ST3134

KNX Blind Actuator SC 4-fold

Operation and Installation Manual

Date: 2.1.2019

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Introduction

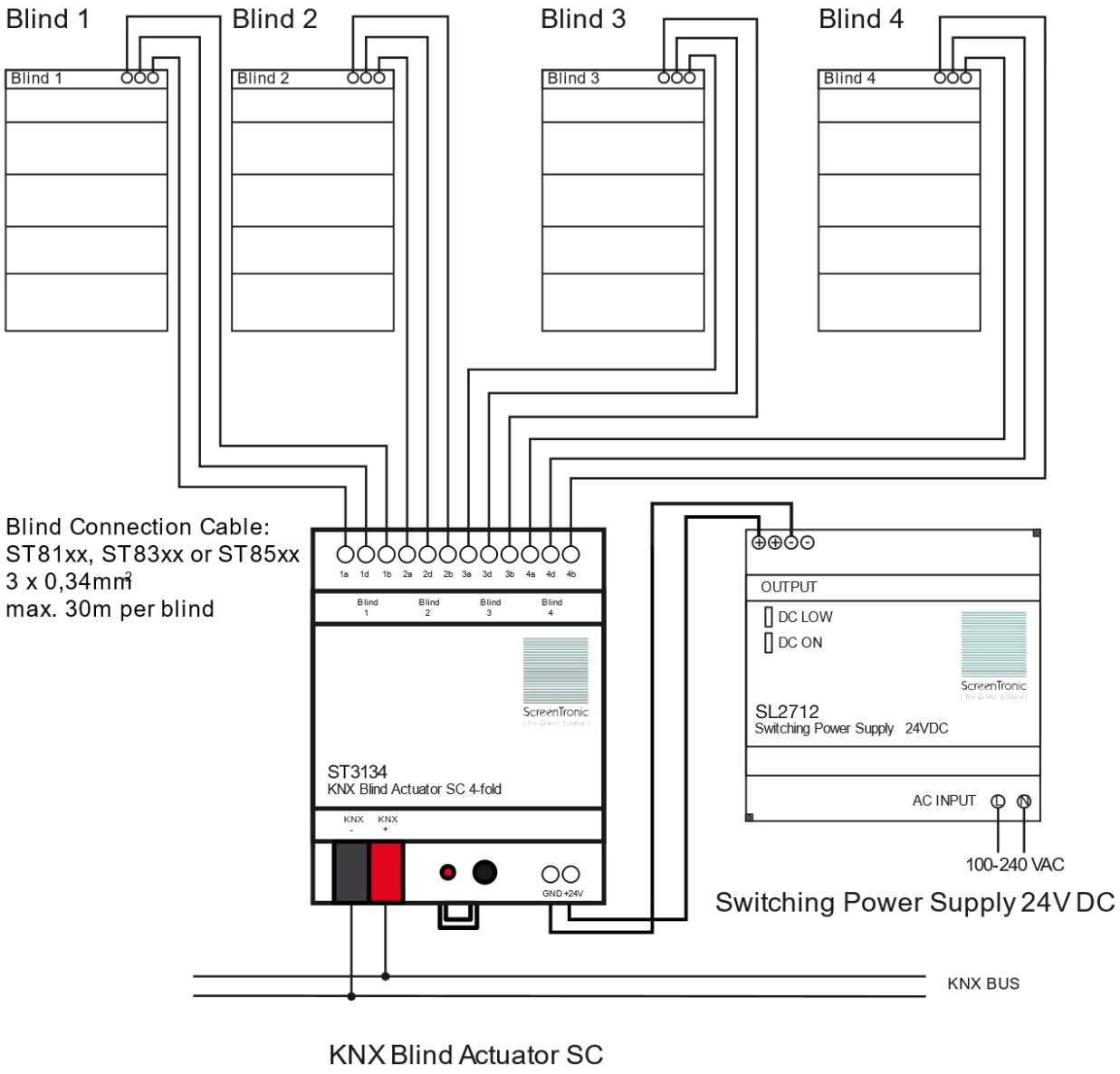
The ST3134 KNX Blind Actuator SC 4-fold is a special control for blinds with SC 3-wire connection (SL MB blinds). Due to the fully digital and bidirectional communication between ST3134 and the motor control unit (inside the blind) the ST3134 realize precise position control and feedback and therefore allows perfect sun tracking and integration into building management systems.

