OCTOBER 2020

ABB RoomTouch® KNX and DALI Light Control

Online Learning Session – Competence Center Europe – Smart Buildings

Thorsten Reibel, Jürgen Schilder, Stefan Grosse, Martin Wichary & Olaf Stutzenberger

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Webinar – Competence Center Europe - Smart Buildings

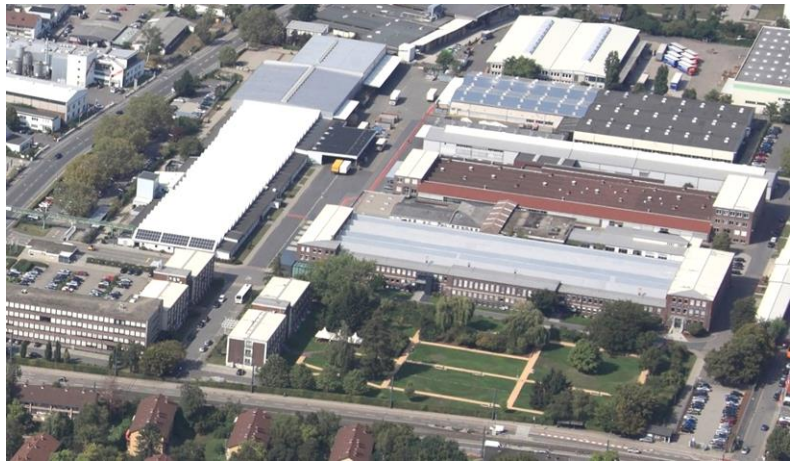
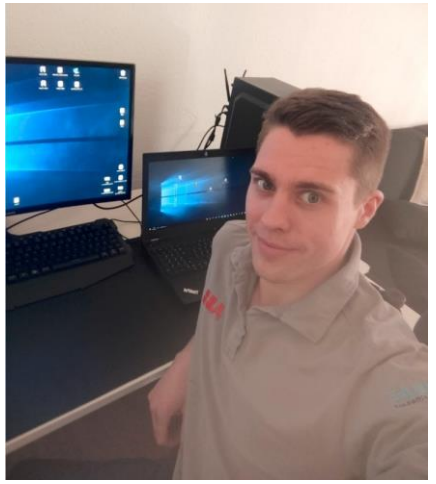


ABB STOTZ-KONTAKT GmbH
Heidelberg / Germany

From home office to home office

ABB Busch-Jaeger
Luedenscheid /
Germany



Agenda

ABB RoomTouch®

- Introduction
- Control element “RGBW Control – RGB”
- Control element “RGBW Control – WW/CW”

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ABB RoomTouch® KNX and DALI Light Control

Introduction

ABB RoomTouch® KNX and DALI Light Control

Introduction

ABB RoomTouch® KNX

Easy operation, easy commissioning, easy installation according to customer desire, regardless of private home, meeting room or hotel

- Small touch displays to control rooms are upcoming
- A touch panel is more flexible then a static push-button
- Lots of functions on a small space
- High quality of material:
  - Glass
  - Metal
- Known smartphone control concept by wiping up/down left/right

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ABB RoomTouch® KNX and DALI Light Control

Introduction

ABB RoomTouch® KNX

- ABB RoomTouch® will expand our range by an additional high-quality KNX Touch panel
- One device and two colors (black and white)
- One Panel that can be mounted portrait and landscape
- New operating concept for quick operation of your lights, blinds, temperature, scenes and audio
- Flat, good looking device with enough functions for a room and for the right price
- Integrated temperature sensor
- Proximity sensor will switch on the device when I am near to it
- Quick switch off when the room is dark (bedroom application)
- Commission via ETS and DCA

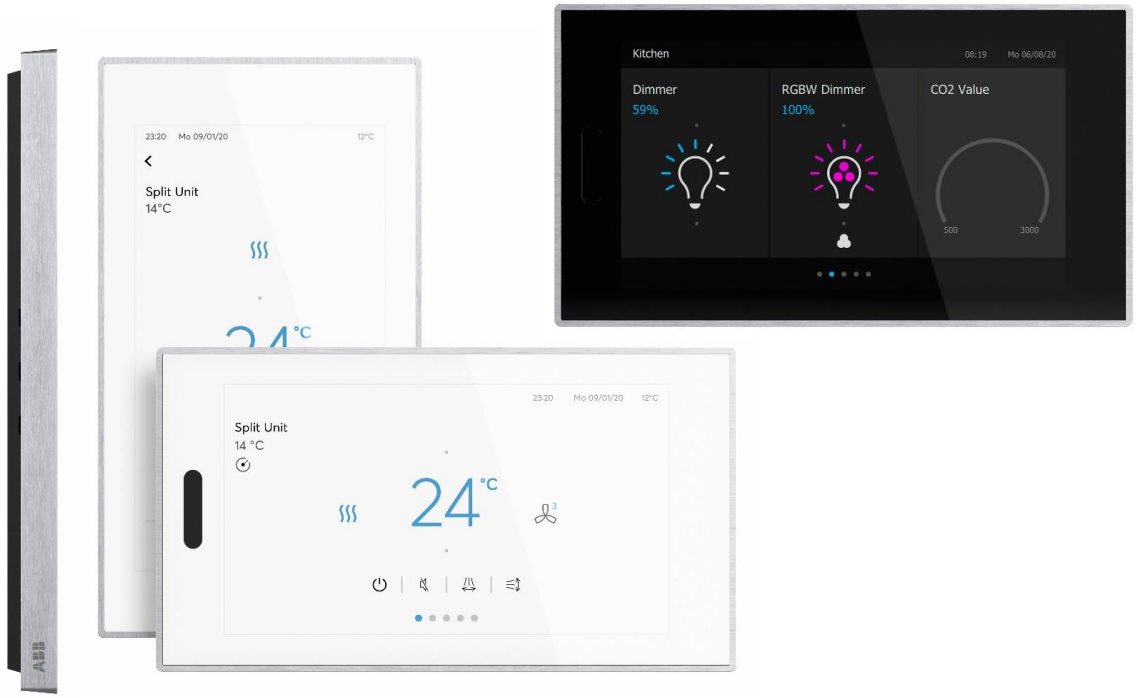

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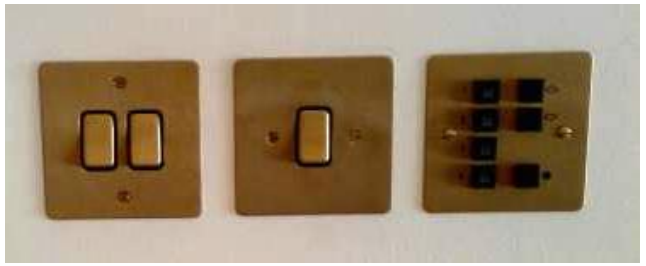
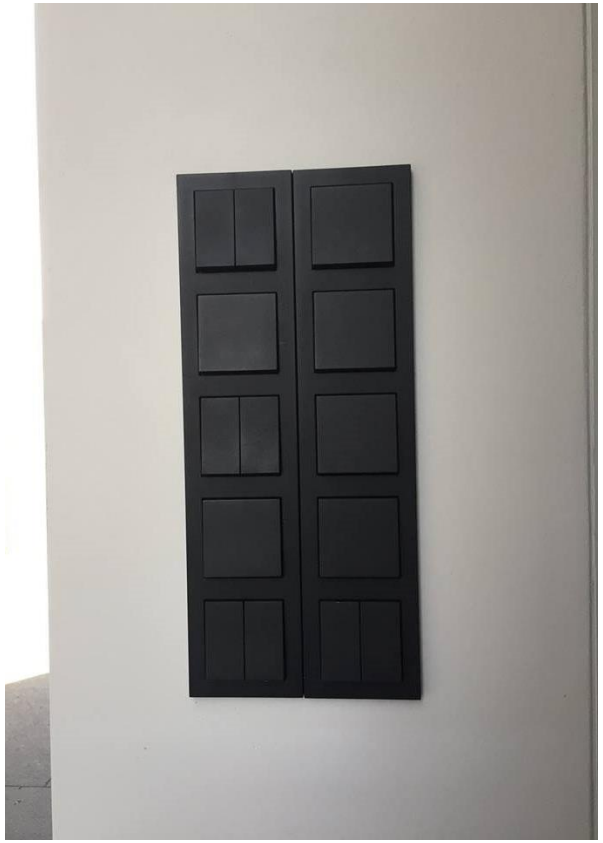
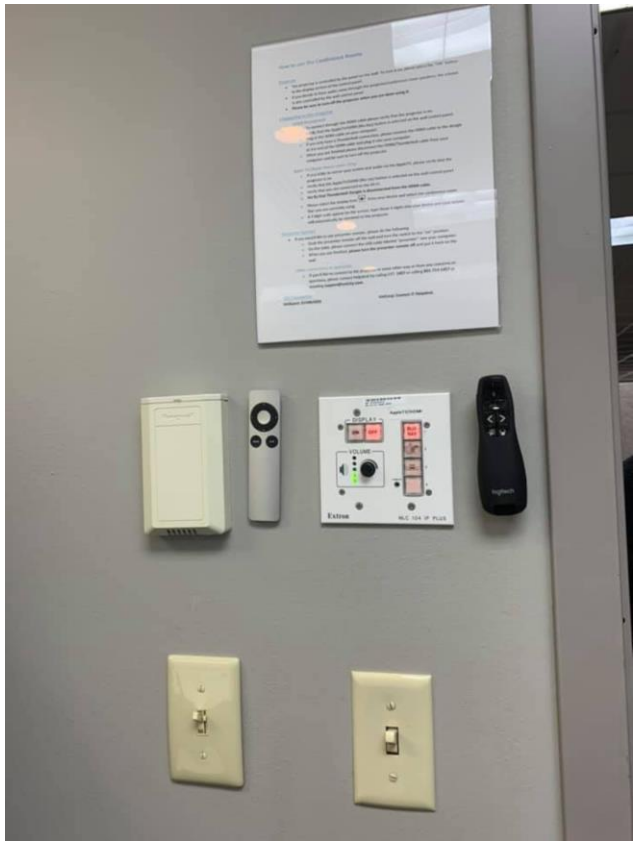
ABB RoomTouch® KNX and DALI Light Control

Several units in one room, e.g. lighting, dimming, shutters, air conditioning, audio/video, ...







Source: Internet

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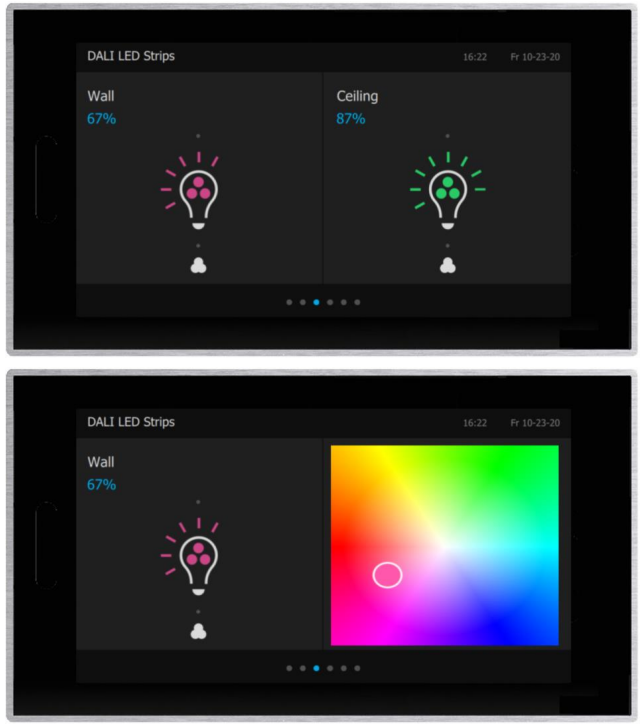
ABB RoomTouch® KNX and DALI Light Control

Introduction

ABB RoomTouch® KNX

Maximum of 30 control elements

- Switch
- Dimmer (4-bit and 8-bit)
- Shutter
- RTC
- Scene
- Value
- Display element
- Audio control
- Split unit control
- Fan speed control
- **RGB(W) / White colour control (WW/CW)**
- …



Control element: RGB

Control element: WW/CW

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ABB RoomTouch® KNX and DALI Light Control

Introduction

ABB RoomTouch® KNX

Webinar about installation, operating concept, commissioning with DCA, … (Sept. 2020)

– Presentation → Link

– Video recording → Link

Homepage

– www.abb.com/knx → Visualisation, Display and Signalling
  - Product Manual
  - Installation and Operating Instructions
  - ETS Application (*.knxprod)
  - ETS App ABB Touch DCA (*.etsapp)
  - …

