

MAY 2020

KNX Combi-, Standard-, Professional Switch Actuators - ETS Application

Online Learning Session – Competence Center Europe – Smart Buildings

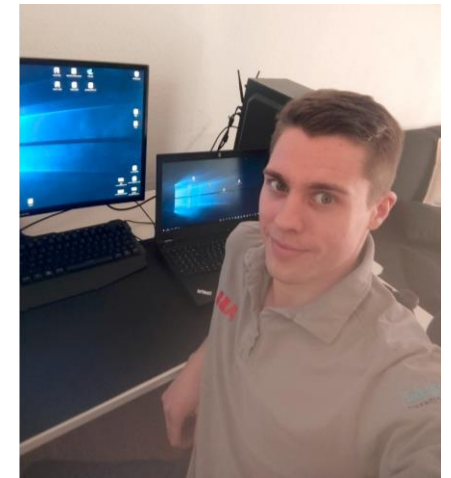
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Online Learning Session – Competence Center Europe - Smart Buildings



ABB STOTZ-KONTAKT GmbH
Heidelberg / Germany

From home office to home office



Agenda

Overview Combi- Standard- Professional Switch Actuators

ETS Application “KNX Combi-, Standard-, Professional Switch Actuators”

KNX Combi-, Standard-, Professional Switch Actuators - ETS Application

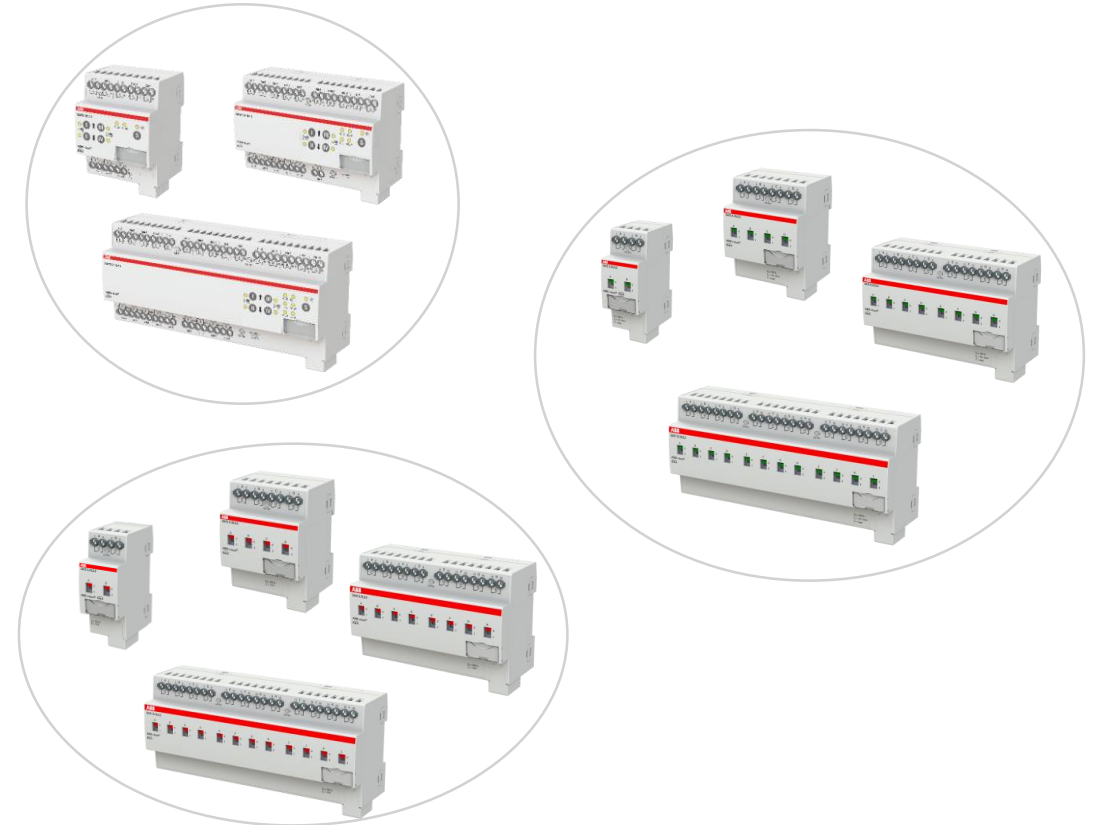
Overview Combi- Standard- Professional Switch Actuators

KNX Combi-, Standard-, Professional Switch Actuators - ETS Application

Overview

Main Features

- Big range of devices – 29 components, and more will come
- Split into 3 types:
 - **Combi Switch Actuators** – Combination of switching and shutter functionality with innovative manual operation, up to 24 channels and small size (Module Width)
 - **Standard Switch Actuators** - ‘High-runner’ types for all standard switching applications
 - **Professional Switch Actuators** - High-switching-capacity devices with extended functionality for industry standard applications
- Devices are prepared for future extensions
- **Coming soon ...**
 - ABB i-bus® Tool integration
 - Professional Switch Actuators with Energy functions



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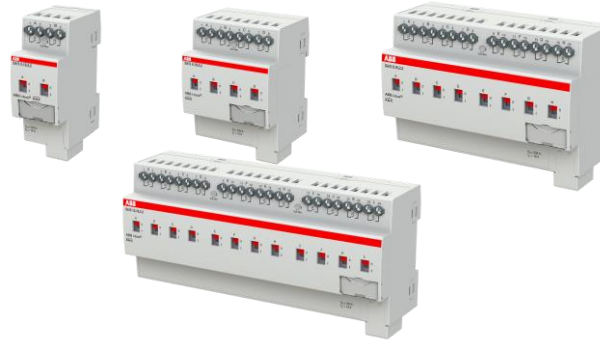
Next Generation Switching

Combi Switch Actuators



- Compact + switch/shutter modes
- 8 (4MW), 16 (8MW) & 24 (12 MW) channels
- 6A, 10A & 16A - AC1 ratings
- 3 x 3 devices

