

FEBRUARY 2020

Update ControlTouch - New KNX Switch Actuators - ABB Caldion®

Webinar – Competence Center Europe – Smart Buildings

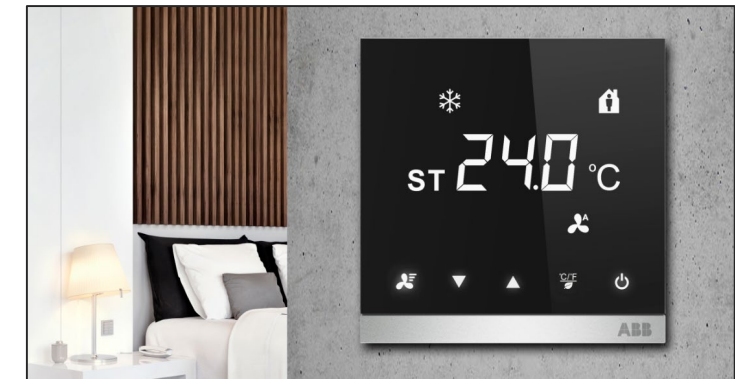
Thorsten Reibel, Jürgen Schilder, Stefan Grosse, Martin Wichary & Ilija Zivadinovic

Webinar “Update ControlTouch - New KNX Switch Actuators - ABB Caldion®”

Agenda

Three topics in one webinar:

- Firmware update for Busch ControlTouch® is available, with a lot of new functions and more
- The new Standard and Professional KNX Switch actuators will be ready now, get the first information about the products
- ABB Caldion®, we extend ClimaECO with a new range of FanCoil Temperature controller



Webinar “Update Busch-ControlTouch®”

Agenda

6136/APP-500 Busch-ControlTouch®:

- Easy commissioning wizard
- New possibilities for the visualisation with room pictures and small control elements
- Implementation of Sonos API with „Works with Sonos“ certificate (text to speech and KNX Bridging)
- Implementation of 16 RTC Controller

Webinar “Update Busch-ControlTouch®”

6136/APP-500 Busch-ControlTouch® - General Overview

Webinar “Update Busch-ControlTouch®”

6136/APP-500 Busch-ControlTouch® - General Overview

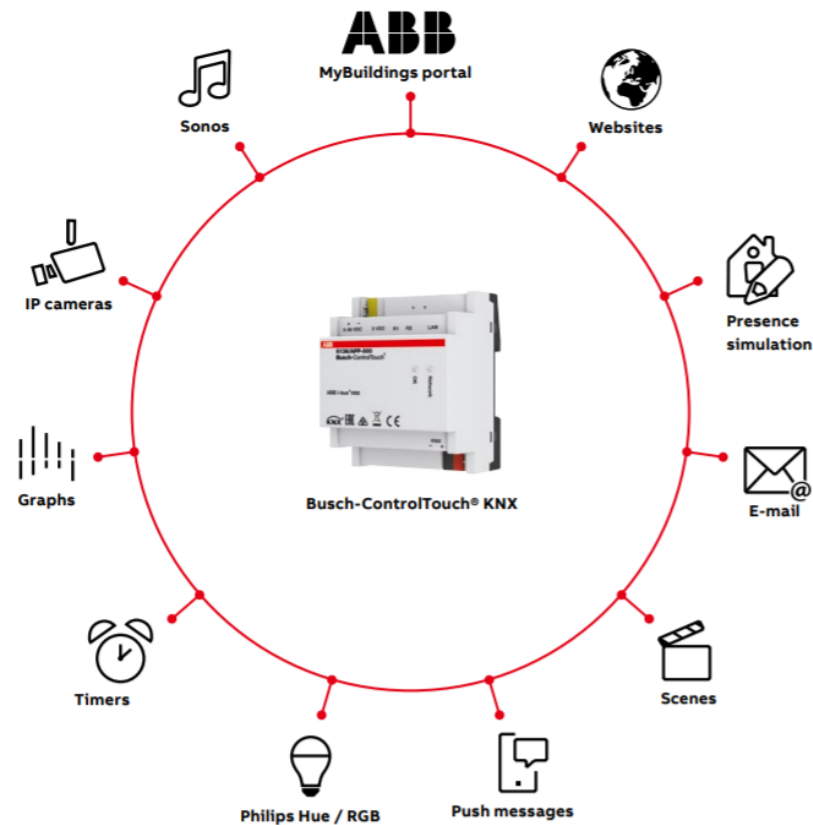
Product Information

The Busch-ControlTouch® KNX IP gateway combines the KNX installation with the IP network (LAN) and controls all KNX functions in the building

The easy-to-use app – for iOS and Android – turns not only smartphones and tablets, but also soon the Apple Watch into practical remote controls for KNX systems

Product advantages

- For smartphones, tablets (iOS and Android), PC client and the Apple Watch
- Implementation and modifications via the Internet
- Intuitive and user-friendly operation
- Integration with IP cameras, Sonos wireless box and Philips Hue lights
- Logic scripts option possible
- Error and alarm messages via push



Webinar “Update Busch-ControlTouch®”

6136/APP-500 Busch-ControlTouch® - General Overview

Functions and impressions

- Scene editor
- Week timer (with astro)
- Logic scripts (if then else)
- Alarm or malfunction messages over push notifications and e-mail
- Diagrams (zoom function)
- RGB/RGBW support
- IP camera (MJPEG)
- PTZ support (Axis, Mobotix)
- Presence detection option (arp-scan, local network)
- KNXnet/IP Tunnel
- Philips hue bridge
- UPnP audio (e.g. SONOS)



Webinar “Update Busch-ControlTouch®”

6136/APP-500 Busch-ControlTouch® - General Overview

Update 1.3.0

All installed devices with a firmware older than version 1.3.0 must be updated before **May 2020**, otherwise they will no longer work properly

Claims arising from defects or damage due to a software version that is not up to date cannot be asserted

Product type : 6136/APP-500

Order code : 2CKA006136A0202

Current version : Firmware 1.3.0

Update can be triggered by “MyBuildings” portal in the future!

Settings system

Writing firmware (version 1.3.0)

Preparing for firmware update: ready

Downloading firmware: ready

Preparing firmware for installation: 88 % done, please wait . . .



Firmware update

Request device to update firmware

Request

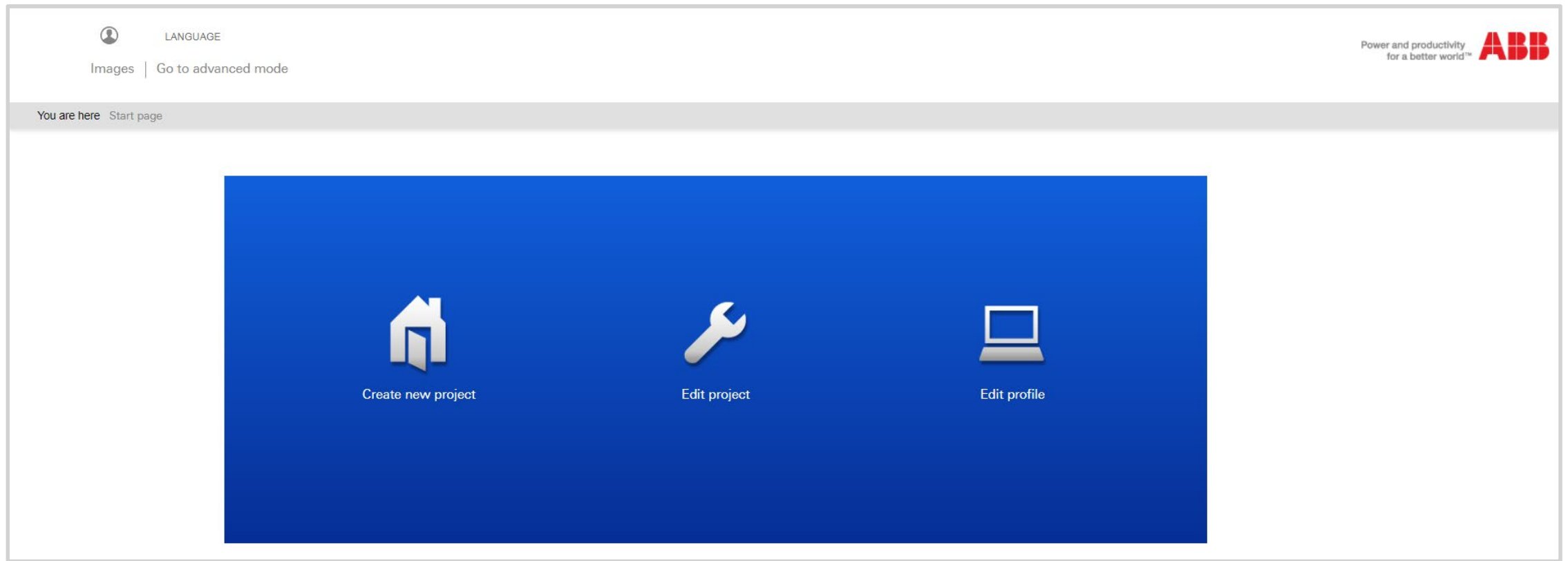
Webinar “Update Busch-ControlTouch®”

6136/APP-500 Busch-ControlTouch® - Smart Commissioning Wizard

Webinar “Update Busch-ControlTouch®”

6136/APP-500 Busch-ControlTouch® - Feature Enhancements

Smart Commissioning Wizard



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6136/APP-500 Busch-ControlTouch® - Feature Enhancements

Smart Commissioning Wizard

Smart wizard for a more combatable way of commissioning the Busch-ControlTouch®.

This wizard guides the user/installer through the steps to:

1. Create new project (register device, create and edit project, create and edit profile, setup device)
2. Edit project (edit project, create and edit profile)
3. Create profile (create and edit profile)

Via "go to enhanced mode" the original extensive UI becomes available.

Device registration	or	Select existing device
Setup project ✓		
Load KNX project ✓		
Link group addresses to functions ✓		
Configure extra features ✓		
Setup customer profile		
Configure visualisation		
Setup device		
Setup app		

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6136/APP-500 Busch-ControlTouch® - Room Based Visualisation

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6136/APP-500 Busch-ControlTouch® - Feature Enhancements

New visualisation

It's possible to use room pictures for the visualization now. To control functions in a room view small “bubbles” can be used as control element.

Important:

Activate “Prefers fullscreen display” in the settings of each roomview page!

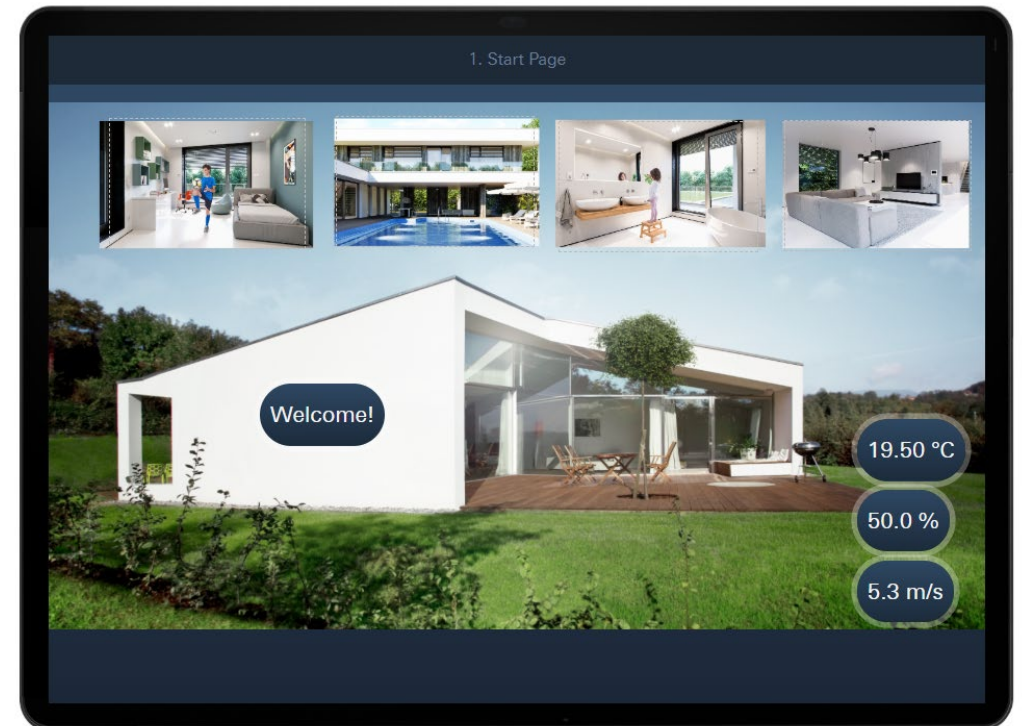
☐ Button color

	47	72	99
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☒ Prefers fullscreen display

Button type

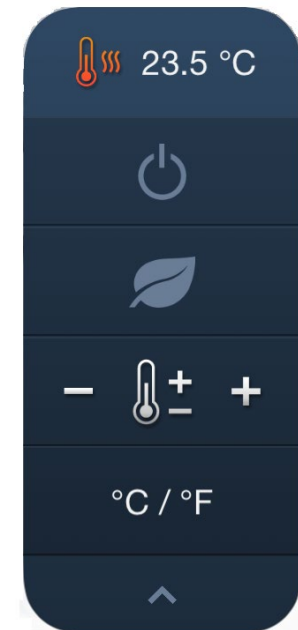
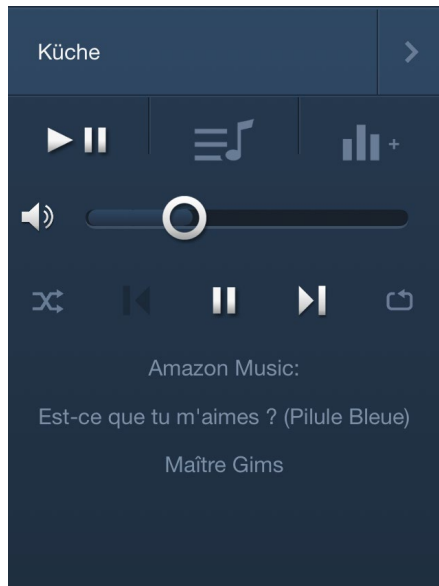
Inherit from profile



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6136/APP-500 Busch-ControlTouch® - Feature Enhancements

Impressions



Webinar “Update Busch-ControlTouch®”

6136/APP-500 Busch-ControlTouch® - Sonos

Webinar “Update Busch-ControlTouch®”

6136/APP-500 Busch-ControlTouch® - Feature Enhancements

Sonos

The Sonos-API is now implemented into the Busch-ControlTouch®.
This gives it the certificate “Works with Sonos”.
For some devices a new Sonos box is required.

Example functions:

- Control Sonos with KNX devices (Sonos linking)
- Creating groups
- Text-to-speech



Works with
SONOS

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6136/APP-500 Busch-ControlTouch® - Feature Enhancements

Sonos Linking

KNX group addresses can be used to control a Sonos box now.