Without any analog timing or manual operations, the blinds can easily be controlled to any target position (height and angle). Smart homes and buildings can integrate blinds controlled by ST3134 perfectly with visual user interface and scenes.

IMPORTANT NOTICE:

* The marked group objects and parameters are not supported at this time or only on request available for special blinds types or projects or must be confirmed from control and blind manufacturer and need in any case detailed knowledge of the entire blind system. Please contact control and blind supplier for details.

Wiring Diagram



Group Objects

Number	Name	Length	C	R	W	T	U
1	Security	1 bit	C	-	W	-	-
10	Blind 1 Up/Down	1 bit	C	-	W	-	-
11	Blind 1 Stop/Step	1 bit	C	-	W	-	-
12	Blind 1 Slat tilting	4 bit	C	-	W	-	-
13	Blind 1 Height	1 byte	C	-	W	-	-
14	Blind 1 Slat angle	1 byte	C	-	W	-	-
15	Blind 1 Position call/set	1 byte	C	-	W	-	-
16	Blind 1 Disable manual control commands	1 bit	C	-	W	-	-
17	Blind 1 Up/Down (automatic)	1 bit	C	-	W	-	-
18	Blind 1 Height (automatic)	1 byte	C	-	W	-	-
19	Blind 1 Slat angle (automatic)	1 byte	C	-	W	-	-
20	Blind 1 Automatic	1 bit	C	R	W	T	U
21	Blind 1 Reference movement	1 bit	C	-	W	-	-
22	Blind 1 Disable blind	1 bit	C	-	W	-	-
23	Blind 1 Status Height	1 byte	C	-	-	T	-
24	Blind 1 Status Slat angle	1 byte	C	-	-	T	-
25	Blind 1 Status Blind	1 byte	C	-	-	T	-
26	Blind 1 Status Blind Communication error	1 bit	C	-	-	T	-
27	Blind 1 Status Blind Error	1 byte	C	-	-	T	-
30	Blind 2 Up/Down	1 bit	C	-	W	-	-
31	Blind 2 Stop/Step	1 bit	C	-	W	-	-
32	Blind 2 Slat tilting	4 bit	C	-	W	-	-
33	Blind 2 Height	1 byte	C	-	W	-	-
34	Blind 2 Slat angle	1 byte	C	-	W	-	-
35	Blind 2 Position call/set	1 byte	C	-	W	-	-
36	Blind 2 Disable manual control commands	1 bit	C	-	W	-	-
37	Blind 2 Up/Down (automatic)	1 bit	C	-	W	-	-
38	Blind 2 Height (automatic)	1 byte	C	-	W	-	-
39	Blind 2 Slat angle (automatic)	1 byte	C	-	W	-	-
40	Blind 2 Automatic	1 bit	C	R	W	T	U
41	Blind 2 Reference movement	1 bit	C	-	W	-	-
42	Blind 2 Disable blind	1 bit	C	-	W	-	-
43	Blind 2 Status Height	1 byte	C	-	-	T	-
44	Blind 2 Status Slat angle	1 byte	C	-	-	T	-
45	Blind 2 Status Blind	1 byte	C	-	-	T	-
46	Blind 2 Status Blind Communication error	1 bit	C	-	-	T	-
47	Blind 2 Status Blind Error	1 byte	C	-	-	T	-
50	Blind 3 Up/Down	1 bit	C	-	W	-	-
51	Blind 3 Stop/Step	1 bit	C	-	W	-	-
52	Blind 3 Slat tilting	4 bit	C	-	W	-	-
53	Blind 3 Height	1 byte	C	-	W	-	-
54	Blind 3 Slat angle	1 byte	C	-	W	-	-
55	Blind 3 Position call/set	1 byte	C	-	W	-	-
56	Blind 3 Disable manual control commands	1 bit	C	-	W	-	-
57	Blind 3 Up/Down (automatic)	1 bit	C	-	W	-	-
58	Blind 3 Height (automatic)	1 byte	C	-	W	-	-
59	Blind 3 Slat angle (automatic)	1 byte	C	-	W	-	-
60	Blind 3 Automatic	1 bit	C	R	W	T	U
61	Blind 3 Reference movement	1 bit	C	-	W	-	-
62	Blind 3 Disable blind	1 bit	C	-	W	-	-
63	Blind 3 Status Height	1 byte	C	-	-	T	-
64	Blind 3 Status Slat angle	1 byte	C	-	-	T	-
65	Blind 3 Status Blind	1 byte	C	-	-	T	-
66	Blind 3 Status Blind Communication error	1 bit	C	-	-	T	-
67	Blind 3 Status Blind Error	1 byte	C	-	-	T	-
70	Blind 4 Up/Down	1 bit	C	-	W	-	-
71	Blind 4 Stop/Step	1 bit	C	-	W	-	-
72	Blind 4 Slat tilting	4 bit	C	-	W	-	-
73	Blind 4 Height	1 byte	C	-	W	-	-
74	Blind 4 Slat angle	1 byte	C	-	W	-	-
75	Blind 4 Position call/set	1 byte	C	-	W	-	-
76	Blind 4 Disable manual control commands	1 bit	C	-	W	-	-
77	Blind 4 Up/Down (automatic)	1 bit	C	-	W	-	-
78	Blind 4 Height (automatic)	1 byte	C	-	W	-	-
79	Blind 4 Slat angle (automatic)	1 byte	C	-	W	-	-
80	Blind 4 Automatic	1 bit	C	R	W	T	U
81	Blind 4 Reference movement	1 bit	C	-	W	-	-
82	Blind 4 Disable blind	1 bit	C	-	W	-	-
83	Blind 4 Status Height	1 byte	C	-	-	T	-
84	Blind 4 Status Slat angle	1 byte	C	-	-	T	-
85	Blind 4 Status Blind	1 byte	C	-	-	T	-
86	Blind 4 Status Blind Communication error	1 bit	C	-	-	T	-
87	Blind 4 Status Blind Error	1 byte	C	-	-	T	-
100	Service interface blinds RX	14 bytes	C	-	W	-	-
101	Service interface blinds TX	14 bytes	C	-	-	T	-

