KNX (PIR+US) dual tech ceiling sensor

Cat. No(s): 0 489 20

KNX (PIR+US) dual tech ceiling sensor

1. USE

The KNX sensor ref. 0 489 20 is a dual technology device (passive infrared and ultrasound (PIR+US)) suitable to detect presence and measure the daylight level.

It can be installed directly on wall surface, on wall on wiring device box and on internal/external corners using the installing accessory ref. 0 489 71.

It is suitable for indoor working areas like offices, conference rooms, meeting rooms...

Throught its application program it is possible to configure all the working parameters such as daylight threshold, time delay, operating modes, technology sensibility... and it is possible to configure the following functions:
- Switching/dimming: auotmatically or manunally if associated with a command device
- Define a minimum/maximum dimming level
- Customize the dimming pace
- Trigger scenarios based on: daylight level and/or presence/absence
- Work in master/slave configuration
- Define a daylight level to be maintained until presence is detected
- Manage more than one output with the same commands

All the working parameters are configurable via ETS but is also possible to modify the main operating parameters (daylight threshold, time delay, technology sesnsibility...) via commissioning tool ref. 0 882 30/ BMSO4001.

2. TECHNICAL FEATURES

■ 2.1 Electrical features

- KNX BUS power supply: 29 ⎓
- KNX BUS absorption: 7 mA (PIR) / 20 mA (PIR + US)
- KNX connector (red/black): terminal capacity 4x (Ø 0,6 à 0,8 mm)

■ 2.2 Climatic features

- Environmental operating temperature : -5°C to +45°C
- Storage temperature : -25°C to +70°C

■ 2.3 Mechanical features

- Impact resistance: IK04
- Penetration by solid and liquid matter: IP41

- KNX LED
- KNX prog. push-button
- US sensor
- Daylight sensor
- IR reception/ transmission LED
- PIR sensor
- Presence LED

3. DIMENSIONS

84

46

118

31
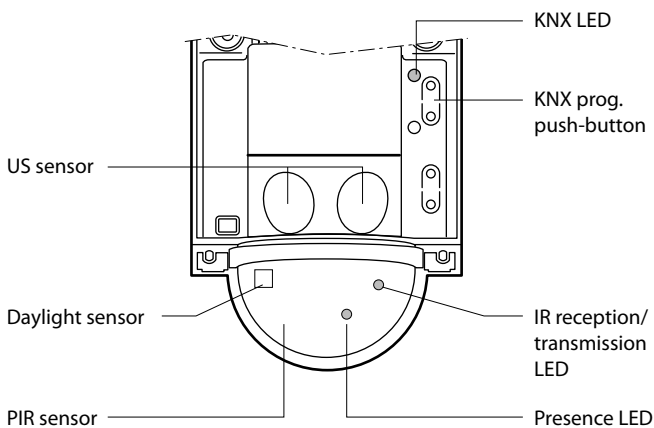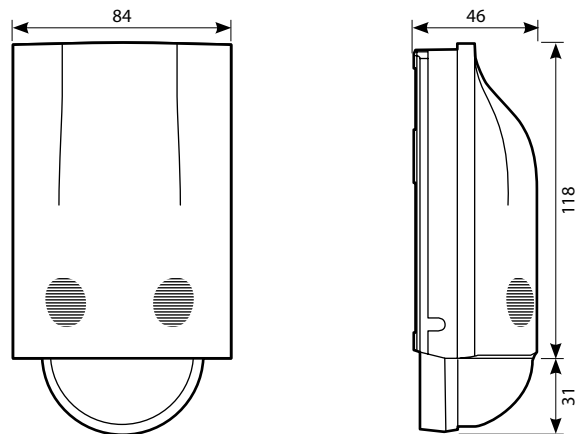
4. CONNECTION

KNX red/black connector

4 x (Ø 0,6 mm < ⟷ 8 mm < Ø 0,8 mm)

KNX

29 V ⎓

5. REMOVAL

① ②

CONTENTS
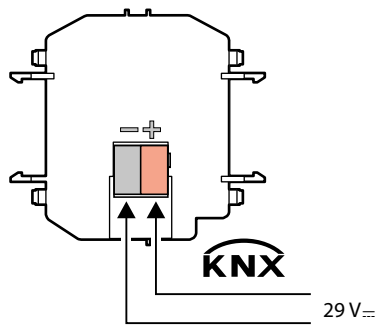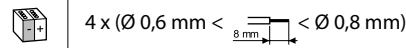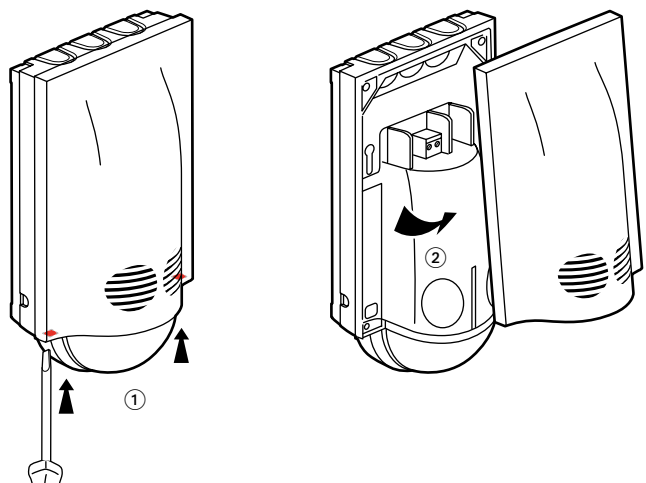
6. INSTALLATION

6.1 Sensor positioning
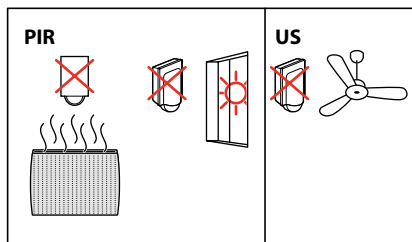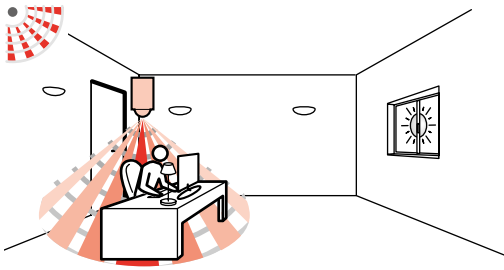
6.2 Recommended light exposure

2,5 m

3,5 m

PIR

US

6. INSTALLATION (continued)

6.3 Fitting

① 60 mm

② 60 mm

50

Ø > 67

③
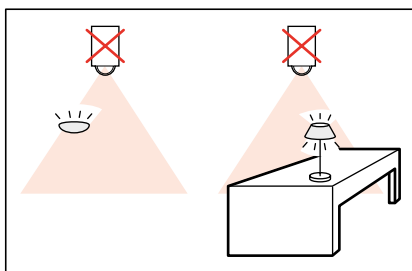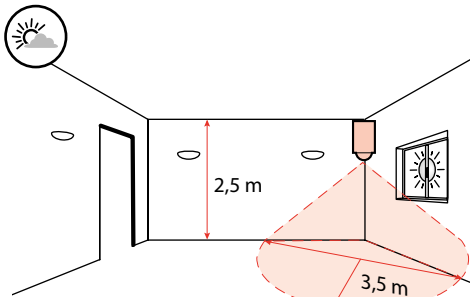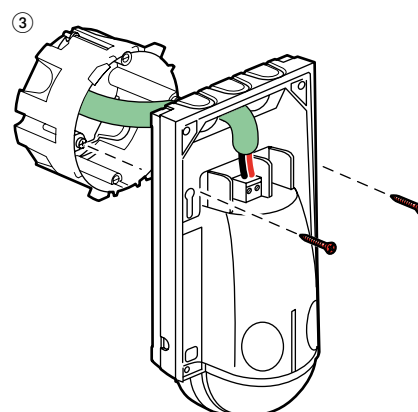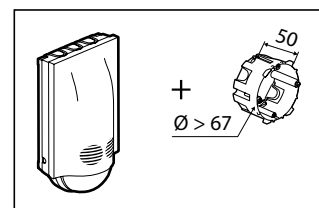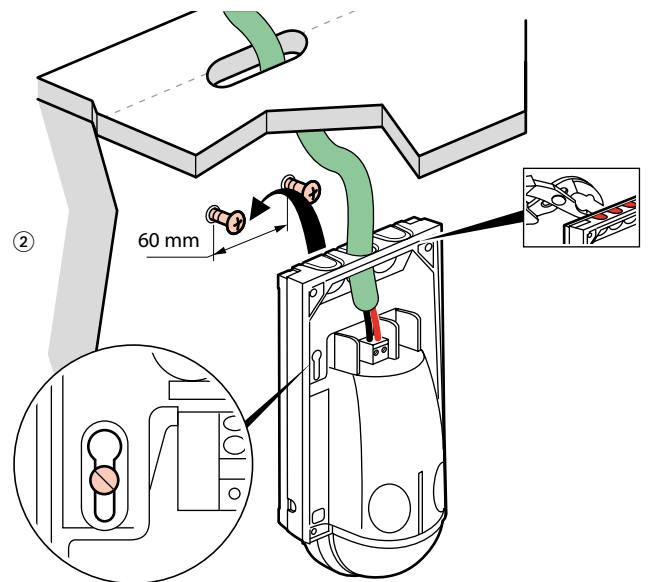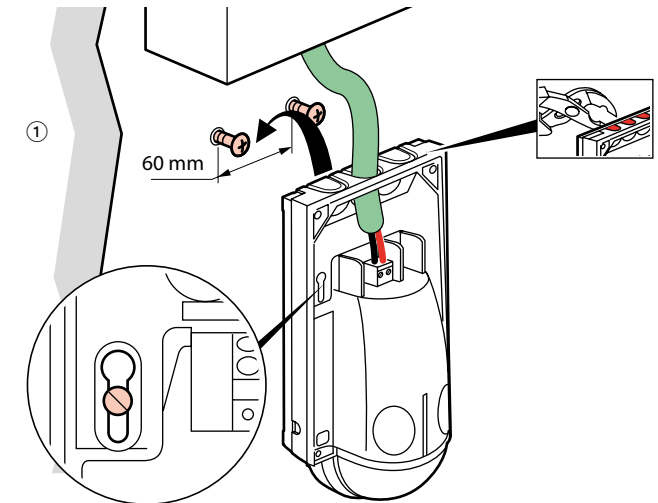
6. INSTALLATION (continued)

■ 6.3 Fitting (continued)

