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KNX/EIB 4 DC/E Motor Controller WM 220–240 V AC
Installation manual

Ref. 1860127

somfy.

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The KNX 4 DC/E Motor Controller WM 220-240 AC is for controlling motors in the Concept 25 motor series (24V DC). It is suited for the controlling of up to four individually parameterable motors for venetian blinds or roller blinds.
This Motor Controller, thanks to its integrated current supply, enables low installation costs. In combination with the Concept 25 Encoder Motor and the CTS Roll-up System Motor it facilitates especially an exact positioning of the slats and an exact positioning of the venetian blinds. Additionally, the combination of the Motor Controller with the Concept 25 Encoder Motor offers the advantage of a longer life expectancy through protection of the venetian blinds.
By using the animeo RTS radio module, four motors can be controlled via remote individually and per device.

Functions and Advantages

- Time saving through easy-installation, for example, with spring clips, pull relief with cable binders, sufficient clip space ...

- Less wiring and space needed thanks to integrated current supply.

- A group input can be used to control all four motors independent of the ETS programming.

- Testing of running direction of the motors without ETS possible.

- The device can be used in the factory-delivered state without necessary programming via the ETS.

- The four local push button inputs can be used as maximum 8 universal KNX/EIB binary inputs, for example, to connect window contacts, temperature sensors, or occupancy detectors. Using a conventional push button, light actuators can also be controlled and dimmed. Via the dimming object, venetian blinds can also be turned slowly.

- User-friendly and intuitive parameter settings in the ETS software.

- Intelligent switching between manual and automatic operation to guarantee excellent user-friendliness and energy savings.

- Positioning messaging of the connected motors during the move and when reaching the upper and bottom end positions.

- Two free configurable security levels per motor output.

- Excess current and short circuit identifying with LED display and messaging via object for each individual motor.

- LED error display when the set operational speed is not reached.

- Free configurable action at mains power return.

- Automatic cascading of the motor outputs to limit the peak current in case of mains power return and bus safety functions.

- Plug and Play! At any time extendable with the animeo RTS Radio module. Without additional wiring the four motors, using Somfy RTS Technology, can be controlled individually per remote.

- In buildings where radio technology can not be used, such as in hospitals, radio control is also possible through animeo infrared technology.

Special advantages when using the Encoder Motor

- Settable end position of the venetian blinds.

- Settable virtual upper end position to guarantee a visually, uniform façade.

- Separate settable UP and DOWN speeds to optimise noise levels.

- Settable slats tilting speeds.

- Longer life expectancy of the end product, e.g. venetian blinds, thanks to soft-stop function in the upper and bottom end positions.

- For exact positioning of the venetian blinds, the cycle for reference moves are freely definable per motor.

- Exactness of the venetian blinds orientation in combination with several encoder motors.

- High level of user comfort using the wheel on the Modulis RTS hand transmitter.

2   Definitions

All indications in the manual marked with * refers to the following terms:

Manual order

A manual order is a command generated by a local conventional switch or by a Somfy RTS radio hand transmitter.
A telegram received on the objects 0-7 is also understood as manual command.

Automatic order

A telegram received on the objects 8-15 is understood as an automatic order.

US switch ergonomics

With this parameter it is specified that the venetian blind is headed in US ergonomics over the local switch inputs or over Somfy RTS radio hand transmitter.
Short manipulation of the switch (< 0.5 s): A move command is executed.
Long manipulation of the switch (> 0.5 s): A tilting command is executed as long as the switch is pressed. When releasing the switch the tilting command is stopped. If the current position of the venetian blind is outside the tilting time, a driving command is implemented with pressed button.

EU switch ergonomics

With this parameter it is specified that the venetian blind is headed in European Union ergonomics over the local switch inputs or over Somfy RTS radio hand transmitter.
Short manipulation of the switch (< 0.5 s): A tilting step is implemented.
Long manipulation of the switch (> 0.5 s): A tilting command is implemented as long as the switch is pressed. If the current position of the venetian blind is outside the tilting time, a driving command is executed.

Screen switch ergonomics (roller blind)

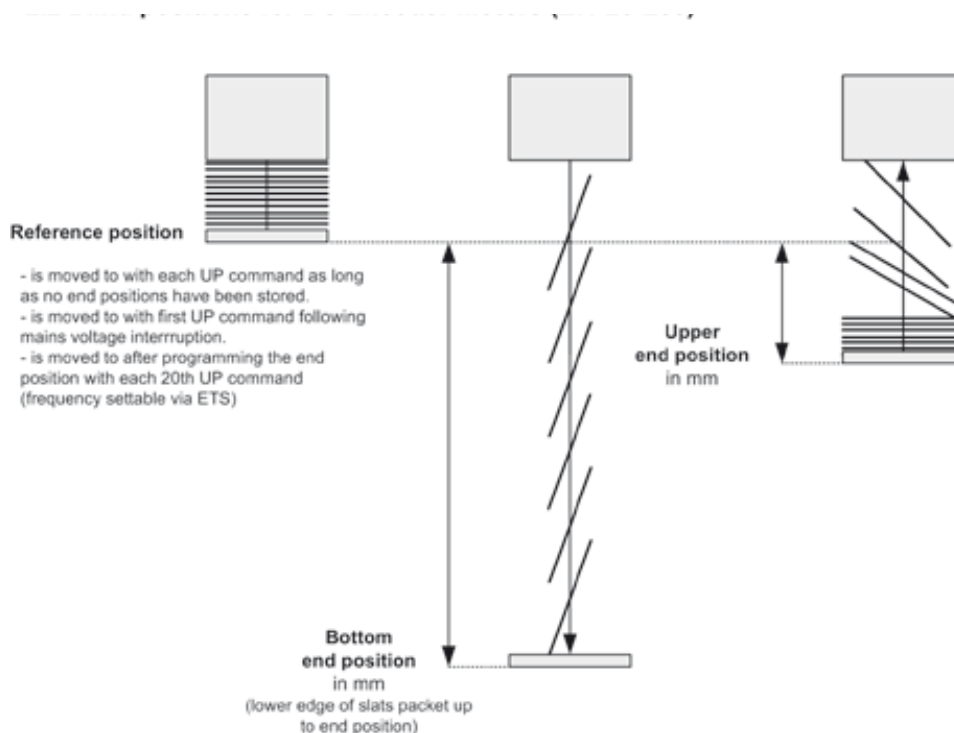With this parameter it is specified that the end product is headed for screen (roller blinds) ergonomics over the local switch inputs or over Somfy RTS radio hand transmitter.
Short manipulation of the switch when the end product is in full swing: A stop command is executed.
Long manipulation when the end product is not in full swing: A driving command is executed.

⚠ This ergonomic is used to control screens, roller blinds, awnings and windows.

DC Motors without encoder

DC Motors without encoder have a two-wire connecting cable (white, gray).

DC Motors with encoder

DC Motors with encoder have a three-wire connecting cable (white, gray, purple).

Running time (mode selection DC)

As running time, the time is defined that the corresponding end product needs from the upper end position to the bottom end position. The time for the UP move and for the DOWN move can be individually parametered.

Tilting time (mode selection DC)

As tilting time, the time is defined necessary for the slats to make one complete turn.

Running length (mode selection DCE)

As running length, the length is defined that the corresponding end product needs from the upper end position to the bottom end position. The length for the UP move and for the DOWN move can be individually parametered.

Turn impulse (mode selection DCE)

With turn impulse the time is defined necessary for a complete slats turn.

Reference move (mode selection DCE)

A reference move is carried out with each 20th UP command after programming the end positions. Here, the venetian blinds move to the reference position (see 2.2).
The frequency of the reference move is settable via the ETS.

2.1 Slat position

Venetian blind 90°/ -90°
Angle: 0°
Slat position: 50%
EIB Byte value: 127

Angle: 90°
Slat position: 0%
EIB Byte value: 255 or 0

Venetian blind 90°/ 0°
Angle: 0°
Slat position: 100%
EIB Byte value: 0 or 255

Venetian blind 90°/ -90°
Angle: -90°
Slat position: 100%
EIB Byte value: 0 oder 255

Tilting direction

Tilting direction

Tilting direction

INSIDE

OUTSIDE

Max. closed

Max. reversed
Ventian blind 90°/ 0°

Max. reversed
Venetian blind 90°/ -90°

2.2 Screen position for DC encoder motors (LW 25 E83)

Reference position

- is moved to with each UP command as long as no end positions have been stored.
- is moved to with first UP command following mains voltage interruption.
- is moved to after programming the end position with each 20th UP command (frequency settable via ETS)

Upper end position
in mm

Bottom end position
in mm
(lower edge of slats packet up to end position)

3   Assembly

63 mm
140 mm
min. 120 mm

Mounting of the Motor Controller 4 DC/E WM
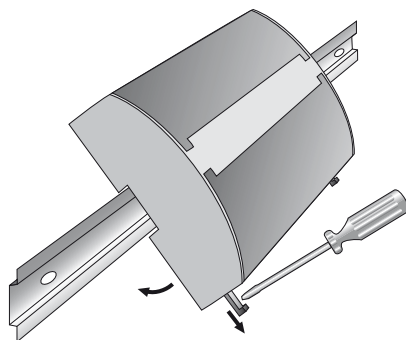
Connect power supply and wiring to the Motor Controller

Bus

Bus
> 10 cm

4   Wiring diagram

Encodermotor 1 LW25-E83
Encodermotor 2 LW25-E83
Encodermotor 3 LW25-E83
Encodermotor 4 LW25-E83
Motor 24 V DC (without Encoder)

LV 25 B44, B64
LW 25, B44, B83
LT 28 B73

purple
0.25 mm²   Junction box
0.25 mm²   Junction box
0.25 mm²   Junction box
0.25 mm²   Junction box
0.25 mm²
alternatively

1 2 3   1 2 3   1 2 3   1 2 3   1 2

L1
N
PE
-mains 230 V 50 Hz

L L N N   1 2 E   1 2 E   1 2 E   1 2 E   1 2 E
M1   M2   M3   M4   Mx

Somfy
animeo KNX/EIB
4 DC/E Motor Controller WM
1860127

SCR
EU
US
Reset / Prog

EIB LED
EIB Prog
animeo RTS module 433.42 MHz 1860105

In 1-4   Out 1-4
C △ ▽   C △ ▽
1 A B   2 C D   3 E F   4 G H   Bus − +
C △ ▽   C △ ▽   C △ ▽   C △ ▽   SW rt

Group control
C
UP
Down

+ UP Down   + UP Down   + UP Down   + UP Down

+ red
- black   EIB-bus cable
2 x 2 x 0.8 mm² (green)

Local push button Motor 1
Local push button Motor 2
Local push button Motor 3
Local push button Motor 4

Local push button inputs can be used as binary inputs!

4.1   Motor outputs

Max. current per output: 500 mA.
Compatibel with the following Somfy motors in combination with the CTS 25 enrolling system for venetian blinds:

LV 25–B44, –B64	LW 25–B44, –B83	LW 25–E83	LT 28–B73	Stehle
DC–Mode	DC–Mode	DCE–Mode	DC–Mode	J 101
2 wires	2 wires	3 wires	2 wires	2 wires

⚠ Control of non Somfy motors only on request

4.2   Cabling

⚠ As soon as 230 V and the EIB bus voltage supply are attached the „US" LED will blink regularly.
The device is operational when the „US" LED is blinking continuously.

CABLE

Connections to ...	Cables	Twisted Pairs	Max. distance
Motors	Min.: 2 oder 3 x 0.6 mm²/19 AWG Max.: 2 oder 3 x 2.5 mm²/13 AWG		20 m
Switches	Min.: 3 x 0.6 mm²/19 AWG Max.: 3 x 2.5 mm²/13 AWG	Recommended	150 m
Group control	Min.: 2 x 0.6 mm²/19 AWG Max.: 2 x 1.5 mm²/13 AWG	Recommended	1000 m
EIB Bus	2 x 2 x 0.8 mm²	Required, following KNX/EIB topology guidelines	
230 V AC	Min.: 3 x 0.75 mm²/16 AWG Max.: 3 x 2.5 mm²/13 AWG		

4.3   Checking the running direction of the blinds

Group control of the motors 1 – 4 over the group control input

Over the group control input the running directions of the connected motors can be tested. All four motor outputs are switched together. This input can become disabled in the ETS parameters. In the case of a bus voltage failure it is always enabled in order to make an emergency operation possible.

⚠ Absolutely guarantee with start-up that the motors run into the correct direction. By cable links at the group control input this test can be accomplished.

Check the correct direction of the end product

DOWN: The end product heads in the down direction (cable link between C + ▼)
STOP: The end product stops (Cable link between C + ▼ + ▲)
UP: The end product heads in the up direction (C + ▲)

4.4   Checking the turning direction of the slats

Should the venetian blinds at the beginning of operation be moved down fully or partly, care must be taken when checking the turning direction for slats position (attention to manufacturer's instructions!).
Should the slats position according to manufacturer's description not match to the move direction, only after first contacting the venetian blind manufacturer can the venetian blinds be corrected. Then, the turning direction can be checked.

