

APRIL 2020

Standard and Professional Switch Actuators

Competence Center Europe – Smart Buildings
Thorsten Reibel

Agenda

Why a new range of KNX Switch Actuators from ABB?

Overview Next Generation Switching

Standard Switch Actuators

Professional Switch Actuators

Features "Standard/Professional Switch Actuators"

ETS Application "Standard/Professional Switch Actuators"

Commercial and Marketing Aspects "Standard/Professional Switch Actuators"

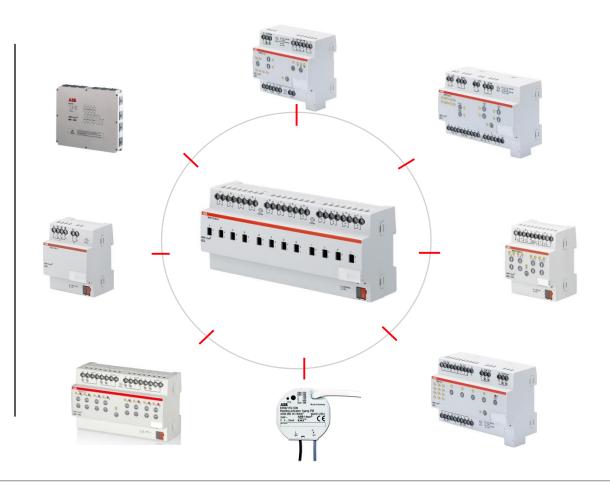


Why a new range of KNX Switch Actuators from ABB?

Why a new range of KNX Switch Actuators from ABB?

Switch actuators still needed?

- Actuators carry out the function needed which finally results in the function in the building for the user
 - Turn on/off of lighting
 - Operation of socket outlets
 - Control of motors and pumps
 - Control of fan
 - Opening/Closing shutter, blinds, curtains or windows
- Though for many applications dedicated actuators are existing, especially for lighting control general switch actuators are very important and often used, with low costs per channel
- Strong market share of DALI for lighting control did not result in reduced number of switch actuators but in a growing market
- Energy efficient illumination with LED lamps allows economical and sophisticated lighting solutions with switch actuators, galvanic separation of the load, even light scenes are possible

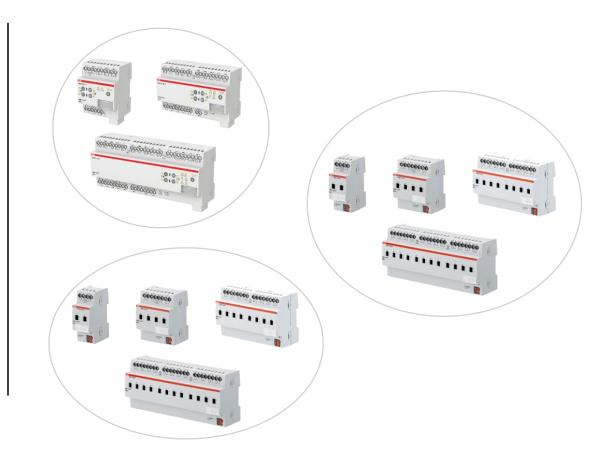




Why a new range of KNX Switch Actuators from ABB?

Requirements

- Closing product range gaps (e.g. number of channels or functionality)
- Increasing number of manufacturers and products needs a new and state of the art actuator range from ABB
- Reduction of size → less space per channel
- Being prepared for future developments (Software functions, IoT services)
- Segmentation → for each application and demand the right product
- Significant evolution of ABB's KNX switch actuator range, continuation of simplicity and reliability, but development of proven functions
- Advanced usability by optimized manual operation and ETS application

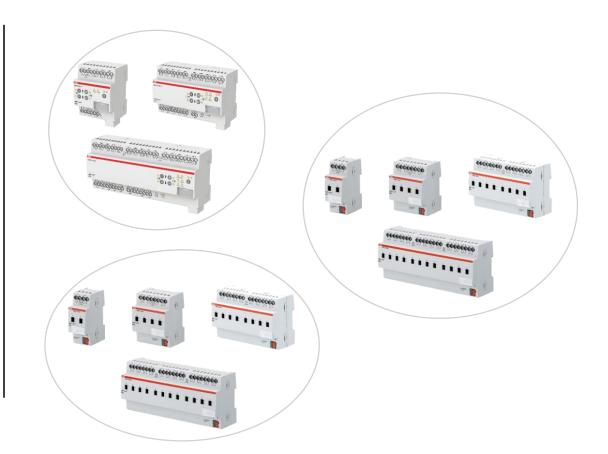




Why a new range of KNX Switch Actuators from ABB?

Requirements

- Being prepared for worldwide usage with different technical standards
- Being prepared for future software extensions
- Switch Actuators as a key product in KNX Building Automation are very important for the market and an all-inclusive manufacturer like ABB
- Provision of high class products with design and production in Germany
- State of the art product family for today and in the next future





Overview Next Generation Switching

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 + energy function
- 2 x 4 devices



Commercial

Applications



Next Generation Switching

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Commercial

Applications



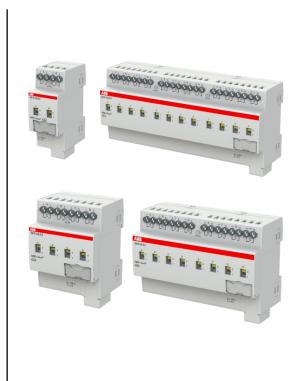
Standard Switch Actuators

Standard Switch Actuators - Overview

Key Characteristics

- 'High-runner' types for all standard switching applications
- Data
 - 2/4/8/12 outputs
 - 6A, 10A and 16A (AC1)
 - Manual operation (voltage independent)
 - Combi screw-head terminals
 - Single application, smart features
 - New housing
 - Being prepared for future developments (Software functions, IoT services)

6A (4 devices)



10A (4 devices)



16A (4 devices)







Range

Main technical Differences between Standard Switch Actuators

Switch Actuator	Channels	Rated Current I _N per Channel	Module Width (MW)	Group Adresses	Group Objects	Total Current per Device
SA/S 2.6.2.2	2	6A	2	1000	136	2 x 6A
SA/S 4.6.2.2	4	6A	4	1000	166	4 x 6A
SA/S 8.6.2.2	8	6A	8	1000	226	8 x 6A
SA/S 12.6.2.2	12	6A	12	1000	286	12 x 6A
SA/S 2.10.2.2	2	10A	2	1000	136	2 x 10A
SA/S 4.10.2.2	4	10A	4	1000	166	4 x 10A
SA/S 8.10.2.2	8	10A	8	1000	226	8 x 10A
SA/S 12.10.2.2	12	10A	12	1000	286	12 x 10A
SA/S 2.16.2.2	2	16A	2	1000	136	2 x 16A
SA/S 4.16.2.2	4	16A	4	1000	166	4 x 16A
SA/S 8.16.2.2	8	16A	8	1000	226	8 x 16A
SA/S 12.16.2.2	12	16A	12	1000	286	12 x 16A