0 489 71

④
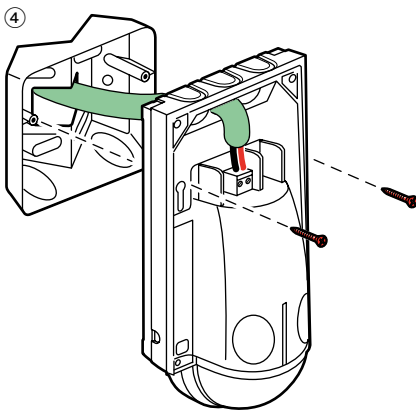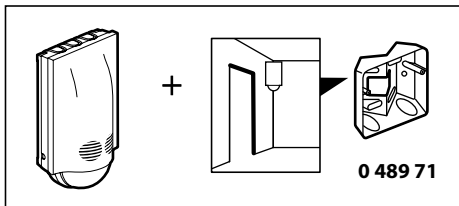
■ 6.4 Choice of detection zone

①

A   CLAC   B   CLIC

②

③

CLIC
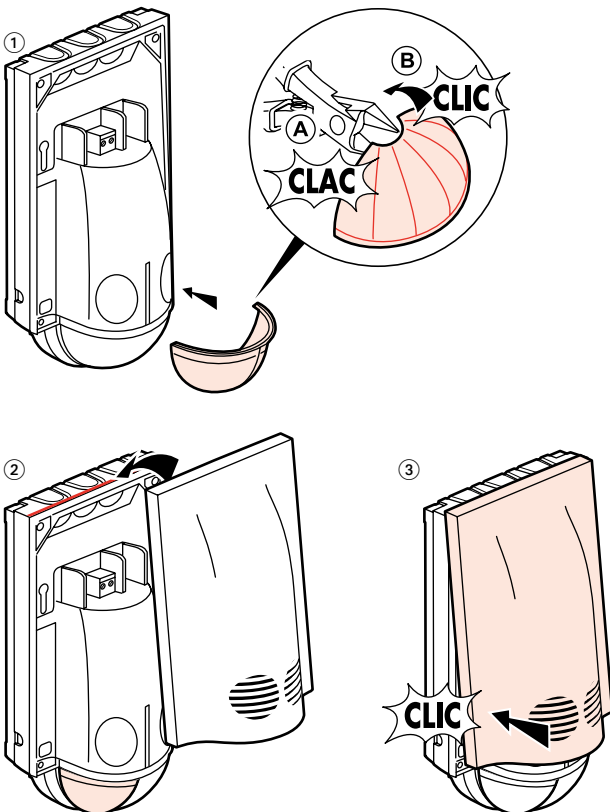
7. OPERATION

The KNX sensors offer many functions, on follows a summary of them (see section "Communication objects" for details):

Functions:

Automatic or manual switching/dimming with constant daylight regulation

Possibility to control a second lighting level as a % of the main one maintaining a positive or negative offset.

Coupling several detectors: It is possible to set the sensors in Master or slave configuration in order to cover a larger area with a synchronized presence detection.

Sending message on presence / absence: Upon presence/absence can be sent an additional command: switching command, values, scene…

Warning of end detection: After the time delay, the light can be conifgured to assume a standby level (for a standby time interval) as to warn of the imminent extinction.

Presence and brightness level Information is available on the bus: Values available for a supervision system**.**

Daylight setpoint and time delay modifiable by bus: Values which can be modified by a supervision system.

Partial on/Group off Mode:
It is possible to turn ON just a subset of lights but at the end of time delay turn OFF all the lights. Classroom example: Room Lighting: automatic switch ON; Board Lighting: manual control.
On end detection, total extinction, room and board.

Virtual Keycard: Especially thought for hotels, the combination of presence sensors, door contacts and other informations (e.g. other detectors, push buttons...) allow determining the presence in the room and enpower some circuits in the room, launch scenarios or any other kind of logics.
The functions is triggered by the "door contact" event which launch the so called "Virtual keycard time delay", a time offset in which the sensor tries to understand if the room is occupied or not on the basis of some informations: sensor detection, window contact events, push buttons event. Once the result of the function is "occupied" it permains until there is another "Door contact event" which trigger another "Virtual keycard time delay" to understand the room status and eventually turn OFF the lights, launch an absence scenario or launch any other logic related to vacancy event.

The product global configuration is made via ETS (version 3 or upper) and it is also possible to modify the main operating parameters via commissioning tool 088230/BMSO4001 (see following section for futher details)

8. SETTINGS

Following the main operating parameters modifiable via commissioning tool 088230/BMSO4001.

■ 8.1 Detection parameters

Sensor parameter		Default value	Possible values	Configuration tools 088230/ BMSO4001
Time delay		15 min	5 s - 17 H 59 min 59 s	✓
Sensitivity		PIR (Very high)	Low, Medium, High, Very high	✓
		US (High)		✓
Detection system	**Initial**	PIR & US	PIR, US, PIR & US	✓
	Maintain	PIR or US	PIR, US, PIR or US	✓

🕐 **Time delay:** It is the time interval between the moment in which a sensor does not detect motion/presence and the deactivation of the load.
The time period re-starts whenever the sensor detects motion/ presence

👋 **Sensitivity:** It is the detection technology sensitivity.

Detection system:
It is the set of technologies used for detection
Initial detection: it is the set of technologies used for the first detection
Maintain: it is the set of technologies used after the first detection

■ 8.2 Lighting parameters

Sensor parameter	Default value	Possible values	Configuration tools 088230/ BMSO4001
Daylight setpoint	300 lux	5 - 1275 lux	✓

☼ **Daylight setpoint:** it is the lighting level under which the sensor enables the load and over which the sensor disables the load.

👁 **Eye function:** Value 0 (eye on configuration tool 088230/ BMSO4001) this function allows to record in the sensor the actual general lighting level and use it as daylight setpoint.

■ 8.3 Other parameters

Sensor parameter		Default value	Possible values	Configuration tools 088230/ BMSO4001
Output	**Standby delay (main load)**	Disabled	Disabled/infinite/ 1 s - 1 h	✓
	Standby level (main load)	10 %	1 - 100 %	✓

Standby level: it is the level, expressed in % of the daylight setpoint, at which the load is keep turned ON during the standby delay.

Standby delay: it is the time interval in which the load is kept turned ON at the standby level. It begins as soon as the sensor does not detect motion/presence

8. SETTINGS (continued)

■ 8.4 Modifying the parameters using the configuration tools

Warning:

Make sure blanking plate is removed before modifying parameters with a configuration tool.
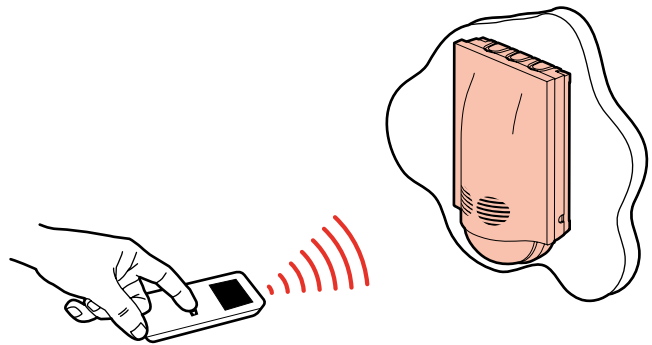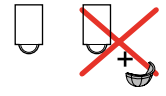
• 0 882 30/BMSO4001: Advanced configuration tool
When the sensor receives an IR command via a configuration tool, the LED blinks.

- Restore to factory settings:
   1st press: Short press on PROG, the LED flashes slowly.
   2nd press: Hold down PROG for 10 seconds until the LED flashes quickly.

9. PERFORMANCE

■ 9.1 PIR Performance

Radial movement ◄▪
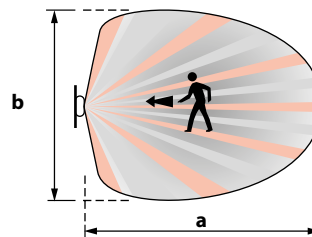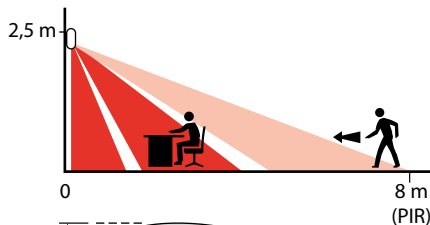
Height 2,5 m

Sensitivity Low (25%)		Sensitivity Medium (50%)		Sensitivity High (75%)		Sensitivity Very high (100%)	
a (m)	**b (m)**	**a (m)**	**b (m)**	**a (m)**	**b (m)**	**a (m)**	**b (m)**
5	6	6	6	7	6	8	6

9. PERFORMANCE (continued)

■ 9.1 PIR Performance (continued)
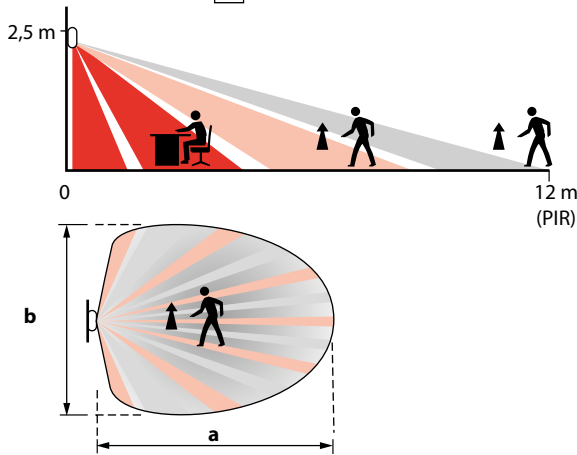
Tangential movement ⬆

Height 2,5 m

Sensitivity Low (25%)		Sensitivity Medium (50%)		Sensitivity High (75%)		Sensitivity Very high (100%)	
a (m)	b (m)	a (m)	b (m)	a (m)	b (m)	a (m)	b (m)
10	6	11	6	11	6	12	6

■ 9.2 US Performance

Radial movement ⬅
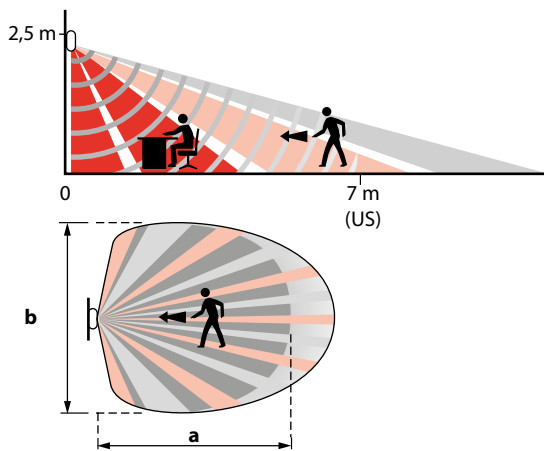
Height 2,5 m

Sensitivity Low (25%)		Sensitivity Medium (50%)		Sensitivity High (75%)		Sensitivity Very high (100%)	
a (m)	b (m)	a (m)	b (m)	a (m)	b (m)	a (m)	b (m)
4	5	5	6	6	6	7	6

