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# ABB KNX Presence Detectors – Master/Slave Concept and other functions

Online Learning Session – Competence Center Europe – Smart Buildings

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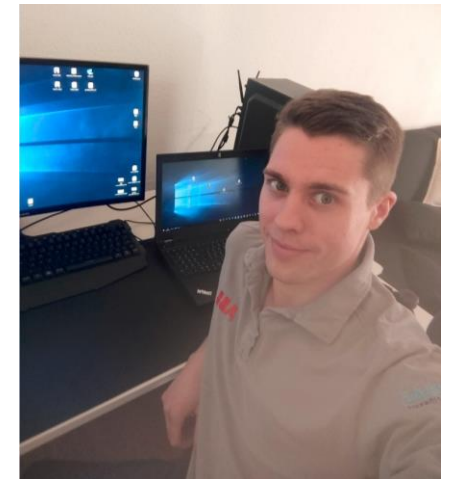
# Online Learning Session – Competence Center Europe - Smart Buildings

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ABB STOTZ-KONTAKT GmbH  
Heidelberg / Germany



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# Agenda

Introduction

Master/Slave Configuration

Two-stage switch-off

Operating modes

- Automatic with external push-buttons

- Automatic switch-on

- Automatic switch-off

- “Survey” / Monitoring

Temperature Control

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# ABB KNX Presence Detectors – Master/Slave Concept and other functions

Introduction



# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Introduction

### ABB KNX Presence Detectors 6131/xx(-500)

- Flat line design with the best detection quality
- New applications for cost efficiency
- Native ETS4/5 application with firmware update via bus...
- Variations and options in functions, sizes, colors and installation heights
- KNX Presence Detectors designed to meet EN15232:2012
  - A list of control, automation, and technical management functions that affect the energy performance of buildings
  - A method for defining the minimum requirements for the control, automation, and technical building management functions implemented in different types of buildings
  - Detailed procedures for quantifying the impact these functions have on the energy performance of a building










# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Introduction

### For each demand

The Busch-Presence detector KNX, the Busch-Presence detector mini KNX and the Busch-Presence detector Corridor KNX are available in two versions: basic and premium with extended functionality. The variety in technical functions, sizes, colors and detection ranges offers a wide field of applications. Now there is an option for every need.

Function	Mini Basic	Mini Premium	Basic	Premium	Corridor Basic	Corridor Premium	Sky
	6131/20-xxx-500	6131/21-xxx-500	6131/30-xxx-500	6131/31-xxx-500	6131/50-xxx-500	6131/51-xxx-500	6131/40-xxx-500
							
<b>General</b>							
Type of installation	flush-mounted/surface-mounted						
Programming button accessible from outside	X	X	X	X	X	X	X
<b>Number of channels</b>							
Movement detector	2	4 in total	2	4 in total	2	4 in total	2
Constant light switch	2		2		2		2
Combination	1 x each		1 x each		1 x each		1 x each
Constant light controller	–	2	–	2	–	2	–
Heating/cooling/ventilation systems (HVAC)	–	1	–	1	–	1	–
Infrared receiver, can be operated via IR remote control 6010-25	–	10 button pairs + 4 single buttons/ 24 single buttons	–	10 button pairs + 4 single buttons/ 24 single buttons	–	10 button pairs + 4 single buttons/ 24 single buttons	(only red for activation of the programming mode)

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# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Introduction

### General questions

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How can I combine more than one presence detector to a Master/Slave configuration?

How can I use the two-stages switch-off function?

Which other operating modes are available?

How can I combine the presence detector with an external push-button?

How can I use the internal RTC?

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# ABB KNX Presence Detectors – Master/Slave Concept and other functions

Master/Slave Configuration



# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Master/Slave Configuration

### Detection range

- Each type of ABBs KNX presence detector has a different detection range
- The range depends also on the mounting height

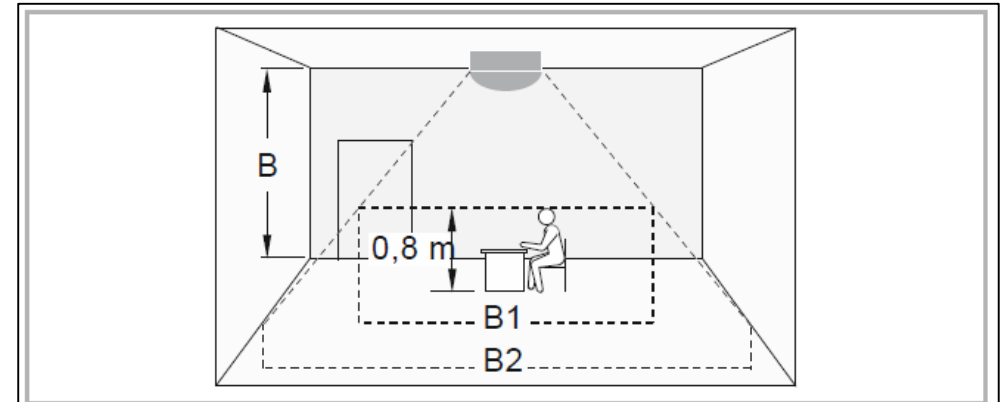
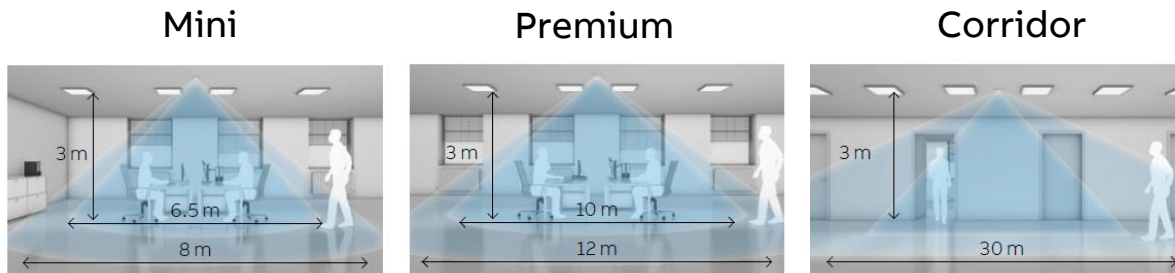


Fig. 14: Detection ranges of Busch-Presence detector KNX / Busch-Presence detector Premium KNX

[B] Mounting height

[B1] Wide inner detection range (seated person)

[B2] Wide outer detection range (walking person)

Mounting height (B)	Wide inner detection range (B1) (seated person)	Wide outer detection range
2.5 m	8 m max.	10 m max.
3 m	max. 10 m	12 m max.
4 m	14 m max.	16 m max.