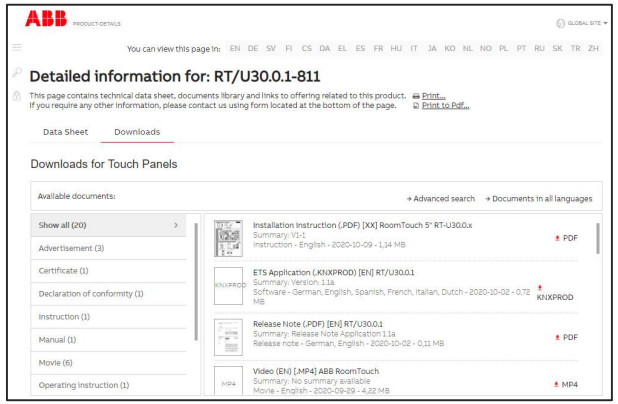

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

Overview DALI Light Control with KNX DALI Gateway Premium DG/S x.64.5.1

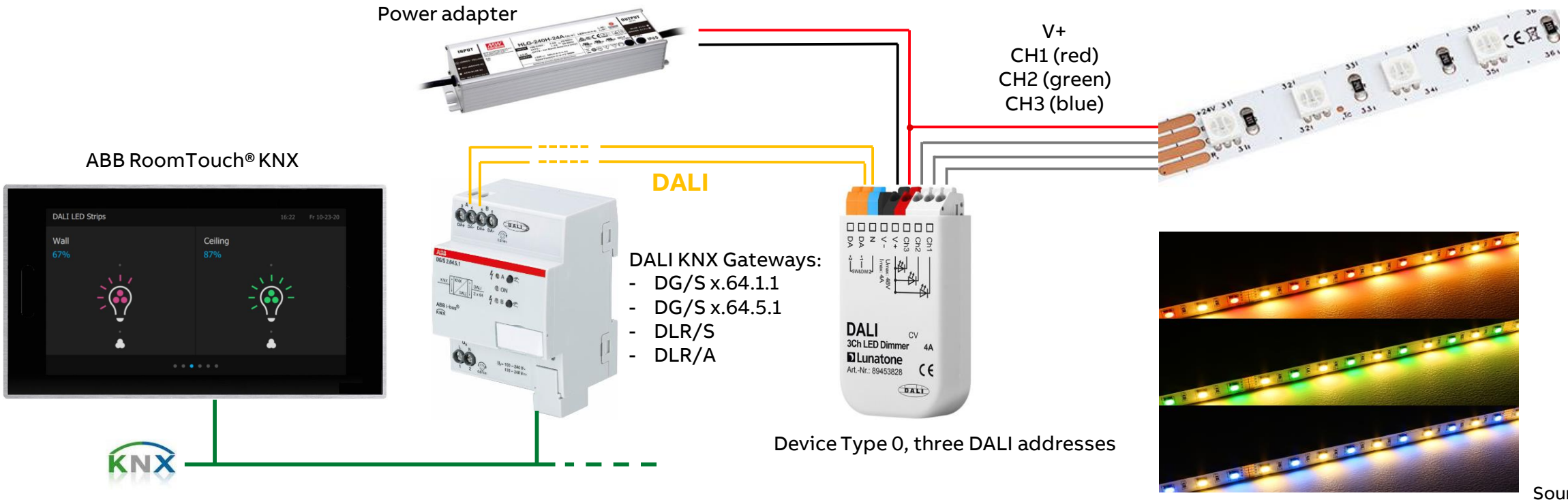

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ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

Overview KNX DALI Gateways DG/S x.64.x.1

KNX DALI Gateways Basic DG/S x.64.1.1 (one or two channels)

- Flexible combination of DALI groups or single control
- ABB i-bus® tool support
- Emergency Lighting
- Templates

KNX DALI Gateways Premium DG/S x.64.5.1 (one or two channels)

- All Functions of DG/S x.64.1.1 Basic plus
- **Tunable White (device type 8)**
- Human Centric Lighting
- Dim2Warm
- Standby Shutdown

… and more

DG/S 1.64.1.1

DG/S 2.64.1.1

DG/S 1.64.5.1

DG/S 2.64.5.1

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ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

KNX DALI Gateways DG/S x.64.x.1

Webinars and Online Learning Sessions (dim2warm, HCL, emergency lighting, …)

– Training & Qualification Database: Webinar slides and videos
  - https://go.abb/ba-training
  - ww.abb.com/knx (→ Services & Tools → Training and Qualification → Training Database)
  - YouTube Channel “ABB Home and Building Automation” https://www.youtube.com/user/ABBibusKNX

Homepage

– www.abb.com/knx → Lighting Control → DALI Gateways
  - Product Manual
  - ETS Application (*.knxprod)
  - …

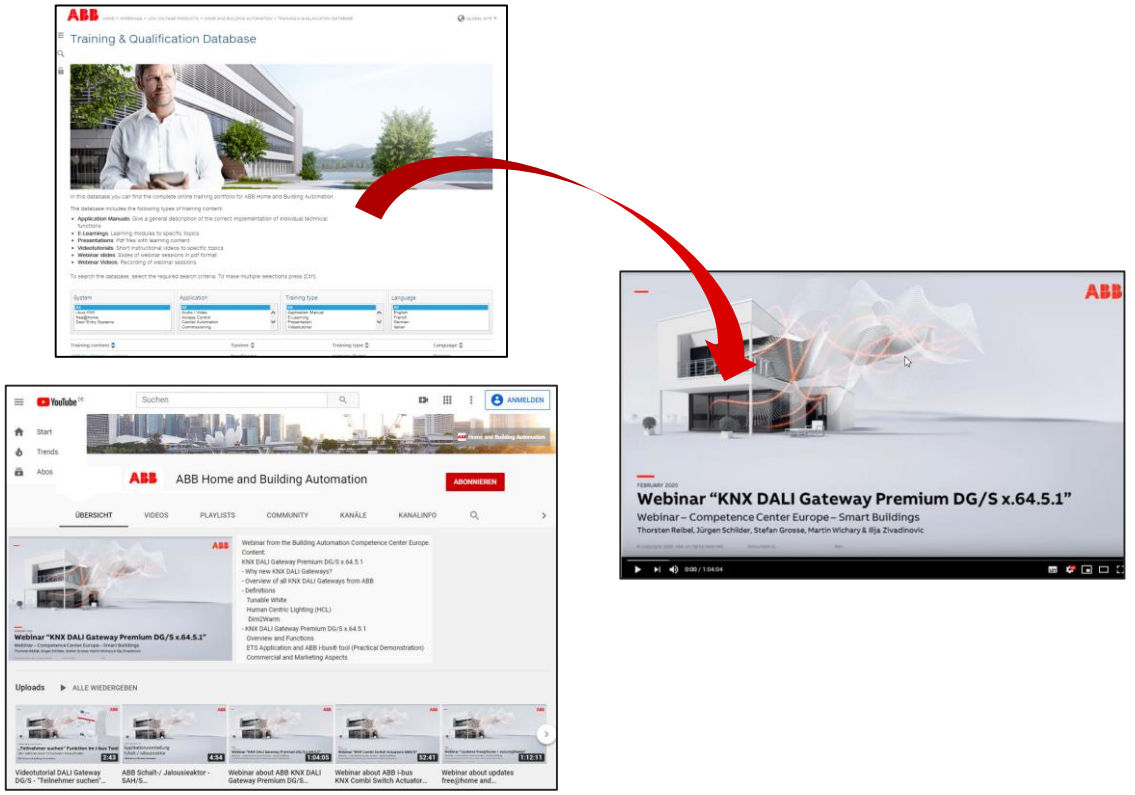

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

Commissioning with the ETS

- The ABB RoomTouch® is parameterized with the “ABB Touch DCA” (device configuration app) like all other panels (SmartTouch, IP touch 7, …)
- Add ABB RoomTouch to the building or topology view

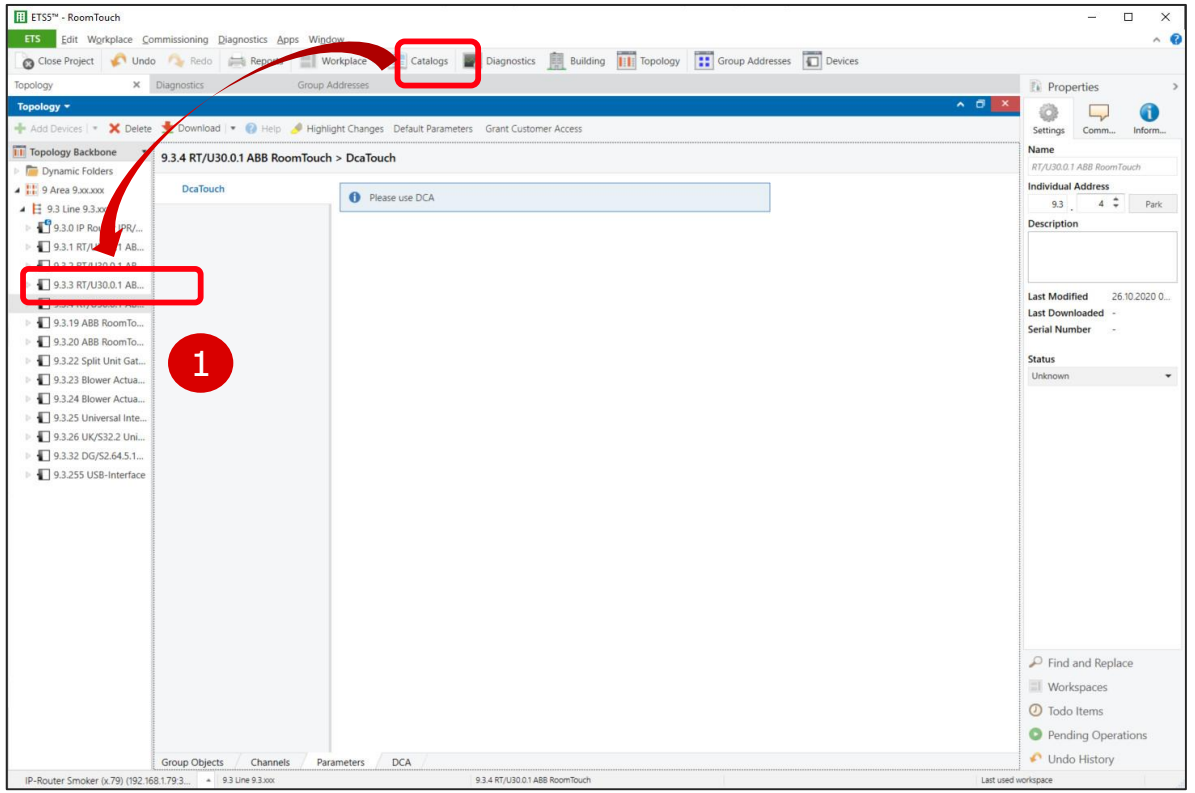

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

Commissioning with the ETS

- The ABB RoomTouch® is parameterized with the “ABB Touch DCA” (device configuration app) like all other panels (SmartTouch, IP touch 7, …)
- Add ABB RoomTouch to the building or topology view
- Click on the “DCA” tab and start the commissioning

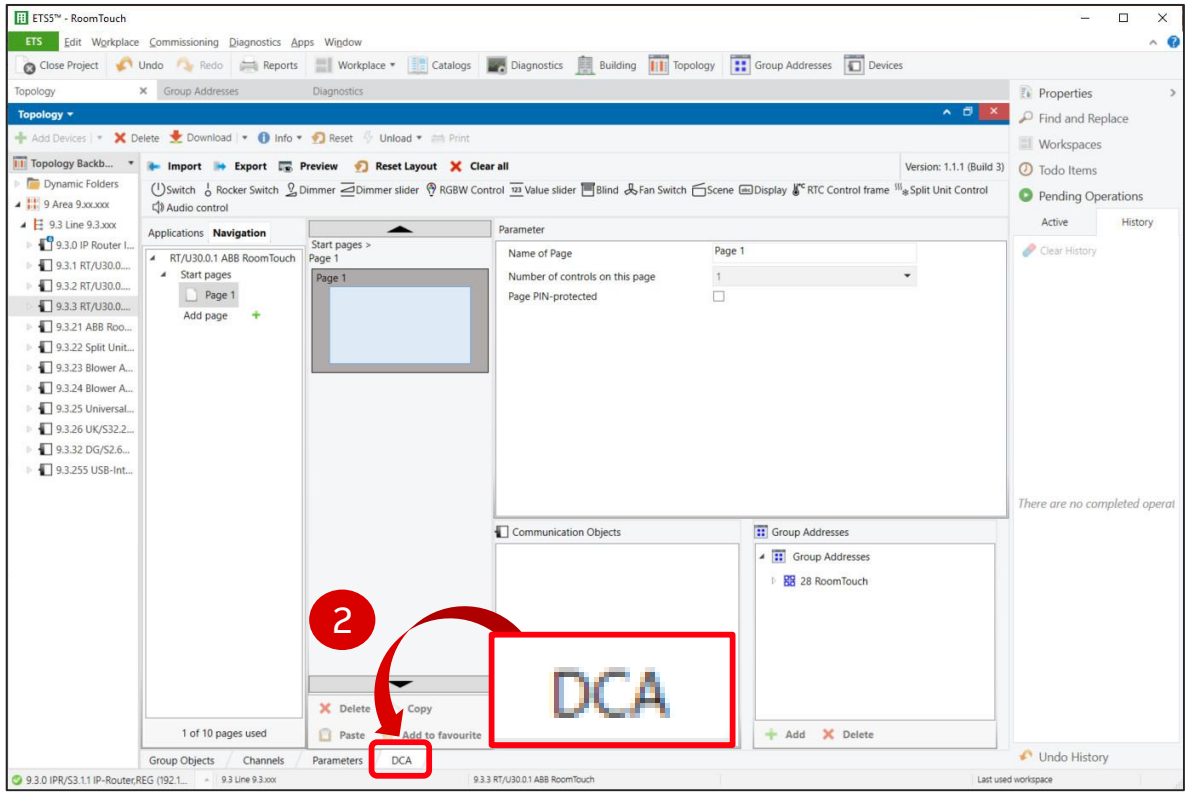

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

Commissioning with the ETS

- The ABB RoomTouch® is parameterized with the “ABB Touch DCA” (device configuration app) like all other panels (SmartTouch, IP touch 7, …)
- Add ABB RoomTouch to the building or topology view
- Click on the “DCA” tab and start the commissioning
  - Drag the control element “RGBW Control” from the task bar to the field of the page