9. PERFORMANCE (continued)

■ 9.2 US Performance (continued)
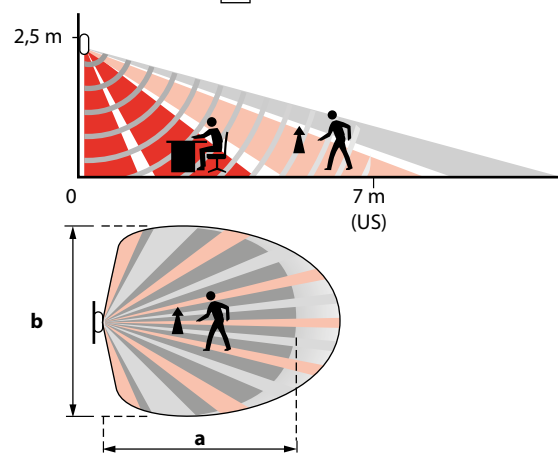
Tangential movement ⬆

Height 2,5 m

Sensitivity Low (25%)		Sensitivity Medium (50%)		Sensitivity High (75%)		Sensitivity Very high (100%)	
a (m)	b (m)	a (m)	b (m)	a (m)	b (m)	a (m)	b (m)
10	6	11	6	11	6	12	6

■ 9.3 PIR Performance with blanking plate
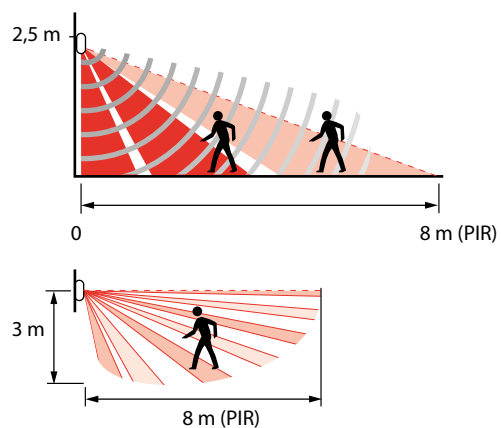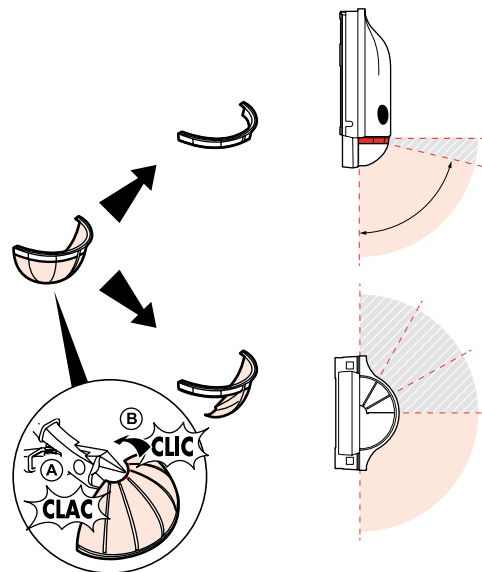
10. STANDARDS AND APPROVALS

• Complies with standard IEC 60 669.2.1
• Marking: KNX, CE

> **Note:**
> All technical information is available at
>
> **www.legrandoc.com**

11. MAINTENANCE

Clean the surface with a cloth.
Do not use acetone, tar-removing cleaning agents or trichloroethylene.

> **Caution:**
> Always test before using other special cleaning products.

12. COMMUNICATION OBJECTS

■ 12.1 List of objects

Here are listed the communication objects active by default settings.

No.	Object name	Function	Size	Flags
1	**Switching**	**Switching**	**1.001 DP_On/Off**	**CT**

Switching telegrams are sent via the group address linked to this object

No.	Object name	Function	Size	Flags
2	**Switching Status**	**Switching Status**	**1.001 DP_On/Off**	**CWTU**

Switching statuses are received via the group address linked to this object.

*If switching statuses are received but the Switching object has not been sent by the sensor, the regulation is stopped.

No.	Object name	Function	Size	Flags
5	**In Occupancy**	**In Occupancy**	**1.002 DP_Bool**	**CW**

In Occupancy statuses are received via the group address linked to this object.
It will be used especially for connecting slave sensor and increase a detection zone (13.5 Master/slave detection).
True: The sensor reacts as if there is an internal detection
False: No reaction

No.	Object name	Function	Size	Flags
6	**Occupancy status**	**Occupancy status**	**1.002 DP_Bool**	**CRT**

Out Occupancy statuses are sent via the group address linked to this object
True: When motion is detected
False: After vacancy time delay, or occupancy if vacancy is not used

No.	Object name	Function	Size	Flags
8	**Out Lux**	**Out Lux**	**9.004 DP_Lux**	**CRT**

Out Lux values are sent via the group address linked to this object.
Send operations can be set in ETS (Cyclical, on change, on request).

No.	Object name	Function	Size	Flags
16	**Switching group off**	**Switching group off**	**1.001 DP_On/Off**	**CRT**

Switching group off statuses are sent via the group address linked to this object.
On vacancy is sent an OFF via the group adress linked to this object.

No.	Object name	Function	Size	Flags
20	**Out occupancy**	**Out occupancy**	**1.002 DP_Bool**	**CT**

Out synchro Master-> Slave statuses are sent via the group address linked to this object
True: The maintain status is sent to the slave
False: The initial status is sent to the slave

No.	Object name	Function	Size	Flags
21	**Enable**	**Enable**	**1.003 DP_Enable**	**CRW**

Enable telegrams are received via the group address linked to this object.
They are used to lock (disable) or unlock (enable) the corresponding input.

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12. COMMUNICATION OBJECTS (continued)

■ 12.2 General parameters

12.2.1 Main function - Master: Light level only

Parameters	Settings
Main function	**Master: Light level only** Master: Detection only Master: Light level & detection Slave: Detection only

Only load and light level can be configured in the associated page, and regulation is active

12.2.1.1 Mode

• Auto on/Auto off mode

Comes on automatically: - At the detection of a presence if there is an insufficient natural level of light. Turns off automatically: - If no presence is detected and at the end of the time delay set. - Or if there is a sufficient natural level of light (activated setting).
Any new detection causes an automatic switch on if there is insufficient light.

• Walkthrough

- If there is no presence detected in the 3 minutes following an initial detection, the product will cut off after 3 minutes.
- If a new presence is detected in the 3 minutes following the initial detection, the device will cut off at the end of the time delay set.

Manual on/Auto off mode: Comes on via a manual switch, automatic switch off: - Where no presence is detected and at the end of the time delay set.

Following switch-off any new detection within a 30 second period will cause the device to be switched on automatically.

After 30 seconds the device is switched on via a manual switch.

Parameters	Settings
Reaction speed	Very Low Low **Normal** Fast Very Fast
This parameter determines the speed reaction of the régulation in dimming or switching	
Start regulation with power on	Yes **No**
This parameter determines if regulation is started with power on	

System behaviour:
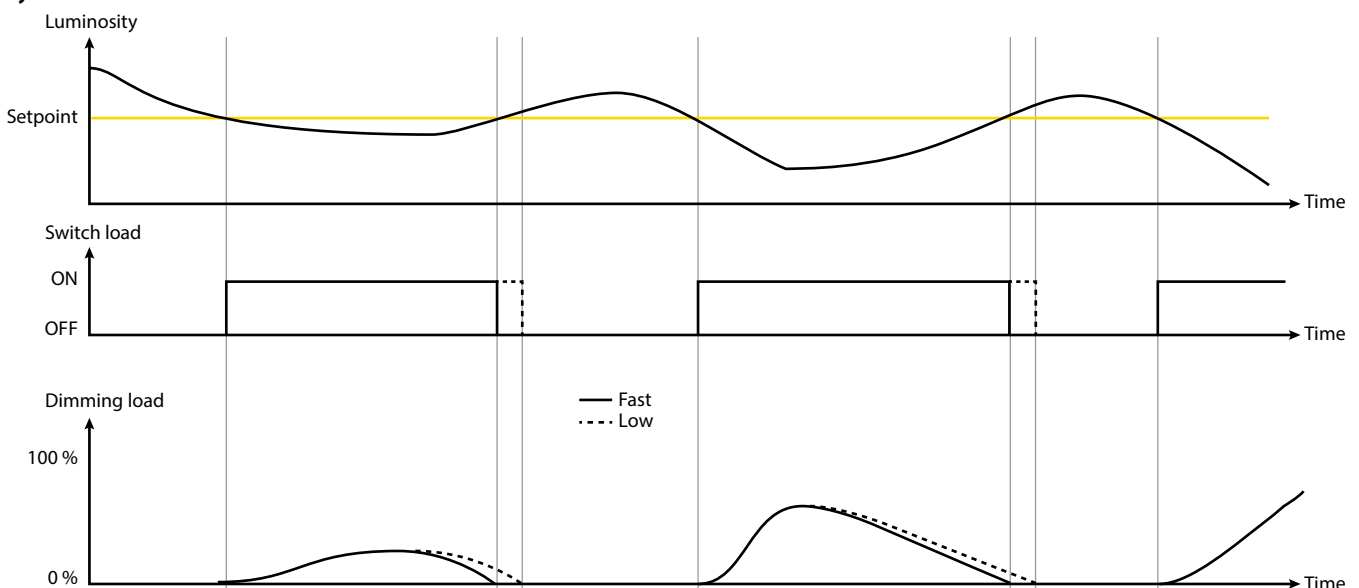
12. COMMUNICATION OBJECTS (continued)

■ **12.2 General parameters (continued)**

12.2.1 Main function - Master: Light level only (continued)

12.2.1.2 Mode: Manual ON/Auto OFF

No.	Object name	Function	Size	Flags
13	Synchro regulation	Synchro regulation	1.010 DP_Start/stop	CW

In Lux values are received via the group address linked to this object.
Start and stop can be configured in ETS.
Message start/stop régulation is received to this object.

