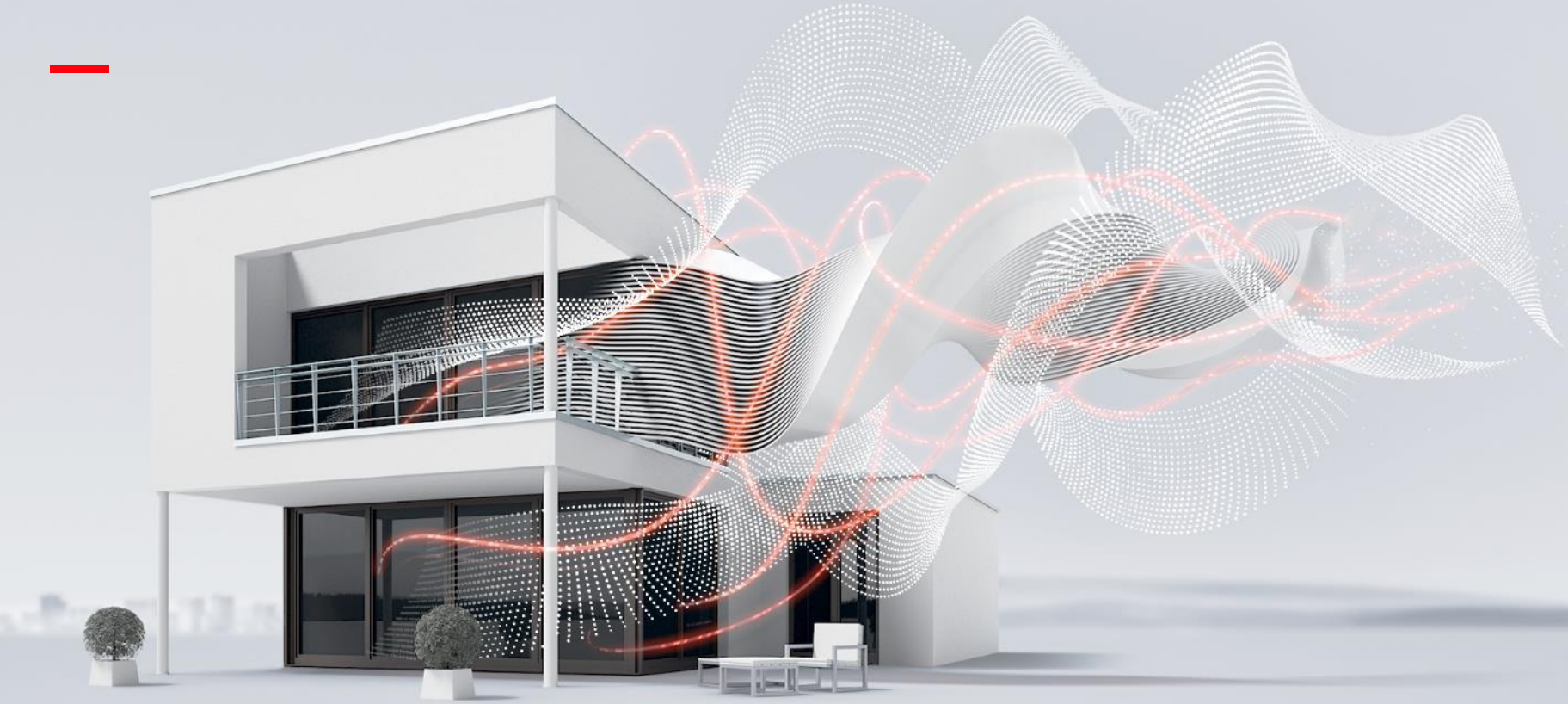

APRIL 2020

Busch-ControlTouch® - Sonos Integration

Online Learning Session – Competence Center Europe – Smart Buildings

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

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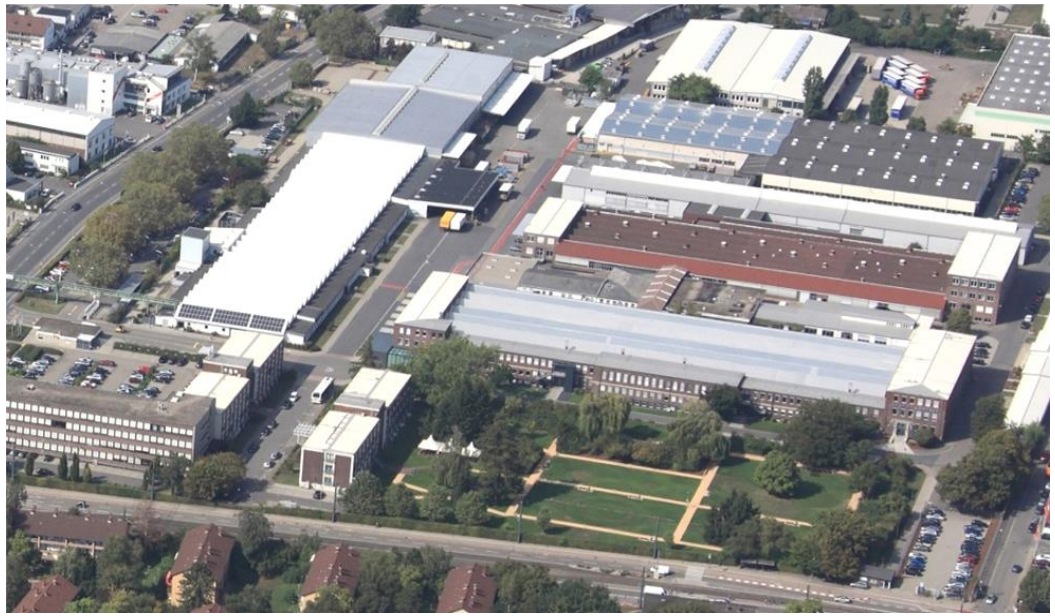
Online Learning Session – Competence Center Europe - Smart Buildings

NEW !!!

From home office to home office



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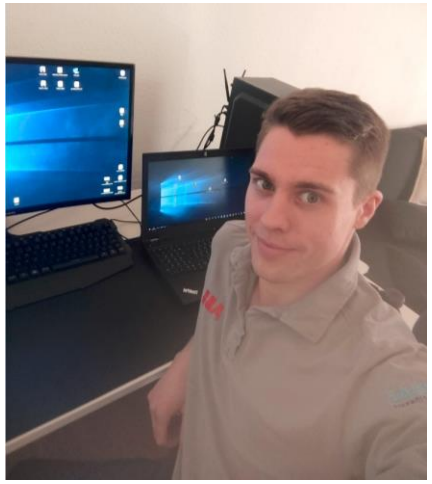

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Agenda

Busch-ControlTouch® - Sonos Integration

- Introduction and use cases
- Linking – basic functions
- Volume
- Playlists and favorites
- Audio clips and other functions

Devices:

- Sonos Play:1
- Sonos One
- 6136/APP-500 Busch-ControlTouch®
- 6127/02 solo® control element, 4/8gang

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Busch-ControlTouch® - Sonos Integration

Introduction and use cases

Busch-ControlTouch® - Sonos Integration

Online Learning Session

Busch-ControlTouch® - 6136/APP(-500)

- Simple KNX visualization for smartphones, tablets and Windows computers
- Easy control using intuitive navigation concept
- Representation of individual operating pages with list view
- Display of individual control pages with room images with small controls
- Fully web-based commissioning with wizard function
- Home automation, switching, dimming, blind control, RTC control, scene/sequences, Sonos control element, timing, Philips Hue
- Entertainment: Sonos - KNX bridging, multimedia integration via UPnP
- Infotainment: Monitoring of usage data for up to 3 years
- …

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Busch-ControlTouch® - Sonos Integration

6136/APP-500 Busch-ControlTouch® - Sonos

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 speaker is required

Example functions:

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

Works with SONOS

Busch-ControlTouch® - Sonos Integration

6136/APP-500 Busch-ControlTouch® - Sonos

Typical use-cases

The new functionality can be used in several applications:

- Acoustic feedback of arming/disarming the alarm system
- Speech notifications in case of a water damage in the basement
- Artificial dog barking in case of movement outside
- Shop: volume of music stops and a gong is played as soon as a customer enters
- Integration into KNX scenes: In the break of a KNX training the light goes on, the blinds drive up and the music starts to play

…

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Busch-ControlTouch® - Sonos Integration

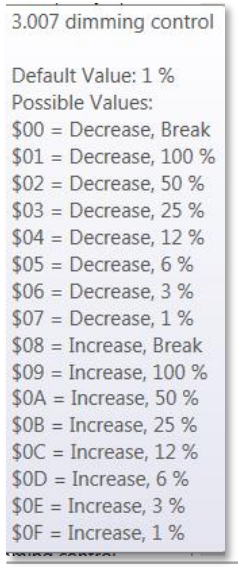
6136/APP-500 Busch-ControlTouch® - Linking

