# animeo ${ }^{\ominus}$ KNX 4 DC 2 A Motor Controller WM 24 V DC Installation manual 



Ref. 1860128

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Before installation, please read the safety instructions carefully. Failure to respect these instructions automatically invalidates warranty and all liability claims against SOMFY (e.g. wrong installation, maloperation etc.). The product must be installed by a qualified electrician! All connections have to be disconnected from mains before mounting! Make precautions against switching on by accident!

The installation of Somfy products has to be made at easily accessible places only. For maintenance and repairs which are difficult to perform because of bad accessibility (e.g. clotted or extensive clotted floors, installation behind lamps or behind façades) additional costs cannot be claimed against the seller.

A proper functioning of the Motor Controllers and motors is assured only if the animeo DC or DCIE Motor Controllers are combined with compatible Somfy motors or with motors which are expressly approved by Somfy for this purpose. In case the buyer should use motors or DC power supplies made by other producers in combination with such made by Somfy, the warranty and responsibility of Somfy will be excluded both for the Somfy product itself and its suitability as part of a functioning system as a whole. The checking and decision whether external products are suitable without restraint is exclusively within buyer's own responsibility.

The KNX 4 DC 2 A Motor Controller WM 24 VDC is for controlling motors in the Concept 25 motor series ( 24 VDC ). It is suited for the controlling of up to four individually parameterable motors for Venetian blinds, roller blinds, windows, curtains and louvers. 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 ...
- 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 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.
- Position feedback 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 response via object for every single motor.
- Free configurable action at mains power return and response via object.
- 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 (ref. 1860105). Without additional wiring the four motors, using Somfy RTS Technology, can be controlled individually per remote.
- Alternatively the animeo KNX RTS Receiver (ref. 1860191) can be installed as well. Up to 5 universal KNX radio binary inputs (e.g. light on/off with dimming) can be realised via radio without any additional wiring efforts.

A complete parametering and programming is only possible when there is a power supply and KNX bus voltage on the KNX Motor Controller. When only KNX bus voltage is present, only the physical address can be programmed.

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

## Manual order

## Automatic order

## US switch ergonomics

## EU switch ergonomics

Screen, roller blind, window, curtain, louver switch ergonomics

## Running time

## Tilting time

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 1-8 is also understood as manual command.

A telegram received on the objects 8-16 is understood as an automatic order.

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.

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.

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.

Running time is the time, 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 is the necessary time for the slats to make one complete turn.

### 2.1 Slat position




Mounting of the Motor Controller KNX 4 DC 2 A WM


Complete wiring and connect power supply to the Motor Controller
 $\boxed{\infty}$

## 4 Wiring diagram



Local push button inputs can be used as binary inputs!

### 4.1 Motor outputs

Max. current per output: 2,1 A.
Compatibel with the following Somfy motors in combination with the CTS 25 enrolling system for Venetian blinds:


```
LV 25-B44, -B64
2 wires
```



LW 25-B44, -B83
2 wires


LT 28-B73
2 wires

J101
2 wires

Compatibility as well with the following motors: Mingardi EURO 1, MICRO S, MICRO L, MICRO ONE, S1, MICRO 02, MOCRO XL, MICRO 92
The compability is only guaranteed when the following power supply is used: Somfy animeo IB+ Power 4,5 DC (Ref. 1860093). Depending on the quantity of motors connected per motor output, one or two power supplies are necessary.

## $\triangle$ Control of non Somfy motors only on request and after approval by Somfy.

### 4.2 Cabling


. As soon as 230 V and the KNX 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.: $2 \times 0.6 \mathrm{~mm} / 22$ AWG <br> Max.: $2 \times 2.5 \mathrm{~mm}^{2} / 14$ AWG <br> $\triangle$ The max. distance of the connected motors. The d | es depends on the he cable must al | 20 m |
| Switches | Min.: $3 \times 0.6 \mathrm{~mm} / 22$ AWG <br> Max.: $3 \times 2.5 \mathrm{~mm}^{2} / 14$ AWG | Recommended | 150 m |
| Group control | Min.: $2 \times 0.6 \mathrm{~mm} / 22$ AWG Max.: $2 \times 1.5 \mathrm{~mm}^{2} / 16$ AWG | Recommended | 50 m |
| KNX Bus | $2 \times 0.8 \mathrm{~mm} / 20$ AWG | Required, follow |  |
| 24 V DC | Min.: $2 \times 0.75 \mathrm{~mm}^{2} / 16$ AWG Max.: $2 \times 2.5 \mathrm{~mm}^{2} / 14$ AWG |  |  |

### 4.3 Checking the running direction of the blinds

## Group control of the motors 1 - $\mathbf{4}$ 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 $\boldsymbol{C}+\boldsymbol{\nabla}$ )
STOP: The end product stops (cable link between $\mathbf{C}+\boldsymbol{\nabla}+\boldsymbol{\Lambda}$ )
UP: $\quad$ The end product heads in the up direction $(C+\boldsymbol{\Delta})$

### 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!).
If the slats position does not fit to the move direction, specified by the manufacturer, please correct the slats position only upon consultation of the blinds manufacturer. Then, the turning direction can be checked.

## Application for sun protection



## Decorative application



The KNX Motor Controller 4 DC 2 A can be used in the factory-delivered state also without programming via ETS software. Sensible presettings are implemented in the device. These settings are valid for all four motor outputs.

## - Running and turning times

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.
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 push 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.

### 5.1 Function of the Reset/Prog button

Over this switch base settings at the Motor Controller KNX 4 DC 2 A 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.
$\triangle$ The selection of the user ergonomics should be consistent with the appropriate end product.


$$
\bullet)) \text { = Configuration of the animeo RTS radio module }
$$

SCR = Screen, roller blind ergonomics*
EU = Venetian blind, EU ergonomics*
US = Venetian blind, US ergonomics*
*See chapter 2 "Definitions"

Change the ergonomics:


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 mode.

### 5.3 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.
$\triangle$ As an alternative to the conventional switches the settings can also be done with Somfy RTS transmitter and animeo RTS radio module (ref. 1860105). It's not possible to do the setting with animeo KNX RTS Receiver (ref. 1860191) and Somfy RTS transmitter!

. Press immediately when lower end limit is reached


Keep Stop pressed during entire tilting



### 5.4 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.
$\triangle$ As an alternative to the conventional switches the settings can also be done with Somfy RTS transmitter and animeo RTS radio module (ref. 1860105). It's not possible to do the setting with animeo KNX RTS Receiver (ref. 1860191) and Somfy RTS transmitter!

## Saving

Move screen in desired position
. With conventional unlocked push buttons the stop order can be generated by pressing the up and down button simultaneously

Activating


The stored position will be moved

### 5.5 Reset to delivery status

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

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


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.