Standard Switch Actuators



- 2, 4, 8 & 12 channels
- 6A, 10A & 16A - AC1 ratings
- 3 x 4 devices

Professional Switch Actuators



- 2, 4, 8 & 12 channels
- 16/20A C-load
- 2 x 4 devices

Residential



Applications



Commercial

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ETS Application

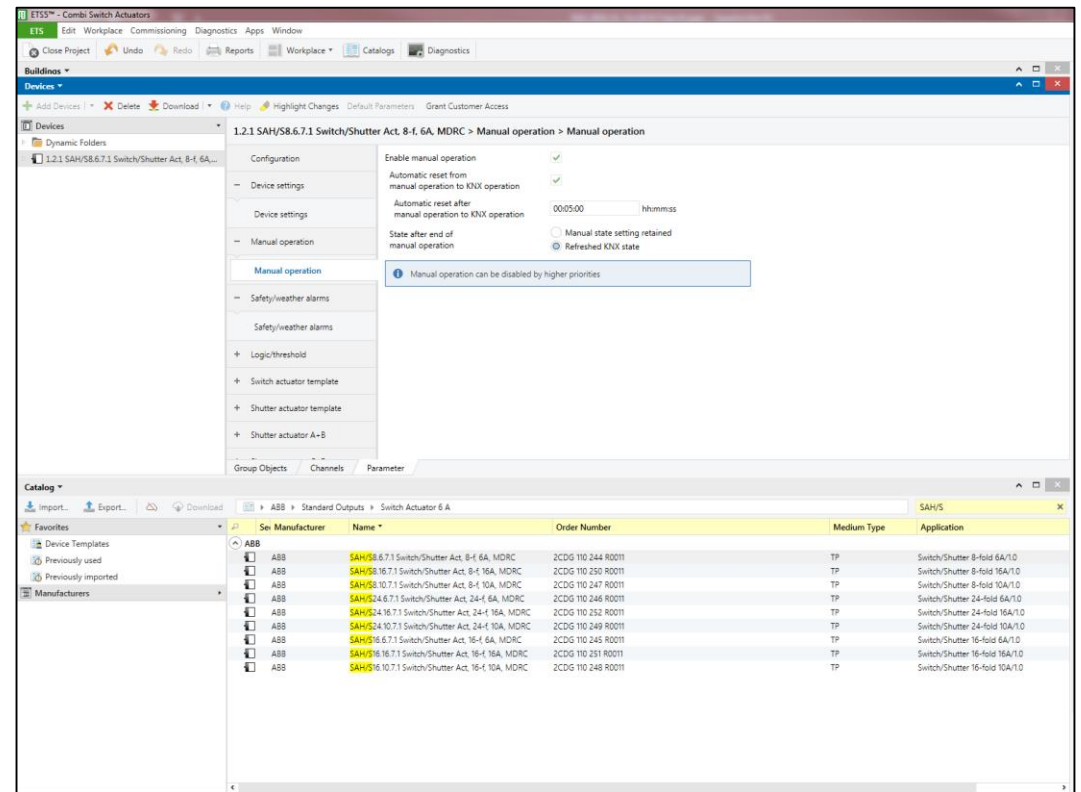
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ETS Application Combi Switch Actuator

Overview

ETS Application with comprehensive functions but satisfying user experience

- Templates for switch- and shutter functions
- Freely programmable logic independent of the output channels (AND, OR, Exclusive OR, GATE) and threshold functions
- Full functionality of shutter outputs (Safety/Weather alarm, automatic sun protection, scenes, blocking, forced operation), but no travel time detection
- Switch outputs with time functions (Staircase, Delay, Flashing), safety, forced operation, blocking, 16 scenes (1 byte)
- Central objects (switching, shutter functions, scenes)
- Colored hints simplify work
- ETS5 is required



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ETS Application Standard/Professional Switch Actuator

Overview

ETS Application with comprehensive functions and satisfying user experience

Application like Combi Switch Actuator but without shutter functionality and parameter manual operation

- Templates for switch functions
- Freely programmable logic independent of the output channels (AND, OR, Exclusive OR, GATE) and threshold functions
- Switch outputs with time functions (Staircase, Delay, Flashing), forced operation, blocking, 16 scenes (1 byte)
- Central objects (switching and scenes)
- Colored hints simplify work
- ETS5 is required

The screenshot shows the ETS5 configuration window for a switch actuator. The left sidebar lists the 'Devices' tree with a folder 'Dynamic Folders' and two actuator objects: 'SA/S2.16.5.2 Switch Act, 2f, 16C, MDRC' and 'SA/S2.6.2.2 Switch Act, 2f, 6A, MDRC'. The main area is titled 'SA/S2.16.5.2 Switch Act, 2f, 16C, MDRC > Configuration'. It features a 'Configuration' tab and a 'Device settings' section. The 'Device settings' section includes a 'Safety' subsection with a list of logic/thresholds: 'Enable Logic/threshold 1-4' (checked), 'Enable Logic/threshold 5-8' (unchecked), 'Enable Logic/threshold 9-12' (unchecked), 'Enable Logic/threshold 13-16' (unchecked), 'Enable Logic/threshold 17-20' (unchecked), and 'Enable Logic/threshold 21-24' (unchecked). Below this, there are two input fields: 'Maximum number of sent telegrams' set to 20 and 'In period (0 = deactivated)' set to 01 ss.

i The objects "Safety priority 1-3" are enabled on the Safety/weather alarms page. The order specifies the priority of the safety functions.

i Observe the contact life and switching cycles per minute. For more information, see product manual.

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ETS

Configuration

- Enabling of channels
 - Better overview, less parameter and group objects

1.2.1 SAH/S8.16.7.1 Switch/Shutter Act, 8-f, 16A, MDRC > Configuration

Configuration	Enable output A + B	<input checked="" type="checkbox"/>
	Enable output C + D	<input checked="" type="checkbox"/>
	Enable output E + F	<input checked="" type="checkbox"/>
	Enable output G + H	<input checked="" type="checkbox"/>
- Device settings		
Device settings		
+ Manual operation	Enable Logic/threshold 1-4	<input checked="" type="checkbox"/>
	Enable Logic/threshold 5-8	<input checked="" type="checkbox"/>
+ Safety/weather alarms	Enable Logic/threshold 9-12	<input type="checkbox"/>
+ Logic/threshold	Enable Logic/threshold 13-16	<input type="checkbox"/>
	Enable Logic/threshold 17-20	<input type="checkbox"/>
+ Switch actuator template	Enable Logic/threshold 21-24	<input type="checkbox"/>
+ Shutter actuator template	Maximum number of sent telegrams	20
+ Switch actuator A	In period	01 ss

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ETS

Configuration

- Enabling of channels
 - Better overview, less parameter and group objects
- Enabling of logic and thresholds
 - 24 individual logic or threshold functions for each Switch Actuator, independent of the outputs, therefore more flexibility compared with former devices

