# ABB i-bus® EIB / KNX

## Shutter Actuator, 2-fold, 230 V AC, MDRC
## JA/S 2.230.1, GH Q631 0071 R0111



2CDC 071 236 F0003

For controlling 2 independent groups, each with 2 shutter drives via ABB i-bus® including the functions Up/Down, Step/Stop, Move to position, Sun protection automatic control and Heating/cooling automatic control.

The output contacts for the directions UP and DOWN are mechanically interlocked so that voltage cannot be applied at both contacts at the same time. The pause on change in direction can be set via the parameters.

The Shutter Actuator is for DIN rail mounting. It is connected to the ABB i-bus® EIB via Bus connection terminal.

## Technical data

| | | |
|---|---|---|
| **Power supply** | – Operating voltage | 21...30 V DC, via the EIB |
| | – Current input | typ. 10 mA |
| | – Power consumption via EIB | < 250 mW |
| **Outputs** | – Number of outputs | 2 independent outputs, each with 2 changeover contacts (UP/DOWN mechanically interlocked) |
| | – Nominal voltage | 230 V AC |
| | – Max. switching current | 6 A (AC1/AC3) at 230 V AC or 6 A (AC1/AC3) at 400 V AC |
| | – Min. switching current | 100 mA at 5 V or 10 mA at 10 V or 1 mA at 24 V |
| **Operating and display elements** | – Red LED and push button | for entering the physical address |
| **Connections** | – Load circuits | 2 screw terminals for phase connection (e.g. L1 and L2) 2 screw terminals per output for UP and DOWN Wire range: finely-stranded: 0.2 – 2.5 mm² single-core: 0.2 – 4.0 mm² |
| | – EIB | Bus connection terminal (black/red) |
| **Type of protection** | – IP 20, EN 60 529 | |
| **Ambient temperature range** | – Operation | –  5 °C ... + 45 °C |
| | – Storage | – 25 °C ... + 55 °C |
| | – Transport | – 25 °C ... + 70 °C |
| **Design** | – Modular installation device, proM | |
| **Housing, colour** | – Plastic housing, grey | |
| **Mounting** | – on 35 mm mounting rail, DIN EN 50 022 | |
| **Dimensions** | – 90 x 72 x 64 mm (H x W x D) | |
| **Mounting depth/width** | – 68 mm/4 modules at 18 mm | |
| **Weight** | – 0.25 kg | |
| **Mounting position** | – as required | |
| **Certification** | – EIB- and KNX-certified | |
| **CE norm** | – in accordance with the EMC guideline and the low voltage guideline | |

# ABB i-bus® EIB / KNX    Shutter Actuator, 2-fold, 230 V AC, MDRC
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**Application programs**

| | Max. number of communication objects | Max. number of group addresses | Max. number of associations |
|---|---|---|---|
| Shutter, 2f/1 | 63 | 254 | 254 |
| | | | |

**Wiring diagram**

**"Shutter" and "Blinds" operating modes**

**"Ventilation flaps" operating mode**
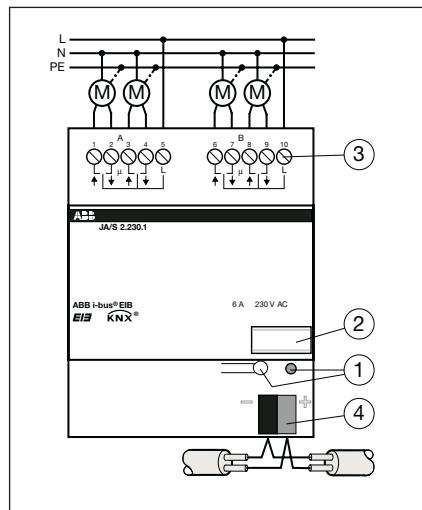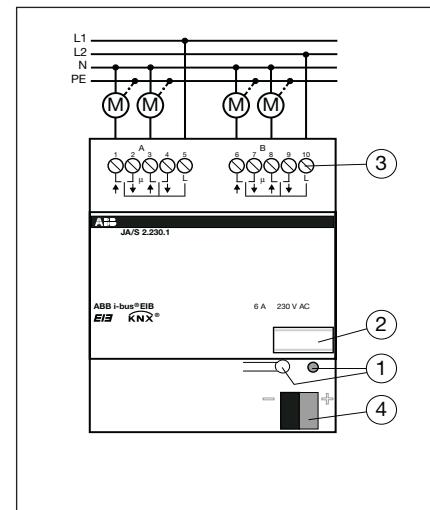


**1** Programming LED, push button    **3** Connection terminals
**2** Marker Tag    **4** Bus terminal

**Dimension drawing**

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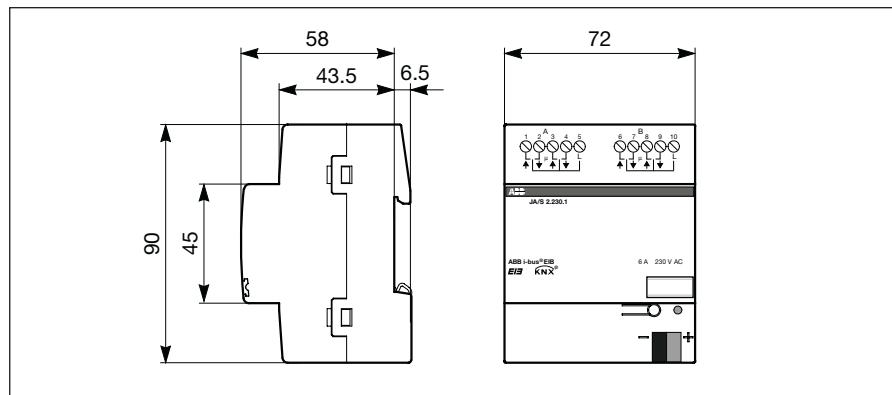
**Note**

The programming is carried out with ETS from version ETS2 V1.2a onwards.

ETS3 note:
For programming the device with the help of the ETS3, the relevant VD3 file must be applied.

To guarantee all the programmable functions, in particular the UP/DOWN directions of travel, it is important to ensure that the drive has been connected properly. The technical data supplied by the drive manufacturer must be taken into account!

If the outputs are switched several times in rapid succession, the switching of the output contacts is delayed.

The following process should be carried out during the initial commissioning of the shutter actuator:

1. Install and wire up the shutter actuator.

2. **First** connect the EIB voltage. The output contacts automatically adopt the neutral position.

3. Only **then** connect the 230 V AC operating voltage for the shutter outputs.

⚠ If the preselected parameter settings have been modified during programming, the output contacts adopt the specified position on bus voltage recovery once the EIB voltage has been connected.

The function "ventilation flaps/switch mode" may be inverted by connecting the load to the "Down" terminal instead of the "Up" terminal (e.g. terminal "2" instead of terminal "3").

⚠ Depending on the position of the output contact, also the non-connected terminals are under voltage!

