# 25 A4 Venetian blind actuator 981202

## Use of the application program

Product family: Venetian blind
Product type: Switch
Manufacturer: Siemens

Name: Venetian blind actuator N 523/04
Order no.: 5WG1 523-1AB04

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Order no.: 5WG1 523-1CB04

## Functional description

### Application

The Venetian blind actuator N 523/04 is a device for DIN-rail mounting, in N-system dimensions with a width of four module units, for controlling shutters, blinds and awnings. Only one sun blind drive (motor) for mains voltage with electromechanical limit switches or with integrated electronics for final position disconnection may be connected to each of the four outputs of the Venetian blind actuator N 523/04. The parallel operation of several drives on one output requires the intermediate switching of a special isolating relay.
Note: Engineering tool software (ETS) from ETS2 V1.3 is required for the configuration and for loading the application program.

### Functions and objects

The application program “25 A4 Sunblind switch 981201” can only be used together with the Venetian blind actuator N 523/04. It is structured so that there is sufficient basic functionality in the supplied state for simple applications in combination with 11 basic communication objects available. Further functions and objects can be added as required during commissioning via the ETS parameter window “Functions, Objects”.
Switching-over from direct operation to bus operation and vice versa is reported via the “Status direct mode” object, which is always present.
It is ensured via an alarm object that influences all channels that the solar protection is raised automatically for example in the event of a wind/rain alarm and that it is prevented from being lowered via the EIB when the alarm is still present. Movement of the solar protection can also be disabled at any time via the blocking object, which likewise influences all channels (e.g. while the outer blinds are being cleaned).
Two 1-bit command objects that are also always present per channel enable a sun blind to be moved into the upper or lower final position. They also enable the blind to be stopped and the stepwise adjustment of the slats.
The following functions can be added per channel via the parameter window “Functions, Objects”:

- one “Alarm” object,
- one “Moving blockade” object,
- the objects for automatic mode,
- one object “Sun” per device or per channel,
- two 8-bit command objects (sun blind and slat position in %) for standard operation,
- one 8-bit status object (sun blind position in %),
- up to two 1-bit status objects (upper / lower final position reached).

Another 8-bit status object (slat position in %) can be added per channel in case of a connected Venetian blind.

### Configuration

To enable a simple and rapid configuration of the Venetian blind actuator N 523/04, it can be selected whether each channel should be configured individually, whether configuration should be carried out for all channels together, or whether configuration should be carried out for two channels at a time. The pause after a change in direction of movement does not need to be configured. It is fixed at about 1 s.
The travel times of the Venetian blind from one limit position to the other, as well as the adjustment period of the slats from fully closed to horizontal or to the start of movement of the blind, must be determined and entered as accurately as possible.
To enable a certain level of daylight to enter the room for example, it is possible to set, once the blind has been moved into the lower final position without disruption and the limit switch has been addressed, which intermediate position the slats should then be rotated into and, for a shutter, how long it is to be raised therefore.
To guarantee uniform final positions of all the blinds on a façade when a movement command to the lower or upper final position of the sun blind is given, the configured movement time is automatically extended by 10% so that reaching of the upper or lower final position is guaranteed by addressing the respective limit switch.

### Direct operation of the actuator outputs

For direct operation of the actuator outputs, both mains voltage and bus voltage must be applied at the actuator and it must be switched from bus to direct operation via the corresponding pushbutton with LED. The change of operating mode is reported automatically via the “Status direct operation” object.
During direct operation, an output remains switched on as long as the associated pushbutton on the top of the device is pressed. As the direct operation is fully isolated from the bus communication, the presence of an alarm or the activation of the moving blockade is not taken into account during direct operation.
Note: The device does not function after the application program has been “unloaded” using the ETS. Direct operation is also not possible in this case.



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**Automatic or standard operation**
It can be set via the “Automatic mode” parameter whether a distinction is to be made between “Automatic mode” and “Manual mode” or whether there is only one operating mode (standard operation).
During standard operation, 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.
Via the “Channels A-D, Autom.=On + sun blind centrally up/down“ object, all channels of the actuator are first of all switched to automatic mode and then moved into the upper or lower final position simultaneously. Use of this central command guarantees that the solar protection in rooms that are switched to manual mode by their user and not switched back to automatic mode before the user leaves the room or the building can also be raised centrally e.g. at night and lowered centrally e.g. early in the morning when the sun starts shining. This central command can be disabled or enabled per channel.
Additionally in automatic mode, both the Venetian blinds and their slats can be positioned at every channel into an intermediate position via commands with a position indication in the 0…100% range. The drive mechanism used and the gears, and not this software, define how accurately the desired position of the sun blind/slats as a percentage is captured.
At a configured automatic mode one object for switching the channel to manual or automatic mode and two 1-bit objects for controlling Venetian blinds and slats in manual mode are available per channel. Further objects may be added via the “Functions, objects” parameter window where required.
If a shutter control module is used, the positioning of the slats can be locked or released, after a travel to the lower or upper final position, via the “Sun” object at those channels which are in automatic mode and for which the “Sun” object has been enabled.
During automatic mode, manual operation for starting a travel of a Venetian blind or an adjustment of its slats via the two 1-bit objects for manual mode (e.g. via a Venetian blind push button in the room) always effects automatic switching from automatic to manual mode for the channel concerned. During manual mode, all automatic mode commands for the channel being operated manually then are ignored. This guarantees that a room user can always bring his solar / anti-glare protection into the position he desires, and this position can only be changed via super-ordinate automation when the channel is switched back to automatic mode.

**Behaviour at bus voltage failure / recovery**
At bus voltage failure a started travel of the blinds or a positioning of the slats will be stopped immediately. The current positions of blinds and slats will not be stored. That is why they have to be synchronized first at bus voltage recovery.
At bus voltage recovery the first telegram with a travel command of the blind will start a reference travel to the closest one of the final positions. If the sun blind is already located in this position the concerned actuator output will nevertheless be switched on for the configured travel time.