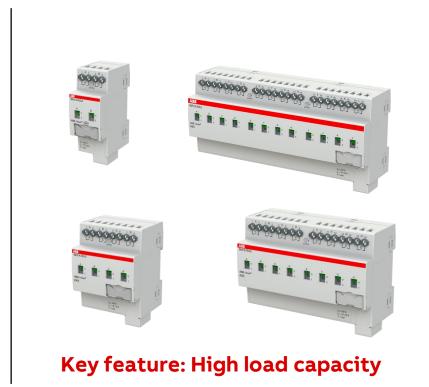
Professional Switch Actuators

Professional Switch Actuators

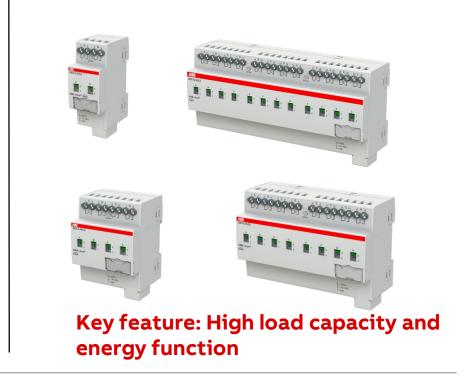
Key Characteristics

- High-switching-capacity devices with extended functionality for industry standard applications
- Data
 - 2/4/8/12 outputs
 - 16/20A C-Load (high capacity)
 - Energy function
 - Manual operation (voltage independent)
 - Combi screw-head terminals
 - Single application, smart features
 - New housing and label carrier
 - Prepared for future developments (Software functions, IoT services)

16/20A C-load (4 devices)



16/20A C-load, Energy Function (4 devices)







Professional Switch Actuators

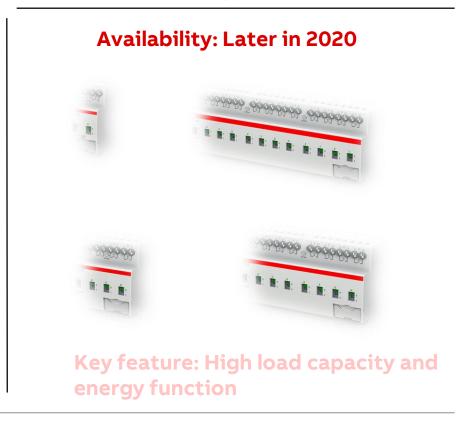
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16/20A C-load (4 devices)



16/20A C-load, Energy Function (4 devices)





Range

Main technical Differences between Professional Switch Actuators

Switch Actuator	Channels	Rated Current I _N per Channel	Module Width (MW)	Group Adresses	Group Objects / Assignments	Total Current per Device
SA/S 2.16.5.2	2	16/20A	2	1000	136	2 x 20A
SA/S 4.16.5.2	4	16/20A	4	1000	166	4 x 20A
SA/S 8.16.5.2	8	16/20A	8	1000	226	8 x 20A
SA/S 12.16.5.2	12	16/20A	12	1000	286	12 x 20A

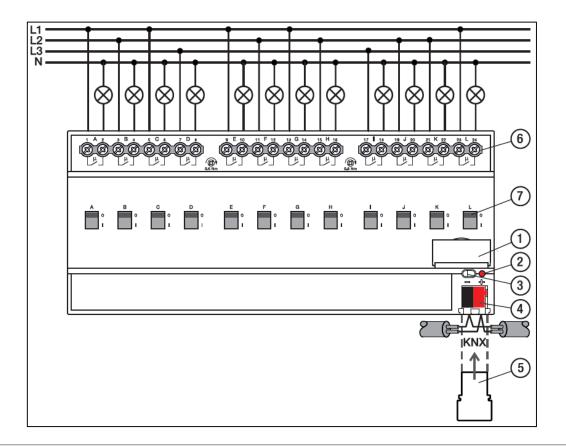


Features "Standard and Professional Switch Actuators"

Connection Diagram

Legend

- 1 Label carriers
- 2 Programming LED
- **3** Programming button
- 4 Bus connection terminal
- 5 Cover cap
- 6 Load circuit, two screw terminals each
- 7 Contact position indication and ON/OFF actuation





Selection Table

Overview about hardware performance (Relay, Power, Loads) and software features to select the right device Link

Differences between 6/10/16 A outputs

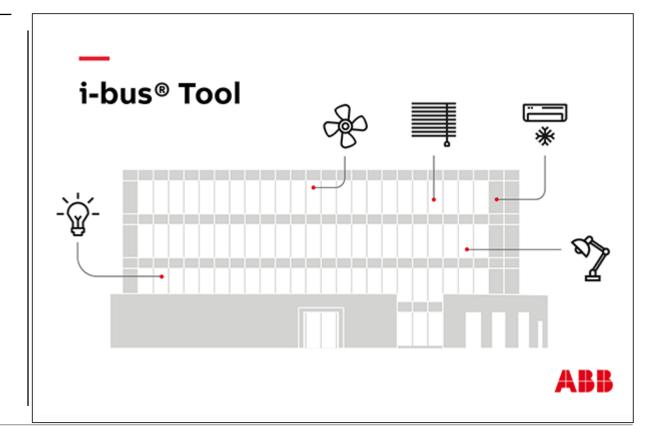
- Rated current I_N distinguish the components 6A, 10A and 16A, according to DIN EN 60947-4-1
 (AC1 operation with cos phi = 0,8)
 (AC3 operation with cos phi = 0,45)
- Switch actuator Professional with 16/20A C-Load at 200uF
- Switch Actuator Professional prepared for high inrush current (ballast for LED or fluorescent lighting) and motor load
- The continuous current and finally the total current of each device is important for the design of the circuit, the line protection and the switch actuator
- Depending on the rules and requirements in different countries (6, 10 or 16A electrical circuits) the right devices from ABB can be selected