Example:

Device volume DPT 3.007 dimming control

3.007 dimming control

Default Value: 1 %

Possible Values:

\$00 = Decrease, Break

\$01 = Decrease, 100 %

\$02 = Decrease, 50 %

\$03 = Decrease, 25 %

\$04 = Decrease, 12 %

\$05 = Decrease, 6 %

\$06 = Decrease, 3 %

\$07 = Decrease, 1 %

\$08 = Increase, Break

\$09 = Increase, 100 %

\$0A = Increase, 50 %

\$0B = Increase, 25 %

\$0C = Increase, 12 %

\$0D = Increase, 6 %

\$0E = Increase, 3 %

\$0F = Increase, 1 %

Wohnzimmer	Sending GA	Status GA	
Group volume	<input type="text"/>	<input type="text"/>	DPT 5.001
Device volume	<input type="text"/>	<input type="text"/>	DPT 5.001
Group volume		<input type="text"/>	DPT 3.007
Device volume		<input type="text"/>	DPT 3.007
Device mute	<input type="text"/>	<input type="text"/>	DPT 1.001
Play	<input type="text"/>	<input type="text"/>	DPT 1.001
Next		<input type="text"/>	DPT 1.001
Previous		<input type="text"/>	DPT 1.001
Shuffle	<input type="text"/>	<input type="text"/>	DPT 1.001
Repeat	<input type="text"/>	<input type="text"/>	DPT 1.001
Meta information	<input type="text"/>		DPT 16.000
Info to send	<input type="text"/>		See below
Select favorite		<input type="text"/>	DPT 5.010
Select next favorite		<input type="text"/>	DPT 1.001
Select playlist		<input type="text"/>	DPT 5.010
Join to next playing group		<input type="text"/>	DPT 1.001
Play audio clip (standard)		<input type="text"/>	DPT 5.010
Play audio clip (own)		<input type="text"/>	DPT 5.010

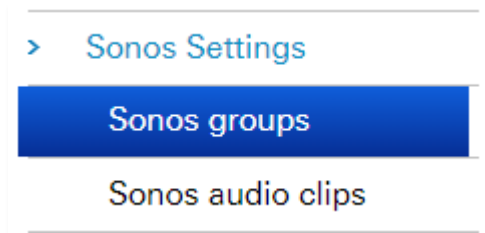
☒ Save

[cn] = container name, [tn] = track name, [ta] = track artist, [an] = album name, [aa] = album artist, [sn] = show name, [si] = stream info

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Sonos settings – Creating groups



Sonos groups

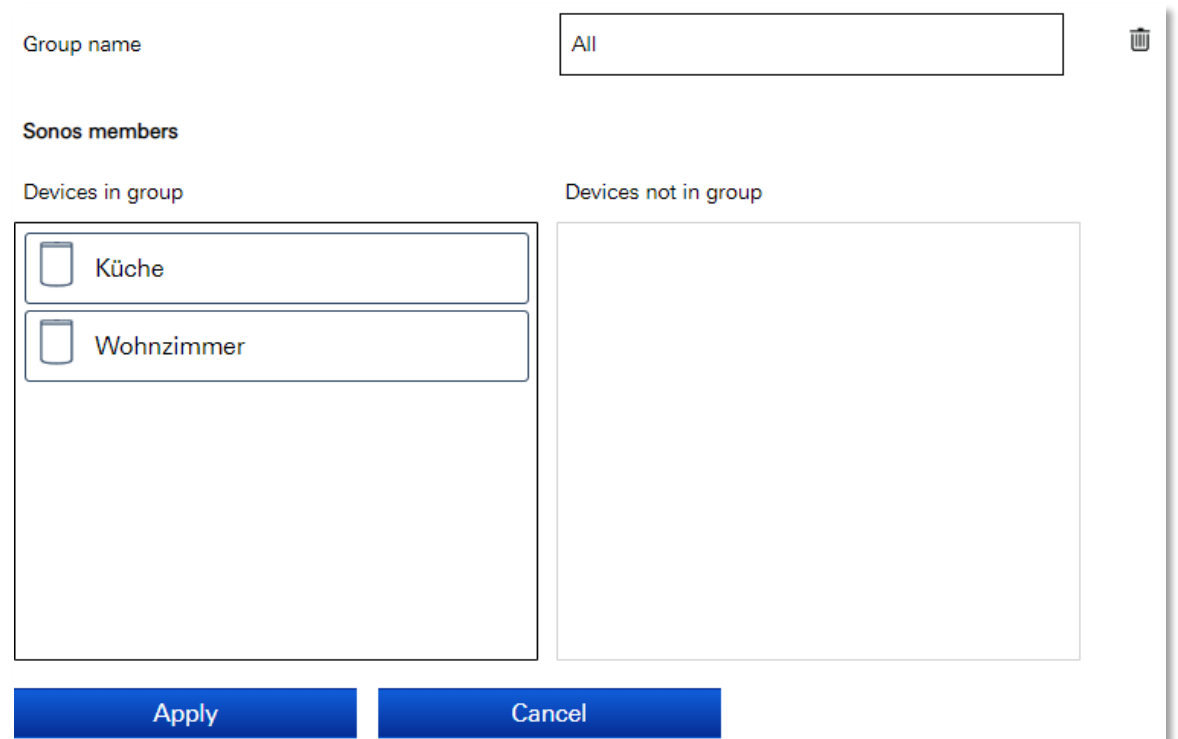
Living Area

Wohnzimmer

All

Wohnzimmer, Küche

Add group

A screenshot of the Sonos group creation dialog box. At the top, there is a "Group name" field containing the text "All" and a trash icon to its right. Below this is the "Sonos members" section, which is divided into two columns. The left column, titled "Devices in group", contains two items: "Küche" and "Wohnzimmer", each preceded by a small speaker icon. The right column, titled "Devices not in group", is currently empty. At the bottom of the dialog, there are two blue buttons: "Apply" on the left and "Cancel" on the right.

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Sonos settings – Audio clips

For “Text-to-Speech” functionality a new Sonos device is needed.

Compatible devices:

- Sonos One
- Sonos One SL
- Sonos Play:5
- Sonos Beam
- Sonos Move
- Sonos Symfonisk (IKEA)

10 predefined audio clips + 30 own audio clips (mp3 or T2S)

Sonos audio clips		Volume	
Sonos standard - 1	Chime	<input type="text" value="20"/>	
ControlTouch standard - 1	Ding dong	<input type="text" value="20"/>	▶
ControlTouch standard - 2	Gong	<input type="text" value="20"/>	▶
ControlTouch standard - 3	Gong 2	<input type="text" value="20"/>	▶
ControlTouch standard - 4	Logo	<input type="text" value="20"/>	▶
ControlTouch standard - 5	Tinkerbelle	<input type="text" value="20"/>	▶
ControlTouch standard - 6	Up the stairs	<input type="text" value="20"/>	▶
ControlTouch standard - 7	Xylophone	<input type="text" value="20"/>	▶
ControlTouch standard - 8	Ding dong (long)	<input type="text" value="20"/>	▶
ControlTouch standard - 9	Melody 1 (long)	<input type="text" value="20"/>	▶
ControlTouch standard - 10	Melody 2 (long)	<input type="text" value="20"/>	▶
Own - 1	<input type="text" value="Good Morning"/>	<input type="text" value="20"/>	▶ 
Own - 2	<input type="text" value="Welcome home"/>	<input type="text" value="20"/>	▶ 

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6136/APP-500 Busch-ControlTouch® - Feature Enhancements

Sonos settings – Audio clips

Integration via Triggers:

Trigger


Enabled:

Yes

Name:

Welcome home

Conditions



Group address


Light 3

=

1

+

Actions



Command

+

Sonos command

Wohnzimmer

Play audio clip

Welcome home

✓ Done

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| Slide 20

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6136/APP-500 Busch-ControlTouch® - Feature Enhancements

Sonos settings – Audio clips

Application:



Window closed
GA BI = 0



Window opened
GA BI = 1



Sonos play audio clip with trigger function

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Sonos settings – Audio clips

Application:



Video outdoor station
GA Call started = 0



Someone bells
GA Call started = 1



Sonos play audio clip with trigger function

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6136/APP-500 Busch-ControlTouch® - Room Temperature Controller

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6136/APP-500 Busch-ControlTouch® - Feature Enhancements

RTCs

Up to 16 Master-RTCs for the ControlTouch are now integrated

+ Add new project

Import project

> ABB Training

Group Addresses

Cameras

Commands

Data Logger

Presence detection

Trigger

Scripts

Sonos KNX linking

Room thermostat controllers

Archive

Backups

Room thermostat controllers

Add

Parameters

General

Control heating

Setpoint settings

Changing set values

Temperature reading

Alarm functions

Temperature limiter

Group objects

Device function

Control function

Operating mode after reset

Temperature unit °C/°F

Additional functions/objects

Single device

Heating

Comfort

Celsius

☒ no ☐ yes

Parameters

Group objects

0 Heating control value

6 External actual temperature

10 Actual setpoint

11 Normal operating mode

12 Operation mode override

DPT 1.001

DPT 9.001

DPT 9.001

DPT 20.102

DPT 20.102

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6136/APP-500 Busch-ControlTouch® - Feature Enhancements

RTC – Configuration as Master

Room thermostat controller - Bedroom (Master)

Parameters

General

Control heating

Basic stage heating

Setpoint settings

Changing set values

Temperature reading

Alarm functions

Temperature limiter

Group objects

Device function

Control function

Operating mode after reset

Temperature unit °C/°F

Additional functions/objects

Delay time for read telegrams after reset (s)

Object 'Current HVAC operating mode' active

Master device

Heating

Comfort

Celsius

no

yes

5

no

yes

Save

3 - Heating

3/0 - Actual Setpoint

3/1 - Request Setpoint

3/2 - Confirm Setpoint

3/3 - Operating Mode

3/4 - On/Off Request

3/5 - On/Off confirmation

3/6 - Controller-Status HVAC

3/7 - Actual Temp.

Parameters			Group objects
0	Heating control value		DPT 1.001
4	On/off confirmation (Master)	3/5/1	DPT 1.001
6	External actual temperature	3/7/1	DPT 9.001
8	Fault, actual temperature (Master)		DPT 1.001
10	Actual setpoint		DPT 9.001
11	Operation mode normal (Master)	3/3/1	DPT 20.102
12	Operation mode override (Master/Slave)		DPT 20.102
13	Window contact (Master/Slave)		DPT 1.001
14	Presence detector (Master/Slave)		DPT 1.001
15	Status heating		DPT 1.001
27	Basic setpoint		DPT 9.001
34	Units switchover (Master)		DPT 1.003
36	On/off request (Master)	3/4/1	DPT 1.001
37	Setpoint display (Master)	3/0/1	DPT 9.00x
38	Request setpoint (Master)	3/1/1	DPT 6.010
39	Confirm setpoint (Master)	3/2/1	DPT 6.010
44	Controller status RHCC		DPT 22.101
45	Controller status HVAC (Master)	3/6/1	DPT ---
Save			

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6136/APP-500 Busch-ControlTouch® - Feature Enhancements

RTC – Configuration as Slave

Room thermostat controller - Living Room (Slave)

Parameters Group objects

General

Operating functions

Changing set values

Device function Slave device

Temperature unit °C/°F Celsius

Additional functions/objects ☒ no ☐ yes

- ▼ 3 - Heating
- ▶ 3/0 - Actual Setpoint
 - ▶ 3/1 - Request Setpoint
 - ▶ 3/2 - Confirm Setpoint
 - ▶ 3/3 - Operating Mode
 - ▶ 3/4 - On/Off Request
 - ▶ 3/5 - On/Off confirmation
 - ▶ 3/6 - Controller-Status HVAC
 - ▶ 3/7 - Actual Temp.

Parameters				Group objects
4	On/off confirmation (Slave)	3/5/0		DPT 1.001
6	External actual temperature	3/7/0		DPT 9.001
8	Fault, actual temperature (Slave)	3/7/1		DPT 1.001
11	Operation mode normal (Slave)	3/3/0		DPT 20.102
12	Operation mode override (Master/Slave)			DPT 20.102
36	On/off request (Slave)	3/4/0		DPT 1.001
37	Setpoint display (Slave)	3/0/2		DPT 9.00x
38	Request setpoint (Slave)	3/1/0		DPT 6.010
39	Confirm setpoint (Slave)	3/2/0		DPT 6.010
40	Heating/cooling request (Slave)	3/7/2		DPT 1.100
45	Controller status HVAC (Slave)	3/6/0		DPT -...

Webinar “Update Busch-ControlTouch®”

6136/APP-500 Busch-ControlTouch® - Other new features

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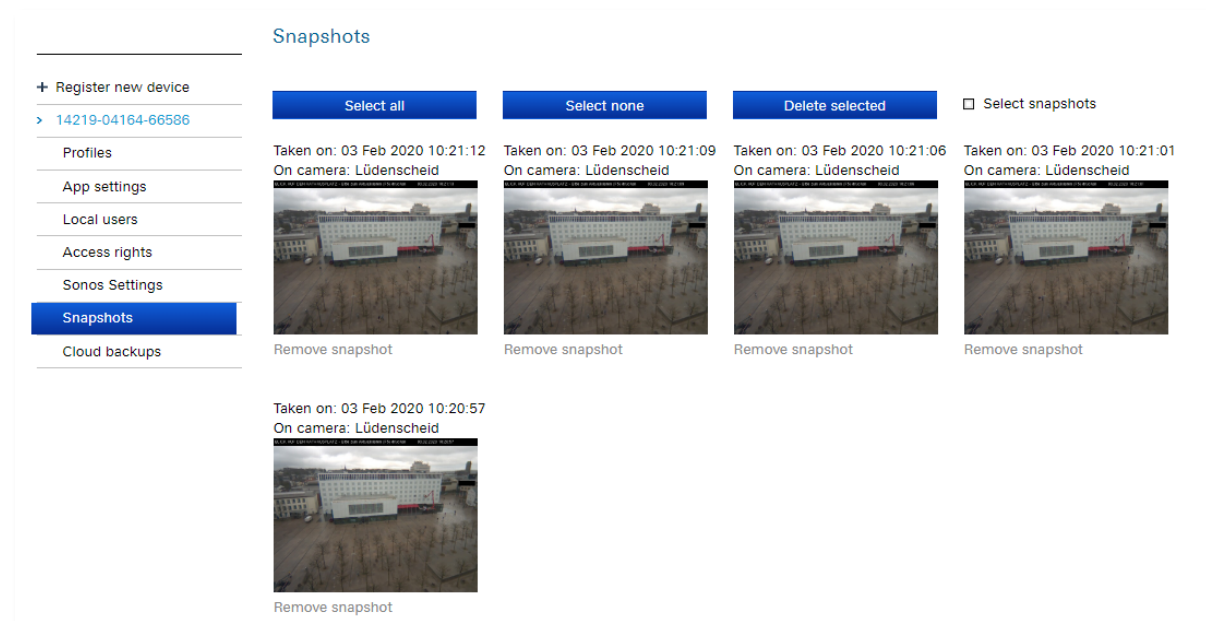
6136/APP-500 Busch-ControlTouch® - Feature Enhancements

Snapshots

Implement snapshot function for alert service

For the alert service, a camera can be selected to make a snapshot that is to be included in the push message or email. This snapshot is made when the alert service is triggered and:

- shown when the message is received
- stored in the myBuildings-environment of the cloud (maximum number of images is restricted, when reached oldest images are removed)
- available from the apps in the alert log
- the last image is always stored on the device



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6136/APP-500 Busch-ControlTouch® - Feature Enhancements

Cloud backups

Cloud backup of device configuration

The automatic cloud backup can be enabled/disabled on the device System page. When enabled, 2 slots will be filled with weekly backups and 2 slots with daily backups. Additionally, 3 slots can be filled with manual backups, that can be named individually. When updating the firmware, the user is prompted to create a manual backup, to safeguard the data in case the device update fails. From the device System page, a backup can be selected and restored to the device. Online in the myBuildings environment, the available backups are also shown.