**Communication objects**
Via the “Alarm” object, in the event of a wind or rain alarm signal, all Venetian blinds are moved into the configured position (e.g. the upper final position) and movement into another position is blocked while the alarm is still present. All sun blind and slat commands received at Alarm=1 as well as commands for switching the automatic mode on or off are stored and will be executed at Alarm=0.
The “Moving blockade” object has a higher priority than the “Alarm” object, i.e. if the “Moving blockade” object is set to logical 1 then the sun blind can also not be moved via an alarm object changed to logical 1. However, if an alarm signal is still present after the moving blockade has been ended, then the channel in question moves automatically into the configured safety position.

| Number | Name | Object Function | ... | ... | Length |
|---|---|---|---|---|---|
| 0 | Status direct mode | On / Off | | | 1 bit |
| 1 | Alarm | On / Off | | | 1 bit |
| 2 | Moving blockade | On / Off | | | 1 bit |
| 13 | Channel A, sun protection up / down | Up / Down | | | 1 bit |
| 14 | Channel A, stop, slats open / closed | Open / Closed | | | 1 bit |
| 27 | Channel B, sun protection up / down | Up / Down | | | 1 bit |
| 28 | Channel B, stop, slats open / closed | Open / Closed | | | 1 bit |
| 41 | Channel C, sun protection up / down | Up / Down | | | 1 bit |
| 42 | Channel C, stop, slats open / closed | Open / Closed | | | 1 bit |
| 55 | Channel D, sun protection up / down | Up / Down | | | 1 bit |
| 56 | Channel D, stop, slats open / closed | Open / Closed | | | 1 bit |

Figure 1. Communication objects at standard operation (min. number)

Figure 1 shows the 11 basic communication objects that are visible with a Venetian blind actuator N 532 / 04 in the product data base in the supplied state for standard operation.


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| Number | Name | Object Function | ... | ... | Length |
|---|---|---|---|---|---|
| 0 | Status direct mode | On / Off | | | 1 bit |
| 5 | Channel A, alarm | On / Off | | | 1 bit |
| 6 | Channel A, moving blockade | On / Off | | | 1 bit |
| 11 | Channel A, sun blind position | 8-bit Value | | | 1 Byte |
| 12 | Channel A, slat position | 8-bit Value | | | 1 Byte |
| 13 | Channel A, sun protection up / down | Up / Down | | | 1 bit |
| 14 | Channel A, stop, slats open / closed | Open / Closed | | | 1 bit |
| 15 | Channel A, status sun blind position | 0% ... 100% | | | 1 Byte |
| 16 | Channel A, status slat position | 0% ... 100% | | | 1 Byte |
| 17 | Channel A, status final position up | On / Off | | | 1 bit |
| 18 | Channel A, status final position down | On / Off | | | 1 bit |
| 19 | Channel B, alarm | On / Off | | | 1 bit |
| 20 | Channel B, moving blockade | On / Off | | | 1 bit |
| 25 | Channel B, sun blind position | 8-bit Value | | | 1 Byte |
| 26 | Channel B, slat position | 8-bit Value | | | 1 Byte |
| 27 | Channel B, sun protection up / down | Up / Down | | | 1 bit |
| 28 | Channel B, stop, slats open / closed | Open / Closed | | | 1 bit |
| 29 | Channel B, status sun blind position | 0% ... 100% | | | 1 Byte |
| 30 | Channel B, status slat position | 0% ... 100% | | | 1 Byte |
| 31 | Channel B, status final position up | On / Off | | | 1 bit |
| 32 | Channel B, status final position down | On / Off | | | 1 bit |
| 33 | Channel C, alarm | On / Off | | | 1 bit |
| 34 | Channel C, moving blockade | On / Off | | | 1 bit |
| 39 | Channel C, sun blind position | 8-bit Value | | | 1 Byte |
| 40 | Channel C, slat position | 8-bit Value | | | 1 Byte |
| 41 | Channel C, sun protection up / down | Up / Down | | | 1 bit |
| 42 | Channel C, stop, slats open / closed | Open / Closed | | | 1 bit |
| 43 | Channel C, status sun blind position | 0% ... 100% | | | 1 Byte |
| 44 | Channel C, status slat position | 0% ... 100% | | | 1 Byte |
| 45 | Channel C, status final position up | On / Off | | | 1 bit |
| 46 | Channel C, status final position down | On / Off | | | 1 bit |
| 47 | Channel D, alarm | On / Off | | | 1 bit |
| 48 | Channel D, moving blockade | On / Off | | | 1 bit |
| 53 | Channel D, sun blind position | 8-bit Value | | | 1 Byte |
| 54 | Channel D, slat position | 8-bit Value | | | 1 Byte |
| 55 | Channel D, sun protection up / down | Up / Down | | | 1 bit |
| 56 | Channel D, stop, slats open / closed | Open / Closed | | | 1 bit |
| 57 | Channel D, status sun blind position | 0% ... 100% | | | 1 Byte |
| 58 | Channel D, status slat position | 0% ... 100% | | | 1 Byte |
| 59 | Channel D, status final position up | On / Off | | | 1 bit |
| 60 | Channel D, status final position down | On / Off | | | 1 bit |

Figure 2. Communication objects at standard operation (max. number)

Figure 2 shows the maximum possible number of communication objects at standard operation, which is 41. These are only visible if all the additional possible functions and objects have been added when commissioning the actuator.