1.2.1 SAH/S8.16.7.1 Switch/Shutter Act, 8-f, 16A, MDRC > Configuration

Configuration	Enable output A + B	<input checked="" type="checkbox"/>
	Enable output C + D	<input checked="" type="checkbox"/>
	Enable output E + F	<input checked="" type="checkbox"/>
	Enable output G + H	<input checked="" type="checkbox"/>
– Device settings		
Device settings		
+ Manual operation	Enable Logic/threshold 1-4	<input checked="" type="checkbox"/>
	Enable Logic/threshold 5-8	<input checked="" type="checkbox"/>
+ Safety/weather alarms	Enable Logic/threshold 9-12	<input type="checkbox"/>
	Enable Logic/threshold 13-16	<input type="checkbox"/>
+ Logic/threshold	Enable Logic/threshold 17-20	<input type="checkbox"/>
	Enable Logic/threshold 21-24	<input type="checkbox"/>
+ Switch actuator template		
+ Shutter actuator template	Maximum number of sent telegrams	20
+ Switch actuator A	In period	01 ss

KNX Combi-, Standard-, Professional Switch Actuators - ETS Application

ETS

Configuration

- Enabling of channels
 - Better overview, less parameter and group objects
- Enabling of logic and thresholds
 - 24 individual logic or threshold functions for each Switch Actuator, independent of the outputs, more flexibility compared with former devices
- Limitation for **sent** telegrams (3...100 telegrams in a period of 0...59 s)
 - Time 0s means deactivated limitation
 - Important with multi channel devices in case of central functions and status telegrams, it avoids bus overload

1.2.1 SAH/S8.16.7.1 Switch/Shutter Act, 8-f, 16A, MDRC > Configuration

Configuration	Enable output A + B	<input checked="" type="checkbox"/>
	Enable output C + D	<input checked="" type="checkbox"/>
	Enable output E + F	<input checked="" type="checkbox"/>
	Enable output G + H	<input checked="" type="checkbox"/>
– Device settings		
Device settings		
+ Manual operation	Enable Logic/threshold 1-4	<input checked="" type="checkbox"/>
	Enable Logic/threshold 5-8	<input checked="" type="checkbox"/>
+ Safety/weather alarms	Enable Logic/threshold 9-12	<input type="checkbox"/>
+ Logic/threshold	Enable Logic/threshold 13-16	<input type="checkbox"/>
	Enable Logic/threshold 17-20	<input type="checkbox"/>
+ Switch actuator template	Enable Logic/threshold 21-24	<input type="checkbox"/>
+ Shutter actuator template		
+ Switch actuator A		

Maximum number of sent telegrams 20

In period 01 ss

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Device Settings

- Central Group Objects
 - to be used to switch several device outputs at the same time
 - Advantage: Less group address assignments, especially for multi channel devices
 - Available for switching, shutter control (only Combi SAH/S) and scene
 - In the parameter block 'Basic settings' of each channel it can be decided whether the channel shall be part of the central function

1.2.1 SAH/S8.16.7.1 Switch/Shutter Act, 8-f, 16A, MDRC > Device settings > Device settings

Configuration	Sending and switching delay after bus voltage recovery	00:00:02	hh:mm:ss
– Device settings	State after sending and switching delay has elapsed	<input checked="" type="radio"/> Last value received	<input type="radio"/> Ignore received values
<u>Device settings</u>	Enable group object "Request status values"	<input type="checkbox"/>	
+ Manual operation	Enable Central switch group object	<input checked="" type="checkbox"/>	
+ Safety/weather alarms	Enable Central blind group objects	<input checked="" type="checkbox"/>	
– Logic/threshold	Enable Central scene group object	<input checked="" type="checkbox"/>	
Logic/threshold 1	Enable group object "In operation"	No	
Logic/threshold 2			

3	Switch	Central: Switch	1 bit
4	Move blind/shutter up-down	Central: Shutter	1 bit
5	Slat adjustment/stop up-down	Central: Shutter	1 bit
6	Move to position height	Central: Shutter	1 byte
7	Move to position slat	Central: Shutter	1 byte
8	Scenes 1...64	Central: Scene	1 byte

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Manual Operation (only Combi SAH/S)

- Enable/Disable manual operation
 - with disabling no manual operation at all
 - Automatic reset after adjustable time (30s ... over 18h) avoids malfunction (no action on telegrams)
 - After end of manual operation also the actual and via KNX telegram changed status (Object End manual operation) can be shown
 - Object to end manual operation at any time but not to disable it
 - Objects for status manual operation
 - Object enable/disable manual operation
- Hint: Manual operation can be disabled by higher priorities, e.g. alarms

1.2.1 SAH/S8.16.7.1 Switch/Shutter Act, 8-f, 16A, MDRC > Manual operation > Manual operation

Configuration	Enable manual operation	<input checked="" type="checkbox"/>
+ Device settings	Automatic reset from manual operation to KNX operation	<input checked="" type="checkbox"/>
- Manual operation	Automatic reset after manual operation to KNX operation	<input type="text" value="00:05:00"/> hh:mm:ss
Manual operation	State after end of manual operation	<input type="radio"/> Manual state setting retained <input checked="" type="radio"/> Refreshed KNX state
+ Safety/weather alarms	<i>Manual operation can be disabled by higher priorities</i>	

12	Status Manual operation	Manual operation: Manual operation	1 bit
13	Enable/disable manual operation	Manual operation: Manual operation	1 bit
14	End manual operation	Manual operation: Manual operation	1 bit

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Safety/(Weather alarms, only Combi SAH/S)

- Distinction between switch and shutter functionality (SAH/S)
- Switching
 - Safety priority 1, 2, 3 (1 highest, 3 lowest priority)
 - Monitoring of telegram possible with cyclical sending of safety signal (like monitoring of wind alarm with shutters)
 - Application: In case of fire alarm all lights are to be turned on with highest priority, not possible to switch off locally
- Shutter
 - Wind alarm 1,2,3 / Rain / Frost
 - Priority of wind, rain and frost adjustable
 - Monitoring of sensor signals (standard due to security reasons) can be deactivated
- For both switching and shutter additionally forced operation and blocking at the dedicated parameter blocks available

1.2.1 SAH/S8.16.7.1 Switch/Shutter Act, 8-f, 16A, MDRC > Safety/weather alarms > Safety/weather alarms

Configuration	Read enabled safety group objects after bus voltage recovery and download <input checked="" type="checkbox"/>
+ Device settings	<div><i>i</i> The read flags must be set in the sending device!</div>
+ Manual operation	
– Safety/weather alarms	
Safety/weather alarms	<div><i>i</i> The reaction with safety priority active must be specified on the "Safety" parameter page for the switch actuator channels.</div>
+ Logic/threshold	Enable group object "Safety priority 1" <input checked="" type="checkbox"/>
+ Switch actuator template	Cyclical monitoring interval (0 = cycl. monitoring deactivated) <input type="text" value="00:00:00"/> hh:mm:ss
+ Shutter actuator template	Enable group object "Safety priority 2" <input type="checkbox"/>
+ Switch actuator A	Enable group object "Safety priority 3" <input type="checkbox"/>