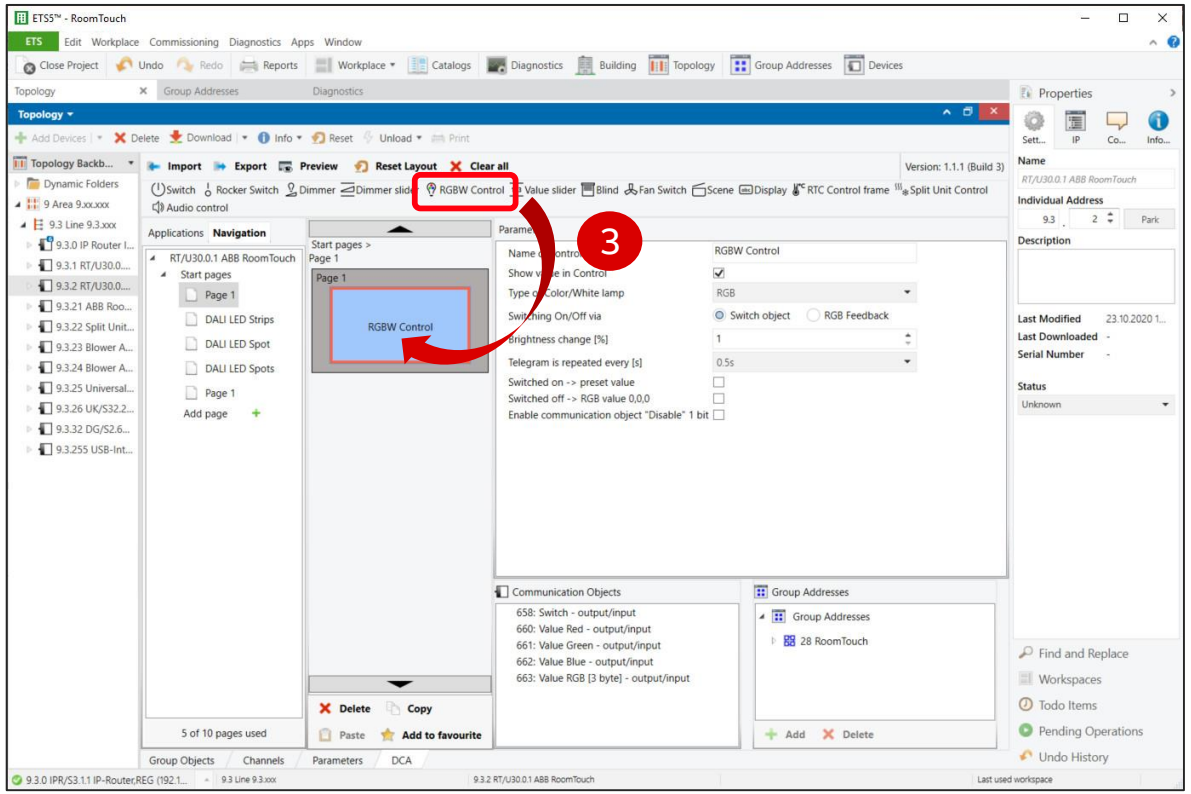

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

Commissioning with the ETS

- The ABB RoomTouch® is parameterized with the “ABB Touch DCA” (device configuration app) like all other panels (SmartTouch, IP touch 7, …)
- Add ABB RoomTouch to the building or topology view
- Click on the “DCA” tab and start the commissioning
  - Drag the control element “RGBW Control” from the task bar to the field of the page
  - Set the parameters

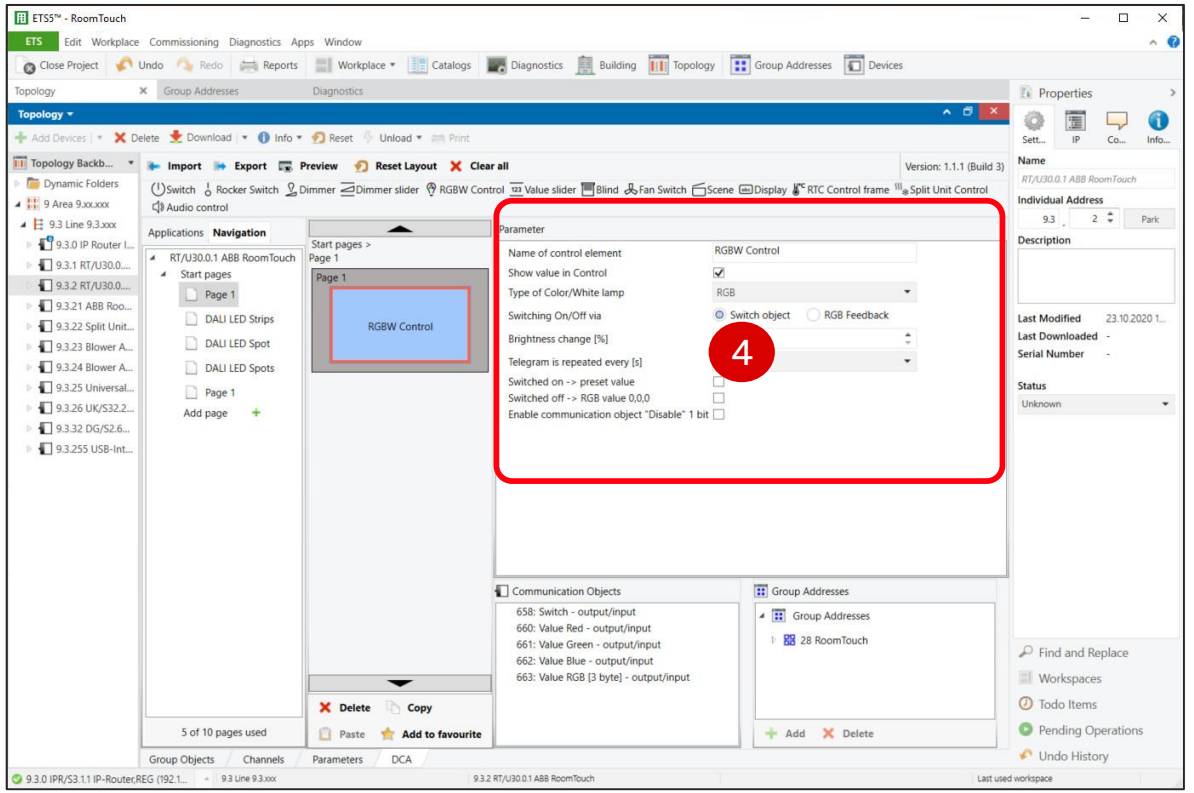

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

Commissioning with the ETS

- The ABB RoomTouch® is parameterized with the “ABB Touch DCA” (device configuration app) like all other panels (SmartTouch, IP touch 7, …)
- Add ABB RoomTouch to the building or topology view
- Click on the “DCA” tab and start the commissioning
  - Drag the control element “RGBW Control” from the task bar to the field of the page
  - Set the parameters
  - Link group addresses
  - Download individual address and application
  - …

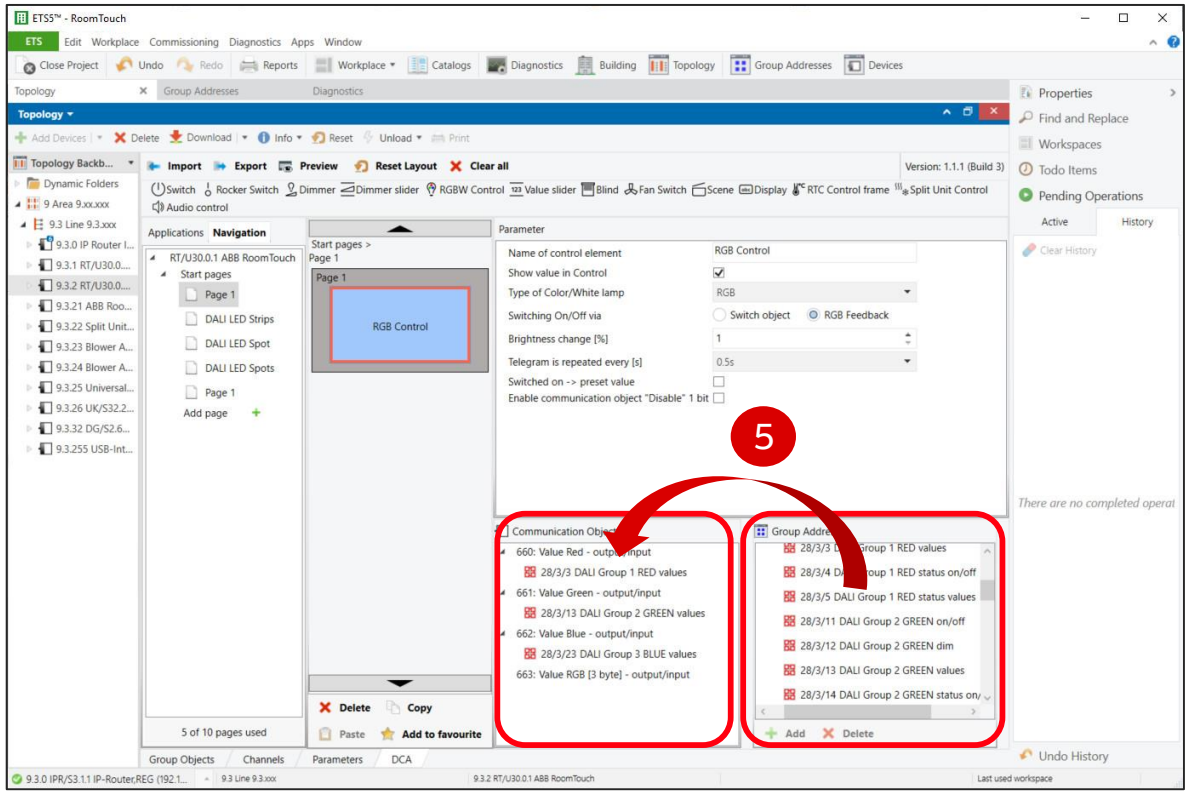

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

Parameters 1/2

- Name of the control element
- Show value in control (RGB brightness value)
- Type of colour/white lamp:
  - **RGB**
  - RGB+W
  - RGB+WW/CW
  - WW/CW
- Switching On/Off via:
  - Switch object (additional 1 bit group object)
  - **RGB feedback**

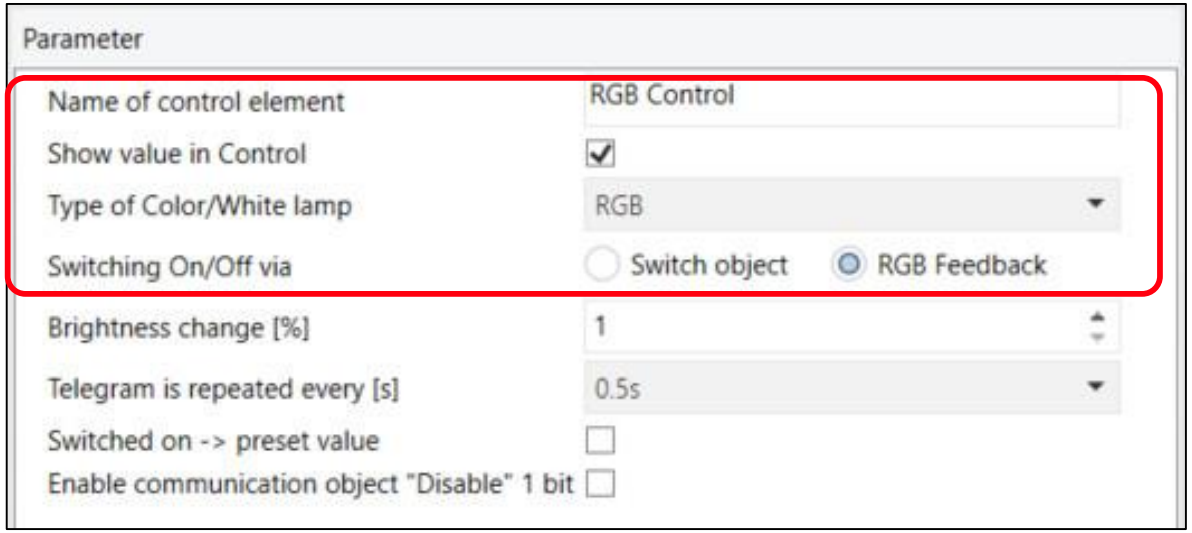

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

Parameters 2/2

- Brightness change [%]
- Telegram is repeated every [sec.]
- Switched On → preset value
- Enable communication object “Disable”

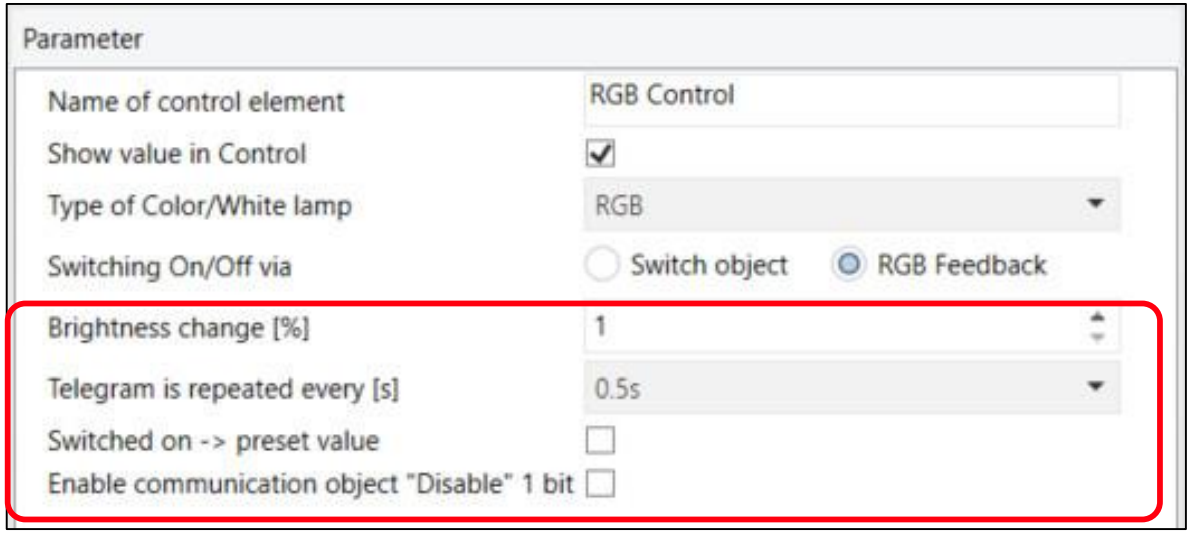

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

Parameter “Switched On → preset value”

- The stored preset value is sent when the lamp is switched on
- The preset value is saved directly on the ABB RoomTouch® KNX
  - Set the desired RGB colour and brightness
  - Press and hold your finger on the light icon
    → A blue bar runs on the upper screen
  - A check mark indicates that the new preset value has been saved