	SA/S 2.6.2.2	SA/S 2.10.2.2	SA/S 2.16.2.2	SA/S 2.16.5.2
	SA/S 4.6.2.2	SA/S 4.10.2.2	SA/S 4.16.2.2	SA/S 4.16.5.2
	SA/S 8.6.2.2	SA/S 8.10.2.2	SA/S 8.16.2.2	SA/S 8.16.5.2
	SA/S 12.6.2.2	SA/S 12.10.2.2	SA/S 12.16.2.2	SA/S 12.16.5.2
Range	Standard	Standard	Standard	Professional
In rated current (A) ³⁾	6 A	10 A	16 A	16/20 A C-Load
U _n rated voltage (V)	230 V AC	230 V AC	230 V AC	230 V AC
AC1 operation (cos φ = 0.8) DIN EN 60947-4-1	6 A	10 A	16 A	20 A
AC3 operation (cos φ = 0.45) DIN EN 60947-4-1	6 A	8 A	8 A	16 A
C-Load switching capacity (200 µF)	-	-	-	20 A
Fluorescent lighting load AX to EN 60669-1	6 AX (140 μF) ²⁾	10 AX (140 μF) ²⁾	16 A (140 µF) 3)	20 AX (200 μF) ³⁰
Minimum switching capacity	100 mA/12 V	100 mA/12 V	100 mA/12 V	100 mA/12 V
DC current switching capacity (resistive load)	6 A/24 V =	10 A/24 V =	16 A/24 V =	20 A/24 V =
Mechanical service life	> 3 x 10 ⁶	> 3 x 10 ⁶	> 3 x 10 ⁶	> 106
Electronic endurance to IEC 60947-4-1:				
- Rated current AC1 (240 V/0.8)	100,000	100,000	100,000	100,000
- Rated current AC3 (240 V/0.45)	30,000	30,000	30,000	30,000
- Rated current AC5a (240 V/0.45)	30,000	30,000	30,000	30,000
Incandescent lamp load at 230 V AC	1,380 W	2,500 W	2,500 W	3,680 W
Fluorescent lamp T5 / T8:				
-Uncorrected	1,380 W	2,500 W	2,500 W	3,680 W
- Parallel compensated	1,380 W	1,500 W	1,500 W	2,500 W
– DUO circuit	1,380 W	1,500 W	1,500 W	3,680 W
Low-voltage halogen lamps:				
- Inductive transformer	1,200 W	1,200 W	1,200 W	2,000 W
- Electronic transformer	1,380 W	1,500 W	1,500 W	2,500 W
Halogen lamp 230 V	1,380 W	2,500 W	2,500 W	3,680 W
Dulux lamps:				
- Uncorrected	1,100 W	1,100 W	1,100 W	3,680 W
- Parallel compensated	1,100 W	1,100 W	1,100 W	3,000 W
Mercury-vapour lamps:				
- Uncorrected	1,380 W	2,000 W	2,000 W	3,680 W
- Parallel compensated	1,380 W	2,000 W	2,000 W	3,000 W
Sodium-vapour lamps:				
- Uncorrected	1,380 W	2,000 W	2,000 W	3,680 W
- Parallel compensated	1,380 W	2,000 W	2,000 W	3,000 W
LED lamps/energy saving lamps	400 W	400 W	400 W	650 W
Motor load	1380 W	1840 W	1840 W	3680 W
Max. peak inrush-current Ip (150 μs)	400 A	400 A	400 A	600 A
Max. peak inrush-current Ip (250 μs)	320 A	320 A	320 A	480 A
Max. peak inrush-current Ip (600 μs)	200 A	200 A	200 A	300 A
Number of electronic ballasts (T5/T8, single element):2)				
18 W (ABB ballasts 1 x 18 SF)	23 ballasts	23 ballasts	23 ballasts	260 ballasts
24 W (ABB ballasts 1 x 24 CY)	23 ballasts	23 ballasts	23 ballasts	26 ^{t)} ballasts
36 W (ABB ballasts 1 x 36 CF)	14 ballasts	14 ballasts	14 ballasts	22 ballasts
58 W (ABB ballasts 1 x 58 CF)	11 ballasts	11 ballasts	11 ballasts	12 ¹⁾ ballasts
80 W (Helvar EL 1 x 80 SC)	10 ballasts	10 ballasts	10 ballasts	12 ¹⁾ ballasts



ABB i-bus Tool

- All relevant ABB i-bus KNX Devices from the last years could be used together with ABB i-bus Tool
- The same will happen for the new generation of Switch Actuators (Combi/Standard/Professional)
- Availability planned for 2020





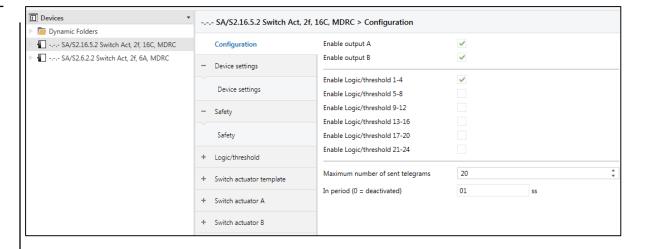
ETS Application "Standard/Professional Switch Actuators"

ETS

ETS Application with comprehensive functions and satisfying user experience

Application like Combi Switch Actuator but without shutter functionality

- 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 (8 bit)
- Central objects (switching and scenes)
- Colored hints simplify work
- ETS5 required



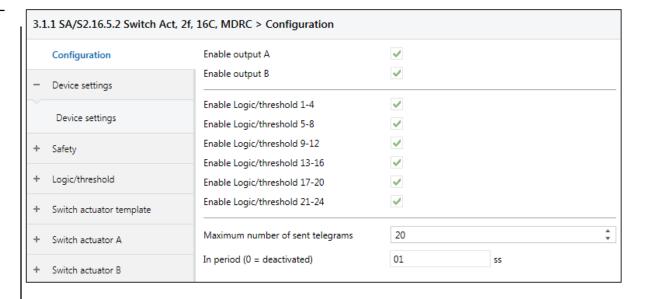
- The objects "Safety priority 1-3" are enabled on the Safety/weather alarms page. The order specifies the priority of the safety functions.
- Observe the contact life and switching cycles per minute. For more information, see product manual.