"Solar protection application"   "Decorative application"

Outside   Inside   Outside   Inside

DOWN   **UP**   **DOWN**   **UP**
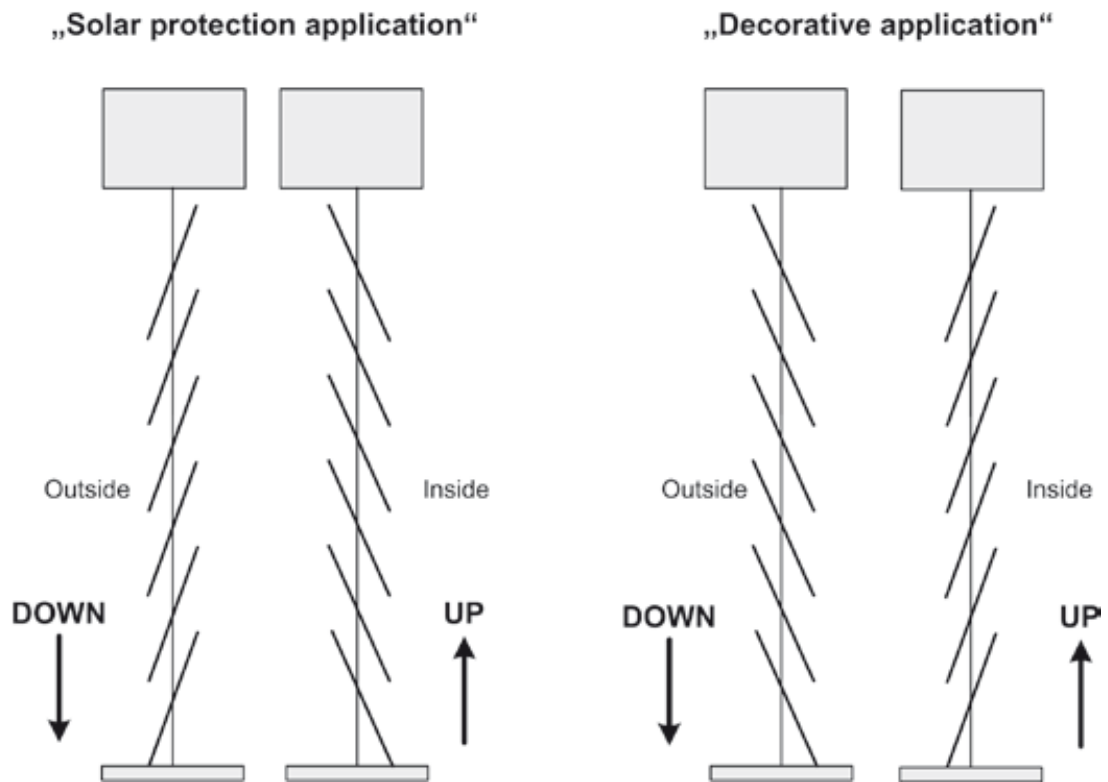
5   Settings on delivery status

The KNX/EIB Motor Controller 4 DC/E can be used in the factory-delivered state also without programming via ETS software. Sensible presettings are implemented in the device. <u>These settings are valid for all four motor outputs.</u>

- **Running and turning times/lengths***
  In the factory-delivered state or after setting back to the factory-delivered state, the pre-determined running and turning times/lengths* are already preset.

- **Mode selection DCE**
  A running length* of approx. 35 cm is preset.
  The turning impulses* are preset to 110 (suitable for 25 mm slats in combination with CTS winding system).
  The impulses for mechanical compensation are preset to 0,5 seconds.

- **Mode selection DC**
  A running time of 3 minutes and a turning time of 3 seconds are preset.
  The time for mechanical compensation is preset to 0,5 seconds.

- **Connection of local push buttons possible**
  The local press buttons inputs are assigned directly to the motor outputs: push button 1 controls motor output 1.
  Through wire bridges on the push button inputs, the motor outputs can be controlled as desired.

* ⚠ See chapter 2 definitions

5.1   Function of the Reset/Prog button

⚠   Over this switch base settings at the Moco KNX/EIB can be made. These base settings are only possible in delivery status before the device is programmed with the ETS or after the device is unloaded by the ETS. The base settings are overwritten by the ETS settings.

### 5.2   Selection of different user ergonomics

Over the Reset/Prog button different switch user ergonomics can be defined for the local switch inputs and/or Somfy RTS radio hand transmitters. These settings are only possible in delivery status before the device was programmed with the ETS or after the device became to unload by the ETS. As soon as the device was programmed with the ETS the user ergonomics can no more be made over the Reset/Prog button. If the device became to unload by the ETS, setting of the user ergonomics is again possible over the Reset/Prog button.

⚠ The selection of the user ergonomics should be consistent with the appropriate end product.

●)))   =   Configuration of the animeo RTS radio module
SCR   =   Screen ergonomics*
EU   =   Venetian blind, EU ergonomics*
US   =   Venetian blind, US ergonomics*
       * see Chapter 2 Definitions

Change the ergonomics:

2 s
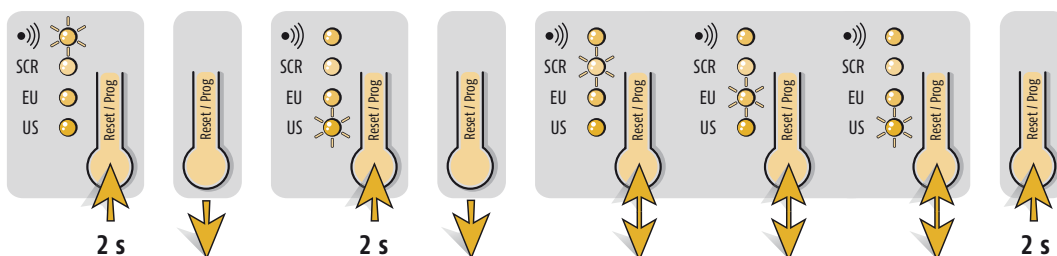
The delivery status is venetian blind with EU ergonomics.

To switch between the different ergonomics press shortly the Reset/Prog button. Continue to do so until the desired LED is lighting.

Save and exit of configuration to mode.

5.3   Mode selection DC or DCE

Type of motors that can be controlled (⚠ Preset mode is DCE):

- DC
- DCE when a LW25-E3 motor is used it is identifiable by the three wires (white, grey, purple)
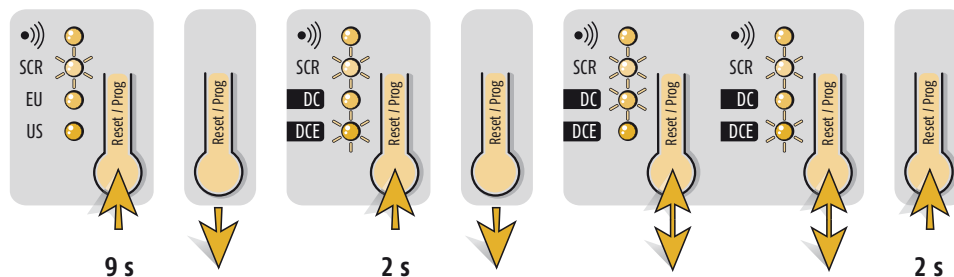
> The motor can be damaged through an unauthorised function mode!
> The mode for all four motor outputs are commonly defined!

5.4   Manual setting of the running and tilting times

Over the local conventional switch and by radio hand transmitters the running and tilting times per motor output can be adjusted. These settings are only possible on delivery status before the device is programmed with the ETS. As soon as the device is programmed with the ETS, the running and tilting times cannot be programmed over the local conventional switches or by radio hand transmitters. If the device is unloaded by the ETS, it is again possible to program the running and tilting times over the local conventional switches or by radio hand transmitters.

⚠ Press immediately when lower end limit is reached.

⚠ Keep Stop pressed during entire tilting.
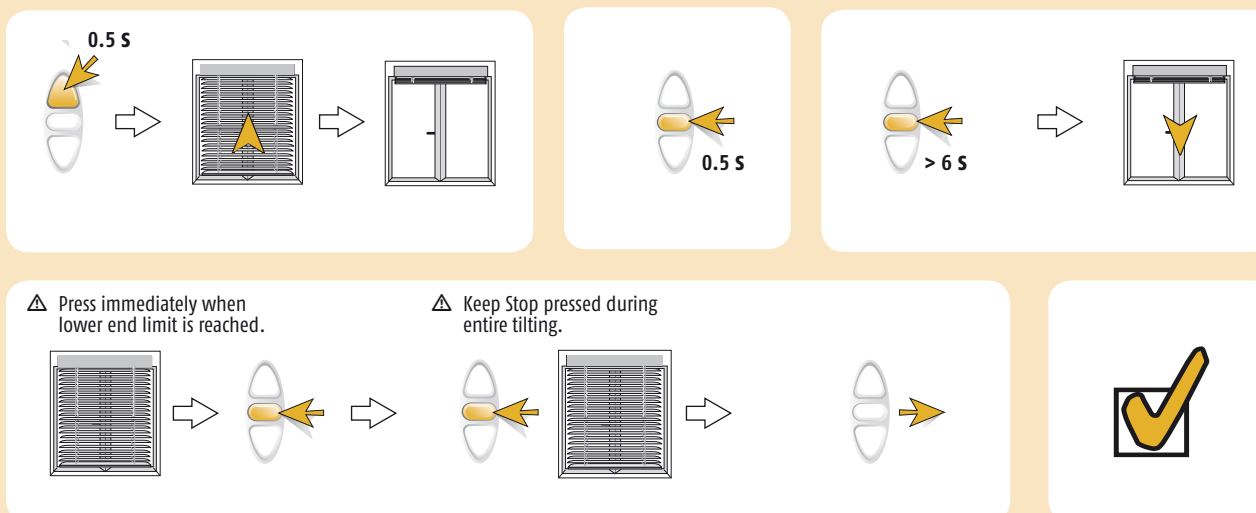
5.5　Manual setting of the intermediate position 1

Intermediate position 1 can also be programmed over a conventional local switch or by radio hand transmitters individually per motor output. At the same time it is possible to define the intermediate position 1 over settings in the ETS parameters. Before the intermediate position 1 is programmed it is obligatory to set the running and tilting times.
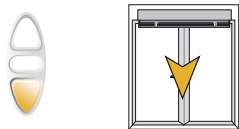
⚠ The last learned position is valid.

① Move screen in desired position

⚠ With conventional unlocked push buttons the stop order can be generated by pressing the up and down button simultaneously

② Store position

> 2 s
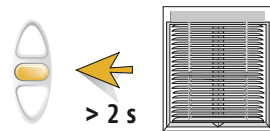
⚠ Whilst saving the screen tilts shortly up and down

①

0,5 s
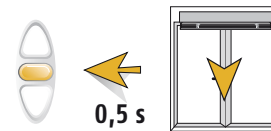
⚠ The stored position will be moved

⚠ When using DCE motors (LW25−E83) a complete UP command must be executed after learning the running and tilting times (lengths) so that the according blind can find its upper reference point.

5.6　Reset to delivery status

1. If the device has not yet been programmed with the ETS software.

SCR
EU
US
Reset / Prog

14 s　⚠
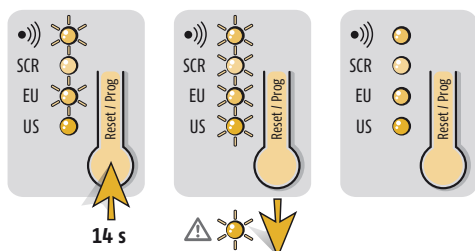
Complete RESET:
The configurations realized over the Reset/Prog button, local conventional push buttons or radio transmitters can be reset over the Reset/Prog button by pressing 10 s.

2. If the device with the ETS software has already been programmed.

Unload
Access
Local
Remote
Unload Application Program
Unload Address & Application
Prompt before each device
Cancel
Address | Room | P | D | Application Program
1.1.2　animeo EIB/KNX 4 DC/E V1.0
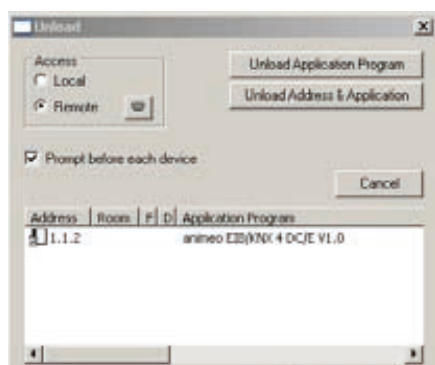
If the device with the ETS has already been programmed, a reset to delivery status is not possible over the Reset/Prog button. Over the function "Unload" in the ETS all settings of the device can be reset to delivery status. The Reset/Prog button can then be used again.

A maximum of 109 communication objects are available, which however cannot be used at one time.
Maximally 90 group addresses can be linked.