| Number | Name | Object Function | ... | ... | Length |
|---|---|---|---|---|---|
| 0 | Status direct mode | On / Off | | | 1 bit |
| 1 | Alarm | On / Off | | | 1 bit |
| 2 | Moving blockade | On / Off | | | 1 bit |
| 3 | Sun | On / Off | | | 1 bit |
| 4 | Channels A-D, autom.=On + centrally up / down | Up / Down | | | 1 bit |
| 8 | Channel A, automatic mode | On / Off | | | 1 bit |
| 9 | Channel A, automatic mode, sun blind position | 8-bit Value | | | 1 Byte |
| 10 | Channel A, automatic mode, slat position | 8-bit Value | | | 1 Byte |
| 13 | Channel A, sun protection up / down | Up / Down | | | 1 bit |
| 14 | Channel A, stop, slats open / closed | Open / Closed | | | 1 bit |
| 22 | Channel B, automatic mode | On / Off | | | 1 bit |
| 23 | Channel B, automatic mode, sun blind position | 8-bit Value | | | 1 Byte |
| 24 | Channel B, automatic mode, slat position | 8-bit Value | | | 1 Byte |
| 27 | Channel B, sun protection up / down | Up / Down | | | 1 bit |
| 28 | Channel B, stop, slats open / closed | Open / Closed | | | 1 bit |
| 36 | Channel C, automatic mode | On / Off | | | 1 bit |
| 37 | Channel C, automatic mode, sun blind position | 8-bit Value | | | 1 Byte |
| 38 | Channel C, automatic mode, slat position | 8-bit Value | | | 1 Byte |
| 41 | Channel C, sun protection up / down | Up / Down | | | 1 bit |
| 42 | Channel C, stop, slats open / closed | Open / Closed | | | 1 bit |
| 50 | Channel D, automatic mode | On / Off | | | 1 bit |
| 51 | Channel D, automatic mode, sun blind position | 8-bit Value | | | 1 Byte |
| 52 | Channel D, automatic mode, slat position | 8-bit Value | | | 1 Byte |
| 55 | Channel D, sun protection up / down | Up / Down | | | 1 bit |
| 56 | Channel D, stop, slats open / closed | Open / Closed | | | 1 bit |

Figure 3. Communication objects at automatic mode (min. number)

Figure 3 shows the minimal possible number of communications objects at automatic mode, which is 25.



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| Number | Name | Object Function | ... | ... | Length |
|---|---|---|---|---|---|
| 0 | Status direct mode | On / Off | | | 1 bit |
| 4 | Channels A-D, autom.=On + centrally up / down | Up / Down | | | 1 bit |
| 5 | Channel A, alarm | On / Off | | | 1 bit |
| 6 | Channel A, moving blockade | On / Off | | | 1 bit |
| 7 | Channel A, sun | On / Off | | | 1 bit |
| 8 | Channel A, automatic mode | On / Off | | | 1 bit |
| 9 | Channel A, automatic mode, sun blind position | 8-bit Value | | | 1 Byte |
| 10 | Channel A, automatic mode, slat position | 8-bit Value | | | 1 Byte |
| 13 | Channel A, sun protection up / down | Up / Down | | | 1 bit |
| 14 | Channel A, stop, slats open / closed | Open / Closed | | | 1 bit |
| 15 | Channel A, status sun blind position | 0% ... 100% | | | 1 Byte |
| 16 | Channel A, status slat position | 0% ... 100% | | | 1 Byte |
| 17 | Channel A, status final position up | On / Off | | | 1 bit |
| 18 | Channel A, status final position down | On / Off | | | 1 bit |
| 19 | Channel B, alarm | On / Off | | | 1 bit |
| 20 | Channel B, moving blockade | On / Off | | | 1 bit |
| 21 | Channel B, sun | On / Off | | | 1 bit |
| 22 | Channel B, automatic mode | On / Off | | | 1 bit |
| 23 | Channel B, automatic mode, sun blind position | 8-bit Value | | | 1 Byte |
| 24 | Channel B, automatic mode, slat position | 8-bit Value | | | 1 Byte |
| 27 | Channel B, sun protection up / down | Up / Down | | | 1 bit |
| 28 | Channel B, stop, slats open / closed | Open / Closed | | | 1 bit |
| 29 | Channel B, status sun blind position | 0% ... 100% | | | 1 Byte |
| 30 | Channel B, status slat position | 0% ... 100% | | | 1 Byte |
| 31 | Channel B, status final position up | On / Off | | | 1 bit |
| 32 | Channel B, status final position down | On / Off | | | 1 bit |
| 33 | Channel C, alarm | On / Off | | | 1 bit |
| 34 | Channel C, moving blockade | On / Off | | | 1 bit |
| 35 | Channel C, sun | On / Off | | | 1 bit |
| 36 | Channel C, automatic mode | On / Off | | | 1 bit |
| 37 | Channel C, automatic mode, sun blind position | 8-bit Value | | | 1 Byte |
| 38 | Channel C, automatic mode, slat position | 8-bit Value | | | 1 Byte |
| 41 | Channel C, sun protection up / down | Up / Down | | | 1 bit |
| 42 | Channel C, stop, slats open / closed | Open / Closed | | | 1 bit |
| 43 | Channel C, status sun blind position | 0% ... 100% | | | 1 Byte |
| 44 | Channel C, status slat position | 0% ... 100% | | | 1 Byte |
| 45 | Channel C, status final position up | On / Off | | | 1 bit |
| 46 | Channel C, status final position down | On / Off | | | 1 bit |
| 47 | Channel D, alarm | On / Off | | | 1 bit |
| 48 | Channel D, moving blockade | On / Off | | | 1 bit |
| 49 | Channel D, sun | On / Off | | | 1 bit |
| 50 | Channel D, automatic mode | On / Off | | | 1 bit |
| 51 | Channel D, automatic mode, sun blind position | 8-bit Value | | | 1 Byte |
| 52 | Channel D, automatic mode, slat position | 8-bit Value | | | 1 Byte |
| 55 | Channel D, sun protection up / down | Up / Down | | | 1 bit |
| 56 | Channel D, stop, slats open / closed | Open / Closed | | | 1 bit |
| 57 | Channel D, status sun blind position | 0% ... 100% | | | 1 Byte |
| 58 | Channel D, status slat position | 0% ... 100% | | | 1 Byte |
| 59 | Channel D, status final position up | On / Off | | | 1 bit |
| 60 | Channel D, status final position down | On / Off | | | 1 bit |

Figure 4. Communication objects at automatic mode (max. number)

Figure 4 shows the maximum possible number of communication objects, which is 50. These are only visible if all the additional possible functions and objects have been added when commissioning the actuator.