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Logic/Gate/Threshold

- Parametrization of logic and thresholds
 - 24 individual logic or threshold functions for each Switch Actuator, also independent of the outputs
 - Functions: AND, OR, Exclusive OR, GATE and Threshold
 - two inputs, one output
 - Assignment of logic also directly to switch or shutter outputs possible, with individual reactions on the result of the logic
- AND/OR/Exclusive OR
 - Inversion of result
 - Send result to KNX: not needed if result is linked internally to an own output
 - Defined status of inputs in case of bus voltage recovery, important for safe operation

The screenshot displays the ETS application interface for configuring a switch actuator. The left sidebar shows a tree view with the following items: Safety/weather alarms, Logic/threshold, Switch actuator template, Shutter actuator template, Switch actuator A, Functions, and Basic settings (highlighted with a red underline). The main area is divided into two sections. The top section, titled 'Output reacts to', contains three dropdown menus: 'Output reacts to' (set to 'Logic/threshold 1'), 'Reaction on result "0"' (set to 'OFF'), and 'Reaction on result "1"' (set to 'ON'). Below these is a blue information bar with a red border that reads: 'Enable the function Logic/threshold on the Logic/Threshold page.' The bottom section, titled '1.2.1 SAH/S8.16.7.1 Switch/Shutter Act, 8-f, 16A, MDRC > Logic/threshold > Logic/threshold 1', contains a table with the following settings: 'Function of the logic gate' (AND), 'Group object "Connection A" after bus voltage recovery' (radio buttons for 1 and 0, with 0 selected), 'Group object "Connection B" after bus voltage recovery' (radio buttons for 1 and 0, with 0 selected), 'Invert result' (checked), 'Send result to KNX' (checked), and 'Send value of group object' (After change or on request).

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Logic/Gate/Threshold

– GATE (Enabling/Disabling of telegrams)

- To enable/disable telegrams at certain situations, e.g. a time program
- Disabling with logical 1 or 0
- Inversion of result
- Send result to KNX: not needed if result is linked internally to an own output
- Defined status of inputs in case of bus voltage recovery, important for safe operation



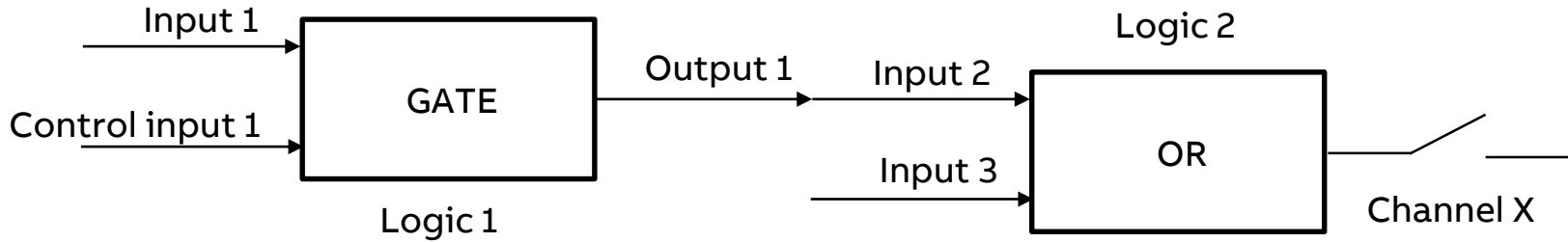
1.2.1 SAH/S8.16.7.1 Switch/Shutter Act, 8-f, 16A, MDRC > Logic/threshold > Logic/threshold 1

Configuration	Function of the logic gate	GATE
+ Device settings	GATE disabled if group object "Connection A" same	<input checked="" type="radio"/> 1 <input type="radio"/> 0
+ Manual operation	Group object "Connection A" after bus voltage recovery	<input type="radio"/> 1 <input checked="" type="radio"/> 0
+ Safety/weather alarms	Group object "Connection B" after bus voltage recovery	<input type="radio"/> 1 <input checked="" type="radio"/> 0
- Logic/threshold	<i>Connection A = GATE, Connection B = input</i>	
Logic/threshold 1	Invert result	<input checked="" type="checkbox"/>
Logic/threshold 2	Send result to KNX	<input checked="" type="checkbox"/>
Logic/threshold 3	Send value of group object	After change or on request

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Logic: Result linked to internal output



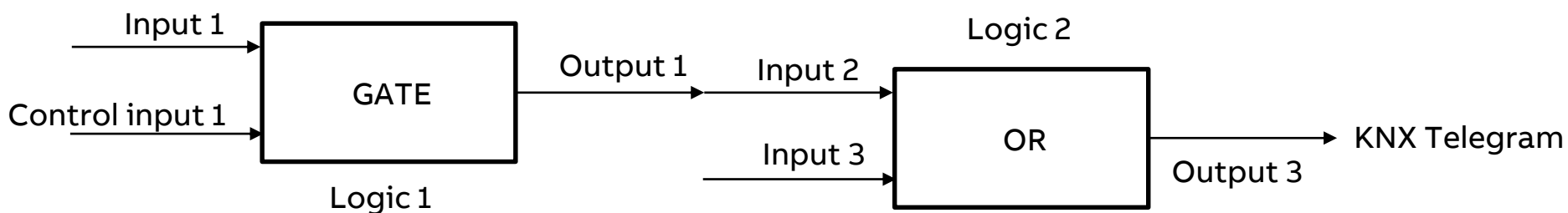
Logic/threshold 1: Logic	Connection A	GATE: Control Input 1	5/2/1
Logic/threshold 1: Logic	Result	GATE: Output 1	5/2/4
Logic/threshold 1: Logic	Connection B	GATE: Input 1	5/2/2
Logic/threshold 2: Logic	Connection A	OR: Input 2	5/2/4
Logic/threshold 2: Logic	Connection B	OR: Input 3	5/2/5

Function of the logic gate	OR
Group object "Connection A" after bus voltage recovery	<input type="radio"/> 1 <input checked="" type="radio"/> 0
Group object "Connection B" after bus voltage recovery	<input type="radio"/> 1 <input checked="" type="radio"/> 0
Invert result	<input type="checkbox"/>
Send result to KNX	<input type="checkbox"/>
Output reacts to	Logic/threshold 2
Reaction on result "0"	OFF
Reaction on result "1"	ON