No.	Objekt name	Type	Description
0	Motor 1 UP/DOWN, CLOSE/OPEN	1 Bit (EIS 7)	If a telegram with the value "0" is received on this communication object, the appropriate blind goes up. If a telegram with the value "1" is received, the appropriate blind goes down. At expiration of the adjusted running time for the UP and DOWN direction the relays of the outputs are deactivated.
1	Motor 2 UP/DOWN, CLOSE/OPEN	1 Bit (EIS 7)	
2	Motor 3 UP/DOWN, CLOSE/OPEN	1 Bit (EIS 7)	
3	Motor 4 UP/DOWN, CLOSE/OPEN	1 Bit (EIS 7)	
4	Motor 1 STEP / STOP	1 Bit (EIS 7)	**For venetian blinds:** If the venetian blind is in a fully moving process, the venetian blind stops with the receipt of a telegram on the appropriate object, independently whether a telegram with the value "0" or "1" is received. If the venetian blind is in passive state, a step will be executed whereas with the receipt of a telegram with the value "1" the slat will close and with the receipt of a telegram with the value "0" the slat will open. The step length is defined in the parameter settings for the appropriate motor. **For screens (roller blinds):** If one of these end products is in a fully moving process, the end product stops with the receipt of a telegram on the appropriate object, indepen-dently of whether a telegram with the value "0" or "1" is received. If one of these end products is in passive state, then with the receipt of a telegram on one of these communication objects no action is executed.
5	Motor 2 STEP / STOP	1 Bit (EIS 7)	
6	Motor 3 STEP / STOP	1 Bit (EIS 7)	
7	Motor 4 STEP / STOP	1 Bit (EIS 7)	
8	Motor 1 Position UP / DOWN	1 Byte (EIS 6)	If one of these communication objects receives a telegram, the appropriate blind will go into the position which is defined by the received value. "0" = UP "255" = DOWN **For venetian blinds:** If the position is reached, the same slat angle starts up in which the venetian blind was previously.
9	Motor 2 Position UP / DOWN	1 Byte (EIS 6)	
10	Motor 3 Position UP / DOWN	1 Byte (EIS 6)	
11	Motor 4 Position UP / DOWN	1 Byte (EIS 6)	
12	Motor 1 Slat position	1 Byte (EIS 6)	**For venetian blinds:** If one of these communication objects receives a telegram, the appropriate slat will go to that position which is defined by the received value. If the venetian blind is in full moving process while receiving a telegram on the appropriate object, the position of the slat will be started up when the move is finished. Depending on the parameter setting on parameter card „General" the position is defined as follows: „255" = slat maximal closed / „0" = slat maximal reversed or "0" = slat maximal closed / "255" = slat maximal reversed
13	Motor 2 Slat position	1 Byte (EIS 6)	
14	Motor 3 Slat position	1 Byte (EIS 6)	
15	Motor 4 Slat position	1 Byte (EIS 6)	
16	Motor 1 Slow movement	4 Bit (EIS 2)	When a telegram is received on one of these communication objects then the venetian blind slats move either slowly to maximal closed or maximal reversed position. The slats turning speed is parametered on the card "Motor 1 … 4". This function is fulfilled by a longer operating of a push button sensor, application "dimming". ⚠ These objects can also be controlled with conventional push buttons when local push button inputs of the Motor Controller are used as universal binary inputs (basis function "dimming").
17	Motor 2 Slow movement	4 Bit (EIS 2)	
18	Motor 3 Slow movement	4 Bit (EIS 2)	
19	Motor 4 Slow movement	4 Bit (EIS 2)	

⚠ A time difference of 2 seconds between the receipt of a telegram on the objects 8 – 11 and the receipt of a telegram on the objects 12 – 15 should be respected.

| No.	Objekt name	Type	Description
20	Motor 1 Move to IP 1	1 Bit (EIS 1)	If a telegram with the value "1" is received on this communication object, the appropriate blind goes to the intermediate position 1 which was configured by local switch or by remote control or parameterised in the ETS parameters. The last position which has been configured is active. Receiving a telegram with the value "0" on one of these communication objects the appropriate blind goes to the upper end position.
21	Motor 2 Move to IP 1	1 Bit (EIS 1)	
22	Motor 3 Move to IP 1	1 Bit (EIS 1)	
23	Motor 4 Move to IP 1	1 Bit (EIS 1)	
24	Motor 1–4 Move to IP 1	1 Bit (EIS 1)	If a telegram with the value "1" is received on this communication object, the blinds 1–4 go to the intermediate position 1 which was configured by local switch or by remote control and parameterised in the ETS parameters. The position which has been configured at last is active. Receiving a telegram with the value "0" on one of these communication objects the blinds 1–4 go to the upper end position.
25	Motor 1 Move to IP 2	1 Bit (EIS 1)	If a telegram with the value "1" is received on this communication object, the appropriate blind goes to the intermediate position 2 which was parameterised in the ETS parameters. Receiving a telegram with the value "0" on one of these communication objects the blind goes to the upper end position.
26	Motor 2 Move to IP 2	1 Bit (EIS 1)	
27	Motor 3 Move to IP 2	1 Bit (EIS 1)	
28	Motor 4 Move to IP 2	1 Bit (EIS 1	
29	Motor 1–4 Move to IP 2	1 Bit (EIS 1)	If a telegram with the value "1" is received on this communication object, the blinds 1–4 go to the intermediate position 2 which was parameterised in the ETS parameters. Receiving a telegram with the value "0" on one these communication objects the blinds 1–4 go to the upper end position.
30	Motor 1–4 Reference Move	1 Bit (EIS 1)	If a telegram with the value "1" or "0" is received on this communication object, a reference move will be generated for the Motors 1 – 4. ⚠ Explanation "reference move" see chapter 2 Definitions.
31	Motor 1 Security, low prio	1 Bit (EIS 1)	If a telegram with the value "1" is received on this communication object, the appropriate blind goes to the position which was parameterised in the ETS parameters. When one of the communication objects receives a telegram with value "0" no action will be executed. Only with the selection "Repeat the last telegram after security (Yes)" in the ETS parameters this action will be executed on the appropriate blind. If one of these communication objects is active through a telegram with the value "1" and if then on one of the communication objects 31–34 (security position, high priority) a telegram with value "1" is received, the appropriate blind will move to the position configured in the ETS parameters (security position, high priority).
32	Motor 2 Security, low prio	1 Bit (EIS 1)	
33	Motor 3 Security, low prio	1 Bit (EIS 1)	
34	Motor 4 Security, low prio	1 Bit (EIS 1)	
35	Motor 1–4 Security, low prio	1 Bit (EIS 1)	If a telegram with the value "1" is received on this communication object, the blinds 1–4 go to the position which was parameterised in the ETS parameters. When the communication object receives a telegram with value "0" no action will be executed. Only with the selection "Repeat the last telegram after security (Yes)" in the ETS parameters this action will be executed on the blinds 1–4. If this communication object is active through a telegram with the value "1" and if then, on the communication object 35 (security position, high priority) a telegram with the value "1" is received the blinds 1–4 will move to the position configured in the ETS parameters (security position, high priority).

No.	Objekt name	Type	Description
36	Motor 1 Security, high prio	1 Bit (EIS 1)	If a telegram with the value "1" is received on this communication object, the appropriate blind goes to the position which was para-meterised in the ETS parameters. When one of the communication objects receives a telegram with value "0" no action will be execut-ed. Only with the selection "Repeat the last telegram after security (Yes)" in the ETS parameters this will be executed in the appropriate blind. If an object for security position, low priority is active ("1"), the appropriate para-meterised position will be started up.
37	Motor 2 Security, high prio	1 Bit (EIS 1)	
38	Motor 3 Security, high prio	1 Bit (EIS 1)	
39	Motor 4 Security, high prio	1 Bit (EIS 1)	
40	Motor 1-4 Security, high prio	1 Bit (EIS 1)	If a telegram with the value "1" is received on this communication object, the blinds 1-4 go to the position which was parameterised in the ETS parameters. When the communication object receives a telegram with value "0" no action will be executed. Only with the selection "Repeat the last telegram after security (Yes)" in the ETS parameters this action will be executed in the blinds 1-4. If an object for security position, low priority is active ("1") the appropri-ate parameterised position will be started up.
41	Mains power failure (230 V)	1 Bit (EIS 1)	With this communication object a mains voltage failure can be signaled. As soon as the mains voltage precipitates a telegram with the value "1" it is sent to the bus. With mains voltage return this communication object sends a telegram with the value "0".
42	Motor 1 Error indication	1 Bit (EIS 1)	Over this communication object an error for the corresponding motor can be signalled. When an error occurs, a telegram with the value "1" is sent. When the error has been corrected, a telegram with the value "0" is sent. The following errors are identified: • Short circuit on the motor output or at least a wire is not con-nected. • Encoder wire (purple) is connected incorrectly on the motor out-put (e.g. M1 connector 1 or 2). • A DCE motor is connected, the Motor Controller is however in the DC mode.
43	Motor 2 Error indication	1 Bit (EIS 1)	
44	Motor 3 Error indication	1 Bit (EIS 1)	
45	Motor 4 Error indication	1 Bit (EIS 1)	
46	Motor 1 Feedback UP / DOWN	1 Byte (EIS 6)	On these communication objects the current position (UP / DOWN direction) of the respective blind is sent to the bus based on the programmed running time. The type of feedback (on demand, status change, cyclic) is defined in the ETS parameters. "0" = UP / "255" = DOWN
47	Motor 2 Feedback UP / DOWN	1 Byte (EIS 6)	
48	Motor 3 Feedback UP / DOWN	1 Byte (EIS 6)	
49	Motor 4 Feedback UP / DOWN	1 Byte (EIS 6)	
50	Motor 1 Feedback Slat	1 Byte (EIS 6)	On these communication objects the current slat position of the respective blind is sent to the bus based on the programmed tilting time. The type of feedback is defined in the ETS parameters. De-pending on the parameter setting on parameter card "General" the position is defined as follows: „255" = slat maximal closed / „0" = slat maximal reversed or „0" = slat maximal closed / „255" = slat maximal reversed
51	Motor 2 Feedback Slat	1 Byte (EIS 6)	
52	Motor 3 Feedback Slat	1 Byte (EIS 6)	
53	Motor 4 Feedback Slat	1 Byte (EIS 6)	
54	Motor 1-4 Status positions	1 Bit (EIS 1)	On this communication object if a telegram with the value "1" or "0" is received, then the current status positions are sent on the bus (objects 46-53).
55	Motor 1 Upper end position	1 Bit (EIS 1)	Over these communication objects for the appropriate blind a tele-gram with the value "1" is sent if the upper end position is reached. When leaving the upper end position of the appropriate blind a telegram with the value "0" is sent. The upper and the lower end position result from the parameterised running times.
56	Motor 2 Upper end position	1 Bit (EIS 1)	
57	Motor 3 Upper end position	1 Bit (EIS 1)	
58	Motor 4 Upper end position	1 Bit (EIS 1)	

No.	Objekt name	Type	Description
59	Motor 1–4 Upper end position	1 Bit (EIS 1)	Over this communication object for the blinds 1–4 a telegram with the value "1" is sent if all 4 blinds have reached the upper end position. If all 4 blinds have left the upper end position, a telegram with the value "0" is sent.
60	Motor 1 Lower end position	1 Bit (EIS 1)	Over these communication objects for the appropriate blind a telegram with the value "1" is sent after the lower end position is reached. When leaving the lower end position of the appropriate blind a telegram with the value "0" is sent. The upper and the lower end position result from the parameterised running times.
61	Motor 2 Lower end position	1 Bit (EIS 1)	
62	Motor 3 Lower end position	1 Bit (EIS 1)	
63	Motor 4 Lower end position	1 Bit (EIS 1)	
64	Motor 1–4 Lower end position	1 Bit (EIS 1)	Over this communication object for the blinds 1–4 a telegram with the value "1" is sent after all 4 blinds have reached the lower end position. After all 4 blinds have left the lower end position, a telegram with the value "0" is sent. The upper and the lower end position result from the parameterised running times.
65	Motor 1 Block functions	1 Bit (EIS 1)	If a telegram with the value "1" is received on one of these communication objects the functions which are selected in ETS parameters will be blocked for the appropriate blind. If on one of these communication objects a telegram with the value "0" is received the functions for the appropriate blind will be enabled again.
66	Motor 2 Block functions	1 Bit (EIS 1)	
67	Motor 3 Block functions	1 Bit (EIS 1)	
68	Motor 4 Block functions	1 Bit (EIS 1)	
69	Motor 1–4 Block functions	1 Bit (EIS 1)	If a telegram with the value "1" is received on this communication object the functions which are selected in ETS parameters will be blocked for the blinds 1–4. If on this communication object a telegram with the value "0" is received the functions for the blind 1–4 will be enabled again.
70	Motor 1 Prio automatic/manual	1 Bit (EIS 1)	Over these communication objects priority between automatic functions and manual functions can be switched. If on one of these communication objects a telegram with the value "1" is received priority automatic functions is active for the appropriate blind. If on one of these communication objects a telegram with the value "0" is received priority manual functions are active for the appropriate blind.
71	Motor 2 Prio automatic/manual	1 Bit (EIS 1)	
72	Motor 3 Prio automatic/manual	1 Bit (EIS 1)	
73	Motor 4 Prio automatic/manual	1 Bit (EIS 1)	
74	Motor 1 Reset priority	1 Bit (EIS 1)	If on one of these communication objects a telegram with the value "1" or "0" is received the appropriate priority for the appropriate blind is reset. Priority automatic functions or priority manual functions are then again actively switched. The active priority depends on which communication object is active and/or which priority has been selected in the ETS parameters.
75	Motor 2 Reset priority	1 Bit (EIS 1)	
76	Motor 3 Reset priority	1 Bit (EIS 1)	
77	Motor 4 Reset priority	1 Bit (EIS 1)	
78	Input 1: UP / DOWN	1 Bit (EIS 1)	A long pressing of the switch at the input A generates a telegram with the value "0" on this communication object. The venetian blind goes UP. A long pressing of the switch at the input B generates a telegram with the value "1" on this communication object. The venetian blind goes DOWN.

