the blinds are also moved to their safety position. To use this object, the parameter "Safety" must be set to "enabled".				

Maximum number of group addresses: 12  
Maximum number of assignments: 12

### Parameters

#### Safety:

Safety...	Shutter/roller blinds	Channel A	
Safety (e.g. wind alarm)	disabled		
Safety position	top		
Factor for monitoring time (10-127)	72		
Base for monitoring time	Time base 4.2 sec		

Parameters	Settings
Safety (e.g. wind alarm)	disabled enabled
This parameter allows you to enable and disable the safety object [4] and must be set to "enabled" when an air speed sensor is to be used.	
Safety position	top bottom
This parameter rules the extremel position in case of a storm alarm, i.e. on a logical "1" at object [4].	
Factor for monitoring time (10-127)	72
The safety object expects cyclic ("0" )telegrams. If no telegrams are received during a monitoring period the safety procedure is started and the blinds are moved to their safety position (see parameter "Safety position").	
The monitoring period is ruled by the above parameters (base x factor). If the blinds actuator does not receive a signal during a monitoring period, the safety procedure is initiated.	
Note: The cyclic send period to sending safety telegrams should be shorter than the monitoring period to avoid the initiation of the safety procedure being caused by sending delays.	

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Parameters	Settings
<b>Base for monitoring time</b>	Time base 130 ms Time base 260 ms Time base 560 ms Time base 1,0 sec. Time base 2,1 sec. <b>Time base 4,2 sec.</b> Time base 8,4 sec. Time base 17 sec. Time base 34 sec. Time base 1,1 min Time base 2,2 min Time base 9 min Time base 18 min Time base 35 min Time base 1,2 h
The safety object expects cyclic ("0") telegrams. If no telegrams are received during a monitoring period the safety procedure is started and the blinds are moved to their safety position (see parameter "Safety position").	
The monitoring period is ruled by the parameters above (base x factor). If the blinds actuator does not receive a signal during a monitoring period, the safety procedure is initiated.	
Note: The cyclic send period to sending safety telegrams should be shorter than the monitoring period to avoid the initiation of the safety procedure being caused by sending delays.	

## Blinds/roller blinds:

Safety	Shutter/roller blinds	Channel A
Louvers adjustment	enabled, e.g. shutter	
Automatic relay opening operation (after shutter movement/louvre adjust)	enabled [shutter/roller blinds]	
<b>Parameters</b>		<b>Settings</b>
<b>Louvres adjustment</b>		<b>released (blinds)</b> STOP mode only (rolling blinds)
When employing venetian blinds this parameter has to be set to "released (blinds)" to allow adjustment of the louvres. It should be set to "STOP mode only" when using sliding shutters where the telegram is only used to halt moving blinds.		
<b>Automatic relay opening operation (after shutter movement/louvre adjust)</b>		<b>released (blinds/rolling blinds)</b> locked
When releasing (enabling) the automatic relay disconnection, the voltage is cut off at the active output once the specified period of time has passed. When set to "locked", the device behaves like a normal change-over contact.		

## Channel A:

Safety	Shutter/roller blinds	Channel A
Factor for shutter movement (10-255)	24	
Base for shutter movement	Time base 33 sec	
Factor for louvres adjustment (10-255)	24	
Base for louvres adjustment	Time base 8,0 ms	
Factor for pause on change in direction (5-255)	63	
Base for pause on change in direction	Time base 8,0 ms	
On bus voltage failure (no pause on change in direction)	move upwards	

Parameters	Settings
<b>Factor for shutter movement (10-255)</b>	<b>24</b>
<b>Blind moving time: base</b>	Time base 8,0 ms Time base 130 ms Time base 2,1 sec. <b>Time base 33 sec.</b>
The time period to moving blinds is generated by multiplying the parameters to base and factor. This is the period the respective output is activated on receiving an appropriate telegram at the "Up/down" object.	
This parameter is ignored when the parameters "automatic relay disconnection" is set to "disabled".	
<b>Factor for louvres adjustment (10-255)</b>	<b>24</b>
<b>Base for louvres adjustment</b>	<b>Time base 8,0 ms</b> Time base 130 ms Time base 2,1 sec. Time base 33 sec.
The time period to adjusting louvres is generated by multiplying the parameters to base and factor. This is the period the actuator is activated to adjusting the louvres by one step.	
<b>Factor for pause on change in direction (5-255)</b>	<b>10</b>
The "reverse delay" corresponds to the lag time after issuing the change direction command to the shutter. It is calculated using the formula "factor x base". During this time the shutter drive will remain static in order to minimise the mechanical strain. It is recommended to set the value to "63".	
<b>Base for pause on change in direction</b>	<b>Time base 8,0 ms</b> Time base 130 ms Time base 2,1 sec. Time base 33 sec.
The delay when reversing the blinds' move direction is generated by multiplying the parameters to base and factor. To preserve the actuator it is halted to the specified period before reversing the move direction.	
<b>On bus voltage failure (no pause on change in direction)</b>	<b>move upwards</b> down halt maintain state
This parameter rules the blinds' response to a bus voltage failure.	
Note: When using actuators at more than 150 W the settings "halt" or "maintain state" should be used to preserve the relay contacts.	
Note: The above reverse move delay is ignored when reversing the blind movement as a response to bus voltage failure.	