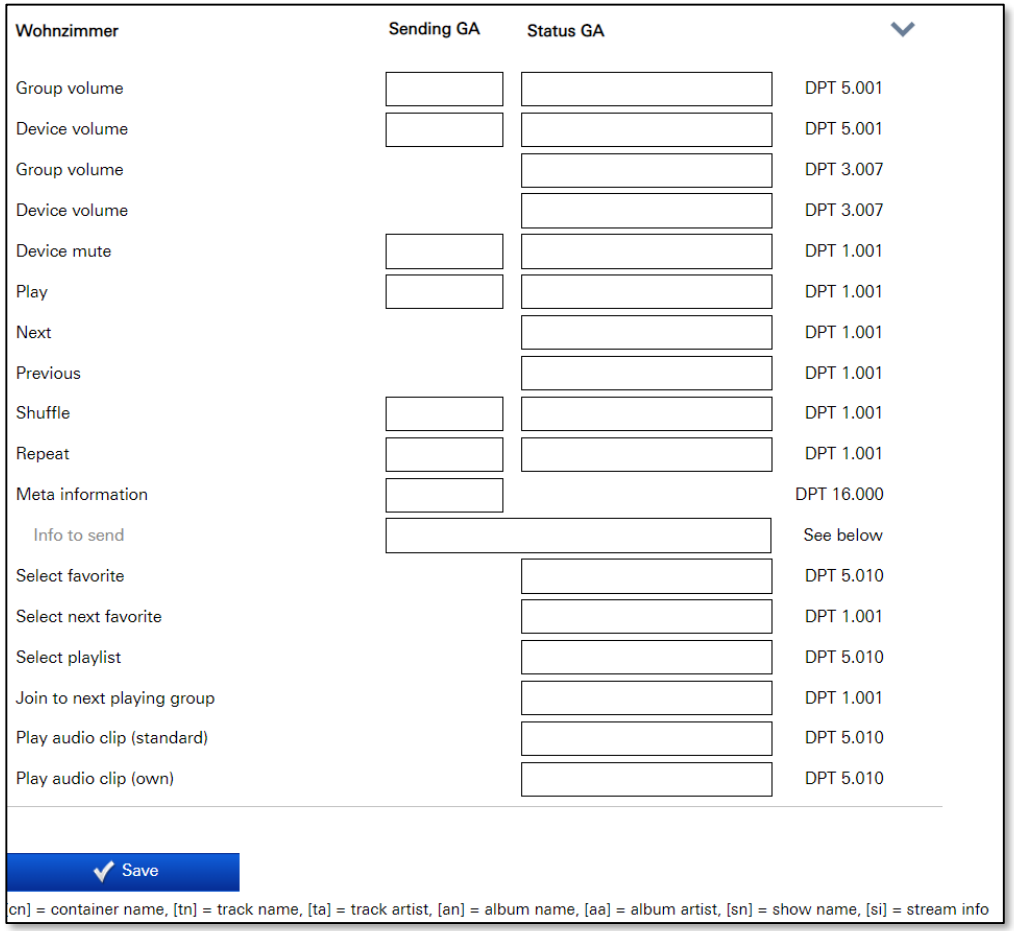
Sonos Linking

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

Example:

Device volume DPT 3.007 dimming control



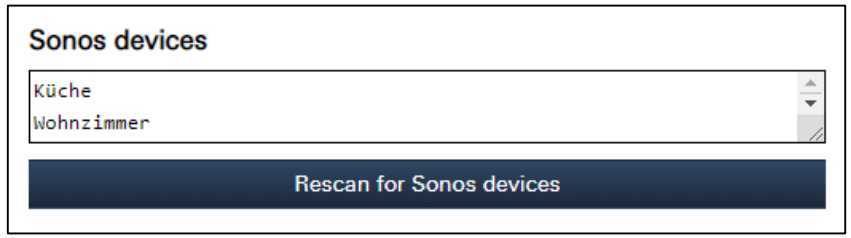


Busch-ControlTouch® - Sonos Integration

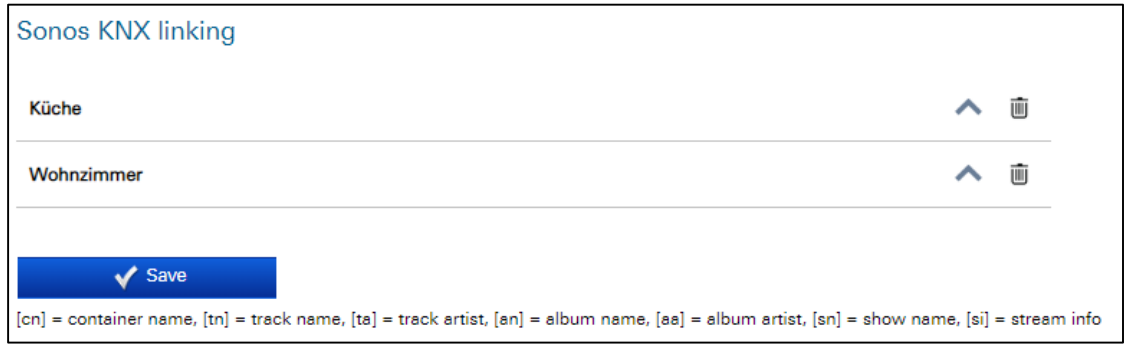
6136/APP-500 Busch-ControlTouch® - Linking

Sonos Linking - Preparation

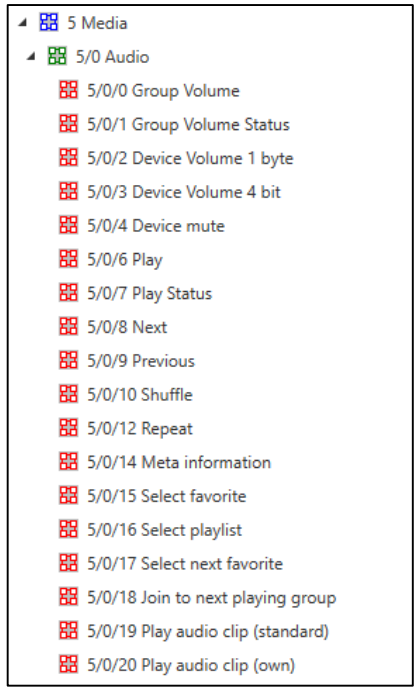
1. Sonos devices must be visible in the network and displayed in the local settings of the Busch-ControlTouch®:



2. After that, they will be also displayed in the menu “Sonos KNX Linking on MyBuildings:



3. Group addresses in the ETS are prepared:



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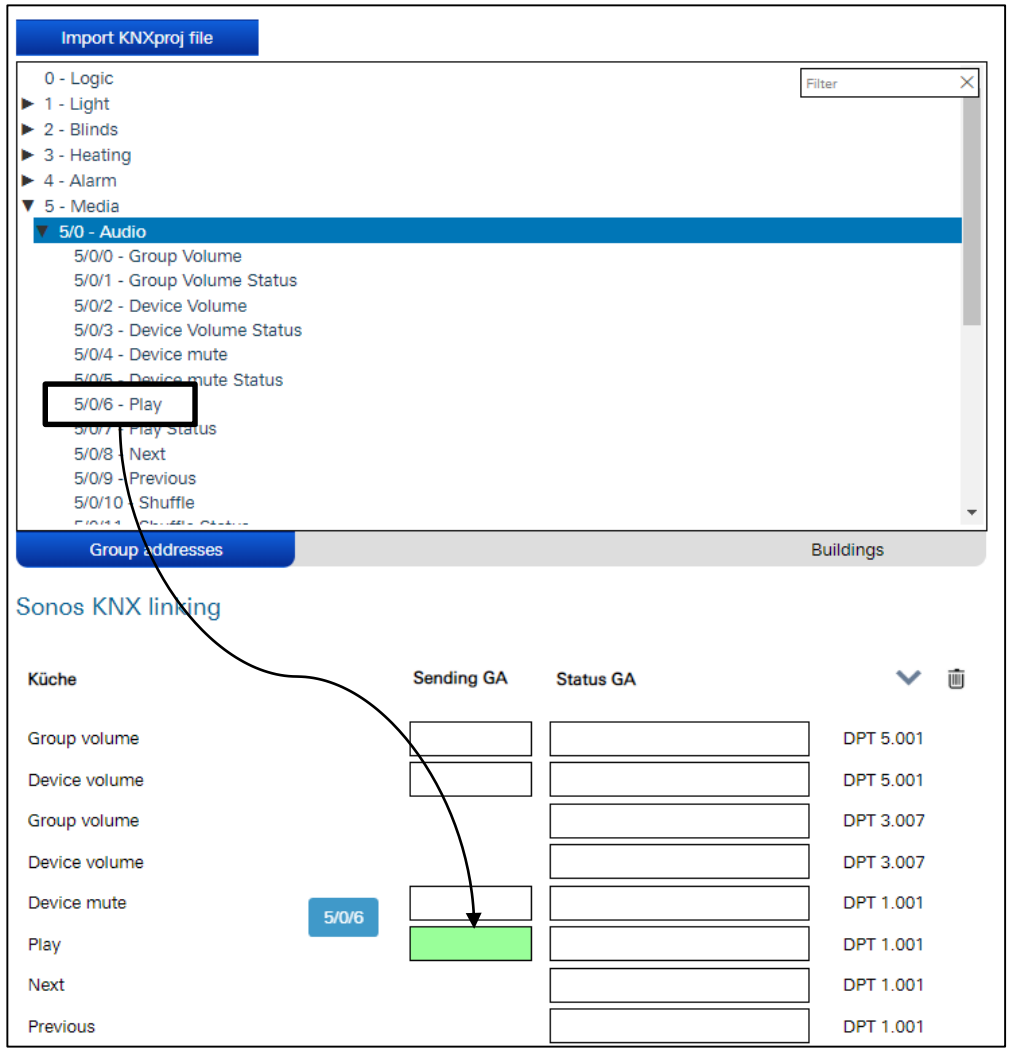
Busch-ControlTouch® - Sonos Integration

6136/APP-500 Busch-ControlTouch® - Linking

Sonos Linking – Configuration

- Easy configuration via Drag&Drop
- No manual entering of GAs needed



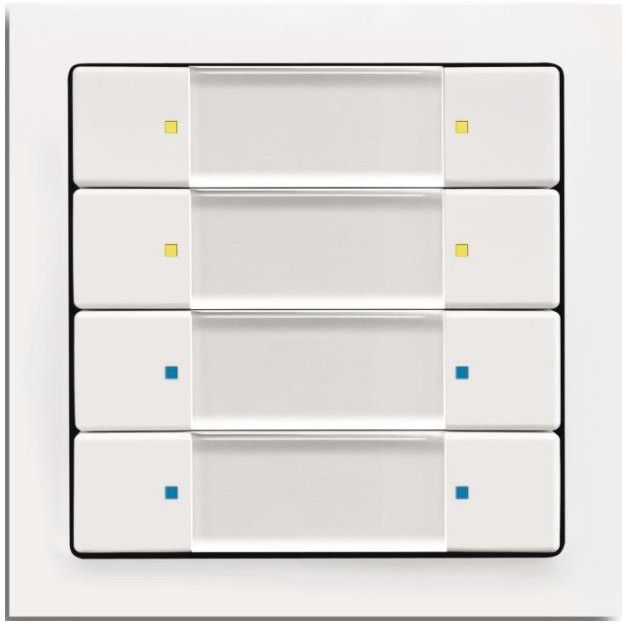
Busch-ControlTouch® - Sonos Integration

Linking – basic functions

Busch-ControlTouch® - Sonos Integration

Configuration

Play / Pause



ControlTouch® & KNX Linking

Play	5/0/7	5/0/6	DPT 1.001

S1.1: Switching	Input / output	Play	5/0/6	1 bit
LED1.1: LED status	Input	Play Status	5/0/7	1 bit
LED1.2: LED status	Input	Play Status	5/0/7	1 bit