No.	Objekt name	Type	Description
79	Input 1: Step/Stop	1 Bit (EIS 1)	A short pressing of the switch at the input A generates a telegram with the value "0" on this communication object. The slat will tilt to reverse (open). If the venetian blind is in the fully moving process with a short pressing of the switch at the input A, a stop order is generated. A short pressing of the switch at the input B generates a telegram with the value "1" on this communication object. The slat will tilt to close. If the venetian blind is in a fully moving process with a short pressing of the switch at the input B a stop order is generated.
80	Input 1: A, Switch	1 Bit (EIS 1)	According to the parameter settings and the state at input 1, contact A, over this communication object a switching telegram with the value "1" or "0" is generated.
81	Input 1: B, Switch	1 Bit (EIS 1)	According to the parameter settings and the state at input 1, contact B, over this communication object a switching telegram with the value "1" or "0" is generated.
82	Input 1: A, 8-Bit value	1 Bit (EIS 6)	According to the parameter settings with a rising edge at the input 1, contact A, the configured value (0–255) is sent.
83	Input 1: B, 8-Bit value	1 Bit (EIS 6)	According to the parameter configurations with a rising edge at the input 1, contact B, the configured value (0–255) is sent.
84	Input 1: A/B, Dimming	1 Bit (EIS 2)	On/Off: According to the parameter settings of the input 1 contact A/B with a short actuation a telegram with the value "1" and/or "0" will be generated. Toggle/Toggle: According to the parameter settings of the input 1 contact A/B with a short actuation a telegram with the value "1" and/or "0" is generated.
85	Input 1: A/B, Dimming, Value	4 Bit (EIS 2)	Brighter/darker dimming: According to the parameter settings of the input 1 contact A with a long actuation it is dimmed brighter. According to the parameter settings of the input 1 contact B with a long actuation it is dimmed darker. Brighter/darker toggle: According to the parameter settings of the input 1 contact A with a long actuation it is dimmed 100 %. When releasing the appropriate switch at the input A a stop order is generated. The dimming action operated last is thus inverted. According to the parameter settings of the input 1 contact B with a long actuation it is dimmed 100 %. When releasing the appropriate switch at the input B a stop order is generated. The dimming action operated last is thus inverted.

No.	Objekt name	Type	Description
86	Input 2: UP / DOWN	1 Bit (EIS 7)	see description of object 69, C/D instead of A/B
87	Input 2: Step/Stop	1 Bit (EIS 7)	see description of object 70, C/D instead of A/B
88	Input 2: C, Switch	1 Bit (EIS 1)	see description of object 71, C instead of A
89	Input 2: D, Switch	1 Bit (EIS 1)	see description of object 72, D instead of B
90	Input 2: C, 8-Bit-value	1 Byte (EIS 6)	see description of object 73, C instead of A
91	Input 2: D, 8-Bit-value	1 Byte (EIS 6)	see description of object 74, D instead of B
92	Input 2: C/D, Dimming	1 Bit (EIS 2)	see description of object 75, C/D instead of A/B
93	Input 2: C/D, Dimming, value	4 Bit (EIS 2)	see description of object 76, C/D instead of A/B
94	Input 3: UP / DOWN	1 Bit (EIS 7)	see description of object 69, E/F instead of A/B
95	Input 3: Step/Stop	1 Bit (EIS 7)	see description of object 70, E/F instead of A/B
96	Input 3: E, Switch	1 Bit (EIS 1)	see description of object 71, E instead of A
97	Input 3: F, Switch	1 Bit (EIS 1)	see description of object 72, F instead of B
98	Input 3: E, 8-Bit value	1 Byte (EIS 6)	see description of object 73, E instead of A
99	Input 3: F, 8-Bit value	1 Byte (EIS 6)	see description of object 74, F instead of B
100	Input 3: E/F, Dimming	1 Bit (EIS 2)	see description of object 75, E/F instead of A/B
101	Input 3: E/F, Dimming, value	4 Bit (EIS 2)	see description of object 76, E/F instead of A/B
102	Input 4: UP / DOWN	1 Bit (EIS 7)	see description of object 69, G/H instead of A/B
103	Input 4: Step/Stop	1 Bit (EIS 7)	see description of object 70, G/H instead of A/B
104	Input 4: G, Switch	1 Bit (EIS 1)	see description of object 71, G instead of A
105	Input 4: H, Switch	1 Bit (EIS 1)	see description of object 72, H instead of B
106	Input 4: G, 8-Bit value	1 Byte (EIS 6)	see description of object 73, G instead of A
107	Input 4: H, 8-Bit value	1 Byte (EIS 6)	see description of object 74, H instead of B
108	Input 4: G/H, Dimming	1 Bit (EIS 2)	see description of object 75, G/H instead of A/B
109	Input 4: G/H, Dimming, value	4 Bit (EIS 2)	see description of object 76, G/H instead of A/B

The options of the individual parameters are described in each case. The default values are shown in italic. In the following illustrations of the different parameter cards a maximum of parameters is always presented.

Parameter card „General"
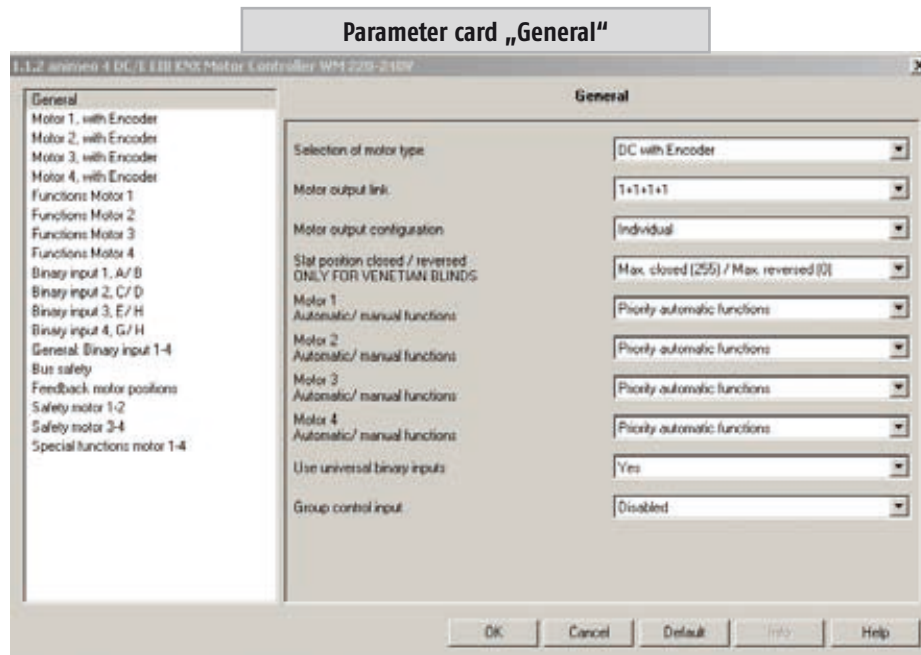
Selection of the motor type

Options:
- DC without encoder
- *DC with encoder*

Over the parameters it is defined which motors are to be connected to the motor outputs. DC motors without encoder have a two-wire connecting cable (white, gray). DC motors with encoder have a three-wire connecting cable (white, grey, purple).

DC motors without encoder: Somfy LV 25-B44 and B64, Somfy LW 25-B44 and B83, Somfy LT 28-B73, J101
DC motors with encoder: Somfy LW 25-E83

⚠ The selection of the motor type applies to all four motor outputs.

Connecting of the motor outputs

Options:
- *1+1+1+1*
- 2+1+1
- 2+2

Over this parameter, the motor outputs can be connected to each other device-internally. A connection is then necessary when for example, two motors are used to control a screen. This means that two motors are integrated into one Din rail and move one motor.
Independent of the type of connection, 2+1+1 or 2+2, all motor cables must be connected to the motor outputs. To control the motor outputs, only the object and parameter of one motor must be parametered. For example when connecting 2+1+1 only the object for motor 1.
.

Motor output configuration

Options: • *Combined*
• Individual

With these parameters it can be specified whether the configurations of the motor outputs are to be done "Combined" or "Individual". If the parameter "Combined" is selected for the basic settings of all four motor outputs, only one parameter card will be visible (Motor 1-4).

⚠ This setting ("Combined") is recommendable for projects where the configurations of the motor outputs are equal.

If the parameter "Individual" is selected for the basic settings of the motor outputs four individual cards will be visible (Motor 1, Motor 2,...).

Slat position closed/reversed
ONLY FOR VENETIAN BLINDS

Options: • Max. closed (255) / Max. reversed (0)
• Max. closed (0) / Max. reversed (255)

● **Max. closed (255) / Max. reversed (0)**
If a value of „255" is received by the appropriate object (12-15) the slat will be maximal closed.
If a value of „0" is received by the appropriate object (12-15) the slat will be maximal reversed (opened).
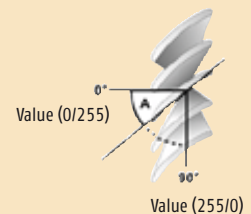
● **Max. closed (0) / Max. reversed (255)**
If a value of „0" is received by the appropriate object (12-15) the slat will be maximal closed.
If a value of „255" is received by the appropriate object (12-15) the slat will be maximal reversed (opened).

Value (0/255)

Value (255/0)

Motor 1...4
Automatic/Manuell Functions

Options: • *None*
• Priority automatic functions
• Priority manual functions

● ***None:***
The moving commands are processed in detailed order.

● **Priority automatic function:**
If an automatic command (1 Byte move command) takes place <u>before</u> a manual command (1 Bit move command), all manual commands are disabled. Also the objects to move to the intermediate positions 1 and 2 (objects 20-29) are disabled. A manual command is generated also over the local switch inputs or the radio hand transmitter. A tilting command (1 Bit) can however, always be executed within the configured tilting time. A reset of the priority automatic function is effected if on the appropriate objects "Reset priority" (74-77) a telegram with the value "1" or "0" is received. Switching between priority manual functions (value "0") and priority automatic functions (value "1") is made by the appropriate objects (70-73). Following adjust-over, the appropriate priority is active again in the reset state. This means for priority automatic functions that the manual commands become again disabled only through the next automatic command.

● **Priority manual function:**
If a manual command (1 Bit) takes place <u>before</u> an automatic command (1 Byte), all automatic commands are disabled. A manual command is generated also over the local switch inputs or the radio hand transmitter. A reset of the priority manual functions is effected if a telegram with the value "1" or "0" is received on the appropriate object "Reset priority" (74-77). Switching between priority manual functions (value "0 ") and priority automatic functions (value "1") is made by the appropriate objects (70-73). Following adjust-over, the appropriate priority is active again in the reset state. This means for functions priority manual that the automatic commands become again disabled only through the next manual command.

⚠ See explanations in chapter 2.

- ⚠ Over the priority manual functions the user has the possibility to disable the automatic functions. For example, over a timer the user comfort can be defined. At 8:00 o'clock over the appropriate object (70-73) the priority manual functions are activated and the user can move the end product to a desired position with the next manual command. At 5:00 o'clock the priority automatic function is again activated. Over the appropriate object (70-73) it is always possible to switch between priority manual functions and priority automatic functions.

To use timer functions it is ideal to use the central unit AS 315 N (Ref. 1860069).

Universal binary inputs use

| Options: | • *No* |
| | • Yes |

With the parameter "Yes" four further parameter cards (binary input 1...4) are opened. The local switch inputs can be linked now over the appropriate objects (78-109). A conventional switch can be used thus for most diverse functions. For example switching, venetian blind function, dimming or sending values.

Group control input

| Options: | • *disabled* |
| | • enabled |

Over this parameter it can be specified whether the group control input is disabled or enabled. Over this input all four motors are moved at the same time. Independently of the parameter configurations the security configurations (objects 31-40) have higher priority. If one of the security objects is active the group control input is disabled.

⚠ With bus voltage failure this input is enabled even if it is disabled over the parameter configurations and can be used for an emergency operation. With bus power return this input is disabled or enabled according to the parameter configurations.

Four individual parameter cards (Motor 1 ... 4) are visible when on the card "General" for the basic setting of the motor to "individual", is parametered. An individual card (Motor 1 ... 4) is visible when on the card "General" for the basic setting of the motor to "Combined", is parametered.

⚠ The basic setting of the motors are different independent of the selection of the motor type (DC without encoder or DC with encoder on the card "General").

The following parameter descriptions concern the selection of the motor type "DC with encoder":

Type of end product/
User ergonomics

> Options: • Venetian blind with EU ergonomics
>   • *Venetian blind with US ergonomics*
>   • Roller blind

● **Venetian blind with EU ergonomics**
  With this parameter it is specified that the venetian blind is in EU ergonomics over the local switch inputs or over Somfy RTS radio hand transmitter.
  If the local switch inputs are used as universal binary inputs, the control ergonomics is defined over the appropriate parameters (short/long depressing the button).

  ⚠ See explanation EU, US, screen switch ergonomics in chapter 2.

● ***Venetian blind with US ergonomics***
  Over this parameter it is specified that the venetian blind is in US ergonomics over the local switch inputs or over Somfy RTS radio hand transmitter.
  If the local switch inputs are used as universal binary inputs, the control ergonomics is defined over the appropriate parameters (short/long depressing of the button).

  ⚠ See explanation EU, US, screen switch ergonomics in chapter 2.

● **Roller blind**
  Over this parameter it is specified that the appropriate blind is directed for move/stop commands, if the control is made by means of the local switch inputs or by Somfy RTS radio hand transmitter.
  If the local switch inputs are used as universal binary inputs, the control ergonomics is defined over the appropriate parameters (short/long depressing of the button).

  ⚠ See explanation EU, US, screen switch ergonomics in chapter 2.

Upper end limit in mm (0–5000)

| Options: | • *0* |
| | • 0–5000 millimetres |

The parametered lengths in millimetres defines the upper end position of the blinds.

⚠ Explanation; see chapter 2, blinds position for DC motors with encoder (LW 25 E83)

Lower end limit in mm (0–5000)

| Options: | • *350* |
| | • 0–5000 millimetres |

The parametered lengths in millimetres defines the bottom end position of the blinds.

⚠ Explanation; see chapter 2, blinds positions for DC motors with encoder (LW 25 E83)

**Speed UP
in RPM (25–56)**

| Options: | • 35 |
| | • *25–56* |

The parametered speed defines the speed for the move in the upper end position.

**Speed DOWN
in -RPM (25–56)**

| Options: | • *35* |
| | • 25–56 |

The parametered speed defines the speed for the move in the bottom end position.

Impulses for tilting

| Options: | • *110* |
| | • 0–255 |

The parametered impulses here define the maximum slat turn. This parameter is only visible when the type of product/user ergonomics, either venetian blinds with EU ergonomics or venetian blinds with US ergonomics, is selected.