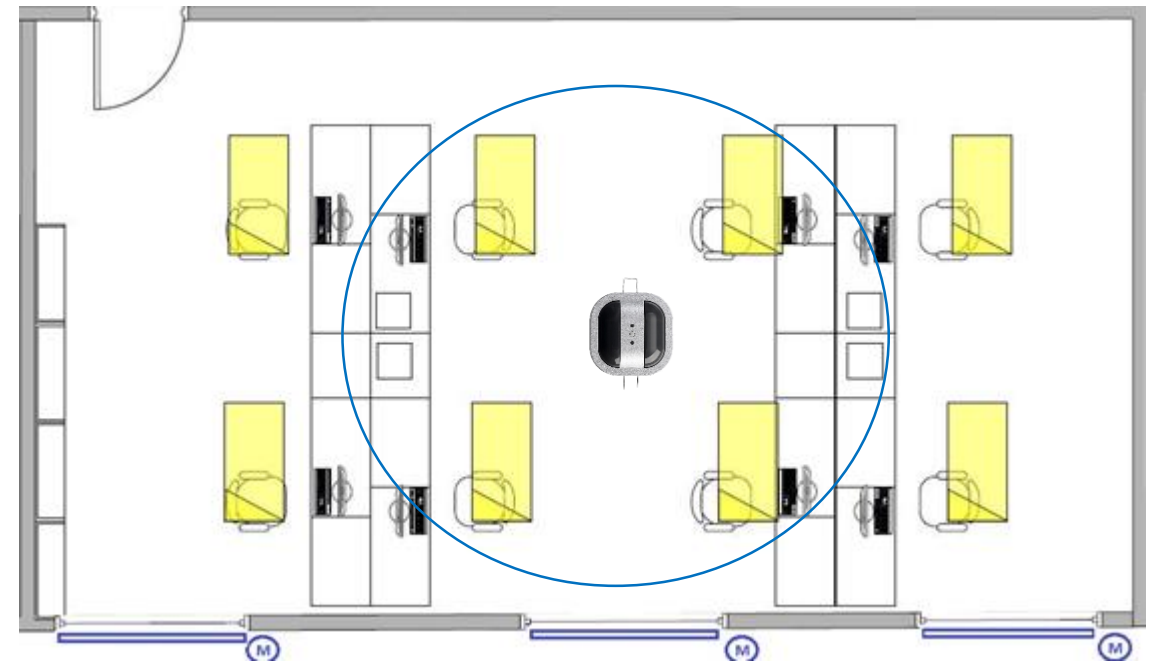
Table 8: Detection ranges of Busch-Presence detector KNX / Busch-Presence detector Premium KNX

# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Master/Slave Configuration

### Situation

For some applications (big offices, halls, schools) one presence detector is not able to cover the whole area of a room.



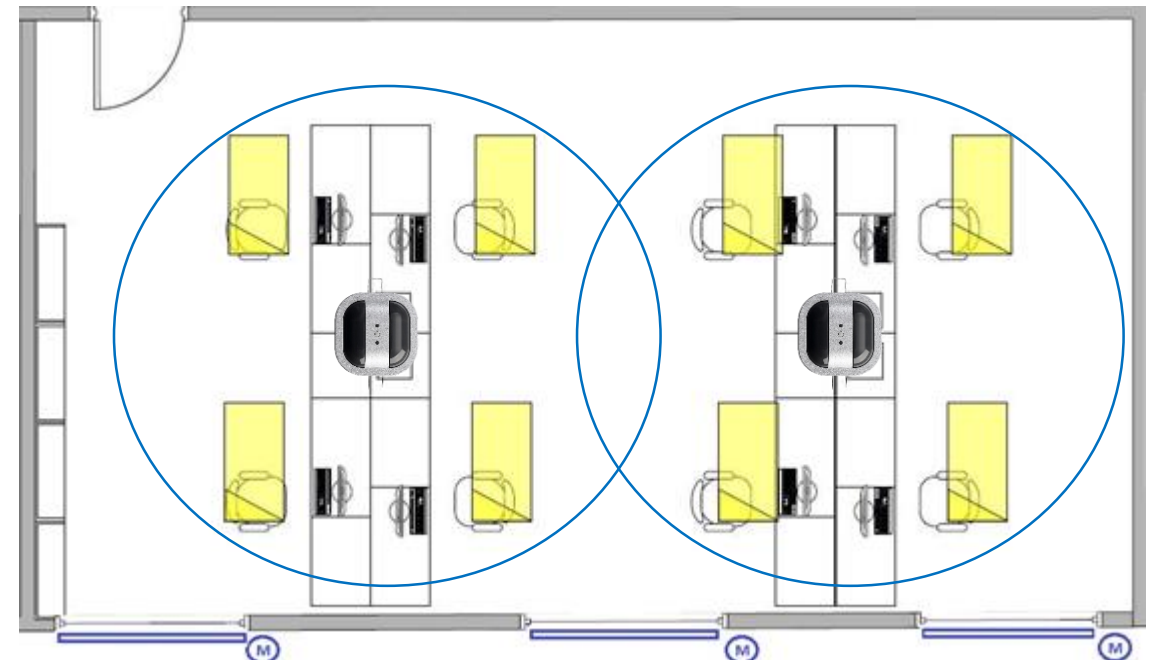
# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Master/Slave Configuration

### Situation

For some applications (big offices, halls, schools) one presence detector is not able to cover the whole area of a room.

Therefore, a second presence detector can be used to cover the whole area and realize a central control for the light inside the room.

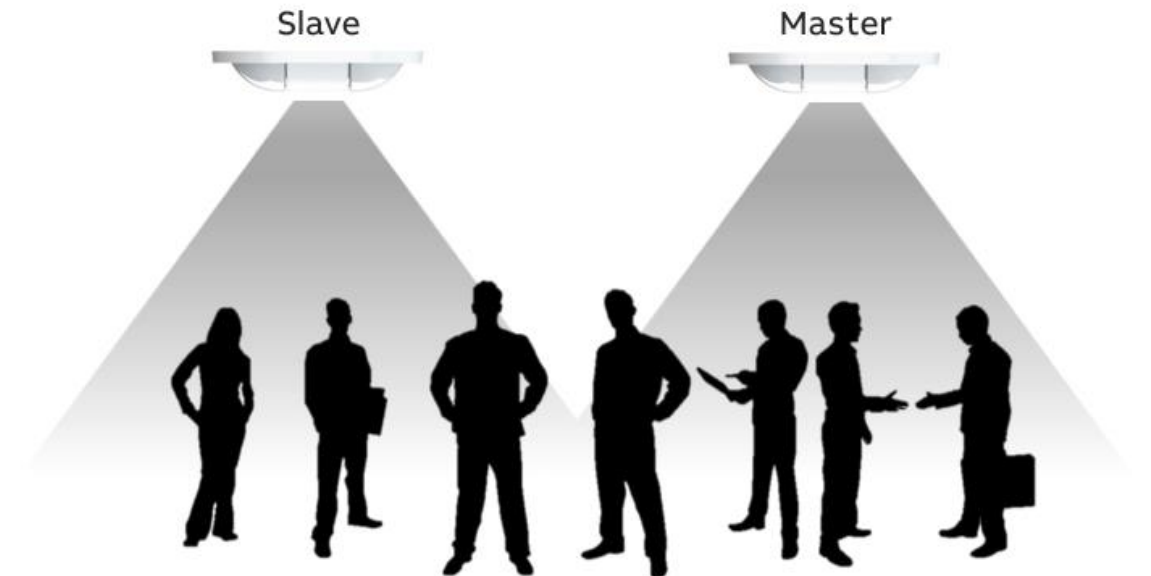


# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Master/Slave Configuration

### Master/Slave

- Master: In master mode On and Off telegrams are sent (to an actuator) dependent on movement
- Slave: In slave mode On telegrams are sent cyclically (to the extension unit input of a master detector) when movement is detected



# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Master/Slave Configuration

### Configuration Master

Important parameters:

- Type of output: Master
- Input Slave: yes
- Input Slave takes the brightness into consideration:
  - No: Every ON telegram to the input slave object ensures that the detector is switched on or the switch-off delay is reset. This is independent of whether the actual brightness is below or above the brightness-value threshold
  - Yes: The detector is switched on or the switch-off delay is reset only when the actual brightness is below the brightness-value threshold