The Shutter Actuator is supplied with a downloaded application program. It is therefore only necessary to download the group addresses and parameters during commissioning. The complete application program can also be downloaded if required.

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**Shutter, 4f/1**
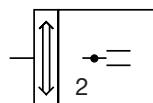


**Selection in ETS2**
– ABB
 └ Shutter
  └ Switch

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## Communication objects in the operating modes
## – "Shutter" and
## – "Blinds"

### "Direct" communication objects

**Move shutter Up-Down**
**Move blinds Up-Down**
If a telegram with the value "0" is received at this communication object, the shutter/blind is raised. If a telegram with the value "1" is received, the shutter/blind is lowered. The output contact reverts to the neutral position once the total travel time has elapsed.

Telegram value:
  "0":    UP
  "1":    DOWN

**Louvre adj. /Stop Up-Down**
**Stop Up-Down**
If the shutter/blind is in motion, the movement is stopped on receipt of a telegram at this communication object, regardless of whether a "0" or a "1" is received.

"Blinds" operating mode: If the shutter is idle, it is raised ("0") or lowered ("1") for the duration of the louvre adjustment and then stopped on receipt of a telegram at this object.

"Shutter" operating mode: If the blind is idle, no action is carried out on receipt of a telegram at this communication object.

Telegram value:
  "0":    Stop/louvre adj. UP
  "1":    Stop/louvre adj. DOWN

**Move to position 0...255**
If a telegram is received at this communication object, the shutter/blind moves to the corresponding position for the received value.

Telegram value:
  "0":    Top
  "...":  Intermediate position
  "255": Bottom

After reaching the target position, the louvres are positioned as before. Only if during the shutter/blind movement a telegram was received on the communication object "Move louvres 0…255", the louvres will be positioned accordingly.

**Move louvres 0...255**
If a telegram is received at this communication object, the louvres are positioned according to the received value. If the shutter/blind is already in motion, it is first moved to the target position and then the positioning of the louvres is carried out.

Telegram value:
  "0":    Louvres opened to maximum
  "...":  Intermediate position
  "255": Louvres closed to maximum

**Move to position 1/2**
**Move to position 3/4**
If a telegram is received at this communication object, the shutter/blind is moved to the stored preset position. In the "Blinds" operating mode, the louvre adjustment is carried out according to the preset position once the position has been reached.

If a telegram with the value "0" is received, the shutter/blind moves to position 1 (or position 3). If a telegram with the value "1" is received, the shutter/blind is moved to position 2 (or position 4).

Telegram value:
  "0":    Move to position 1 or
          Move to position 3
  "1":    Move to position 2 or
          Move to position 4

**Set position 1/2**
**Set position 3/4**
If a telegram is received at this communication object, the current position of the shutter/blind is adopted as the new preset value.

If a telegram with the value "0" is received, the current position is stored as the new preset value for position 1 (or position 3). If a telegram with the value "1" is received, the current position is stored as the new preset value for position 2 (or position 4).
If position 1 or 2 is now recalled (position 3 or 4), the shutter/blind moves to the new preset values.

The modified preset values are retained on bus voltage failure. After programming the shutter actuator, the preset values are reset to the values that were parameterised during the project design stage or the values adapted in operation are stored, depending on parameterization.

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Telegram value:
"0":   Set position 1 or
       Set position 3
"1":   Set position 2 or
       Set position 4

**Shutter Up-Down limited**
**Blinds Up-Down limited**
If a telegram with the value "0" is received at this communication object, the shutter/blind is raised. If a telegram with the value "1" is received, the shutter/blind is lowered. The shutter/blind is stopped if the *Upper limit* or the *Lower limit* of the travelling range is reached.

If telegrams are received on the communication object "Louvre adj./Stop Up-Down", the shutter/blind can be moved in steps external to the set limits.

If the shutter/blind is positioned in a higher position than the upper limit, no reaction will be carried out after a telegram with the value "0" and it is moved down after a telegram with the value "1". If the shutter/blind is positioned in a lower position than the downer limit, no reaction will be carried out after a telegram with the value "1" and it is moved up after a telegram with the value "0".

If the shutter actuator has not carried out a reference movement after programming, bus reset or bus voltage recovery, the shutter/blind is moved completely up or down when receiving a telegram on this communication object. It is not stopped at the upper or lower limit in this case.

Telegram value:
"0":   UP
"1":   DOWN

**Reference movement**
If a telegram is received at this communication object, all the shutters/blinds which have the following settings are fully raised or fully lowe-red:

– the option "deactivated" has not been set for Position after reference movement
– the option "Ventilation flaps/switch mode" has not been set as the Operating mode
– no safety function has been activated and
– manual operation has not been activated.
The saved position is updated and the shutter/blind is moved into the set

Position after reference movement.
If the option "back to saved position" has been selected and automatic control was activated for the shutter/blind prior to the reference movement, automatic control is reactivated once the saved position has been reached.

Telegram value:
"0":   Reference movement right to the top
"1":   Reference movement right to the bottom

**Scene**
Each output can be integrated into up to ten scenes with this communication object. A telegram is received which contains the number of the scene that is addressed together with the information about whether the shutter/blind is moved to the last saved position or whether the current position should be stored as the new preset value.

The stored scene values are retained in the event of a bus voltage failure and if only the parameters are downloaded during programming. If the complete application is downloaded again during programming, the scene value is reset to the position "right at the top".

Telegram code:    MXNNNNNN
  NNNNNN:
  0...63: Scene number
  X:     free (contains no information)
  M:     "0":    Recall scene
         "1":    Store scene

**"Automatic" communication objects**

**Activation of automatic control**
If a telegram with the value "1" is received at this communication object, automatic control is activated for the corresponding output. The output is controlled via the "automatic" communication objects: "Sun", "Presence", "Heating" and "Cooling" as well as "Move to position for sun 0...255" and "Adjust louvres for sun 0...255".

If a telegram with the value "0" is received, the shutter/blind remains in the current position and no longer reacts to incoming telegrams at the "automatic" communication objects.
If the shutter is in the process of carrying out an automatic movement command, the action is carried out.

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Telegram value:
  "0":  Automatic control
        deactivated
  "1":  Automatic control
        activated

**Sun**
Incoming telegrams at this communication object are only taken into account if the communication object "Activation of automatic control" has the value "1".

If a telegram with the value "1" is received at the communication object "Sun", the shutter/blind moves to the set *Position for sun = "1"*. If a telegram with the value "0" is received, the shutter/blind moves to the set *Position for sun = "0"*.

The reaction to an incoming telegram can be carried out with a time delay via the parameters *Delay for sun = "1"* and *Delay for sun = "0"* so that the shutter/blind is not continually raised and lowered when there are frequent changes in the weather. If a telegram with the opposite value is received within the delay period, the shutter/blind does not move to the *Position for sun = "1"* and remains in the *Position for sun = "0"* or vice versa.