⚠ Setting recommendation: with a slats width of 25 mm = approx. 110 impulses for the turn.
With a slats width of 16 mm = approx. 90 impulses for the turn.

Step impulses (3–255)

| Options: | • *10* |
| | • 3–255 |

The parametered impulses define the impulses for a turning step. This parameter is only visible when the type of product/user ergonomics, either venetian blinds with EU ergonomics or venetian blinds with US ergonomics, is selected.
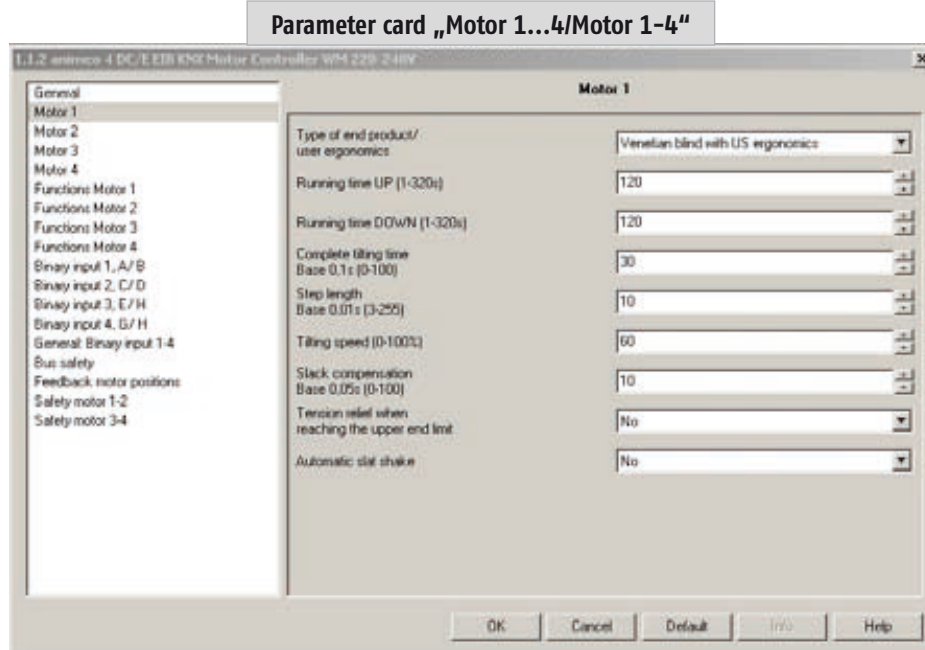
Speed tilting in RPM (5–56)

| Options: | • *15* |
| | • 5–56 |

The parametered speed here defines the slats turning speed. This parameter is only visible when the type of product/user ergonomics, either venetian blinds with EU ergonomics or venetian blinds with US ergonomics, is selected.

Impulses for slack compensation
Basis 0,05 s (0-255)

Options:
- *20*
- 0-255

The parametered impulses here define the impulses that shall be added for the turn to balance out mechanical tolerances. This parameter is only visible when the type of product/user ergonomics, either venetian blinds with EU ergonomics or venetian blinds with US ergonomics, is selected.

Parameter card „Motor 1...4/Motor 1-4"

Four individual parameter cards (Motor 1 ... 4) are visible when on the card "General" for the basic setting of the motor to "Individual", is parametered. An individual card (Motor 1 ... 4) is visible when on the card "General" for the basic setting of the motor to "Combined", is parametered.

⚠ The basic setting of the motors are different independent of the selection of the motor type
(DC without encoder or DC with encoder on the card "General".

The following parameter descriptions concern the selection of the motor type „DC without encoder":

Type of end product/
user ergonomics

Options:
- Venetian blind with EU ergonomics
- *Venetian blind with US ergonomics*
- Roller blind

- **Venetian blind with EU ergonomics:**
  With this parameter it is specified that the venetian blind is in EU ergonomics over the local switch inputs or over Somfy RTS radio hand transmitter.If the local switch inputs are used as universal binary inputs, the control ergonomics is defined over the appropriate parameters (short/long depressing the button).

  ⚠ See explanation EU, US, screen switch ergonomics in chapter 2.

- ***Venetian blind with US ergonomics***
  Over this parameter it is specified that the venetian blind is in US ergonomics over the local switch inputs or over Somfy RTS radio hand transmitter.If the local switch inputs are used as universal binary inputs, the control ergonomics is defined over the appropriate parameters (short/long depressing of the button).

  ⚠ See explanation EU, US, screen switch ergonomics in chapter 2.

- **Roller blind**
  Over this parameter it is specified that the appropriate blind is directed for move/stop commands, if the control is made by means of the local switch inputs or by Somfy RTS radio hand transmitter.
  If the local switch inputs are used as universal binary inputs, the control ergonomics is defined over the appropriate parameters (short/long depressing of the button).

  ⚠ See explanation EU, US, screen switch ergonomics in chapter 2.

Running time UP (1 – 320 s)

Options:	• *120*
	• 1 – 320 seconds

The configured time here is the maximum running time from the lower end position to the upper end position and/or the maximum running time that one window motor needs in order to close the appropriate window. An overlapping time of 5 seconds is always added except in case of positioning telegrams (objects 8–11). However, if a telegram with the value "0" is received by the appropriate object (objects 8–11) an overlapping time of 5 seconds is added.

Running time DOWN (1 – 320 s)

Options:	• *120*
	• 1 – 320 seconds

The configured time here is the maximum running time from the upper end position into the lower end position, and/or the maximum running time a particular window motor needs, in order to open the appropriate window. An overlapping time of 5 seconds is always added except in the case of positioning telegrams (objects 8–11). However, if a telegram with the value "255" is received by the appropriate object (objects 8–11) an overlapping time of 5 seconds is added.

Complete tilting time
Basis 0,01 s (0 – 100)

Options:	• *30*
	• 0 – 100

The configured time here defines the complete tilting time of the slat. This parameter is visible only if as type of end product either venetian blind with EU ergonomics or venetian blind with US ergonomics were selected.

Step length
Basis 0,01 s (3 – 255)

Options:	• *10*
	• 3 – 255

The confiured time here defines the time for a tilting step. This parameter is visible only if as type of end product either venetian blind with EU ergonomics or venetian blind with US ergonomics were selected.

Turning speed (0 – 100 %)

Options:	• 0 – 100
	• *60*

This parameter defines the speed the venetian blinds slats should turn. Here, by selecting the value "0" the slowest turning speed is defined and with the selection "100", the fastest turning speed.

Slack compensation
0,05 s (0 – 100)

Options:	• *10*
	• 0 – 100

The time for slack compensation is active as soon as a higher value than "0" is registered. The time configured here defines the time to add to the complete tilting time in order to adjust mechanical tolerances. This time is always added with the first UP (reverse/open) command of the slat if as type of end product either venetian blind with EU ergonomics or venetian blind with US ergonomics were selected.

**Tension relief when
reaching the upper end limit**

Options:
- No
- *Yes*

⚠ With this parameter it is possible to extend the life of the end product (venetian blinds).

By selecting "Yes" the venetian blinds are relieved when reaching the upper end position. This means shortly after reaching, a minimal DOWN command is generated. This results in the venetian blinds not being under strain whilst standing in the upper end position. By relieving the pull cord, it is thus not unnecessarily stressed and life expectancy is extended.

Automatic slat shake

Options:
- *No*
- Yes

When the parameter "Yes" is selected, an automatic slat shake is carried out when reaching the bottom end limit. Here, the slats are one time completely opened and closed.

⚠ Through this function it is possible also to set up the slats automatically. It can happen that in a DOWN command some of the slats whilst turning get entangled and therefore do not stand in the mechanical default position. Through completely opening and closing the slats, the entangled slats are brought into the mechanical default position.

Parameter card „Functions Motor 1...4 / Functions Motor 1-4"
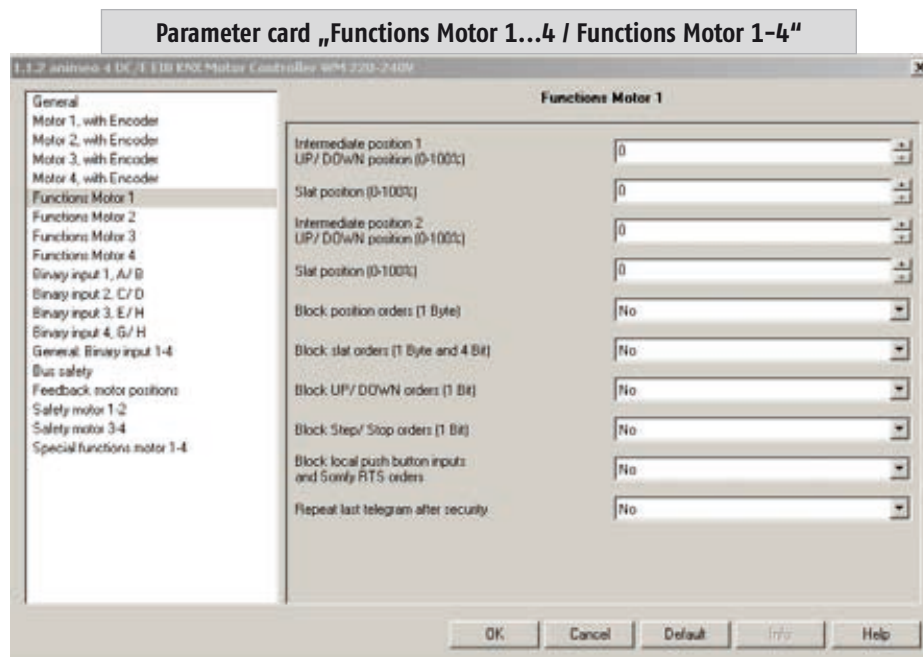
Four individual parameter cards (Functions Motor 1...4) become visible if on the parameter card "General" the basic adjustment of the motors is set to "Individual". Only one parameter card (Functions Motor 1-4) becomes visible, if on the parameter card "General" the basic adjustment of the motors is set to "Combined".

⚠ The parameters which become visible on this parameter card are independent of the selection of the motor type (DC without Encoder or DC with Encoder) on the parameter card "General". The parameters for the setting of functions are identical for both motor types.
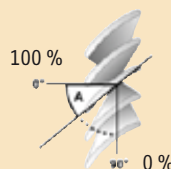
Intermediate position 1
UP / DOWN position (0 – 100 %)

Options:	• *0*
	• 0 – 100

With this parameter the intermediate position 1 "UP / DOWN" is defined. The adusted value in % refers to the configured running time of the appropriate venetian blind of the parameter cards Motor 1...4/Motor 1-4.

Slat position (0 – 100 %)

Options:	• *0*
	• 0 – 100

With this parameter the slat position of the intermediate position 1 is defined. The adjusted value in % refers to the configured complete tilting time of the appropriate venetian blind of the parameter cards Motor 1...4/Motor 1-4.

⚠ Intermediate position 1 can be stored also over the conventional local switch or individually by radio hand transmitters per motor output. <u>The position learned last is valid.</u>
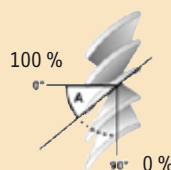
Intermediate position 2
UP / DOWN Position (0 – 100 %)

Options:	• *0*
	• 0 – 100

With this parameter the intermediate position 2 "UP / DOWN" is defined. The adjusted value in % refers to the configured running time of the appropriate blinds of the parameter cards Motor 1...4/Motor 1-4.

Slat position (0 – 100 %)

Options:	• *0*
	• 0 – 100

With this parameter the slat position of the intermediate position 3 is defined. The adjusted value in % refers to the configured complete tilting time of the appropriate venetian blind of the parameter cards Motor 1...4/Motor 1-4.

Block UP / DOWN orders (1 Byte)

Options:	• *No*
	• Yes

Over this parameter the move orders (Byte) can be blocked by object (65-69). If the appropriate object receives a telegram with the value "1" during a blind is in full moving process, this action will first be executed completely . Only then, further move commands (Byte) are blocked. If the appropriate object receives a telegram with the value "0" the move orders (Byte) are again enabled.

Block slat orders (1 Byte und 4 Bit)

Options:	• *No*
	• Yes

Over this parameter the slat tilting orders (1 Byte und 4 Bit) can be blocked by object (65-69). If the appropriate object receives a telegram with the value "1" when the slats of a venetian blind are in full moving process, this action will first be executed completeley. Only then, further tilting orders (1 Byte und 4 Bit) are closed. If the appropriate object receives a telegram with the value „0" the slat tilting orders (1 Byte und 4 Bit) are enabled.

Block UP / DOWN orders (1 Bit)

Options:
- *No*
- Yes

Over this parameter the move orders (1 Bit) can be blocked by object (56-60). If the appropriate object receives a telegram with the value "1" when a blind is in full moving process, this action will first be executed completely. Only then, further move orders (1 Bit) are blocked. If the appropriate object receives a telegram with the value "0", move orders (1 Bit) are again enabled.

Block step/stop orders (1 Bit)

Options:
- *No*
- Yes

Over this parameter the step/stop and/or tilting order (1 Bit) can be blocked by object (56-60). If the appropriate object receives a telegram with the value "1" when the slat of a venetian blind is tilting this action will first be executed completely. Only then, further tilting orders (1 Bit) are blocked. If the appropriate object receives a telegram with the value "0", step/stop orders (1 Bit) are again enabled.