Maximum number of group addresses: 110
Maximum number of associations: 125

### Communication objects

| Obj | Object name | Function | Type | Flag |
|---|---|---|---|---|
| **0** | Status direct mode | On / Off | 1 Bit | CRT |
| The information is transmitted via this object that the actuator has been switched from bus operation to direct operation via the “Direct operation” push button on the top of the actuator (direct operation = on), or, respectively, that it has been switched back to bus operation (direct operation=off). When direct operation is switched on (the associated LED on the top of the actuator lights up), direct activation of the actuator channels is enabled via the corresponding push buttons on the top of the actuator. During direct operation, an output remains switched on as long as the associated push button on the top of the device is pressed. As the direct operation is fully isolated from the bus communication, the presence of an alarm or the activation of the moving blockade is not taken into account.<br>Sun blind and slat commands received during direct operation, as well as commands for switching the automatic mode on or off, are ignored and will not be executed at direct operation=0, i.e. after switching back to bus operation (the yellow LED on the top of the actuator used for indicating direct operation is switched off). But alarm and moving blockade commands received during direct operation will be stored and executed after switching back to bus operation.<br>The direct operation status is transmitted automatically after bus or mains voltage recovery. | | | | |
| **1 (or 5, 19, 33, 47)** | Alarm, respectively Channel A(5), B(19), C(33), D(47), alarm | On / Off | 1 Bit | CRWT |
| This object can be linked with an alarm signal from a wind, rain or ice detector, which sends a logical 0 in the idle state (cyclically) 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 Venetian 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 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 are executed at alarm =0.<br>The blind likewise moves to the parameterised safety position if a time has been assigned to the parameter “Monitoring period for alarm” and no telegrams have been received during the set time interval.<br>Caution: If the actuator is switched to direct operation, the movement of the blinds is possible in spite of an alarm being received via the bus. | | | | |


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| Obj | Object name | Function | Type | Flag |
|---|---|---|---|---|
| **2 (or. 6, 20, 34, 48)** | Moving blockade resp. Channel A(6), B(20), C(34), D(48), moving blockade | On / Off | 1 Bit | CRWT |
| If a logical 1 is received via this object, then movement of the sun 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 blind from being raised e.g. by a time program 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.<br>Moving blockade=1 has the highest priority and cannot be overridden by an alarm. Sun blind and slat commands received at moving blockade=1, as well as alarm commands and commands for switching the automatic mode on or off, are stored and executed at moving blockade =0.<br>Caution: If the actuator is switched to direct operation, the movement of the blinds is possible even if the function to prevent movement of the sun blind is activated via the bus. | | | | |
| **3 (or. 7, 21, 35, 49)** | Sun resp. Channel A(7), B(21), C(35), D(49), sun | On / Off | 1 Bit | CRWT |
| If a shutter control module is used, this object serves for enabling/disabling the positioning of the slats and, if configured, traveling to the lower or upper final position. For this the "Sun" object has to be linked with the object of the same name of the shutter control module. If a telegram is received for this object the solar protection of all channels in automatic mode will be traveled together and, after having reached the commanded final position, the positioning of the blinds and the slats via commands with a position in percent will be enabled or disabled.<br>If a logical 0 is received via this object, the blind will be travelled (if configured) to the upper final position, and the positioning of blind and slats via commands with a position in percent will be disabled. If a logical 1 is received via this object, the blind will be travelled (if configured) to the lower final position, and the positioning of blind and slats via commands with a position in percent will be enabled. If a blind has been travelled by this, without stopping it, from the upper to the lower final position, the slats will be turned automatically to the position defined by the parameter "Slat position after sun blind down in percent (0-100)". | | | | |
| **4** | Channels A – D, autom.=On + centrally up/down | Up / Down | 1 Bit | CWTA |
| 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" and then the sun blind is moved on all channels simultaneously. If a logical 0 is received, then the sun blind is raised (open); if a logical 1 is received, then it is lowered (closed). If Venetian blinds travel into the lower final position via this object, the slat position stipulated via the "Slat position after sun blind down in percent (0-100)" parameter is then established automatically. | | | | |

| Obj | Object name | Function | Type | Flag |
|---|---|---|---|---|
| **8, 22, 36, 50** | Channel A (8),B(22), C (36), D (50), automatic mode | On / Off | 1 Bit | CRWT A |
| Via this object, the corresponding channels can be switched between "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 read via the bus. | | | | |
| **9, 23, 37, 51** | Channel A(9), B(23), C(37), D(51), automatic mode, sun blind position | 8-bit Value | 8 Bit | CWTA |
| Using this object, the sun blind 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 only after switching over to automatic mode. Sun blind positions can be transmitted as EIS6 in a value range of 0 to 255 using this object. The following values apply:<br>0 or 1 (=0%) Venetian blind fully Up<br>255 (=100%) Venetian blind fully Down<br>As soon as the sun blind position, stipulated via this object, has been reached, the slat position which was last set via the "Automatic mode, slat position" object belonging to the respective channel is automatically restored.<br>If the sun blind is moved into an intermediate position via this object for the first time after mains voltage recovery, then a limit switch is approached beforehand in order to synchronise the position. In addition, the slats then remain fully open (horizontal slat position) until a positioning command to adjust the slats is received. If one of the final positions is to be approached, the movement time is automatically extended by 10% of the configured movement time, so that the reaching of the final position with addressing of the respective limit switch is guaranteed.<br>Once the sun blind adjustment has been completed or the final position has been reached, the object value of all status objects (sun blind and slat position together with upper or lower final position) is updated and, if configured correspondingly, transmitted onto the bus. | | | | |



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| Obj | Object name | Function | Type | Flag |
|---|---|---|---|---|
| **10, 24, 38, 52** | Channel A(10), B(24), C(38), D(52), automatic mode, slat position | 8-bit Value | 8 Bit | CWTA |

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 only after switching over to automatic mode. The slat adjustment may cause the height of the Venetian blind to vary slightly from one window to another. If the current slat position is invalid (status value = 0, e.g. after bus voltage recovery), the slat is not adjusted. The slat position becomes valid and is applied only after a final position has been reached first.