1.1.31 6131/31 Busch-Presence detector premium > Presence 1 > Common parameter

Presence 1 Application Sensor

Common parameter

Extended parameters

Parameter brightness

Parameter external pushbutton

Choice of sensor

Enable

Type of output  Master  Slave

Input Slave  no  yes

Output is of type 1 bit

Output object sends at Switching On / Off

Value for switch on  Off  On

1.1.31 6131/31 Busch-Presence detector premium > Presence 1 > Parameter brightness

Presence 1 Use object for detection independent of brightness  no  yes

Common parameter Input Slave takes the brightness into consideration  yes  no

Extended parameters Used brightness internal only

Parameter brightness Use object for internal brightness-value threshold  no  yes

Parameter external pushbutton



# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Master/Slave Configuration

### Configuration Slave

Important parameters:

- Type of output: Slave
- Cyclical repeating time: 00:00:30
  - Slave is sending each 30 seconds a “1” to the master
  - With each “1” the light-on time of the master is reset
  - Hint: Light-on time should be longer than the cyclical repeating time
- Used brightness: Brightness-independent

1.1.32 6131/31 Busch-Presence detector premium > Presence 1 > Common parameter

Presence 1	Application	Sensor
Common parameter	Type of output	<input type="radio"/> Master <input checked="" type="radio"/> Slave
Extended parameters	Cyclical repeating time	00:00:30 hh:mm:ss
Parameter brightness	Sensitivity of watchdog	High
Choice of sensor	Fade in extended parameters	<input type="radio"/> no <input checked="" type="radio"/> yes
Enable		

1.1.32 Slave: 6131/31 Busch-Presence detector premium > Presence 1 > Parameter brightness

Presence 1	Used brightness	Brightness-independent
Common parameter		
Extended parameters		
Parameter brightness		

# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Master/Slave Configuration

### Master/Slave – Group objects

Number	Name ^	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
1.1.31	6131/31 Busch-Presence detector premium											
69	BR: Brightness	Output	Brightness (Outp...	0/4/0	2 bytes	C	-	-	T	-	2-byte floa...	Low
10	P1: Movement (master)	Output	SA: Output 1	0/1/0	1 bit	C	-	-	T	-	switch	Low
3	P1: Slave	Input	Slave Input	0/1/11	1 bit	C	-	W	-	U	switch	Low
1.1.32	6131/31 Busch-Presence detector premium											
69	BR: Brightness	Output			2 bytes	C	-	-	T	-	2-byte floa...	Low
11	P1: Movement (slave)	Output	Slave Input	0/1/11	1 bit	C	-	W	T	-	switch	Low

# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Master/Slave Configuration

### Master/Slave – Bus monitor

Movement detected from slave

Slave is sending “1” every 10 sec.

Master is controlling the light and switches off when no more movement is detected

#	Time	Service	Flags	Prio	Source	Source Name	Destination	Destination Name	Route	Type	DPT	Info
1	04.05.2020 19:15:13,299	Start										Recording was started,
2	04.05.2020 19:15:15,482	from bus	S=4	Low	1.1.32	Slave: 6131/31 Busch-Presence detecto...	0/1/11	Slave Input	6	GroupValueWrite		\$01   On
3	04.05.2020 19:15:21,850	from bus	S=6	Low	1.1.31	Master: 6131/31 Busch-Presence detect...	0/4/0	Brightness (Output)	6	GroupValueWrite		0C AB   23,9
4	04.05.2020 19:15:25,501	from bus	S=0	Low	1.1.32	Slave: 6131/31 Busch-Presence detecto...	0/1/11	Slave Input	6	GroupValueWrite		\$01   On
5	04.05.2020 19:15:29,7...	from bus	S=2	Low	1.1.32	Slave: 6131/31 Busch-Presence detecto...	0/4/0	Brightness (Output)	6	GroupValueWrite		0C 7E   23
6	04.05.2020 19:15:35,5...	from bus	S=4	Low	1.1.32	Slave: 6131/31 Busch-Presence detecto...	0/1/11	Slave Input	6	GroupValueWrite		\$01   On
7	04.05.2020 19:15:45,5...	from bus	S=6	Low	1.1.32	Slave: 6131/31 Busch-Presence detecto...	0/1/11	Slave Input	6	GroupValueWrite		\$01   On
8	04.05.2020 19:15:51,850	from bus	S=0	Low	1.1.31	Master: 6131/31 Busch-Presence detect...	0/4/0	Brightness (Output)	6	GroupValueWrite		0C 56   22,2
9	04.05.2020 19:15:55,5...	from bus	S=2	Low	1.1.32	Slave: 6131/31 Busch-Presence detecto...	0/1/11	Slave Input	6	GroupValueWrite		\$01   On
10	04.05.2020 19:15:59,7...	from bus	S=4	Low	1.1.32	Slave: 6131/31 Busch-Presence detecto...	0/4/0	Brightness (Output)	6	GroupValueWrite		0D B9   29,3
11	04.05.2020 19:16:14,845	from bus	S=6	Low	1.1.31	Master: 6131/31 Busch-Presence detect...	0/1/0	SA: Output 1	6	GroupValueWrite		\$00   Off
12	04.05.2020 19:16:14,896	from bus	S=0	Low	1.1.30	SA/S4.16.6.1 Switch Actuator,4-fold,16...	0/1/4	SA: Status 1	6	GroupValueWrite		\$00   Off

# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Master/Slave Configuration

### Master/Slave and Constant Light

We can also use the Constant Light Switch/Controller application for a Master/Slave Configuration

- Application: Constant light switch / Constant light controller
- Used movement detection: internal and external

The image displays three screenshots of the ABB KNX configuration interface, showing the settings for a presence detector in a Master/Slave configuration. The settings are as follows:

- 1.1.31 Master: 6131/31 Busch-Presence detector premium > Presence 1 > Common parameter**
  - Application: Constant light switch
  - Output is of type: 1 bit
  - Sending value for switch-on cyclic:  no  yes
  - Value for switching on output 1:  Off  On
- 1.1.31 Master: 6131/31 Busch-Presence detector premium > Presence 1 > Extended parameters**
  - Operating mode: Automatic
  - Used movement detection: internal and external
  - Slave sends:  On/off telegram  Cyclic On telegram
- 1.1.32 Slave: 6131/31 Busch-Presence detector premium > Presence 1 > Common parameter**
  - Application: Sensor
  - Type of output:  Master  Slave
  - Cyclical repeating time: 00:00:10

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# ABB KNX Presence Detectors – Master/Slave Concept and other functions