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Logic: Result sent to KNX



Logic/threshold 1: Logic	Connection A	GATE: Control Input 1	5/2/1
Logic/threshold 1: Logic	Result	GATE: Output 1	5/2/4
Logic/threshold 1: Logic	Connection B	GATE: Input 1	5/2/2
Logic/threshold 2: Logic	Result	OR: Output 3	5/2/3
Logic/threshold 2: Logic	Connection A	OR: Input 2	5/2/4
Logic/threshold 2: Logic	Connection B	OR: Input 3	5/2/5

Function of the logic gate	OR
Group object "Connection A" after bus voltage recovery	<input type="radio"/> 1 <input checked="" type="radio"/> 0
Group object "Connection B" after bus voltage recovery	<input type="radio"/> 1 <input checked="" type="radio"/> 0
Invert result	<input type="checkbox"/>
Send result to KNX	<input checked="" type="checkbox"/>
Send value of group object	After change or on request

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Logic/thresholds

- Threshold (Value comparison with fixed value to take action)
 - Different data point types for input selectable:
Percent (1 byte), Meter pulses (1 byte or 2 byte), Temperature (2 byte floating), Lux (2 byte)
 - Upper and lower threshold (Hysteresis)
 - Thresholds changeable via KNX group object
 - Results (1, 0, unchanged) for overshooting and undershooting the thresholds, but also for value between both thresholds
 - Minimum time in all three situations adjustable, to hide short term and invalid situations
 - Send result to KNX: not needed if result is linked internally to an own output
 - Application: Depending on brightness level outside light is to be turned on or off with hysteresis

1.2.1 SAH/S8.16.7.1 Switch/Shutter Act, 8-f, 16A, MDRC > Logic/threshold > Logic/threshold 1

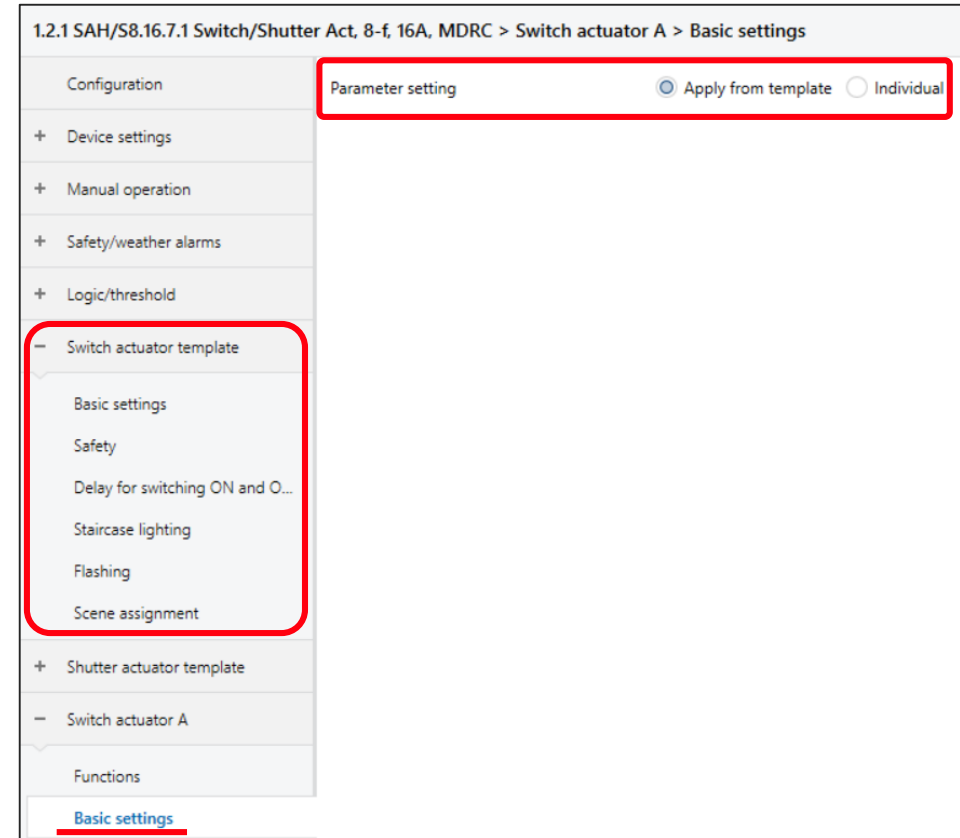
Configuration	Function of the logic gate	Threshold
+ Device settings	Data type of group object "Threshold input"	Percent (DPT5.001)
+ Manual operation	<div><div></div>The value for the upper threshold must always be above the value for the lower threshold. If not, there will be a malfunction in the threshold evaluation.</div>	
+ Safety/weather alarms	Upper threshold	50 %
– Logic/threshold	Lower threshold	20 %
Logic/threshold 1	Change thresholds via KNX	<input type="checkbox"/>
Logic/threshold 2	Result if upper threshold is exceeded	1
Logic/threshold 3	Min. duration of the overshoot	00:00:00 hh:mm:ss
Logic/threshold 4	Result if the input value is between the thresholds	Unchanged
Logic/threshold 5	Minimum dwell time between the thresholds	00:00:00 hh:mm:ss
Logic/threshold 6	Result if lower threshold is dropped below	0
Logic/threshold 7	Min. duration of the undershoot	00:00:00 hh:mm:ss
+ Switch actuator template	Update result after each overshoot/undershoot	<input checked="" type="checkbox"/>
+ Shutter actuator template	Send result to KNX	<input checked="" type="checkbox"/>
+ Shutter actuator A+B	Send value of group object	After change or on request
+ Switch actuator C		

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ETS

Templates

- Templates allow to parametrize a certain number of functions to be assigned to individual channels
 - Same concept as for DALI Gateways DG/S x.64.x.1
- Available for switch or shutter outputs (only Combi SAH/S)
 - Split into different parts (parameter pages)
 - Switch Actuator: Basic settings, Safety, Delay for switching ON/OFF, Staircase lighting, Flashing, Scene assignment
 - For each output and parameter block the templates can be used or individual adjustment can be done (Switch actuator X, e.g. Basic settings)
- Advantage: Save of time and work during parametrization as typically channels need the same adjustments



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ETS

Switch Actuator channel X – Function (only Combi SAH/S)

- Selection of actuator type (switching or shutter) per channel
- Please note: Default parametrization is shutter! Why?
 - Inverse default parametrization (switching) can destroy a motor as the two related output can be closed at the same time!
 - For switch functionality the parameter has to be changed at the beginning
- In case of switch actuator selection the second output of a pair (e.g. A/B or C/D) can be an actuator as well or inactive
 - Enable scene, priority/safety functions and time functions (staircase, on/off delay, flashing) per channel

The image displays two screenshots of the ETS (Energy Management System) application interface, specifically the configuration page for a switch actuator.