ETS

Configuration

- Enabling of channels
- Enabling of logic and thresholds
 - 24 individual logic or threshold functions for each Combi Switch Actuator, independent of the outputs
- Telegram limitation

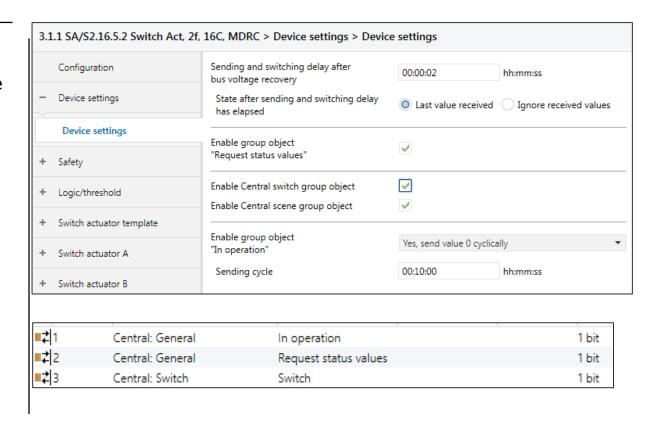




ETS

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 and scene
 - In the parameter block of each channel it can be decided whether the channel shall be part of the central function

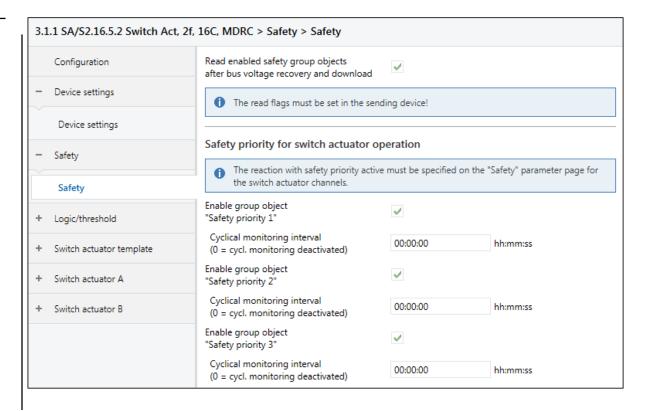




ETS

Safety

- Switching
 - Safety priority 1, 2, 3
 - Monitoring of telegram possible with cyclical sending of safety signal
 - Application: In case of fire alarm all lights are to be turned on with highest priority, not possible to switch off locally
- Additionally forced operation and blocking at the dedicated parameter pages available

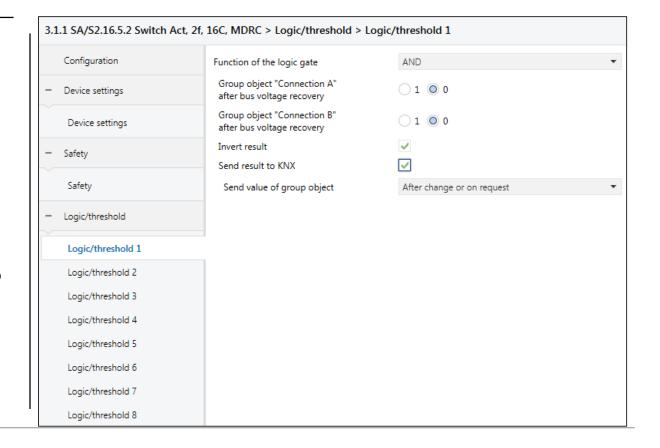




ETS

Logic/thresholds

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

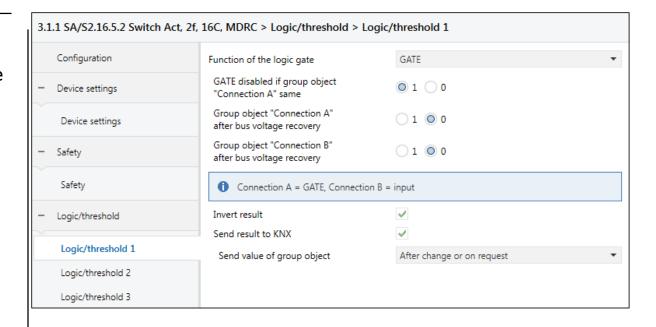




ETS

Logic/thresholds

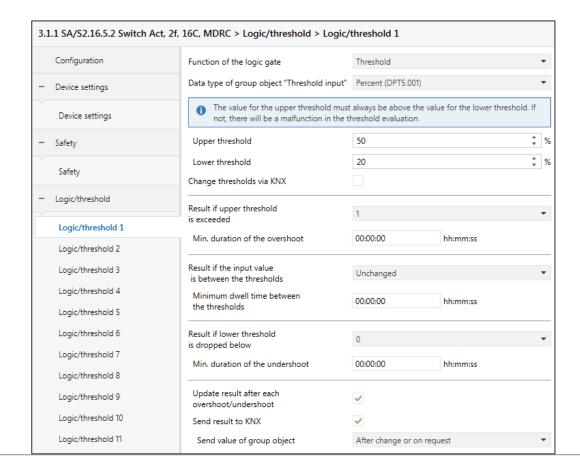
- GATE
 - To enable/disable telegrams at certain situations, e.g. a time program
 - Disabling with logical 1 or 0
 - Inversion of result
 - Send result to KNX: not needed if result is linked to a further logic
 - Defined status of inputs in case of bus voltage recovery, important for safe operation





Logic/thresholds

- Threshold
 - 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
 - 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 to a further logic

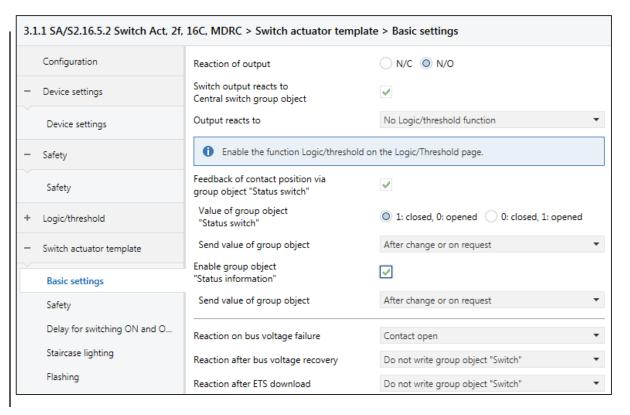




ETS

Templates

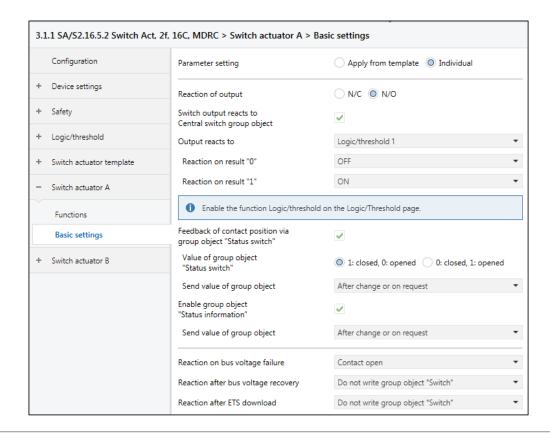
- Templates allow to parametrize a certain number of functions to be assigned to individual channels
 - Split into different parts (parameter pages)
 - For each output and parameter block the templates can be used or individual adjustment can be done
- Advantage: Save of time and work during parametrization as typically channels need the same adjustments