Cloud backups				
<div><div>+ Register new device</div><div>> 14219-04164-66586</div><div>Profiles</div><div>App settings</div><div>Local users</div><div>Access rights</div><div>Sonos Settings</div><div>Snapshots</div><div>Cloud backups</div></div>				
Type	Position	On	Name	
Automatic	2	2020-01-28 09:13:10	Weekly	
Automatic	3	2020-02-02 10:15:10	Daily	
Automatic	4	2020-02-03 10:15:11	Daily	

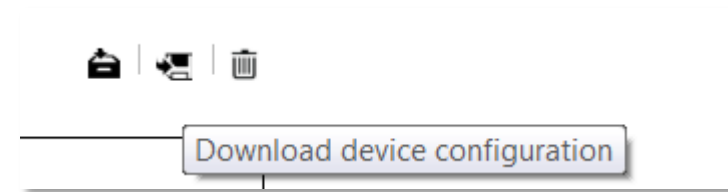
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Local commissioning

From the myBuildings environment on the device page, a file can be downloaded containing the project and profile information. On the device System page, this file can be uploaded under Configuration. When an app is connected to the device, also the profiles are available for the app. This allows for offline/local commissioning, when the device is unable to connect to the cloud.

The profile information is kept on the device as long as there is no cloud connection.



Configuration

Load personal configuration

Load

Export configuration

Save

Import configuration

Datei auswählen Keine ausgewählt

Load

Delete all configuration

Delete

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6136/APP-500 Busch-ControlTouch® - Feature Enhancements

LUA scripting support

Definition: (Wikipedia)

“Lua [...] is a lightweight, high-level, multi-paradigm programming language designed primarily for embedded use in applications. Lua is cross-platform, since the interpreter of compiled bytecode is written in ANSI C, and Lua has a relatively simple C API to embed it into applications.”

Use for the Busch-ControlTouch®:

Sonos, Timer, Alerts, etc.

Scripts

Add Script

Add LUA Script

```
ct.userlog(text)
ct.startscript(script_id)
ct.stopscrip(script_id)
ct.enablescript(script_id, status)
ct.sleep(time)
ct.callscenario(scenario_id)
ct.learnscenario(scenario_id)
ct.callalert(alert_id[, text [,camera_id]])
ct.makesnapshot(camera_id)
ct.enablescheduler(scedule_id, status)
ct.setcomponent(component_id, value [, value_2, value_3])
ct.getcomponent(component_id)
ct.readcomponent(component_id)
ct.httpcommand(http_id)
ct.setupnp(device_id, command[, option_setting])
ct.getupnp(device_id)
ct.tcpcommand(tcp_id)
ct.openKNXtunnel(status)
ct.setsimulation(status)
ct.getsimulation()
ct.connectKNX(status)
ct.setpersistent(varname, value)
ct.getpersistent(varname)
ct.setsonos(device_id, command[, option_setting])
ct.getsonos(device_id, parameter)
```



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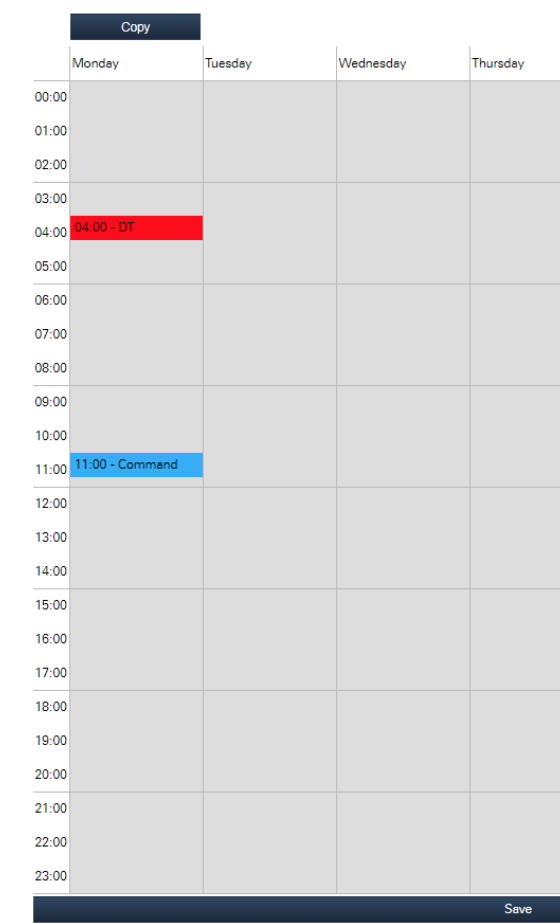
Time switch

Enhance scheduler with day/week options

For the scheduler, now three options exist:

- Standard scheduler: schedule one action for one (recurring) time
- day scheduler: schedule up to 5 actions over the 24 hour period, which is performed every day
- week scheduler: schedule up to 5 actions over 7x24 hour periods, which is performed every week

Additionally a scheduler can be enabled only for a certain time period, for instance only May to



Webinar “Standard/Professional Switch Actuators”

Agenda

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”

Webinar “Standard/Professional Switch Actuators”

Overview Next Generation Switching

Webinar “Standard/Professional Switch Actuators”

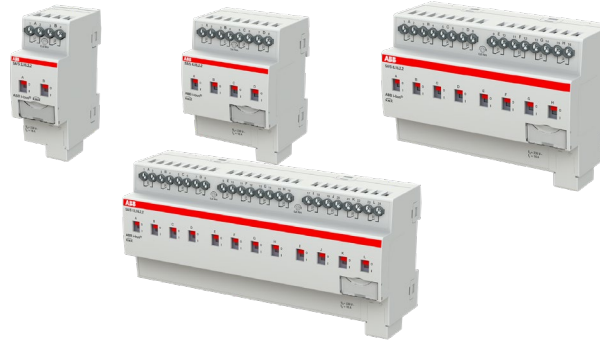
Next Generation Switching

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

Residential



Applications

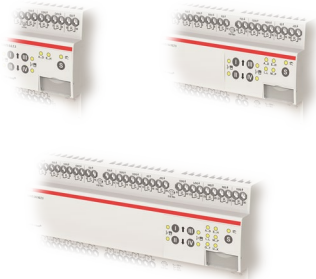


Commercial

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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 + energy function
- 2 x 4 devices

Residential



Applications



Commercial

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Standard Switch Actuators

Webinar “Standard/Professional 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)



Webinar “Standard/Professional Switch Actuators”

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

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Professional Switch Actuators

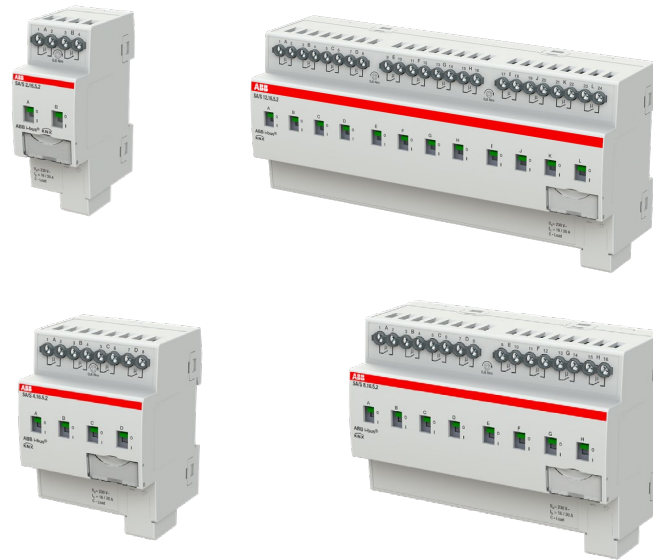
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Professional Switch Actuators

Key Characteristics

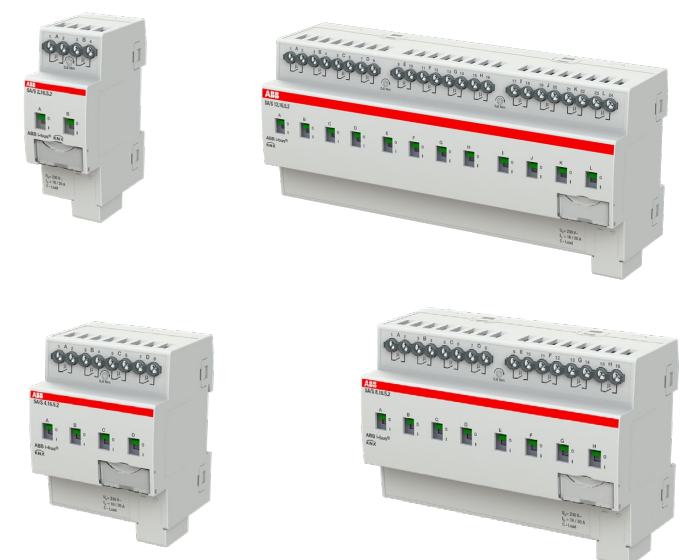
- High-switching-capacity devices with extended functionality for industry standard applications
- Data
 - 2 / 4 / 8 / 12 outputs
 - 16/20A C-Load (high capacity)
 - Energy function
 - Manual operation (voltage independent)
 - Combi screw-head terminals
 - Single application, smart features
 - New housing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

16/20A C-load (4 devices)



Key feature: High load capacity

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



Key feature: High load capacity and energy function

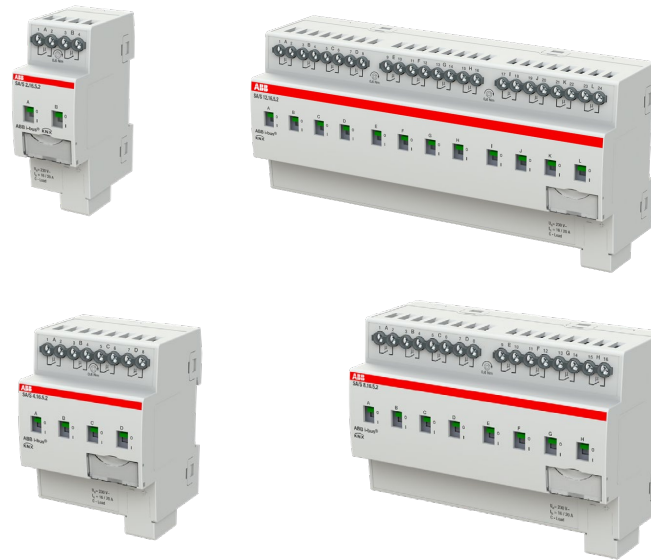
Webinar “Standard/Professional Switch Actuators”

Professional Switch Actuators

Key Characteristics

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- Data
 - 2 / 4 / 8 / 12 outputs
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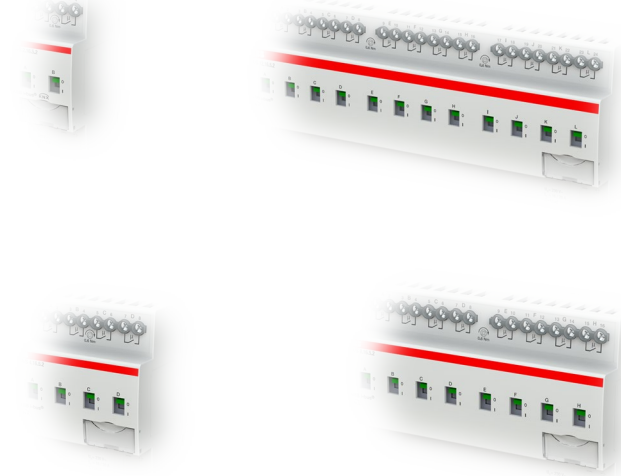
16/20A C-load (4 devices)



Key feature: High load capacity

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

Availability: Later in 2020



Key feature: High load capacity and energy function

Webinar “Standard/Professional Switch Actuators”

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

Webinar “Standard/Professional Switch Actuators”

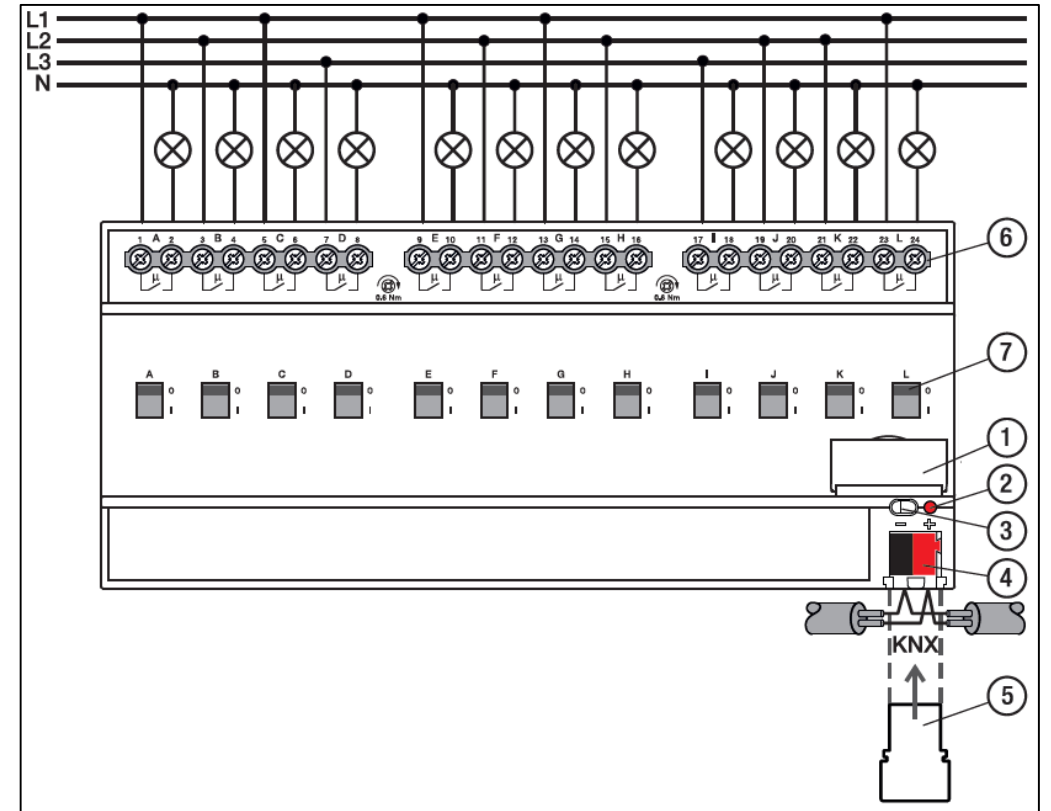
Features “Standard and Professional Switch Actuators”