Bus Monitor

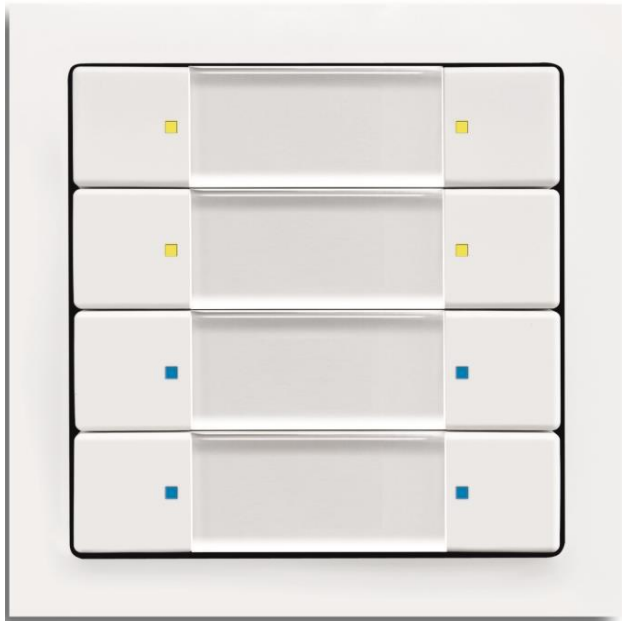
1.1.10	solo® comf. 4gang - RIGHT	5/0/6	Play	6	GroupValue...	$00 | Off	→ Press ‚pause' on solo
1.1.255	-	5/0/7	Play Status	6	GroupValue...	$00 | Off	→ Answer from CT
1.1.10	solo® comf. 4gang - RIGHT	5/0/6	Play	6	GroupValue...	$01 | On	→ Press ‚play' on solo
1.1.255	-	5/0/7	Play Status	6	GroupValue...	$01 | On	→ Answer from CT
1.1.255	-	5/0/7	Play Status	6	GroupValue...	$00 | Off	→ Operation on CT App. Status sent and displayed
1.1.255	-	5/0/7	Play Status	6	GroupValue...	$01 | On	
1.1.255	-	5/0/7	Play Status	6	GroupValue...	$00 | Off	

Play and pause via 1 bit object (1 = play, 0 = pause)

Busch-ControlTouch® - Sonos Integration

Configuration

Mute On / Off + Shuffle On /Off



ControlTouch® & KNX Linking

Device mute	5/0/4	5/0/4	DPT 1.001
Shuffle	5/0/10	5/0/10	DPT 1.001

S3.1: Switching	Input / output	Shuffle	5/0/10	1 bit

Bus Monitor

1.1.60	solo® comf. 4gang - RIGHT	5/0/10	Shuffle	6	GroupValue...	$00 | Off
1.1.255	-	5/0/10	Shuffle	6	GroupValue...	$00 | Off
1.1.60	solo® comf. 4gang - RIGHT	5/0/10	Shuffle	6	GroupValue...	$01 | On
1.1.255	-	5/0/10	Shuffle	6	GroupValue...	$01 | On

It‘s working also with the same GA for sending and status. Both must be connected! Without sending GA, the status would not be sent to KNX. Without status GA an operation via KNX would not be possible!

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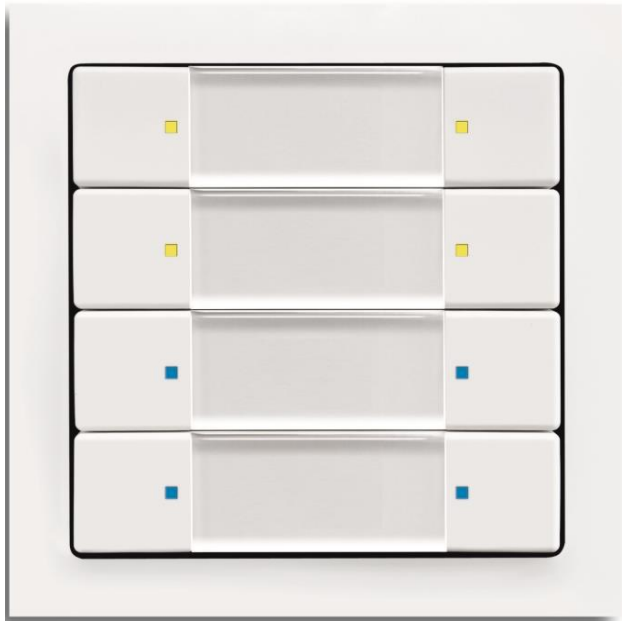
Busch-ControlTouch® - Sonos Integration

Configuration

Repeat On /Off



ControlTouch® & KNX Linking

Repeat	5/0/12	5/0/12	DPT 1.001

S4.1: Switching	Input / output	Repeat	5/0/12	1 bit
LED4.1: LED status	Input	Repeat	5/0/12	1 bit
LED4.2: LED status	Input	Repeat	5/0/12	1 bit

Bus Monitor

1.1.10	solo® comf. 4gang - RIGHT	5/0/12	Repeat	6	GroupValue...	$00 | Off
1.1.255	-	5/0/12	Repeat	6	GroupValue...	$00 | Off
1.1.10	solo® comf. 4gang - RIGHT	5/0/12	Repeat	6	GroupValue...	$01 | On
1.1.255	-	5/0/12	Repeat	6	GroupValue...	$01 | On
1.1.255	-	5/0/12	Repeat	6	GroupValue...	$01 | On
1.1.255	-	5/0/12	Repeat	6	GroupValue...	$00 | Off
1.1.255	-	5/0/12	Repeat	6	GroupValue...	$01 | On
1.1.255	-	5/0/12	Repeat	6	GroupValue...	$01 | On
1.1.255	-	5/0/12	Repeat	6	GroupValue...	$00 | Off

→ Press ‚Repeat off' on solo and answer from CT

→ Press ‚Repeat on' on solo and answer from CT

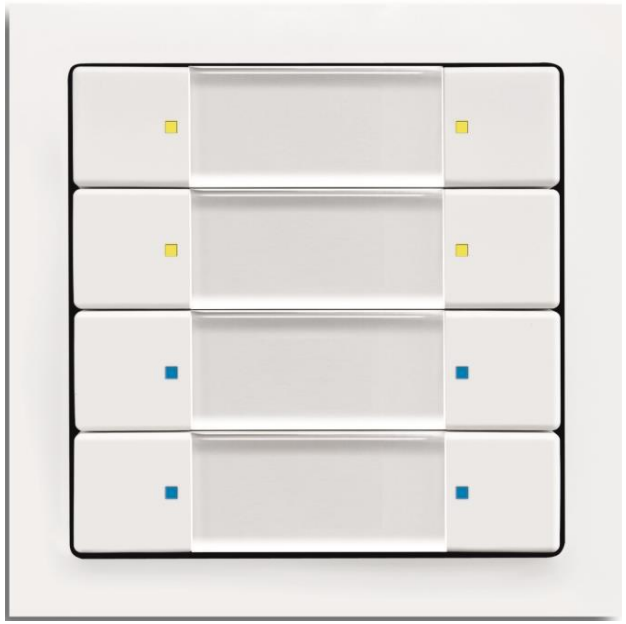
→ Operation on CT App. Status sent and displayed.

Operation via ControlTouch:
First "On" = Repeat on | Second "On" = Repeat one time | Third press = Repeat off

Busch-ControlTouch® - Sonos Integration

Configuration

Next / Previous



ControlTouch® & KNX Linking

Next	5/0/8	DPT 1.001
Previous	5/0/9	DPT 1.001

S4.1: Switching	Input / output	Next	5/0/8	1 bit
S4.2: Switching	Input / output	Previous	5/0/9	1 bit

Bus Monitor

solo® comf. 4gang - RIGHT	5/0/8	Next	6	GroupValue...	$01 | On
solo® comf. 4gang - RIGHT	5/0/9	Previous	6	GroupValue...	$01 | On
solo® comf. 4gang - RIGHT	5/0/8	Next	6	GroupValue...	$01 | On
solo® comf. 4gang - RIGHT	5/0/8	Next	6	GroupValue...	$01 | On
solo® comf. 4gang - RIGHT	5/0/9	Previous	6	GroupValue...	$01 | On
solo® comf. 4gang - RIGHT	5/0/9	Previous	6	GroupValue...	$01 | On

Next / Previous via 1 bit object (1 button switching → only “On”)

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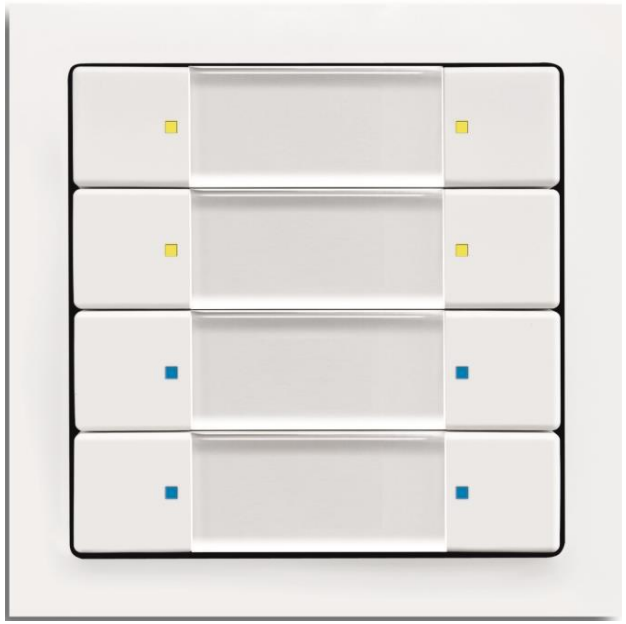
Busch-ControlTouch® - Sonos Integration