Slat positions can be transmitted as EIS6 in a value range of 0 to 255 using this object. The following values apply:

0 or 1 (=0%) Slats fully open (horizontal)
255 (=100%) Slats fully closed

As soon as the slat adjustment has been completed or the final position has been reached, the object value of all status objects (Venetian blind and slat position together with upper or lower final position) is updated and, if configured correspondingly, transmitted onto the bus.

| Obj | Object name | Function | Type | Flag |
|---|---|---|---|---|
| **11, 25, 39, 53** | Channel A(11), B(25), C (39), D (53), sun blind position | 8-bit Value | 8 Bit | CWTA |

Using this object, the sun blind of the corresponding channel can be moved into a chosen position in standard mode.

Sun blind positions can be transmitted as EIS6 in a value range of 0 to 255 using this object. The following values apply:

0 or 1 (=0%) Venetian blind fully Up
255 (=100%) Venetian blind fully Down

As soon as the sun blind position stipulated via the object has been reached, the slat position which was last set via the "Slat position" object belonging to the respective channel is automatically restored.

If the sun blind is moved into an intermediate position via this object for the first time after mains voltage recovery, then a limit switch is approached beforehand in order to synchronise the position. In addition, the slats then remain fully open (horizontal slat position) until a positioning command to adjust the slats is received.

If one of the final positions is to be approached, the movement time is automatically extended by 10% of the configured movement time, so that the reaching of the final position with addressing of the respective limit switch is guaranteed.

Once the sun blind adjustment has been completed or a final position has been reached, the object value of all status objects (sun blind and slat position together with upper or lower final position) is updated and, if configured correspondingly, transmitted onto the bus.

| Obj | Object name | Function | Type | Flag |
|---|---|---|---|---|
| **12, 26, 40, 54** | Channel A(12),B(26), C(40), D(54), slat position | 8-bit Value | 8 Bit | CWTA |

Using this object, the slats of the corresponding channel can be moved into a chosen position in standard mode.

The slat adjustment may cause the height of the Venetian blind to vary slightly from one window to another. If the current slat position is invalid (status value = 0, e.g. after bus voltage recovery), the slat is not adjusted. The slat position becomes valid and is applied only after a final position has been reached first.

Slat positions can be transmitted as EIS6 in a value range of 0 to 255 using this object. The following values apply:

0 or 1 (=0%) Slats fully open (horizontal)
255 (=100%) Slats fully closed

As soon as the slat adjustment has been completed or the final position has been reached, the object value of all status objects (Venetian blind and slat position together with upper or lower final position) is updated and, if configured correspondingly, transmitted onto the bus.

| Obj | Object name | Function | Type | Flag |
|---|---|---|---|---|
| **13, 27, 41, 55** | Channel A(13),B(27), C(41), D(55), sun blind up/down | Up / Down | 1 Bit | CWT |

The Up/Down movement of the sun 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 corresponding output (relay contact) remains switched on until either a stop command is received or the travel time including the additional 10% period of the configured movement time has elapsed and the final position must therefore have been reached.

If the blind has been moved down without any stop from the upper to the lower final position via this object and a "Slat position after sun blind down in percent" has been configured, the slats are opened or the solar protection is raised 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 will then be ignored.

| Obj | Object name | Function | Type | Flag |
|---|---|---|---|---|
| **14, 28, 42, 56** | Channel A(14),B(28), C(42), D(56), stop, slats open/closed | Open / Closed | 1 Bit | CWT |

Via these objects, the movement of a blind is stopped for the respective channel regardless of whether the telegram contains a logical 0 or a logical 1. If the blind is stationary, the slats are opened by one step on receipt of a logical 0 and closed by one step on receipt of a logical 1.

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 will then be ignored.

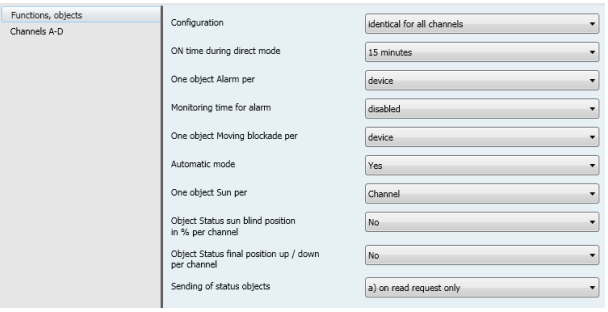

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**25 A4 Venetian blind actuator 981202**