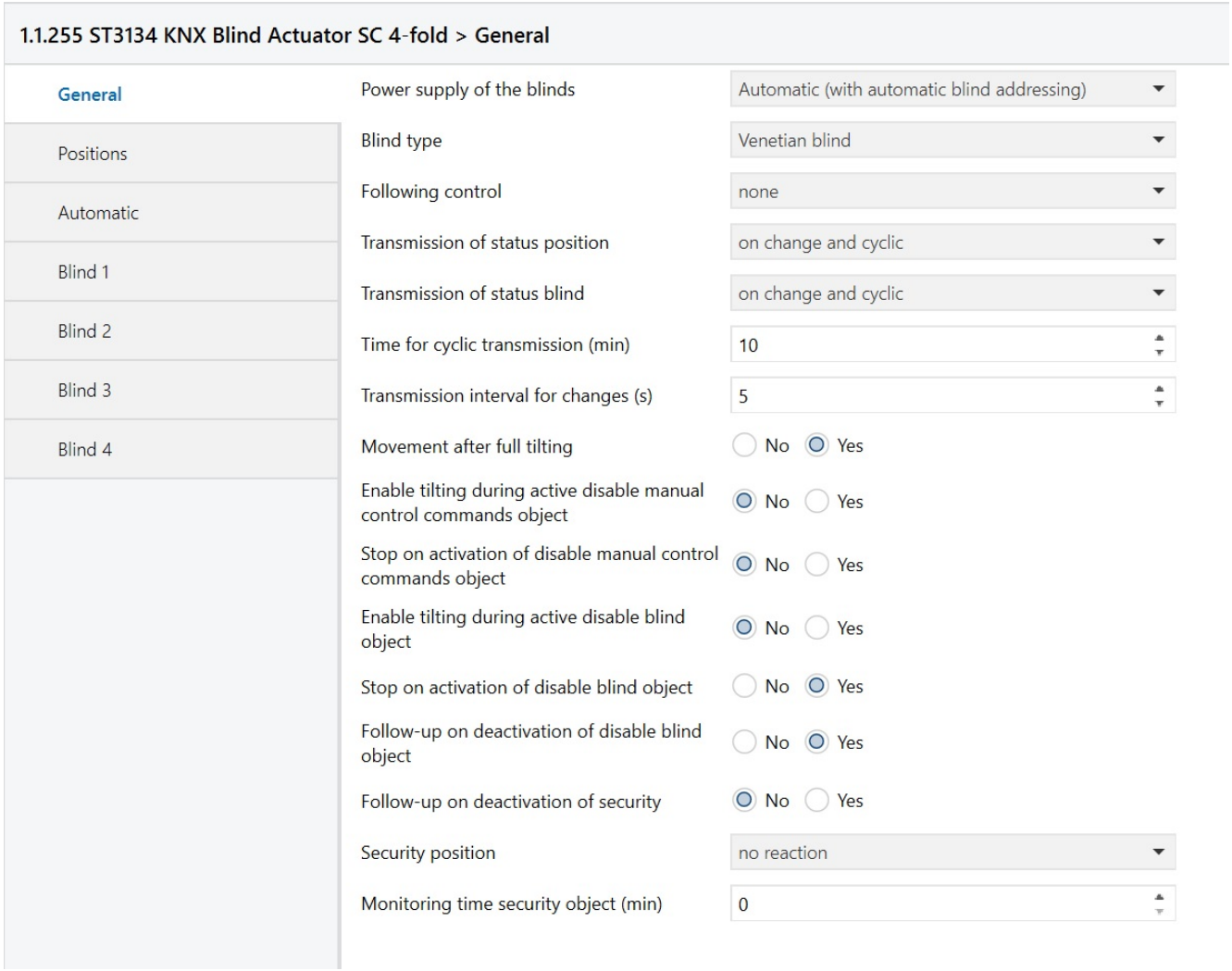
The following KNX Group Objects are supported: (channel 1)