Switch Actuator – Basic settings

- Available 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

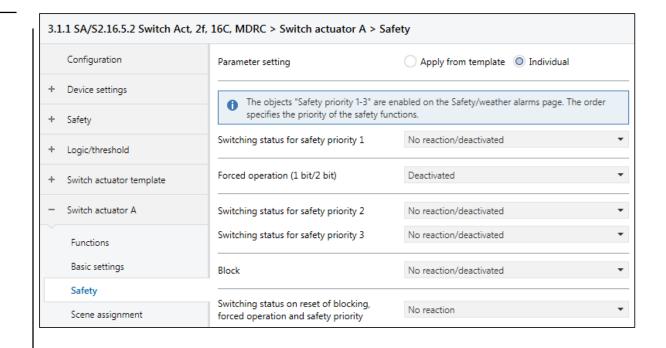




ETS

Switch Actuator – Safety

- Available for individual configuration or template
- Reaction on safety functions, forced operation or blocking
 - 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)
- Further adjustments at parameter block Safety

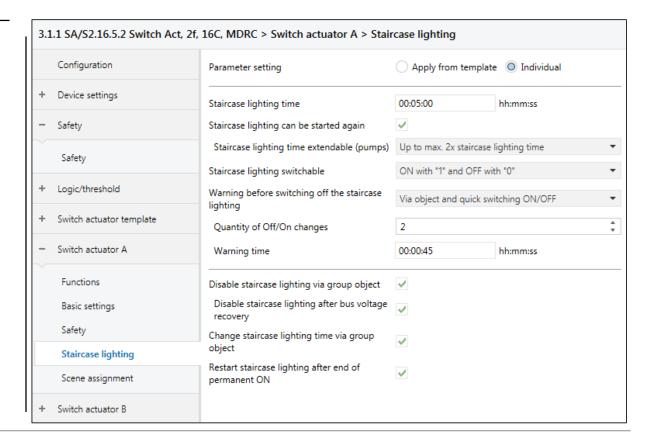




ETS

Switch Actuator - Staircase lighting

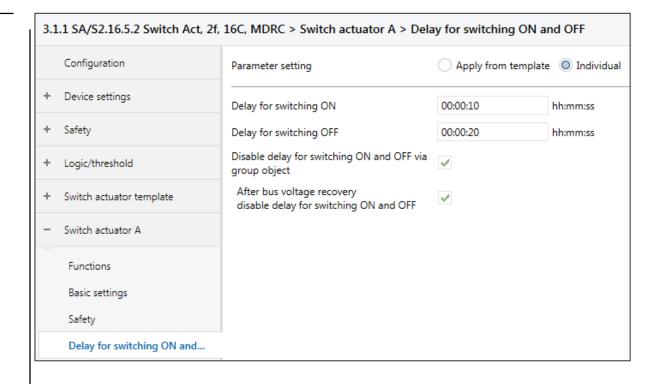
- Available for individual configuration or template
- Visible if this time function is enabled at parameter block
 Functions
- Staircase lighting can be started again or extended to up to 5 x staircase time by pressing the local push button up to 5 times
- Staircase lighting switchable, e.g. to be turned 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)





Switch Actuator - Delay for switching ON and 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

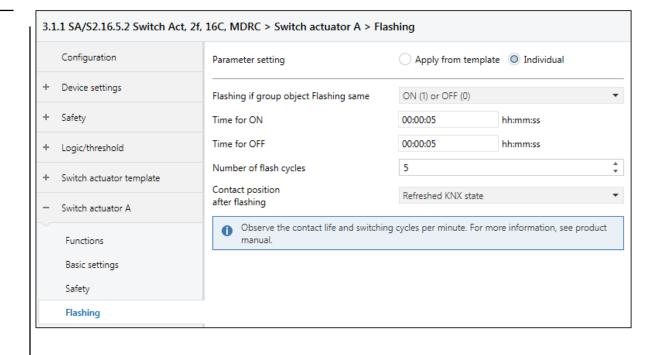




ETS

Switch Actuator - 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
- 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)

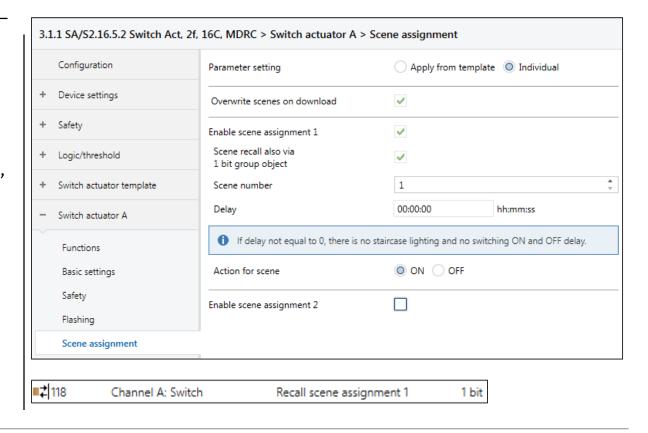




ETS

Switch Actuator – 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 (similar to 1 bit preset, e.g. UD/S 2.300.2)
 - 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)





Which answer is correct?

Question 1 — Templates ...

A ... are for saving time during commissioning with ETS

B ... are for assigning the same parameter to many channels

C ... are split into different parameter pages



Which answer is correct?

Question 1 — Templates ...

A ... are for saving time during commissioning with ETS

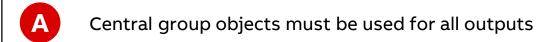
B ... are for assigning the same parameter to many channels

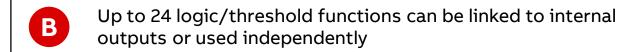
C ... are split into different parameter pages



Which answer is correct?

Question 2



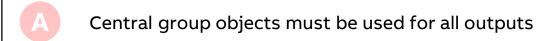


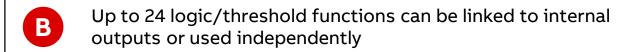
There are special parameters in ETS Application of SA/S for shutter control



Which answer is correct?

Question 2



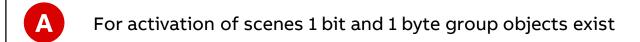


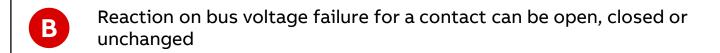
There are special parameters in ETS Application of SA/S for shutter control



Which answer is correct?

Question 3



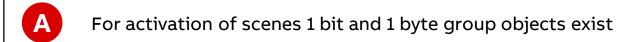


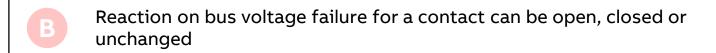
Staircase function can be disabled, staircase time can be changed via KNX telegram

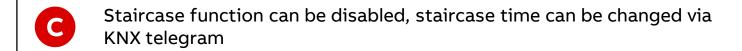


Which answer is correct?