Webinar “Standard/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



Webinar “Standard/Professional Switch Actuators”

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

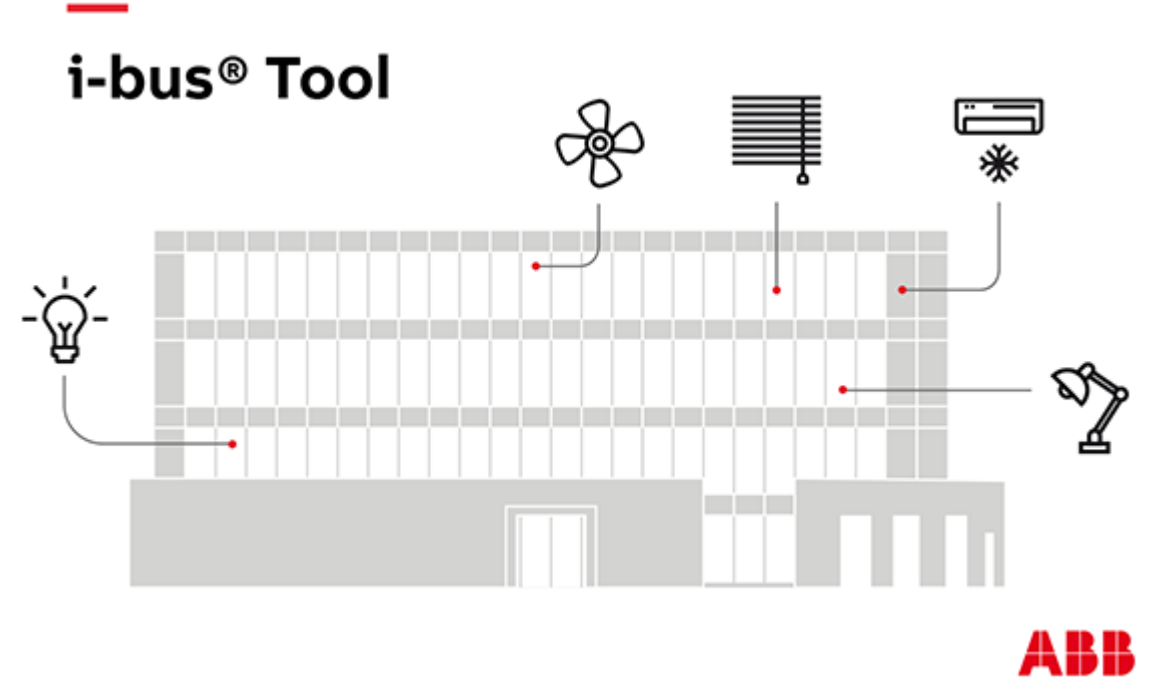
- Rated current I_N distinguish the components 6A, 10A and 16A, according to DIN EN 60947-4-1
(AC1 operation with $\cos \phi = 0,8$)
(AC3 operation with $\cos \phi = 0,45$)
- Switch actuator Professional with 16/20A C-Load at 200uF
- Switch Actuator Professional prepared for high inrush current (ballast 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
I_N rated current (A) ^a	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 ($\cos \phi = 0.8$) DIN EN 60947-4-1	6 A	10 A	16 A	20 A
AC3 operation ($\cos \phi = 0.45$) DIN EN 60947-4-1	6 A	8 A	8 A	16 A
C-Load switching capacity (200 μ F)	–	–	–	20 A
Fluorescent lighting load AX to EN 60669-1	6 AX (140 μ F) ^b	10 AX (140 μ F) ^b	16 A (140 μ F) ^b	20 AX (200 μ F) ^b
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	> 10 ⁶
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 I_p (150 μ s)	400 A	400 A	400 A	600 A
Max. peak inrush-current I_p (250 μ s)	320 A	320 A	320 A	480 A
Max. peak inrush-current I_p (600 μ s)	200 A	200 A	200 A	300 A
Number of electronic ballasts (T5/T8, single element): ^{c)}				
18 W (ABB ballasts 1 x 18 SF)	23 ballasts	23 ballasts	23 ballasts	26 ^{b)} ballasts
24 W (ABB ballasts 1 x 24 CY)	23 ballasts	23 ballasts	23 ballasts	26 ^{b)} 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 ^{b)} ballasts
80 W (Helvar EL 1 x 80 SC)	10 ballasts	10 ballasts	10 ballasts	12 ^{b)} ballasts

Webinar “Standard/Professional Switch Actuators”

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



Webinar “Standard/Professional Switch Actuators”

ETS Application “Standard/Professional Switch Actuators”

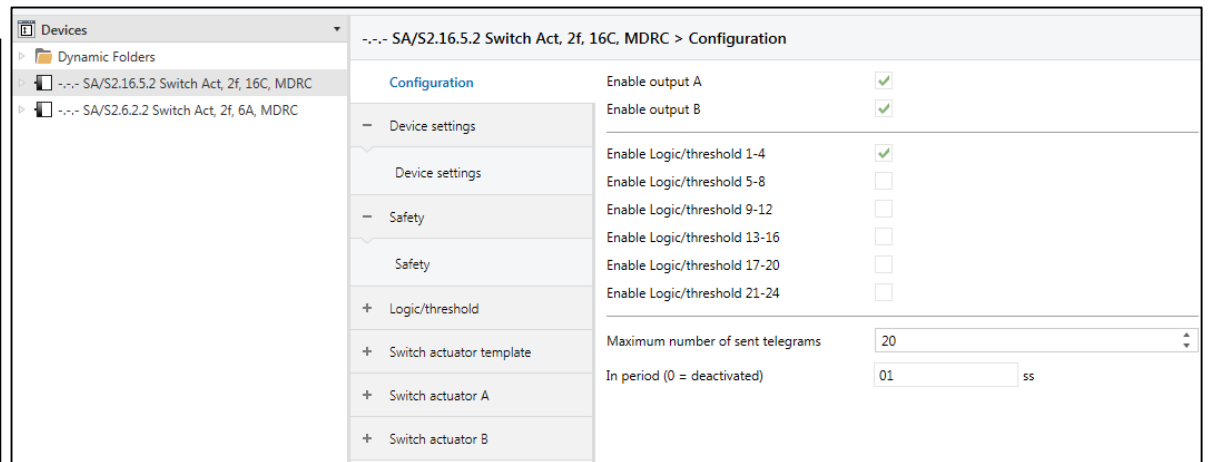
Webinar “Standard/Professional Switch Actuators”

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



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.

Webinar “Standard/Professional Switch Actuators”

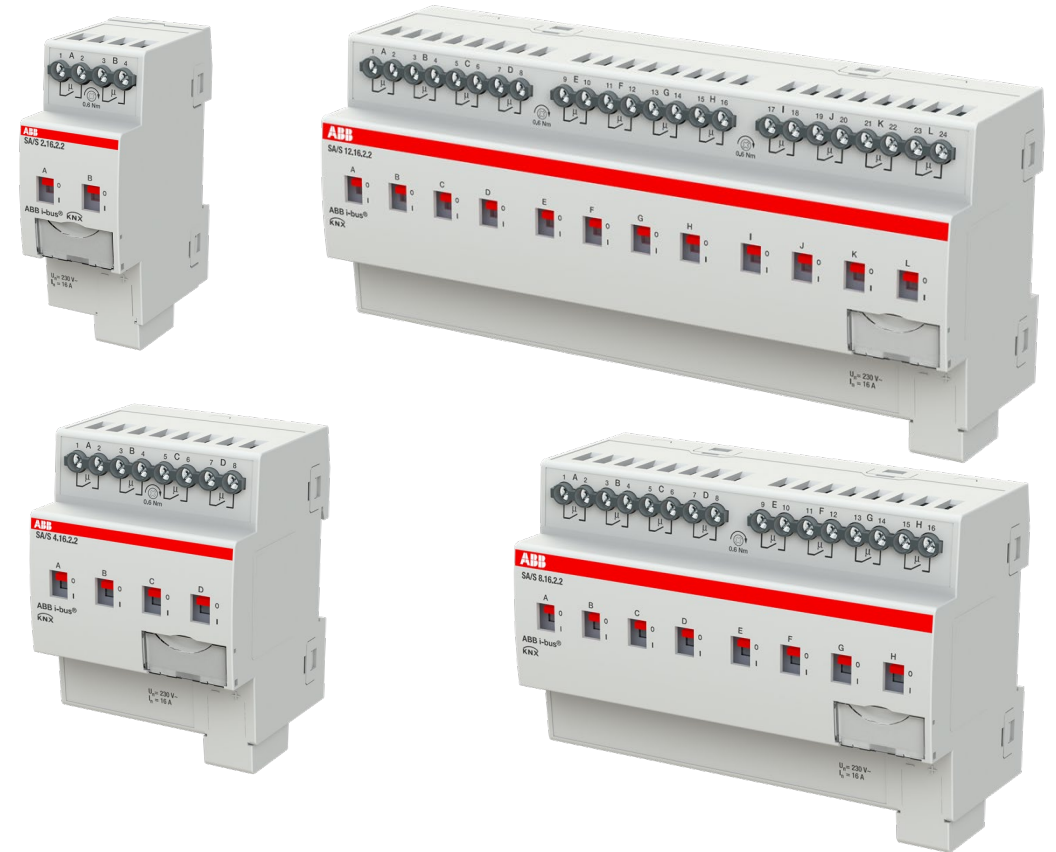
Commercial and Marketing Aspects “Standard/Professional Switch Actuators”

Webinar “Standard/Professional Switch Actuators”

Standard Switch Actuator

Order Code and List Price (ABB Version)

Standard Switch Actuator	Order Code	List Price (excl. VAT)
SAS/S 2.6.2.2	2CDG110253R0011	166 €
SAS/S 4.6.2.2	2CDG110254R0011	207 €
SAS/S 8.6.2.2	2CDG110255R0011	285 €
SAS/S 12.6.2.2	2CDG110256R0011	354 €
SAS/S 2.10.2.2	2CDG110257R0011	184 €
SAS/S 4.10.2.2	2CDG110258R0011	229 €
SAS/S 8.10.2.2	2CDG110259R0011	322 €
SAS/S 12.10.2.2	2CDG110260R0011	400 €
SAS/S 2.16.2.2	2CDG110261R0011	202 €
SAS/S 4.16.2.2	2CDG110262R0011	252 €
SAS/S 8.16.2.2	2CDG110263R0011	348 €
SAS/S 12.16.2.2	2CDG110264R0011	432 €

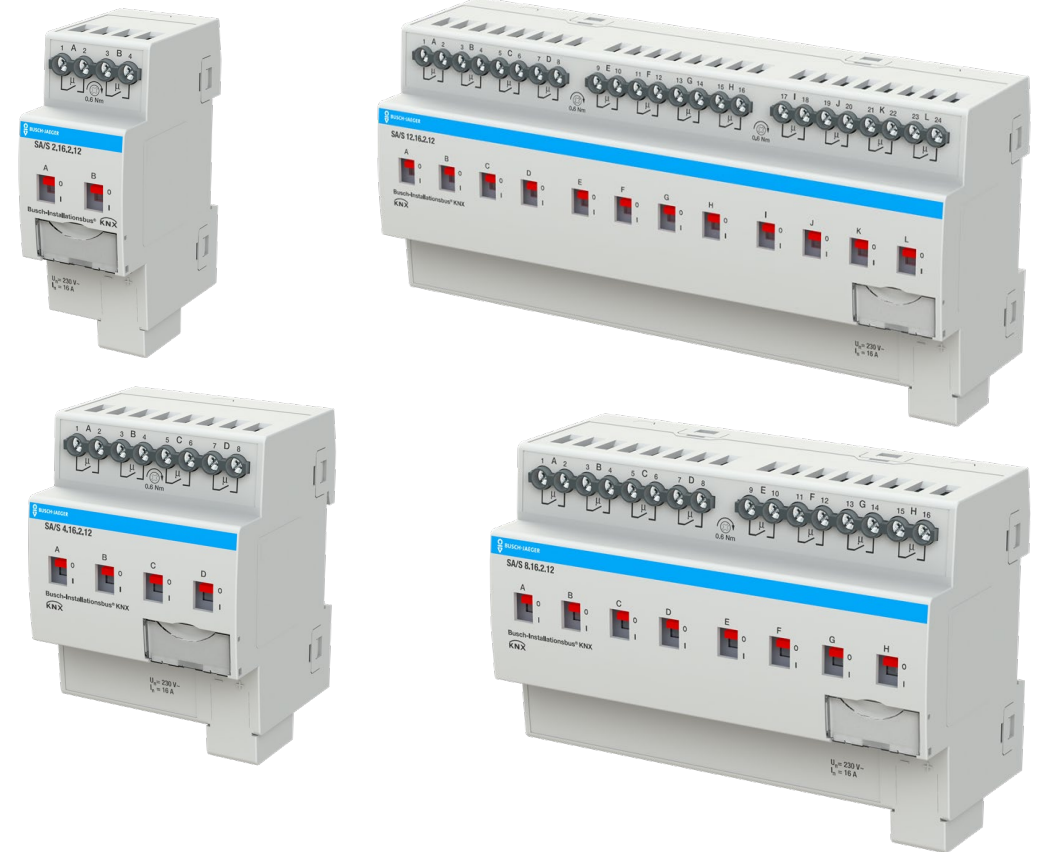


Webinar “Standard/Professional Switch Actuators”

Standard Switch Actuator

Order Code and List Price (Busch-Jaeger Version)

Standard Switch Actuator	Order Code	List Price (excl. VAT)
SAS/S 2.10.2.12	2CDG110257R0021	184 €
SAS/S 4.10.2.12	2CDG110258R0021	229 €
SAS/S 8.10.2.12	2CDG110259R0021	322 €
SAS/S 12.10.2.12	2CDG110260R0021	400 €
SAS/S 2.16.2.12	2CDG110261R0021	202 €
SAS/S 4.16.2.12	2CDG110262R0021	252 €
SAS/S 8.16.2.12	2CDG110263R0021	348 €
SAS/S 12.16.2.12	2CDG110264R0021	432 €