10	Blind 1 Up/Down	1 Bit	W	up/down
11	Blind 1 Stop/Step	1 Bit	W	up/down
13	Blind 1 Height	1 Byte	W	0-255 (0-100%)
14	Blind 1 Slat angle	1 Byte	W	0-255 (0-100%)
15	Blind 1 Position call	1 Byte	W	0 – 5 (position 1 to 6)
23	Blind 1 Status Height	1 Byte	RT	0-255 (0-100%)
24	Blind 1 Status Slat angle	1 Byte	RT	0-255 (0-100%)
26	Blind 1 Status Blind Communication error	1 Bit	RT	on/off

and same for blind channel 2, 3 and 4.

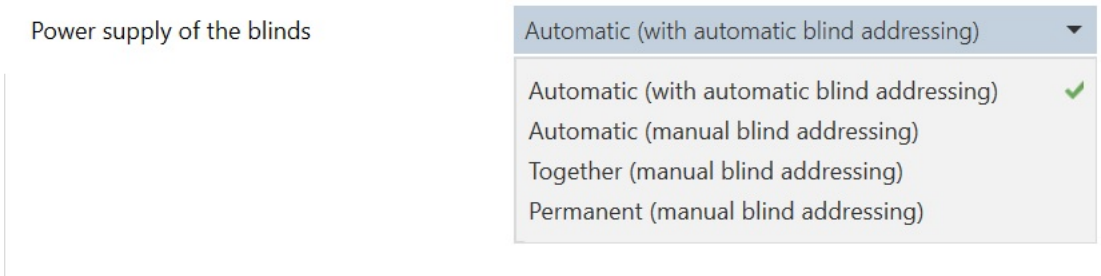
Parameters

General



Power supply of the blinds

Please use in any case Automatic (with automatic blind addressing) except the blind manufacturer indicates something different.



Automatic:
The power output (+24V DC) for each channel is controlled from the ST3134 on internal requirement.

Together:
The power output for all channels is controlled from the ST3134 on requirement, but all 4 outputs are powered in any case in same way.

Permanent:
The power output (+24V DC) for all channels is ON at any time.