Two-stage switch-off

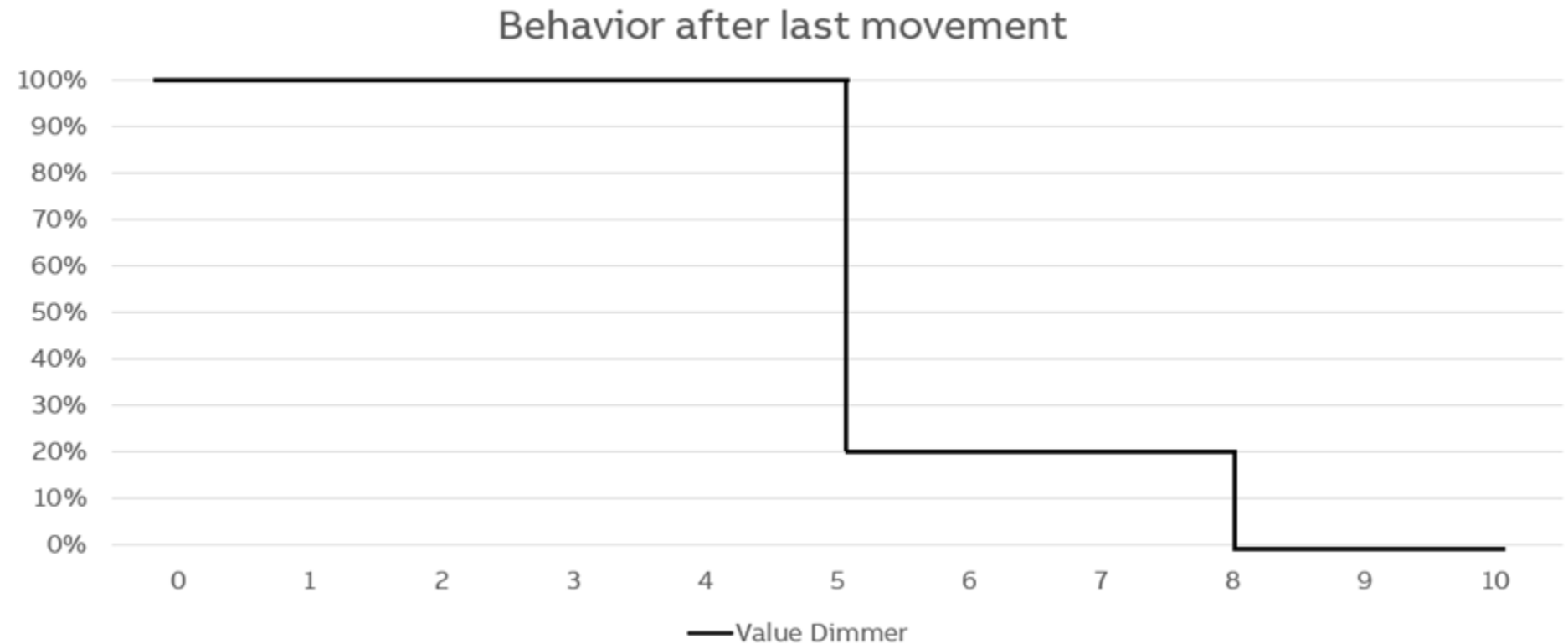


# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Two-stage switch-off

### Two-stage switch-off

If movement is no longer detected, the light should be dimmed to 20% after 5 minutes and then to 0% after a further 3 minutes (switch-off).



# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Two-stage switch-off

### Two-stage switch-off

- This parameter is only displayed when "Output is of type" is set on 1 byte 0 - 100% or 1 byte 0 – 255 and for the application “Constant light controller”
- After the switch-off delay the detector first switches to the set reduced brightness and only then sends the value set under the "Value for switch-off" parameter after brightness reduced according to switch-off delay
- Example:
  - Switch-off delay = 5 minutes
  - Value for switch-off = 0%
  - Value for reduced brightness = 20%
  - Brightness reduced according to switch-off delay = 3 minutes

1.1.2 6131/31 Busch-Presence detector premium > Presence 1 > Common parameter

– Presence 1	Application	Sensor
-----		
Common parameter	Type of output	<input checked="" type="radio"/> Master <input type="radio"/> Slave
Extended parameters	Input Slave	<input checked="" type="radio"/> no <input type="radio"/> yes
Parameter brightness	Output is of type	1-byte 0..100%
Parameter external pushbutton	Output object sends at	Switching On / Off
Choice of sensor	Value for switch on (%)	100
Enable	Sending value for switch-on cyclic	<input checked="" type="radio"/> no <input type="radio"/> yes
+ Presence 2	Value for switching off (%)	0
+ Presence 3	Send value for switch-off cyclic	<input checked="" type="radio"/> no <input type="radio"/> yes
+ Presence 4	Light-on time	00:05:00 hh:mm:ss
+ Brightness detection	Brightness threshold extern	400
+ Object RTC	Sensitivity of watchdog	High
	Fade in extended parameters	<input type="radio"/> no <input checked="" type="radio"/> yes

# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Two-stage switch-off

### Two-stage switch-off

- This parameter is only displayed when "Output is of type" is set on 1 byte 0 - 100% or 1 byte 0 – 255 and for the application "Constant light controller"
- After the switch-off delay the detector first switches to the set reduced brightness and only then sends the value set under the "Value for switch-off" parameter after brightness reduced according to switch-off delay
- Example:
  - Switch-off delay = 5 minutes
  - Value for switch-off = 0%
  - Value for reduced brightness = 20%
  - Brightness reduced according to switch-off delay = 3 minutes

1.1.2 6131/31 Busch-Presence detector premium > Presence 1 > Extended parameters

– Presence 1	Operating mode	Automatic
Common parameter	Use two-stage switch-off	<input type="radio"/> no <input checked="" type="radio"/> yes
Extended parameters	Value for reduced brightness (%)	20
Parameter brightness	Brightness reduced according to switch-off delay	00:03:00 hh:mm:ss
Parameter external pushbutton	Use forced switch-off	<input checked="" type="radio"/> no <input type="radio"/> yes
Choice of sensor	Use object for switch-off delay	<input checked="" type="radio"/> no <input type="radio"/> yes
Enable	Use object for switch-off delay reduced brightness	<input checked="" type="radio"/> no <input type="radio"/> yes
+ Presence 2	Use object for test mode	<input checked="" type="radio"/> no <input type="radio"/> yes
+ Presence 3	Use object actuator status	<input checked="" type="radio"/> no <input type="radio"/> yes
+ Presence 4	Pause time	01.250 ss.fff
+ Brightness detection	Overwrite settings for download	<input type="radio"/> no <input checked="" type="radio"/> yes

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# ABB KNX Presence Detectors – Master/Slave Concept and other functions

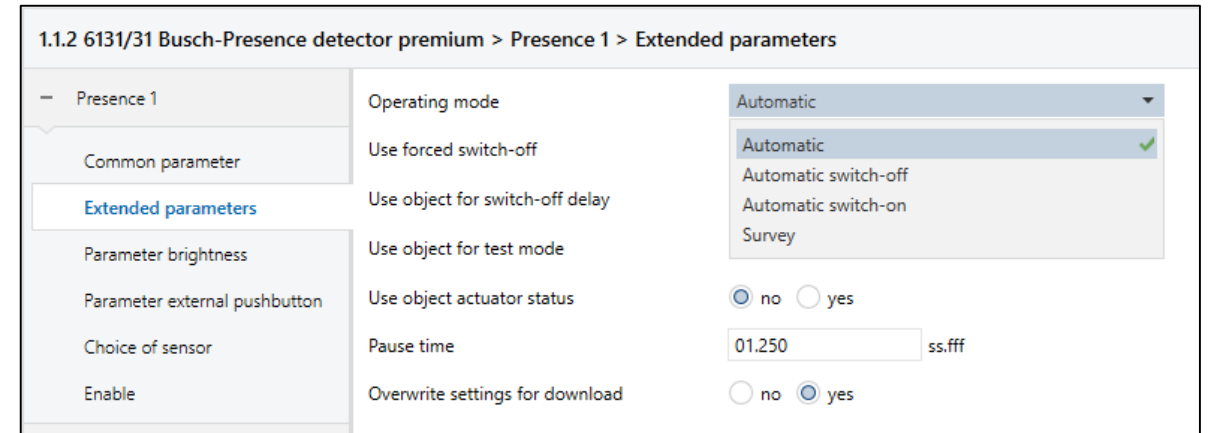
Operating modes

# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Operating modes

### Operating modes: Sensor

- **Automatic:** the detector switches on automatically when detecting a movement. The switch-off is effected after the set switch-off delay beginning from the most recent detection.
- **Automatic switch-off:** the detector must be switched on manually using the "External push-button (input)" object. The switch-off is effected automatically under consideration of the switch-off delay.
- **Automatic switch-on:** the detector switches on automatically when detecting a movement. The switch-off is effected by the receipt of an Off telegram on the "External push-button (input)" object. Note: The detector switches off automatically after 6 hours.
- **“Survey” / Monitoring:** the detector switches on brightness-dependent if an adjustable component of movement has been recorded within the time period set. The switch-off occurs 2 seconds after switch-on and the last detection of movement.