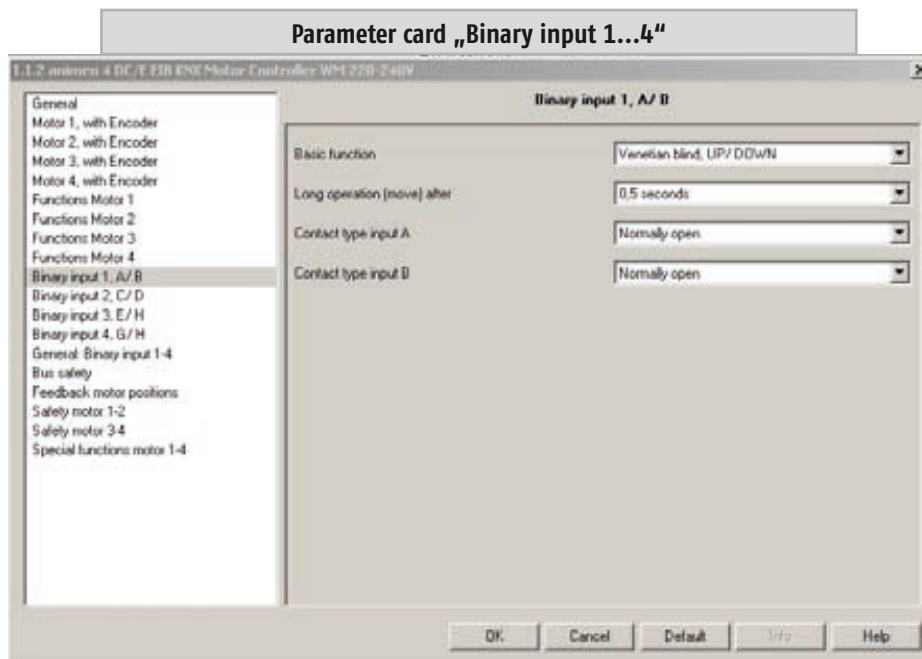**Block local push button inputs and Somfy RTS orders**

Options:
- *No*
- Yes

Over this parameter the local push button inputs and the Somfy RTS radio orders can be blocked by object (56-60). If the appropriate object receives a telegram with the value "1" when an end product is in full moving process, this action will first be executed completely. Only then, further commands over the local push button inputs and the Somfy RTS radio will be blocked. If the appropriate object receives a telegram with the value "0" the local push button inputs and the Somfy RTS radio orders are again enabled.

Repeat last telegram after security

Options:
- *No*
- Yes

If this parameter is set on "Yes" the last move command after security is repeated. This means, the according blind will move to the position at which it was previously before on one of the security objects, low or high security, a telegram with the value "1" was received.

Parameter card „Binary input 1...4"

```
1.1.2 animeo 4 DC/E EIB KNX Motor Controller WM 220-240V                    [x]

General                                    Binary input 1, A/B
Motor 1, with Encoder
Motor 2, with Encoder
Motor 3, with Encoder        Basic function              Venetian blind, UP/ DOWN     [v]
Motor 4, with Encoder
Functions Motor 1            Long operation (move) after 0,5 seconds                   [v]
Functions Motor 2
Functions Motor 3           Contact type input A         Normally open                [v]
Functions Motor 4
Binary input 1, A/ B        Contact type input B         Normally open                [v]
Binary input 2, C/ D
Binary input 3, E/ H
Binary input 4, G/ H
General: Binary input 1-4
Bus safety
Feedback motor positions
Safety motor 1-2
Safety motor 3-4
Special functions motor 1-4

                                        OK    Cancel   Default   Info    Help
```

General information

For each binary input four different basic functions are available:

Options:
- *Venetian blind UP / DOWN*
- Switch/dry contact
- 8-Bit value (rising edge)
- Dimming

The individual functions and parameters depend on the selection of the basic function and are now described. The four different possibilities are described using screenshots of the binary input 1, contact A/B and are identical for the binary inputs 2-4, contacts C/D, E/F and G/H. The default setting of the basic function for the parameter cards binary input 1...4 is venetian blind, UP / DOWN.

⚠ When the basic function "Venetian blind, UP / DOWN" is selected please be certain about which contact controls the UP order and which contact controls the DOWN order. The same attention is necessary when the basic function "Dimming" is selected. Please be certain about which contact controls dimming brighter and which contact controls dimming darker.

Basis function

Options:
- *Venetian blind UP / DOWN*
- Switch/dry contact
- 8-Bit value (rising edge)
- Dimming

Long operating (move) after

Options:
- *0,5 seconds*
- 0,3....5,0 seconds

This parameter defines the operating time of the appropriate switch, which differentiates between sending a short-term telegram (step/stop) and a long-term telegram (UP / DOWN motor). If the time is, for example, set to 0,5 seconds, only with a duration of application which is generated longer than 0,5 seconds, a long-term telegram will be executed. With duration of an application which is smaller than 0,5 seconds a short-term telegram is generated.
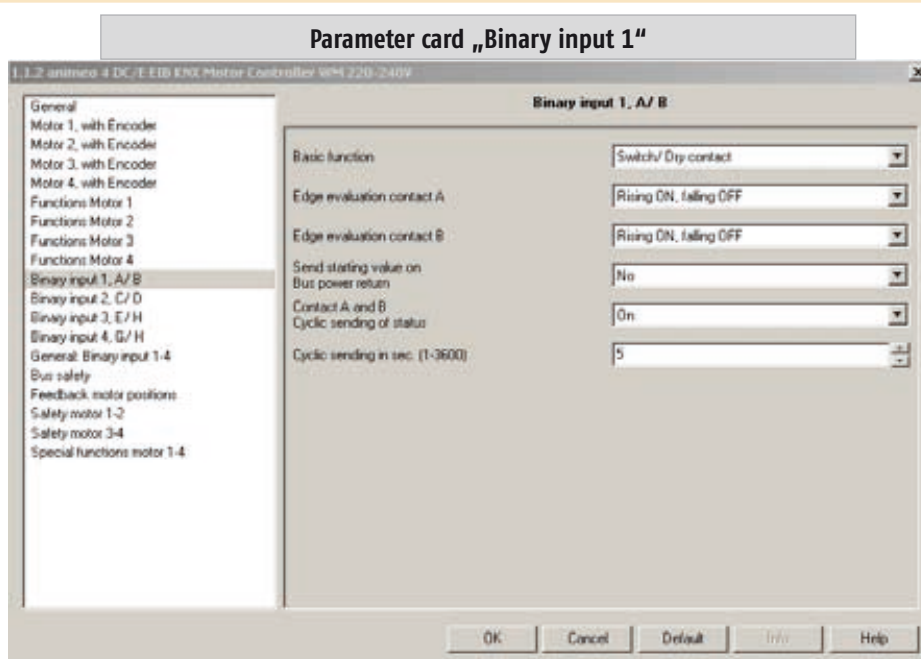
Contact type input A

Options: • *Normally closed*
• Normally open

Specified over this parameter is the contact type at the local input A. Normally open contact: The contact at the local input is not operated open and operated closed. Normally closed contact: The contact at the local input is operated opened and not operated closed.

Contact type input B

Options: • *Normally closed*
• Normally open

Specified over this parameter is the contact type at the local input B. Normally open contact: The contact at the local input is not operated open and operated closed. Normally closed contact: The contact at the local input is operated opened and not operated closed.

Parameter card „Binary input 1"

Basis function

Options: • *Venetian blind UP / DOWN*
• Switch/dry contact
• 8-Bit value (rising edge)
• Dimming

Edge evaluation contact A

Options: • *Rising ON, falling OFF*
• Rising OFF, falling ON
• Rising ON
• Falling ON
• Rising OFF
• Falling OFF
• Rising toggle
• Falling toggle
• Rising toggle, falling toggle
• No evaluation

On („1")   Off („0")   Toggle („1/0")

Depending on which edge evaluation was selected the appropriate object value "0" or "1" will be generated.

- ***Rising ON, falling OFF***

If a rising edge at the local input appears, the object value "OFF" is produced. If a falling edge at the local input appears, the object value "ON" is produced. The duration of the manipulation is not evaluated.

- **Rising OFF, falling ON**

If a rising edge at the local input appears, the object value "ON" is produced . If a falling edge at the local input appears, this is not evaluated. The duration of the manipulation is not evaluated.

- **Rising ON**

If a falling edge at the local input appears, the object value "ON" is produced. If a rising edge at the local input appears, this is not evaluated. The duration of the manipulation is not evaluated.

- **Falling ON**

If a falling edge at the local input appears, the object value "ON" is produced. If a rising edge at the local input appears, this is not evaluated. The duration of the manipulation is not evaluated.

- **Rising OFF**

If a rising edge at the local input appears, the object value "OFF" is produced. If a falling edge at the local input appears, this is not evaluated. The duration of the manipulation is not evaluated.

- **Falling OFF**

If a falling edge at the local input appears, the object value "OFF" is produced. If a rising edge at the local input appears, this is not evaluated. The duration of the manipulation is not evaluated.

- **Rising toggle**

If a rising edge at the local input appears, the object value is inverted. If a falling edge at the local input appears, this is not evaluated. The duration of the manipulation is not evaluated.

- **Falling toggle**

If a falling edge at the local input appears, the object value is inverted. If a rising edge at the local input appears, this is not evaluated. The duration of the manipulation is not evaluated.

- **Rising toggle, fallling toggle**

If a rising or falling edge at the local input appears, the object value is inverted. The duration of the manipulation is not evaluated.

- **No evaluation**

If a rising or falling edge at the local input appears, this is not evaluated.

Edge contakt B

Options:	• *Rising ON, falling OFF* • Rising OFF, falling ON • Rising ON • Falling ON • Rising OFF • Falling OFF • Rising toggle • Falling toggle • Rising toggle, falling toggle • No evaluation	Description see "Edge evaluation contact A"

Send starting value on bus power return

Options:	• Yes • *No*

If this parameter is set to "Yes" with bus power return the current status of the input is then sent. If this parameter is set to "No" the current adjusted status of the input is not sent.

Contact A und B
Cycling sending of status

Options:	• *No cyclic sending*
	• On
	• Off
	• On and off

Over this parameter it is specified whether the appropriate switching value of the communication object is to be sent cyclically.

● **No cyclic sending**
The switching value of the communication object is not cyclically sent.

● **On**
Only if the object value is "1" it is cyclically sent. If the object value changes due to a change of edge status at the input or due to a receipt of a Bus telegram from "0" to "1", the cyclic sending is stopped.

● **Off**
Only if the object value is "0" it is cyclically sent. If the object value changes due to a change of edge status at the input or due to a receipt of a Bus telegram from "1" to "0", the cyclic sending is stopped.

● **On and Off**
If the object value is "1" or "0" then the appropriate one is cyclically sent. If the object value changes due to a change of edge status at the input or due to a receipt, a bus telegram of the new value is sent.

Cyclic sending in seconds (1 – 3600)

Options:	• *5*
	• 1 – 3600

Over this parameter the time intervals are fixed in which the appropriate object value is sent cyclically.

⚠ With active cyclic sending it is to be made certain that the time of the cyclic time received is greater approx. 1/4 than the configured cyclic time of the sender.
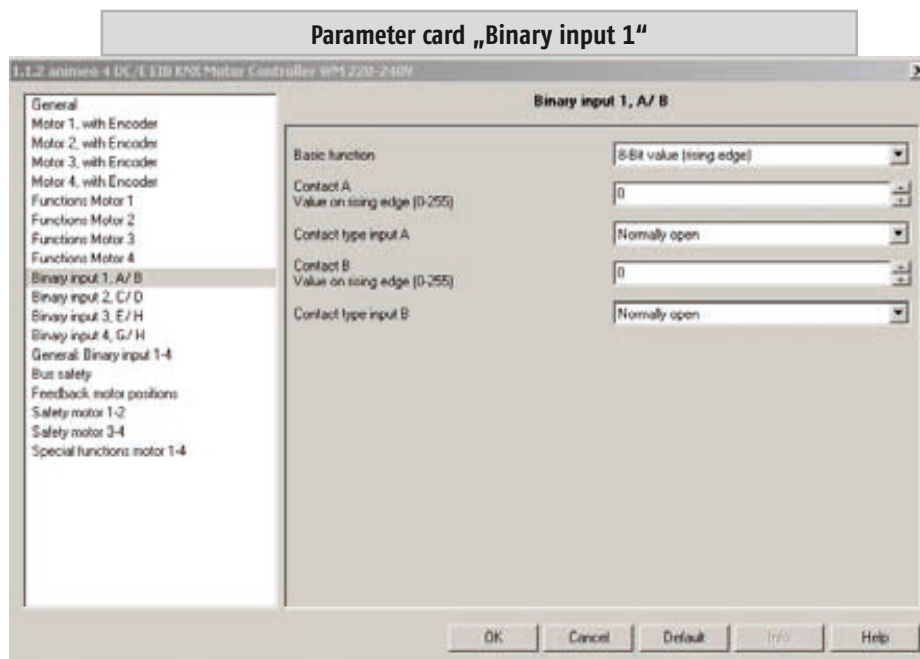
Parameter card „Binary input 1"

Basis function

Options:
- *Venetian blind UP / DOWN*
- Switch/dry contact
- <u>8-Bit value (rising edge)</u>
- Dimming

Contact A
Value on rising edge (0 – 255)

Options:
- *0*
- 0 – 255

Over this parameter the value is adjusted which is sent with receipt of a rising edge at the local input 1 contact A.