Top Screenshot: The page title is "1.2.1 SAH/S8.16.7.1 Switch/Shutter Act, 8-f, 16A, MDRC > Switch actuator A > Functions". The left sidebar shows a tree view with "Switch actuator A" selected. The main area shows the "Application" tab, where "Switch actuator" is selected (indicated by a red box). Below this, there are three checked boxes: "Enable function Scene", "Enable functions Priority and safety operation", and "Enable function Time" (set to "Delay for switching ON and OFF").

Bottom Screenshot: The page title is "1.2.1 SAH/S8.16.7.1 Switch/Shutter Act, 8-f, 16A, MDRC > Switch actuator A > Functions". The left sidebar shows a tree view with "Shutter actuator A=B" selected. The main area shows the "Application" tab, where "Shutter actuator" is selected (indicated by a red box). Below this, there are three checked boxes: "Enable function Scene", "Enable function Priority and safety operation/weather alarms", and "Enable function Automatic sun protection".

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Switch Actuator channel X – Basic settings

- Available per channel for individual configuration or template
- Normally open or closed contact
- Reaction to central object to create individual 'central' function
- Reaction on logic/threshold function
 - Though logic is independent of any output, it can be directly assigned to the channel
- Status feedback (on/off) via separate group object
- Status information 1 byte, e.g. forced/manual operation or time function active
- Reaction on bus voltage failure and recovery or after ETS download

1.2.1 SAH/S8.16.7.1 Switch/Shutter Act, 8-f, 16A, MDRC > Switch actuator A > Basic settings

Switch actuator A	Parameter setting	<input type="radio"/> Apply from template <input checked="" type="radio"/> Individual
Functions	Reaction of output	<input type="radio"/> N/C <input checked="" type="radio"/> N/O
Basic settings	Switch output reacts to	Central switch group object <input checked="" type="checkbox"/>
Safety	Output reacts to	Logic/threshold 1
Delay for switching ON and O...	Reaction on result "0"	OFF
Scene assignment	Reaction on result "1"	ON
+ Switch actuator B	i Enable the function Logic/threshold on the Logic/Threshold page.	
- Shutter actuator C+D	Feedback of contact position via group object "Status switch"	<input checked="" type="checkbox"/>
Functions	Value of group object "Status switch"	<input checked="" type="radio"/> 1: closed, 0: opened <input type="radio"/> 0: closed, 1: opened
Basic settings	Send value of group object	After change or on request
Drive	Enable group object "Status information"	<input checked="" type="checkbox"/>
Blind/shutter	Send value of group object	After change or on request
Safety/weather	Reaction on bus voltage failure	Contact open
Automatic sun protection	Reaction after bus voltage recovery	Do not write group object "Switch"
Status messages	Reaction after ETS download	Do not write group object "Switch"
Scene assignments		

KNX Combi-, Standard-, Professional Switch Actuators - ETS Application

ETS

Switch Actuator channel X – Safety

- Available per channel for individual configuration or template
- Reaction on safety functions (to be activated under safety alarms), forced operation or blocking per channel
 - On/off/unchanged/no reaction
- Switching Status on reset of these functions
 - On/off/refreshed KNX state/no reaction
 - Refreshed KNX state (any background function during safety/forced operation/blocking will be carried out)
- Priority (high to low) of all 5 safety functions:
Safety priority 1 → Forced operation → Safety priority 2
→ Safety priority 3 → Block

1.2.1 SAH/S8.16.7.1 Switch/Shutter Act, 8-f, 16A, MDRC > Switch actuator A > Safety

Switch actuator A

Parameter setting ☐ Apply from template ☒ Individual

i The objects "Safety priority 1-3" are enabled on the Safety/weather alarms page. The order specifies the priority of the safety functions.

Switching status for safety priority 1	No reaction/deactivated
Forced operation (1 bit/2 bit)	Deactivated
Switching status for safety priority 2	No reaction/deactivated
Switching status for safety priority 3	No reaction/deactivated
Block	No reaction/deactivated
Switching status on reset of blocking, forced operation and safety priority	No reaction

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ETS

Switch Actuator channel X – Staircase lighting

- Available per channel for individual configuration or template
- Visible if this time function is enabled at parameter block Functions
- Staircase lighting can be started again or extended to up to 5 x staircase time by pressing the local push button up to 5 times
- Staircase lighting switchable, e.g. to be turned off during an event (permanent on)
- Warning before switching off the staircase lighting: Either via telegram or quick switching off/on of the light
 - Switching off/on up to 5 times and warning time adjustable
- Staircase lighting can be enabled/disabled via group object
- Staircase time changeable via group object
- Restart staircase lighting after end of permanent on
- Timeline: Staircase time – warning – warning time – end (off)

1.2.1 SAH/S8.16.7.1 Switch/Shutter Act, 8-f, 16A, MDRC > Switch actuator A > Staircase lighting

Configuration	Parameter setting	<input type="radio"/> Apply from template <input checked="" type="radio"/> Individual
+ Device settings	Staircase lighting time	00:05:00 hh:mm:ss
+ Manual operation	Staircase lighting can be started again	<input checked="" type="checkbox"/>
+ Safety/weather alarms	Staircase lighting time extendable (pumps)	Up to max. 2x staircase lighting time
+ Logic/threshold	Staircase lighting switchable	ON with "1" and OFF with "0"
+ Switch actuator template	Warning before switching off the staircase lighting	Via quick switching OFF/ON
+ Shutter actuator template	Quantity of Off/On changes	1
– Switch actuator A	Warning time	00:00:45 hh:mm:ss
Functions	Disable staircase lighting via group object	<input checked="" type="checkbox"/>
Basic settings	Disable staircase lighting after bus voltage recovery	<input checked="" type="checkbox"/>
Safety	Change staircase lighting time via group object	<input checked="" type="checkbox"/>
<u>Staircase lighting</u>	Restart staircase lighting after end of permanent ON	<input checked="" type="checkbox"/>

KNX Combi-, Standard-, Professional Switch Actuators - ETS Application

ETS

Switch Actuator channel X – Delay for switching ON/OFF

- Available for individual configuration or template
- Visible if this time function is enabled at parameter block Functions
- Time for delay on or delay off
- Can be enabled/disabled via group object
- Application: Delayed on and off of ventilation