No.	Object name	Function	Size	Flags
14	Regulation status	Regulation status	1.010 DP_Start/stop	CRT

Regulation statuses are sent via the group address linked to this object

System behaviour:

12. COMMUNICATION OBJECTS (continued)

■ **12.2 General parameters (continued)**

12.2.1 Main function - Master: Light level only (continued)

12.2.1.2 Mode: Manual ON/Auto OFF (continued)

Parameters	Settings
Action on "Synchro regulation" object on start	**Start regulation** ON + Start regulation Stop regulation Stop regulation + ON Stop regulation + OFF No reaction

This parameter determines the regulation reaction when Start received.
Start regulation: Regulation is run with no action on load
ON + Start regulation: Regulation is run with ON action on load
Stop regulation: Regulation is stopped with no action on load
Stop regulation + ON: Regulation is stopped with ON action on load
Stop regulation + OFF: Regulation is stopped with OFF action on load
No reaction: No reaction

Parameters	Settings
Action on "Synchro regulation" object on stop	**Start regulation** ON + Start regulation Stop regulation Stop regulation + ON Stop regulation + OFF No reaction

This parameter determines the regulation reaction when Stop received.
Start regulation: Regulation is run with no action on load
ON + Start regulation: Regulation is run with ON action on load
Stop regulation: Regulation is stopped with no action on load
Stop regulation + ON: Regulation is stopped with ON action on load
Stop regulation + OFF: Regulation is stopped with OFF action on load
No reaction: No reaction

Parameters	Settings
Use scene	**No** Yes

No: In scene regulation cannot be used, no accessible communication objects.

• **Use scene ➞ Yes**

Use scene	Yes
Scene A number (0: not used)	0
Scene A action	No reaction
Scene B number (0: not used)	0
Scene B action	No reaction
Scene C number (0: not used)	0
Scene C action	No reaction
Scene D number (0: not used)	0
Scene D action	No reaction
Scene E number (0: not used)	0
Scene E action	No reaction

12. COMMUNICATION OBJECTS (continued)

■ 12.2 General parameters (continued)

12.2.1 Main function - Master: Light level only (continued)

12.2.1.2 Mode: Manual ON/Auto OFF (continued)

• Use scene → Yes (continued)

When use scene is yes: this object communication is available.

No.	Object name	Function	Size	Flags
12	In_scene_ regulation	In_scene_ regulation	17.001 DP_Scene_ number	CW

8-bit auxiliary telegrams are received via the group address linked to this object.
On scene telegram you can start/stop régulation with on/off (mode manuel On/ Auto Off).

Parameters	Settings
Scene A to E number	**0-64**

This parameter determines which scene (1..64) is to be recalled.
If value "0" is set, no scene will be recalled

Parameters	Settings
Scene A to E action	**Start regulation** ON + Start regulation Stop regulation Stop regulation + ON Stop regulation + OFF No reaction

This parameter determines the regulation reaction when scene number is received.
Start regulation: Regulation is run with no action on load
ON + Start regulation: Regulation is run with ON action on load
Stop regulation: Regulation is stopped with no action on load
Stop regulation + ON: Regulation is stopped with ON action on load
Stop regulation + OFF: Regulation is stopped with OFF action on load
No reaction: No reaction

12. COMMUNICATION OBJECTS (continued)

■ **12.2 General parameters (continued)**

12.2.2 Main function - Master: Detection only

Parameters	Settings
Main function	Master: Light level only **Master: Detection only** Master: Light level & detection Slave: Detection only

Load, detection, early warning, AuxOutput and Advanced config can be configured in the various associated pages, and regulation is not active.

12.2.2.1 Mode: Auto ON/OFF

Parameters	Settings
Active regulation	Yes **No**

No: No regulation possible

System behaviour:

Time delay

Switch load

Dimming load

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Created: 19/05/2015

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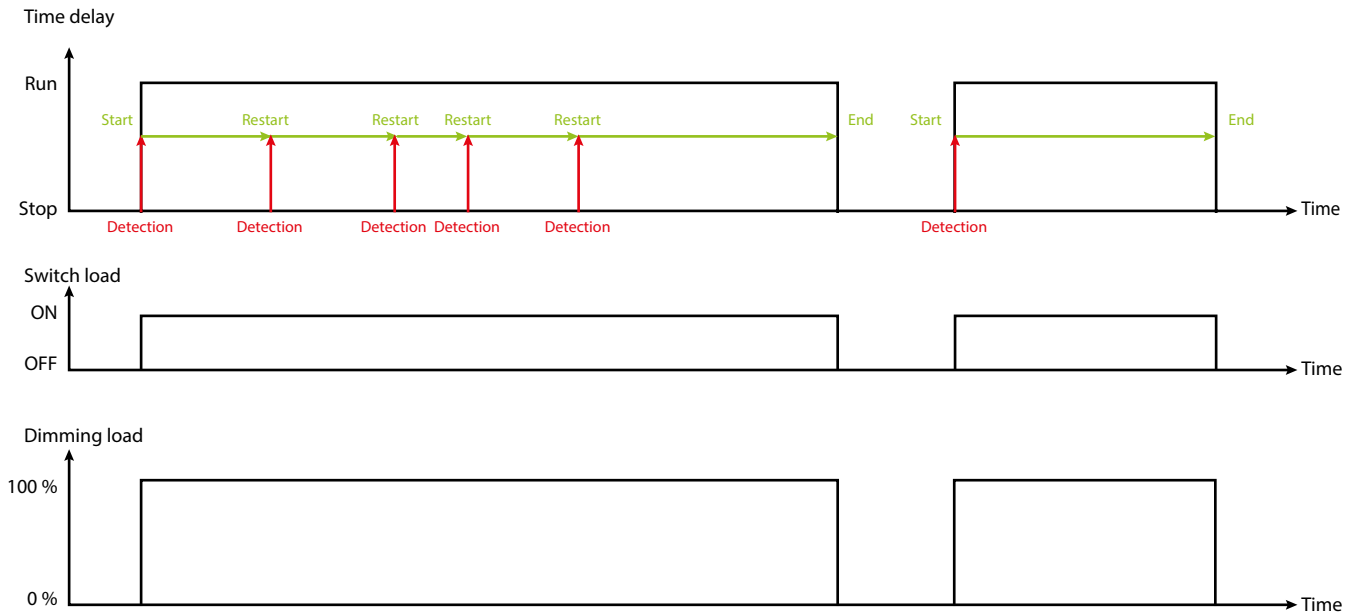
12. COMMUNICATION OBJECTS (continued)

▪ 12.2 General parameters (continued)

12.2.2 Main function - Master: Detection only (continued)
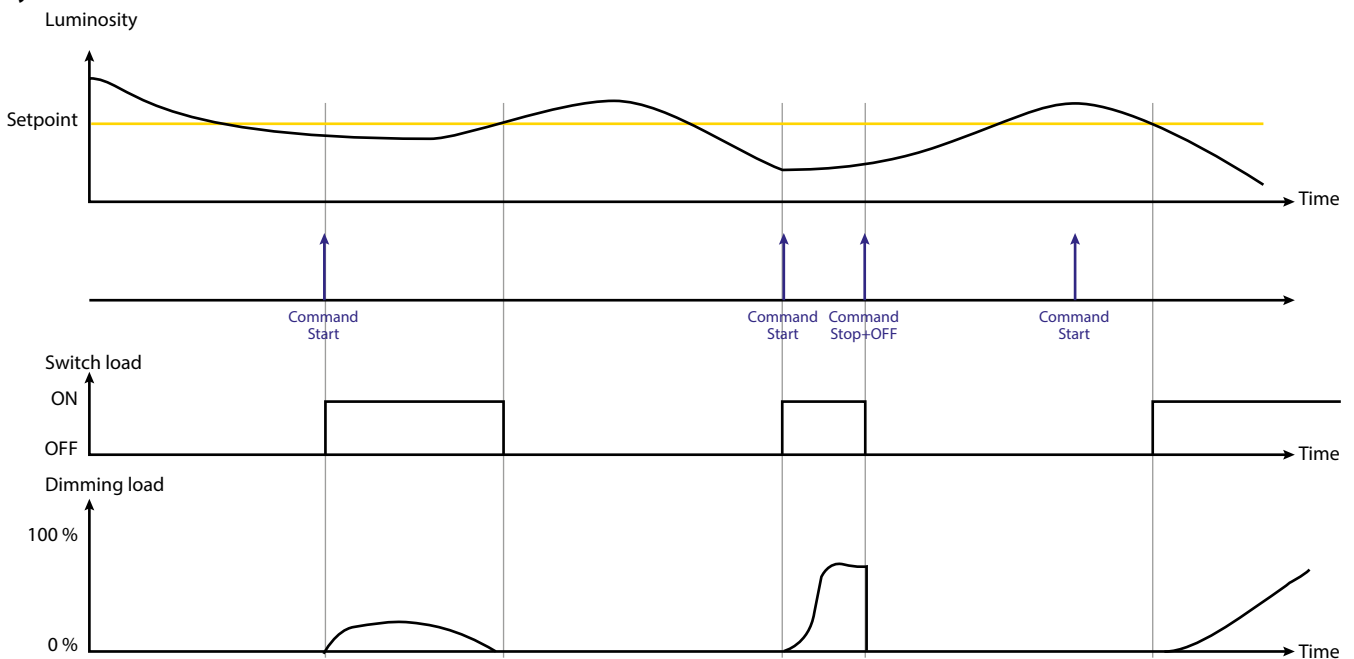
12.2.2.2 Mode: Manual ON/Auto OFF

Field	Value
General / Load / Detection config. / Auxiliary output / Advanced / Virtual keycard / Commissioning Tool	
Main function	Master : Detection only
Mode	Manual ON/Auto OFF
Active regulation	No

No.	Object name	Function	Size	Flags
13	Synchro on/off	Synchro on/off	1.010 DP_Start/stop	CW

Synchro on/off statuses are received via the group address linked to this object.