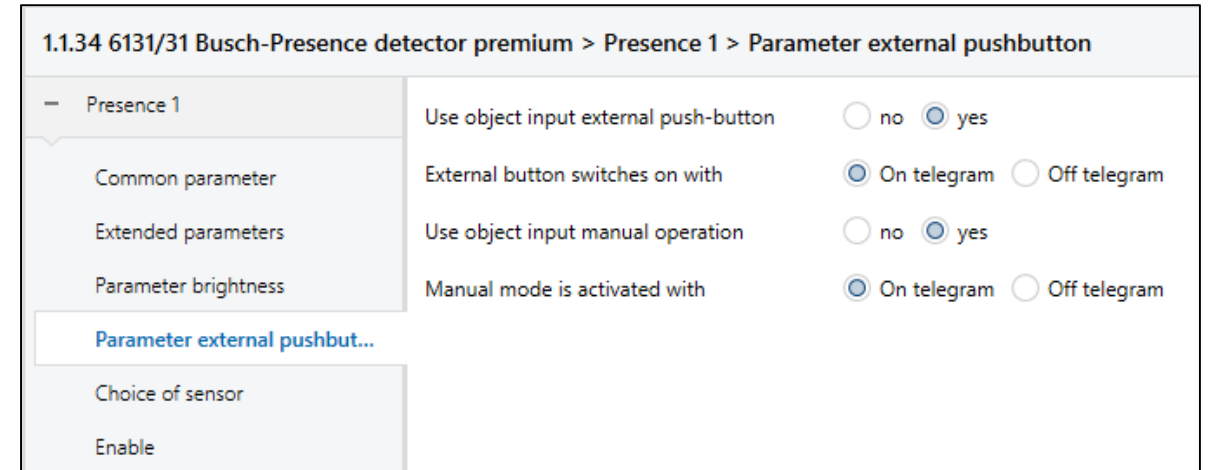


# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Operating modes

### Automatic with external push-buttons

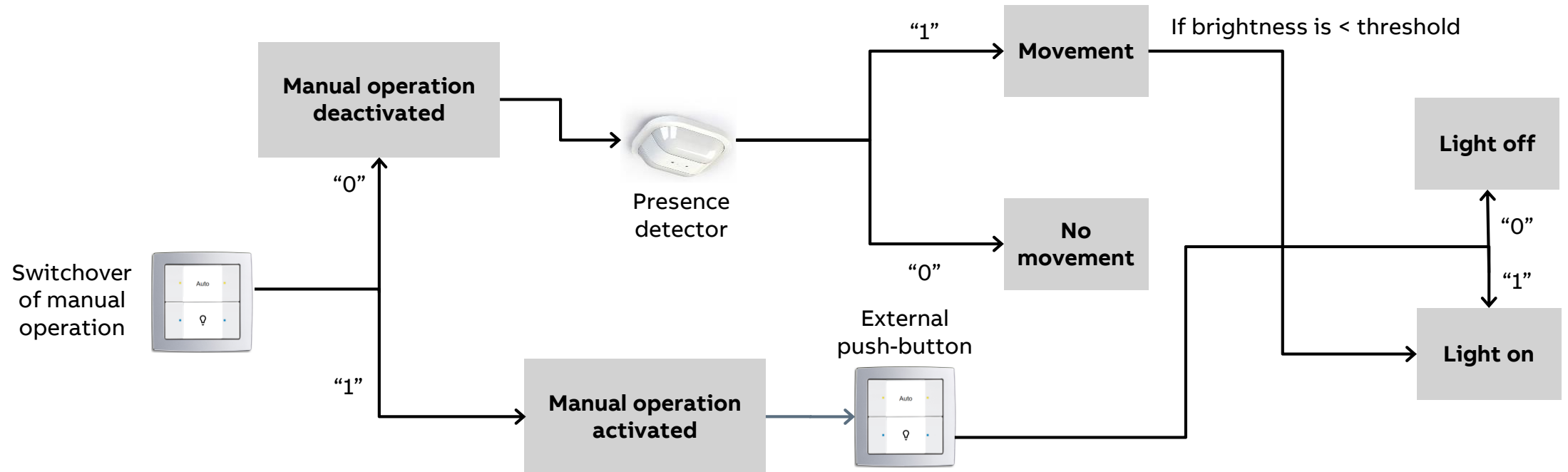
- In some applications we have to switch between automatic and manual mode
- External push-buttons can be used in combination with the presence detector
- Object “Switchover to manual operation”: if an ON telegram is received on this input, the detector is deactivated. In this case only manual operation is possible via the "External push-button" object
- The receipt of an Off telegram resets the detector to detector mode



# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Operating modes

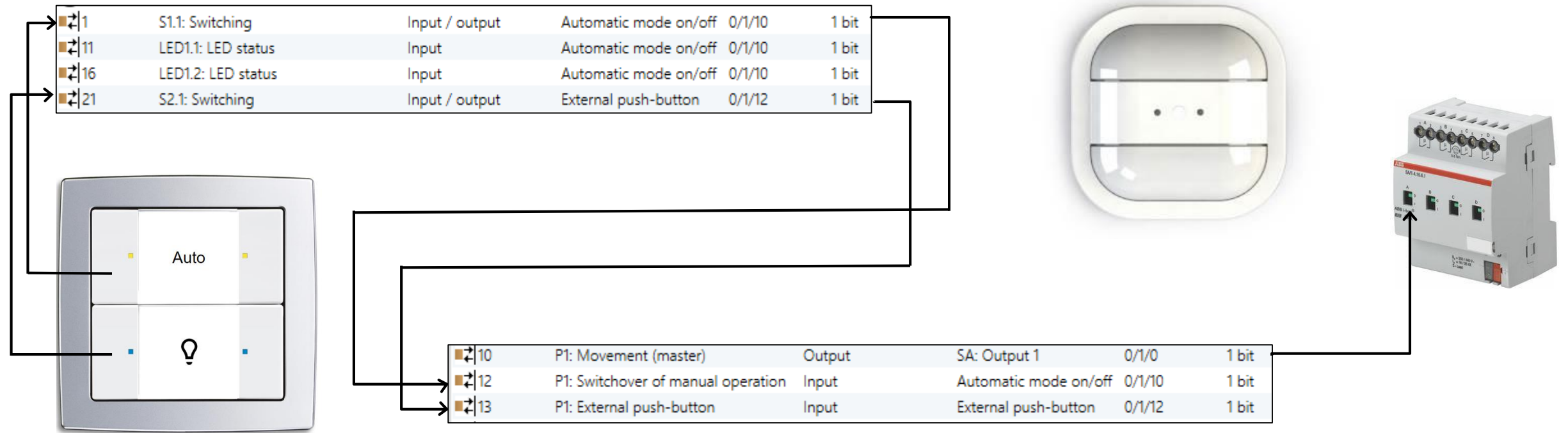
### Automatic with external push-buttons



# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Operating modes

### Automatic with external push-buttons



# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Operating modes

### Actuator Status and pause time

- “actuator status”: This is connected with the status of a switch actuator, for example. When this actuator is switched off via a central command, the detector is informed and is ready again for switch-on after the pause time.
- The set pause time is started after the detector has been switched off due to expiry of the switch-off delay or when a switch-off telegram is received on objects “external pushbutton” or “actuator status”
- If movement is detected during this time, the detector is not switched on immediately. The pause time is first extended by 7 seconds. If there is still movement after these 7 seconds, the detector switches back on
- Example: The person switches the light off manually when leaving the room. Without the pause time the detected movement would cause a renewed switch-on during exiting

– Presence 1	Operating mode	Automatic
Common parameter	Use forced switch-off	<input checked="" type="radio"/> no <input type="radio"/> yes
Extended parameters	Use object for switch-off delay	<input checked="" type="radio"/> no <input type="radio"/> yes
Parameter brightness	Use object for test mode	<input checked="" type="radio"/> no <input type="radio"/> yes
Parameter external pushbutton	Use object actuator status	<input type="radio"/> no <input checked="" type="radio"/> yes
Choice of sensor	Pause time	<input type="text" value="01.000"/> ss.fff
Enable	Overwrite settings for download	<input type="radio"/> no <input checked="" type="radio"/> yes

# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Operating modes

### Automatic switch-off

#### Automatic switch-off:

- the detector must be switched on manually using the "External push-button (input)" object
- The switch-off is effected automatically under consideration of the switch-off delay
- Brightness independent
- Group object “P1: External push-button” will be activated automatically to switch on the light

1.1.34 6131/31 Busch-Presence detector premium > Presence 1 > Extended parameters

– Presence 1	Operating mode	Automatic switch-off
Common parameter	Use forced switch-off	<input checked="" type="radio"/> no <input type="radio"/> yes
Extended parameters	Use object for switch-off delay	<input checked="" type="radio"/> no <input type="radio"/> yes
Parameter external pushbutton	Use object for test mode	<input checked="" type="radio"/> no <input type="radio"/> yes
Choice of sensor	Use object actuator status	<input checked="" type="radio"/> no <input type="radio"/> yes
Enable	Use object status manual on/off	<input type="radio"/> no <input checked="" type="radio"/> yes
+ Presence 2	Pause time	01.250 ss.fff
+ Presence 3	Overwrite settings for download	<input type="radio"/> no <input checked="" type="radio"/> yes

	Number	Name ^	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
■	69	BR: Brightness	Output	Brightness (Outp...	0/4/0	2 bytes	C	-	-	T	-	2-byte floa...	Low
■	13	P1: External push-button	Input	SA: Output 3	0/1/2	1 bit	C	-	W	-	U	switch	Low
■	10	P1: Movement (master)	Output	SA: Output 1	0/1/0	1 bit	C	-	-	T	-	switch	Low

# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Operating modes

### Automatic switch-on

#### Automatic switch-on:

- the detector switches on automatically when detecting a movement
- The switch-off is effected by the receipt of an Off telegram on the "External push-button (input)" object
- The detector switches off automatically after 6 hours
- Brightness depended
- Group object “P1: External push-button” will be activated automatically to switch off the light

1.1.34 6131/31 Busch-Presence detector premium > Presence 1 > Extended parameters

– Presence 1	Operating mode	Automatic switch-on
Common parameter	Use object actuator status	<input checked="" type="radio"/> no <input type="radio"/> yes
Extended parameters	Use object status manual on/off	<input checked="" type="radio"/> no <input type="radio"/> yes
Parameter brightness	Pause time	10.000 ss.fff
Parameter external pushbutton	Overwrite settings for download	<input type="radio"/> no <input checked="" type="radio"/> yes
Choice of sensor		
Enable		

	Number	Name ^	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
■	69	BR: Brightness	Output	Brightness (Outp...	0/4/0	2 bytes	C	-	-	T	-	2-byte floa...	Low
■	13	P1: External push-button	Input	SA: Output 3	0/1/2	1 bit	C	-	W	-	U	switch	Low
■	10	P1: Movement (master)	Output	SA: Output 1	0/1/0	1 bit	C	-	-	T	-	switch	Low

# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Operating modes

### “Survey” / Monitoring

#### “Survey” / Monitoring:

- the detector switches on brightness-dependent if an adjustable component of movement has been recorded within the time period set
- The switch-off occurs 2 seconds after switch-on and the last detection of movement

Presence 1

Operating mode: Survey

Monitoring time window: 00:00:30 hh:mm:ss

Minimum activity in monitoring time window: 50%

Pause time: 01.250 ss.fff

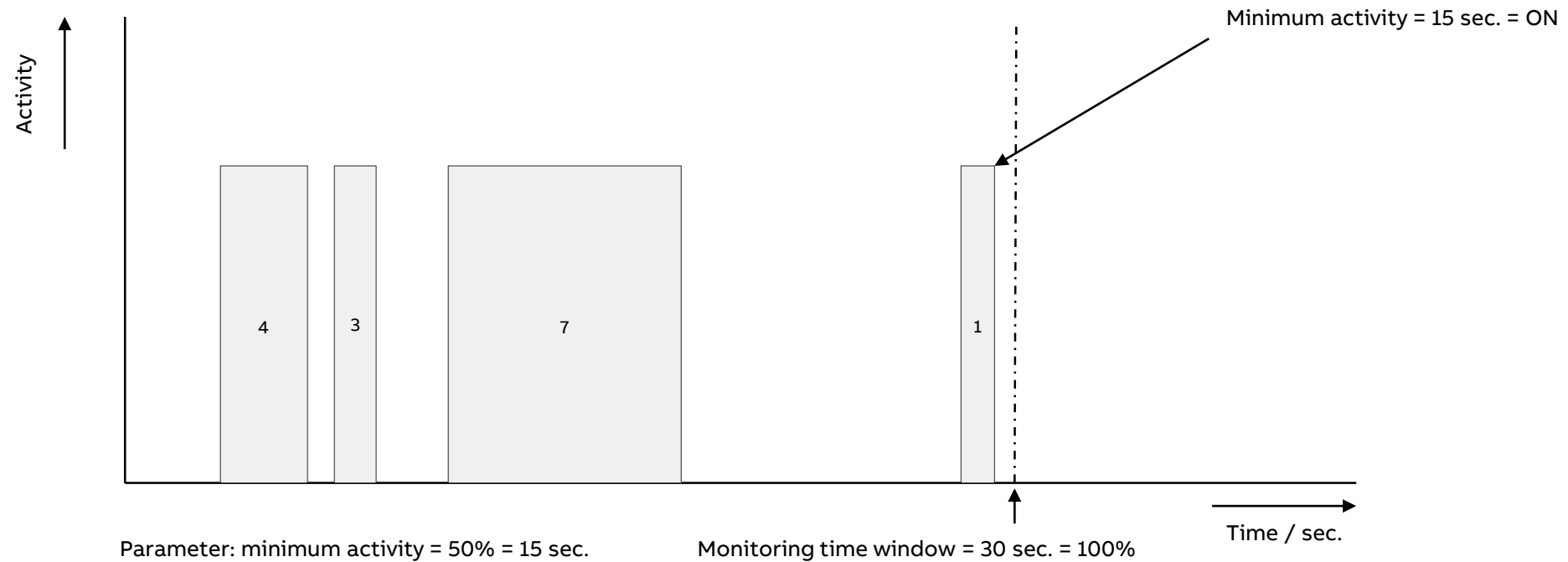
Overwrite settings for download:  no  yes