1.2.1 SAH/S8.16.7.1 Switch/Shutter Act, 8-f, 16A, MDRC > Switch actuator A > Delay for switching ON and OFF

– Switch actuator A	Parameter setting	<input type="radio"/> Apply from template <input checked="" type="radio"/> Individual
Functions	Delay for switching ON	<input type="text" value="00:00:10"/> hh:mm:ss
Basic settings	Delay for switching OFF	<input type="text" value="00:00:20"/> hh:mm:ss
Safety	Disable delay for switching ON and OFF via group object	<input checked="" type="checkbox"/>
<u>Delay for switching ON and OFF</u>	After bus voltage recovery disable delay for switching ON and OFF	<input checked="" type="checkbox"/>
Scene assignment		


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ETS

Switch Actuator channel X – Flashing

- Available for individual configuration or template
- Visible if this time function is enabled at parameter block Functions
- Activation with value 0 or 1 or both
- Time for on and off (min. 1s)
- Number of flash cycles up to 100
- After flashing relay on or off or refreshed KNX state (any background functions during flashing will be carried out)
- Application: Flashing light in a building together with intrusion alarm

1.2.1 SAH/S8.16.7.1 Switch/Shutter Act, 8-f, 16A, MDRC > Switch actuator C > Flashing

Configuration	Parameter setting
+ Device settings	<input type="radio"/> Apply from template <input checked="" type="radio"/> Individual
+ Manual operation	Flashing if group object Flashing same ON (1) or OFF (0)
+ Safety/weather alarms	Time for ON 00:00:05 hh:mm:ss
+ Logic/threshold	Time for OFF 00:00:05 hh:mm:ss
+ Switch actuator template	Number of flash cycles 5
+ Shutter actuator template	Contact position after flashing Refreshed KNX state
+ Shutter actuator A+B	<div> Observe the contact life and switching cycles per minute. For more information, see product manual.</div>
– Switch actuator C	
Functions	
Basic settings	
Safety	
Flashing	

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ETS

Switch Actuator channel X – Scene assignment

- Available for individual configuration or template
- Activation for of up to 16 scenes 1 byte
- Recall and storage of scenes via 1 byte object
- Scene recall also via group object 1 bit (for scene 1 ... 4)
 - Additional object to activate the scene (see also DALI Gateway Premium DG/S x.64.5.1)
 - Advantage: 1 bit is easier to handle for some sensors than 1 byte
- Free allocation of the 16 scenes to scene number 1 ... 64
- Delay time until scene is active (up to 12 hours), e.g. 5min. delayed action after leaving the house

1.2.1 SAH/S8.16.7.1 Switch/Shutter Act, 8-f, 16A, MDRC > Switch actuator A > Scene assignment

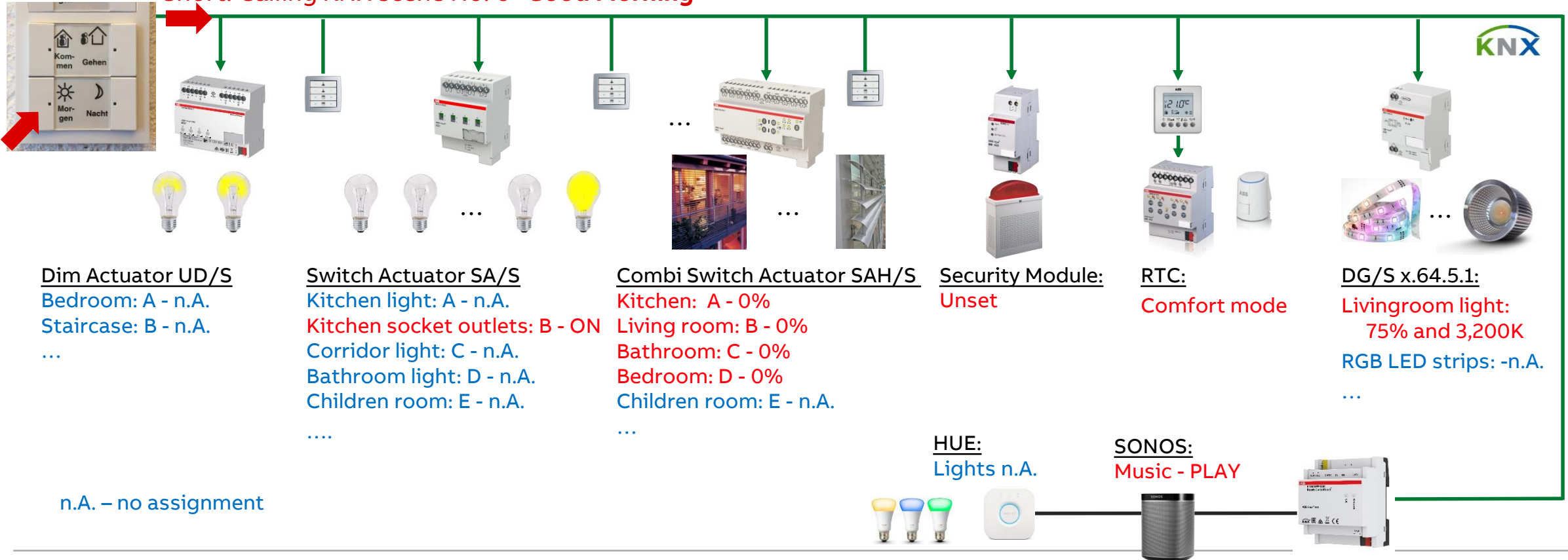
+ Safety/weather alarms	Parameter setting	<input type="radio"/> Apply from template <input checked="" type="radio"/> Individual
+ Logic/threshold	Overwrite scenes on download	<input checked="" type="checkbox"/>
+ Switch actuator template	Enable scene assignment 1	<input checked="" type="checkbox"/>
+ Shutter actuator template	Scene recall also via group object	<input checked="" type="checkbox"/>
– Switch actuator A	Scene number	1
Functions	Delay	00:00:00 hh:mm:ss
Basic settings	<div>i If delay not equal to 0, there is no staircase lighting and no switching ON and OFF delay.</div>	
Safety	Action for scene	<input checked="" type="radio"/> ON <input type="radio"/> OFF
Delay for switching ON and O...	Enable scene assignment 2	<input type="checkbox"/>
<u>Scene assignment</u>		

130 Recall scene assignment 1 Channel A: Switch 1 bit

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1 byte Light Scene

Short: Calling KNX scene No. 6 “Good Morning”



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Homepage

www.abb.com/KNX

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 **Lighting Control**


 Modern light management


ABB i-bus® KNX ensures optimum lighting of industrial and office buildings as well as private dwellings. The lighting requirement is monitored and controlled. In addition, subsystems (such as 1 - 10 V lighting control, DALI) and their interfaces are supported.