Volume Control

Busch-ControlTouch® - Sonos Integration

Configuration

Volume (Option 1) – 4 bit rel. dimming



ControlTouch® & KNX Linking

Device volume	5/0/3	DPT 3.007
Play	5/0/7	5/0/6 DPT 1.001

S3.1: Switching	Input / output	Play	5/0/6	1 bit	C	-	W	T	U	switch
S3.1: Relative dimming	Output	Device Volume St...	5/0/3	4 bit	C	-	-	T	-	dimming control

Bus Monitor

1.1.10	solo® comf. 4gang - RIGHT	5/0/3	Device Volume Status	6	GroupValue...	$09 | On
1.1.255	-	5/0/2	Device Volume	6	GroupValue...	$0F | 6 %
1.1.255	-	5/0/2	Device Volume	6	GroupValue...	$1A | 10 %
1.1.255	-	5/0/2	Device Volume	6	GroupValue...	$24 | 14 %
1.1.255	-	5/0/2	Device Volume	6	GroupValue...	$2E | 18 %
1.1.10	solo® comf. 4gang - RIGHT	5/0/3	Device Volume Status	6	GroupValue...	$08 | Off

Short press = Play/Pause
Long press = dim up (increase volume) / dim down (decrease volume)

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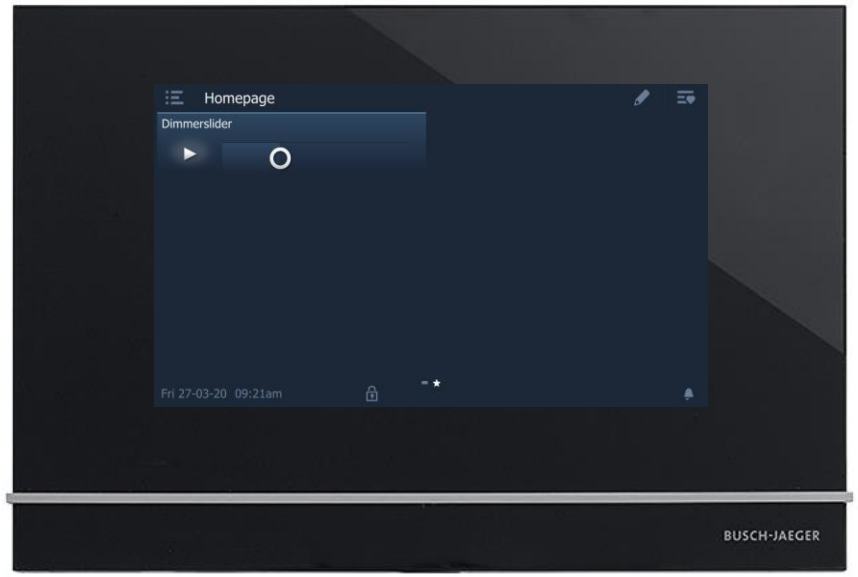
Busch-ControlTouch® - Sonos Integration

Configuration

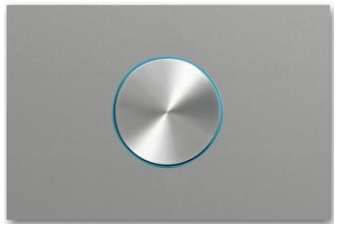
Volume (Option 2) – 1 byte

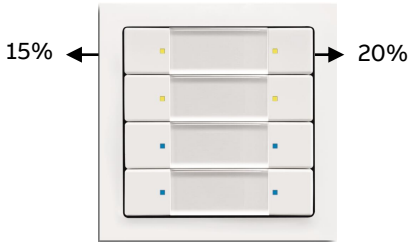


ControlTouch® & KNX Linking

Device volume	5/0/2	5/0/2	DPT 5.001

Products





For Panels (dimmer slider) or rotary control elements (PriOn)

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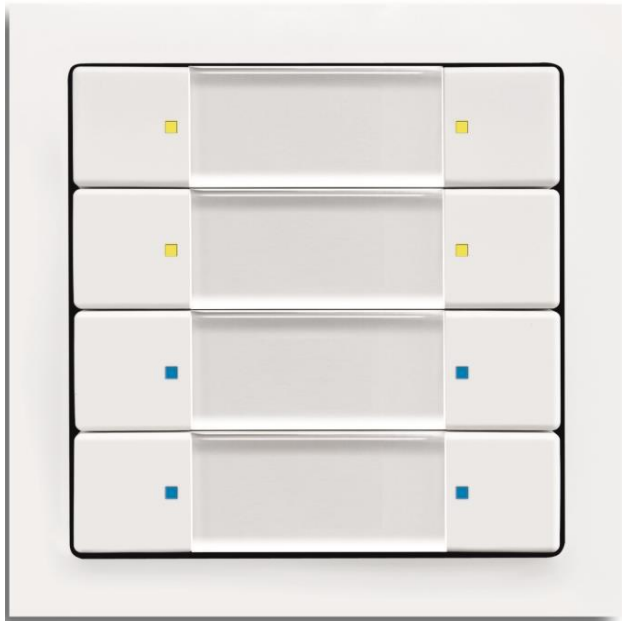
Busch-ControlTouch® - Sonos Integration

Configuration

Group Volume



ControlTouch® & KNX Linking

Group volume	5/0/1	DPT 3.007

S2.1: Switching	Input / output	Play	5/0/6	1 bit
S2.1: Relative dimming	Output	Group Volume St...	5/0/1	4 bit

Bus Monitor

1.1.10	solo® comf. 4gang - RIGHT	5/0/1	Group Volume Status	6	GroupValue...	$01 | On	→ Start “Dim down” (long press) → Increase group volume
1.1.255	-	5/0/2	Device Volume 1 byte	6	GroupValue...	$54 | 33 %	
1.1.255	-	5/0/0	Group Volume	6	GroupValue...	$54 | 33 %	
1.1.255	-	5/0/0	Group Volume	6	GroupValue...	$4A | 29 %	→ CT is rising the group volume in 4% steps
1.1.255	-	5/0/2	Device Volume 1 byte	6	GroupValue...	$4A | 29 %	
1.1.255	-	5/0/0	Group Volume	6	GroupValue...	$40 | 25 %	
1.1.10	solo® comf. 4gang - RIGHT	5/0/1	Group Volume Status	6	GroupValue...	$00 | Off	→ Stop “Dim down” → Stop increasing group volume

For applications, where more than one Sonos speaker is to be controlled in one area

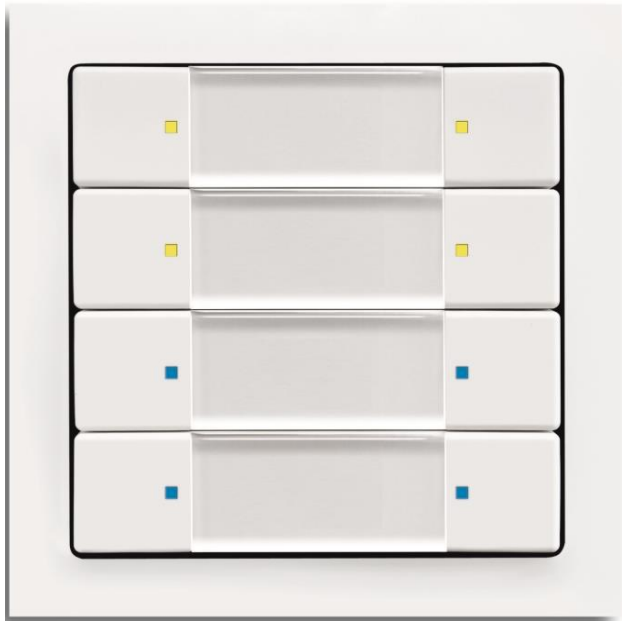
Busch-ControlTouch® - Sonos Integration

Playlists and favorites

Busch-ControlTouch® - Sonos Integration

Configuration

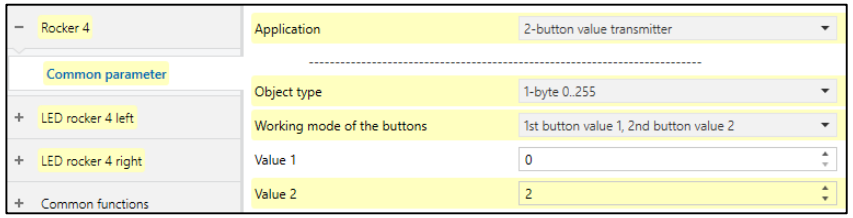
Select favorite



ControlTouch® & KNX Linking

Select favorite	5/0/15	DPT 5.010

S4.1: Value switching	Input / output	Select favorite	5/0/15	1 byte	C - W T U	counter pulses (0..255)



Bus Monitor

1.1.10	solo® comf. 4gang - RIGHT	5/0/15	Select favorite	6	GroupValue...	$00
1.1.10	solo® comf. 4gang - RIGHT	5/0/15	Select favorite	6	GroupValue...	$02