## 5 Communication objects

A maximum of 150 communication objects are available, which however cannot be used at one time. Maximally 250 group addresses can be linked.

| No. | Object name | Model | DPT_ID | Description |
| :---: | :--- | :--- | :--- | :--- |
| 1 | Motor 1 UP/ DOWN, CLOSED / OPEN | 1 Bit | 1.001 | If a telegram with the value "0" is received by this communication <br> object, the corresponding blind is moved upwards or a window <br> is closed. If a telegram with the value "1" is received, the corre- <br> sponding blind is moved down or a window is opened. At the end <br> of the set move time for UP or D0wN direction or the move time for <br> opening or closing of the window, the relays of the outputs are freed. |
| 2 | Motor 2 UP/ DOWN, CLOSED /OPEN | 1 Bit | 1.001 | 1 Bit |
| 3 | Motor 3 UP/ DOWN, CLOSED / OPEN | 1.001 | 1 Bit | 1.001 |


| No. | Object name | Model | DPT_ID | Description |
| :--- | :--- | :--- | :--- | :--- |
| 26 | Motor 1 Move to IP 2 | 1 Bit | 1.001 | If a telegram with the value "1" is received on one of these commu- <br> nication objects, the corresponding blind moves to the intermediate <br> position 2 parametered in the ETS parameters. With the receiving of a <br> telegram with the value "0" on one of these communication objects, <br> the corresponding blind moves to the upper end position. |
| 27 | Motor 2 Move to IP 2 | 1 Bit | 1.001 | 1 Bit |
| 28 | Motor 3 Move to IP 2 | 1.001 | Bit | 1.001 |


| No. | Object name | Model | DPT_ID | Description |
| :--- | :--- | :--- | :--- | :--- |
| 49 | Motor 1-4 Status positions | 1 Bit | 1.001 | If a telegram with the value "1" or "0" is received on this com- <br> munication object, the current status positions of the corresponding <br> blinds are sent to the bus (objects 41-48). |
| 50 | Motor 1 Upper end position | 1 Bit | 1.001 | Through these communication objects a telegram with the value "1" <br> for the corresponding blind is sent when the upper end position is <br> reached. When leaving the upper end position of the corresponding <br> blind, a telegram with the value "0" is sent. The upper and lower <br> end position is determined by the parametered move times. |
| 51 | Motor 2 Upper end position | 1 Bit | 1.001 | 1 Bit |
| 52 | Motor 3 Upper end position | 1.001 | 1 Bit | 1.001 | | Dit |
| :--- |


| No. | Object name | Model | DPT_ID | Description |
| :---: | :---: | :---: | :---: | :---: |
| 74 | Switch input 1: STEP/STOP | 1 Bit | 1.001 | A short pressing of the button on input A generates a telegram on this communication object with the value " 0 ". The slat turns UP. When the Venetian blinds are making a move then a short pressing of the button generates a stop command on input A. A short pressing of the switch on input $B$ generates a telegram with the value "1". The slats turn CLOSE. When the Venetian blind is making a move then a short pressing of the button generates a stop command on input $B$. |
| 75 | Switch input 1: A, Switch | 1 Bit | 1.001 | According to the parameter settings and the state at input 1 contact A a switching telegram is sent over this communication object with the value "1" or "0". |
| 76 | Switch input 1: B, Switch | 1 Bit | 1.001 | According to the parameter settings and the state at input 1 contact B , a switching telegram is sent over this communication object with the value "1" or "0". |
| 77 | Switch input 1: A, 8-Bit value | 1 Byte | 5.004 | According to the parameter settings, with a rising edge on input 1 contact $A$, the parametered value ( $0-255$ ) is sent. |
| 78 | Switch input 1: B, 8-Bit value | 1 Byte | 5.004 | According to the parameter settings, with a rising edge on input 1 contact $B$, the parametered value ( $0-255$ ) is sent. |
| 79 | Switch input 1: A/B, Dimming | 1 Bit | 1.001 | On/Off: <br> According to the parameter settings, with a short pressing at the input 1 contact A/B, a telegram is generated with the value "1" or " 0 ". Toggle/Toggle: <br> According to the parameter settings, with a short pressing at the input 1 contact A/B, a telegram is generated with the value " 1 " or " 0 ". |
| 80 | Switch input 1: <br> A/B, Dimming, Value | 4 Bit | 3.007 | Brighter/darker dimming: <br> According to the parameter settings, brighter dimming is done with a long pressing at the input 1 contact A. According to the parameter settings, darker dimming is done with a long pressing at the input 1 contact B. <br> Brighter/Darker toggle: <br> According to the parameter settings, over input 1 contact A, $100 \%$ is dimmed with longer pressing of the switch. When releasing the corresponding switch at the input A , a stop command is generated. The last activated dimming step becomes inverted. According to the parameter settings, over input 1 contact A, 100\% is dimmed with longer pressing of the switch. When releasing the corresponding switch at the input $B$, a stop command is generated. The last activated dimming step becomes inverted. |
| 81 | Switch input 2: UP/DOWN | 1 Bit | 1.001 | See object description 69, CID instead A/B |
| 82 | Switch input 2: STEP/STOP | 1 Bit | 1.001 | See object description 70. C/D instead A/B |
| 83 | Switch input 2: C, Switch | 1 Bit | 1.001 | See object description 71, C instead A |
| 84 | Switch input 2: D, Switch | 1 Bit | 1.001 | See object description 72, D instead B |
| 85 | Switch input 2: $C_{1} 8$-Bit value | 1 Bit | 5.004 | See object description 73, C instead A |
| 86 | Switch input 2: D, 8-Bit value | 1 Bit | 5.004 | See object description 74, D instead B |
| 87 | Switch input 2: CID, Dimming | 1 Bit | 1.001 | See object description 75, CID instead A/B |
| 88 | Switch input 2: CID, Dimming, Value | 4 Bit | 3.007 | See object description 76, CID instead A/B |
| 89 | Switch input 3: UP/DOWN | 1 Bit | 1.001 | See object description 69, E/F instead A/B |
| 90 | Switch input 3: STEP/STOP | 1 Bit | 1.001 | See object description 70. E/F instead A/B |
| 91 | Switch input 3: E, Switch | 1 Bit | 1.001 | See object description 71, E instead A |
| 92 | Switch input 3: F, Switch | 1 Bit | 1.001 | See object description 72, F instead B |
| 93 | Switch input 3: E, 8-Bit value | 1 Bit | 5.004 | See object description 73, E instead A |
| 94 | Switch input 3: F, 8-Bit value | 1 Bit | 5.004 | See object description 74, F instead B |
| 95 | Switch input 3: E/F, Dimming | 1 Bit | 1.001 | See object description 75, E/F instead A/B |