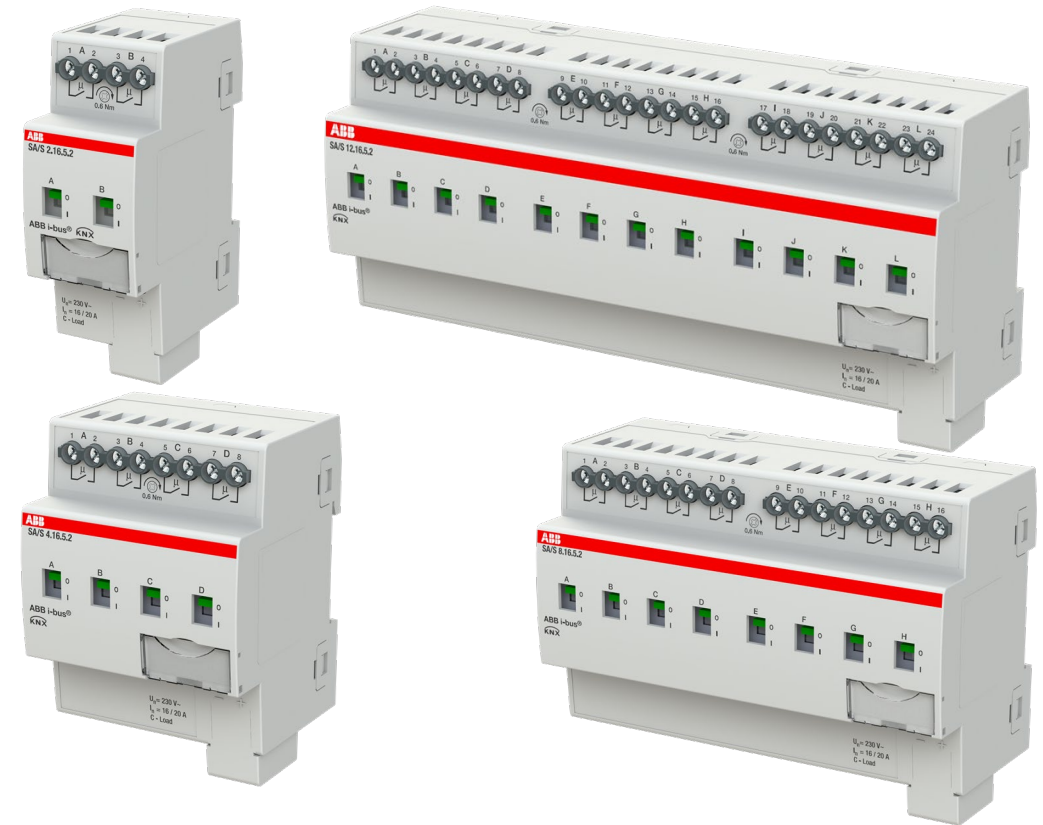


Webinar “Standard/Professional Switch Actuators”

Professional Switch Actuator

Order Code and List Price (ABB Version)

Professional Switch Actuator	Order Code	List Price (excl. VAT)
SAS/S 2.16.5.2	2CDG110265R0011	230 €
SAS/S 4.16.5.2	2CDG110266R0011	288 €
SAS/S 8.16.5.2	2CDG110267R0011	398 €
SAS/S 12.16.5.2	2CDG110268R0011	490 €



Webinar “Standard/Professional Switch Actuators”

Professional Switch Actuator

Order Code and List Price (Busch-Jaeger Version)

Professional Switch Actuator	Order Code	List Price (excl. VAT)
SAS/S 2.16.5.12	2CDG110265R0021	230 €
SAS/S 4.16.5.12	2CDG110266R0021	288 €
SAS/S 8.16.5.12	2CDG110267R0021	398 €
SAS/S 12.16.5.12	2CDG110268R0021	490 €



Webinar “Standard/Professional Switch Actuators”

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

42 PRODUCT RANGE OVERVIEW 2019/2020 9AKK10740243188 REV. B

ABB i-bus® KNX

Outputs – Combi Switch Actuators




SAH/S 8.8.7.1

Switching/Shading Actuator, 6 A, MDBC NEW

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 V AC 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. Available November 2019

Description	Mod. width	Order details		Price		Pack unit
		Type code	Order code	1 piece	kg	
8-fold	4	SAH/S 8.8.7.1	ZCDG110248R0011	0.349	1	
16-fold	8	SAH/S 16.8.7.1	ZCDG110248R0011	0.396	1	
24-fold	12	SAH/S 24.8.7.1	ZCDG110248R0011	0.83	1	




SAH/S 16.10.7.1

Switching/Shading Actuator, 10 A, MDBC NEW

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 i-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 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. Available November 2019

Description	Mod. width	Order details		Price		Pack unit
		Type code	Order code	1 piece	kg	
8-fold	4	SAH/S 8.10.7.1	ZCDG110248R0011	0.349	1	
16-fold	8	SAH/S 16.10.7.1	ZCDG110248R0011	0.396	1	
24-fold	12	SAH/S 24.10.7.1	ZCDG110248R0011	0.83	1	



SAH/S 24.16.7.1

Switching/Shading Actuator, 16 A, MDBC NEW

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. 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. Available November 2019

Description	Mod. width	Order details		Price		Pack unit
		Type code	Order code	1 piece	kg	
8-fold	4	SAH/S 8.16.7.1	ZCDG110258R0011	0.349	1	
16-fold	8	SAH/S 16.16.7.1	ZCDG110258R0011	0.396	1	
24-fold	12	SAH/S 24.16.7.1	ZCDG110258R0011	0.83	1	





Webinar “Standard/Professional Switch Actuators”

Microsite

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

Standard Switch Actuator:

[LINK](#)

Professional Switch Actuator:

[LINK](#)

ABB

HOME > OFFERINGS > LOW VOLTAGE PRODUCTS > HOME AND BUILDING AUTOMATION > ABB i-bus® KNX STANDARD SWITCH ACTUATORS

GLOBAL SITE

ABB i-bus® KNX Standard Switch Actuators

Switch to a smarter tomorrow

Universal switching in any application – The next generation of Standard Switch Actuators are perfectly suited for universal use in modern commercial buildings. These 32 devices are ideal for use in modern commercial buildings and offer simple installation, tool-free assembly and disassembly, together with cost and time savings during commissioning, thanks to a user-friendly interface.

Thanks to the wide range of devices with a high number of outputs and switching currents, the Standard Switch Actuators provide the perfect fit for all common standard switching applications, delivering further savings on costs and space in the distribution board.

Are you looking for support or purchase information?

➔ Contact us

Main benefits

Versatility

Complete portfolio - Wide choice of number of outputs and different currents and universal switching in any application

Efficiency

Cost and time savings during commissioning thanks to its user-friendly interface and template pages with central group objects

Complete portfolio

Wide choice of number of outputs and different currents plus space saving by using the right fit that suits your needs

Main features

- Easy installation thanks to combi screw-head terminals
- Tool-free assembly and disassembly from DIN-rail
- Unified housing – one simplified user interface
- Easy status identification without bus voltage
- Simplified commissioning thanks to template pages and central functions for all outputs

ABB

HOME > OFFERINGS > LOW VOLTAGE PRODUCTS > HOME AND BUILDING AUTOMATION > ABB i-bus® KNX PROFESSIONAL SWITCH ACTUATORS

GLOBAL SITE

ABB i-bus® KNX Professional Switch Actuators

Switch to a smarter tomorrow

Suitable for large commercial buildings, the series includes eight switch actuators, designed for reliable switching of high and capacitive loads of up to 20 A C-Load.

Thanks to its user-friendly interface and simple programming, commissioning is both cost and time efficient.

Are you looking for support or purchase information?

➔ Contact us

Main benefits

High switching capacity

Reliable switching of high and alternating loads suitable for large commercial projects and flexible connection of loads up to 20 A C-Load and various consumers

Efficiency

Cost-effective and time-saving commissioning thanks to its user-friendly interface and template pages with central group objects

Main features

- High switching capacity devices with extended functionality for large commercial projects
- Easy installation thanks to combi screw-head terminals
- Tool-free assembly and disassembly from DIN-rail
- Easy status identification without bus voltage
- Simplified commissioning thanks to template pages and central functions for all outputs



Webinar “Standard/Professional Switch Actuators”

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

...

Detailed information for: SA/S12.16.2.2

This page contains technical data sheet, documents library and links to offering related to this product. [Print...](#)
If you require any other information, please contact us using form located at the bottom of the page. [Print to Pdf...](#)

Data Sheet

Downloads

SA/S12.16.2.2

General Information

Extended Product Type: SA/S12.16.2.2

Product ID: 2CDG110264R0011

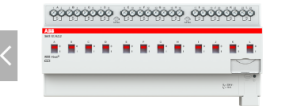
EAN: 4016779066693

Catalog Description: SA/S12.16.2.2 Switch Actuator, 12-fold, 16 A, MDRC

Long Description: The switch actuator uses potential free contacts to switch 12 independent electrical loads via the ABB I-bus®. Manual operation and display of the switching state of the contacts. The 16 A device is especially suited for resistive loads.

Categories

Products » Low Voltage Products and Systems » Home and Building Automation » KNX » Standard Outputs » Switch Actuators 16 A



Show all (11)

Data sheet (3)

Declaration of conformity (1)

Drawing (2)

Manual (1)

Operating instruction (1)

Software (1)

Tender specification (2)



ETS Application (.knxprod) [XX] SA/S x.x.2.2
Summary: ETS Application (.knxprod) [XX] SA/S x.x.2.2 Version 1.0
Software - German, English, Spanish, French, Italian, Dutch, Polish - 2020-01-29
- 3,46 MB [KNXPROD](#)



CE & RoHS Declaration of Conformity (.PDF) [XX] SA/S12.16.2.x2
Summary: CE & RoHS Declaration of Conformity (.PDF) [XX] SA/S12.16.2.x2
Declaration of conformity - German, English, French, Italian - 2020-01-28 - 0,05 MB [PDF](#)



Technical Data (.PDF) [EN] SA/S12.16.2.2
Summary: Technical Data (.PDF) [EN] SA/S12.16.2.2
Data sheet - English - 2020-01-22 - 0,19 MB [PDF](#)



Product Manual (.PDF) [EN] SA/S x.x.2.2
Summary: Product Manual (.PDF) [EN] SA/S x.x.2.2
Manual - English - 2020-01-21 - 4,52 MB [PDF](#)

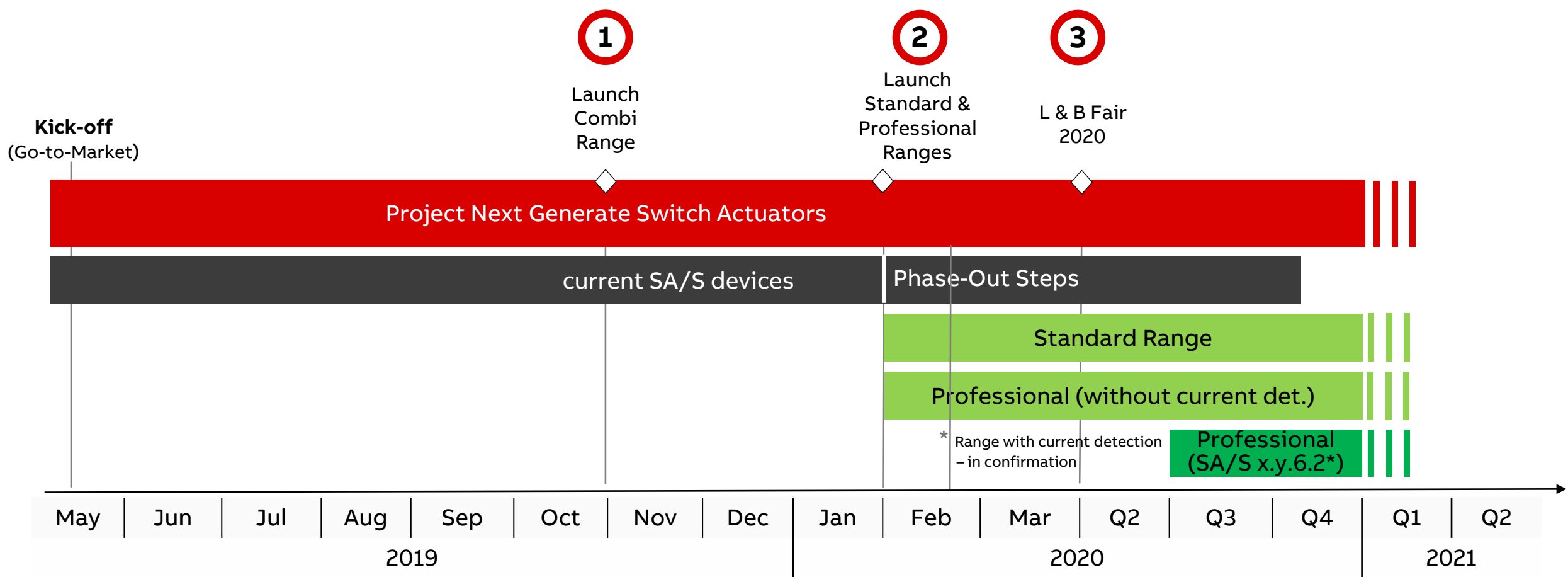
Webinar “Standard/Professional Switch Actuators”

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	SAH/S16.6.7.1	-	Schalt-/Jalousieaktor, 16fach, 6 A, REG	Switch/Shutter Actuator, 16-fold, 6 A, MDRC	4016779066792	16	8	8	6 A	441,00 €	October 2019	no forrunner device (kein Vorgänger)
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 €		
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 (kein Vorgänger)
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 €		
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 (kein Vorgänger)
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 €		
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					6 A			1.Feb - 30. April 2020
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								
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 €		
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 €		
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 €		
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/S4.16.5.2	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	288,00 €	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 €		

Webinar “Standard/Professional Switch Actuators”