Parameters	Settings
Active regulation	Yes
	No

No: No regulation possible

System behaviour:

Time delay

Switch load

Dimming load
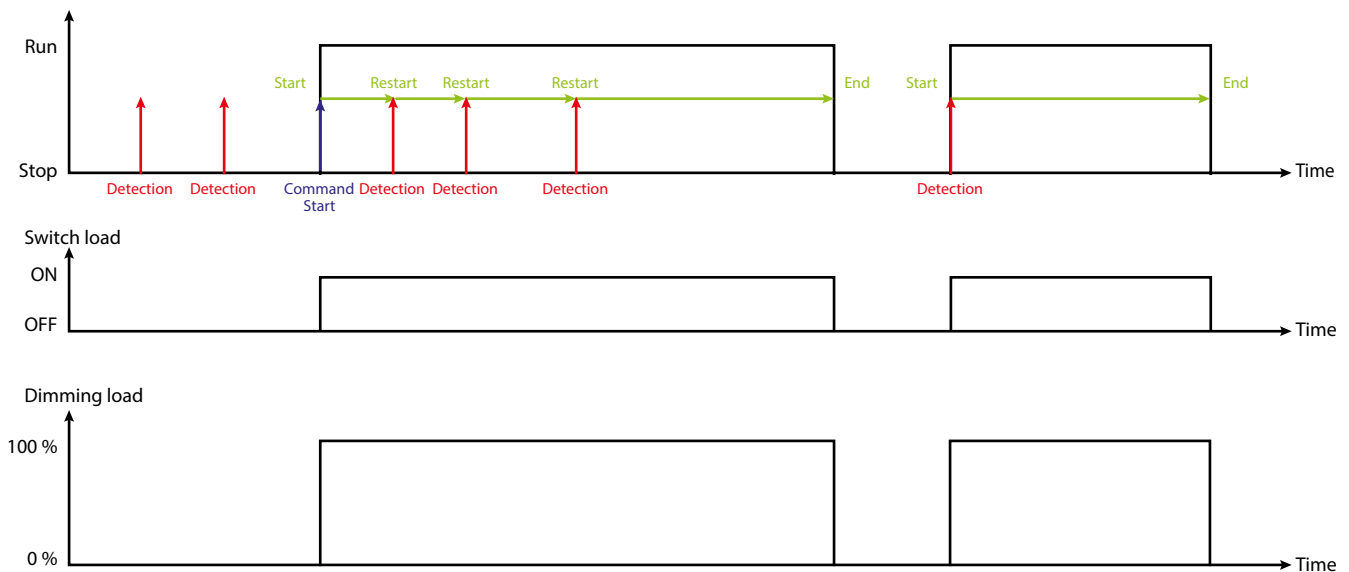
12. COMMUNICATION OBJECTS (continued)

■ **12.2 General parameters (continued)**

12.2.3 Main function - Master: Light level & Detection

Parameters	Settings
Main function	Master: Light level only Master: Detection only **Master: Light level & detection** Slave: Detection only

Load, light level, detection, early warning, AuxOutput and Advanced config can be configured in the various associated pages.

12.2.3.1 Mode: Auto ON/OFF

The system runs automatically.

Parameters	Settings
Active regulation	Yes **No**

No: No regulation possible
Yes: The cell in the sensor will switch ON/OFF or dim its associated loads according to variations in the natural light

System behaviour:

12. COMMUNICATION OBJECTS (continued)

■ **12.2 General parameters (continued)**

12.2.3 Main function - Master: Light level & Detection (continued)

12.2.3.1 Mode: Auto ON/OFF(continued)

Parameters	Settings
Active regulation	**Yes**
	No

No: No regulation possible
Yes: The cell in the sensor will switch ON/OFF or dim its associated loads according to variations in the natural light

Reaction speed	Very Low
	Low
	Normal
	Fast
	Very Fast

This parameter determines the speed reaction of the regulation in dimming or switching

When active régulation is yes: this object communication is available.

No.	Object name	Function	Size	Flags
10	**In_Detection_ enable**	**In_Detection_ enable**	**1.003 DP_Enable**	**CRW**

In detection enable statuses are received via the group address linked to this object.
Enable: The sensor is in Light level & detection mode
Disable: The sensor is in light level only mode
Used to enable/disable the DETECTION ONLY, by a control schedule for example.

12. COMMUNICATION OBJECTS (continued)

■ **12.2 General parameters (continued)**

12.2.3 Main function - Master: Light level & Detection (continued)

12.2.3.1 Mode: Auto ON/OFF(continued)

System behaviour:
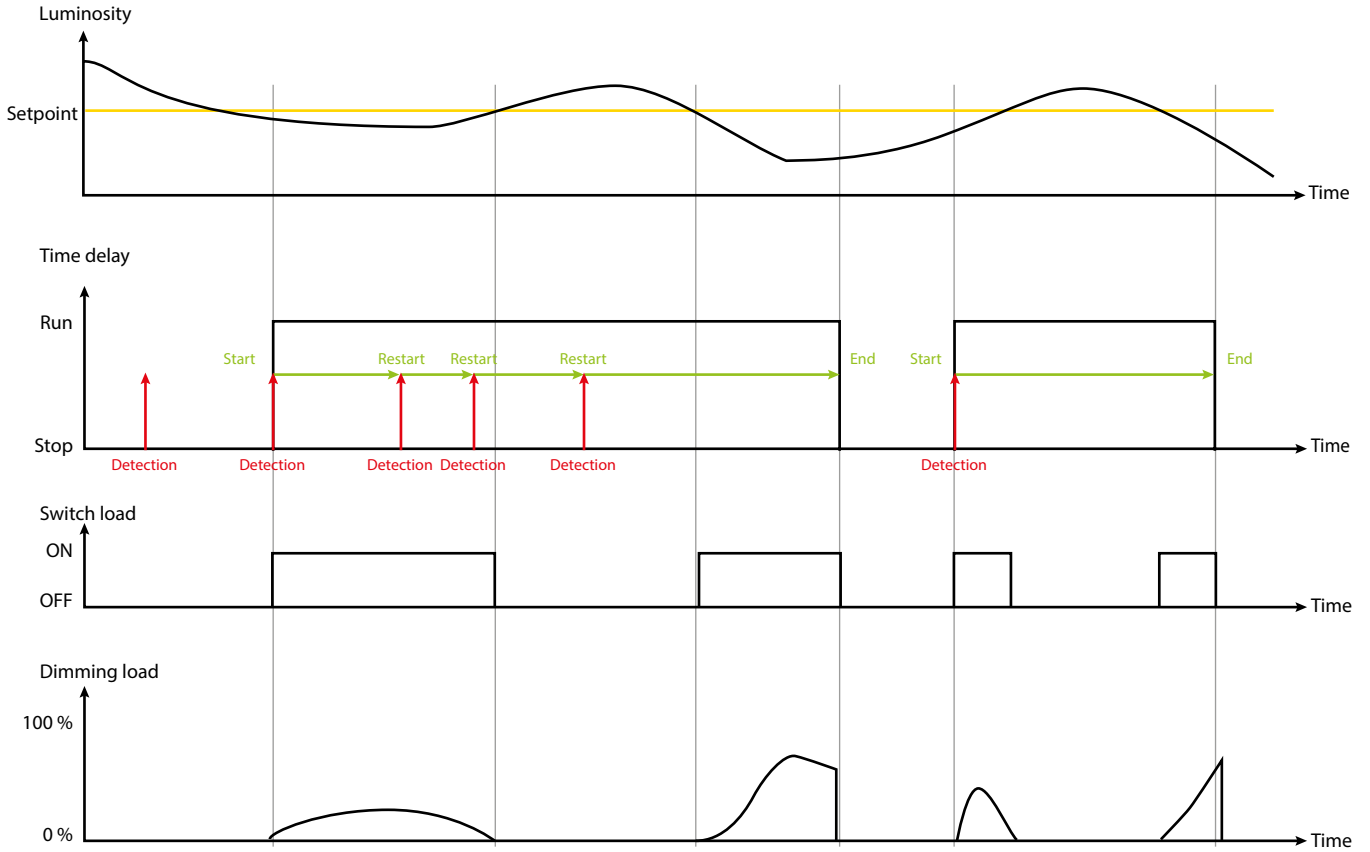
12.2.3.2 Mode: AUTO Walkthrough

Parameters	Settings
Active regulation	**Yes** No

No: No regulation possible
Yes: The cell in the sensor will switch ON/OFF or dim its associated loads according to variations in the natural light

Reaction speed	Very Low Low **Normal** Fast Very Fast

This parameter determines the speed reaction of the regulation in dimming or switching

CONTENTS

12. COMMUNICATION OBJECTS (continued)

■ **12.2 General parameters (continued)**

12.2.3 Main function - Master: Light level & Detection (continued)

12.2.3.3 Mode: Manual On/Auto Off

The system runs with manual operation.

General		Main function		Master : Light level & detection ▼
Load				
Light level config.				
Detection config.		Mode		Manual ON/Auto OFF ▼
Auxiliary output				
Advanced		Active regulation		No ▼

Virtual keycard				
Commissioning Tool				

No.	Object name	Function	Size	Flags
13	Synchro on/off	Synchro on/off	1.010 DP_Start/stop	CW

Synchro on/off statuses are received via the group address linked to this object

Parameters	Settings
Active regulation	Yes
	No

No: No regulation possible
Yes: The cell in the sensor will switch ON/OFF or dim its associated loads according to variations in the natural light

System behaviour:

CONTENTS

12. COMMUNICATION OBJECTS (continued)

■ **12.2 General parameters (continued)**

12.2.3 Main function - Master: Light level & Detection (continued)

12.2.3.3 Mode: Manual On/Auto Off (continued)

Main function	Master : Light level & detection
Mode	Manual ON/Auto OFF
Active regulation	Yes
Reaction speed	Normal
Action on "Synchro regulation" object on start	ON + Start regulation
Action on "Synchro regulation" object on stop	Stop regulation + OFF
Use scene	No

General
Load
Light level config.
Detection config.
Auxiliary output
Advanced

Virtual keycard
Commissioning Tool

Parameters	Settings
Active regulation	**Yes** No

No: No regulation possible
Yes: The cell in the sensor will switch ON/OFF or dim its associated loads according to variations in the natural light

When active régulation is yes: this object communication is available.

No.	Object name	Function	Size	Flags
13	**Synchro regulation**	**Synchro regulation**	**1.010 DP_Start/stop**	**CW**

In Lux statuses are received via the group address linked to this object.
Start and stop can be configured in ETS.