Question 3







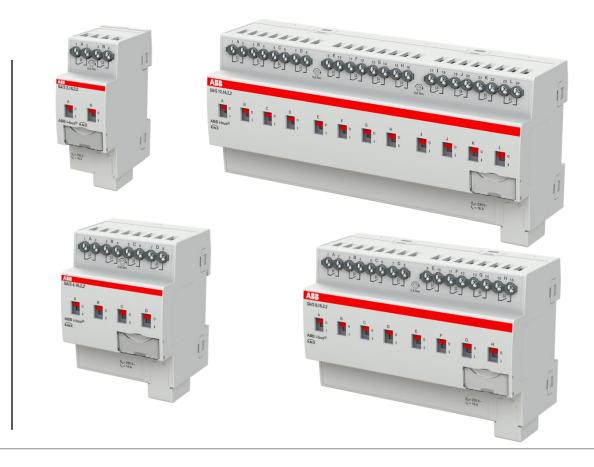


Commercial and Marketing Aspects "Standard/Professional Switch Actuators"

Standard Switch Actuator

Order Code and List Price (ABB Version)

Standard Switch Actuator	Order Code
SAS/S 2.6.2.2	2CDG110253R0011
SAS/S 4.6.2.2	2CDG110254R0011
SAS/S 8.6.2.2	2CDG110255R0011
SAS/S 12.6.2.2	2CDG110256R0011
SAS/S 2.10.2.2	2CDG110257R0011
SAS/S 4.10.2.2	2CDG110258R0011
SAS/S 8.10.2.2	2CDG110259R0011
SAS/S 12.10.2.2	2CDG110260R0011
SAS/S 2.16.2.2	2CDG110261R0011
SAS/S 4.16.2.2	2CDG110262R0011
SAS/S 8.16.2.2	2CDG110263R0011
SAS/S 12.16.2.2	2CDG110264R0011



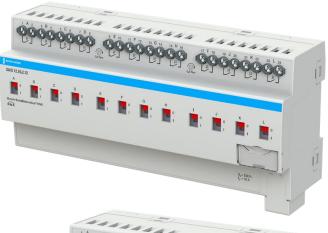


Standard Switch Actuator

Order Code and List Price (Busch-Jaeger Version)

Standard Switch Actuator	Order Code
SAS/S 2.10.2.12	2CDG110257R0021
SAS/S 4.10.2.12	2CDG110258R0021
SAS/S 8.10.2.12	2CDG110259R0021
SAS/S 12.10.2.12	2CDG110260R0021
SAS/S 2.16.2.12	2CDG110261R0021
SAS/S 4.16.2.12	2CDG110262R0021
SAS/S 8.16.2.12	2CDG110263R0021
SAS/S 12.16.2.12	2CDG110264R0021





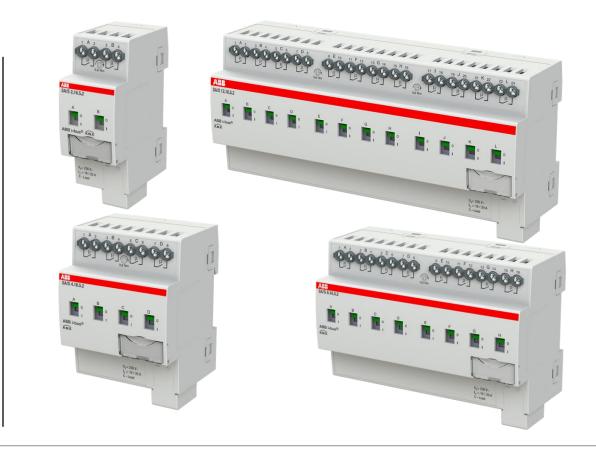




Professional Switch Actuator

Order Code and List Price (ABB Version)

Professional Switch Actuator	Order Code					
SAS/S 2.16.5.2	2CDG110265R0011					
SAS/S 4.16.5.2	2CDG110266R0011					
SAS/S 8.16.5.2	2CDG110267R0011					
SAS/S 12.16.5.2	2CDG110268R0011					

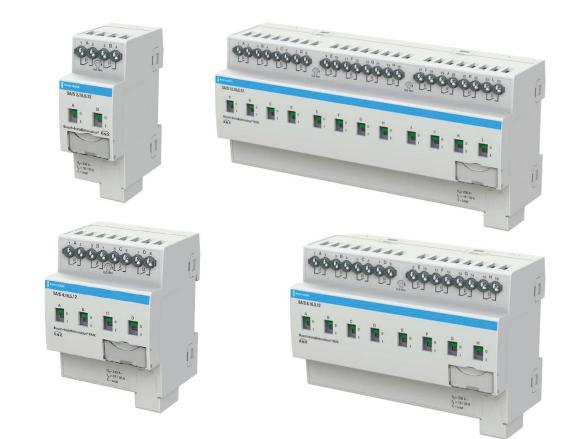




Professional Switch Actuator

Order Code and List Price (Busch-Jaeger Version)

Professional Switch Actuator	Order Code
SAS/S 2.16.5.12	2CDG110265R0021
SAS/S 4.16.5.12	2CDG110266R0021
SAS/S 8.16.5.12	2CDG110267R0021
SAS/S 12.16.5.12	2CDG110268R0021





Range Overview

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

Including all new Switch Actuators

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

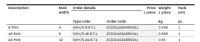
PRODUCT RANGE OVERVIEW 2019/2020 9AKK107492A3188 REV. B

ABB i-bus® KNX

Outputs - Combi Switch Actuators



Switching/Shading Actuator, 6 A. MDRO The compact 6 A combi switch actuator has 8, 16 or 24 independent switching relays (no electromechanically interlocking). The outputs can be used individually via ABB i-bus® KNX for switching electrical loads or in pairs for controlling 230 VAC roller shutter or blind drives.
The device features a manual operation, which can also be disabled. Via the manual operation the outputs can be operated manually and the switching or driving status is displayed. The device is powered by KNX and requires no additional power supply.





Switching/Shading Actuator, 10 A, MDRC N
The compact 10 A combi switch actuator has 8, 16 or 24 independent switching relays (no electromechanically interlocking). The outputs can be used individually via ABB 1-bus® KNX for switching electrical loads or in pairs for controlling 230 V AC roller shutter or blind drives. The device features a manual operation, which can also be disabled. Via the manual opera-tion the outputs can be operated manually and the switching or driving status is displayed. The device is powered by KNX and requires no additional power supply.