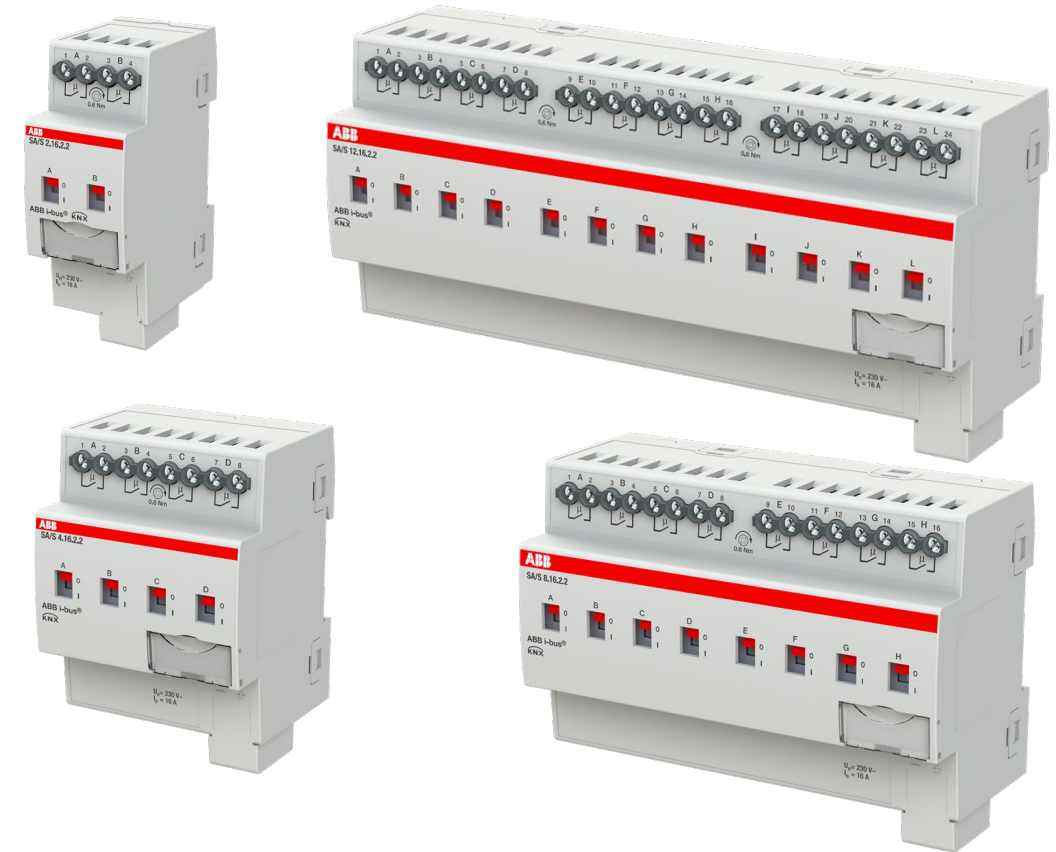
Timeline



Webinar “Standard/Professional Switch Actuators”

Summary of the Features and Advantages

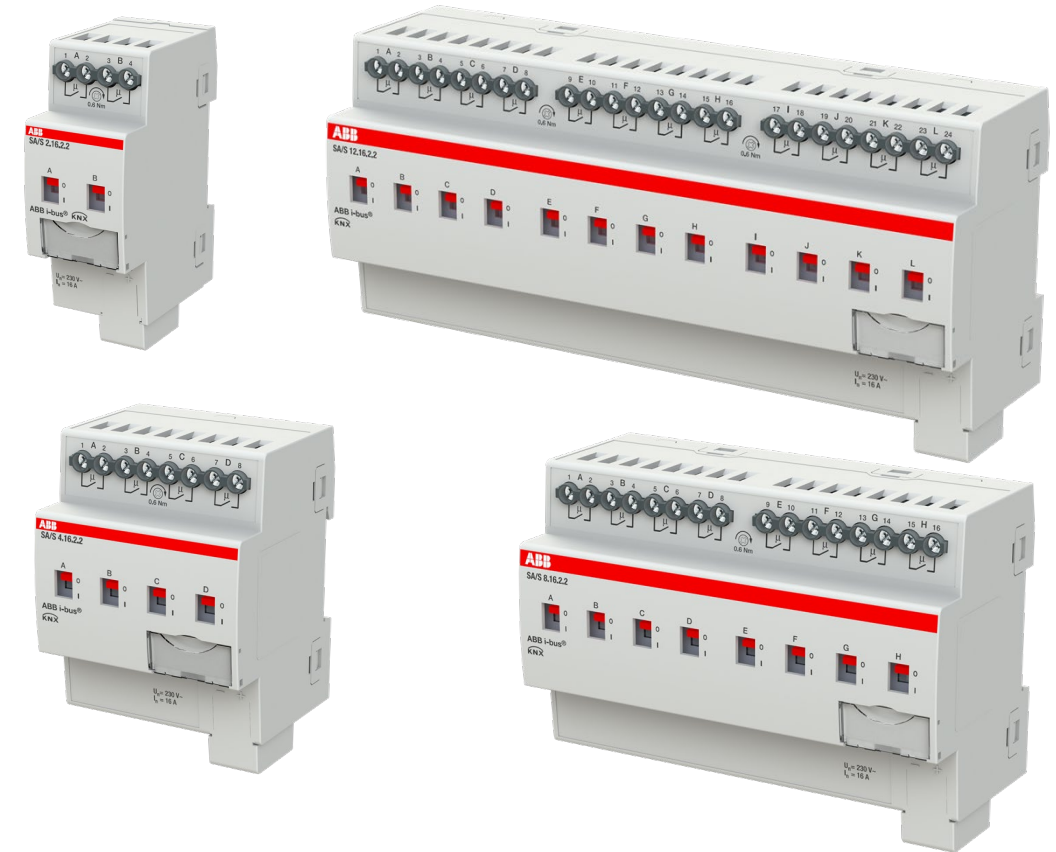
- Proven connection terminals with screws, on the same level
→ easy and stress-free wiring for the panel builder
- Classic manual operation
→ simple and well known, no bus voltage needed
- Up to 12 independent channels
→ very efficient solution (costs per channel) with no restrictions in functions
- Optimized ETS Application
→ easy to operate, saves 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



Webinar “Standard/Professional Switch Actuators”

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



Webinar “ABB Caldion®”

A new range of FanCoil Temperature controller

Agenda

Introduction, Projects and Product Overview
Technical Features and Connection Diagram
ETS Application
Commercial and Marketing Aspects

Webinar “ABB Caldion® Room Temperature Controller”

Introduction, Projects and Product Overview

Webinar “ABB Caldion® Room Temperature Controller”

Introduction

ABB Caldion® Truly The One

ABB Caldion® is a new range of fan coil room temperature controller that is part of the ABB i-bus® KNX portfolio and ClimaECO

It is a KNX RTC sensor for hotels, commercial buildings, offices and public buildings with a dual option on the type of installation (stand alone or KNX)

It has a built-in temperature sensor, LED display, buttons and Fan Coil actuator to provide an efficient and cost-effective solution

The perfect frameless casing and intuitive icons using capacitive touch make customer life smarter and easier than ever



Webinar “ABB Caldion® Room Temperature Controller”

Projects

Hospitality – Hotel guest room, common area



Commercial – Office building, common area



Webinar “ABB Caldion® Room Temperature Controller”

Product Overview

Black version

2 devices

- On/Off - **BS standard** with/without electrical heater
- 0 - 10V - **BS standard** with/without electrical heater



White version

2 devices

- On/Off - **BS standard** with/without electrical heater
- 0 - 10V - **BS standard** with/without electrical heater



Webinar “ABB Caldion® Room Temperature Controller”

Technical Features and Connection Diagram

Webinar “ABB Caldion® Room Temperature Controller”

Features

ABB Caldion®

- For BS (British Standard) installation
- Frameless design
- Large LED display, illuminated capacitive touch buttons
- Intuitive icons for ease of operating mode identification
- Display and button illumination – efficiency mode (sleep mode when not in use) / constantly on
- Display illumination and button illumination can be activated/deactivated via group object
- °C/°F/ECO button – long press/short press function
- First trigger command – awake device/awake and send command
- On/Off button – long press/short press function
- Recall of last setpoint after On/Off of device



Webinar “ABB Caldion® Room Temperature Controller”

Features

ABB Caldion®

- “In operation” monitor – antitheft and function monitoring
- In built temperature sensor for accurate room temperature measurement
- Lock and unlock of the device via group object to prevent unauthorized adjustment
- Compatible configuration similar to Fan Coil Controller FCC/S, also forced operation, temperature limitation or valve purge, PI-Controller, PWM, ...
- Two Binary inputs – temperature sensor/binary input/window/alarm function selectable
- ABB Caldion® can work as standalone device without KNX power supply thanks to power connection
- Occupancy presence detection logic: combination of door contact and presence detector to function as keycard holder for room occupancy status

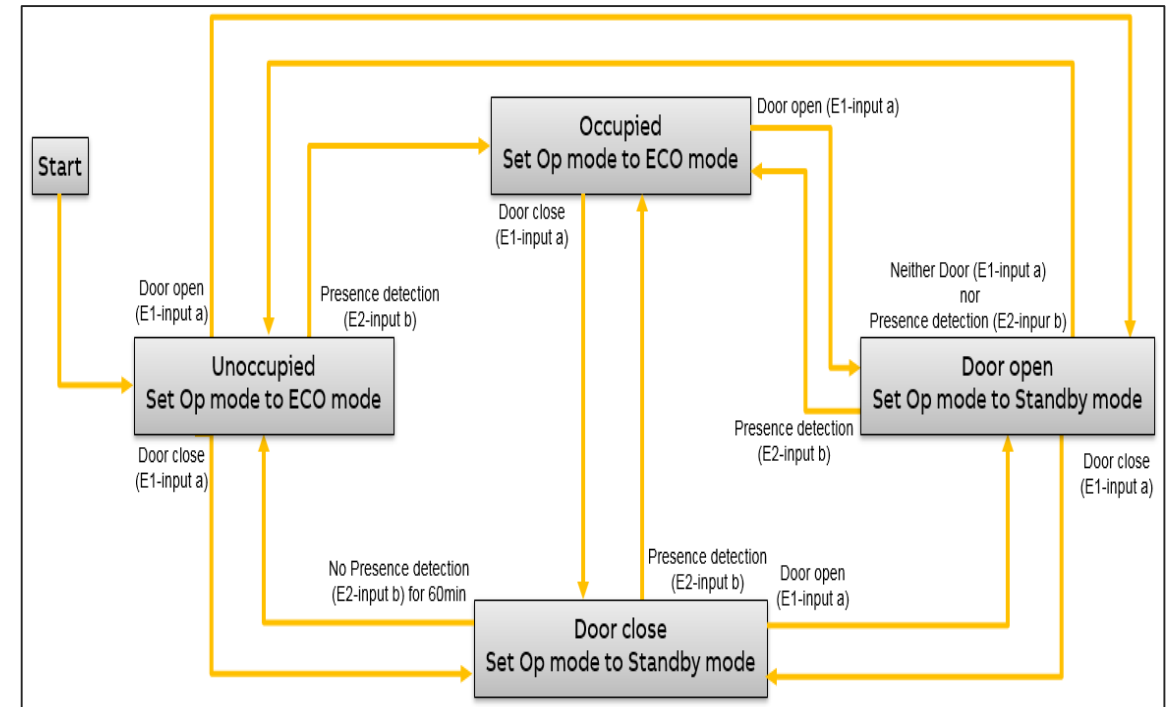


Webinar “ABB Caldion® Room Temperature Controller”

Features

ABB Caldion®

- Occupancy presence detection logic – with the combination of door contact & presence detector signal, ability to determine the status of guests in the room (room occupancy status)
- Change between ECO, Standby and Comfort mode
- Door contact and presence detector signal can either be received by group object or physical input via E1 and E2 binary input
- Detection checking duration is configurable via ETS
- In 2 pipe configuration only, VB/RO output can be configured as an relay output to energize the power for the room (via a external contactor) like keycard holder
- When logic is active and E1 and E2 are not configured as physical input, it can be used for other binary input functions

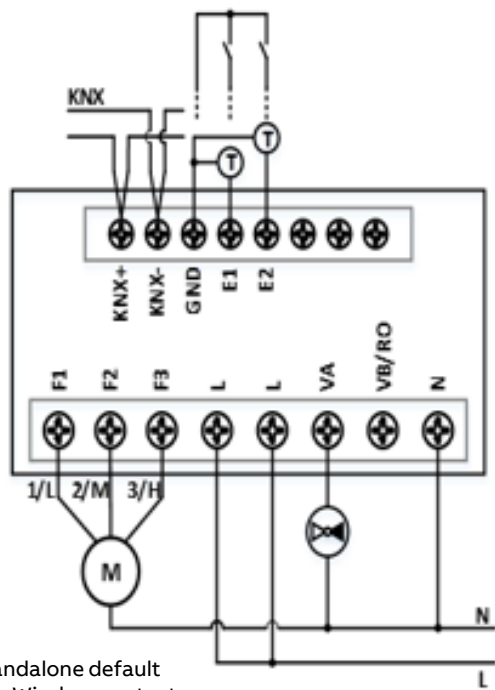


Solution ready for non keycard holder installation in hotel guest rooms

Webinar “ABB Caldion® Room Temperature Controller”

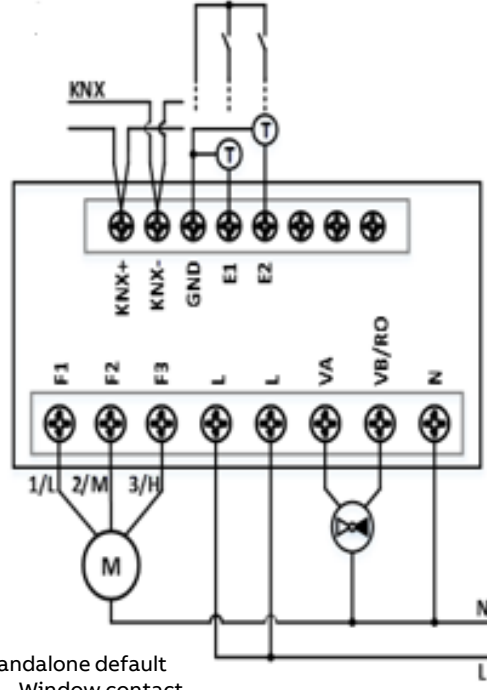
Connection Diagram - On/Off version and 3 step fan

2 pipe/electrothermal valve



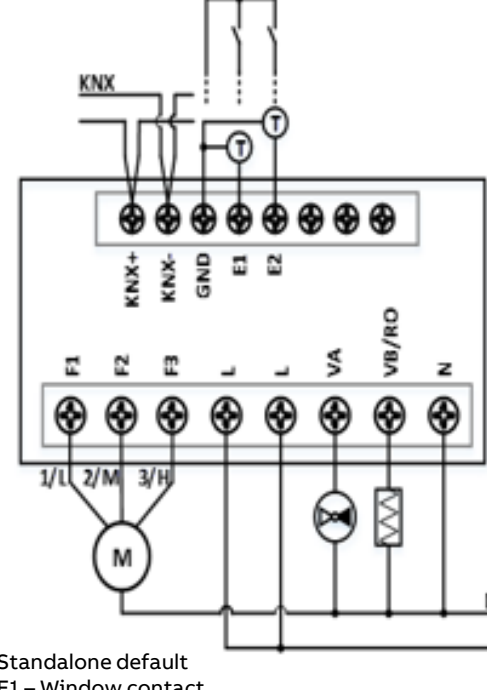
Standalone default
E1 – Window contact
E2 – Temperature sensor NTC 10K