Automatic blind addressing:
After KNX Power on or KNX application programming the addressing of the blinds is automatically performed from the ST3134 with the addresses 1 to 4 (for channel 1 to 4).

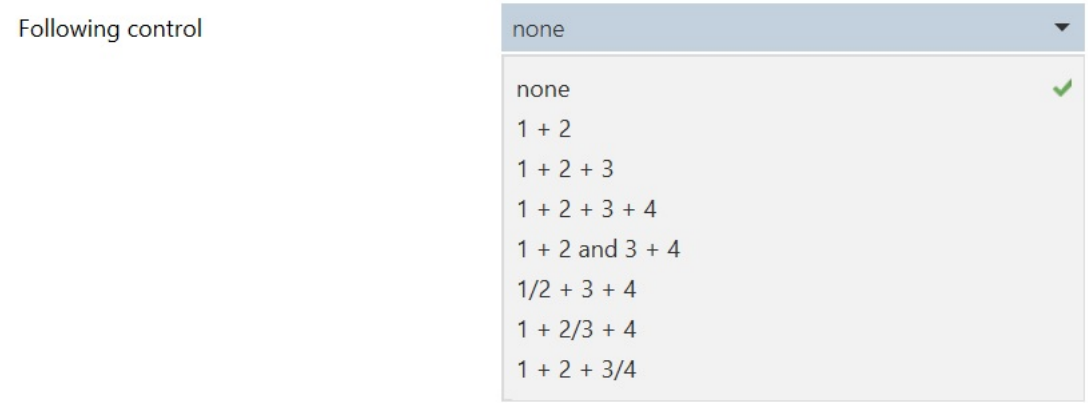
Manual blind addressing:
Blind addresses must be set manually for each blind using CTS for Blinds software (special knowledge about the blind system is necessary).

Blind type

Indicates the blind type connected to all channels as indicated from the blind supplier.

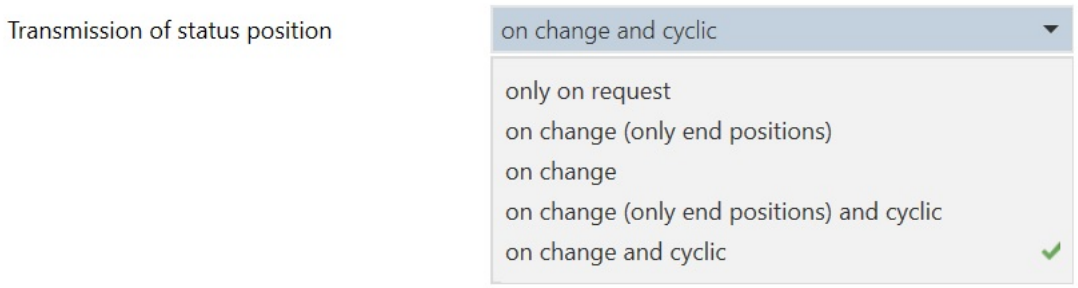
Following Control*

Allows to control from KNX side blinds over each other in same way as a single blind. E.g. 1 + 2 means that the blind on channel 1 is mounted over blind on channel 2. Both blinds are controlled from KNX side with group objects for channel 1 and group objects for channel 2 do not exist.



Transmission of status position*

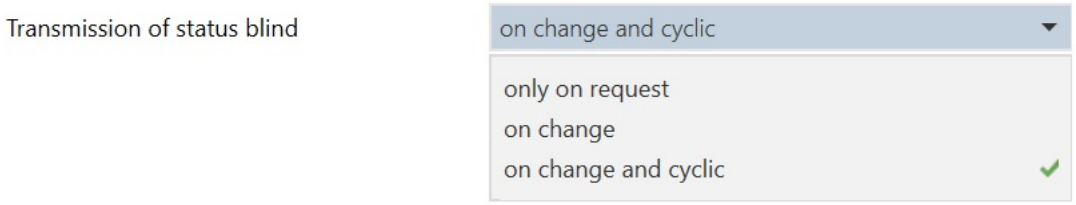
Status position is transmitted cyclically with fixed timing.