To play an specific favorite song from Sonos

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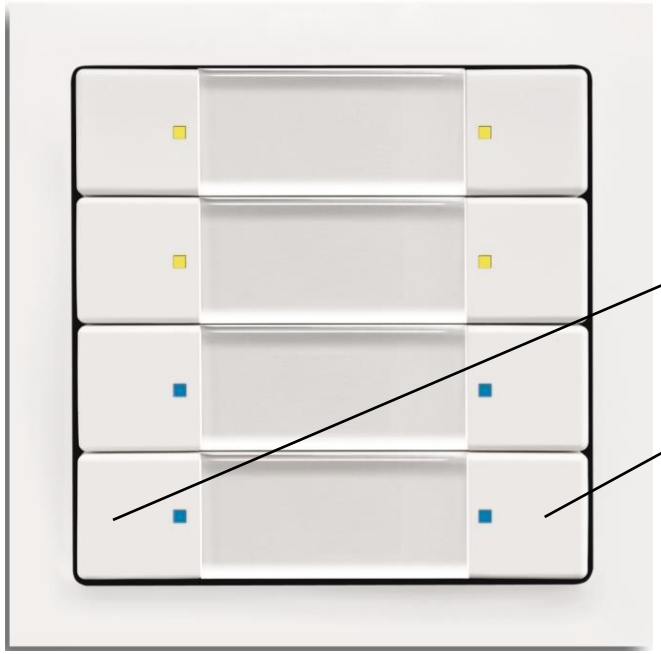
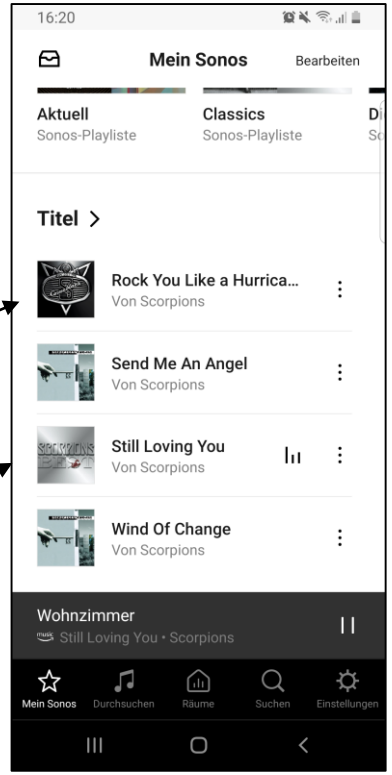
Busch-ControlTouch® - Sonos Integration

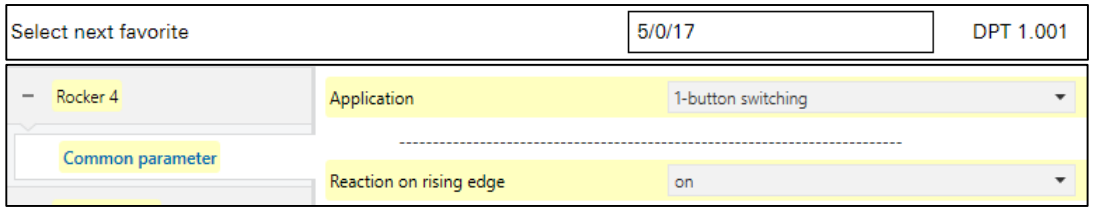
Configuration

Select favorite + Select next favorite





1. Title = $00
2. Title = $01
3. Title = $02
4. Title = $03

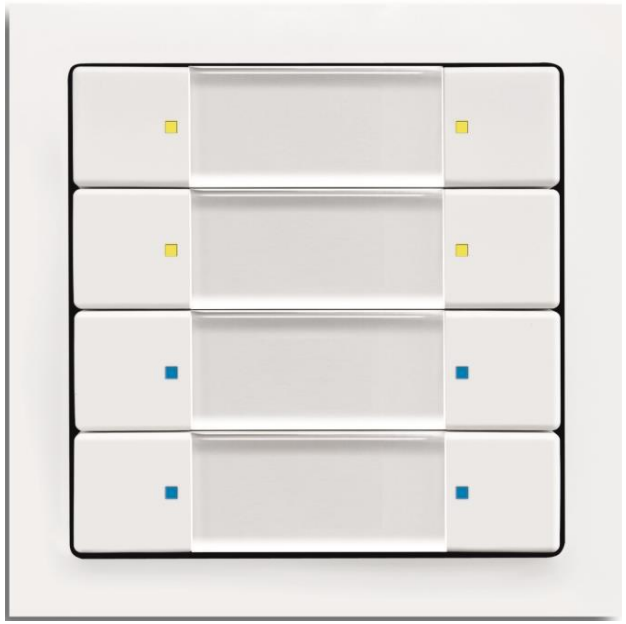


Same configuration and operation like Next / Previous

Busch-ControlTouch® - Sonos Integration

Configuration

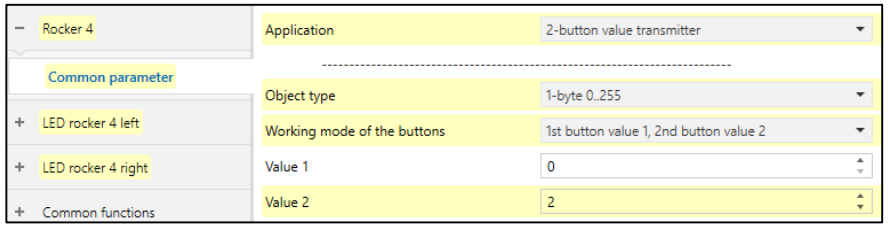
Select playlist



ControlTouch® & KNX Linking

Select playlist	5/0/16	DPT 5.010

S4.1: Value switching	Input / output	Select playlist	5/0/16	1 byte	C - W T U	counter pulses (0..255)



Bus Monitor

solo® comf. 4gang - RIGHT	5/0/16	Select playlist	6	GroupValue...	$00
solo® comf. 4gang - RIGHT	5/0/16	Select playlist	6	GroupValue...	$02

To play an specific playlist from Sonos

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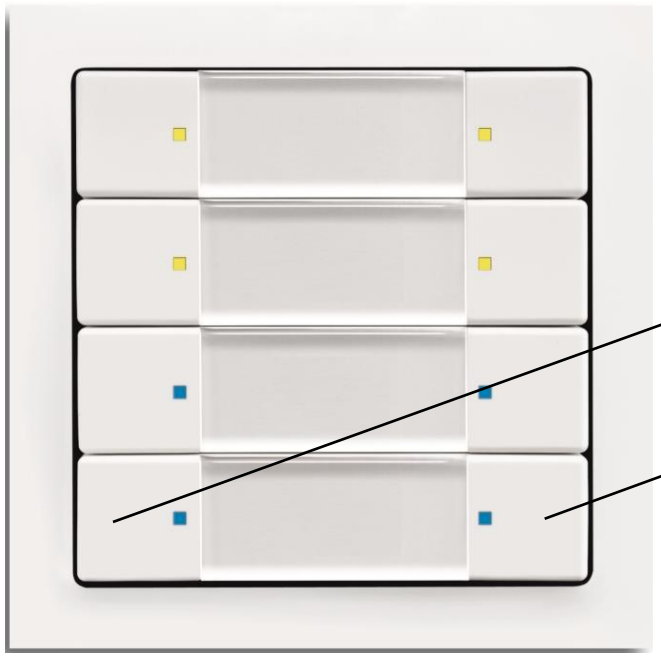
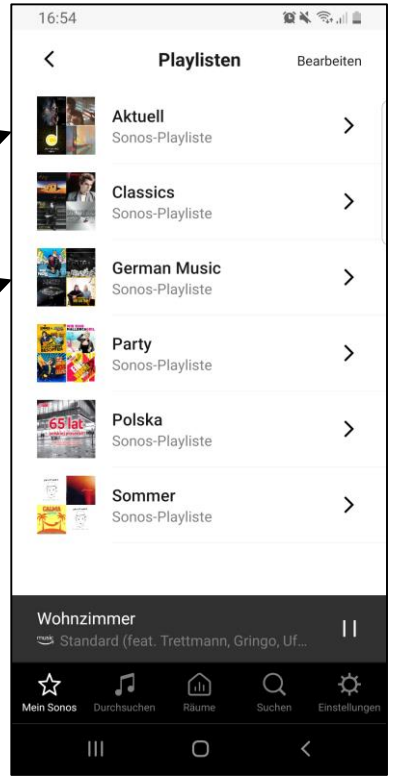
Busch-ControlTouch® - Sonos Integration

Configuration

Select playlist





1. Playlist = $00
2. Playlist = $01
3. Playlist = $02
4. Playlist = $03
5. Playlist = $04
6. Playlist = $05

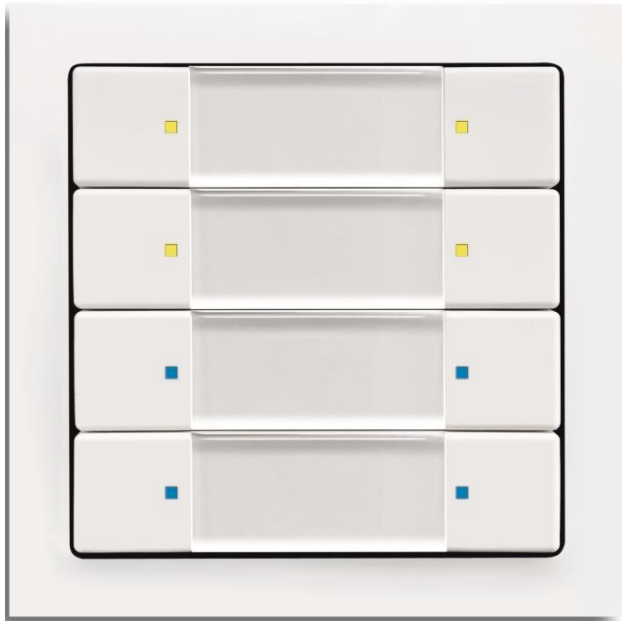
Busch-ControlTouch® - Sonos Integration

Audio clips and other functions

Busch-ControlTouch® - Sonos Integration

Configuration

Join to next playing group



ControlTouch® & KNX Linking

Join to next playing group	5/0/18	DPT 1.001

S4.1: Switching	Input / output	Join to next playi... 5/0/18	1 bit

– Rocker 4	Application	2-button switching
Common parameter	Working mode of the buttons for switching	1st button on, 2nd button off