Parameter	
Name of control element	DALI RGB Control
Telegram is repeated every [s]	0.5s
Switched on -> preset value	☑
Enable communication object "Disable" 1 bit	☐

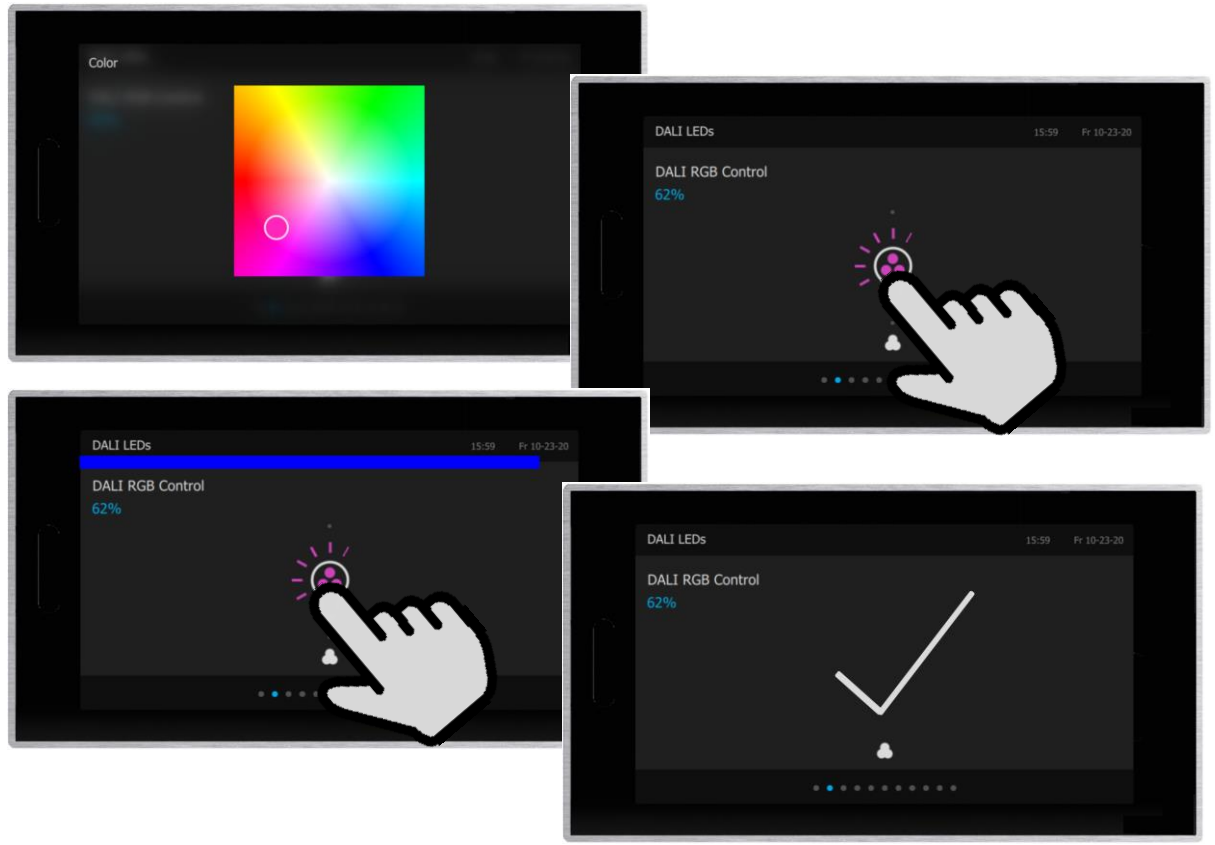

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

Parameters – Example RGB: Assignment of Group Addresses

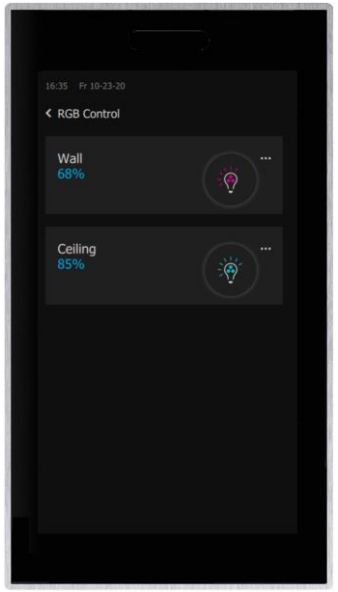

ABB RoomTouch	RGBW Control RGB
	…
	Value Red (1 byte output/input)
	Value Green (1 byte output/input)
	Value Blue (1 byte output/input)
	Value RGB (3 byte output/input)
	…

DALI Gateway DG/S	Ballast/ group X
	…
	Group 1 – Brightness value
	Group 2 – Brightness value
	Group 3 – Brightness value
	…

Group 1: RED
Group 2: GREEN
Group 3: BLUE

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

Parameters – Example RGB: Assignment of Group Addresses

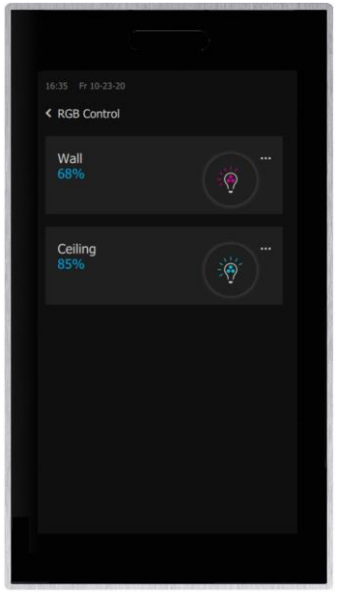

ABB RoomTouch	RGBW Control RGB
	…
	Value Red (1 byte output/input)
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	Value Blue (1 byte output/input)
	Value RGB (3 byte output/input)
	…

DALI Gateway DG/S	Ballast/ group X
…	
Group 1 – Brightness value	
Group 2 – Brightness value	
Group 3 – Brightness value	
…	

Group 1: RED
Group 2: GREEN
Group 3: BLUE

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

Parameters – Example RGB: Assignment of Group Addresses

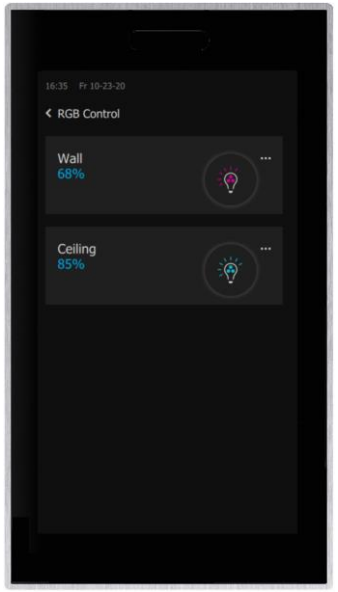

ABB RoomTouch	RGBW Control RGB	
		…
		Value Red (1 byte output/input)
		Value Green (1 byte output/input)
		Value Blue (1 byte output/input)
		Value RGB (3 byte output/input)
		…

DALI Gateway DG/S	Ballast/ group X	
		…
		Group 1 – Brightness value
		Group 2 – Brightness value
		Group 3 – Brightness value
		…

Group 1: RED
Group 2: GREEN
Group 3: BLUE

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

Parameters – Example RGB: Assignment of Group Addresses

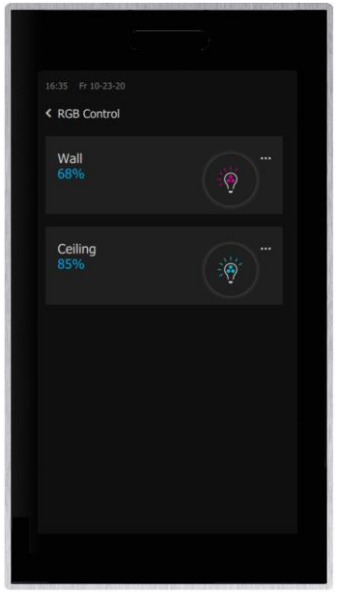

ABB RoomTouch — **RGBW Control RGB**

…
Value Red (1 byte output/input)
Value Green (1 byte output/input)
Value Blue (1 byte output/input)
Value RGB (3 byte output/input)
…

DALI Gateway DG/S — **Ballast/ group X**

…
Group 1 – Brightness value
Group 2 – Brightness value
Group 3 – Brightness value
…

Group 1: RED
Group 2: GREEN
Group 3: BLUE

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

Parameters – Example RGB: Assignment of Group Addresses

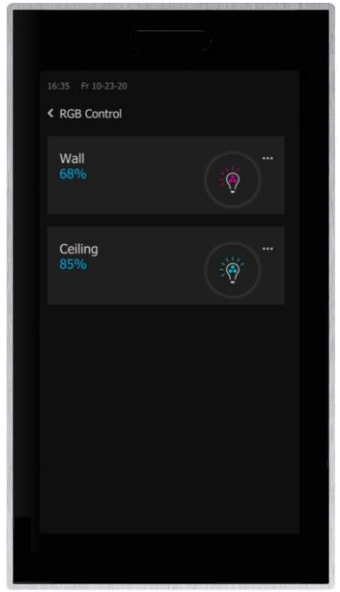

ABB RoomTouch	RGBW Control RGB			DALI Gateway DG/S	Ballast/ group X
		…		…	
		Value Red (1 byte output/input)	→	Group 1 – Brightness value	
		Value Green (1 byte output/input)	→	Group 2 – Brightness value	
		Value Blue (1 byte output/input)	→	Group 3 – Brightness value	
		Value RGB (3 byte output/input)		…	
		…			

#	Time	Se	Fla	Pri	Sourc	Source Name	Destinat	Destination Name	Type	DPT	Info
1	23.10.2020 15:32:08,518	fr...		L...	9.3.21	ABB RoomTouch RT/U30.0.1	28/3/3	DALI Group 1 RED values	GroupValueWrite	5.001 perce...	$A8 | 66 %
2	23.10.2020 15:32:08,568	fr...		L...	9.3.21	ABB RoomTouch RT/U30.0.1	28/3/13	DALI Group 2 GREEN values	GroupValueWrite	5.001 perce...	$25 | 15 %
3	23.10.2020 15:32:08,618	fr...		L...	9.3.21	ABB RoomTouch RT/U30.0.1	28/3/23	DALI Group 3 BLUE values	GroupValueWrite	5.001 perce...	$0C | 5 %
4	23.10.2020 15:32:14,085	fr...		L...	9.3.21	ABB RoomTouch RT/U30.0.1	28/3/3	DALI Group 1 RED values	GroupValueWrite	5.001 perce...	$00 | 0 %
5	23.10.2020 15:32:14,134	fr...		L...	9.3.21	ABB RoomTouch RT/U30.0.1	28/3/13	DALI Group 2 GREEN values	GroupValueWrite	5.001 perce...	$00 | 0 %
6	23.10.2020 15:32:14,185	fr...		L...	9.3.21	ABB RoomTouch RT/U30.0.1	28/3/23	DALI Group 3 BLUE values	GroupValueWrite	5.001 perce...	$00 | 0 %

Group 1: RED
Group 2: GREEN
Group 3: BLUE

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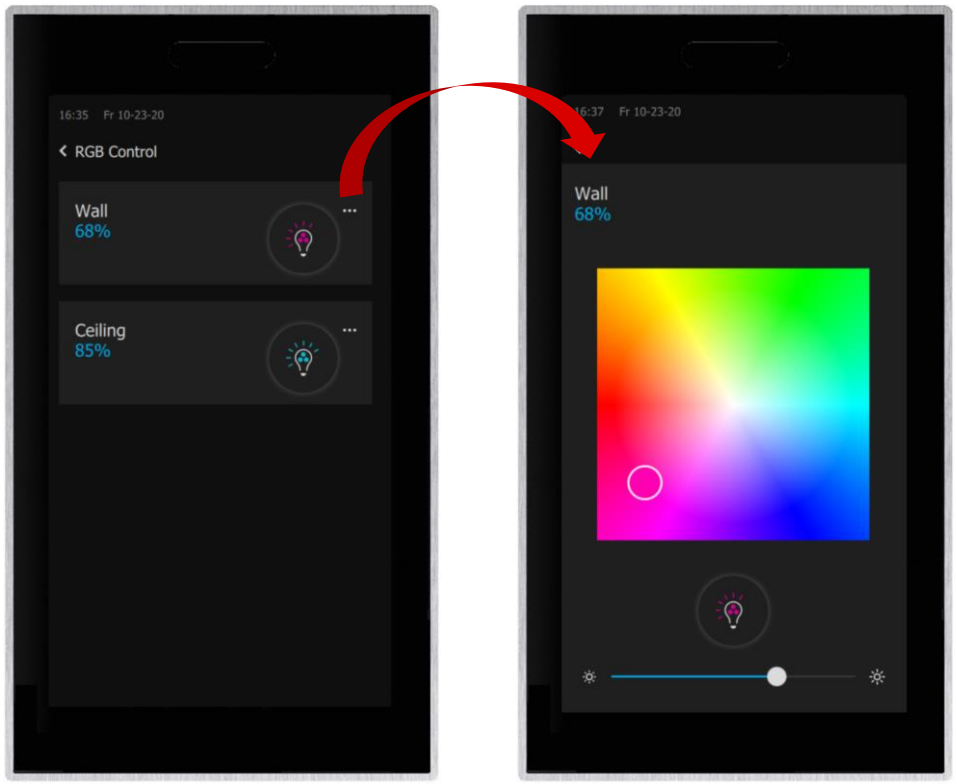
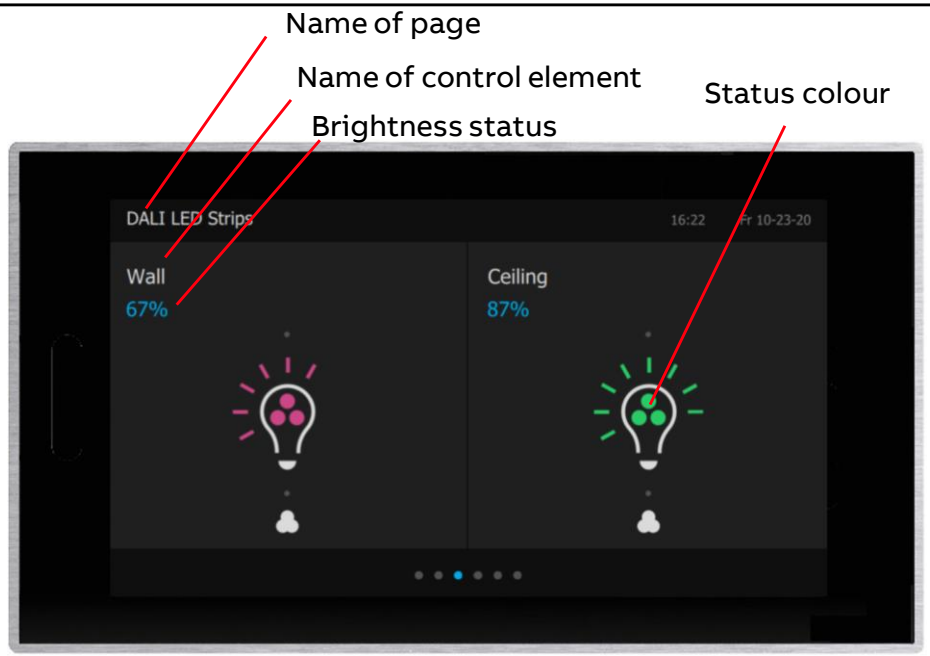
ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