No.	Object name	Function	Size	Flags
14	**Regulation status**	**Regulation status**	**1.010 DP_Start/stop**	**CRT**

Regulation statuses are sent via the group address linked to this object

12. COMMUNICATION OBJECTS (continued)

■ **12.2 General parameters (continued)**

12.2.3 Main function - Master: Light level & Detection (continued)

12.2.3.3 Mode: Manual On/Auto Off (continued)

System behaviour:

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Updated: 24/06/2019

Created: 19/05/2015

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12. COMMUNICATION OBJECTS (continued)

■ 12.2 General parameters (continued)

12.2.3 Main function - Master: Light level & Detection (continued)

12.2.3.3 Mode: Manual On/Auto Off (continued)

Parameters	Settings
Reaction speed	Very Low Low **Normal** Fast Very Fast

This parameter determines the speed reaction of the regulation in dimming or switching

Parameters	Settings
Action on "Synchro regulation" object on start	**Start regulation** ON + Start regulation Stop regulation Stop regulation + ON Stop regulation + OFF No reaction

This parameter determines the regulation reaction when Start received.
Start regulation: Regulation is run with no action on load
ON + Start regulation: Regulation is run with ON action on load
Stop regulation: Regulation is stopped with no action on load
Stop regulation + ON: Regulation is stopped with ON action on load
Stop regulation + OFF: Regulation is stopped with OFF action on load
No reaction: No reaction

Parameters	Settings
Action on "Synchro regulation" object on stop	**Start regulation** ON + Start regulation Stop regulation Stop regulation + ON Stop regulation + OFF No reaction

This parameter determines the regulation reaction when Stop received.
Start regulation: Regulation is run with no action on load
ON + Start regulation: Regulation is run with ON action on load
Stop regulation: Regulation is stopped with no action on load
Stop regulation + ON: Regulation is stopped with ON action on load
Stop regulation + OFF: Regulation is stopped with OFF action on load
No reaction: No reaction

Parameters	Settings
Use scene	**No** Yes

*No:* In scene regulation cannot be used, no accessible communication objects.

CONTENTS

12. COMMUNICATION OBJECTS (continued)

■ **12.2 General parameters (continued)**

12.2.3 Main function - Master: Light level & Detection (continued)

12.2.3.3 Mode: Manual On/Auto Off (continued)

• **Use scene → Yes**

Use scene	Yes
Scene A number (0: not used)	0
Scene A action	No reaction
Scene B number (0: not used)	0
Scene B action	No reaction
Scene C number (0: not used)	0
Scene C action	No reaction
Scene D number (0: not used)	0
Scene D action	No reaction
Scene E number (0: not used)	0
Scene E action	No reaction

When use scene is yes: this object communication is available.

No.	Object name	Function	Size	Flags
12	In_scene_ regulation	In_scene_ regulation	17.001 DP_Scene_ number	CW

8-bit auxiliary telegrams are received via the group address linked to this object

Parameters	Settings
Scene A to E number	**0-64**

This parameter determines which scene (1..64) is to be recalled.
If value "0" is set, no scene will be recalled

Parameters	Settings
Scene A to E action	**Start regulation** ON + Start regulation Stop regulation Stop regulation + ON Stop regulation + OFF No reaction

This parameter determines the regulation reaction when scene number is received.
Start regulation: Regulation is run with no action on load
ON + Start regulation: Regulation is run with ON action on load
Stop regulation: Regulation is stopped with no action on load
Stop regulation + ON: Regulation is stopped with ON action on load
Stop regulation + OFF: Regulation is stopped with OFF action on load
No reaction: No reaction

12. COMMUNICATION OBJECTS (continued)

■ 12.2 General parameters (continued)

12.2.4 Slave: Detection only

Parameters	Settings
Main function	Master: Light level only
	Master: Detection only
	Master: Light level & detection
	Slave: Detection only

You can configure the detection,, Advance config in the different page associated, and regulation is not active.You can associate the sensors with the sensor master to extend the detection zone , see the configuration § 13.5.

General
Load
Light level config.
Detection config.
Auxiliary output
Advanced

Virtual keycard
Commissioning Tool

Main function   Slave : Detection only

12. COMMUNICATION OBJECTS (continued)

■ 12.3 Load

Page only available for Master: Light level Only, Master: Detection Only and Master: Light level & Detection modes.

No.	Object name	Function	Size	Flags
1	**Switching**	**Switching**	**1.001 DP_On/Off**	**CT**

Switching telegrams are sent via the group address linked to this object

No.	Object name	Function	Size	Flags
2	**Switching Status**	**Switching Status**	**1.001 DP_On/Off**	**CWTU**

Switching statuses are received via the group address linked to this object.

*If switching statuses are received but the Switching object has not been sent by the sensor, the regulation is stopped.

12.3.1 Use dimming load

Parameters	Settings
Use dimming load	**Yes**
	No

No: Level, level status and In_Sync_Dim cannot be used, no accessible communication objects

No.	Object name	Function	Size	Flags
3	**Level**	**Level**	**5.001 DP Percentage**	**CT**

Level telegrams are sent via the group address linked to this object

No.	Object name	Function	Size	Flags
4	**Level status**	**Level status**	**5.001 DP Percentage**	**CWTU**

Level statuses are received via the group address linked to this object.

*If Level statuses are received but the Level object has not been sent by the sensor, the regulation is stopped.

No.	Object name	Function	Size	Flags
9	**In Synchro dimming**	**In Synchro dimming**	**3.007 DP_dimming control**	**CW**

In override dimming values are received via the group address linked to this object. Any value received on this object is considered to be an override.

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12. COMMUNICATION OBJECTS (continued)

■ **12.3 Load (continued)**

12.3.2 Use expert parameters

Parameters only available for Master Light level Only and Master Light level & Detection modes.

Parameters	Settings
Dimming expert configuration	Yes No

No: Use for the current load type
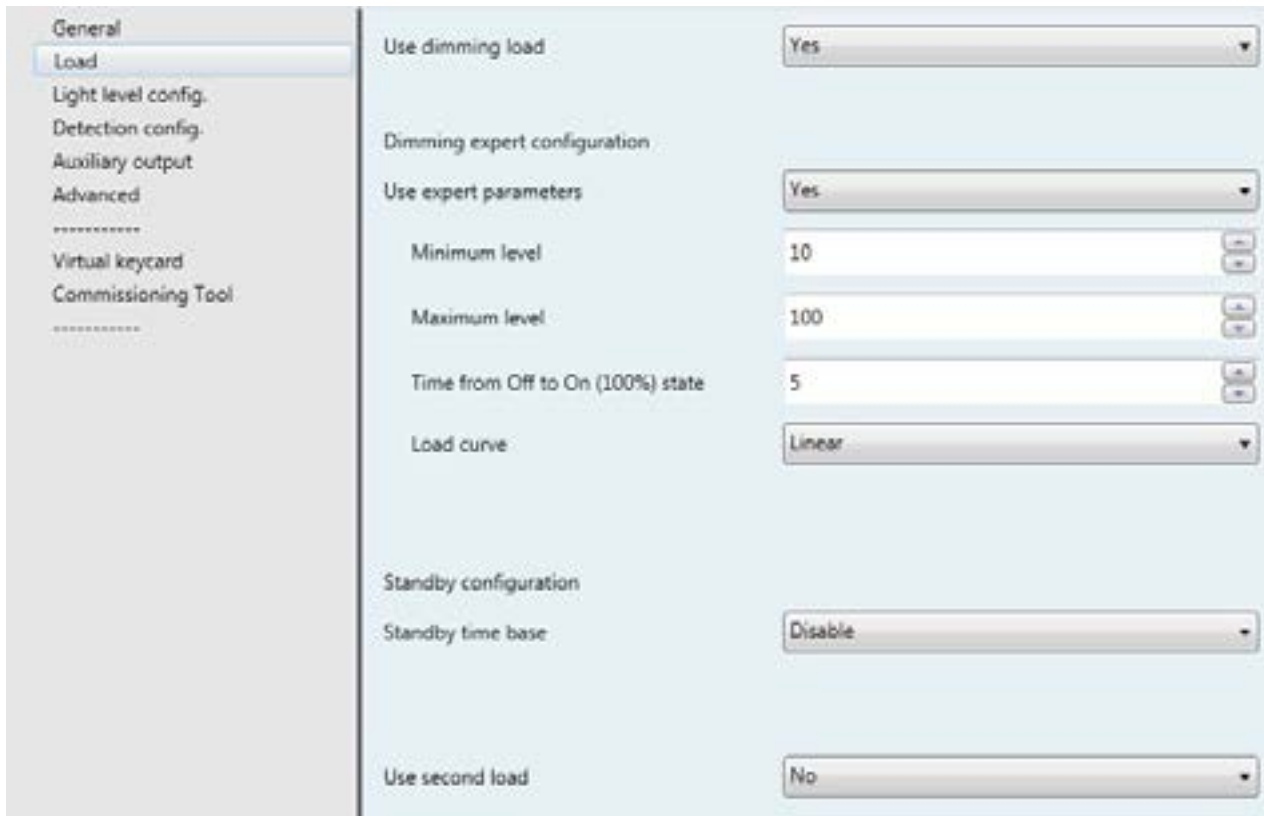
When dimming expert configuration is yes: this object communication is available.

No.	Object name	Function	Size	Flags
24	**Syncro_ MinimumLevel**	**Syncro_ MinimumLevel**	**5.001 DP Percentage**	**CRW**

Synchro_MinimumLevel values are received via the group address linked to this object

Parameters	Settings
Minimum level	0-100

This parameter determines the minimum level of the actuator

Parameters	Settings
Maximum level	0-100

This parameter determines the maximum level of the actuator

Parameters	Settings
Time from Off state to On (100%) state	1-60

This parameter determines the time (in seconds) for the actuator to change from OFF to ON (0% to 100%)

Parameters	Settings
Load curve	Linear Type 1 (DALI) Custom Reserved Reserved

This parameter determines the response curve of the actuator

12. COMMUNICATION OBJECTS (continued)

■ 12.3 Load (continued)

12.3.3 Standby time base (function only available in Master mode: detection and Master: Light level & Detection)

Parameters only available for Master Light level Only and Master Light level & Detection modes.

• Standby configuration :
You alert the user to the switch off the light: after the last detection (plus detection time delay) you can reduce the level of light.