2 pipe/3 point motor valve



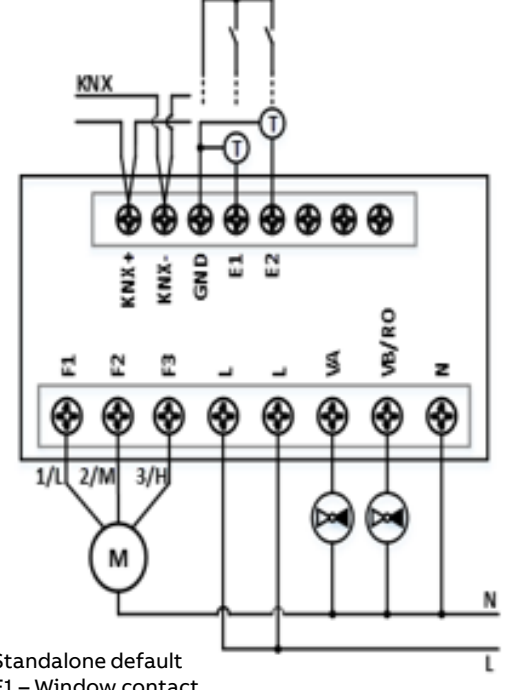
Standalone default
E1 – Window contact
E2 – Temperature sensor NTC 10K

2 pipe/electrical heater



Standalone default
E1 – Window contact
E2 – Temperature sensor NTC 10K

4 pipes

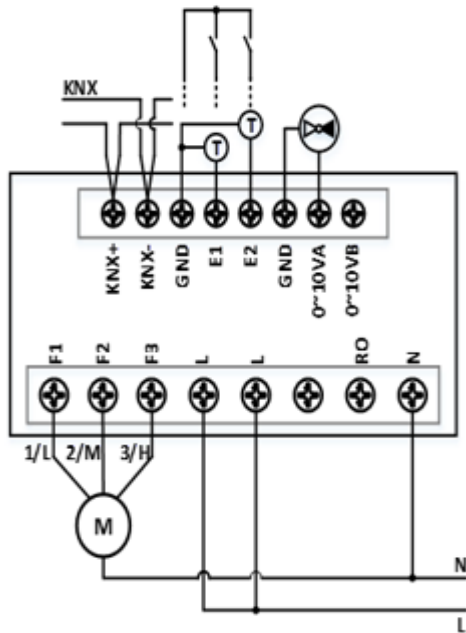


Standalone default
E1 – Window contact
E2 – Temperature sensor NTC 10K

Webinar “ABB Caldion® Room Temperature Controller”

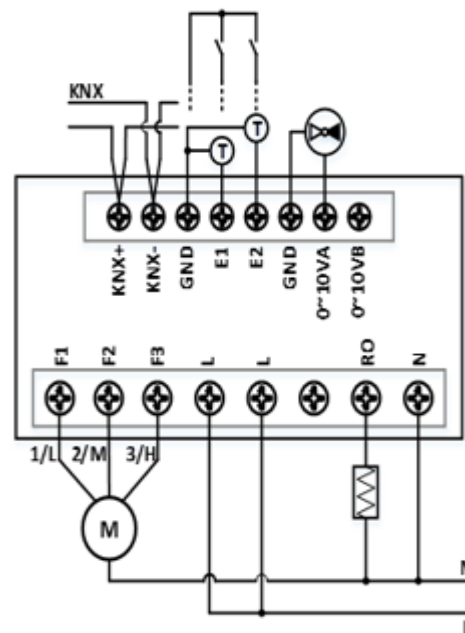
Connection Diagram - 0-10V version and 3 step fan

2 pipe/0-10V valve



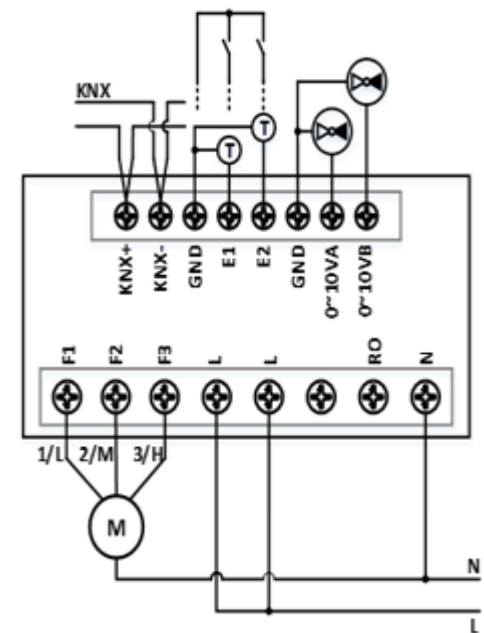
Standalone default
E1 – Window contact
E2 – Temperature sensor NTC 10K

2 pipe/0-10V valve + electrical heater



Standalone default
E1 – Window contact
E2 – Temperature sensor NTC 10K

4 pipes / 2 x 0-10V valves



Standalone default
E1 – Window contact
E2 – Temperature sensor NTC 10K

Webinar “ABB Caldion® Room Temperature Controller”

Architecture

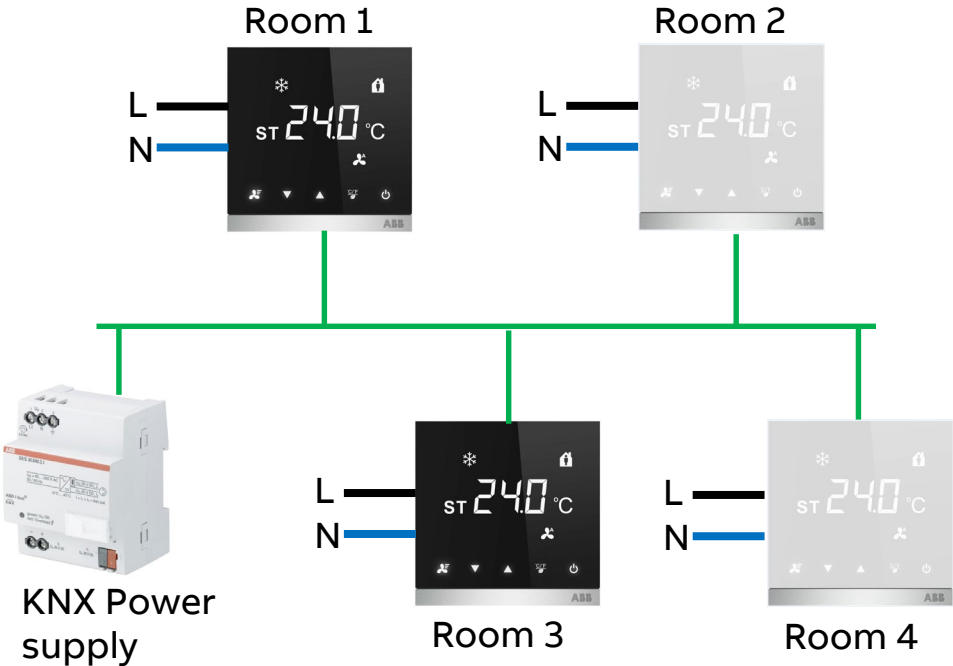
Standalone configuration



- Configuration via DIP switches
- works without KNX power supply
- All options as KNX device with configuration via ETS

DIP Switch	1	2	3
KNX	1	1	1
Cool - 2 pipe (on/off, 0-10v)	1	1	0
Cool - 2 pipe 3pt (on/off)	1	0	1
Heat - 2 pipe (on/off, 0-10v)	0	0	1
Heat - 2 pipe 3pt (on/off)	0	1	0
Heat - 2 pipe w. heater (on/off, 0-10v)	0	1	1
Cool/Heat - 4 pipe (on/off, 0-10v)	0	0	0

KNX configuration



Flexible!! Install as standalone and be future proof to upgrade as system control

Webinar “ABB Caldion® Room Temperature Controller”

ETS Application

Webinar “ABB Caldion® Room Temperature Controller”

ETS

ABB Caldion®

ETS Application similar to Fan Coil Controller FCC/S

Parameter block ‘General’

– Various parameter for display and buttons

- Display Illumination
- On/Off operation
- Device lock/unlock
- Temperature Display
- ...

2.2.1 CAR/U4 Caldion® Room Temperature Controller, On/Off, FM > General

General	Sending and switching delay after 230V recovery	2 s
– Application	State after sending and switching delay has elapsed	<input checked="" type="radio"/> Last value received <input type="radio"/> Ignore received values
Application parameters	Limit number of telegrams	<input checked="" type="radio"/> No <input type="radio"/> Yes
Device function	Enable group object "In operation", 1-bit	<input checked="" type="radio"/> No <input type="radio"/> Yes
– Temperature controller	Display illumination	<input type="radio"/> Illumination efficiency <input checked="" type="radio"/> Constantly on
+ Temperature controller	Display illumination activate/deactivate by group object	Inactive
+ Setpoint manager	Button icon LED illumination	<input type="radio"/> Illumination efficiency <input checked="" type="radio"/> Constantly on
+ Monitoring and safety	Button icon LED illumination activate/deactivate by group object	Inactive
+ Valve A	Button icon first touch function when device is in standby mode	<input type="radio"/> Awake and send command <input checked="" type="radio"/> Awake device
+ Valve B	Switching on/off control of RTC	<input checked="" type="radio"/> Short press-On/Off, Long press-mode select <input type="radio"/> Short press-mode select, Long press-On/Off
+ Fan output	On/off reaction	<input checked="" type="radio"/> Recovery last setting <input type="radio"/> Default
+ Electric heater relay output	On/Off reaction by group object	Inactive
+ Setpoint adjustment	Device to be lock/unlock by group object	Inactive
+ Input a	Temperature display	<input type="radio"/> Setpoint temp <input checked="" type="radio"/> Actual measure temp
+ Input b	Temperature display units	<input checked="" type="radio"/> °C <input type="radio"/> °F
+ Internal temperature sensor	Switching C/F + ECO control of RTC	<input checked="" type="radio"/> Short press for C/F - Long press for ECO <input type="radio"/> Short press for ECO - Long press for C/F
	Switchover temperature display units via group object	Inactive

Webinar “ABB Caldion® Room Temperature Controller”

ETS

ABB Caldion®

- Occupancy presence detection logic (Block Application Parameters)
 - Duration of first checking of presence, e.g. 10 min
 - Duration of second checking of presence before activating ECO mode, e.g. 60 min
 - Presence- and door contact detection via physical device input or group object
 - In 2 pipe configuration only, VB/RO output can be configured as an relay output to energize the power for the room (via a external contactor) like keycard holder

Occupancy presence detection logic	<input checked="" type="radio"/> Activate <input type="radio"/> Deactivate
Door contact detection	<input checked="" type="radio"/> Via physical device-input A <input type="radio"/> Via group object
Duration for first checking of presence	<input type="text" value="00:10:00"/> hh:mm:ss
Duration for second checking of presence before activating ECO mode	<input type="text" value="01:00:00"/> hh:mm:ss
Presence detection	<input checked="" type="radio"/> Via physical device-input B <input type="radio"/> Via group object
To include physical output VB/RO for power energization	<input type="text" value="Deactivate"/>

Webinar “ABB Caldion® Room Temperature Controller”

Commercial and Marketing Aspects

Webinar “ABB Caldion® Room Temperature Controller”

Range

ABB Caldion®

Article Code	Order Code	Type	Colour
CAR/U4.1.1.1-71	2TAZ740010R2001	On/Off valve	Black
CAR/U4.2.1.1-71	2TAZ741010R2001	0 – 10 V valve	Black
CAR/U4.1.1.1-84	2TAZ740010R0001	On/Off valve	White
CAR/U4.2.1.1-84	2TAZ741010R0001	0 – 10 V valve	White

Available in markets with British Standard installation
or countries which allow this installation



Webinar “ABB Caldion® Room Temperature Controller”

Further information

Product Overview

[LINK](#)



Features:

- An integrated (control and actuator) room temperature controller
- One device supports multiple types of application
- Option to select standalone or KNX configurations
- Enhance function configurable via ETS application

Benefits:

- Easy replacement for existing conventional thermostat
- Cost-effective installation
- Intuitive design for ease of controls
- Simple and effective application with option for expansion



Product overview

ABB Caldion®, part of the ABB I-bus® KNX portfolio is a Room-Temperature Controller for fan coil units with either 2 pipes, 2 pipes with electric heater or 4 pipe system application. Flush Mounted, BS standard; it can be installed as a standalone configuration or with built-in integrated bus coupling as a KNX device. It is equipped with a temperature sensor and 2 x binary input for either presence detection, window, dewpoint alarm or condensate alarm. It has an integrated actuator for valve control of on/ off or 0-10V with 3 x fan speed control. It has dedicated capacitive touch control button for intuitive control and mode operation selection. Its frameless design equipped with a large display ensures the ease of viewing and elegance to complement the surrounding.



ABB Caldion®
Black



ABB Caldion®
White

Technical data:	
Rate voltage	AC 230V(min.AC 110V),50/60 Hz
Power consumption	Max. 4 VA
Power supply	Maximum allowable Inputload/fan+valve
	Max. 7 A
Wiring connection	Wiring cross section on L,N,F1,F2,VA,VB
	1 x 0.5...2.5 mm²
Degree of protection	IP 20
	EN 60529
Protection class	Overvoltage category III
	EN 60664-1
Ambient conditions	Operating temperature range
	-5°C to +50°C
Outputs	Transport and Storage temperature
	-25°C to +70°C
Inputs	Humidity max range
	not more than 98%, no dew permissible
Degree of protection	Maximum air pressure of atmosphere
	up to 2000m
Power supply	Control output Rating [Resistive(Inductive)] on FL F2, F3-N, VA/VB -N, RO-N
	AC 230 V / Min. 8.3 mA, Max. 5(2) A
Wiring connection	Max. total load current through terminal "L" (Fx + Vxx)
	Max. 7 A
Ambient conditions	Control output load on 0-10V-GND
	SELV DC 0...10 V/ 1.5 mA(Max) / > 10 kohms
Degree of protection	Input port EI & E2
	10V/1mA
Protection class	Input cable length
	Maximum 30 m

Name	Article code	Order code	Type	Colour
ABB Caldion®	CAR/U4.111-71	2TAZ740010R2001	On/off valve	Black
	CAR/U4.211-71	2TAZ741010R2001	0-10v valve	Black
	CAR/U4.111-84	2TAZ740010R0001	On/off valve	White
	CAR/U4.211-84	2TAZ741010R0001	0-10v valve	White



Webinar “ABB Caldion® Room Temperature Controller”