Operation and view





On/off by tapping the icon

Change brightness or colour level by swiping

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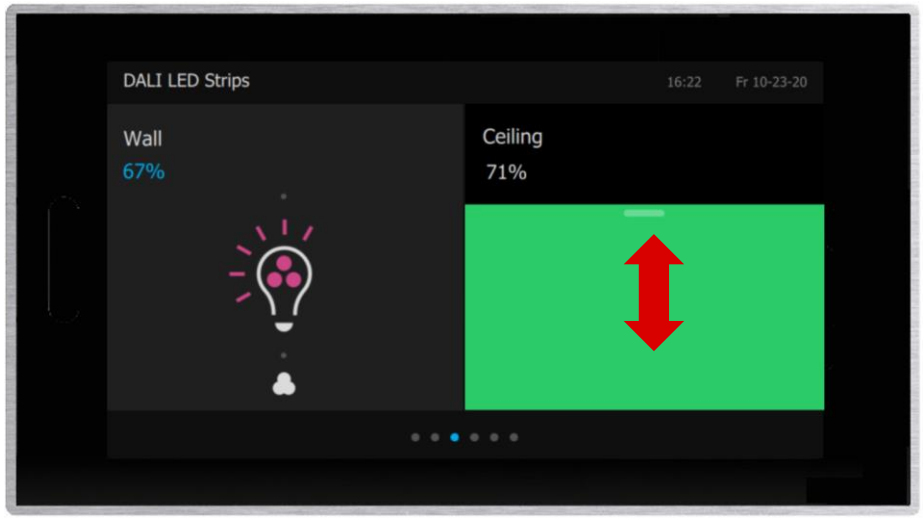
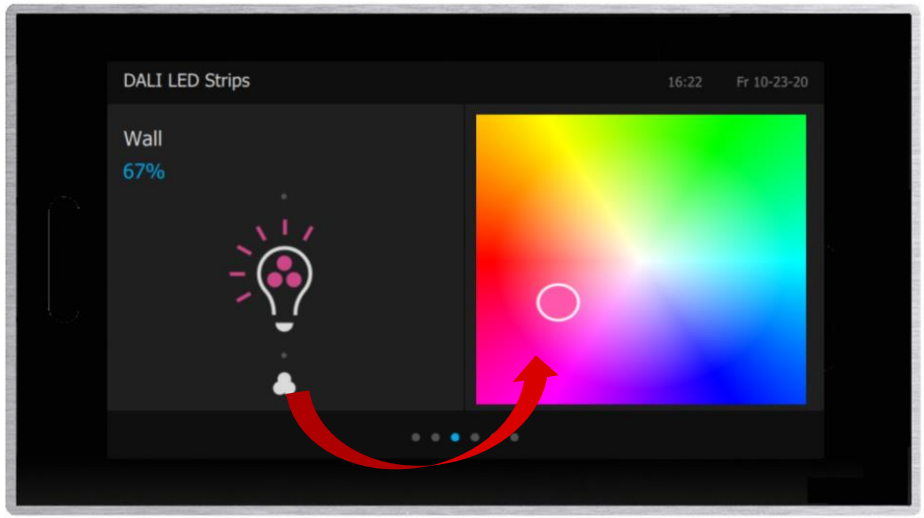
ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – RGB”

Operation and view





Change brightness or colour level by swiping

On/off by tapping the icon

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ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – WW/CW”

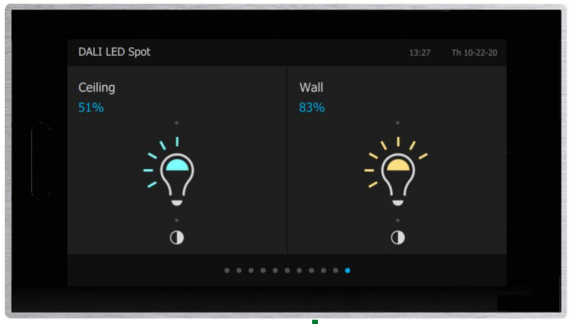
ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – WW/CW”

Overview DALI Light Control with KNX DALI Gateway Premium DG/S x.64.5.1

Power adapter

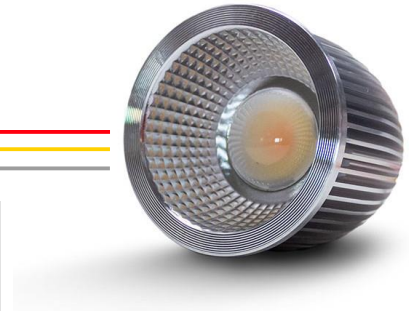
ABB RoomTouch® KNX



DALI

DALI KNX Gateway DG/S x.64.5.1

Device Type 8
a DALI address



For example:
DALI CW-WW LED-Dimmer CV
12V DC – 28V DC, 4A, 3000-6500K
Manufacturer: Lunatone
Manufacturer number: 89453836

For example:
Spot Deep Tunable white CV
8 W, 750 lm, 2200-6500 K
Manufacturer: ConstaLED
Manufacturer number: 31362

Source: Internet

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – WW/CW”

Overview KNX DALI Gateway Premium DG/S x.64.5.1

Two devices

– DG/S 1.64.5.1 (one channel, 64 ballasts)

– DG/S 2.64.5.1 (two independent channels, 2 x 64 ballasts)

- Flexible combination of DALI groups or single control
- ABB i-bus® tool support
- Emergency Lighting
- Templates
- **Tunable White (device type 8)**
- Human Centric Lighting
- Dim2Warm
- Standby Shutdown

… and more

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ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – WW/CW”

Commissioning with the ETS

- The ABB RoomTouch® is parameterized with the “ABB Touch DCA” (device configuration app) like all other panels (SmartTouch, IP touch 7, …)
- Add ABB RoomTouch to the building or topology view

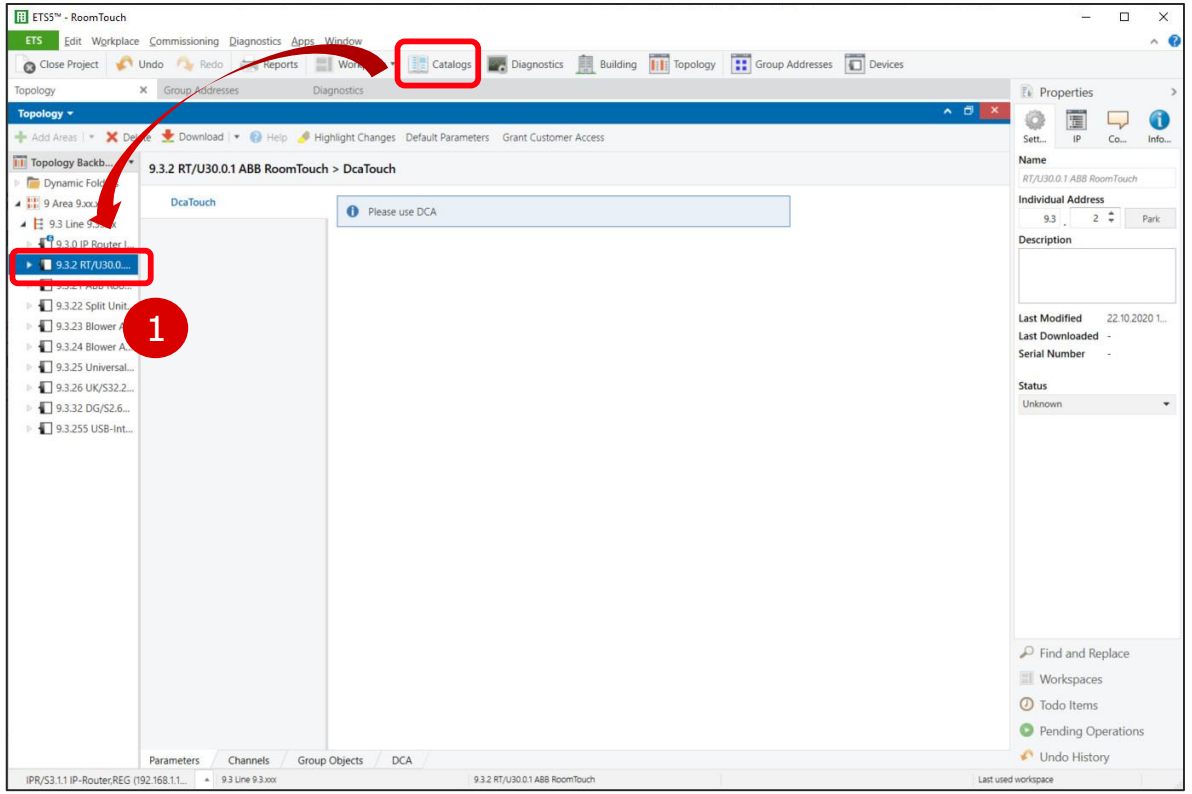

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – WW/CW”

Commissioning with the ETS

- The ABB RoomTouch® is parameterized with the “ABB Touch DCA” (device configuration app) like all other panels (SmartTouch, IP touch 7, …)
- Add ABB RoomTouch to the building or topology view
- Click on the “DCA” tab and start the commissioning

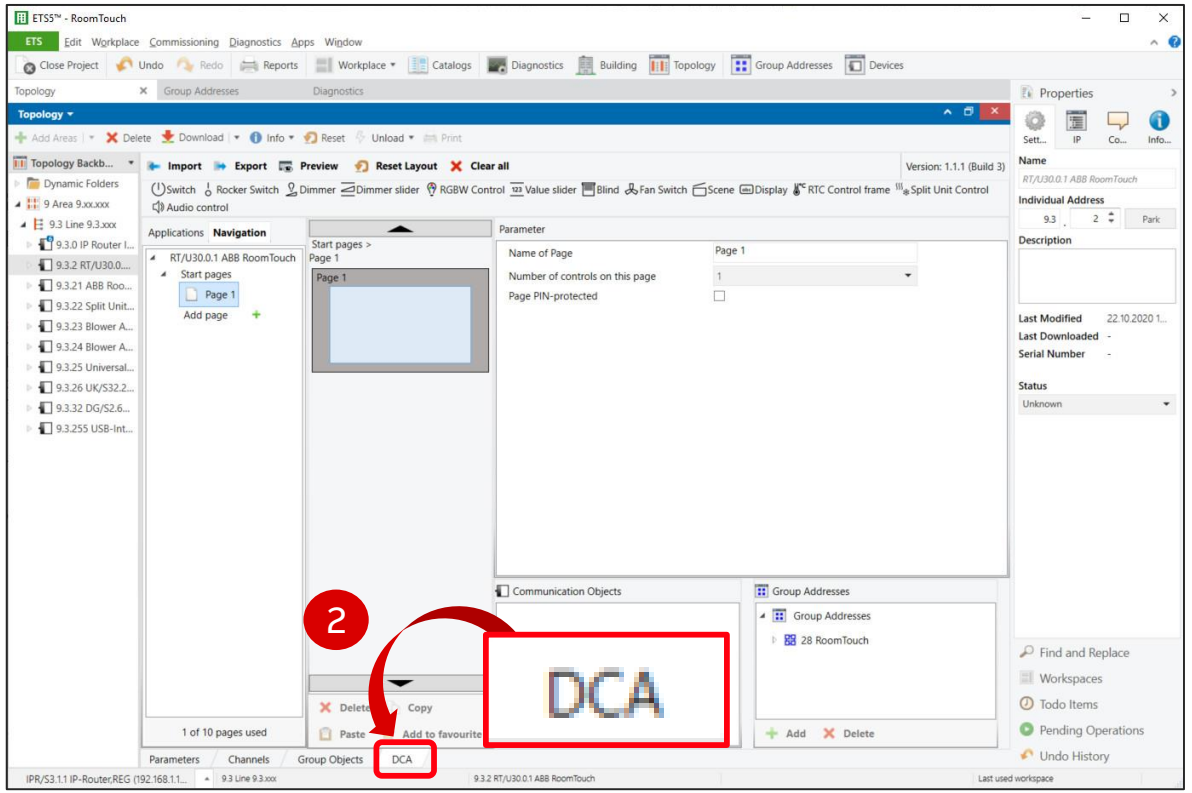

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – WW/CW”

Commissioning with the ETS

- The ABB RoomTouch® is parameterized with the “ABB Touch DCA” (device configuration app) like all other panels (SmartTouch, IP touch 7, …)
- Add ABB RoomTouch to the building or topology view
- Click on the “DCA” tab and start the commissioning
  - Drag the control element “RGBW Control” from the task bar to the field of the page