Parameters	Settings
Standby time base	**Disable** Infinite Seconds Minutes

Disable: Standby is not active
Infinite: At the end of time delay the load decreases to standby level for an infinite time
Seconds: At the end of time delay the load decreases to standby level for the standby time in seconds
Minutes: At the end of time delay the load decreases to standby level for the standby time in minutes
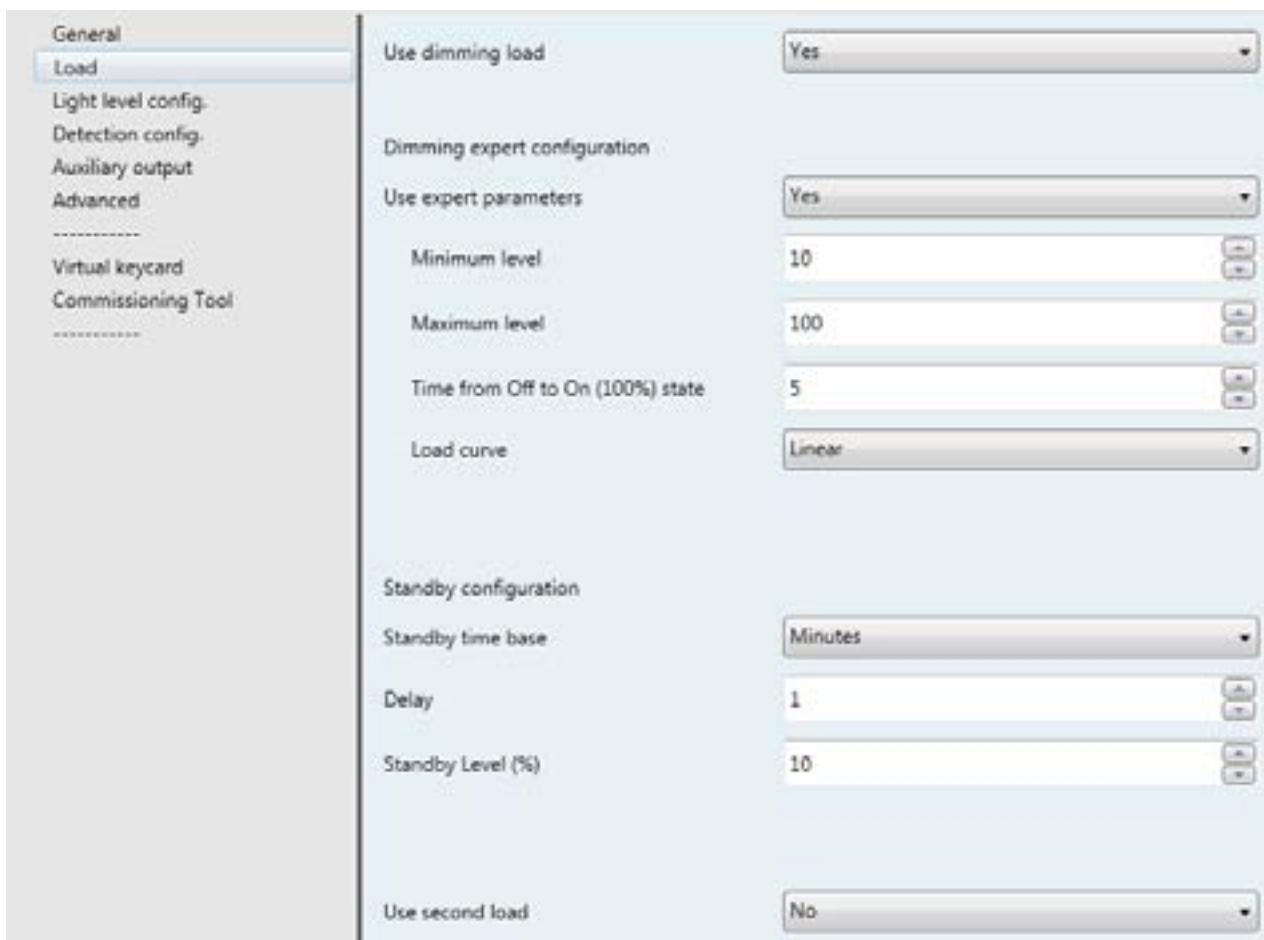
12. COMMUNICATION OBJECTS (continued)

■ **12.3 Load (continued)**

12.3.3 Standby time base (function only available in Master mode: detection and Master: Light level & Detection) (continued)

• **Standby time base → Seconds**

A standby function, in seconds, is used. At the end of time delay the load decreases to standby level for the standby time in seconds.

Parameters	Settings
Delay	0-60
This parameter determines the time for the standby in seconds	

Parameters	Settings
Standby level	0-100
This parameter determines the standby level (default value 10%)	

• **Standby time base → Minutes**

A standby function, in minutes, is used. At the end of time delay the load decreases to standby level for the standby time in minutes.

Parameters	Settings
Delay	0-60
This parameter determines the time for the standby in minutes	

Parameters	Settings
Standby level	0-100
This parameter determines the standby level (default value 10%)	

• Standby time base → Infinite

An infinite standby function is used. At the end of time delay the load decreases to standby level for an infinite time.

Parameters	Settings
Standby level	0-100
This parameter determines the standby level (default value 10%)	

12. COMMUNICATION OBJECTS (continued)

■ **12.3 Load (continued)**

12.3.4 Use second load

Parameters	Settings
Use second load	**Yes**
	No

No: Switching second light and level second light cannot be used, no accessible communication objects
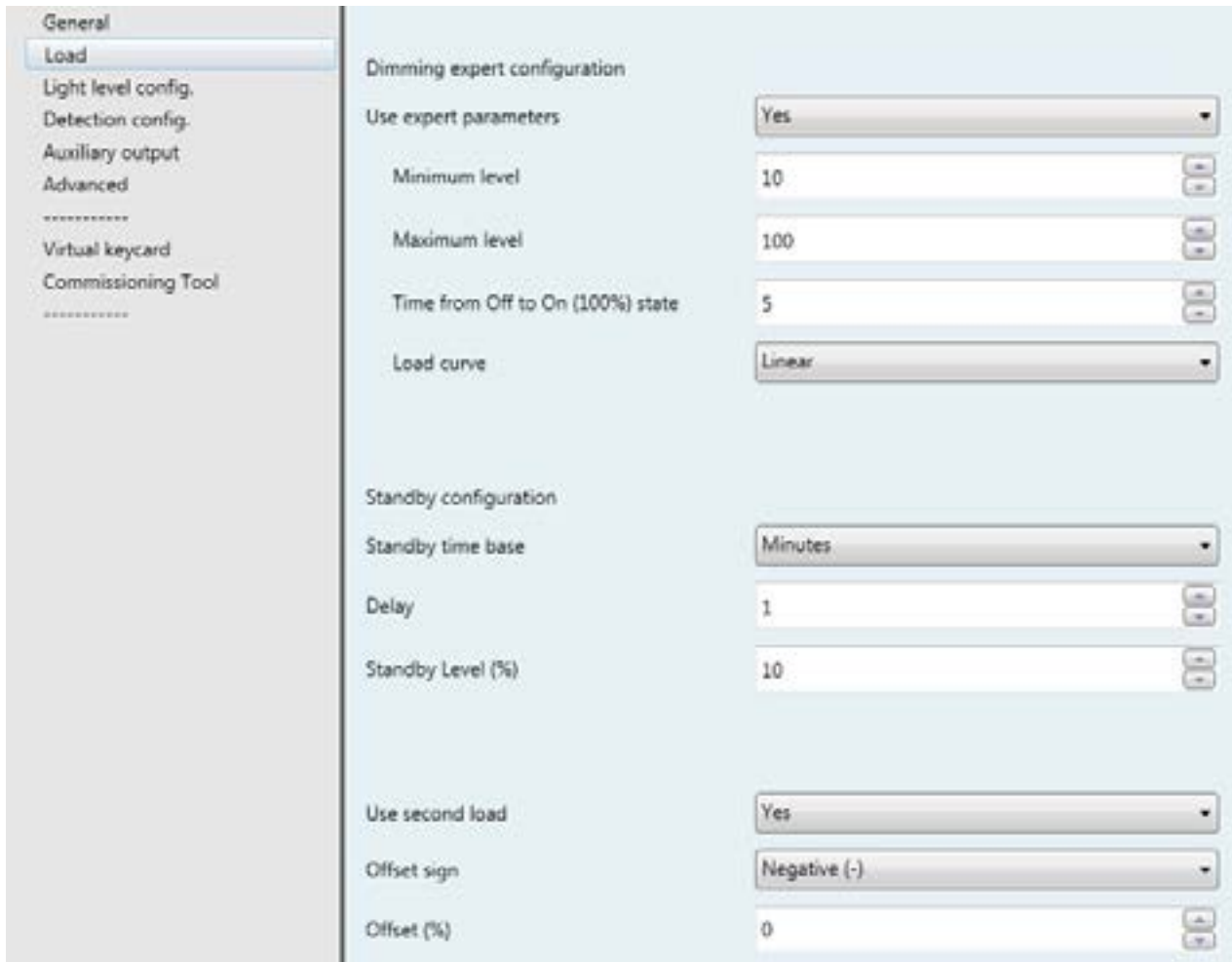
When use second load is yes: this object communication is available.

No.	Object name	Function	Size	Flags
22	**Switching second light**	**Switching second light**	**1.001 DP_On/Off**	**CRT**

Switching second light telegrams are sent via the group address linked to this object.
Used to pilot on On/Off 2nd light with an offset compared to 1st load.

23	Level second light	Level second light	5.001 DP Percentage	CRT

Level second light telegrams are sent via the group address linked to this object.
Used to pilot on dimming 2nd light with an offset compared to 1st load.

Parameters	Settings
Offset sign	**Negative**
	Positive

This parameter determines the sign of the offset value

Offset (%)	0-100

This parameter determines the offset value

12. COMMUNICATION OBJECTS (continued)

■ 12.4 Light level config

Page only available for Master: Light level Only and Master: Light level & Detection modes.

Parameters	Settings
Setpoint	0 Lux…**100 Lux**….1275 Lux

This parameter represents the set luminosity threshold to be maintained. It is expressed in Lux

12.4.1 Use external daylight cell

For light régulation you choose if you use lux value measured by the sensor (No) or you can use an external daylight cell (Yes) see below.

Parameters	Settings
Use external daylight cell	**No** Yes
Send condition	**On request only** On change Cyclical On change + Cyclical

On request only: The object value is updated but not sent
On change: The object value is sent when it changes
Cyclical: The object value is sent cyclically
On change + Cyclical: The object value is sent when it changes and cyclically

No.	Object name	Function	Size	Flags
8	**Out Lux**	**Out Lux**	**9.004 DP_Lux**	**CRT**

Out Lux values are sent via the group address linked to this object.
Send operations can be set in ETS (Cyclical, on change, on request)

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12. COMMUNICATION OBJECTS (continued)

■**12.4 Light level config (continued)**

12.4.1 Use external daylight cell (continued)

On change

Parameters	Settings
Max. number of messages per minute	1-60
This parameter determines the maximum number of messages per minute	

Parameters	Settings
Dead band	1-100
This parameter determines the percentage variation for validating a change	

Cyclical
The object value is sent cyclically

Parameters	Settings
Cyclical interval (seconds)	1-255
This parameter determines the timebase for sending lux in seconds	

On change + Cyclical

Parameters	Settings
Cyclical interval (seconds)	1-255
This parameter determines the timebase for sending lux in seconds	

Parameters	Settings
Max. number of messages per minute	1-60
This parameter determines the maximum number of messages per minute. The value must be higher than the timebase/60.	