If the option "receive position via 8 bit value" has been set for the parameter *Position for sun = "1"*, the output moves once the delay period has elapsed to the position that was last received at the communication objects "Move to position for sun 0...255" ("Shutter" and "Blinds" operating modes) and "Adjust louvres for sun 0...255" ("Blinds" operating mode only).

Telegram value:
  "0":  No sun
  "1":  Sun

**Move to position for sun 0...255**
Incoming telegrams at this communication object are only executed if automatic control has been activated ("Activation of automatic control"= "1") and the sun is shining ("Sun" = "1"). The shutter/blind is then positioned according to the received value.

After reaching the target position, the louvres are positioned as before. Only if during the shutter/blind movement a telegram was received on the communication object "Adjust louvres for sun 0…255", the louvres will be positioned accordingly.

Telegram value:
  "0":  Top
  "...":  Intermediate position
  "255": Bottom

**Adjust louvres for sun 0...255**
Incoming telegrams at this communication object are only executed if automatic control has been activated ("Activation of automatic control"= "1") and the sun is shining ("Sun" = "1"). The louvres are then positioned according to the received value.

The movement command "Move to position for sun 0...255" is always executed first. Once the target position is reached, the positioning of the louvres is carried out.

Telegram value:
  "0":    Louvres opened to maximum
  "...":   Intermediate position
  "255":  Louvres closed to maximum

**Presence**
Incoming telegrams at this communication object are only taken into account if the communication object "Activation of automatic control" has the value "1".

Using the communication object "Presence", it is possible to toggle between automatic sun protection and automatic heating/cooling. If a telegram with the value "1" is received at the object "Presence", the shutter/blind is only controlled via the communication object "Sun" (automatic sun protection). If a telegram with the value "0" is received, the shutter/blind is controlled via the communication objects "Sun", "Heating" and "Cooling" (automatic heating/cooling).

The reaction to an incoming telegram can be carried out with a time delay via the parameters *Delay for presence = "1" and Delay for presence = "0"*.
If a telegram with the opposite value is received within the delay period, the period is restarted. If a telegram with the same value is received, the delay period is not restarted. The shutter/blind moves to the target position once the delay has elapsed.

Telegram value:
  "0":  No-one is present
        (→ automatic heating/cooling)
  "1":  Someone is present
        (→ automatic sun protection)

**Heating**
**Cooling**
Incoming telegrams at these communication objects are only taken into account if the communication object "Activation of automatic control" has the value "1" and the communication object "Presence" has the value "0".

If a telegram with the value "1" is received at the communication object "Heating", the output moves to the set *Position for heating = "1" and sun = "1" or Position for heating = "1" and sun = "0"*.

If a telegram with the value "1" is received at the communication object "Cooling", the output moves to the set *Position for cooling = "1" and sun = "1" or Position for cooling = "1" and sun = "0"*.

If a "0" or a "1" is received at both communication objects, the automatic heating/cooling mode is deactivated and the output is controlled via the automatic sun protection.

Telegram value:
  "0":    No heating/no cooling
  "1":    Heating/cooling

**Enable/disable automatic control**
If a telegram with the value "1" is received at this communication object, automatic control is automatically deactivated and the output can only be controlled via the "direct" commu-nica-tion objects. Automatic control can no longer be activated via the communication object "Activation of automatic control".

If a telegram with the value "0" is received at this communication object, automatic control can be reactivated for the corresponding output.

Telegram value:
  "0":    Automatic control enabled
  "1":    Automatic control disabled

**Enable/block direct operation**
If a telegram with the value "1" is received at this communication object, the output switches automatically from direct operation to automatic control. Automatic control can no longer be deactivated via the communication object "Activation of automatic control" or the "direct" communication objects.

Incoming telegrams at the direct communication objects are not executed.

If a telegram with the value "0" is received at this communication object, automatic control can be deactivated again for the corresponding output.

Telegram value:
  "0":    Direct operation enabled
  "1":    Direct operation blocked

**"Safety" communication objects**

**Wind alarm no. X**
**Rain alarm**
**Frost alarm**
These communication objects expect cyclical telegrams. If a telegram with the value "0" is received within the monitoring period, the associated outputs can be controlled via the "direct" and "automatic" communication objects.

If no telegrams or a telegram with the value "1" are received during the monitoring period, the shutters/blinds are moved to the set *Position for wind alarm* (for rain alarm or frost alarm). Operation via the "direct" and "automatic" communication objects is disabled.

If a telegram with the value "0" is received again for the first time after a weather alarm or once the monitoring period has been exceeded, the shutters/blinds are moved to the *Position on reset of weather alarm, blocking and forced operation* and operation via the "direct" and "auto-matic" communication objects is enabled again.

The monitoring period is restarted after each receipt of a telegram, after the programming of the actuator and on bus voltage recovery.

If the parameter *Position for wind alarm* has been set to "no reaction", a wind alarm is not carried out for the respective output and the cyclical monitoring of the object is not taken into account. The same applies to the rain alarm and frost alarm functions.

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If more than one wind object has been assigned to a shutter/blind, the values in the associated communication objects "Wind alarm no. X" are logically linked via an OR gate i.e. if there is a wind alarm at one of the assigned communication objects (or a telegram is omitted within the monitoring period), the shutter/blind remains in the *Position for wind alarm* until there are no wind alarms at any of the assigned objects.

Telegram value:
  "0":    No alarm
          (operation enabled)
  "1":    Alarm (operation blocked)

**Block**
If a telegram with the value "0" is received at this communication object, the output can be operated via the "direct" and "automatic" communication objects. If a telegram with the value "1" is received, the output moves to the set *Position for blocking*. The operation of the output via the "direct" and "automatic" communication objects is disabled.

If a telegram with the value "0" is received for the first time after a "1", the shutter/blind moves into the *Position on reset of wind alarm, blocking and forced operation* and operation via the "direct" and "auto-matic" communication objects is enabled again.

Telegram value:
  "0":    Operation enabled
  "1":    Operation blocked

**Forced operation**
If a telegram with the value "2" (binary 10) is received at this communication object, the shutter/blind is raised. Operation via the "direct" and "automatic" communication objects is blocked. If a telegram with the value "3" (binary 11) is received, the shutter/blind is lowered. Operation via the "direct" and "automatic" communi-cation objects is blocked.

If a telegram with the value "0" (binary 00) or "1" (binary 01) is received at this communication object, the shutter/blind moves into the *Position on reset of wind alarm, blocking and forced operation* and operation via the "direct" and "automatic" communi-ca-tion objects is enabled again.

Telegram value:
  "0"     (binary 00):
          Operation enabled
  "1"     (binary 01):
          Operation enabled
  "2"     (binary 10):
          UP/operation blocked
  "3"     (binary 11):
          DOWN/operation blocked

**"Status response" communication objects**

⚠ Never set the Write-flag for "Status response" communication objects!

⚠ The "Status response" communication objects don't send their value, in case the value has not been actualized, e.g. if no reference position has been reached after a bus voltage break down!

**Telegr. status of position 0...255**
The Shutter Actuator sends the current position of the shutter/blind to this communication object.