Group objects 23 and 24 (and corresponding objects for channel 2 to 4) Status Height and Status Slat Angle.

Transmission of status blind*

Status blind (object 26) is transmitted cyclically with fixed timing.



Group objects 25, 26 and 27 (and corresponding objects for channel 2 to 4) Status Blind, Status Blind Communication Error, Status Blind Error.

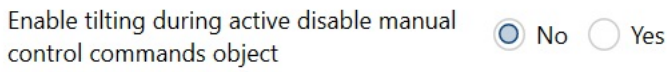
Time for cyclic transmission (min)*

Transmission interval for changes (s) *

Movement after full tilting*

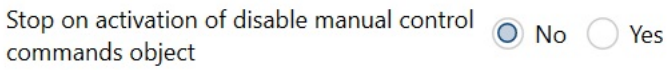
Group object 12 Slat Tilting: Dimming control from switch.

Enable tilting during active disable manual control commands object*



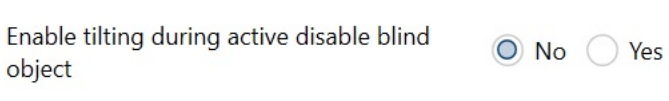
Group object 16 Disable Manual Control Commands is in case of “active” not performed for the Objects 11, 12 and 14.

Stop on activation of disable manual control commands object*



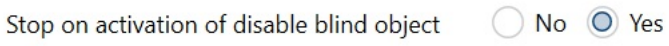
Stops actual moving blinds 1 on receiving a “1” on group object 16 (and corresponding objects for channel 2 to 4). Manual control commands are blocked and blind is stopped.

Enable tilting during active disable blind object*



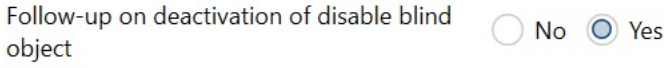
Group object 22 is not performed for group objects 11, 12, 14, 19. Only tilting functions are allowed.

Stop on activation of disable blind object*



Stops actual moving blind on receiving a “1” on group object 22. So all control commands are blocked and blind is stopped.

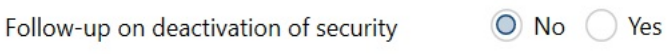
Follow-up on deactivation of disable blind object*



After receiving “0” on group object 22 the blind start moving to the latest expected position.

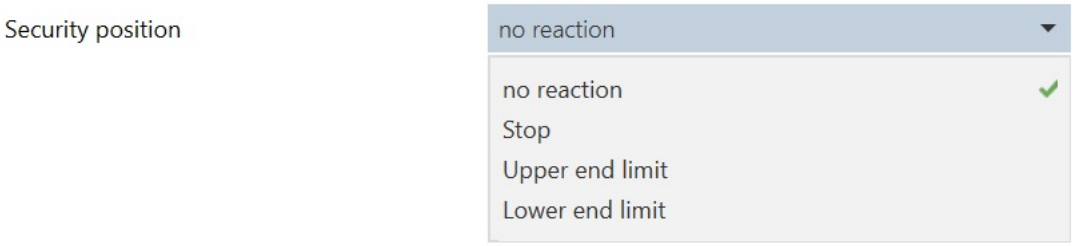
Typical Application: Closing windows frame.

Follow-up on deactivation of security*



After receiving “0” on group object 1 the blind start moving to the latest expected position (if last command was moving, slat angle or height).

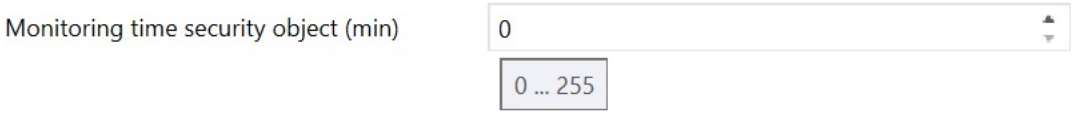
Security position*



After receiving “1” on group object 1 all 4 blinds (channel 1 to 4) reacts like the parameter.