| No. | Object name | Model | DPT_ID | Description |
| :---: | :---: | :---: | :---: | :---: |
| 96 | Switch input 3: E/F, Dimming, Value | 4 Bit | 3.007 | See object description 76, E/F instead A/B |
| 97 | Switch input 4: UP/ DOWN | 1 Bit | 1.001 | See object description 69, G/H instead A/B |
| 98 | Switch input 4: STEP/STOP | 1 Bit | 1.001 | See object description 70. G/H instead A/B |
| 99 | Switch input 4: G, Switch | 1 Bit | 1.001 | See object description 71, G instead A |
| 100 | Switch input 4, H, Switch | 1 Bit | 1.001 | See object description 72, H instead B |
| 101 | Switch input 4: G, 8-Bit value | 1 Bit | 5.004 | See object description 73, G instead A |
| 102 | Switch input 4: H, 8-Bit value | 1 Bit | 5.004 | See object description 74, H instead B |
| 103 | Switch input 4: G/H, Dimming | 1 Bit | 1.001 | See object description 75, G/H instead A/B |
| 104 | Switch input 4: G/H, Dimming, Value | 4 Bit | 3.007 | See object description 76, G/H instead A/B |
| 110 | Radio input 1: UP / DOWN | 1 Bit | 1.001 | A longer pressing of the "UP" switch on channel 1 of the learned-in handheld transmitter generates a telegram with the value " 0 ". The Venetian blind moves UP. <br> A longer pressing of the "DOWN" switch on channel 1 of the learned-in handheld transmitter generates a telegram with the value " 1 ". The Venetian blind moves DOWN. |
| 111 | Radio input 1: STEP/STOP | 1 Bit | 1.001 | According to the parameter settings a short press on the "my" button on channel 1 of the learned-in handheld radio transmitter generates a telegram with the value "0" on this communication object. The slats turn OPEN. When the Venetian blind is moving then a short press of channel 1 on the learned-in handheld radio transmitter will generate a stop command. <br> A short pressing of the "DOWN" button on channel 1 of the learnedin handheld radio transmitter generates a telegram with the value "1" on this communication object. The slats turn DOWN. When the Venetian blind is moving then a short press of channel 1 on the learned-in handheld radio transmitter will generate a stop command. |
| 112 | Radio input 1: Switch "my" button | 1 Bit | 1.001 | According to the parameter settings a press on the "my" button on channel 1 of the learned-in handheld radio transmitter generates a switching telegram with the value " 0 " or " 1 " on this communication object. |
| 113 | Radio input 1: 8-Bit value "my" button | 1 Byte | 5.004 | According to the parameter settings a press on the "my" button on channel 1 of the learned-in handheld radio transmitter sends a switching telegram with the value (0-255). |
| 114 | Radio input 1: Switch "UP" button | 1 Bit | 1.001 | According to the parameter settings a press on the "UP" button on channel 1 of the learned-in handheld radio transmitter generates a switching telegram with the value " 1 " or " 0 " on this communication object. |
| 115 | Radio input 1: Switch "DOWN" button | 1 Bit | 1.001 | According to the parameter settings a press on the "DOWN" button on channel 1 of the learned-in handheld radio transmitter generates a switching telegram with the value "1" or " 0 " on this communication object. |
| 116 | Radio input 1: 8-Bit value "UP" button | 1 Byte | 5.004 | According to the parameter settings a press on the "UP" button on channel 1 of the learned-in handheld radio transmitter sends a switching telegram with the value (0-255). |
| 117 | Radio input 1: 8-Bit value "DOWN" button | 1 Byte | 5.004 | According to the parameter settings a press on the "DOWN" button on channel 1 of the learned-in handheld radio transmitter sends a switching telegram with the value (0-255). |


| No. | Object name | Model | DPT_ID | Description |
| :---: | :---: | :---: | :---: | :---: |
| 118 | Radio input 1: Dimming 0N/OFF or Slow tilting UP/DOWN | 1 Bit | 1.001 | ON/UP: <br> A short pressing of the "UP" button on channel 1 of the learned-in handheld radio transmitter generates a telegram with the value "0" on this communication object. The lights switch OFF or the Venetian blind moves UP. <br> OFFIDOWN: <br> A short pressing of the "DOWN" button on channel 1 of the learnedin handheld radio transmitter generates a telegram with the value " 1 " on this communication object. The lights switch 0 N or the Venetian blind moves DOWN. <br> Toggle/Toggle: <br> A short pressing of the "DOWN" or the "UP" button on channel 1 of the learned-in handheld radio transmitter generates a telegram with the value " 1 " or with the value " 0 "on this communication object. <br> The lights switch ON or OFF or the Venetian blind moves DOWN or UP. |
| 119 | Radio input 1: Dimming Brighter/Darker or Slow tilting OPEN/CLOSE | 4 Bit | 3.007 | Brighter/Slow tilting open: <br> A longer pressing of the "UP" button on channel 1 of the learned-in handheld radio transmitter generates a telegram with the adjusted value " $100 \%, 1 / 2,1 / 4,1 / 8,1 / 16,1 / 32$ or $1 / 64$ " on this communication object. The lights dim darker or the Venetian blind moves UP. Darker/Slow tilting close: <br> A short pressing of the "DOWN" button on channel 1 of the learnedin handheld radio transmitter generates a telegram with the adjusted value " $100 \%, 1 / 2,1 / 4,1 / 8,1 / 16,1 / 32$ or ${ }^{1 / 64}$ " on this communication object. The light dims brighter or the Venetian blind turns slowly closed. |
| 120 | Radio input 2: UP / DOWN | 1 Bit | 1.001 | See object description 110. channel 2 instead channel 1 |
| 121 | Radio input 2: STEP/STOP | 1 Bit | 1.001 | See object description 111, channel 2 instead channel 1 |
| 122 | Radio input 2: Switch "my" button | 1 Bit | 1.001 | See object description 112, channel 2 instead channel 1 |
| 123 | Radio input 2: 8-Bit value "my" button | 1 Byte | 5.004 | See object description 113, channel 2 instead channel 1 |
| 124 | Radio input 2: Switch "UP" button | 1 Bit | 1.001 | See object description 114, channel 2 instead channel 1 |
| 125 | Radio input 2: Switch "DOWN" button | 1 Bit | 1.001 | See object description 115, channel 2 instead channel 1 |
| 126 | Radio input 2: 8-Bit value "UP" button | 1 Byte | 5.004 | See object description 116, channel 2 instead channel 1 |
| 127 | Radio input 2: 8-Bit value "DOWN" button | 1 Byte | 5.004 | See object description 117, channel 2 instead channel 1 |
| 128 | Radio input 2: Dimming 0N/OFF or Slow tilting UP/DOWN | 1 Bit | 1.001 | See object description 118, channel 2 instead channel 1 |
| 129 | Radio input 2: Dimming Brighter/Darker or Slow tilting OPEN/CLOSE | 4 Bit | 3.007 | See object description 119, channel 2 instead channel 1 |
| 130 | Radio input 3: UP/ DOWN | 1 Bit | 1.001 | See object description 110. channel 3 instead channel 1 |
| 131 | Radio input 3: STEP/STOP | 1 Bit | 1.001 | See object description 111, channel 3 instead channel 1 |
| 132 | Radio input 3: Switch "my" button | 1 Bit | 1.001 | See object description 112, channel 3 instead channel 1 |
| 133 | Radio input 3: 8-Bit value "my" button | 1 Byte | 5.004 | See object description 113, channel 3 instead channel 1 |
| 134 | Radio input 3: Switch "UP" button | 1 Bit | 1.001 | See object description 114, channel 3 instead channel 1 |
| 135 | Radio input 3: Switch "DOWN" button | 1 Bit | 1.001 | See object description 115, channel 3 instead channel 1 |
| 136 | Radio input 3: 8-Bit value "UP" button | 1 Byte | 5.004 | See object description 116, channel 3 instead channel 1 |
| 137 | Radio input 3: 8-Bit value "DOWN" button | 1 Byte | 5.004 | See object description 117, channel 3 instead channel 1 |
| 138 | Radio input 3: Dimming 0N/OFF or Slow tilting UP/DOWN | 1 Bit | 1.001 | See object description 118, channel 3 instead channel 1 |
| 139 | Radio input 3: Dimming Brighter/Darker or Slow tilting OPEN/CLOSE | 4 Bit | 3.007 | See object description 110. channel 3 instead channel 1 |
| 140 | Radio input 4: UP/ DOWN | 1 Bit | 1.001 | See object description 110. channel 4 instead channel 1 |