The current position is sent approx. 5 seconds after the completion of a movement. If a new movement is started in the meantime, the current position is only sent once the last action has been completed.

Telegram value:
  "0":    Top
  "...":  Intermediate position
  "255": Bottom

**Telegr. status of louvres 0...255**
The Shutter Actuator sends the current position of the louvres to this communication object. The current position is sent approx. 5 seconds after the completion of a movement. If a new movement is started in the meantime, the current position is only sent once the last action has been completed.

Telegram value:
  "0":    Louvres opened to maximum
  "...":  Intermediate position
  "255": Louvres closed

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**Telegr. status of upper position**
The Shutter Actuator sends the information to this communication object as to whether the shutter/blind is located in the upper limit position or not. The current position is sent approx. 5 seconds after the completion of a movement. If a new movement is started in the meantime, the current position is only sent once the last action has been completed.

Telegram value:
  "0":    Shutter/blind not in upper
          limit position
  "1":    Shutter/blind in upper limit
          position

**Telegr. status of lower position**
The Shutter Actuator sends the information to this communication object as to whether the shutter/blind is located in the lower limit position or not. The current position is sent approx. 5 seconds after the completion of a movement. If a new movement is started in the meantime, the current position is only sent once the last action has been completed.

Telegram value:
  "0":    Shutter/blind not in lower
          limit position
  "1":    Shutter/blind in lower limit
          position

⚠ If on both communication objects "Telegr. status of upper position" and "Telegr. status of lower position" a "1" is sent at the same time, the actuator does not know the position of the shutter/blind. The values of the position communication objects are not valid!

**Telegr. status of operation**
The Shutter Actuator sends the information to this communication object as to whether operation via the "direct" and "automatic" communication objects has been enabled or disabled.

Operation is disabled if one of the "safety" functions has been activated (e.g. wind alarm) or if the Shutter Actuator has been switched to manual operation (e.g. via the push button "Man.") or if both, direct and automatic control is disabled via communication object. The status is sent after a change.

Telegram value:
  "0":    Operation enabled
  "1":    Operation blocked

**Telegr. status of automatic control**
The Shutter Actuator sends the information to this communication object as to whether automatic control (automatic sun protection or automatic heating/cooling) has been activated.

Automatic control is activated if a telegram with the value "1" has been received at the communication object "Activation of automatic control" and neither the safety functions nor manual operation have been activated. The status is sent after a change.

Telegram value:
  "0":    Automatic control not
          activated
  "1":    Automatic control activated

**Telegr. status byte**
The Shutter Actuator sends the information about the current operating mode of the output to this communication object. Only one operating mode can be activated at the same time. The status byte is sent after a change.

Telegram code:    76543210
  "0":    Not activated
  "1":    Activated

  7:    Automatic sun protection
  6:    Automatic heating/cooling
  5:    Wind alarm
  4:    Rain alarm
  3:    Frost alarm
  2:    Forced operation
  1:    Block
  0:    not used

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**Communication objects in the operating mode "Ventilation flaps/switch mode"**

**Ventilation flaps Open-Closed/On-Off**
The output contact closes if a telegram with the value "1" is received at this communication object. The connected ventilation flaps are thereby opened or the connected loads are switched on.

If a telegram with the value "0" is received, the ventilation flaps are closed or the loads are switched off. The output contact reverts to the neutral position.

Telegram value:
  "1":  Open/On
  "0":  Closed/Off

**"Safety" communication objects**
The "safety" communication objects

– Wind alarm no. X
– Rain alarm
– Frost alarm
– Block
– Forced operation

carry out the same function in the operating mode "Ventilation flaps/switch mode" as in the operating modes "Shutter" and "Blinds".

**Telegr. status Open-Closed/On-Off**
If the Shutter Actuator sends the information to this communication object as to whether the ventilation flaps are opened or closed or the connected loads are switched on or off. The current status is always sent after a change.

Telegram value:
  "0":  Ventilation flaps CLOSED/
        switch contact OFF
  "1":  Ventilation flaps OPEN/
        switch contact ON

**Telegr. status of operation**
The Shutter Actuator sends the information to this communication object as to whether operation has been enabled or blocked via the communication objects "Ventilations flaps Open-Closed/On-Off" and "Scene".

Operation is blocked if one of the "safety" functions has been activated (e.g. wind alarm) or if the Shutter Actuator has been switched to manual operation (e.g. via the push button "Man."). The operational status is sent after a change.

Telegram value:
  "0":  Operation enabled
  "1":  Operation blocked

**Telegr. status byte**
The Shutter Actuator sends the information about the current operating mode of the output to this communication object. Only one operating mode can be activated at the same time.

The status byte is sent after a change.

Telegram code:  76543210
  "0":  Not activated
  "1":  Activated

  7:  "0" (not used)
  6:  "0" (not used)
  5:  Wind alarm
  4:  Rain alarm
  3:  Frost alarm
  2:  Forced operation
  1:  Block
  0:  not used

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## Parameters

Some of the parameters of the application program can be hidden or displayed via the button "High Access"/ "Low Access". The default values are deseribed in the technical data sheets.

### "A…X - Safety" parameter window

**Order of priority for safety functions**
For defining the priority between the safety functions of weather alarm, blocking and forced operation.

**Order of priority for weather alarm functions**
For defining the priority between the weather alarm functions of wind alarm, rain alarm and frost alarm.

**Communication object no. X for wind alarm**
If the option "activated" is selected, the communication object "Wind alarm no. X" appears.

**Monitoring period for wind alarm [s]**
**Monitoring period for rain alarm [s]**
**Monitoring period for frost alarm [s]**
For setting the monitoring period for the wind alarm, rain alarm or frost alarm in seconds. The monitoring period in the Shutter Actuator should be at least twice as long as the cyclical sending time of the sensor so that the shutters/blinds are not immediately moved to the alarm position due to the negligible omission of a signal (e.g. due to a high bus load).

If the value of this parameter is set to "0", the monitoring of the communication object is deactivated.

**Rain alarm**
**Frost alarm**
If the option "activated" is selected, the communication object "Rain alarm" or "Frost alarm" appears.

### Parameters in the operating modes "Shutter" and "Blinds"

### "A - General" parameter window

**Operating mode**
The operating mode is set via this parameter. The communication objects and the parameters for the respective output differ depending on the operating mode.

The parameters for the operating modes "Shutter" and "Blinds" are described in the following section.

**Position on bus voltage failure**
For setting the behaviour on bus voltage failure. If the option "no reaction" is set, the output contacts remain in their current position. In the option "Stop", the shutter/blind is halted immediately. The output contact reverts to the neutral position.

**Position on bus voltage recovery**
For setting the behaviour on bus voltage recovery. If the option "no reaction" is set, the output contacts remain in their current position. In the option "Stop", the shutter/blind is halted immediately. The output contact reverts to the neutral position. If the option "Position X" is selected, the shutter/blind first moves right to the top after bus voltage recovery (reference movement) before it travels to the set position.