Typical application: Fire alarm moves all blinds in upper position

Monitoring time security object (min)*



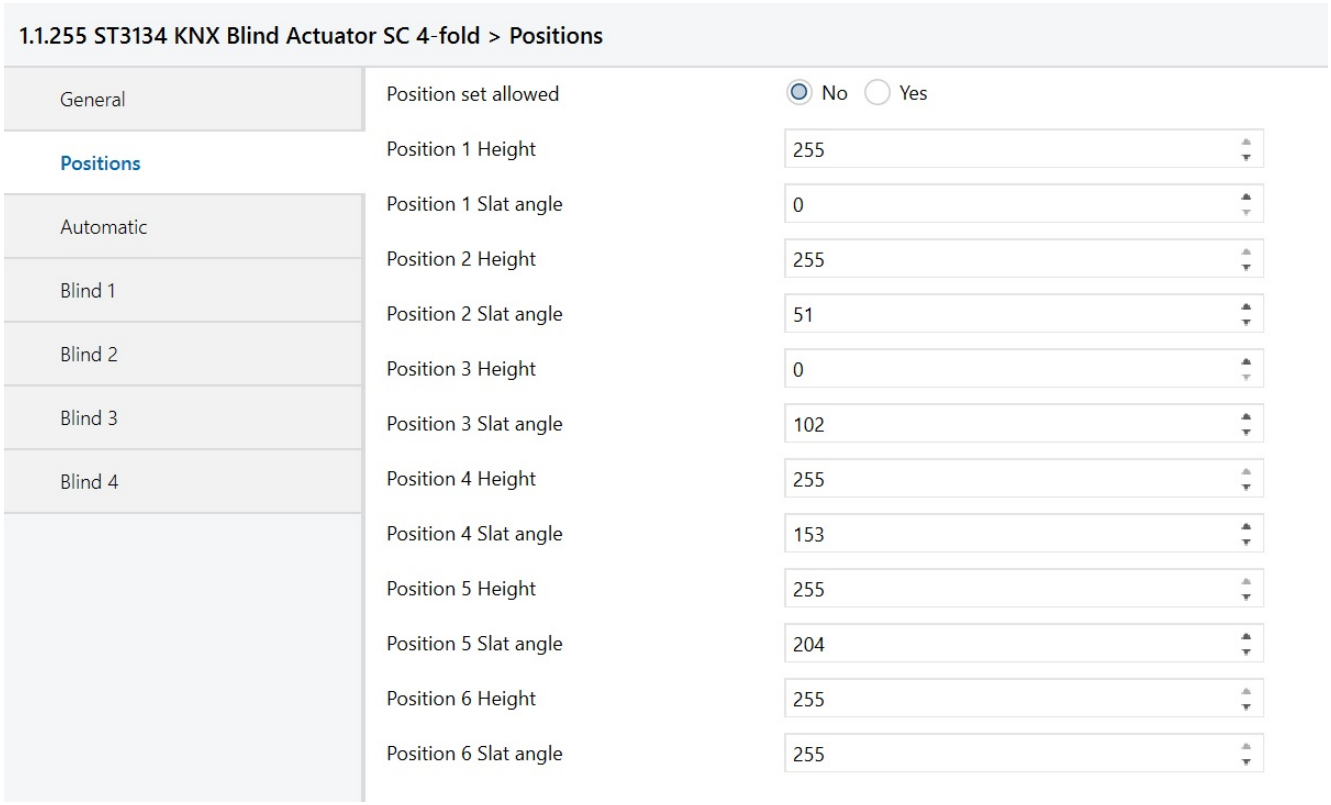
After receiving not a “0” within this time the Security function is activated.

0=Monitoring of the security object is deactivated.

Positions

Allows to define 6 different positions (height and angle) to be called for each channel with group object 15 Position call (or corresponding group object for channel 2 to 4).

Position set allowed*



Receiving byte value 0 to 5 calls the defined positions 1 to 6.

Automatic (example for blind 1)

Automatic object function
After receiving “1” on group object 20, automatic function is activated and object groups 17, 18 and 19 are deactivated.

Status Feedback
Object group 20 is set by actuator status feedback.

Automatic switching
Object group 20 is set by external group address.

Status Feedback & Automatic switching
Object group 20 is set by actuator status feedback or by external group address.