| No. | Object name | Model | DPT_ID | Description |
| :---: | :---: | :---: | :---: | :---: |
| 141 | Radio input 4: STEP / STOP | 1 Bit | 1.001 | See object description 111, channel 4 instead channel 1 |
| 142 | Radio input 4: Switching "my" button | 1 Bit | 1.001 | See object description 112, channel 4 instead channel 1 |
| 143 | Radio input 4: 8-Bit value "my" button | 1 Byte | 5.004 | See object description 113, channel 4 instead channel 1 |
| 144 | Radio input 4: Switch "UP" button | 1 Bit | 1.001 | See object description 114, channel 4 instead channel 1 |
| 145 | Radio input 4: Switch "DOWN" button | 1 Bit | 1.001 | See object description 115, channel 4 instead channel 1 |
| 146 | Radio input 4: 8-Bit value "UP" button | 1 Byte | 5.004 | See object description 116, channel 4 instead channel 1 |
| 147 | Radio input 4: 8-Bit value "DOWN" button | 1 Byte | 5.004 | See object description 117, channel 4 instead channel 1 |
| 148 | Radio input 4: Dimming 0N/OFF or Slow tilting UPIDOWN | 1 Bit | 1.001 | See object description 118, channel 4 instead channel 1 |
| 149 | Radio input 4: Dimming Brighter/Darker or Slow tilting OPEN/CLOSE | 4 Bit | 3.007 | See object description 119, channel 4 instead channel 1 |
| 150 | Radio input 5: UP/ DOWN | 1 Bit | 1.001 | See object description 110. channel 5 instead channel 1 |
| 151 | Radio input 5: STEP/STOP | 1 Bit | 1.001 | See object description 111, channel 5 instead channel 1 |
| 152 | Radio input 5: Switch "my" button | 1 Bit | 1.001 | See object description 112, channel 5 instead channel 1 |
| 153 | Radio input 5: 8-Bit value "my" button | 1 Byte | 5.004 | See object description 113, channel 5 instead channel 1 |
| 154 | Radio input 5: Switch "UP" button | 1 Bit | 1.001 | See object description 114, channel 5 instead channel 1 |
| 155 | Radio input 5: Switch "DOWN" button | 1 Bit | 1.001 | See object description 115, channel 5 instead channel 1 |
| 156 | Radio input 5: 8-Bit value "UP" button | 1 Byte | 5.004 | See object description 116, channel 5 instead channel 1 |
| 157 | Radio input 5: 8-Bit value "DOWN" button | 1 Byte | 5.004 | See object description 117, channel 5 instead channel 1 |
| 158 | Radio input 5: Dimming 0N/OFF or Slow tilting UP/DOWN | 1 Bit | 1.001 | See object description 109, channel 5 instead channel 1 |
| 159 | Radio input 5: Dimming Brighter/Darker or Slow tilting OPEN/CLOSE | 4 Bit | 3.007 | See object description 110. channel 5 instead channel 1 |
| 160 | Mains power failure ( 230 V ) | 1 Bit | 1.002 | A mains power failure is signaled with this communication object. As soon as the mains voltage cuts out, a telegram with the value "1" is sent to the bus. With return of mains voltage this communication object sends the telegram with the value " 0 ". |

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 menu index cards a maximum of parameters is always presented.

### 7.1 Menu index card "General"



## Basic setting of the motors

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 menu index 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) I Max. reversed (0)

If a value of " 255 " is received by the appropriate object (13-16) the slat will be maximal closed. If a value of " 0 " is received by the appropriate object (13-16) the slat will be maximal reversed.


- Max. closed (0) / Max. reversed (255)

If a value of " 0 " is received by the appropriate object (13-16) gesendet, the slat will be maximal closed.
Value (255/0)
If a value of " 255 " is received by the appropriate objectt (13-16) gesendet, the slat will be maximal reversed.

Motor 1... 4
Automatic/Manual functions
Options: • None

- Priority automatic funtions
- Priority manual funtions
- None

The moving commands are processed in detailed order.

- Priority automatic function

If an automatic command (1 Byte move command) takes place before 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 21-30) 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" (6972 ) 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 (65-68). 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.
$\triangle$ See explanations in chapter 2.

- Priority manual function

If a manual command ( 1 Bit ) takes place before 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" (69-72). Switching between priority manual functions (value " 0 ") and priority automatic functions (value "1") is made by the appropriate objects (65-68). 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.
$\triangle$ 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 (65-68) the priority manual functions are activated and the user can move the end product to a desired position with the next manual command. At 17:00 o'clock the priority automatic function is again activated. Over the appropriate object (65-68) it is always possible to switch between priority manual functions and priority automatic functions.Universal binary inputs use $\triangle$ See explanations in chapter 2.


To adjust the timer it's ideal to use the façade controller animeo KNX Master Control W2 (ref. 1860187) or animeo KNX Master Control W8 (ref. 1860193).

## Universal binary inputs use

Options: • No

- Yes

With the parameter "Yes" four further menu index cards (binary input 1...4) are opened. The local switch inputs can be linked now over the appropriate objects (73-104). A conventional switch can be used thus for most diverse functions. For example switching, Venetian blind function, dimming or sending values.