Bus Monitor

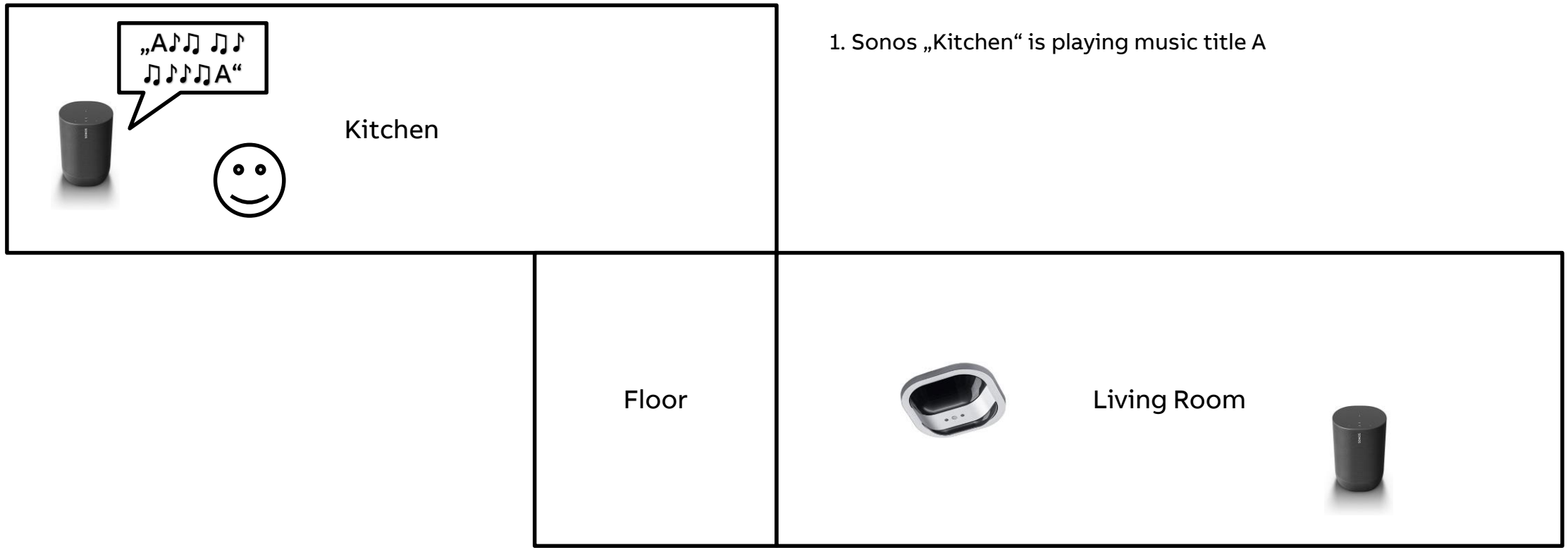
1.1.10	solo® comf. 4gang - RIGHT	5/0/18	Join to next playing group	6	GroupValue...	$01 | On
1.1.10	solo® comf. 4gang - RIGHT	5/0/18	Join to next playing group	6	GroupValue...	$00 | Off

Sonos is searching the next playing group and adds the speaker to it.
1 = “Join group” | 0 = “Leave group”

Busch-ControlTouch® - Sonos Integration

Configuration

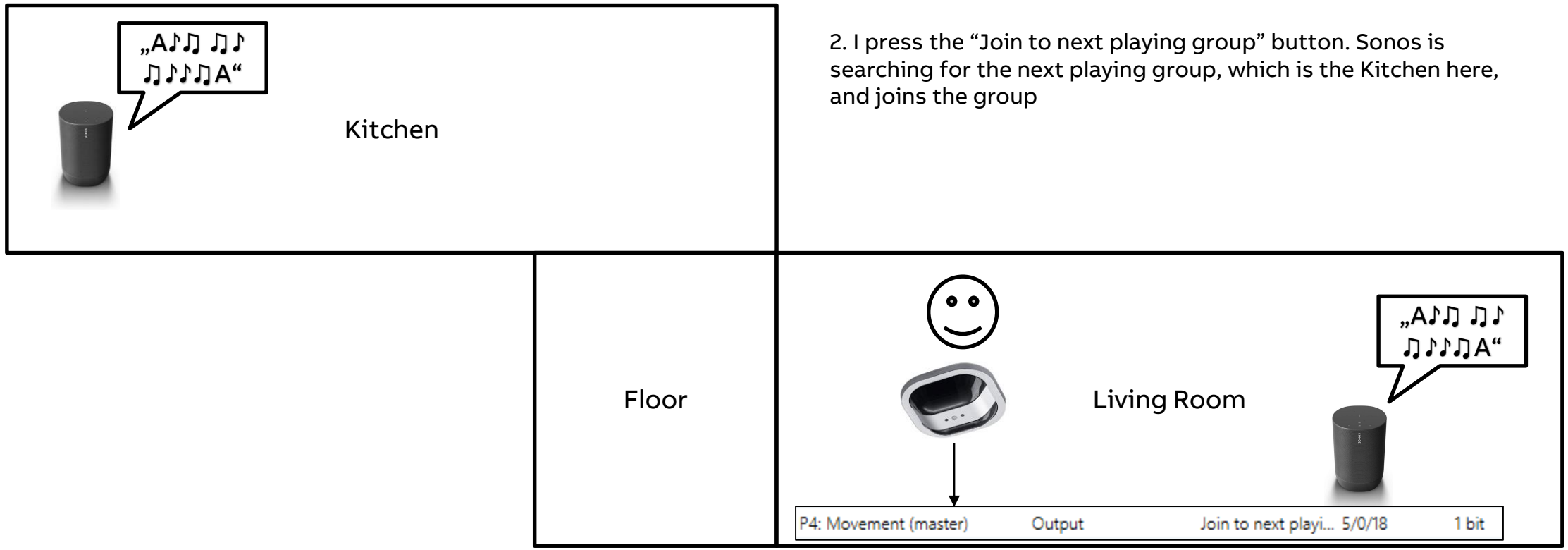
Join to next playing group



Busch-ControlTouch® - Sonos Integration

Configuration

Join to next playing group



2. I press the “Join to next playing group” button. Sonos is searching for the next playing group, which is the Kitchen here, and joins the group

Busch-ControlTouch® - Sonos Integration

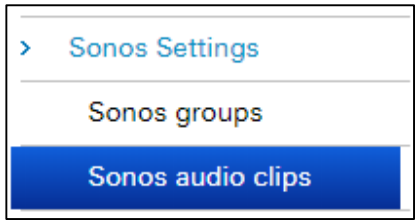
Configuration

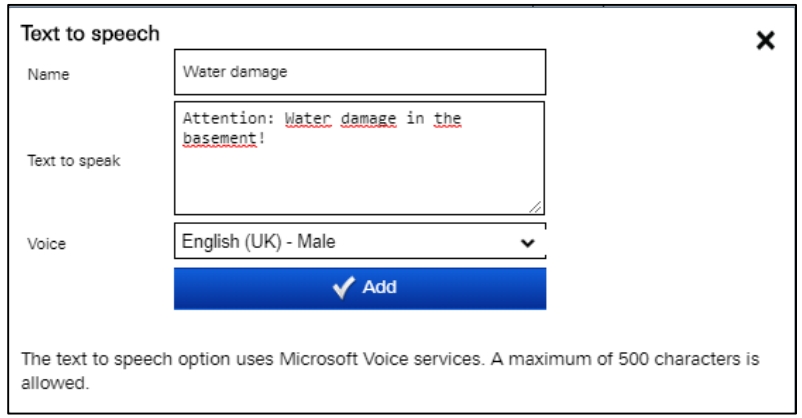
Sonos settings – Audio clips

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)





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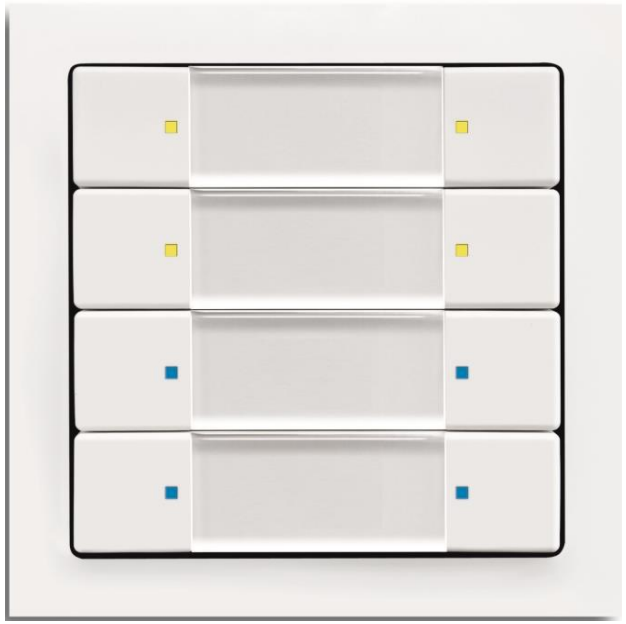
Configuration

Play audio clip (standard and own)



ControlTouch® & KNX Linking

Play audio clip (standard)	5/0/19	DPT 5.010
Play audio clip (own)	5/0/20	DPT 5.010

S4.1: Value switching	Input / output	Play audio clip (st...	5/0/19	1 byte	C	-	W	T	U	counter pulses (0..255)

Bus Monitor

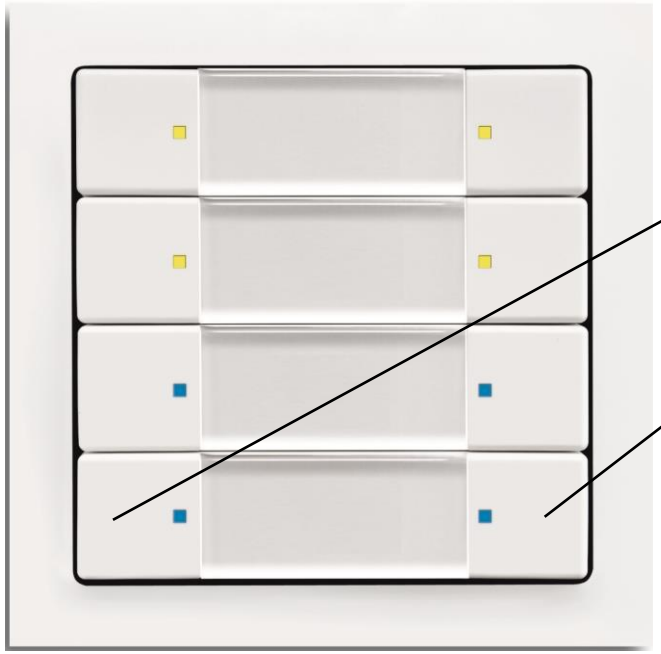
solo® comf. 4gang - RIGHT	5/0/19	Play audio clip (standard)	6	GroupValue...	$00
solo® comf. 4gang - RIGHT	5/0/19	Play audio clip (standard)	6	GroupValue...	$02