Description	Mod. width	Order details		Weight 1 piece	Pack unit
		Type code	Order code	kg	pc.
8-fold	4	SAH/S 8.10.7.1	2CDG110247R0011	0.349	1
16-fold	8	SAH/S 16.10.7.1	2CDG110248R0011	0.596	1
24-fold	12	SAH/S 24.10.7.1	2CDG110249R0011	0.83	1



The compact 16 A combi switch actuator has 8, 16 or 24 independent switching relays (no electromechanically interlocking). The outputs can be used individually via ABB i-bus® KNX for switching electrical loads or in pairs for controlling 230 V AC roller shutter or blind drives. tion the outputs can be operated manually and the switching or driving status is displayed The device is powered by KNX and requires no additional po

Description	Mod. width	Order details			Weight 1 piece kg	Pack unit pc.
		Type code	Order code			
8-fold	4	SAH/S 8.16.7.1	2CDG110250R0011		0.349	1
16-fold	8	SAH/S 16.16.7.1	2CDG110251R0011		0.596	1
24-fold	12	SAH/S 24.16.7.1	2CDG110252R0011		0.83	1



Microsite

Product page with the first main information and links to further related pages

Standard Switch Actuator:

<u>LINK</u>

Professional Switch Actuator:

<u>LINK</u>





Homepage

www.abb.com/KNX

→ Products and Downloads

→ Outputs

→ Search Options SA/S

Product Manual

CAD Drawing

Installation and Operating Instructions

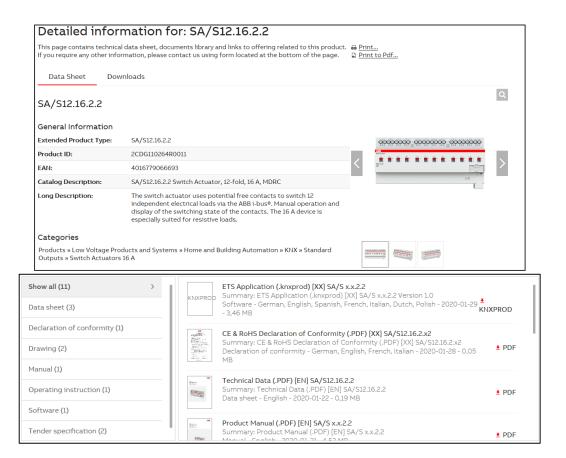
Specification Text

ETS Application

Selection Table

CE & RoHS Declaration of Conformity

• • •





Transformation Table

NGS Order Code Materialnummer	NGS Type Typenbezeichnung	Old Type (forerunner Type) Typenbezeichnung (Vorgänger-Type	Product Name DE Produkt Name DE	Product Name EN Produkt Name EN	EAN-Code EAN Nummer	Switch Outputs Ausgänge Schaltakt	Shutter Outputs Ausgänge Jalousie	Module width Modulbreite	Rated current Nennstrom	List price 01/2020	Launch planned (Einführung geplant)	Phase-out (Auslauf-Phase)
ABB Combi Range												
2CDG 110 244 R0011	SAH/S8.6.7.1	-	Schalt-/Jalousieaktor, 8fach, 6 A, REG	Switch/Shutter Actuator, 8-fold, 6 A, MDRC	4016779066310	8	4	4		303,00 €		-
2CDG 110 245 R0011		-	Schalt-/Jalousieaktor, 16fach, 6 A, REG	Switch/Shutter Actuator, 16-fold, 6 A, MDRC	4016779066792	16	8	8	6 A		October 2019	no forrunner device
2CDG 110 246 R0011	SAH/S24.6.7.1	-	Schalt-/Jalousieaktor, 24fach, 6 A, REG	Switch/Shutter Actuator, 24-fold, 6 A, MDRC	4013614552540	24	12	12		541,00 €		(kein Vorgänger)
2CDG 110 247 R0011	SAH/S8.10.7.1	-	Schalt-/Jalousieaktor, 8fach, 10 A, REG	Switch/Shutter Actuator, 8-fold, 10 A, MDRC	4016779066815	8	4	4		336,00 €		-
2CDG 110 248 R0011	SAH/S16.10.7.1	-	Schalt-/Jalousieaktor, 16fach, 10 A, REG	Switch/Shutter Actuator, 16-fold, 10 A, MDRC	4016779066822	16	8	8	10 A	488,00 €	October 2019	no forrunner device
2CDG 110 249 R0011	SAH/S24.10.7.1	-	Schalt-/Jalousieaktor, 24fach, 10 A, REG	Switch/Shutter Actuator, 24-fold, 10 A, MDRC	4016779066839	24	12	12		599,00€		(kein Vorgänger)
2CDG 110 250 R0011	SAH/S8.16.7.1	-	Schalt-/Jalousieaktor, 8fach, 16 A, REG	Switch/Shutter Actuator, 8-fold, 16 A, MDRC	4016779066846	8	4	4		371,00 €		-
2CDG 110 251 R0011	SAH/S16.16.7.1	-	Schalt-/Jalousieaktor, 16fach, 16 A, REG	Switch/Shutter Actuator, 16-fold, 16 A, MDRC	4016779066853	16	8	8	16 A	540,00€	October 2019	no forrunner device
2CDG 110 252 R0011	SAH/S24.16.7.1	-	Schalt-/Jalousieaktor, 24fach, 16 A, REG	Switch/Shutter Actuator, 24-fold, 16 A, MDRC	4016779066860	24	12	12		663,00 €		(kein Vorgänger)
ABB Standard Range											•	
2CDG 110 244 R0011	SAH/S8.6.7.1 *)	SA/S4.6.1.1	Schaltaktor, 4fach, 6 A.REG	Switch Actuator, 4-fold, 6 A, MDRC								
2CDG 110 244 R0011	SAH/S8.6.7.1 *)	SA/S8.6.1.1	Schaltaktor, 8fach, 6 A,REG	Switch Actuator, 8-fold, 6 A, MDRC					6 A			1.Feb - 30. April 2020
2CDG 110 245 R0011	SAH/S16.6.7.1 *)	SA/S12.6.1.1	Schaltaktor, 12fach, 6 A,REG	Switch Actuator, 12-fold, 6 A, MDRC								· ·
2CDG 110 253 R0011	SA/S2.6.2.2	SA/S2.6.2.1	Schaltaktor, 2fach, 6 A,REG	Switch Actuator, 2-fold, 6 A, MDRC	4016779066716	2	-	2		166,00 €		
2CDG 110 254 R0011	SA/S4.6.2.2	SA/S4.6.2.1	Schaltaktor, 4fach, 6 A,REG	Switch Actuator, 4-fold, 6 A, MDRC	4016779066730	4	-	4	6 A	207,00 €	January 2020	1.Feb - 30. April 2020
2CDG 110 255 R0011	SA/S8.6.2.2	SA/S8.6.2.1	Schaltaktor, 8fach, 6 A,REG	Switch Actuator, 8-fold, 6 A, MDRC	4016779066754	8	-	8		285,00 €	1	· ·