## Radio binary input

```
Options: • No
    - Yes
```

With the parameter „Yes" a menu index card ("General: radio binary input") is opened. In this menu index card five more can be activated (radio binary input $1 \ldots 5$ ). Now the radio channels can be linked over the appropriate objects (110-159) . This makes the radio transmitter usable for several functions.

## 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.
$\triangle$ 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.

### 7.2 Menu index card „Motor 1...4/Motor 1-4"



Four individual menu index 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.

## Type of end product/user ergonomics

Options: - Venetian blind with EU ergonomics

- Venetian blind with US ergonomics
- Roller blind
- Window
- Curtain
- Louver


## - 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). The user ergonomics via Sonfy RTS radio hand transmitter remains unchanged.
$\triangle$ See explanation EU, US, screen, roller blind, window, curtain, louver ergonomics in chapter 2 "Definitions".

- Venetian blind with US ergonomics

With 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 the button). The user ergonomics via Sonfy RTS radio hand transmitter remains unchanged.

See explanation EU, US, screen, roller blind, window, curtain, louver ergonomics in chapter 2 „Definitions".

## - Roller blind

With this parameter it is specified that the appropriate end product 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). The user ergonomics via Sonfy RTS radio hand transmitter remains unchanged.
$\triangle$ See explanation EU, US, screen, roller blind, window, curtain, louver ergonomics in chapter 2 „Definitions".

- Windows

With this parameter it is specified that the appropriate end product 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). The user ergonomics via Sonfy RTS radio hand transmitter remains unchanged.
$\triangle$ See explanation EU, US, screen, roller blind, window, curtain, louver ergonomics in chapter 2 „Definitions".

- Curtain

With this parameter it is specified that the appropriate end product 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). The user ergonomics via Sonfy RTS radio hand transmitter remains unchanged.
$\triangle$ See explanation EU, US, screen, roller blind, window, curtain, louver ergonomics in chapter 2 „Definitions".

- Louver

With this parameter it is specified that the appropriate end product 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).The user ergonomics via Sonfy RTS radio hand transmitter remains unchanged.
© See explanation EU, US, screen, roller blind, window, curtain, louver ergonomics in chapter 2 "Definitions".

## 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 An overlapping time of 5 seconds is always added except in case of positioning telegrams (objects 9-12). However, if a position telegram with the value "0" is received by the appropriate object, an overlapping time of 5 seconds is added.

## Running time DOWN (1-320 s)

```
Options: • }12
    - 1-320 seconds
```

The configured time here is the maximum running time from the upper end position into the lower end position An overlapping time of 5 seconds is always added except in the case of positioning telegrams (objects 9-12). However, if a position telegram with the value "255" is received by the appropriate object, an overlapping time of 5 seconds is added.

## Complete tilting time <br> 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 0.05 s (2-100)
Options: • 10

- 3-255

The configured 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 <br> 0.01 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: - Nein

- Ja

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: • Nein <br> - Ja

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.

### 7.3 Menu index card „Functions Motor 1...4"



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

## Intermediate position 1

## UPI DOWN Position (0-100 \%)

Options: • 0

- 0-100

With this parameter the intermediate position 1 "UP / DOWN" is defined. The adjusted value in \% refers to the configured running time of the appropriate Venetian blind of the menu index 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 menu index 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. The position learned last is valid.

## Intermediate position 2

## UPIDOWN 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 menu index 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 menu index cards Motor 1...4/Motor 1-4.

## Block UP I DOWN orders (Byte) and intermediate position 1

Options: • No

- Yes

Over this parameter the move orders (Byte) can be blocked by object (60-64). 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 order (Byte)

Options: • No

- Yes

Over this parameter the slat tilting orders (Byte) can be blocked by object (60-64). 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 completely. Only then, further tilting orders (Byte) are closed. If the appropriate object receives a telegram with the value „ 0 " the slat tilting orders (Byte) are enabled.

## Block UP I DOWN order (Bit)

Options: - No

- Yes

Over this parameter the move orders (Bit) can be blocked by object (60-64). 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 (Bit) are blocked. If the appropriate object receives a telegram with the value „0", move orders (Bit) are again enabled.

## Block step/stop orders (Bit)

Options: • No

- Yes

Over this parameter the move orders (Bit) can be blocked by object (60-64). 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 (Bit) are blocked. If the appropriate object receives a telegram with the value "0", move orders (Bit) are again enabled.

## Block local push button inputs and Somfy RTS orders

$$
\begin{array}{ll}
\text { Options: } & \text { - No } \\
& \text { - Yes }
\end{array}
$$

Over this parameter the local push button inputs and the Somfy RTS radio orders can be blocked by object (60-64). 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 accounting 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.

### 7.4 Menu index card „Binary input 1...4"



## 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.
© When the basic function „Venetian blind, UP / DOWN" is selected, please be certain about which contact controls the UP order and which the DOWN order. The same attention is necessary when the basic function „Dimming" für „Brighter" resp. „Darker" is selected. The default setting of the basic funtion for the menu index cards binary input 1...4 is Venetian blind, UP / DOWN.

## 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: <br> - Normally open

- Normally closed

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 open
- Normally closed

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.


## Basis function

Options: - Venetian blind UP/DOWN

- Switch/dry contact
- 8-Bit value (rising edge)
- Dimming


## Edge valuation contact A

Options: • Rising ON, falling OFF

- Rising OFF, falling ON
- Rising ON
- Falling 0 N
- Rising OFF
- Falling 0FF

On ("1") Off ("0") Toggle("1/0")

- Rising toggle
- Falling toggle
- Rising toggle, falling toggle
- No evaluation

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 " $0 n$ " is generated. If a falling edge at the local input appears, the object value "Off" is generated. The duration of the activation is not evaluated.

- Rising OFF, falling ON

If a rising edge at the local input appears, the object value "Off" is generated. If a falling edge at the local input appears, the object value " 0 n " is generated. The duration of the activation is not evaluated.

- Rising 0N

If a rising edge at the local input appears, the object value " 0 n " is generated. If a falling edge at the local input appears, it is not evaluated. The duration of the activation is not evaluated.

## - Falling 0 N

If a falling edge at the local input appears, the object value " 0 n " is generated. If a rising edge at the local input appears, it is not evaluated. The duration of the activation is not evaluated.

- Rising 0FF

If a rising edge at the local input appears, the object value "0ff" is generated. If a falling edge at the local input appears, this is not evaluated. The duration of the activity is not evaluated.

- Falling OFF

If a falling edge at the local input appears, the object value "Off" is generated. If a rising edge at the local input appears, this is not evaluated. The duration of the activity 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 activity 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 activity is not evaluated.