Further information

Product page will all relevant files

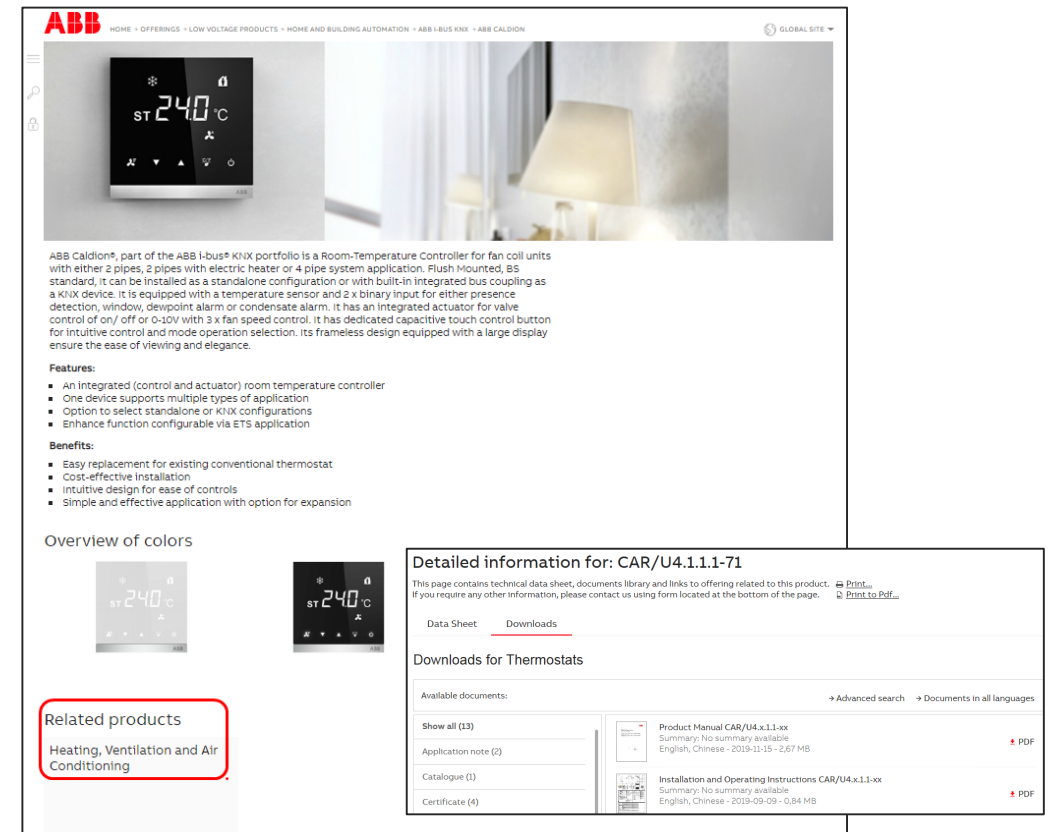
[LINK](#)

Link on this page to *Related Products* (ABB Caldion® Room Temperature Controller” CAR/U) shows all relevant files:

- ETS Application
- Product Manual
- Installation and Operating Instructions
- CE Declaration
- ...

Link works only in countries with availability of this product

Option: Simulate Country via [Country Selector](#)



The screenshot displays the ABB Caldion product page. At the top, the ABB logo is visible alongside a navigation menu with links to HOME, OFFERINGS, LOW VOLTAGE PRODUCTS, HOME AND BUILDING AUTOMATION, ABB I-BUS KNX, and ABB CALDION. A 'GLOBAL SITE' dropdown is also present. The main visual is a large image of the ABB Caldion room temperature controller, which has a digital display showing 'ST 24.0 °C' and several control buttons. Below this image, a descriptive paragraph states: 'ABB Caldion®, part of the ABB I-bus® KNX portfolio is a Room-Temperature Controller for fan coil units with either 2 pipes, 2 pipes with electric heater or 4 pipe system application. Flush Mounted, BS standard, it can be installed as a standalone configuration or with built-in integrated bus coupling as a KNX device. It is equipped with a temperature sensor and 2 x binary input for either presence detection, window, dewpoint alarm or condensate alarm. It has an integrated actuator for valve control of on/ off or 0-10V with 3 x fan speed control. It has dedicated capacitive touch control button for intuitive control and mode operation selection. Its frameless design equipped with a large display ensure the ease of viewing and elegance.' Below the text, there are sections for 'Features' and 'Benefits'. The 'Features' section lists: 'An integrated (control and actuator) room temperature controller', 'One device supports multiple types of application', 'Option to select standalone or KNX configurations', and 'Enhance function configurable via ETS application'. The 'Benefits' section lists: 'Easy replacement for existing conventional thermostat', 'Cost-effective installation', 'Intuitive design for ease of controls', and 'Simple and effective application with option for expansion'. Further down, there is an 'Overview of colors' section showing two color variants of the device. A 'Related products' section is highlighted with a red box, containing the text 'Heating, Ventilation and Air Conditioning'. On the right side of the page, there is a 'Detailed information for: CAR/U4.1.1.1-71' section. It includes a note: 'This page contains technical data sheet, documents library and links to offering related to this product. If you require any other information, please contact us using form located at the bottom of the page.' Below this, there are links for 'Data Sheet' and 'Downloads'. The 'Downloads for Thermostats' section lists available documents: 'Show all (13)', 'Application note (2)', 'Catalogue (1)', and 'Certificate (4)'. It also shows a list of documents with their titles, summaries, and file sizes, including 'Product Manual CAR/U4.x.1.1-xx' and 'Installation and Operating Instructions CAR/U4.x.1.1-xx'.

Webinar “Update ControlTouch - New KNX Switch Actuators - ABB Caldion®”

Training & Qualification Database

this database you can find the complete online training portfolio for ABB Home and Building Automation

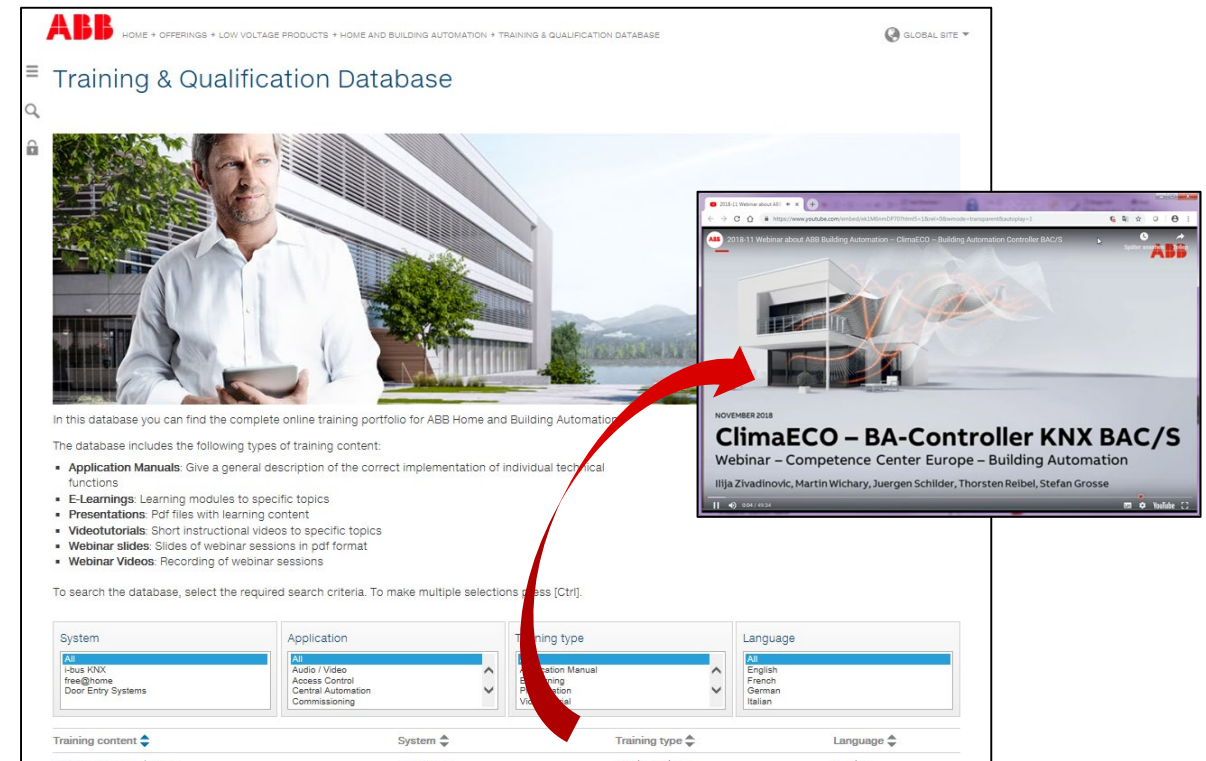
The database includes the following types of training content:

- Application Manuals
- E-Learnings
- Presentations
- Video tutorials
- Webinar slides and videos

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

→ Training and Qualification

→ Training Database



Webinar “Update ControlTouch - New KNX Switch Actuators - ABB Caldion®”

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



ABB HOME • OFFERINGS • LOW VOLTAGE PRODUCTS • HOME AND BUILDING AUTOMATION • TRAINING AND QUALIFICATION • TRAINING & QUALIFICATION CALENDAR GLOBAL SITE ▼

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 webinars and on-site trainings conducted by our specialists at different ABB Competence Centers.

In this Training & Qualification Calendar you can find the educational events that are taking place during 2018.

If you are interested in a training please [REGISTER HERE](#).

To search the Calendar, select the required search criteria. To make multiple selections press [Ctrl].

System	Date	Location
all	all	webinar
Door Entry Systems	January 2018	Heidelberg, Germany
Fire alarm Systems	February 2018	Lödenscheid, Germany
I-bus KNX	March 2018	S. Palomba (Rome), Italy
	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

ABB MyLearning

HOME CATALOG PROFILE ADMINISTER REPORTS MY LEARNING

CERTIFIED KNX BASIC COURSE
Code : 9CSC007151-GLB-EN-20190218_22
Certified KNX Basic Course at ABB in Heidelberg, Germany, 5 days
★★★★★ | Share

Webinar “Update ControlTouch - New KNX Switch Actuators - ABB Caldion®”

KNX Certified Trainings 2020

Certified KNX Courses in Heidelberg

- Basic Course : 17th to 21st Feb.
- Advanced Course: 13th to 17th Jul.
- Tutor Course: 19th to 23rd Oct.
- Basic Course : 16th to 20th Nov.
- Followed by two day application training

Save the date!!!

And many more training courses in the calendar
“International Training Dates 2020”

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



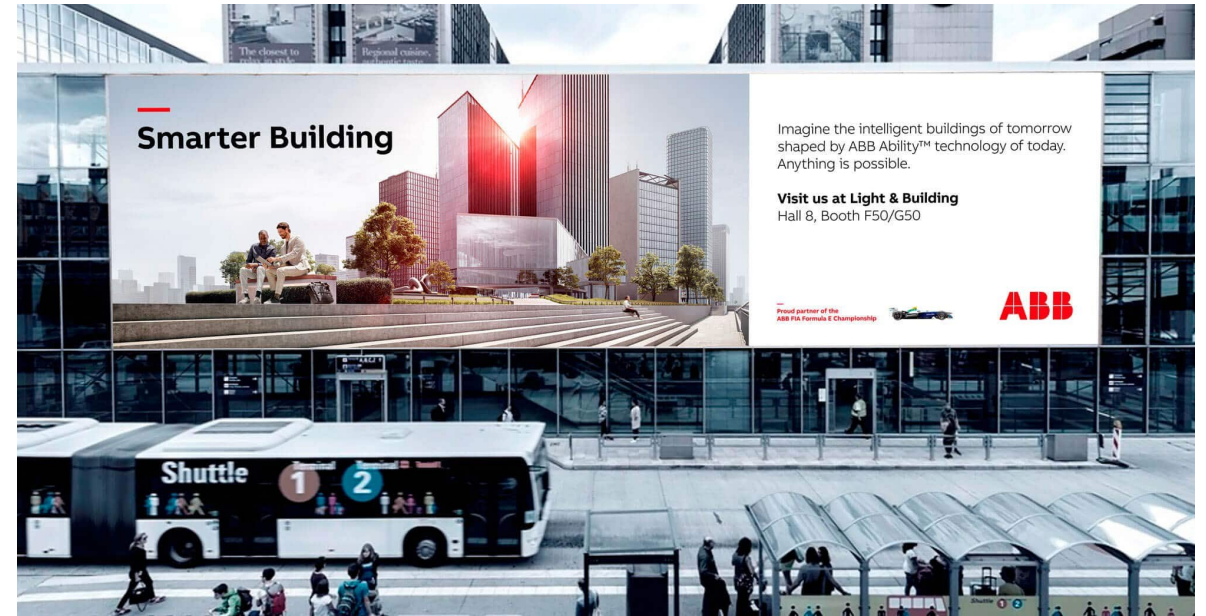
Webinar “Update ControlTouch - New KNX Switch Actuators - ABB Caldion®”

Light + Building

The world’s leading trade fair for lighting and building services technology

– 8. – 13. March 2020 in Frankfurt/Germany

– **NEW:** ABB now in Hall 12



Webinar “Update ControlTouch - New KNX Switch Actuators - ABB Caldion®”

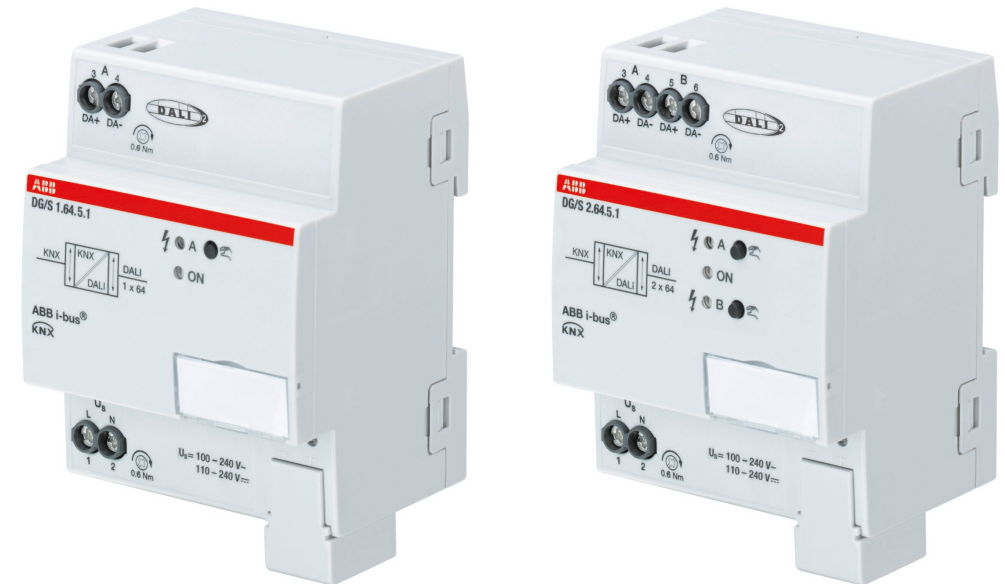
Next Webinar

KNX DALI Gateway Premium DG/S x.64.5.1

- Human Centric Lighting (HCL)
- Dim2Warm
- Tunable White
- ...

Wednesday 26th February 2020

- Morning 09:00 am Europe Time (Berlin, UTC + 1h)
- Afternoon 03:00 pm Europe Time (Berlin, UTC + 1h)



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