| Obj | Object name | Function | Type | Flag |
|---|---|---|---|---|
| **15, 29, 43, 57** | Channel A(15), B(29), C(43), D(57), status sun blind position | 0...100% | 8 Bit | CRWT |
| The position of the sun blind (as a percentage value) can be queried at any time via this object or sent automatically once the sun blind adjustment is finished. The upper final position corresponds to the value 1 (= 0%) while the lower final position corresponds to the value 255 (= 100%). An unknown sun blind position is reported via the value 0 (e.g. after a restart of the actuator).<br>This status object is updated for the first time after having configured the sun blind movement time and the slat movement time when an uninterrupted movement of the sun blind from one final position to the other took place. | | | | |
| **16, 30, 44, 58** | Channel A(16), B(30), C(44), D(58), status slat position | 0...100% | 8 Bit | CRWT |
| The position of Venetian blind slats (as a percentage value) can be queried at any time via this object or sent automatically once the slat adjustment is finished. The **horizontal slat position** corresponds to the value **1 (= 0%)** while the lower final position (slats fully closed) corresponds to the value 255 (= 100%). An **unknown slat position** is reported via the value **0** (e.g. after a restart of the actuator or when the slats are turned backwards before the movement begins).<br>This status object is updated for the first time after having configured the sun blind movement time and the slat movement time when an uninterrupted reference movement of the sun blind to a final position took place. | | | | |
| **17, 31, 45, 59** | Channel A(17), B(31), C (45), D (59), status final position up | On / Off | 1 Bit | CRWT |
| Via this object, a logical 1 object value reports that the solar protection is in the upper final position. | | | | |
| **18, 32, 46, 60** | Channel A(18), B(32), C (46), D (60), status final position down | On / Off | 1 Bit | CRWT |
| Via this object, a logical 1 object value reports that the solar protection is in the upper final position. | | | | |

## Parameters

### Functions, Objects




| Parameters | Settings |
|---|---|
| **Configuration** | **identical for all channels**<br>identical for channels A+B and C+D<br>individually per channel |
| It can be set via this parameter whether just one parameter window should appear for the joint and identical configuration of Venetian blind channels A-D, or whether two windows should be used at a time for identical configuration of Venetian blind channels A+B and C+D, or 4 windows for the individual configuration of each Venetian blind channel. | |
| **ON time during direct mode** | unlimited, 5 minutes,<br>10 minutes, **15 Minutes**,<br>20 minutes, 30 minutes,<br>45 minutes, 60 minutes |
| This parameter is used to set whether direct mode is to be permanently switched on using the pushbutton for operating mode selection and has to be switched off again by repressing the pushbutton ("unlimited"), or whether it is switched on for a limited period and automatically switched off again after expiration of the set On period. The time-limited switching on of the direct mode ensures that the bus mode cannot be permanently blocked by the direct mode. Each time the pushbutton for switching the channels in direct mode is actuated, direct mode is prolonged by the configured On period. After the configured On period has elapsed, if the pushbutton has not been pressed again, the direct mode is switched off automatically and thus the “bus mode” re-activated (provided that communication via the EIB is possible). Commencement and termination of direct operation are reported via the corresponding communication object via the bus. | |
| **One object Alarm per** | **Device**<br>Channel |
| It is set via this parameter whether one single alarm object should be available to have an influence on all actuator channels, or whether each actuator channel should have its own alarm object. Adjustment is made per channel as to whether and how to react if an alarm object is set to logical 1. | |



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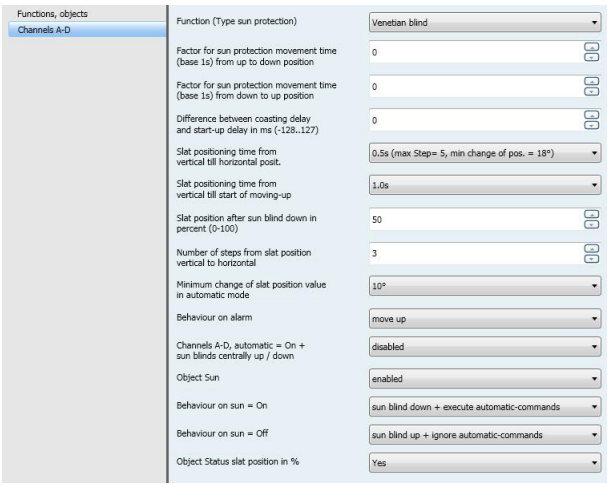
| Parameter | Settings |
|---|---|
| **Monitoring time for alarm** | **disabled**<br>1 minute, 2 minutes,<br>3 minutes, 4 minutes,<br>5 minutes, 7 minutes,<br>10 minutes, 15 minutes,<br>30 minutes, 60 minutes |
| This monitoring time applies, with one alarm object per channel, for all alarm objects jointly.<br>If e.g. a wind detector is faulty or the bus cable to it is disrupted, gusts of wind can lead to the damage or destruction of an exterior solar/anti-glare protection equipment. To prevent this, the actuator can monitor whether the wind detector assigned to the actuator or to the channel is sending telegrams cyclically.<br>If the setting “disabled” is assigned to the parameter “Monitoring time for alarm”, the cyclical sending of the alarm object is not monitored.<br>Otherwise, it is set via this parameter within which period at least one telegram with a logical 0 must be received at the alarm object. If no telegrams are received at the alarm object during the “Monitoring time for alarm”, then the alarm object is set to logical 1 inside the actuator, i.e. the Venetian blind connected to the actuator channel is moved into the configured position according to the “Behaviour on alarm" parameter 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. | |
| **One object Moving blockade per** | **Device**<br>Channel |
| It is set via this parameter whether a “Moving blockade” communication object should be available per device or per channel. If a telegram with “Moving blockade = ON” is received via this channel, then the current position of the Venetian blind and slats is frozen at the addressed channel (i.e. all commands to move the Venetian blind or adjust a slat or re-call of a position, and even movement commands initiated via the alarm object remain ineffective and are also not stored intermediately) until a telegram with “Moving blockade = OFF” is received. If an alarm is still present at this point in time, the action configured for the alarm event is then carried out.<br>If “direct mode” is switched on, an activated moving blockade will be ignored while the direct mode lasts. | |
| **Automatic mode** | **No**<br>Yes |
| It is set via this parameter whether a distinction should be made between automatic and manual mode or not. If this parameter is set to ´”Yes”, then the objects for switching between automatic and manual mode and for central control of all sun blind drives are added in automatic mode, together with one object per channel for moving the Venetian blind and one for adjusting the slats via percentage values.<br>The distinction between automatic and manual mode is necessary if e.g. the Venetian blind slats are updated by a weather centre according to the status of the sun but the room user wishes to be able to prevent the weather centre from updating the slats and moving the Venetian blind. | |