- Rising toggle, falling toggle

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

## - No evaluation

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

## Edge contact B

Options: - Rising ON, falling OFF

- Rising OFF, falling ON
- Rising ON
- Falling ON
- Rising OFF
- Falling OFF
- Rising toggle On ("1") Off ("0") Toggle ("1/0")
- Falling toggle
- Rising toggle, falling toggle
- No evaluation


## 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 and B <br> Cyclic 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.
$\triangle$ 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 transmitter.


## Basis function

Options: - Venetian blind UP/ DOWN

- Switch/dry contact
- 8 -Bit value (rising edge)
- 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 A.

## Contact type input A

Options: - Normally open

- Normally closed

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 B.

## Contact type input B

Options: - Normally open

- Normally closed

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.


## Basis function

Options: - Venetian blind UP/DOWN

- Switch/dry contact
- 8-Bit value (rising edge)
- Dimming


## Long operation (dimming) after

Options: - 0.5 seconds

- 0.3-0.5 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/0ff

- On/0ff on ("1") off ("0") Toggle ("1/0")

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

## - On/0ff

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 opened

- Normally closed

Over this parameter the contact type at the local input A is specified.
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 opened

- Normally closed

Over this parameter the contact type at the local input B is specified.
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 "0n" 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 duration of an interval for cyclical sending. If, for example, a "change $1 / 4$ " and an "interval of 0.5 seconds" is set, then with a longer pressing of the push button on the corresponding local input, every 0.5 seconds $1 / 4$ brighter or darker will be dimmed.

### 7.5 Menu index card "General: Binary input 1-4"



These parameters concern binary inputs 1-4.

## Start-up delay motor 1... 4

$$
\begin{array}{ll}
\text { Options: } & \text { • } 0 \text { seconds } \\
& \text { - } 0-21 \text { seconds }
\end{array}
$$

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

This parameter opens the parameter for adjusting the limit number of telegrams which enables to limit the number of telegrams, which are cyclically sent per time unit.

## Limit

Options: - 30 telegrams per 17 seconds

- 60 telegrams per 17 seconds
- 100 telegrams per 17 seconds
- 127 telegrams per 17 seconds

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

### 7.6 Menu index card "Bus Safety"



On this menu index 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
- Close window
- Open window
- Ignore
- Close curtain
- Open curtain

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

MOTOR 1 ... 4

## Reaction at bus power return

Options: - Upper end position

- Lower end position
- Ignore
- Intermediate position 1
- Intermediate position 2
- Close window
- Open window
- Ignore
- Close curtain
- Open curtain


## MOTOR 1... 4

## Reaction at power return (24 V DC)

Options:

- Upper end position
- Lower end position
- Ignore
- Close window
- Open window
- Close curtain
- Open curtain


## Automatic cascading

Options: • No

- Yes

If the parameter "Yes" is selected, each motor output will move to the appropriate position with 1 second of delay. This delay time arises, considered in case of "Reaction at bus power return" and "Reaction at main power return (24 V DC)".
$\triangle$ Advantage: The current peaks can be lowered thus in larger projects.

### 7.7 Menu index card „Feedback motor position"



On this menu index 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 menu index cards "Motor 1...4" or" Motor 1-4".

## Feedback of status upper/lower end position

Options: - No

- Yes

This parameter opens the parameter "Type of feedback".

## Type of feedback for end positions

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 54) respectively have reached the lower end position (object 59).

- Individual

If this parameter is selected, the appropriate end position, UP or DOWN, is sent to the bus for every single blind. For this objects (50-53 und 55-58) are available.

MOTOR 1 ... 4
Feedback for
Options: - UP / DOWN positions

- Slat position
- UP / DOWN and slat position
- None

- UP / DOWN position

Over this parameter the position UP / DOWN for the appropriate motor is sent to the bus, depending on the parameter "Type of feedback". „0" = UP I „255" = DOWN.

## - Slat position

Over this parameter the position of the slat for the appropriate motor is sent to the bus, depending on the parameter "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 menu index card "General" - Slat position closed/ reversed ONLY FOR Venetian BLINDS.

## - UPIDOWN and slat position

Over this parameter the position UP / DOWN and the position of the slat for the appropriate motor is sent to the bus, depending on the parameter "Type of feedback ". " 0 " = UPI „ $255^{\prime \prime}=$ DOWN, ${ }^{\prime} 0 / 255^{\prime \prime}=$ slat opened. The value for the slat position which is sent depends on the parameter selection on the menu index card "General" - Slat position closed/reversed ONLY FOR Venetian BLINDS.

## - None

No position are sent to the bus.

## Type of feedback

Options: - On demand

- Status change
- Cyclic


## - On demand

The currenct position of the blinds must be requested over object 46 .

## - 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 position is reached.

## - Cyclic

This parameter opens an additional 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
$\triangle$ Over this parameter it is defined in which time intervals the current position of the appropriate blind is sent to the bus. The current position of the blinds is only sent to the bus during the drive.


### 7.8 Menu index card "Safety motor 1-2 / motor 3-4/motor 1-4"



Two individual cards (Safety motor 1-2 I Safety motor 3-4) are visible when on the card "General" for the motor output configuration "Individual" is parametered. One card (Safety 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
- Close window
- Open window
- Close curtain
- Open curtain

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. 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
- Close window
- Open window
- Close curtain
- Open curtain

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. If in this case an object for low priority is activ (,1") , the appropriate parametered position will be moved to.

Cyclic monitoring time in seconds ( $0-255$ )
Options: • 0

- 0-255

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

### 7.9 Menu index card "General: Radio binary input"



## General information for radio input

For every radio input there are five different basis functions for selection:

Options: - Venetian blind UP/DOWN

- Switch/Dry contact
- 8 -Bit value (rising edge)
- Dimming
- Venetian blind slow tilting

The single functions and parameters which arise depending on the selection of the basis functions are now described. To illustrate this, another basis function has been selected for each radio input. The functions are described with the help of the radio input 1 (channel A) and are identical for the radio inputs 2 - 5 (channel $B, C, D$ and $E$ ).

The preset, default of the basis function for the menu index card radio input $1 . . .5$ is Venetian blinds UP / DOWN.

## Radio binary input 1... 5

For every radio input there are five different basis functions for selection:
Options: • No

- Yes

With the parameter "Yes" additional menu index cards "Radio binary input $1 . . .5$ " become visible. At the same time the necessary objects for this appear.

### 7.10 Menu index card "Radio binary input 1...5"



## Basic function

## Options: - Venetian blind UP/DOWN

- Switch/Dry contact
- 8-Bit value (rising edge)
- Dimming
- Venetian blind turn slowly


## Long operation move after

Options: - 0.5 seconds

- 0.3...5.0 seconds

This parameter defines the activity time of the corresponding transmitter push button which distinguishes between the sending of a shortterm telegram (Step/Stop) and a long-term telegram (UP/DOWN). If the time, for example, is parametered on 0.5 seconds, then only after a pressing of more than 0.5 seconds is a long-term telegram generated. With a pressing of the push button which is shorter than 0.5 seconds, a short-term telegram is generated.