**Position after programming and bus reset**
For setting the behaviour after programming or bus reset. If the option "no reaction" is set, the output contacts remain in their current position. In the option "Stop", the shutter/blind is halted immediately. The output contact reverts to the neutral position. If the option "Position X" is selected, the shutter/blind first moves right to the top after programming (reference movement) before it travels to the set position.

**Automatic control**
The communication objects "Activation of automatic control" and "Sun" as well as the parameter window "Auto 1" appear if the option "activated" is selected.

**8 bit scene**
If the option "yes" is selected, both the communication object "Scene" and the parameter window "Scene" appear.

**Position after reference movement**
If the option "no reaction" or "back to saved position" is selected, the communication object "Reference movement" appears.

This parameter specifies how the Shutter Actuator behaves after a reference movement. If the option "no reaction" is set, the shutter/blind remains in the reference position i.e. right at the top or right at the bottom. If the option "back to the saved position" is set, the shutter/blind is moved back to the position it occupied prior to the reference movement.
If automatic control was activated for the shutter/blind prior to the reference movement, automatic control is reactivated once the saved position has been reached.

#### "Drive" parameter window

**Total travel time [s]**
For setting the total travel time in seconds.

**Duration of louvre adjustment [ms]**
(only in the "Blinds" operating mode)
For setting the duration of louvre adjustment in milliseconds.

**Pause on change in direction [ms]**
For setting the pause on change in direction in milliseconds.

⚠ The technical data supplied by the manufacturer of the drive must be taken into account!

**Max. number of louvre adjustments**
(only in the "Blinds" operating mode)
For setting the maximum number of louvre adjustments.

**Start-up delay [ms]**
For setting the start-up delay for the drive in milliseconds.

**Deceleration delay [ms]**
For setting the deceleration delay for the drive in milliseconds.

**Limit travelling range**
If the option "yes" is selected, the communication object "Shutter Up-Down limited" or "Blinds Up-down limited" appears together with the parameters "Upper limit" and "Lower limit".

**Upper limit 0..100 %**
**Lower limit 0..100 %**
For setting the upper or lower limit of the travelling range.

#### "Safety" parameter window

**Output reacts to communication object for wind alarm no.**
This parameter specifies which wind alarm objects the output reacts to. The values of the linked communication objects are connected with an OR function.

⚠ This parameter must be set to "Output does not react on wind alarm" if no wind alarm communication object is used!

**Position for wind alarm**
**Position for rain alarm**
**Position for frost alarm**
For setting the behaviour in the event of a weather alarm. In the option "Stop", the shutter/blind is halted immediately. The output contact reverts to the neutral position.
If the option "no reaction" is set, the current movement is carried out in full. If the option "deactivated" is selected, this output does not react to either an alarm or to the monitoring period.

**Disable via communication object**
If the option "activated" is selected, the communication object "Block" appears as well as the parameter *Position for blocking*.

**Position for blocking**
For setting the behaviour during disable mode. If the option "no reaction" is set, the current movement is carried out in full. In the option "Stop", the shutter/blind is halted immediately. The output contact reverts to the neutral position.

**Forced operation (2 bit)**
The communication object "Forced operation" appears if the option "activated" is selected.

**Position on reset of weather alarm, blocking and forced operation**
This parameter defines how the output behaves after a safety alarm. If the option "no reaction" is set, the current movement is carried out in full. In the option "Stop", the shutter/blind is halted immediately. The output contact reverts to the neutral position.
In the option "move to saved position", the shutter/blind moves to the position it occupied prior to the safety alarm.
If automatic control was activated when the safety alarm occurred, it is reactivated.

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If in the meantime telegramms are received on the move to position objects (e.g. "Move to position 1/2" or "Move to position 0…255"), the shutter/blind will be positioned accordingly.

### "Status" parameter window

**Send position: 0…255**
If the option "yes" is selected, the communication objects "Telegr. status of position" ("Shutter" and "Blinds" operating modes) and "Telegr. status of louvres" (only in "Blinds" operating mode) appear.

**Send position: limit position reached**
If the option "yes" is selected, the communication objects "Telegr. status of upper position" and "Telegr. status of lower position" appear.

**Send status of operation**
If the option "yes" is selected, the communication object "Telegr. status of operation" appears.

**Send status of automatic control**
If the option "yes" is selected, the communication object "Telegr. status of automatic control". This parameter is only visible, if the option "activated" is selected for the parameter *Automatic control* in the "General" parameter window.

**Send status byte**
The communication object "Telegr. status byte" appears if the option "yes" is selected.

### "Pos. 1" parameter window

**Move to position 0...255**
If the option "activated" is selected, the communication objects "Move to position 0...255" (in "Shutter" and "Blinds" operating modes) as well as "Move louvres 0...255" (only in "Blinds" operating mode).

**Objects for "Move to position"**
**Objects for "Set position"**
If the option "activated" is selected, the communication objects "Move to position 1/2" and "Set position 1/2" or "Move to position 3/4" and "Set position 3/4" appear as well as the parameter window "Pos. 2".

**Move to position**
If the option "directly" is selected, the shutter/blind moves directly from the current position to the new target position.

If the option "indirectly via top" or "indirectly via bottom" is selected, the shutter/blind first moves completely up or completely down and then into the target position.

If the option "indirectly via shortest way is selected, the shutter/blind first moves completely up or completely down, depending on which detour is the shortest, and then into the target position.

### "Pos. 2" parameter window

**Overwrite preset values during download**
Options: – yes
– no

This parameter defines whether the preset values stored in the Shutter Actuator should be overwritten during a download with the parameterised preset values. If the option "yes" is selected, the communication objects *Position X: Blinds 0…100* % and *Position X: Louvres 0…100* % appear.

If individual preset values have already been specified by the user during operation, this parameter should be set to "no" so that these individual positions are retained.

**Position X: Shutter 0...100 % or Position X: Blinds 0...100 %**

For setting the preset value for the height of the shutter/blind when moving into a preset position.

**Position X: Louvres 0...100 %**
For setting the preset value for louvre adjustment when moving into a preset position.

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### "Auto 1" parameter window

This parameter window is only visible, if the option "activated" is selected for the parameter *Automatic control* in the "General" parameter window.

**Deactivation of automatic control**
This parameter defines whether automatic control should only be deactivated via the communication object "Activation of automatic control" or via the "direct" communication objects in addition.

If the second option is selected and a telegram is received at a "direct" communication object when automatic control is activated, automatic control is deactivated and the direct movement command is carried out.

**Toggling to automatic control**
**Toggling to direct operation**
This parameter specifies whether toggling to automatic control or direct operation is enabled or disabled. If the option "enable/disable via communication object" is selected, the communication object "Enable/disable automatic control" or "Enable/block direct operation" appears.