Contact type input A

Options:
- *Normally closed*
- Normally open

Specified over this parameter is the contact type at the local input A. Normally open contact: The contact at the local input is not operated open and operated closed. Normally closed contact: The contact at the local input is operated opened and not operated closed.
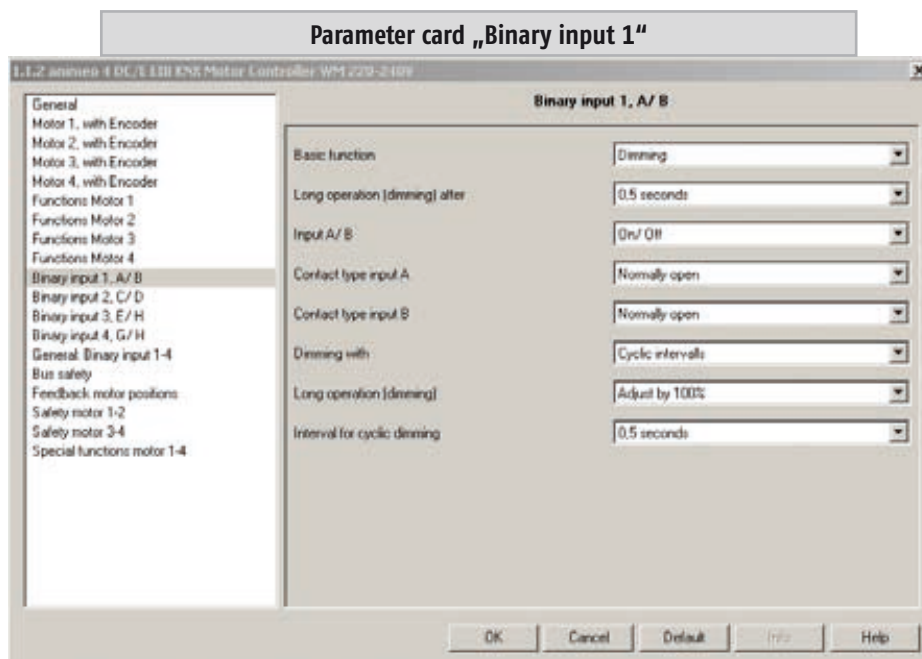
Contact B
Value on rising edge (0 – 255)

Options:
- *0*
- 0 – 255

Over this parameter the value is adjusted which is sent with receipt of a rising edge at the local input 1 contact B.

Contact type input B

Options:
- *Normally closed*
- Normally open

Specified over this parameter is the contact type at the local input B. Normally open contact: The contact at the local input is not operated open and operated closed. Normally closed contact: The contact at the local input is operated opened and not operated closed.

Parameter card „Binary input 1"

Basis function

Options:
- *Venetian blind UP / DOWN*
- Switch/dry contact
- 8-Bit value (rising edge)
- Dimming

Long operation (dimming) after

Options:
- *0,5 seconds*
- 0,3 – 5,0 seconds

This parameter defines the operating time of the appropriate switch, which differentiates between sending a switching telegram and a dimming telegram. If the time is, for example, set at 0,5 seconds, only with duration of an application which is longer than 0,5 seconds a dimming telegram is generated. With duration of application which is smaller than 0,5 seconds, a switching telegram is generated.

Input A/B

Options:
- *On/Off*
- Toggle/toggle

On („1") Off („0") Toggle („1/0")

This parameter defines the value which is sent with short manipulation of the appropriate input.

- ● *On/Off*
With a short manipulation of the switch at the input A an "Off" telegram is generated. With a short manipulation of the switch at the input B an "On" telegram is generated. These functions can be inverted by changing the wiring.

- ● **Toggle/toggle**
With every short manipulation of the switch at the input A or B, toggling occurs. This means the value that is in the appropriate switching object is inverted and then sent.

Contact type input A

Options:
- *Normally closed*
- Normally open

Specified over this parameter is the contact type at the local input A. Normally open contact: The contact at the local input is not operated open and operated closed. Normally closed contact: The contact at the local input is operated opened and not operated closed.

Contact type input B

Options:
- *Normally closed*
- Normally open

Specified over this parameter is the contact type at the local input B. Normally open contact: The contact at the local input is not operated open and operated closed. Normally closed contact: The contact at the local input is operated opened and not operated closed.

Dimming with

Options:
- *Stop telegram*
- Cyclic intervals

● **Stop telegram**
With a short manipulation of the switch at the local input 1 contact A or B a telegram is generated over the appropriate object (1 Bit). With a long manipulation of the switch at the local input A brightness is dimmed further over the appropriate object (4 Bit). With a long manipulation of the switch at the local input B over the appropriate object (4 Bit) more darkness is dimmed. When releasing the appropriate switch at the local input 1 contact A or B, a stop command is generated.

● **Cyclic intervals**
With a short manipulation of the switch at the local input 1 contact A or B over the object (1 Bit) an "On" or "Off" telegram is generated. With a long manipulation of the switch at the local input 1 contact A over the object (4 Bit) more brightly is being dimmed as long as the switch is depressed. The dimming step width and the time for more brightness dimming, results out of the parameters "Long operation (dimming)" and "Interval for cyclic dimming". When the switch is released the cyclic sending is stopped.
With a long manipulation of the switch at the local input 1 contact B over the appropriate object (4 Bit) more darkness is dimmed as long as the switch is depressed. The dimming step width and the time for more darkness dimming results out of the parameters "Long operation (dimming)" and "Interval for cyclic dimming". When the switch is released the cyclic sending is stopped.

Long operation (dimming)

Options:
- *Adjust by 100 %*
- Adjust by 1/2
- Adjust by 1/4
- Adjust by 1/8
- Adjust by 1/16
- Adjust by 1/32
- Adjust by 1/64

This parameter defines the dimming step width of the telegrams after a long manipulation of the switch at the according input.

⚠ If "Dimming with cyclic sending" is selected in the parameters, it is to made certain, that the dimming step width is configured together with the parameter "Interval for cyclic dimming" depending on the dimming time of the according actuator.

Interval for cycling dimming

Options:
- *0,5 seconds*
- 0,5 – 7,0 seconds

This parameter defines the length of time of an interval for cyclic sending. Example: the dimming time (0 – 100%) in the according switch/ dimming actuator is set to 4 seconds, and "Adjust by 1/8" with an "Interval for cyclic dimming" 0,5 seconds is selected. The result is that a dimming command brighter or darker is sent every 0,5 seconds. With a configuration of 8 x 12,5 % and 8 x 0,5 seconds, this matches the dimming speed of the switch/dimming actuator.

Parameter card „General: Binary input 1…4"
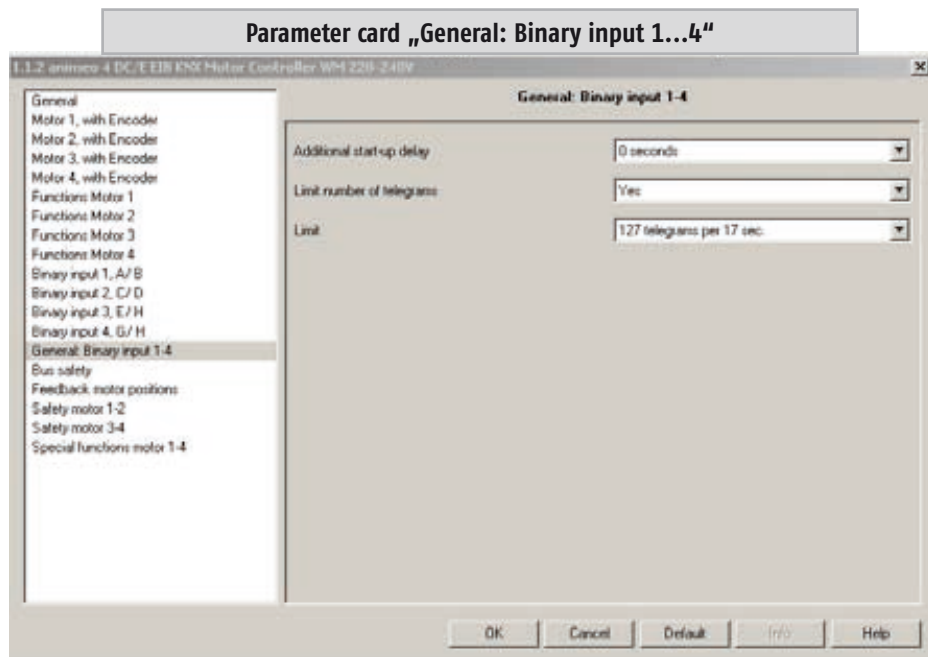
These parameters concern binary inputs 1…4.

Start-up delay

Options:
- *0 seconds*
- 0 – 21 seconds

This parameter defines the time after bus power return which runs off before the first telegram can be sent.
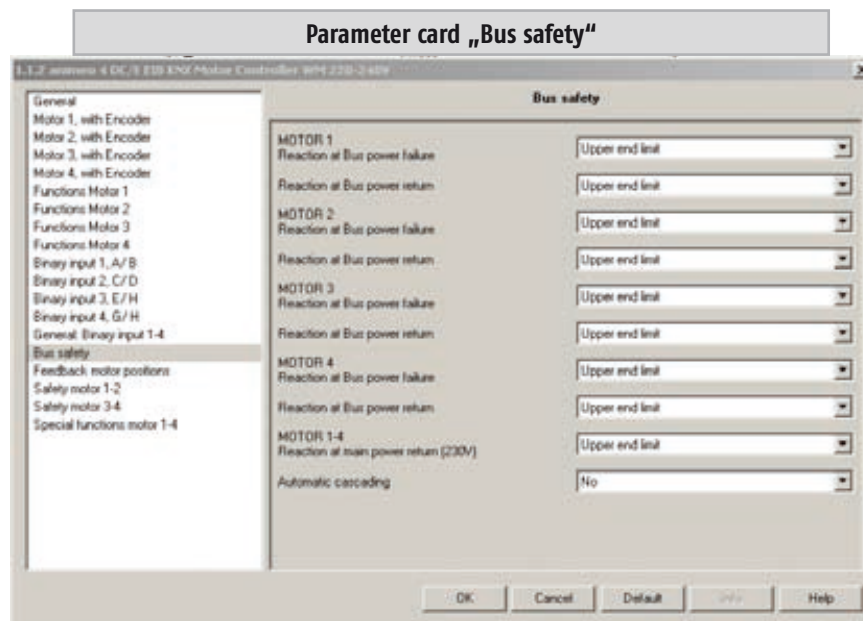
Limit number of telegrams

Options:
- *No*
- Yes

If this parameter is set on "Yes" it opens the parameter "Limit" for adjusting the limit of telegrams.

Limit

Options:
- 30 telegrams per 17 sec.
- 60 telegrams per 17 sec.
- 100 telegrams per 17 sec.
- *127 telegrams per 17 sec.*

This parameter defines the number of telegrams to be sent within 17 seconds.

Parameter card „Bus safety"

On this parameter card the reaction can be defined for bus power failure and bus power return of each individual motor output.

MOTOR 1...4
Reaction at bus power failure

Options:	• *Upper end position*
	• Lower end position
	• Ignore
	• Intermediate position 1
	• Intermediate position 2

This parameter defines the position which will be generated at bus power failure.

MOTOR 1...4
Reaction at bus power failure

Options:	• *Upper end position*
	• Lower end position
	• Ignore
	• Intermediate position 1
	• Intermediate position 2

This parameter defines the position which is generated at bus power return.

MOTOR 1...4
Reaction at main power return (230 V)

Options:	• *Upper end position*
	• Lower end position
	• Ignore

This parameter defines the position which is generated at main power return (230 V).

Automatic cascading

| Options: | • *No* |
| | • Yes |

If the parameter "Yes" is selected, each motor output with 1 second of delay will move to the appropriate position. This deceleration time arises considered in the case of "Reaction at Bus power return" and "Reaction at main power return (230V)". The position selected in the parameters for the according motor output will be moved to.

⚠ Advantage: The current peaks can be lowered thus in larger projects.

Paremeter card „Feedback motor position"
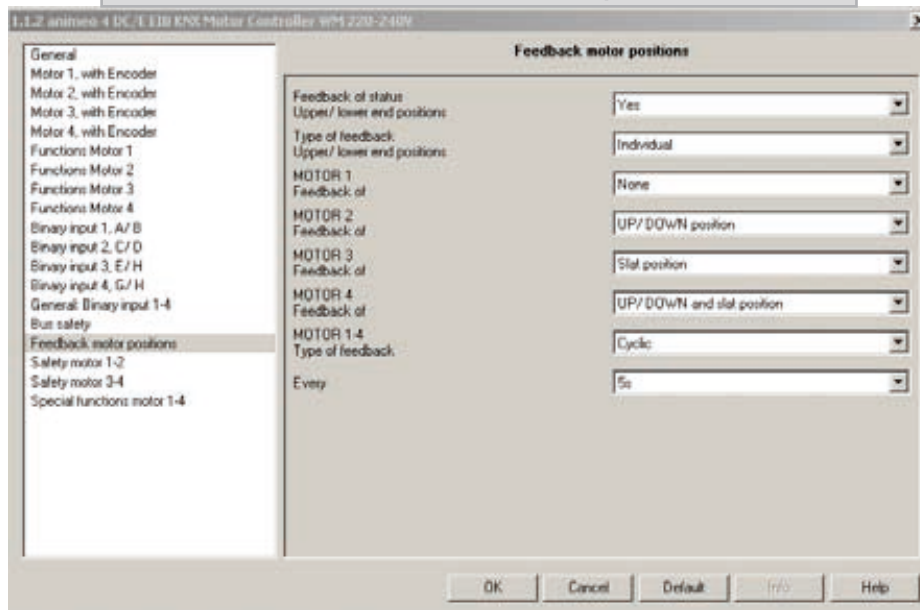
On this parameter card the parameters can be selected in order to announce the status positions of the individual blinds on the bus. The status positions generated thus are based on the configured running and tilting times of the parameter cards "Motor 1...4" or" On this parameter card the parameters can be selected in order to announce the status positions of the individual blinds on the bus. The status positions generated thus are based on the configured running and tilting times of the parameter cards "Motor 1...4" or" Motor 1-4".