2CDG 110 256 R0011	SA/S12.6.2.2	SA/S12.6.2.1	Schaltaktor, 12fach, 6 A,REG	Switch Actuator, 12-fold, 6 A, MDRC	4016779066778	12	-	12		354,00 €		
2CDG 110 257 R0011	SA/S2.10.2.2	SA/S2.10.2.1	Schaltaktor, 2fach, 10 A.REG	Switch Actuator, 2-fold, 10 A. MDRC	4016779066556	2	-	2		184.00 €		
2CDG 110 258 R0011	SA/S4.10.2.2	SA/S4.10.2.1	Schaltaktor, 4fach, 10 A,REG	Switch Actuator, 4-fold, 10 A, MDRC	4016779066570	4	-	4	10 A	229,00 €	January 2020	1.Feb - 30. April 2020
2CDG 110 259 R0011	SA/S8.10.2.2	SA/S8.10.2.1	Schaltaktor, 8fach, 10 A,REG	Switch Actuator, 8-fold, 10 A, MDRC	4016779066594	8		8		322,00 €	1	· ·
2CDG 110 260 R0011	SA/S12.10.2.2	SA/S12.10.2.1	Schaltaktor, 12fach, 10 A,REG	Switch Actuator, 12-fold, 10 A, MDRC	4016779066617	12	-	12		400,00€		
2CDG 110 261 R0011	SA/S2.16.2.2	SA/S2.16.2.1	Schaltaktor, 2fach, 16 A,REG	Switch Actuator, 2-fold, 16 A, MDRC	4016779066631	2	-	2		202,00 €		
2CDG 110 262 R0011	SA/S4.16.2.2	SA/S4.16.2.1	Schaltaktor, 4fach, 16 A.REG	Switch Actuator, 4-fold, 16 A, MDRC	4016779066655	4	-	4	16 A	252.00 €	January 2020	1.Feb - 30. April 2020
2CDG 110 263 R0011	SA/S8.16.2.2	SA/S8.16.2.1	Schaltaktor, 8fach, 16 A,REG	Switch Actuator, 8-fold, 16 A, MDRC	4016779066679	8	-	8		348.00 €	1 1	· ·
2CDG 110 264 R0011	SA/S12.16.2.2	SA/S12.16.2.1	Schaltaktor, 12fach, 16 A,REG	Switch Actuator, 12-fold, 16 A, MDRC	4016779066693	12	-	12		432,00 €		
ABB Professional Range			•									
2CDG 110 265 R0011	SA/S2.16.5.2	SA/S2.16.5.1	Schaltaktor, 2fach, 16 A, C-Last, REG	Switch Actuator, 2-fold, 16 A, C-Load, MDRC	4016779066457	2	-	2		230,00 €		
2CDG 110 266 R0011		SA/S4.16.5.1	Schaltaktor, 4fach, 16 A, C-Last, REG	Switch Actuator, 4-fold, 16 A, C-Load, MDRC	4016779066471	4	-	4	16/20 A		January 2020	1.Feb - 31. May 2020
2CDG 110 267 R0011	SA/S8.16.5.2	SA/S8.16.5.1	Schaltaktor, 8fach, 16 A, C-Last, REG	Switch Actuator, 8-fold, 16 A, C-Load, MDRC	4016779066495	8	-	8	C-Load	398,00 €		
2CDG 110 268 R0011	SA/S12.16.5.2	SA/S12.16.5.1	Schaltaktor, 12fach, 16 A, C-Last, REG	Switch Actuator, 12-fold, 16 A, C-Load, MDRC	4016779066518	12	-	12		490,00€		
2CDG 110 269 R0011	SA/S2.16.6.2	SA/S2.16.6.1	Schaltaktor, 2fach, 16 A, C-Last mit Stromerkennung, REG	Switch Actuator, 2-fold, 16 A, C-Load, Current Detection, MDRC	4016779066327	2	-	2		253,00 €		
2CDG 110 270 R0011	SA/S4.16.6.2	SA/S4.16.6.1	Schaltaktor, 4fach, 16 A, C-Last mit Stromerkennung, REG	Switch Actuator, 4-fold, 16 A, C-Load, Current Detection, MDRC	4016779066419	4	-	4	16/20 A	317,00 €	tbd	tbd
2CDG 110 271 R0011	SA/S8.16.6.2	SA/S8.16.6.1	Schaltaktor, 8fach, 16 A, C-Last mit Stromerkennung, REG	Switch Actuator, 8-fold, 16 A, C-Load, Current Detection, MDRC	4016779066433	8		8	C-Load	438,00 €		
2CDG 110 272 R0011	SA/S12.16.6.2	SA/S12.16.6.1	Schaltaktor, 12fach, 16 A, C-Last mit Stromerkennung, REG	Switch Actuator, 12-fold, 16 A, C-Load, Current Detection, MDRC	4016779066532	12	-	12		539,00€		



Summary of the Features and Advantages

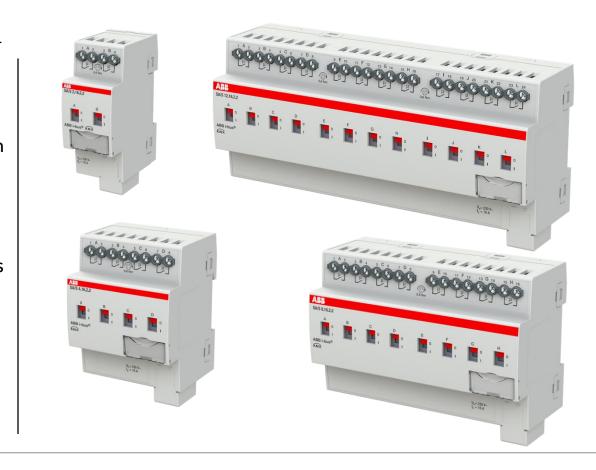
- Proven connection terminals with screws, on the same level
 → easy and stress-free wiring for the panel builder
- Classic manual operation
 - → simple and well known, no bus voltage needed
- Up to 12 independent channels
 - → very efficient solution (costs per channel) with no restrictions in functions
- Optimized ETS Application
 - → easy to operate, safes time and satisfies the programmer, same look and feel for all new switch actuators
- Prepared for ABB i-bus tool connection (coming soon)
 - → operation, status information, simulation and more





Summary of the Features and Advantages

- Versions with 6, 10 (Standard) and 16A (Standard/Professional)
 → products available for the different market requirements
- Switch Actuators Professional with 16/20A relay and high inrush current
 - → prepared for challenging loads
- Extension of Switch Actuators Professional with current detection in 2020
 - → new functions with highest performance for switch actuators
- New hardware platform and digital ready components
 - → allows in future feature extensions
- Designed and produced in Germany
 - → highest quality standard





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