**Position for sun = "1" (sun)**
For setting the behaviour if the sun = "1" (sun) in automatic sun protection mode. If the option "receive position via 8 bit value" is selected, the communication objects "Move to position for sun 0...255" and "Adjust louvres for sun 0..255" appear. If the option "no reaction" is set, the current movement is carried out in full. In the option "Stop", the shutter/blind is halted immediately. The output contact reverts to the neutral position.

**Position for sun = "0" (no sun)**
For setting the behaviour if the sun = "0" (no sun) in automatic sun protection mode. If the option "no reaction" is set, the current movement is carried out in full. In the option "Stop", the shutter/blind is halted immediately. The output contact reverts to the neutral position.

**Delay for sun = "1" [s]**
**Delay for sun = "0" [s]**
For setting the delay in seconds when activating the *Position for sun = "1" or Position for sun = "0"*.

**Automatic heating/cooling**
If the option "activated" is selected, the communication objects "Presence", "Heating" and "Cooling" appear as well as the parameter window "Auto 2".

### "Auto 2" parameter window

This parameter window is only visible, if the option "activated" is selected for the parameter *Automatic heating/cooling* in the "Auto 1" parameter window.

**Delay for presence = "0" [s]**
**Delay for presence = "1" [s]**
For setting the delay in seconds when toggling between automatic sun protection and automatic heating/cooling.

**Position for heating = "X"**
**and sun = "X"**
For setting the behaviour when the sun = "1" (sun) or sun = "0" (no sun) in heating mode (Heating = "1") or in cooling mode (Cooling = "1"). If the option "no reaction" is set, the outputs remain in their current position. In the option "Stop", the shutter/blind is halted immediately. The output contact reverts to the neutral position.

### "Scene" parameter window

This parameter window is only visible, if the option "activated" is selected for the parameter *8-bit-scene* in the "General" parameter window.

**Scene assignment (X)**
This parameter defines into which scenes the shutter/blind should be integrated. Each shutter/blind can be integrated in up to 10 out of a total of 64 scenes per group address.

## Parameters in the operating mode "Ventilation flaps/switch mode"

### "A - General" parameter window

**Operating mode**
The operating mode is set via this parameter. The communication objects and the parameters for the respective output differ according to the operating mode. The following section describes the parameters for the operating mode "Ventilation flaps/switch mode".

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**Position on bus voltage failure**
For setting the behaviour on bus voltage failure. In the option "Closed-Off", the output contact reverts to the neutral position.

**Position on bus voltage recovery**
For setting the behaviour on bus voltage recovery. In the option "Closed-Off", the output contact reverts to the neutral position.

**Position after programming and bus reset**
For setting the behaviour after programming or bus reset. In the option "Closed-Off", the output contact reverts to the neutral position.

**Staircase lighting function**
The staircase lighting function is activated via this parameter. If "activated" is selected, the parameter *Duration/opening time for staircase lighting* appears.

**Duration/opening time for staircase lighting [s]**
For setting the duration/opening time for staircase lighting in seconds.

  **"Safety" parameter window**

**Output reacts to communication object for wind alarm no.**
This parameter defines which wind alarm objects the output reacts to. The values of the linked communication objects are connected via an OR function.

**Position for wind alarm**
**Position for rain alarm**
**Position for frost alarm**
For setting the behaviour in the event of a weather alarm. In the option "Closed-Off", the output contact reverts to the neutral position.

If the option "no reaction" is set, the current movement is carried out in full.

If the option "deactivated" is selected, this output does not react to an alarm or to the monitoring period.

**Disable via communication object**
If the option "activated" is selected, the communication object "Block" appears as well as the parameter *Position for blocking*.

**Position for blocking**
For setting the behaviour during disable mode. If the option "no reaction" is set, the output contacts remain in their current position. In the option "Closed-Off", the output contact reverts to the neutral position.

**Forced operation (2 bit)**
The communication object "Forced operation" appears if the option "activated" is selected.

**Position on reset of weather alarm, blocking and forced operation**
This parameter defines how the output behaves after a safety alarm. If the option "no reaction" is set, the output contacts remain in their current position. In the option "Closed", the output contact reverts to the neutral position.

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  **"Status" parameter window**

**Send position: Open-Closed/On-Off**
If the option "yes" is selected, the communication object "Telegr. status Open-Closed/On-Off" appears.

**Send status of operation**
If the option "yes" is selected, the communication object "Telegr. status of operation" appears.

**Send status byte**
The communication object "Telegr. status byte" appears if the option "yes" is selected.

**"Direct" communication objects**
in "Blinds" operating mode
using "Output A" as an example

| No. | Type | Object name | Function |
|-----|------|-------------|----------|
| 11 | 1 bit | Output A | Move blinds Up-Down |
| 12 | 1 bit | Output A | Louvre adj./Stop Up-Down |
| 13 | 1 byte | Output A | Move to position 0…255 |
| 14 | 1 byte | Output A | Move louvres 0...255 |
| 15 | 1 bit | Output A | Move to position 1/2 |
| 16 | 1 bit | Output A | Move to position 3/4 |
| 17 | 1 bit | Output A | Set position 1/2 |
| 18 | 1 bit | Output A | Set position 3/4 |
| 19 | 1 bit | Output A | Blinds Up-Down limited |
| 20 | 1 bit | Output A | Reference movement |
| 21 | 1 byte | Output A | Scene |

**"Direct" communication objects**
in "Shutter" operating mode
using "Output A" as an example

| No. | Type | Object name | Function |
|-----|------|-------------|----------|
| 11 | 1 bit | Output A | Move shutter Up-Down |
| 12 | 1 bit | Output A | Stop Up-Down |
| 13 | 1 byte | Output A | Move to position 0…255 |
| 15 | 1 bit | Output A | Move to position 1/2 |
| 16 | 1 bit | Output A | Move to position 3/4 |
| 17 | 1 bit | Output A | Set position 1/2 |
| 18 | 1 bit | Output A | Set position 3/4 |
| 19 | 1 bit | Output A | Shutter Up-Down limited |
| 20 | 1 bit | Output A | Reference movement |
| 21 | 1 byte | Output A | Scene |

**"Automatic" communication objects**
in "Blinds" operating mode
using "Output A" as an example

| No. | Type | Object name | Function |
|-----|------|-------------|----------|
| 22 | 1 bit | Output A | Activation of automatic control |
| 23 | 1 bit | Output A | Sun |
| 24 | 1 byte | Output A | Move to position for sun 0…255 |
| 25 | 1 byte | Output A | Adjust louvres for sun 0…255 |
| 26 | 1 bit | Output A | Presence |
| 27 | 1 bit | Output A | Heating |
| 28 | 1 bit | Output A | Cooling |
| 29 | 1 bit | Output A | Enable/disable automatic control |
| 30 | 1 bit | Output A | Enable/block direct operation |