| Parameter | Settings |
|---|---|
| **One object Sun per** | Device<br>**Channel** |
| This parameter only appears if the parameter “Automatic mode” is set to “Yes”. It is set via this parameter whether a “Sun” communication object should be available per device or per channel.<br>The behaviour of a channel after receipt of a telegram with a logical 0 or a logical 1 at the object “Sun” has to be configured via the parameter window(s) for the configuration of the actuator channels. | |
| **Object Sun blind position in % per channel at Standard mode** | **No**<br>Yes |
| This parameter only appears if the parameter “Automatic mode” is set to “No”. In this case it can be set via this parameter whether a communication object should be available per channel to adjust the sun blind via percentage values. | |
| **Object Status sun blind position in % per channel** | **No**<br>Yes |
| It can be set via this parameter whether the communication object “Status sun blind position” should be available per channel. | |
| **Objects Status final position up / down per channel** | **No**<br>Yes<br>Only status up-position<br>Only status down-position |
| It can be set via this parameter whether none, both or only a “Status final position up” or only a “Status final position down” communication object should be available per channel.<br>The “Status final position up” (respectively the “Status final position down”) object is only set to logical “1” when the sun blind is in the upper (respectively lower) final position. | |
| **Sending of status objects** | **a) on read request only**<br>b) on change of status and on read request<br>c) as at b) and on bus / mains voltage recovery |
| Depending on the configuration, the status objects are sent automatically every time the status is changed, and also on bus or mains voltage recovery or only on read request. | |


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### Channels A-D resp. Channel x (as at Function “Venetian blind”)




| Parameter | Settings |
|---|---|
| **Function (Type of sun protection)** | **Venetian blind**<br>Roller shutter, awning |
| The type of the solar / anti-glare protection to be controlled is set via this parameter.<br>If the parameter is set to “Roller shutter, awning”, then the objects “Slat position” and “Status slat position”, as well as the parameters “Factor for slat positioning time from vertical to horizontal position (or to start of moving-up)” appearing for Venetian blinds will disappear, as they are not required for roller shutters / awnings. | |
| **Factor for sun protection movement time (base 1s) from up to down position** | 0...255<br>**0** |
| The travel time of the sun protection device from the upper to the lower final position is set via this parameter. | |
| **Factor for sun protection movement time (base 1s) from down to up position** | 0...255<br>**0** |
| The travel time of the sun protection device from the lower to the upper final position is set via this parameter. | |
| **Difference between coasting delay and start-up delay in ms** | -128…127<br>**0** |
| In case a drive reaches its full power only a few milliseconds after the Venetian blind actuator switched on (start-up delay) or still moves for a few milliseconds after the Venetian blind actuator switched off (coasting delay), the difference between start-up delay and coasting delay can be configured with this parameter.<br>Difference = start-up delay – coasting delay<br><br>Note:<br>If the value of Difference is larger than the configured movement period for the slats (see: next parameters), the configured start-up delay respectively coasting delay may not be fully applied. | |
| **Slat positioning time from vertical to horizontal position** | 0,2s (max step = 2, min change of pos. = 45°)<br>...<br>**0,5s (max step = 5, min change of pos. = 18°)**<br>...<br>10s (max Step = 100, min change of pos. = 1°) |
| This parameter sets the adjustment time for the Venetian blind slats to move from fully closed (=100%) to horizontal slat position (=0%) in the range from 0.2s to 10s. It must be determined as accurately as possible.<br>The values in brackets following upon a time define which value has to be selected as max. permissible value at the following parameter “Number of steps from slat position vertical to horizontal” and which one as min. permissible value at the following parameter “Minimum change of slat position value in Automatic mode”. | |
| **Slat positioning time from vertical to start of moving-up** | 0,3s<br>...<br>**1,0s**<br>...<br>12,5s |
| This parameter sets the adjustment time for the slats to move from fully closed to the slat position from which the blind starts to move upwards in the range from 0.3s to 12.5s. This time will differ from the time above if the slats can be rotated further beyond the horizontal position (i.e. tilted backwards, partially closed again).<br>Note: This time must be determined as accurately as possible. | |
| **Slat position after sun blind down in percent (0-100)** | 0...100 (**50**) |
| This parameter only appears if the “Function (Type of solar protection)” parameter is set to “Venetian blind”.<br>The slats are adjusted from their vertical position into the position stipulated via this parameter after an uninterrupted movement by the Venetian blind from the upper to the lower final position via one of the corresponding objects.<br>0% = Slats fully open (horizontal)<br>100% = Slats fully closed<br>Note: It is a prerequisite for Venetian blinds that they are lowered with closed slats. | |
| **Number of steps from slat position vertical to horizontal in manual mode** | 0...255<br>**3** |
| The number of steps required to adjust the slats from the vertical to the horizontal position and reverse is set via this parameter. The set value must not be greater than the max. number of steps given in brackets behind the configured parameter “Slat positioning time from vertical to horizontal position”. | |