	Number	Name ^	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
■	69	BR: Brightness	Output	Brightness (Outp...	0/4/0	2 bytes	C	-	-	T	-	2-byte floa...	Low
■	15	PT: Survey	Output	SA: Output 1	0/1/0	1 bit	C	-	W	T	-	switch	Low

# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Operating modes

### “Survey” / Monitoring





# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Operating modes

### Operating modes: Constant Light Switch/Controller

- **Automatic:** the detector switches on automatically when detecting a movement. The switch-off is effected after the set switch-off delay beginning from the most recent detection
- **Automatic switch-off:** the presence detector must be switched on manually using the “automatic/manual” object. The switch-off is effected automatically under consideration
- **Light controller:** the presence detector switches on and off only on the basis of brightness  $\pm$  hysteresis. Activation / deactivation through the “automatic/manual off” object

1.1.32 Slave: 6131/31 Busch-Presence detector premium > Presence 2 > Extended parameters

Choice of sensor	Operating mode	Automatic
Enable	Use two-stage switch-off	Automatic <input checked="" type="checkbox"/>
– Presence 2	Used movement detection	Automatic switch-off
Common parameter	Used brightness	Light controller (independent of movement)
Extended parameters	Dimming step size brighter (1 to 15)	<input checked="" type="radio"/> Internal <input type="radio"/> External
Choice of sensor	Dimming step size darker (1 to 15)	2
Enable	Use output 2	2
		<input checked="" type="radio"/> no <input type="radio"/> yes

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# ABB KNX Presence Detectors – Master/Slave Concept and other functions

Temperature control

# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Other functions

### Temperature control

- Integrated object room temperature controller

Object RTC Configuration:

- Application:  Inactive  Active
- Device function: Master device
- Control function: Heating
- Operating mode after reset: Comfort
- Send cyclic 'in operation' (min): 30
- Additional functions/objects:  no  yes

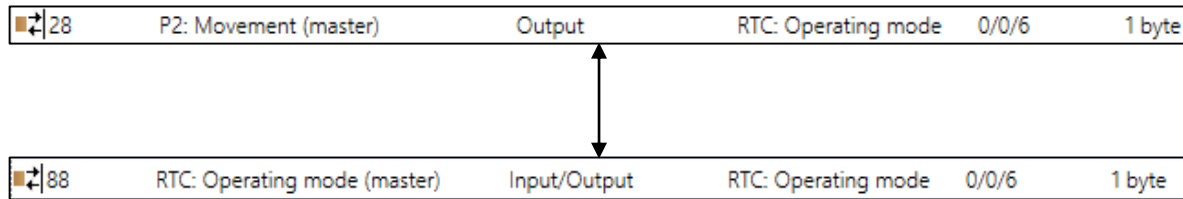
77	RTC: Heating control value	Output	RTC: Heating control va...	0/0/1	1 bit
81	RTC: Control On/Off (master)	Output	RTC: Control On/Off	0/0/2	1 bit
82	RTC: Actual temperature	Output	RTC: Actual temperature	0/0/3	2 bytes
85	RTC: Fault, actual temperature (mast...	Output	RTC: Fault, actual temp...	0/0/4	1 bit
87	RTC: actual setpoint	Output	RTC: actual setpoint	0/0/5	2 bytes
88	RTC: Operating mode (master)	Input/Output	RTC: Operating mode	0/0/6	1 byte
89	RTC: Superimposed operating mod...	Input	RTC: Superimposed op...	0/0/7	1 byte
113	RTC: On/off request (master)	Input	RTC: On/off request	0/0/8	1 bit
114	RTC: Setpoint display (master)	Output	RTC: Setpoint display	0/0/9	2 bytes
115	RTC: Request setpoint (master)	Input	RTC: Request setpoint	0/0/10	1 byte
116	RTC: Confirm setpoint (master)	Output	RTC: Confirm setpoint	0/0/11	1 byte
122	RTC: Controller status HVAC (master)	Output	RTC: Controller status H...	0/0/12	1 byte
123	RTC: Commissioned	Output	RTC: Commissioned	0/0/13	1 bit

# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Other functions

### Temperature control

– Activation via the application “Sensor”



1.1.31 Master: 6131/31 Busch-Presence detector premium > Presence 2 > Common parameter

Presence 2	Application	Sensor
Common parameter		
Presence 3	Type of output	<input checked="" type="radio"/> Master <input type="radio"/> Slave
Presence 4	Input Slave	<input checked="" type="radio"/> no <input type="radio"/> yes
Brightness detection	Output is of type	RTC operating mode switchover (1 byte)
Object RTC	Output object sends at	Switching On / Off
IR functions (white)	Value for switch on	Comfort
	Sending value for switch-on cyclic	<input checked="" type="radio"/> no <input type="radio"/> yes
	Value for switch off	ECO

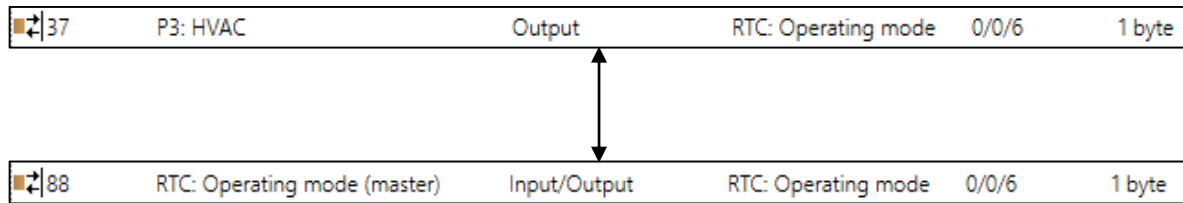
1.1.31	Master: 6131/31 Busch-Presence detect...0/1/0	SA: Output 1	6	GroupValueWrite	\$01   On	
1.1.31	Master: 6131/31 Busch-Presence detect...0/0/6	RTC: Operating mode	6	GroupValueWrite	\$01   0 %	
1.1.31	Master: 6131/31 Busch-Presence detect...0/0/12	RTC: Controller status HVAC	6	GroupValueWrite	\$21   13 %	
1.1.31	Master: 6131/31 Busch-Presence detect...0/0/5	RTC: actual setpoint	6	GroupValueWrite	0C 1A   21	
1.1.30	SA/S4.16.6.1 Switch Actuator,4-fold,16...	SA: Status 1	0/1/4	6	GroupValueWrite	\$01   On
1.1.31	Master: 6131/31 Busch-Presence detect...0/0/9	RTC: Setpoint display	6	GroupValueWrite	0C 1A   21	
1.1.31	Master: 6131/31 Busch-Presence detect...0/0/1	RTC: Heating control value	6	GroupValueWrite	\$01   On	
1.1.31	Master: 6131/31 Busch-Presence detect...0/0/12	RTC: Controller status HVAC	6	GroupValueWrite	\$21   13 %	

# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Other functions

### Temperature control

- Activation via the application “HVAC” (With switch-on delay and brightness independent)



1.1.31 Master: 6131/31 Busch-Presence detector premium > Presence 3 > Common parameter

+ Presence 2	Application	HVAC
- Presence 3	Output is of type	RTC operating mode switchover (1 byte)
<b>Common parameter</b>		
Extended parameters	Use input slave	<input checked="" type="radio"/> no <input type="radio"/> yes
Choice of sensor	Value for switch on	Comfort
Enable	Value for switch off	ECO
+ Presence 4	Switch-on delay time	00:00:10 hh:mm:ss
	Light-on time	00:03:00 hh:mm:ss