## Functionality of the "my" push button

Selection options: • 1-Bit value

- 8-Bit value
- No function (no evaluation)


## Functionality of the "my" push button <br> 1-Bit value

```
Options: - On
```

- Off
- Toggle
- No function (no evaluation)

```
On ("1") Off("0") Toggle ("1/0")
```

- On

If the "my" button in the radio transmitter is pressed, the object value " 0 n " is generated. The duration of the activity is not evaluated.

- Off

If the "my" button in the radio transmitter is pressed, the object value "0ff" is generated. The duration of the activity is not evaluated.

- Toggle

If the "my" button in the radio transmitter is pressed, the object value "At" is generated. The duration of the activity is not evaluated.

- No function

If the "my" button in the radio transmitter is pressed, this is not evaluated.

## 8-Bit value (Rising edge)

Options:

- 0
- 0-255
- 0-255

With this parameter the value is set which is transmitted while pressing the "my" button in the radio transmitter.

- No function (no evaluation)

If the "my" button in the radio transmitter is pressed, this is not evaluated.


## Basic function

Options: - Venetian blind UP/ DOWN

- Switch/Dry contact
- 8-Bit value
- Dimming
- Venetian blind slow tilting


## Function of the "UP" button

```
Options: - On
```

- Off
- Toggle
- No function

```
On ("1") Off ("0") Toggle ("1/0")
```

- On

If the "my" button in the radio transmitter is pressed, the object value " 0 n " is generated. The duration of the activity is not evaluated.

- Off

If the "my" button in the radio transmitter is pressed, the object value "0ff" is generated. The duration of the activity is not evaluated.

- Toggle

If the "my" button in the radio transmitter is pressed, the object value "At" is generated. The duration of the activity is not evaluated.

- No function (no evaluation)

If the "my" button in the radio transmitter is pressed, this is not evaluated.

## Functionality of the "DOWN" button

Options: - On
On

- Toggle

```
On ("1") Off ("0") At ("1/0")
```

- No function (no evaluation)


## Functionality of the "my" button

Options:

- 1-Bit value
- 8-Bit value
- No function (no evaluation)

For a description please see "Function of the "my" button with Venetian blind UP/DOWN".


## Basic function

Options: • Venetian blind UP/DOWN

- Switch/Dry contact
- 8-Bit value
- Dimming
- Venetian blind slow tilting


## Function of the "UP" button

Options:

- 0
- 0-255

0-255
With this parameter the value is set which is transmitted while pressing the "UP" button in the radio transmitter.

## Function of the "DOWN" button

```
Options: • 0
    - 0-255
```

For a description please see "Function of the "UP" button with 8-Bit value".

## Function of the "my" button

| Options: | - 1 -Bit value |
| :--- | :--- |
|  | • 8 -Bit value |
|  | - No function (no evaluation) |

For a description please see "Function of the "UP" button with "Venetian blind UP/DOWN".


## Basic function

Options: - Venetian blind UP/DOWN

- Switch/Dry contact
- 8-Bit value
- Dimming
- Venetian blind slow tilting


## Long operation after

```
Options: - 0.5 seconds
    - 0.3...5.0 seconds
```

This parameter defines the pressing time of the corresponding transmitter push button (Up/Down) which makes a distinction between the sending of a short-term telegram (0n/Off) and a long-term telegram (Brighter/darker dimming). If the time, for example, is set at 0.5 seconds, a long-term telegram is generated after a longer pressing than 0.5 seconds. With a pressing duration which is shorter than 0.5 seconds, a short-term telegram is generated.

## Dimming brighter/darker for

Options: • Adjust 1/8

- Adjust 100 \% ... 1/64

This parameter defines the dimming step length which is transmitted as a telegram with a long pressing of the push button.

## Functionality of the "my" push button

$\begin{array}{ll}\text { Options: } & \text { - } 1 \text {-Bit value } \\ & \text { - } 8 \text {-Bit value } \\ & \text { No function }\end{array}$

For a description please see "Function of the "my" button with Venetian blind UP/DOWN".


## Basic function

Options: • Venetian blind UP/DOWN

- Switch/Dry contact
- 8-Bit value
- Dimming
- Venetian blind slow tilting


## Long operation (move) after

```
Options: - 0.5 seconds
    - 0.3...5.0 seconds
```

This parameter defines the pressing time of the corresponding transmitter push button (Up/Down) which makes a distinction between the sending of a short-term telegram (Up/Down) and a long-term telegram (Open/Close). If the time, for example, is set at 0.5 seconds, a longterm telegram is generated after a longer pressing than 0.5 seconds. With a pressing duration which is shorter than 0.5 seconds, a shortterm telegram is generated.

## Tilt slats (open/close) slowly by

Options: - Adjust 1/8

- Adjust 100 \% ... 1/64

This parameter defines the turn of the Venetian blinds which is transmitted as a telegram with a long pressing of the push button.

## Functionality of the "my" push button

| Options: | - 1 -Bit value |
| :--- | :--- |
|  | - 8 -Bit value |
|  | - No function (no evaluation) |

For a description please see "Function of the "my" button with Venetian blind UP/DOWN.

### 8.1 LEDs on the animeo KNX Motor Controller

The LEDs on the animeo KNX 4 DC 2 A Motor Controller can be used for the following functions:

- Operability of the device during operation ( $24 \mathrm{~V} D C /$ KNX bus power attached, indication of radio signals, ...)
- A limited overview of the configuration
- First diagnosis


### 8.2 Information during the operation

Receiving of a radio telegram $\qquad$
"Security low/high" or object „Block functions" active
"The device is operational", display of receipt of KNX telegrams


### 8.3 Status of configuration

$\triangle$ The inquiry of the status of the configuration 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 configuration 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 |
| :--- | :--- | :--- | :--- |
| $\boldsymbol{\bullet})$ ) $=$ Green | Radio remote configured | No radio configuration |
| SCR $=$ Yellow | Screen, roller blind with configured running and tilt- <br> ing times | Screen, roller blind without configured running and <br> tilting times |
| EU $=$ Orange | Venetian blind, EU ergonomics with configured <br> running and tilting times | Venetian blind, EU ergonomics without configured <br> running and tilting times |
| US $=$ Red | Venetian blind, US ergonomics with configured <br> running and tilting times | Venetian blind, US ergonomics without configured <br> running and tilting times |

### 8.4 First diagnosis

### 8.4.1 Warning LED ( $\triangle$ ) on the Motor Controller

When an UP or DOWN command is given and the warning LED ( $\triangle$ ) flashes red (excess current), the following points must be checked:

- Short circuit on one of the motor outputs
- Overload, e.g. connected end product is too heavy

|  |  | Venetian blind UP/DOWN | Switch (1-Bit) | 8-Bit value | Dimming/Venetian <br> blinds turn slowly |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | UP button | UP/Step/Stop | ON /OFF/Toggle/ No function | VALUE | ON / Brighter |
| 2 | "my" button | ON/OFF/Toggle /VALUE/ No function |  |  |  |
| 3 | DOWN button | DOWN/Step/Stop | ON/OFF/Toggle/ No function | VALUE | OFF/Darker |



|  |  | Venetian blind UP/DOWN | Switch (1-Bit) | 8-Bit value | Dimming/Venetian blinds turn slowly |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | UP button | UP / Step / Stop | ON / OFF/ Toggle / No function | VALUE | ON / Brighter |
| 2 | "my" button | ON / OFF/Toggle /VALUE/ No function |  |  |  |
| 3 | DOWN button | DOWN / Step/Stop | ON / OFF/ Toggle / No function | VALUE | OFF/ Darker |
| 4 | Scroll wheel | Step/Stop | --- | --- | Brighter / Darker |



| KNX 4 DC 2A Motor Controller | Ref. 1860128 |
| :---: | :---: |
| Supply voltage | 21.5-28VDC |
| Stand-by current (IEC 62301) | 50 mA @ 24 V DC |
| Stand-by power (IEC 62301) | 300 mW@ 24 V DC |
| KNX power supply | KNX voltage 21... 30 V DC, SELV |
| KNX nominal power input | according to KNX guidelines |
| Max. power input (motor) | $4 \times 2,3$ @ 24 V DC |
| Voltage of combined inputs | SELV, $16 \mathrm{VDC}=$ |
| Voltage of local push button inputs | SELV, $16 \mathrm{VDC}=$ |
| Input/output | short circuit protected |
| Connection | Screw connectors |
| Connection KNX | KNX bus terminals (black/red) |
| Running time motor (switch time relais) | max. 5 minutes |
| Operating temperature | $0^{\circ} \mathrm{C}-45^{\circ} \mathrm{C}$ |
| Relative air humidity | 85 \% |
| Housing material | CC-ABS Polycarbonate |
| Housing measurements ( x W $\times$ D) | $180 \times 255 \times 63 \mathrm{~mm}$ |
| Protection degree | IP 20 |
| Protection class | III |
| Conformity | www.somfy.com/ce |

## The Motor Controller is an electronically and manually-operated, independently-mounted control.

```
Software class:
Action:
Pollution degree:
Rated impulse voltage:
Temperature of ball hardness test:
Type of fixing:
Type of fixing for permanently connected wiring:
EMV interference emission check:
```


## A

Type 1
2
4 kV
$75^{\circ} \mathrm{C}$
Type X
Screwless spring terminals
$U_{D C}=24 \mathrm{VDC} \quad \mathrm{I}_{\mathrm{DC}}=9 \mathrm{~A}($ EN 55022 transmission class $B)$

## (i) www.somfy.com/DFS/manuals/

## AUSTRIA

SOMFY GesmbH
www.somfy.at
Tel.: +43 (0) 662625308
AUSTRALIA
SOMFY Pty Limited
www.somfy.com.au
Tel.: +61 (0) 296380744

## BELGIUM

SOMFY NV SA
www.somfy.be
Tel.: +32 (0) 27120770
BRASIL
SOMFY BRASIL Ltda
www.somfy.com.br
Tel.: +55 (0) 1136953585

## CANADA

SOMFY ULC
www.somfysystems.com
Tel.: +1 (0) 9055646446
CHINA
SOMFY China Co Ltd.
www.somfy.com.cn
Tel.: +86 (0) 2162809660
CYPRUS
SOMFY Middle East Co. Ltd.
www.somfy.com
Tel.: +357 (0) 25345540
CZECH REPUBLIC
SOMFY Spol s.r.o
www.somfy.cz
Tel.: +420 (0) 2963724867
DENMARK
SOMFY Nordic AB
www.somfy.dk
Tel.: +45 (0) 65325793

FINLAND
SOMFY Nordic AB
www.somfy.fi
Tel.: +358 (0) 957130230
FRANCE
SOMFY France
www.somfy.fr
Tel.: +33 (0) 450967096
GERMANY
SOMFY GmbH
www.somfy.de
Tel.: +49 (0) 74729300
GREECE
SOMFY Hellas SA
www.somfy.com
Tel.: +30 (0) 2106146768
HONG KONG
SOMFY Co. Ltd.
www.somfy.cn
Tel.: +852 (0) 25236339
HUNGARY
SOMFY Kft
www.somfy.hu
Tel.: +36 (0) 18145120
INDIA
SOMFY India Private Limited
www.somfy.co.in
Tel.: +91 (0) 1146111555

## ISRAEL

SISA HOME AUTOMATION LTD
www.somfy.co.il
Tel.: +972 (0) 39525554
ITALY
SOMFY Italia S.R.L
www.somfy.it
Tel.: +39 (0) 24847181

## JAPAN

SOMFY K.K
www.somfy.co.jp
Tel.: +81 (0) 454750732
KOREA
SOMFY JOO
www.somfy.co.kr
Tel.: +82 (0) 316005250
KUWAIT
SOMFY Kuwait
www.somfy.com
Tel.: +965 (0) 9889467
LEBANON
SOMFY Lebanon
www.somfy.com.lb
Tel.: +961 (0) 1427888
MEXICO
SOMFY MEXICO SA de CD
www.somfy.mx
Tel.: +52 (0) 55477777701
NETHERLANDS
SOMFY Nederland B.V
www.somfy.nl
Tel.: +31 (0) 235544900
NORWAY
SOMFY Nordic AB
www.somfy.no
Tel.: +47 (0) 41576639
POLAND
SOMFY SP Z.0.0
www.somfy.pl
Tel.: +48 (0) 225095300
PORTUGAL
SOMFY Portugal
www.somfy.pt
Tel.: +351 (0) 229396840

RUSSIA
SOMFY LLC
www.somfy.ru
Tel.: +7 (0) 953604186
SINGAPORE
SOMFY PTE LTD
www.somfy.com.sg
Tel.: +65 (0) 63833855
SPAIN
SOMFY Espana SA
www.somfy.es
Tel.: +34 (0) 934800900
SWEDEN
SOMFY Nordic AB
www.somfy.se
Tel.: +46 (0) 40165900
SWITZERLAND
SOMFY AG
www.somfy.ch
Tel.: +41 (0) 18384030
TAIWAN
SOMFY Development Taiwan Branch www.somfy.com.tw Tel.: +886 (0) 226587150

TURKEY
SOMFY Turkiye
www.somfy.com.tr
Tel.: +90 (0) 2166513015
UNITED KINGDOM
SOMFY Ltd.
www.somfy.co.uk
Tel.: +44 (0) 1133913030

## USA

SOMFY Systems Inc.
www.somfysystems.com
Tel.: +1 (0) 6093951300