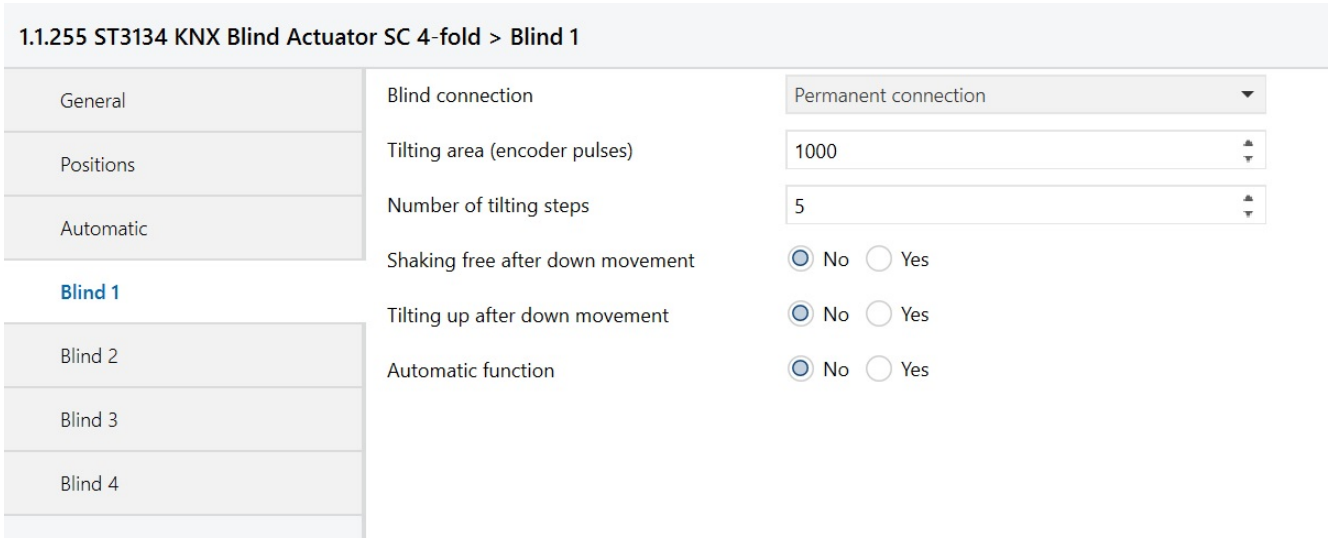
Time until automatic activation (10-minute step) deactivation by automatic object
After receiving “0” on group object 20, timer starts immediately for the set point time.

Deactivation by manual operation
Yes
No

Time until automatic activation (10-minute step) deactivation by manual operation
The timer starts as soon as a manual command (object groups 10..15) is received; when the timer expires the system resumes the Automatic mode.

Menu Blind1
In order to allow the automatic operation of blind 1, set the “Automatic function” parameter to “Yes”

Blind 1 to 4

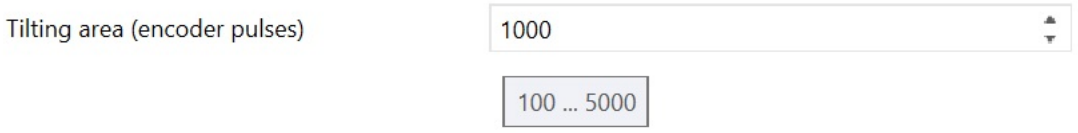


Blind connection*

Option must be set to Permanent connection.

Tilting area (encoder pulses)*

Do not change this value which is defined by the internal blind parameters from blind manufacturer! Modification can be done with separate CTS software!

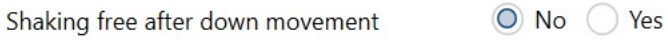


Number of tilt steps*

Do not change this value which is defined by the internal blind parameters from blind manufacturer! Modification can be done with separate CTS software!

Shaking free after down movement *

Do not change this value which is defined by the internal blind parameters from blind manufacturer! Modification can be done with separate CTS software!



Tilting up after down movement *

Do not change this value which is defined by the internal blind parameters from blind manufacturer! Modification can be done with separate CTS software!

Technical Support

For technical support please contact:

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