1.1.31	Master: 6131/31 Busch-Presence detect...	0/0/6	RTC: Operating mode	6	GroupValueWrite	\$01   0 %
1.1.31	Master: 6131/31 Busch-Presence detect...	0/0/12	RTC: Controller status HVAC	6	GroupValueWrite	\$21   13 %
1.1.31	Master: 6131/31 Busch-Presence detect...	0/0/5	RTC: actual setpoint	6	GroupValueWrite	0C 1A   21
1.1.31	Master: 6131/31 Busch-Presence detect...	0/0/9	RTC: Setpoint display	6	GroupValueWrite	0C 1A   21
1.1.31	Master: 6131/31 Busch-Presence detect...	0/0/1	RTC: Heating control value	6	GroupValueWrite	\$01   On
1.1.31	Master: 6131/31 Busch-Presence detect...	0/0/12	RTC: Controller status HVAC	6	GroupValueWrite	\$21   13 %

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# ABB KNX Presence Detectors – Master/Slave Concept and other functions

Questions

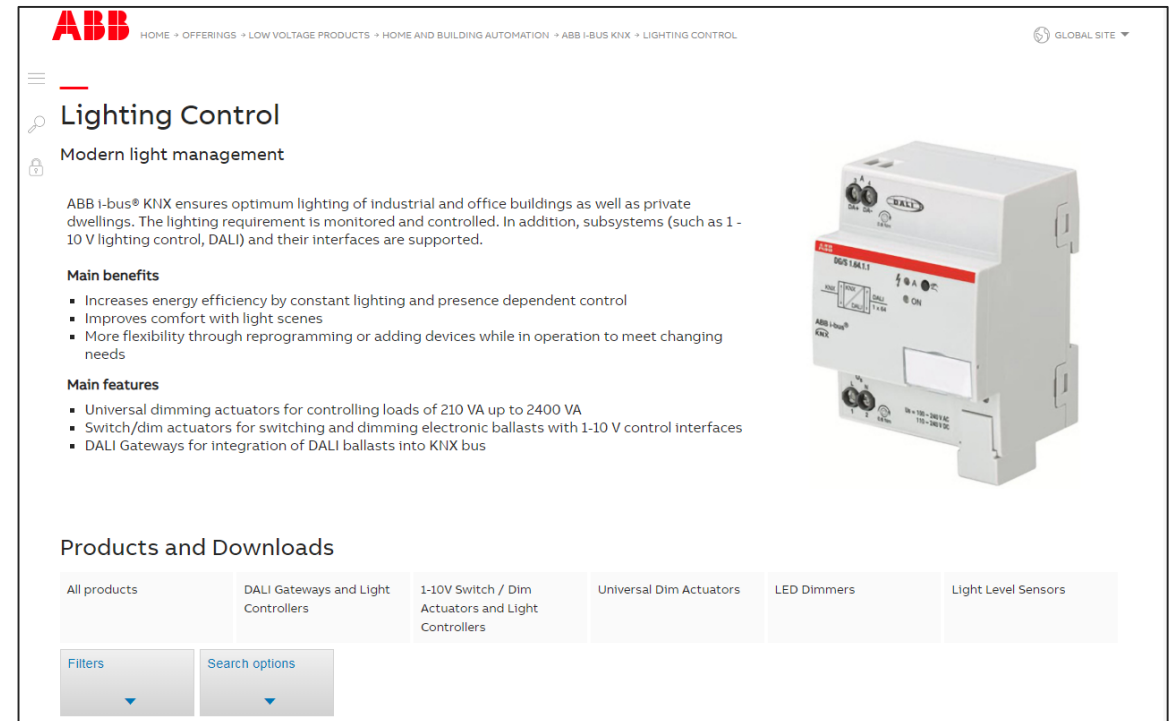
# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Online Learning Session

### Homepage

[www.abb.com/KNX](http://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
- ...



**ABB** HOME → OFFERINGS → LOW VOLTAGE PRODUCTS → HOME AND BUILDING AUTOMATION → ABB I-BUS KNX → LIGHTING CONTROL GLOBAL SITE ▼

### Lighting Control

Modern light management

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

**Main benefits**

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

**Main features**

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

**Products and Downloads**

All products	DALI Gateways and Light Controllers	1-10V Switch / Dim Actuators and Light Controllers	Universal Dim Actuators	LED Dimmers	Light Level Sensors
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Filters Search options

# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## Online Learning Session

### Further information

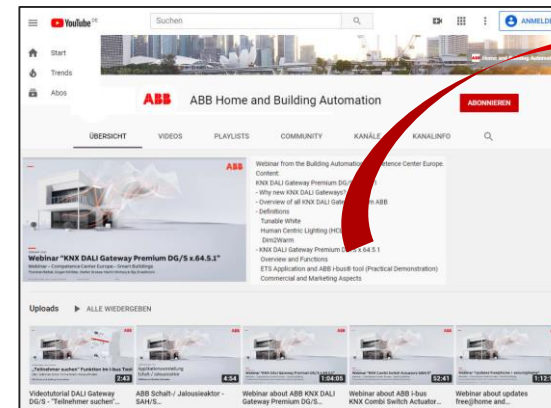
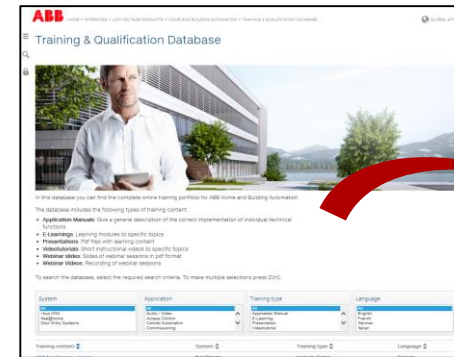
#### Training & Qualification Database

– The database includes the following types of training content:

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

#### Youtube

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





# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## 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](http://www.abb.com/knx) or <https://go.abb/ba-training>

→ Training and Qualification

→ Training Calendar



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### Training & Qualification Calendar

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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
Free@home	February 2018	Lödenscheid, Germany
Fire Alarm Systems	March 2018	s. Palomba (Rome), Italy
I-bus KNX	April 2018	Vittuone (Milan), Italy

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

**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

# ABB KNX Presence Detectors – Master/Slave Concept and other functions

Online Learning Session

## KNX Certified Trainings 2020

Certified KNX Courses in Heidelberg

- Advanced Course: 13<sup>th</sup> to 17<sup>th</sup> Jul.
- Tutor Course: 19<sup>th</sup> to 23<sup>rd</sup> Oct.
- Basic Course : 16<sup>th</sup> to 20<sup>th</sup> 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](http://www.abb.com/knx) or <https://go.abb/ba-training>



# ABB KNX Presence Detectors – Master/Slave Concept and other functions

## 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 6<sup>th</sup> May 2020

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



# ABB KNX Presence Detectors – Master/Slave Concept and other functions

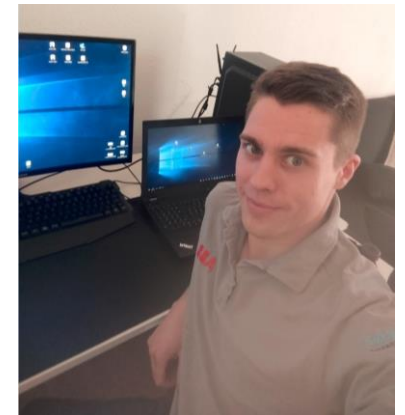
Online Learning Session

## Next online learning sessions

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

... and more will follow

*From home office to home office*



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