**"Automatic" communication objects**
in "Shutter" operating mode
using "Output A" as an example

| No. | Type | Object name | Function |
|-----|------|-------------|----------|
| 22 | 1 bit | Output A | Activation of automatic control |
| 23 | 1 bit | Output A | Sun |
| 24 | 1 byte | Output A | Move to position for sun 0...255 |
| 26 | 1 bit | Output A | Presence |
| 27 | 1 bit | Output A | Heating |
| 28 | 1 bit | Output A | Cooling |
| 29 | 1 bit | Output A | Enable/disable automatic control |
| 30 | 1 bit | Output A | Enable/block direct operation |

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**"Safety" communication objects**
All operating modes
General for all outputs A...B or using
"Output A" as an example

| No. | Type | Object name | Function |
|-----|------|-------------|----------|
| 1 | 1 bit | Output A...B | Wind alarm no. 1 |
| 2 | 1 bit | Output A...B | Wind alarm no. 2 |
| 3 | 1 bit | Output A...B | Wind alarm no. 3 |
| 4 | 1 bit | Output A...B | Rain alarm |
| 5 | 1 bit | Output A...B | Frost alarm |
| 31 | 1 bit | Output A | Block |
| 32 | 2 bit | Output A | Forced operation |

**"Status response" communication objects**
In the "Blinds" operating mode
using "Output A" as an example

| No. | Type | Object name | Function |
|-----|------|-------------|----------|
| 33 | 1 byte | Output A | Telegr. status of position |
| 34 | 1 byte | Output A | Telegr. status of louvres |
| 35 | 1 bit | Output A | Telegr. status of upper position |
| 36 | 1 bit | Output A | Telegr. status of lower position |
| 37 | 1 bit | Output A | Telegr. status of operation |
| 38 | 1 bit | Output A | Telegr. status of automatic control |
| 39 | 1 byte | Output A | Telegr. status byte |

**"Status response" communication objects**
In the "Shutter" operating mode
using "Output A" as an example

| No. | Type | Object name | Function |
|-----|------|-------------|----------|
| 33 | 1 byte | Output A | Telegr. status of position |
| 35 | 1 bit | Output A | Telegr. status of upper position |
| 36 | 1 bit | Output A | Telegr. status of lower position |
| 37 | 1 bit | Output A | Telegr. status of operation |
| 38 | 1 bit | Output A | Telegr. status of automatic control |
| 39 | 1 byte | Output A | Telegr. status byte |

**Other communication objects**
In the operating mode
"Ventilation flaps/switch mode"
using "Output A" as an example

| No. | Type | Object name | Function |
|-----|------|-------------|----------|
| 11 | 1 bit | Output A | Ventilation flaps Open-Closed/On-Off |
| 37 | 1 bit | Output A | Telegr. status Open-Closed/On-Off |
| 38 | 1 bit | Output A | Telegr. status of operation |
| 39 | 1 byte | Output A | Telegr. status byte |

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**General parameters**
General for all outputs A...B.
The default setting for the values is
**printed in bold type.**

| "A...X - Safety" parameter window | |
| --- | --- |
| – Order of priority for safety functions | **1.Weather alarm-2.Block-3.Forced operation** |
| | 1.Weather alarm-2.Forced operation-3.Block |
| | 1.Block-2.Weather alarm-3.Forced operation |
| | 1.Block-2.Forced operation-3.Weather alarm |
| | 1.Forced operation-2.Block-3.Weather alarm |
| | 1.Forced operation-2.Weather alarm-3.Block |
| – Order of priority for weather alarm functions | **1.Wind alarm-2.Rain alarm-3.Frost alarm** |
| | 1.Wind alarm-2.Frost alarm-3.Rain alarm |
| | 1.Rain alarm-2.Wind alarm-3.Frost alarm |
| | 1.Rain alarm-2.Frost alarm-3.Wind alarm |
| | 1.Frost alarm-2.Rain alarm-3.Wind alarm |
| | 1.Frost alarm-2.Wind alarm-3.Rain alarm |
| – Communication object no. 1 for wind alarm | activated/**deactivated** |
| – Communication object no. 2 for wind alarm | activated/**deactivated** |
| – Communication object no. 3 for wind alarm | activated/**deactivated** |
| – Monitoring period for wind alarm [s] | 0..1,000 **(0)** |
| – Rain alarm | activated/**deactivated** |
| Only if "activated": | |
| – Monitoring period for rain alarm [s] | 0..1,000 **(0)** |
| – Frost alarm | activated/**deactivated** |
| Only if "activated": | |
| – Monitoring period for frost alarm [s] | 0..1,000 **(0)** |

## Parameters

Separate for each output in the operating modes "Shutter" and "Blinds". The default setting for the values is **printed in bold type.**

### "A - General" parameter window

| | |
|---|---|
| – Operating mode | Shutter/**Blinds**/Ventilation flaps/switch mode |
| – Position on bus voltage failure | no reaction/Up/Down/**Stop** |
| – Position on bus voltage recovery Position 2/Position 3/Position 4 | no reaction/Up/Down/**Stop**/Position 1/ |
| – Position after programming and bus reset | no reaction/Up/Down/**Stop**/Position 1/ Position 2/Position 3/Position 4 |
| – Automatic control | activated/**deactivated** |
| – 8 bit scene | activated/**deactivated** |
| – Position after reference movement | no reaction/ move to saved position/**deactivated** |

### "Drive" parameter window

| | |
|---|---|
| – Total travel time [s] | 0..6,000 **(60)** |
| Only if "Operating mode" = "Blinds" | |
| – Duration of louvre adjustment [ms] | 50..1,000 **(200)** |
| – Pause on change in direction | 50..10,000 **(500)** |
| Only if "Operating mode" = "Blinds" | |
| – Max. number of louvre adjustments | 1..60 **(7)** |
| – Start-up delay [ms] | 0..255 **(0)** |
| – Deceleration delay [ms] | 0..255 **(0)** |
| – Limit travelling range | yes/**no** |
| Only if "yes" is selected: | |
| – Upper limit 0...100 % (0 % = top; 100 % = bottom) | 0..100 **(0)** |
| – Lower limit 0...100 % (0 % = top; 100 % = bottom) | 0..100 **(100)** |

### "Safety" parameter window

| | |
|---|---|
| – Output reacts to communication object for wind alarm no. | **Output does not react on wind alarm**/ 1/2/3/1+2/1+3/2+3/1+2+3 |
| – Position for wind alarm | **deactivated**/ activated – up/ activated – down/ activated – no reaction |
| – Position for rain alarm | **deactivated**/ activated – up/ activated – down/ activated – no reaction |
| – Position for frost alarm | **deactivated**/ activated – up/ activated – down/ activated – no reaction |
| – Disable via communication object | activated/**deactivated** |
| Only if "activated" | |
| – Position for blocking | **no reaction**/Up/Down/Stop/Position 1/ Position 2/Position 3/Position 4 |
| – Forced operation | activated/**deactivated** |
| – Position on reset of weather alarm, blocking and forced operation | no reaction/**Stop**/ move to saved position |

**"Status" parameter window**

| | |
|---|---|
| – Send position: 0...255 | yes/**no** |
| – Send position: limit position reached | yes/**no** |
| – Send status of operation | yes/**no** |
| Only if "Automatic control" = "activated" | |
| – Send status of automatic control | yes/**no** |
| – Send status byte | yes/**no** |