Main benefits

- Increases energy efficiency by constant lighting and presence dependent control
- Improves comfort with light scenes
- More flexibility through reprogramming or adding devices while in operation to meet changing needs

Main features

- Universal dimming actuators for controlling loads of 210 VA up to 2400 VA
- Switch/dim actuators for switching and dimming electronic ballasts with 1-10 V control interfaces
- DALI Gateways for integration of DALI ballasts into KNX bus



Products and Downloads

All products	DALI Gateways and Light Controllers	1-10V Switch / Dim Actuators and Light Controllers	Universal Dim Actuators	LED Dimmers	Light Level Sensors
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Product Range Overview

Smarter Solutions for Home and Building Automation
ABB i-bus KNX
Product Range Overview 2019/2020

– Including KNX DALI Gateway Premium DG/S x.64.5.1

[LINK](#)



Smarter Solutions for Home and Building Automation

ABB i-bus® KNX


Product Range Overview 2019/2020

Product description, quick and easy selection of product codes

62 PRODUCT RANGE OVERVIEW 2019/2020 BAKK107402A3188 REV. B

ABB i-bus® KNX

Lighting Control – DALI




DG/S 1.64.5.1

DALI Gateway Basic, MDRC

The device is used to interface between DALI and KNX installations and incorporates the DALI power supply. One/Two DALI output(s) for up to 64/2x 64 DALI Slaves. Control and status feedback is carried out via KNX per DALI slave (64/2x 64), with lighting groups (16/2x 64), together in broadcast or per scenes (16/2x 16). Extensive fault and error messages are available. Self-contained emergency converter (64/2x 64) acc. EN 62386-202 will be supported. By means of KNX and emergency converter, different emergency tests (e.g. function and duration test) can be triggered. Feedback is sent. Slave-, staircase-, force-, block- and scene- function are integrated. DALI telegram rate can change. For diagnostic use and individual change of the DALI address or group assignment a separate ABB i-bus® Tool is available.

Description	Mod. width	Order details		Price		Weight	Pack unit
		Type code	Order code	1 piece	1 piece		
1-fold	4	DG/S 1.64.5.1	ZCDG101099R0011	€	kg	0.133	1
2-fold	4	DG/S 2.64.5.1	ZCDG101099R0011	€	kg	0.15	1



DG/S 1.64.5.1

DALI Gateway Colour, MDRC

For controlling DALI devices via the ABB i-bus® KNX. One/Two DALI output(s) for up to 64/2x 64 DALI slaves. DALI power supply is integrated. Control and status feedback is carried out via KNX per DALI slave (64/2x 64), with lighting groups (16/2x 16), together in broadcast or per scenes (16/2x 16). DALI devices type DT2 (Self-contained emergency converter acc. EN 62386-202) and type DT8 (colour temperature Tc / tunable white acc. EN 62386-209) will be supported. Extensive fault and error messages are available. By means of KNX and DT2 converter different emergency tests (e.g. function and duration test) can be triggered, test results are transferred back to KNX. With DT8 devices Dim2Warm, HCL, set and dim colour temperature are possible. Slave-, staircase-, force-, block- and scene- function are integrated. Feedback is sent. DALI telegram rate can change. For diagnostic use and individual change of the DALI address or group assignment a separate Software-Tool is available. Available January 2020

Description	Mod. width	Order details		Price		Weight	Pack unit
		Type code	Order code	1 piece	1 piece		
1-fold	4	DG/S 1.64.5.1	ZCDG101077R0011	€	kg	0.133	1
2-fold	4	DG/S 2.64.5.1	ZCDG101077R0011	€	kg	0.15	1

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Further information

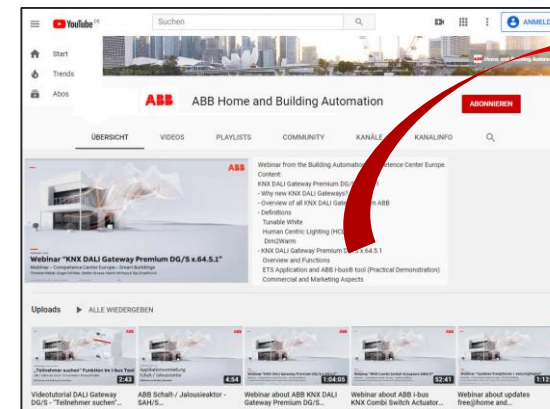
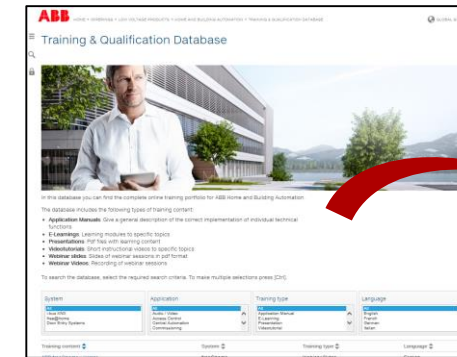
Training & Qualification Database

– The database includes the following types of training content:

- Application Manuals
- E-Learnings
- Presentations
- Video tutorials
- Webinar slides and videos
- www.abb.com/knx or <https://go.abb/ba-training>

Youtube

- Channel “ABB Home and Building Automation”
- <https://www.youtube.com/user/ABBibusKNX>



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Training & Qualification Calendar

In addition to the online modules and the traditional training programs offered by your local ABB sales team, we offer a variety of on-site trainings conducted by our specialists at different ABB training facilities

In this Training & Qualification Calendar you can find the educational events that are taking place during 2020

If you are interested in a training please click the training und you will be forwarded to register in “ABB MyLearning”

www.abb.com/knx or <https://go.abb/ba-training>

→ Training and Qualification

→ Training Calendar



System	Date	Location
ABB	all	webinar:
Door Entry Systems	January 2018	Heidelberg, Germany
Free@home	February 2018	Lödenscheid, Germany
Fire Alarm Systems	March 2018	S. Palomba (Rome), Italy
I-bus KNX	April 2018	Vittuone (Milan), Italy

Content	Date	Location	Language
KNX for Commercial Building	05.04.2018 - 06.04.2018	Lödenscheid, Germany	EN
Building Automation Light + Building 2018	10.04.2018	Webinar	EN
KNX in Hotels	19.04.2018 - 20.04.2018	Heidelberg, Germany	EN
HVAC Automation	23.04.2018 - 24.04.2018	Heidelberg, Germany	EN

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