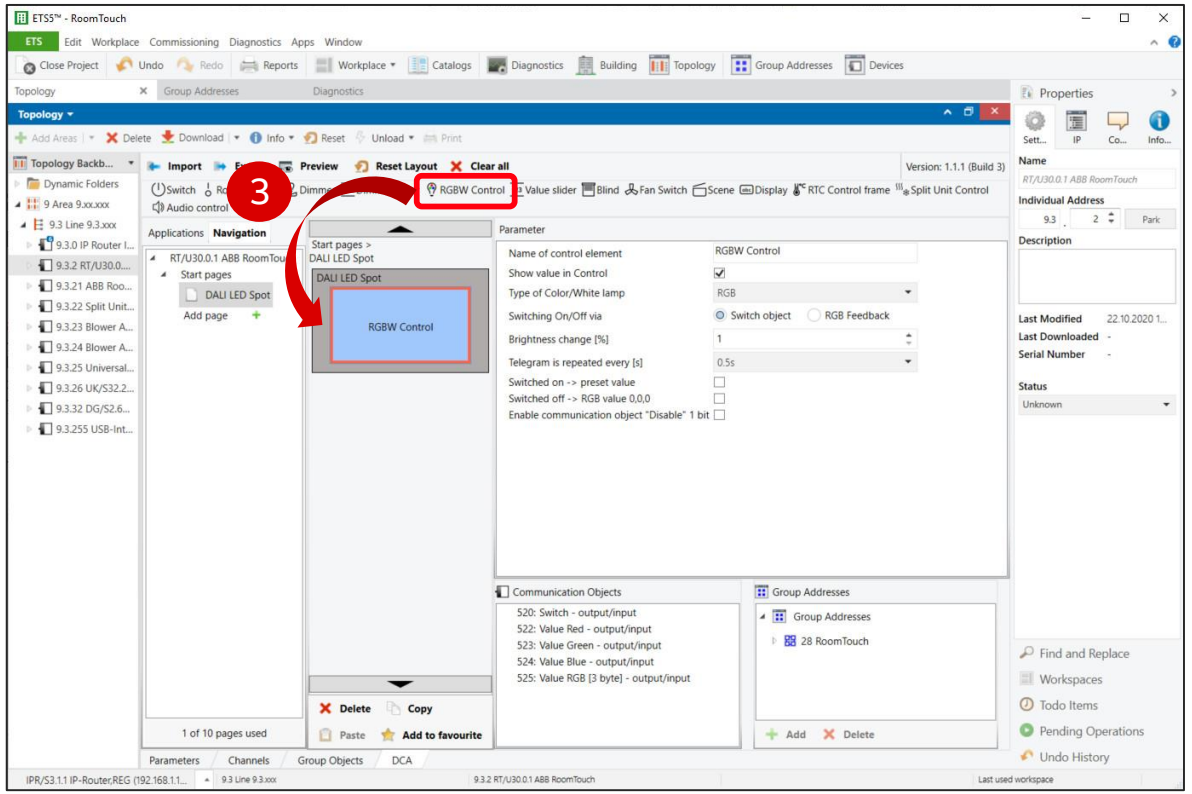

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ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – WW/CW”

Commissioning with the ETS

- The ABB RoomTouch® is parameterized with the “ABB Touch DCA” (device configuration app) like all other panels (SmartTouch, IP touch 7, …)
- Add ABB RoomTouch to the building or topology view
- Click on the “DCA” tab and start the commissioning
  - Drag the control element “RGBW Control” from the task bar to the field of the page
  - Set the parameters

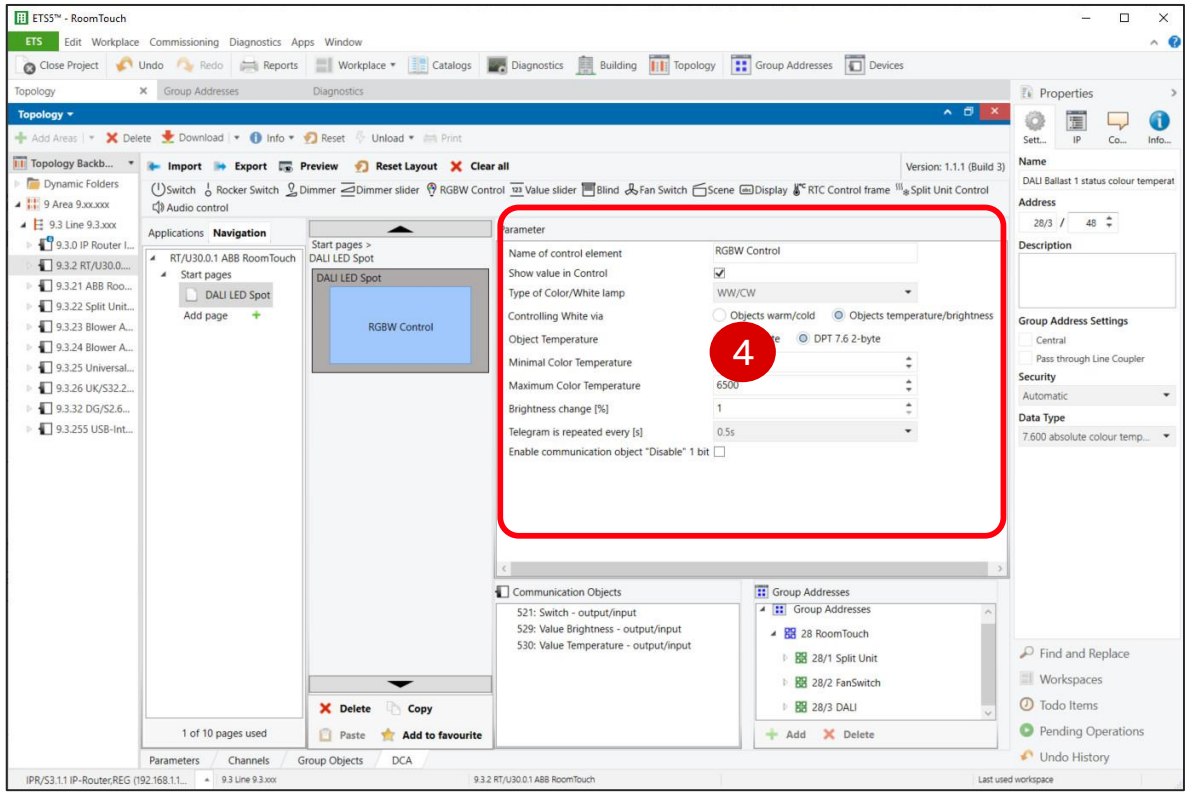

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – WW/CW”

Commissioning with the ETS

- The ABB RoomTouch® is parameterized with the “ABB Touch DCA” (device configuration app) like all other panels (SmartTouch, IP touch 7, …)
- Add ABB RoomTouch to the building or topology view
- Click on the “DCA” tab and start the commissioning
  - Drag the control element “RGBW Control” from the task bar to the field of the page
  - Set the parameters
  - Link group addresses
  - Download individual address and application
  - …

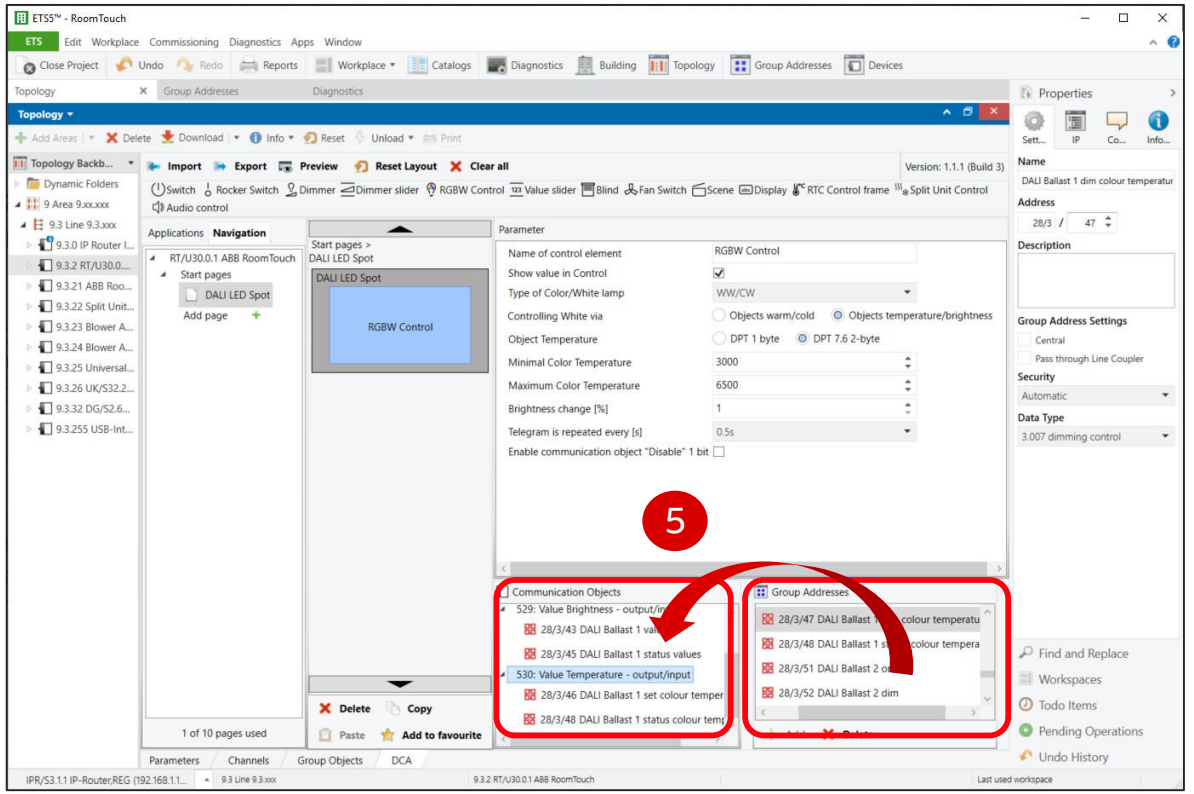

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – WW/CW”

Parameters 1/2

- Name of the control element (max. 36 characters)
- Show value in control (RGBW brightness value)
- Type of colour/white lamp: WW/CW
- Controlling white via:
  - “Objects warm/cold”
    1 byte group objects “value warm white” and “value cold white”
  - “Objects temperature/brightness” – “DPT 1 byte”
    1 byte group objects “value brightness” and “value temperature”
  - **“Objects temperature/brightness” – “DPT 7.600 2 byte”**
    1 byte group object “value brightness” and 2 byte “value temperature”
    DPT 7.600 “Absolute Colour Temperature” contains the absolute colour temperature (K)
    → preferred!

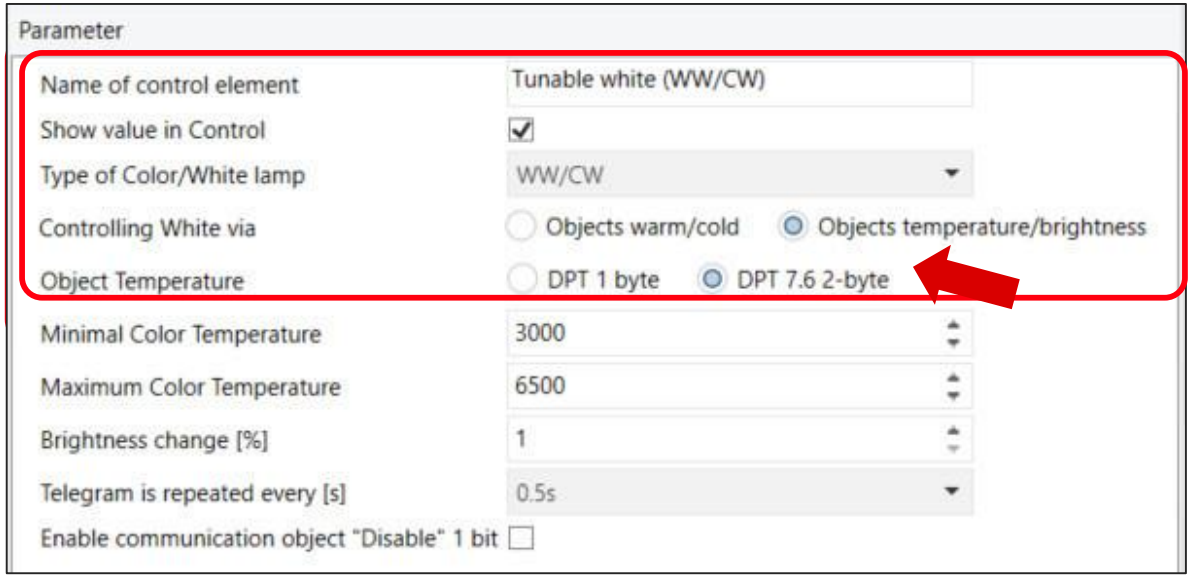

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ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – WW/CW”

Parameters 2/2

- Minimum colour temperature*
- Maximum colour temperature*
- Brightness change [%]
- Telegram is repeated every [sec.]
- Enable communication object “Disable”

* Note the data sheet for the DALI driver and LEDs

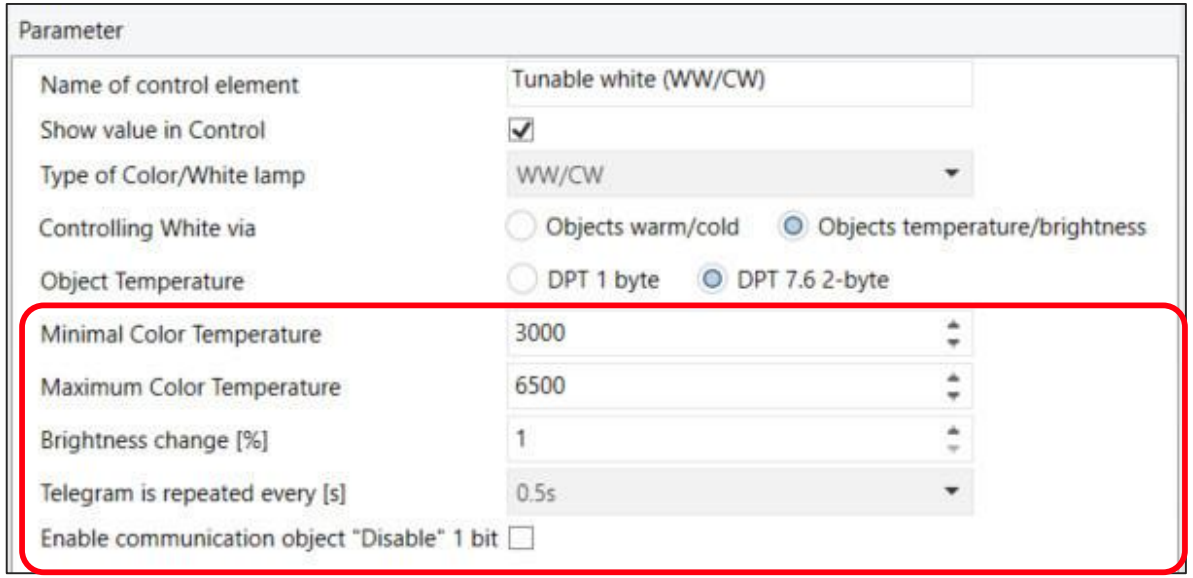

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ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – WW/CW”