Only if "Move to position" = "activated"
**"Pos. 1" parameter window**

| | |
|---|---|
| – Move to position 0...255 (8 bit value) | activated/**deactivated** |
| – Objects for "Move to Position" (1 bit preset) | activated/**deactivated** |
| Only if "Objects for "Move to Position"' = "activated" | |
| – Objects for "Set Position" (1 bit preset) | activated/**deactivated** |
| – Move to position | **directly**/indirectly via top/indirectly via bottom/indirectly via shortest way |

In the "Blinds" operating mode

Only if "Objects for "Move to Position"' = "activated"
**"Pos. 2" parameter window**

| | |
|---|---|
| – Overwrite preset values during download | **yes**/no |
| only if "Overwrite preset values during download" = "yes" | |
| – Position 1: Blinds 0...100 % (0 % = top; 100 % = bottom) | 0...100 **(20)** |
| – Position 1: Louvres 0...100 % (0 % = open; 100 % = closed) | 0...100 **(20)** |
| – Position 2: Blinds 0...100 % (0 % = top; 100 % = bottom) | 0...100 **(40)** |
| – Position 2: Louvres 0...100 % (0 % = open; 100 % = closed) | 0...100 **(40)** |
| Only if "Objects for Set Position"' = "activated" | |
| – Position 3: Blinds 0...100 % (0 % = top; 100 % = bottom) | 0...100 **(60)** |
| – Position 3: Louvres 0...100 % (0 % = open; 100 % = closed) | 0...100 **(60)** |
| – Position 4: Blinds 0...100 % (0 % = top; 100 % = bottom) | 0...100 **(80)** |
| – Position 4: Louvres 0...100 % (0 % = open; 100 % = closed) | 0...100 **(80)** |

In the "Shutter" operating mode

Only if "Objects for "Move to Position"' = "activated"

**"Pos. 2" parameter window**

| | |
|---|---|
| – Overwrite preset values during download | **yes**/no |
| only if "Overwrite preset values during download" = "yes" | |
| – Position 1: Shutter 0...100 % | 0...100 **(20)** |
| (0 % = top; 100 % = bottom) | |
| – Position 2: Shutter 0...100 % | 0...100 **(40)** |
| (0 % = top; 100 % = bottom) | |
| Only if "Objects for Set Position"' = "activated" | |
| – Position 3: Shutter 0...100 % | 0...100 **(60)** |
| (0 % = top; 100 % = bottom) | |
| – Position 4: Shutter 0...100 % | 0...100 **(80)** |
| (0 % = top; 100 % = bottom) | |

Only if "Automatic control" = "activated"

**"Auto 1" parameter window**

| | |
|---|---|
| – Deactivation of automatic control | via object "Activation of automatic control"/ **via object "Activation of automatic control" and direct objects** |
| – Toggling to automatic control | enabled/ **enable/disable via communication object** |
| – Toggling to direct operation | enabled/ **enable/disable via communication object** |
| – Position for sun = "1" | no reaction/Up/**Down**/Stop/ |
| (sun) | Position 1/Position 2/Position 3/Position 4/ receive position via 8 bit value |
| – Position for sun = "0" | no reaction/**Up**/Down/Stop/ |
| (no sun) | Position 1/Position 2/Position 3/Position 4 |
| – Delay for sun = "1" [s] | 0...6,000 **(60)** |
| – Delay for sun = "0" [s] | 0...6,000 **(240)** |
| – Automatic heating/cooling | activated/**deactivated** |

Only if "Automatic heating/cooling" = "activated"

**"Auto 2" parameter window**

| | |
|---|---|
| – Delay for presence = "1" [s] | 0...6,000 **(0)** |
| – Delay for presence = "0" [s] | 0...6,000 **(600)** |
| – Position for heating = "1" and | no reaction/**Up**/Down/Stop/Position 1/ |
| sun = "1" | Position 2/Position 3/Position 4 |
| – Position for heating = "1" and | **no reaction**/Up/Down/Stop/Position 1/ |
| sun = "0" | Position 2/Position 3/Position 4 |
| – Position for cooling = "1" and | no reaction/Up/**Down**/Stop/Position 1/ |
| sun = "1" | Position 2/Position 3/Position 4 |
| – Position for cooling = "1" and | **no reaction**/Up/Down/Stop/Position 1/ |
| sun = "0" | Position 2/Position 3/Position 4 |

Only if "8 bit scene" = "activated"

**"Scene" parameter window**

| | |
|---|---|
| – Scene assignment (1) | **no assignment**/0...63 |
| – Scene assignment (2) | **no assignment**/0...63 |
| – Scene assignment (3) | **no assignment**/0...63 |
| – Scene assignment (4) | **no assignment**/0...63 |
| – Scene assignment (5) | **no assignment**/0...63 |
| – Scene assignment (6) | **no assignment**/0...63 |
| – Scene assignment (7) | **no assignment**/0...63 |
| – Scene assignment (8) | **no assignment**/0...63 |
| – Scene assignment (9) | **no assignment**/0...63 |
| – Scene assignment (10) | **no assignment**/0...63 |

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**Parameters**
Separate for each output in the operating mode "Ventilation flaps/switch mode".
The default setting for the values is **printed in bold type.**

| **"A - General" parameter window** | |
|---|---|
| – Operating mode | Shutter/**Blinds**/ Ventilation flaps/switch mode |
| – Position on bus voltage failure | Closed-Off/**Open-On**/no reaction |
| – Position on bus voltage recovery | Closed-Off/**Open-On**/no reaction |
| – Position after programming and bus reset | Closed-Off/**Open-On**/no reaction |
| – Staircase lighting function | activated/**deactivated** |
| Only if "activated": | |
| – Duration/opening time for staircase lighting [s] | 0...30,000 **(60)** |

| **"Safety" parameter window** | |
|---|---|
| – Output reacts to communication object for wind alarm no. | **Output does not react on wind alarm**/ 1/2/3/1+2/1+3/2+3/1+2+3 |
| – Position for wind alarm | activated – closed-off/ activated – open-on/ activated – no reaction/ **deactivated** |
| – Position for rain alarm | activated – closed-off/ activated – open-on/ activated – no reaction/ **deactivated** |
| – Position for frost alarm | activated – closed-off/ activated – open-on/ activated – no reaction/ **deactivated** |
| – Disable via communication object | activated/**deactivated** |
| Only if "activated": | |
| – Position for blocking | Closed-Off/**Open-On**/no reaction |
| – Forced operation | activated/**deactivated** |
| – Position on reset of weather alarm, blocking and forced operation | Closed-Off/**Open-On**/no reaction |

| **"Status" parameter window** | |
|---|---|
| – Send position: Open-Closed/On-Off | yes/**no** |
| – Send status of operation | yes/**no** |
| – Send status byte | yes/**no** |

**7**