Feedback of status
Upper/lower end positions

| Options: | • *No* |
| | • Yes |

This parameter opens the parameter "Type of feedback" upper/lower end positions".

Type of feedback

| Options: | • *Combined when all are UP / DOWN* |
| | • Individual |

● **Combined when all are UP / DOWN**
If this parameter is selected, the appropriate end position, UP or DOWN, is sent only to the bus when all four blinds have reached the upper end limit (object 59), and respectively when all four end products have reached the lower end position (object 64).
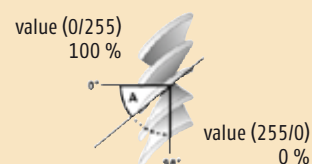
● **Individual**
If this parameter is selected, the appropriate end position, UP or DOWN, is sent to the bus individually for each blind. Two objects are available per motor output (objects 55-58 and 60-63).

MOTOR 1...4
Feedback for

Options:	• UP / DOWN positions
	• Slat position
	• UP / DOWN and slat position
	• *None*

value (0/255)
100 %

value (255/0)
0 %

● **UP / DOWN position**
Over this parameter the position UP / DOWN is sent to the bus for the appropriate motor, depending on the parameter "Motor 1-4 type of feedback ". "0 "= UP/ "255 "= DOWN.

● **Slat position**
Over this parameter the position of the slat is sent to the bus for the appropriate motor, depending on the parameter "Motor 1–4 type of feedback ". "0/255 "= slat opened, "255/0 "= slat closed.
The value for the slat position which is sent depends on the parameter selection on the parameter card "General, slat position closed/reversed ONLY FOR VENETIAN BLINDS".

● **UP / DOWN and slat postion**
Over this parameter the position UP / DOWN and the position of the slat is sent to the bus for the appropriate motor, depending on the parameter "Motor 1–4 type of feedback ". "0/255 "= slat opened, "255/0 "= slat closed.
The value for the slat position which is sent depends on the parameter selection on the parameter card "General, slat position closed/reversed ONLY FOR VENETIAN BLINDS".

● *None*
No positions are sent to the bus.

Type of feedback
Motor 1–4

Options:	• *On demand*
	• Status change
	• Cyclic

● *On demand*
The current position of the blinds must be requested over object 54.

● **Status change**
The current position of the appropriate blind is sent to the bus after every change of position. The position is only sent to the bus if the target postion is reached.
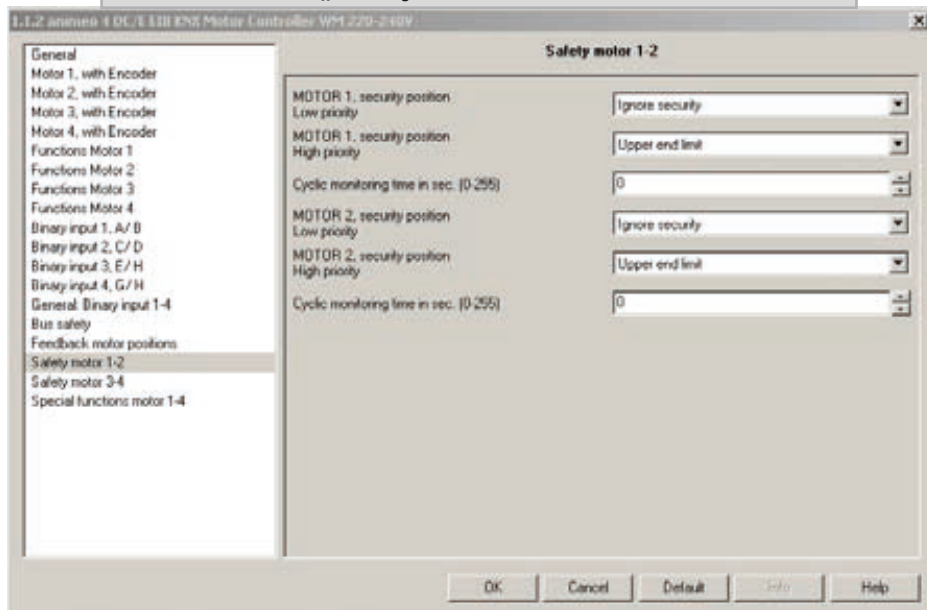
● **Cyclic**
This parameter opens a further parameter ("Every") in the time for cycling sending is configured.

Every

Options:	• *5 seconds*
	• 10 seconds
	• 20 seconds
	• 30 seconds
	• 60 seconds
	• 15 minutes
	• 30 minutes
	• 60 minutes
	• 120 minutes

Over this parameter it is defined in which time intervals the current position of the appropriate blind is sent to the bus.

Two individual cards (Safety motor 1-2 / Safety motor 3-4) are visible when on the card "General" for the motor output configuration "Individual" is parametered. One card (Security motor 1-4) is visible when on the card "General" for the motor output configuration "Combined" is parametered.
The parameter for motor 1 is described as follows. The parameters for motors 2-4 are the same.

MOTOR 1, Security position
Low priority

Options:
- Upper end limit
- Lower end limit
- Intermediate position 1
- Intermediate position 2
- *Ignore Security*
- Stop

Over this parameter the security position "low security" is specified for the appropriate blind. If on one of the communication objects (objects 31-35) a telegram with the value "1" is received, then the appropriate blind moves to the position which is configured in the ETS parameters. If on one of these communication objects a telegram with the value "0" is received no action will be executed. Only if in the ETS parameters "Repeat the last telegram after security (Yes)" is selected, then this action for the appropriate blind will be executed.
If one of these communication objects is active by a telegram with the value "1" and on one of the communication objects 36-40 (security position, high priority) a telegram with the value "1" is received, the appropriate blind moves to the position configured in the ETS parameters (security position, high priority).

MOTOR 1, Security position
High priority

Options:
- *Upper end limit*
- Lower end limit
- Ignore security

Over this parameter the security position "high security" is specified for the appropriate blind. If on one of the communication objects (objects 36-40) a telegram with the value "1" is received, then the appropriate blind moves to the position configured in the ETS parameters. If on one of these communication objects a telegram with the value "0 " is received no action will be executed. Only if in the ETS parameters "Repeat the last telegram after security (Yes)" is selected, then this action for the appropriate blind will be executed.

Cyclic monitoring time in seconds (0 – 255)

Options:
- *0*
- 0 – 255

Cyclic monitoring time is active as soon as a higher value than "0" is registered and refers to both security objects, low and high priority.

⚠ With active cyclic monitoring it is to be made certain that the time of the cyclic transmitter is smaller, approx. 1/4 than the configured cyclic monitoring time for the security objects, low and high priority.
If the default value remains adjusted "0" the security objects react statically to the values "1" and "0".

Parameter card „Special functions motors 1–4"
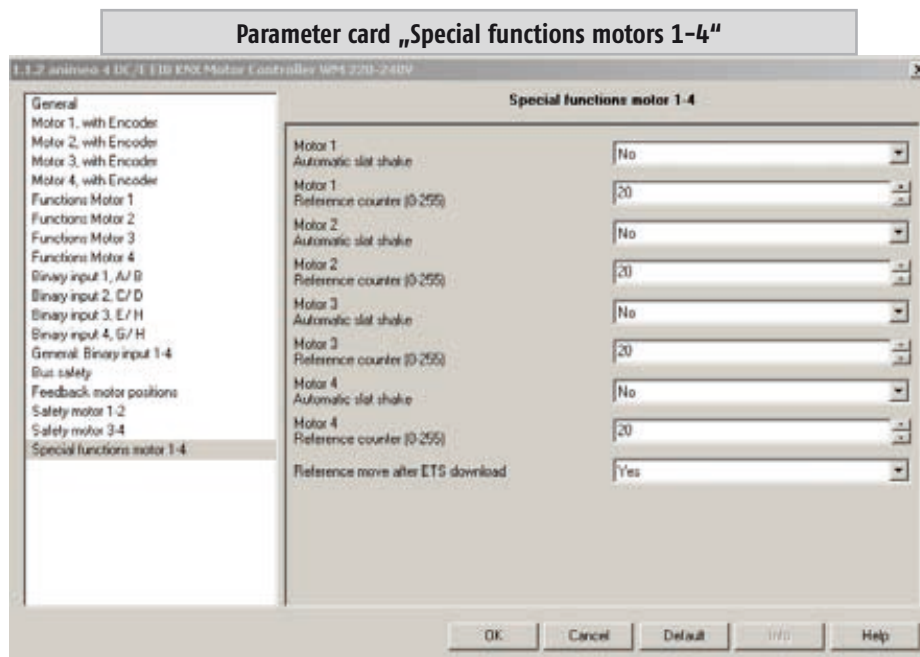
The parameter for motor 1 is described as follows. The parameters for motors 2–4 are the same.

⚠ This card is only visible with "Selection motor type DC with encoder" on the card "General".

Motor 1
Automatic slat shake

Options:
- *No*
- Yes

When the parameter "Yes" is selected, an automatic slat shake is carried out when reaching the bottom end position. Here, the slats are one time completely opened and closed.

⚠ Through this function it is possible also to set up the slats automatically. It can happen that in a DOWN command some of the slats whilst turning get entangled and therefore do not stand in the mechanical default position. Through completely opening and closing the slats, the entangled slats are brought into the mechanical default position.

Motor 1
Reference counter (0-255)

Options:
- *20*
- 0 – 255

This parameter defines when a reference move is carried out. This means for example, that after 20 UP/STOP telegrams, a reference move will be carried out.

⚠ See also Chapter 2, definitions.

Motor 1-4
Reference move after ETS download

Options:
- No
- *Yes*

When selecting "Yes", a reference move is carried out with each ETS download.

⚠ See also Chapter 2, definitions.

8.1   LEDs on the animeo KNX/EIB Motor Controller

The LEDs on the animeo KNX/EIB Motor Controller can be used for the following functions:
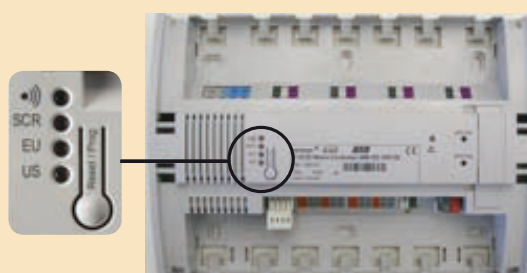
- Operability of the device during operation (230 V / KNX/EIB bus power attached, indication of radio signals, ...)
- A limited overview of the configurations
- First diagnosis

8.2   Information during the operation

Receipt of a radio telegram ....

Security low/high or object "Block functions" active ....
The device is operational, display of receipt of EIB telegrams ....

8.3   Status of configurations

⚠ The inquiry of the status of the configurations is only possible on delivery before the device is programmed with the ETS. As soon as the device is programmed with the ETS, the status of the configurations can no longer be checked via the Reset/Prog button. If the device is unloaded by the ETS, the status of the configurations can again be queried over the Reset/Prog button. The inquiry of the status of the radio functionality (green upper LED) is always possible.

LED		On (2 s)	Blinking
•)))	= Green	Radio remote configured	No radio configuration
SCR	= Yellow	Screen with configured running and tilting times	Screen without configured running and tilting times
EU	= Orange	Venetian blind, EU ergonomics, with configured running and tilting times	Venetian blind, EU ergonomics, without configured running and tilting times
US	= Red	Venetian blind, US ergonomics, with configured running and tilting times	Venetian blind, US ergonomics, without configured running and tilting times

8.4 First diagnosis

8.4.1 Warning LED (⚠) on the Motor Controller

When an UP or DOWN command is given and the warning LED flashes red (excess current), the following points must be checked:
- Short circuit on the motor output or at least a wire is not connected
- Encoder wire (purple) is connected incorrectly on the motor output (e.g. M1 connector 1 or 2)
- A DCE motor is connected, the Motor Controller is however in the DC mode
- A DC motor is connected, the Motor Controller is however in the DCE mode

In the mode selection DCE:
When an UP or DOWN command is given and the warning LED flashes yellow (regulator error), the set speed concerning the size of the venetian blinds is too high. The set time for the UP and DOWN direction must be appropriate (increased).

8.4.2 Visual display with error identifying

Motor 1 ....
Motor 2 ....
Motor 3 ....
Motor 4 ....

To switch off the error display briefly press the Reset/Prog button (0,5 seconds)

The 4 DC/E Motor Controller animeo KNX/EIB is an electronic operated, independently mounted control with looped-through PE-connection.

4 DC/E Motor Controller KNX/EIB	Art. 1 860 127
Supply voltage	220 – 240 V AC / 50/60 Hz
Stand-by current	16 mA
Stand-by energy consumption	3.5 VA
Supply voltage from KNX/EIB bus	KNX/EIB-voltage 21…30 V DC, SELV
Rated current consumption KNX/EIB	as per KNX/EIB guidelines
Max. motor current consumption	4 x 500 mA
Max. power per motor output	Max. 500 mA at 24 V DC
Supply voltage of group control input	SELV, 16 VDC =
Supply voltage of local push buttons	SELV, 16 VDC =
Input/output	Short circuit protected
Terminals	Spring connectors
Terminals KNX/EIB	KNX/EIB bus terminal (black/red)
Running time per output (relay contact)	max. 5 minutes or 5.000 mm
Fuses	T4A (not replacable)
Operation temperature	0° C – 45° C
Relative humidity	85 %
Material of housing	CC-ABS polycarbonate
Housing dimensions (H x B x W)	180 x 255 x 63 mm
Degree of protection	IP 20
Protection class	II, corresponding to the installation
Automatic action	Typ 1; Typ 1.C micro interruption
Pollution degree	2
Rated impulsive voltage	4 kV
Temperature of ball pressure test	75° C
Conformity	CE by EN 60730

ⓘ www.somfy.com/DFS/manuals/

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