Parameters: Objects temperature/brightness – “DPT 7.600 2 byte” – Example: Assignment of Group Addresses

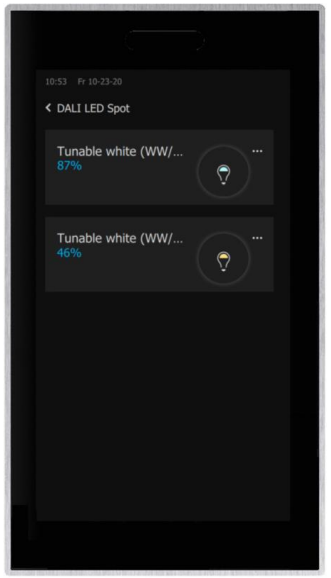

ABB RoomTouch	RGBW Control WW/CW
	…
	Switch (1 bit output/input)
	Value brightness (1 byte out/input)
	Value Temperature (2 byte out/input)
	Disable input (1 bit input)
	…

Ballast/ group X	DALI Gateway Premium DG/S x.64.5.1
…	
Switch (1 bit)	
Status switch (1 bit)	
Brightness value (1 byte)	
Status Bright. value (1 byte)	
Set colour temperature (K)	
Status colour temperature (K)	
…	

Keycard reader, time switch ,…

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ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – WW/CW”

Parameters: Objects temperature/brightness – “DPT 7.600 2 byte” – Example: Assignment of Group Addresses

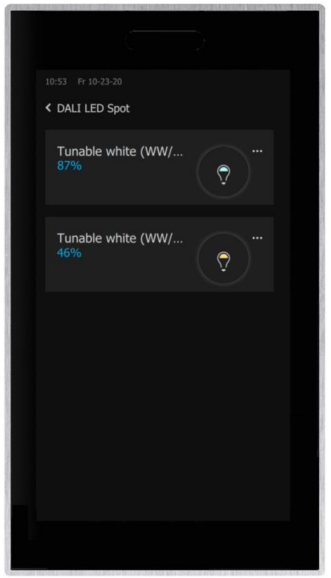

ABB RoomTouch	RGBW Control WW/CW
	…
	Switch (1 bit output/input)
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	Value Temperature (2 byte out/input)
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Ballast/ group X	DALI Gateway Premium DG/S x.64.5.1
…	
Switch (1 bit)	
Status switch (1 bit)	
Brightness value (1 byte)	
Status Bright. value (1 byte)	
Set colour temperature (K)	
Status colour temperature (K)	
…	

Keycard reader, time switch ,…

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – WW/CW”

Parameters: Objects temperature/brightness – “DPT 7.600 2 byte” – Example: Assignment of Group Addresses

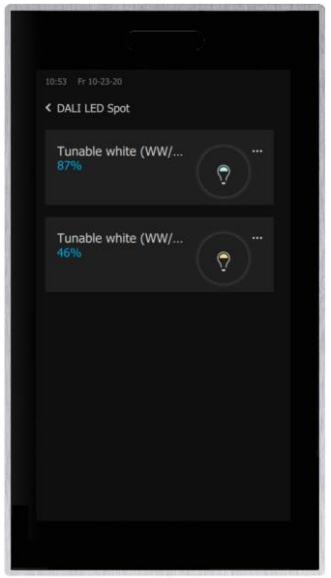

ABB RoomTouch	RGBW Control WW/CW
	…
	Switch (1 bit output/input)
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	…

DALI Gateway Premium DG/S x.64.5.1	Ballast/ group X
	…
	Switch (1 bit)
	Status switch (1 bit)
	Brightness value (1 byte)
	Status Bright. value (1 byte)
	Set colour temperature (K)
	Status colour temperature (K)
	…

Keycard reader, time switch ,…

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – WW/CW”

Parameters: Objects temperature/brightness – “DPT 7.600 2 byte” – Example: Assignment of Group Addresses

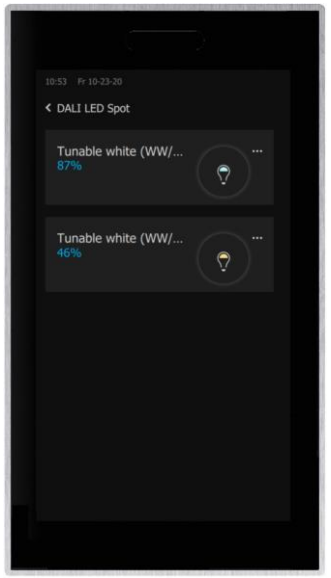

ABB RoomTouch	RGBW Control WW/CW
	…
	Switch (1 bit output/input)
	Value brightness (1 byte out/input)
	Value Temperature (2 byte out/inpu)
	Disable input (1 bit input)
	…

Ballast/ group X	DALI Gateway Premium DG/S x.64.5.1
…	
Switch (1 bit)	
Status switch (1 bit)	
Brightness value (1 byte)	
Status Bright. value (1 byte)	
Set colour temperature (K)	
Status colour temperature (K)	
…	

DPT 7.600 “Absolute Colour Temperature”
contains the absolute colour temperature (K)

Keycard reader, time switch ,…

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ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – WW/CW”

Parameters: Objects temperature/brightness – “DPT 7.600 2 byte” – Example: Assignment of Group Addresses

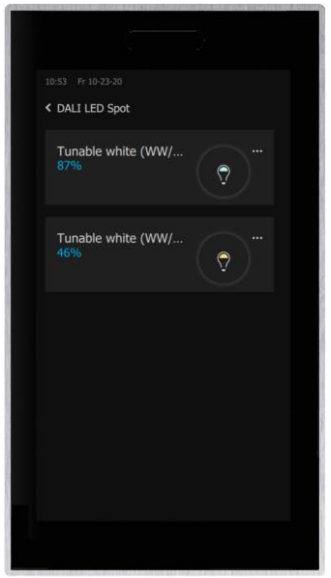


ABB RoomTouch

RGBW Control WW/CW

- …
- Switch (1 bit output/input)
- Value brightness (1 byte out/input)
- Value Temperature (2 byte out/input)
- **Disable input (1 bit input)**
- …

- …
- Switch (1 bit)
- Status switch (1 bit)
- Brightness value (1 byte)
- Status Bright. value (1 byte)
- Set colour temperature (K)
- Status colour temperature (K)
- …

Ballast/ group X

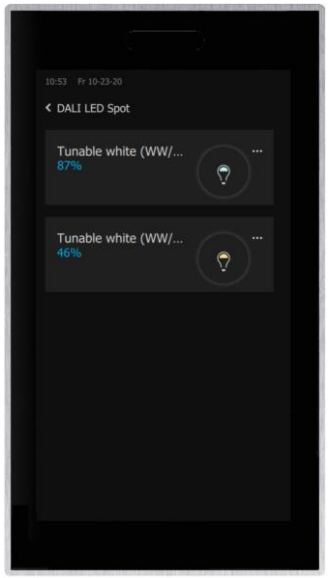
DALI Gateway Premium DG/S x.64.5.1

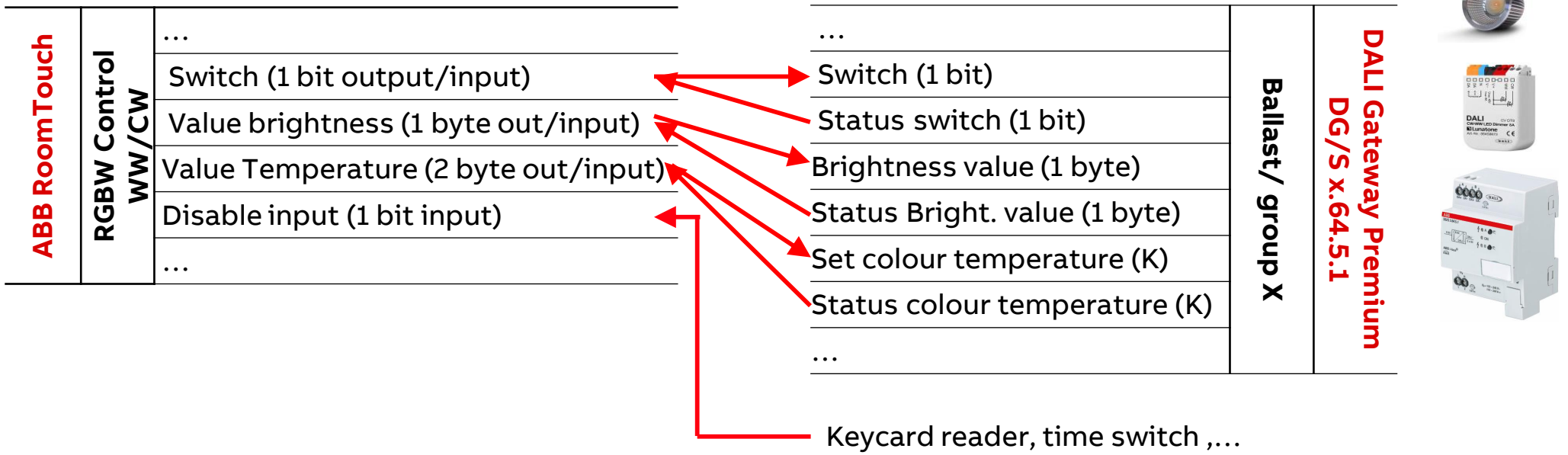
Keycard reader, time switch ,…

ABB RoomTouch® KNX and DALI Light Control

Control element “RGBW Control – WW/CW”

Parameters: Objects temperature/brightness – “DPT 7.600 2 byte” – Example: Assignment of Group Addresses





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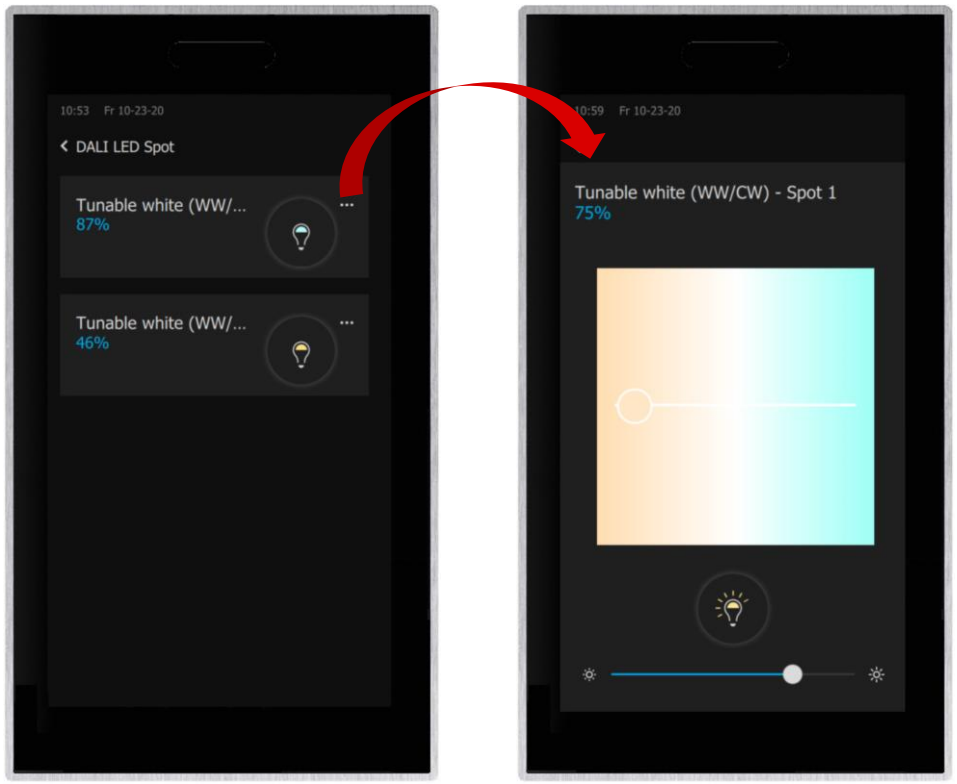
Control element “RGBW Control – WW/CW”