To play an specific audio clip, which is set up in MyBuildings

Busch-ControlTouch® - Sonos Integration

Configuration

Play audio clip (standard)



Sonos audio clips		Volume	
Sonos standard - 1	Chime	20	
ControlTouch standard - 1	Ding dong	20	▶
ControlTouch standard - 2	Gong	20	▶
ControlTouch standard - 3	Gong 2	20	▶
ControlTouch standard - 4	Logo	20	▶
ControlTouch standard - 5	Tinkerbell	20	▶
ControlTouch standard - 6	Up the stairs	20	▶
ControlTouch standard - 7	Xylophone	20	▶
ControlTouch standard - 8	Ding dong (long)	20	▶
ControlTouch standard - 9	Melody 1 (long)	20	▶
ControlTouch standard - 10	Melody 2 (long)	20	▶

Sonos standard = $00

ControlTouch standard – 1 = $01

ControlTouch standard – 2 = $02

ControlTouch standard – 3 = $03

…

…

…

…

…

…

ControlTouch standard – 10 = $10

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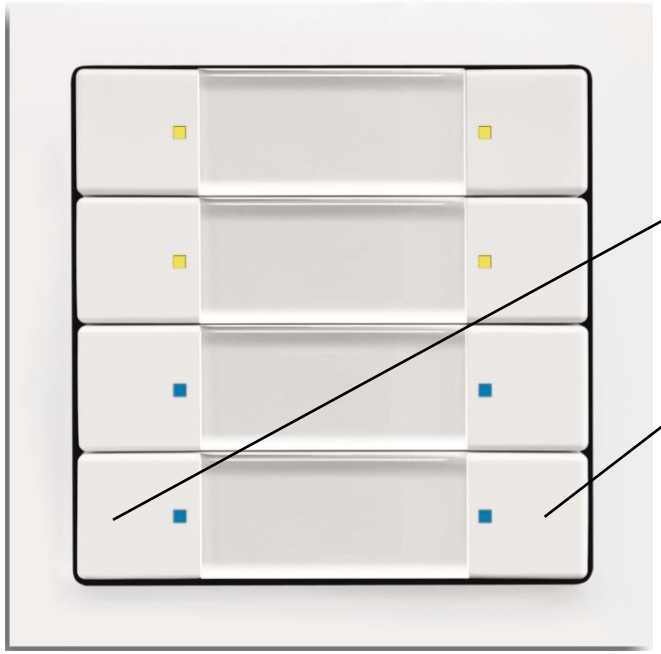
Configuration

Play audio clip (own)



Attention! → Internal numbering start with $01 here!!

Own – 1 = $01

Own – 2 = $02

Own – 3 = $03

…

…

…

…

…

…

…

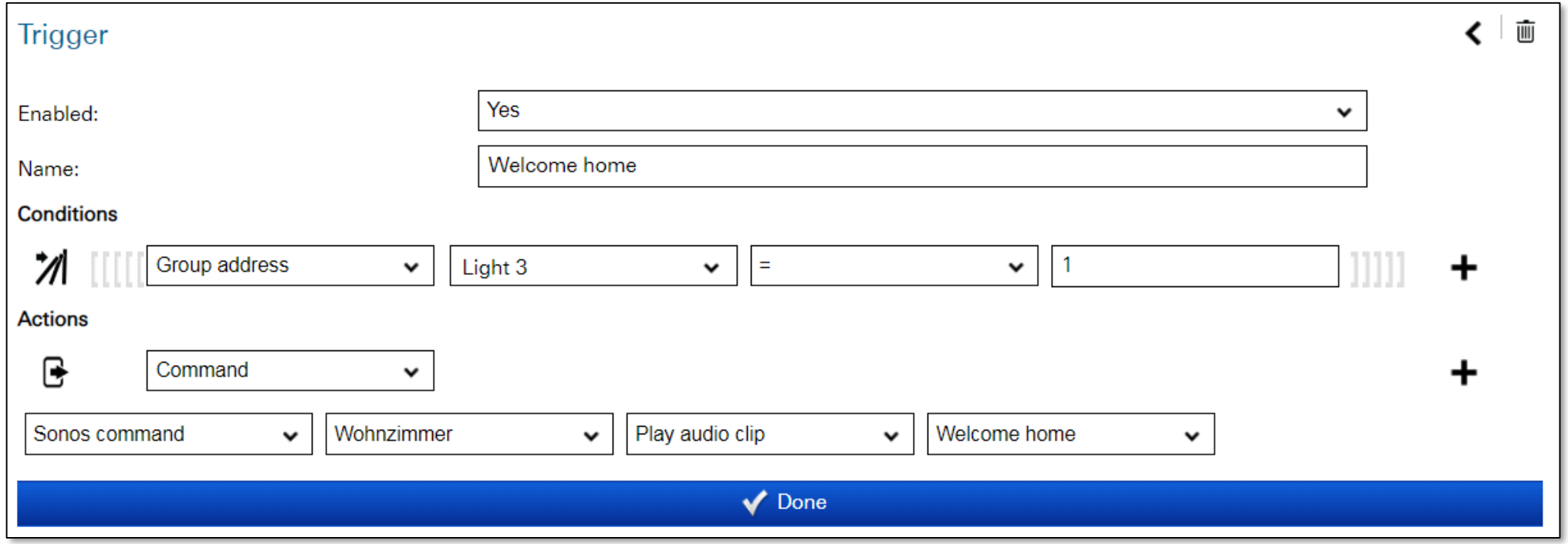
Own – 11 = $11

Busch-ControlTouch® - Sonos Integration

Configuration

Sonos settings – Audio clips

Integration via Triggers:



Busch-ControlTouch® - Sonos Integration

Configuration

Sonos settings – Audio clips

Application:

Window closed
GA BI = 0

Window opened
GA BI = 1

Sonos play audio clip with trigger function

Busch-ControlTouch® - Sonos Integration

Configuration

Sonos settings – Audio clips

Application:

Video outdoor station
GA Call started = 0

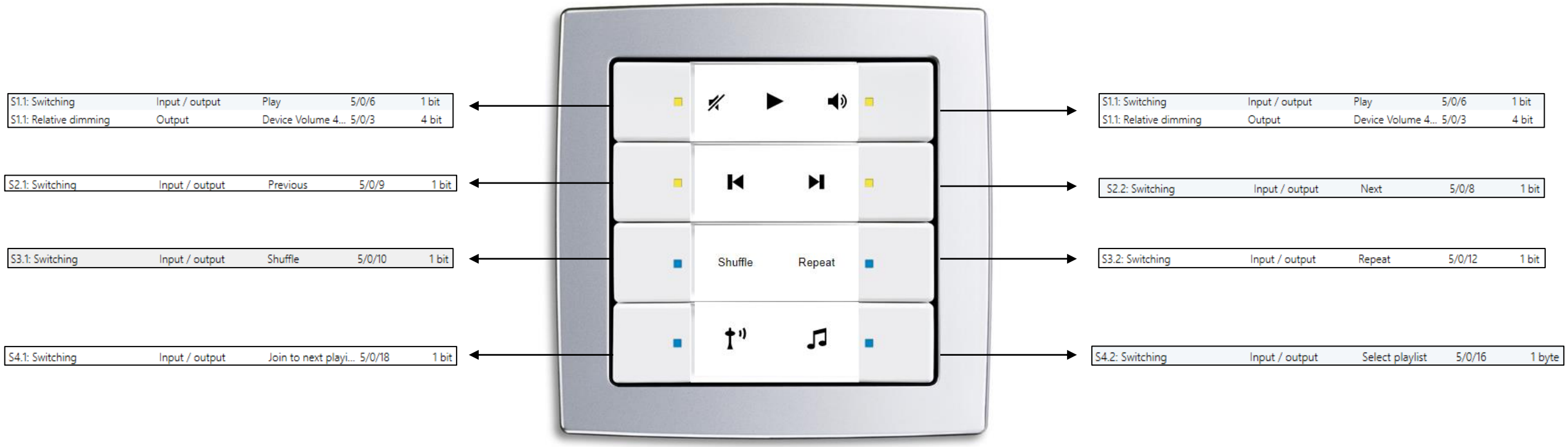
Someone bells
GA Call started = 1

Sonos play audio clip with trigger function

Busch-ControlTouch® - Sonos Integration

Configuration

Final solution



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Questions

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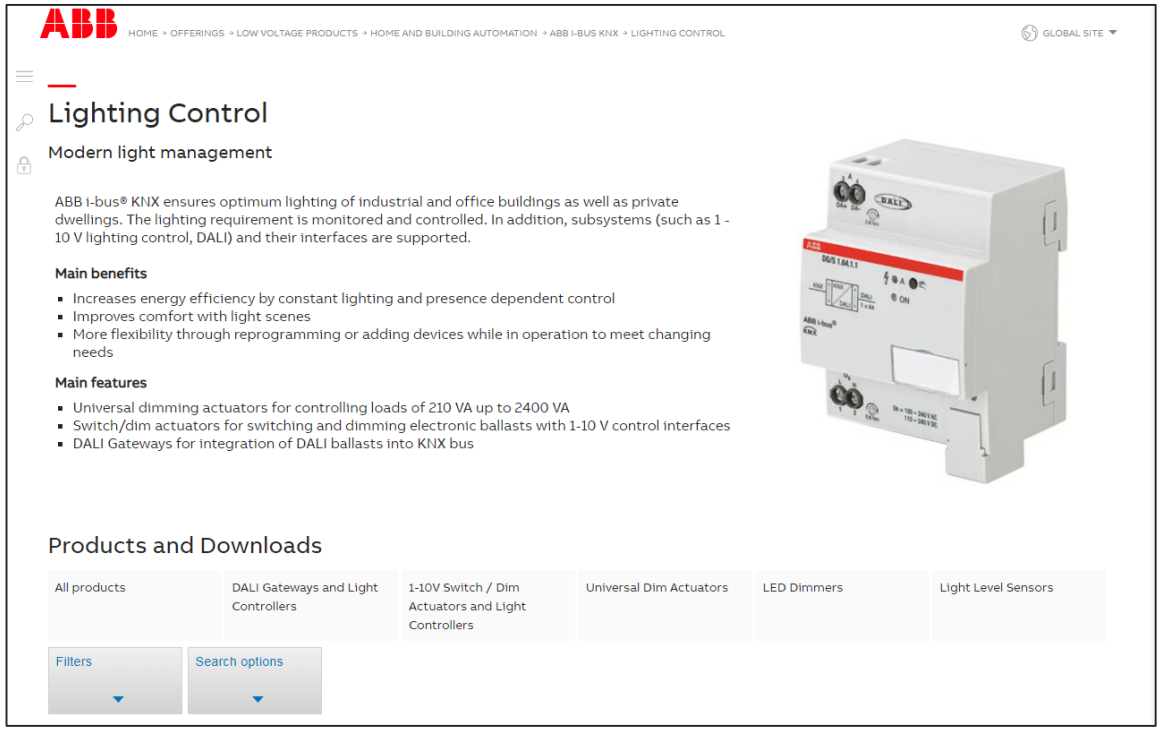
Online Learning Session

Homepage

www.abb.com/KNX

→ Products and Downloads
→ Lighting Control
→ Search Options DG/S

- Product Manual
- CAD Drawing
- Installation and Operating Instructions
- Specification Text
- ETS Application
- Selection Table
- CE & RoHS Declaration of Conformity
- • •



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Online Learning Session

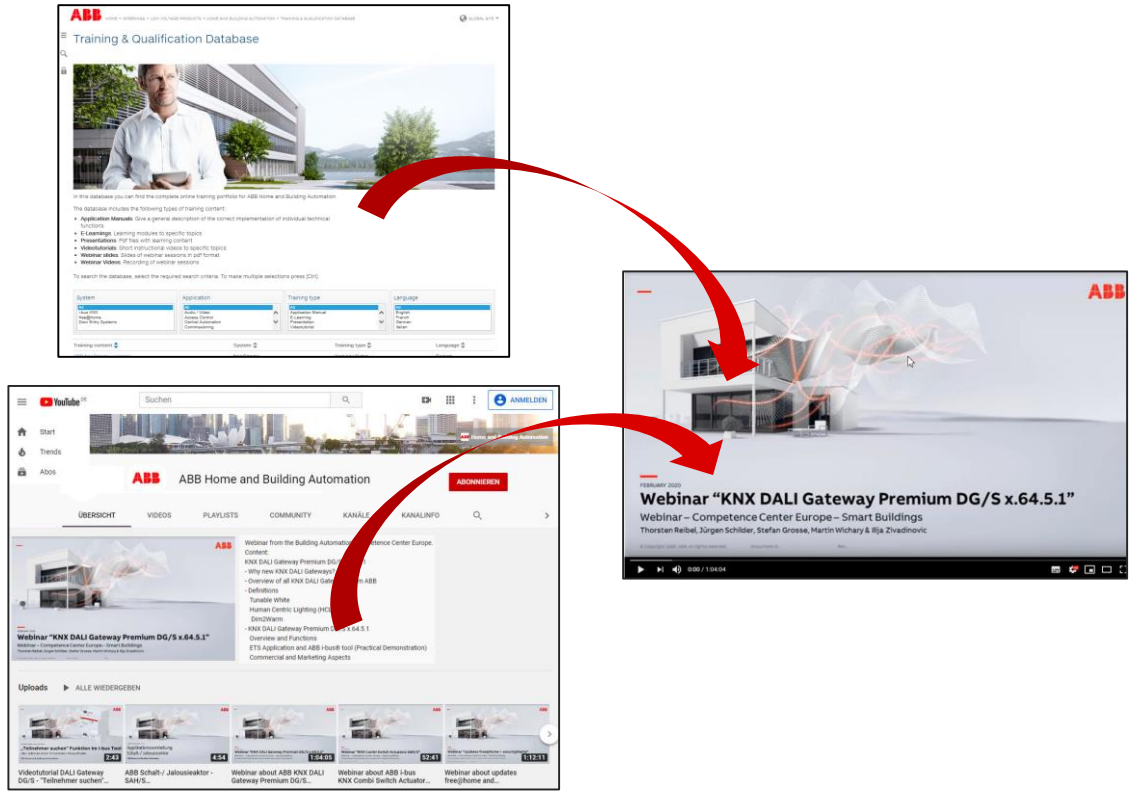
Further information

Training & Qualification Database

– The database includes the following types of training content:
  - Application Manuals
  - E-Learnings
  - Presentations
  - Video tutorials
  - Webinar slides and videos
  - ww.abb.com/knx or https://go.abb/ba-training

Youtube

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



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Online Learning Session

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

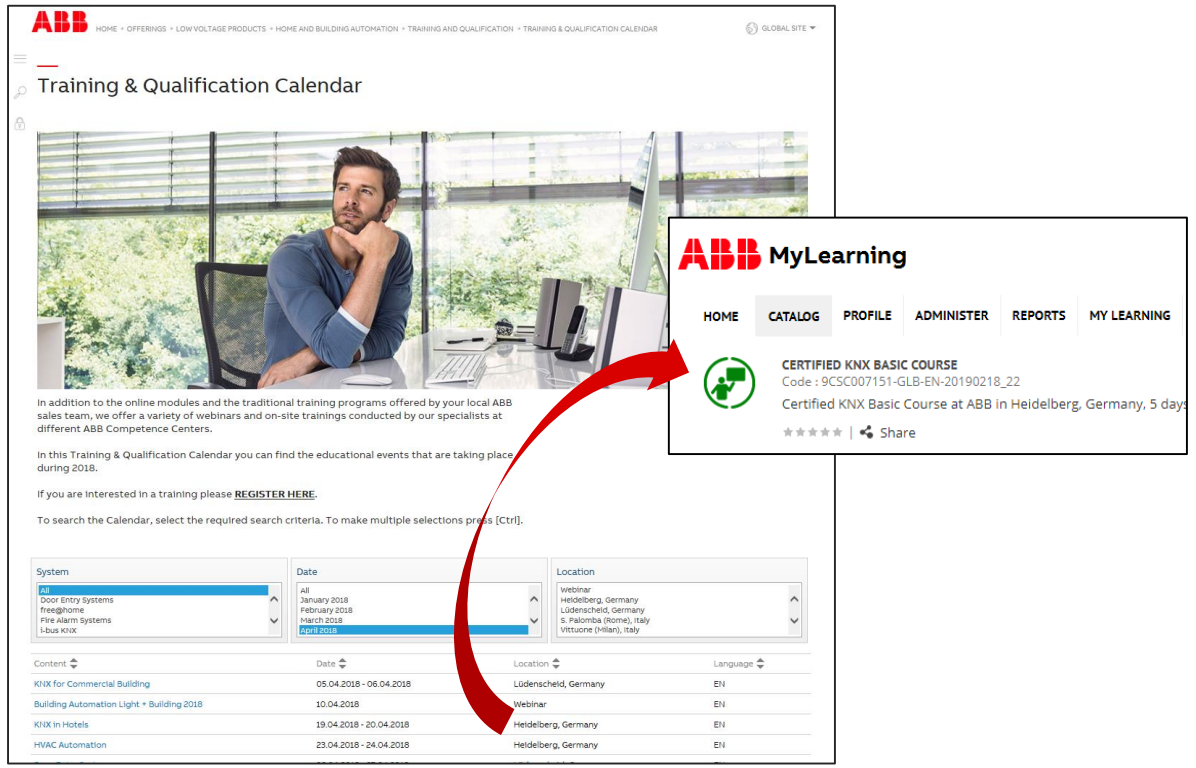
In this Training & Qualification Calendar you can find the educational events that are taking place during 2020

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



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KNX Certified Trainings 2020

Certified KNX Courses in Heidelberg

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

Safe the date!!!

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

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

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Online Learning Session

Next Webinar

KNX DALI Gateway Premium DG/S x.64.5.1 – Special functions

- Human Centric Lighting (HCL) – Colour temperature curve following daylight
- Dim2Warm – Colour temperature changes proportionally to brightness with the effect like a light bulb
- Standby switch-off – Ballast voltage shutdown via additional switching actuator to save energy
- Scenes – 1 bit recall and 1 byte coded scenes
- ABB i-bus® tool – Search menu for a ballast with unknown address, operating hours, …

Wednesday 6th May 2020

- Morning 09:00 am Europe Time (Berlin, UTC + 2h)
- Afternoon 03:00 pm Europe Time (Berlin, UTC + 2h)

Busch-ControlTouch® - Sonos Integration

Online Learning Session

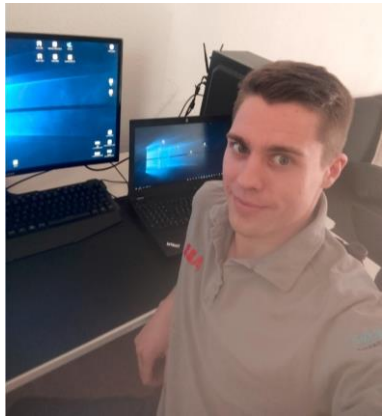
Next online learning sessions

- Tuesday 5th May: ETS: Presence Detector – Zones, Calibration and Constant Light Control
- Thursday 7th May: Presence Detector – Master/Slave Concept

… and more will follow

NEW !!!

From home office to home office



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