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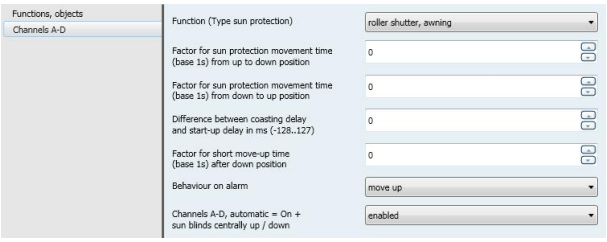
| Parameter | Settings |
|---|---|
| **Minimum change of slat position value in Automatic mode** | 1°...45°<br>**10°** |
| It is set via this parameter how much a new slat position, received via the "Automatic mode, slat position" object, has to differ from the current one to cause a movement to the new slat position. The set value must not be smaller than the min. change of slat position value given in brackets behind the configured parameter "Slat positioning time from vertical to horizontal position" and should be the same value as set at the shutter control module or at the weather central to initiate the transmission of a new slat position value.<br>If a value 0 respectively 1 or a value 255 is received via the "Automatic mode, slat position" object the slats will always be moved to the corresponding final position (horizontal or vertical). If the calculated switch-on time of the actuator output is the same as the min. possible switch-on period of 50 ms it depends on the drive if such a short pulse will cause a movement of the slats or not. | |
| **Behaviour on Alarm** | **move up**<br>move down<br>ignore alarm (no action) |
| It is set via this parameter whether the solar protection should move into the upper or lower limit position in the event of an alarm and then cease to be adjustable as long as the alarm is active, or stay in its respective position and continue to be adjustable. | |
| **Object Slat position in percent at Standard mode** | **No**<br>Yes |
| This parameter only appears if the "Automatic mode" parameter is set to "No". Then it can be set via this parameter whether a communication object for slat adjustment via percentage values shall be available for the respective channel. | |
| **Channels A-D, Automatic = On + sun blinds centrally up/down** | **disabled**<br>enabled |
| It is set via this parameter whether the central movement command with additional switch-over to automatic mode is enabled for this channel (i.e. can have an influence on the channel) or is disabled, so that the channel ignores this central movement command (e.g. required for a channel used for darkening a room). | |
| **Object Sun** | **disabled**<br>enabled |
| It is set via this parameter whether the "Sun" object is enabled for this channel (i.e. can have an influence on the channel) or is disabled (i.e. will be ignored at this channel).<br>The object "Sun" will be available only after having enabled it. | |

| Parameter | Settings |
|---|---|
| **Behaviour on Sun=On** | **Sun blind down + execute automatic commands**<br>execute automatic commands |
| This parameter only appears if the "Sun" object is enabled. It is set via this parameter how a channel has to react on receipt of a telegram for the "Sun" object with the object value "1" if automatic mode is active and the "Sun" object enabled. If automatic mode is inactive for the respective channel then the telegram will be ignored at this channel.<br>"Sun blind down + execute automatic commands": the Venetian blind will be moved to the lower final position, the slats will be turned into the configured position, the execution of automatic commands will be enabled, and it will be waited for the next automatic command. If during the movement to the lower final position a telegram will be received with a sun blind or slat position in percent this telegram will be executed immediately.<br>"Execute automatic commands:" The execution of automatic commands is released and the automatic commands for blind and slats position last received and stored are executed. | |
| **Behaviour on Sun=Off** | **Sun blind up + ignore automatic commands**<br>ignore automatic commands |
| This parameter only appears if the "Sun" object is enabled. It is set via this parameter how a channel has to react on receipt of a telegram for the "Sun" object with the object value "0" if automatic mode is active and the "Sun" object enabled. If automatic mode is inactive for the respective channel then the telegram will be ignored at this channel.<br>"Sun blind up + ignore automatic commands": the Venetian blind will be moved to the upper final position, and the execution of automatic commands will be disabled, i.e. automatic commands for the respective channel will be ignored and not executed as long as "Sun=Off" is valid. If during the movement to the upper final position a telegram will be received with a sun blind or slat position in percent this telegram will already be ignored.<br>"ignore automatic commands": the position of the sun blind remains unchanged. The execution of automatic commands will be disabled, i.e. automatic commands for the respective channel will be ignored and not executed as long as "Sun=Off" is valid. | |
| **Object Status slat position in %** | **No**<br>Yes |
| It can be set via this parameter whether a "Status slat position" communication object shall be available for the respective channel (or for all channels). | |


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### Channels A-D resp. Channel x (as at Function “Roller shutter,…”)




| Parameter | Settings |
|---|---|
| **Factor for sun protection movement time (base 1s) from up to down position** | 0...255<br>**0** |
| The travel time of the sun protection device from the upper to the lower final position is set via this parameter. | |
| **Factor for sun protection movement time (base 1s) from down to up position** | 0...255<br>**0** |
| The travel time of the sun protection device from the lower to the upper final position is set via this parameter. | |
| **Difference between coasting delay and start-up delay in ms** | -128…127<br>**0** |
| In case a drive reaches its full power only a few milliseconds after the Venetian blind actuator switched on (start-up delay) or still moves for a few milliseconds after the Venetian blind actuator switched off (coasting delay), the difference between start-up delay and coasting delay can be configured with this parameter.<br>Difference = start-up delay – coasting delay<br><br>Note:<br>If the value of Difference is larger than the configured movement period for the slats (see: next parameters), the configured start-up delay respectively coasting delay may not be fully applied. | |
| **Factor for short move-up time (base 1s) after down position** | 0...255<br>**0** |
| Via this parameter, the movement time during which the solar protection should be raised again after the lower final position has been reached is set so that e.g. roller shutter slats can be opened to a certain extent and some light can come into the room through the gaps. | |
| **Behaviour on alarm** | **move up**<br>move down<br>ignore alarm (no action) |
| It is set via this parameter whether the solar protection should move into the upper or lower limit position in the event of an alarm and then cease to be adjustable as long as the alarm is active, or stay in its respective position and continue to be adjustable. | |

| Parameter | Settings |
|---|---|
| **Channels A-D, automatic = On + sun blinds centrally up/down** | **disabled**<br>enabled |
| It is set via this parameter whether the central movement command with additional switch-over to automatic mode is enabled for this channel (i.e. can have an influence on the channel) or is disabled, so that the channel ignores this central movement command (e.g. required for a channel used for darkening a room). | |



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## Space for notes



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