Operation and view



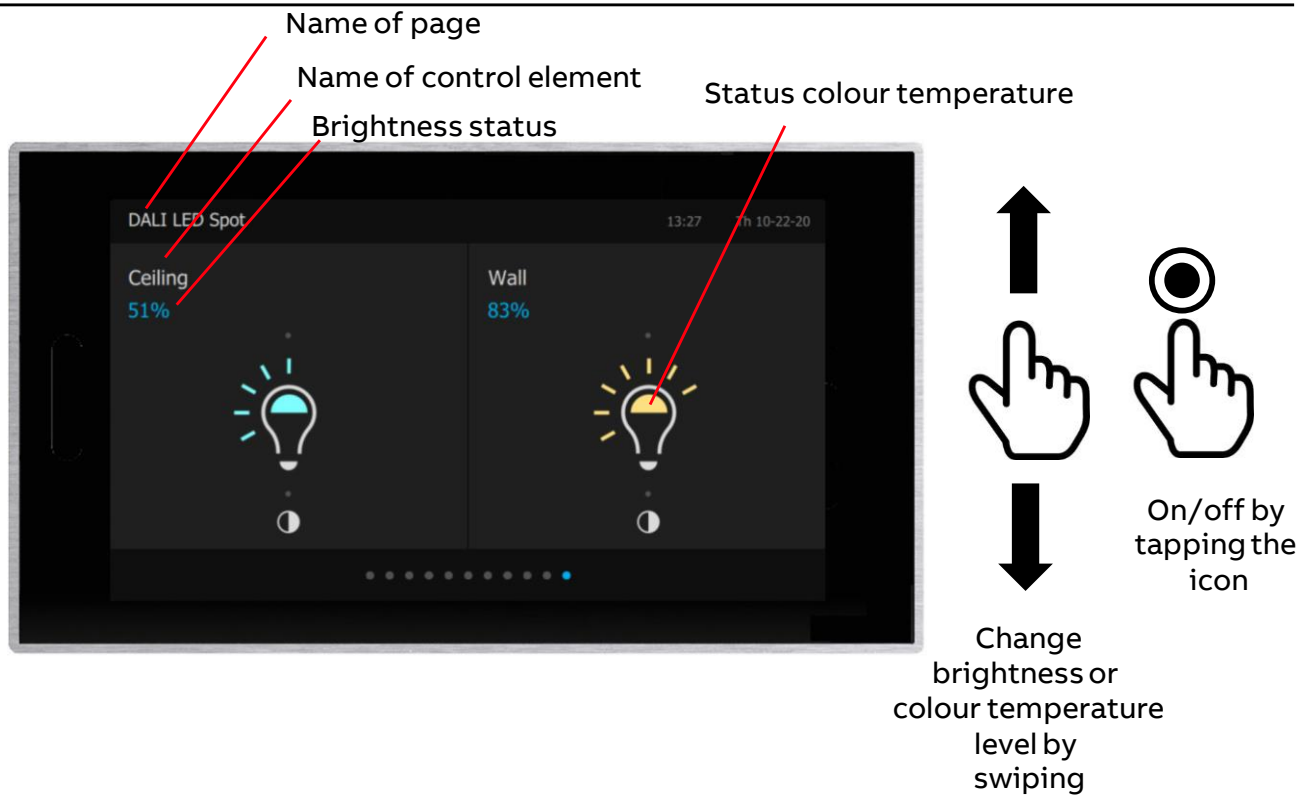
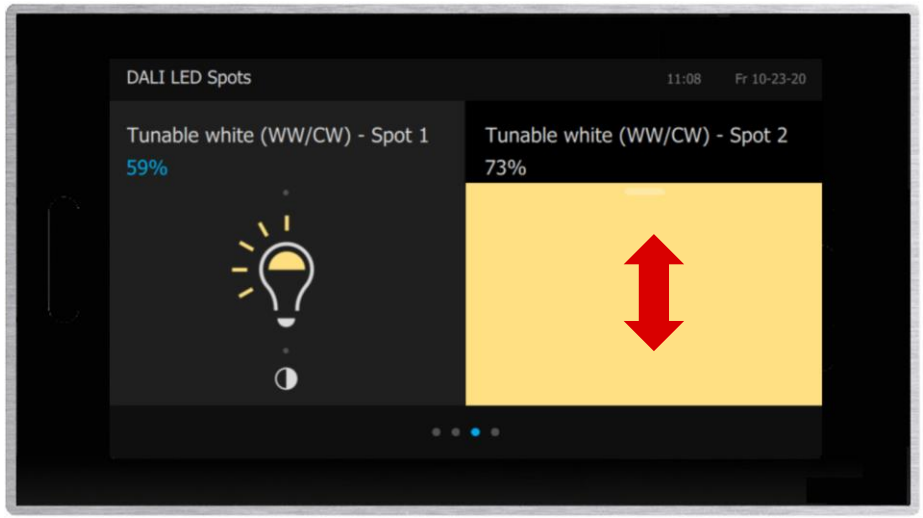
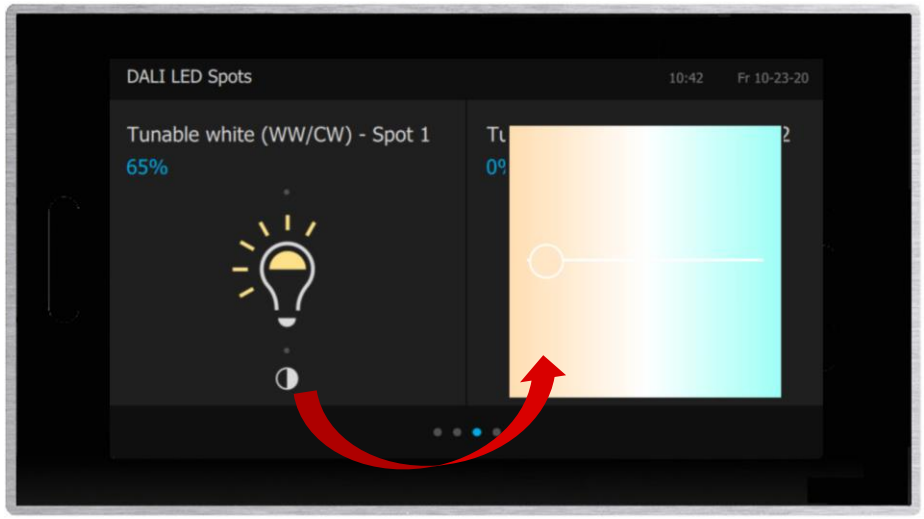


ABB RoomTouch® KNX and DALI Light Control

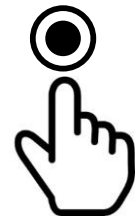
Control element “RGBW Control – WW/CW”

Operation and view





Change brightness or colour temperature level by swiping



On/off by tapping the icon

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ABB RoomTouch® KNX and DALI Light Control

Online Learning Session

ABB RoomTouch® KNX and DALI Light Control

Online Learning Session

Homepage

www. www.abb.com/KNX

→ Products and Downloads
→ Visualisation, Display and Signalling
→ Touch Panels RT/U

- Product Manual
- Installation and Operating Instructions
- ETS Application (*.knxprod)
- ETS App ABB Touch DCA (*.etsapp)
- Webinar recordings and presentations
- • •

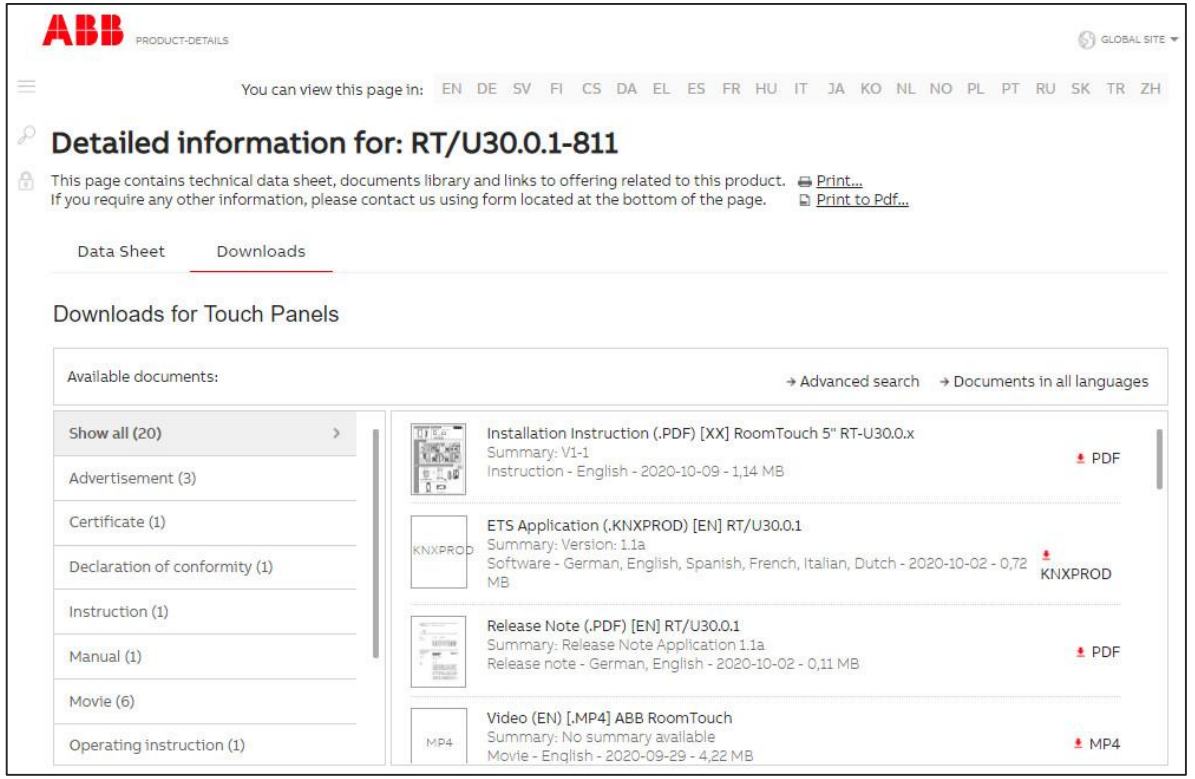


ABB RoomTouch® KNX and DALI Light Control

Online Learning Session

Training Material

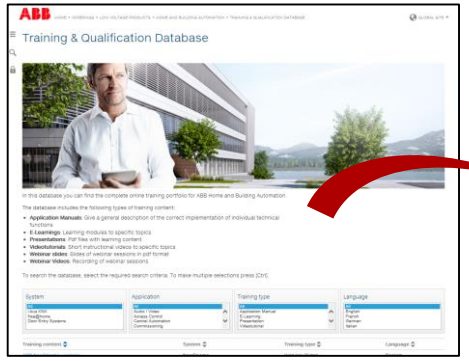
Training & Qualification Database

– The database contains extensive training content
  - Presentations
  - Video tutorials
  - Webinar slides and videos
  - and more …
  - https://go.abb/ba-training
  - ww.abb.com/knx (→ Services & Tools → Training and Qualification → Training Database)

Training and Qualification

YouTube

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



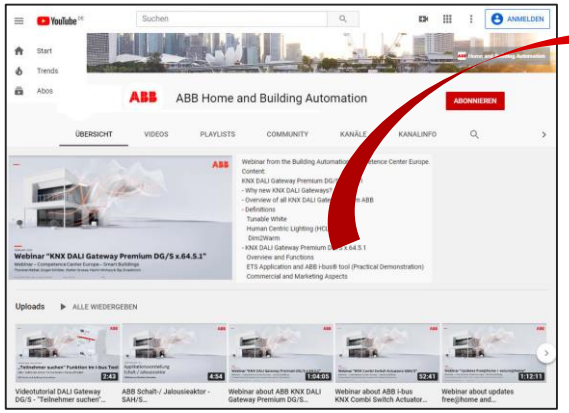


ABB RoomTouch® KNX and DALI Light Control

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”

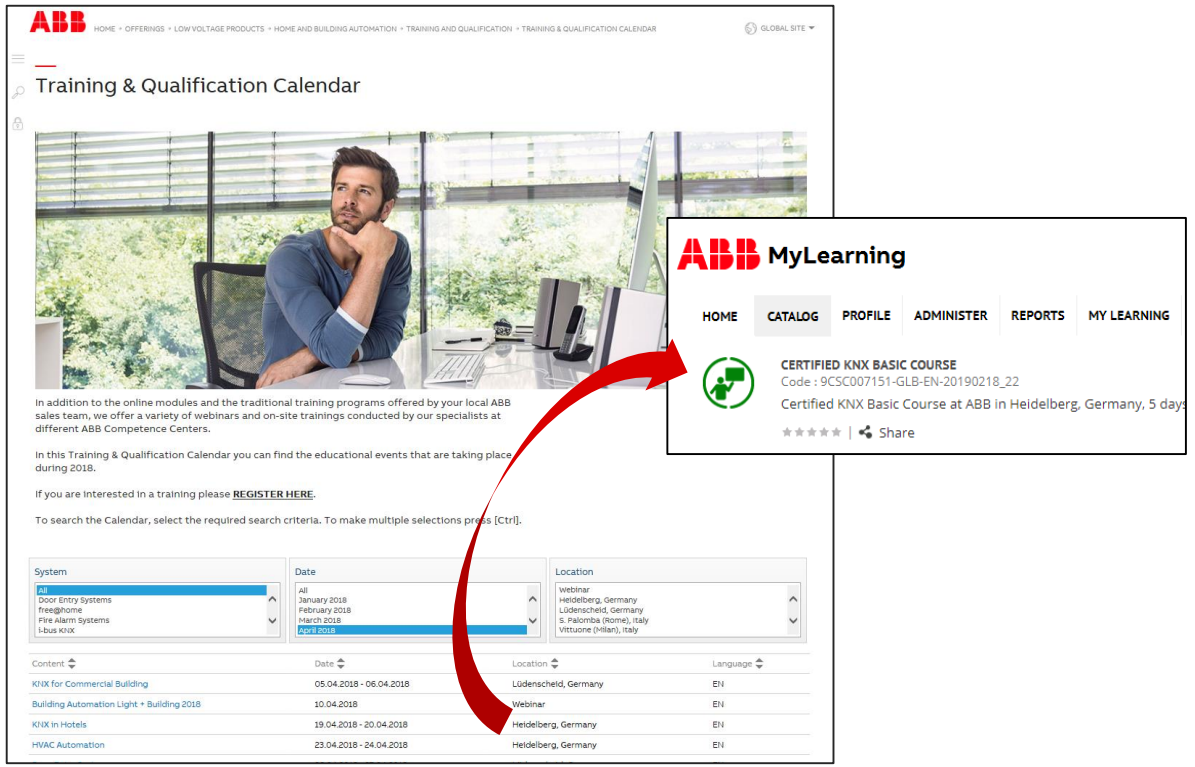
www.abb.com/knx or https://go.abb/ba-training

→ Services & Tools

→ Training and Qualification

→ Training Calendar

Training and Qualification



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