Parameters	Settings
Dead band	1-100
This parameter determines the percentage variation for validating a change	

When use external daylight cell is yes: this object communication is available.

No.	Object name	Function	Size	Flags
7	**In Lux**	**In Lux**	**9.004 DP_Lux**	**CW**

In Lux values are received via the group address linked to this object.
The sensor reacts as if it had an internal daylight cell

> **Warning:** When an external daylight cell is used, the provision of light must be set with the IR commissioning tool.

12. COMMUNICATION OBJECTS (continued)

■ **12.5 Detection config**

Page only available for Master Detection Only and Master Light level & Detection modes.

No.	Object name	Function	Size	Flags
5	In Occupancy	In Occupancy	1.002 DP_Bool	CW

In Occupancy statuses are received via the group address linked to this object.
True: The sensor reacts as if there was an internal detection
False: No reaction

No.	Object name	Function	Size	Flags
6	Out Occupancy	Out Occupancy	1.002 DP_Bool	CRT

Out Occupancy statuses are sent via the group address linked to this object
True: When motion detected
False: After vacancy time delay, or occupancy if vacancy is not used

No.	Object name	Function	Size	Flags
20	Out Synchro Master → Slave	Out Synchro Master → Slave	1.002 DP_Bool	CT

Out synchro Master-> Slave statuses are sent via the group address linked to this object
True: The maintain status is sent to the slave
False: The initial status is sent to the slave

Parameters	Settings
Use detection LED	**Yes** No
This parameter determines whether or not the detection LED is to be used when detection is active	
Time delay: hours	0-17
This parameter determines the hours of the time delay	
Time delay: minutes	0-59
This parameter determines the minutes of the time delay	
Time delay: seconds	0-59
This parameter determines the seconds of time delay. If the total value is less than 5 s the time delay is automatically set to 5 s	
Transfer In Occupancy to "Occupancy Status"	Yes **No**
This parameter determines how many "presence events" are transmitted on the bus. Is "yes" the presence events of all sensors being part of the master-slave configuration are passed on the KNX/BUS; This configuration is useful for an external supervisor. If "no" only the presence event of the master sensor is passed on the KNX/BUS *Yes:* you have the occupancy status for each sensors : master and slaves .usefull for examplle in supervision *No:* you have one occupancy status for all sensors of the detection zone.You can use it to pilot a corridor for example.	

12. COMMUNICATION OBJECTS (continued)

■ **12.5 Detection config (continued)**

12.5.1 Send Condition

Page only available for Slave Detection Only mode.

General	Use detection led	No ▼
Detection config.		
Advanced		
────────	Minimum time between two sends (seconds)	5
Commissioning Tool		
────────	Send condition	On request only ▼

Parameters	Settings
Send condition	**On request only**
	On change
	Cyclical
	On change + Cyclical

On request only: The object value is updated but not sent
On change: The object value is sent when it changes
Cyclical: The object value is sent cyclically
On change + Cyclical: The object value is sent when it changes and cyclically

On request only
The object value is updated but not sent

On change
The object value is sent when detection is validated

Parameters	Settings
Max. number of messages per minute	1-60

This parameter determines the maximum number of messages per minute

Cyclical
The object value is sent cyclically

Parameters	Settings
Cyclical interval (seconds)	1-255

This parameter determines the timebase for sending lux in seconds

On change + Cyclical

Parameters	Settings
Cyclical interval (seconds)	1-255

This parameter determines the timebase for sending lux in seconds

Max. number of messages per minute	1-60

This parameter determines the maximum number of messages per minute.
The value must be higher than the timebase/60.

12. COMMUNICATION OBJECTS (continued)

■ **12.6 Auxiliary output**

Page only available for Master: Detection Only, Master: Light level & Detection and Slave: Detection Only modes

Parameters	Settings
Auxiliary object type	None **Switchting** Scaled value HVAC Mode Scene 2 bytes value

12.6.1 None

The auxiliary output cannot be used, no accessible communication objects.

12.6.2 Switching

No.	Object name	Function	Size	Flags
11	Switching Auxiliary	Switching Auxiliary	1.001 DP_On/Off	CT

Switching Auxiliary telegrams are sent via the group address linked to this object

Parameters	Settings
Send on Occupancy	**Yes** No
This parameter determines the reaction of the auxiliary on occupancy	

Parameters	Settings
Value	On **Off**
This parameter determines the value to send on occupancy	

Parameters	Settings
Send on Vacancy	**Yes** No
This parameter determines the reaction of the auxiliary on vacancy	

Parameters	Settings
Value	On **Off**
This parameter determines the value to send on occupancy	

12. COMMUNICATION OBJECTS (continued)

■ 12.6 Auxiliary output (continued)

12.6.3 Scaled values

No.	Object name	Function	Size	Flags
11	Scaling Auxiliary	Scaling Auxiliary	5.001 DP_Scaling	CW

Scaling Auxiliary telegrams are sent via the group address linked to this object

Parameters	Settings
Send on Occupancy	**Yes**
	No
This parameter determines the reaction of the auxiliary on occupancy	
Value	0-100
This parameter determines the value to send on occupancy	
Send on vacancy	**Yes**
	No
This parameter determines the reaction of the auxiliary on vacancy	
Value	0-100
This parameter determines the value to send on vacancy	

12. COMMUNICATION OBJECTS (continued)

■ 12.6 Auxiliary output (continued)

12.6.4 HVAC Mode

No.	Object name	Function	Size	Flags
11	HVAC Mode	HVAC Mode	20.102 DP_HVACMode	CW

Percent auxiliary telegrams are sent via the group address linked to this object

Parameters	Settings
Send on Occupancy	**Yes** No
This parameter determines the reaction of the auxiliary on occupancy	
Value	0-255
This parameter determines the value to send on occupancy	
Send on vacancy	**Yes** No
This parameter determines the reaction of the auxiliary on vacancy	
Value	0-255
This parameter determines the value to send on vacancy	

12. COMMUNICATION OBJECTS (continued)

■ **12.6 Auxiliary output (continued)**

12.6.5 Scene

General	Auxiliary object type	Scene ▼
Load	Send on occupancy	Yes ▼
Light level config.		
Detection config.	Value	1
Auxiliary output		
Advanced	Send on vacancy	Yes ▼

Virtual keycard	Value	1
Commissioning Tool		

No.	Object name	Function	Size	Flags
11	8-bit scene Auxiliary	8-bit scene Auxiliary	17.001 DP_ SceneNumber	CW

8-bit scene auxiliary telegrams are sent via the group address linked to this object

Parameters	Settings
Send on Occupancy	**Yes** No
This parameter determines the reaction of the auxiliary on occupancy	
Value	1-64
This parameter determines which scene (1..64) to send on occupancy. If value "0" is set, no scene will be recalled.	
Send on vacancy	**Yes** No
This parameter determines the reaction of the auxiliary on vacancy	
Value	1-64
This parameter determines which scene (1..64) to send on vacancy. If value "0" is set, no scene will be recalled.	

12. COMMUNICATION OBJECTS (continued)

■ 12.6 Auxiliary output (continued)

12.6.6 2 bytes value

General	Auxiliary object type	2 bytes value ▼
Load		
Light level config.	Send on occupancy	Yes ▼
Detection config.		
Auxiliary output	Value	0
Advanced		
------------	Send on vacancy	Yes ▼
Virtual keycard		
Commissioning Tool	Value	0

No.	Object name	Function	Size	Flags
11	2-byte unsigned Auxiliary	2-byte unsigned Auxiliary	9.001 DP_Value_ Temp	CRT

2-bytet unsigned auxiliary telegrams are sent via the group address linked to this object

Parameters	Settings
Send on Occupancy	**Yes** No
This parameter determines the reaction of the auxiliary on occupancy	
Value	0-65535
This parameter determines the value to send on occupancy	
Send on vacancy	**Yes** No
This parameter determines the reaction of the auxiliary on vacancy	
Value	0-65535
This parameter determines the value to send on vacancy	

12. COMMUNICATION OBJECTS (continued)

■ 12.7 Advanced

Page only available for Master: Detection Only, Master: Light level Only and Master: Light level & Detection modes.
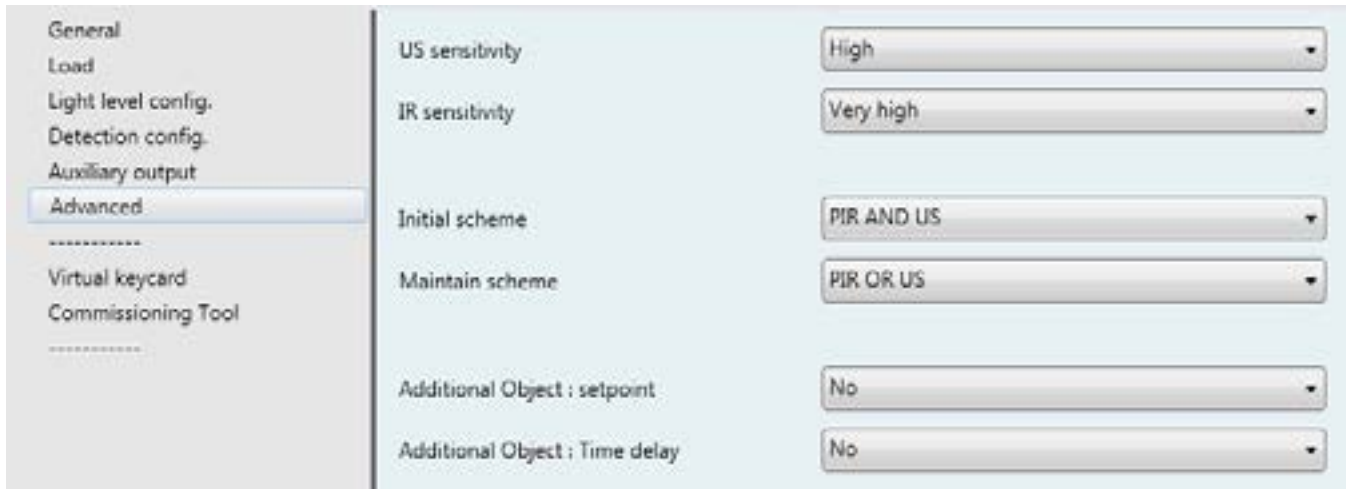
12.7.1 Sensitivity (only available for Master: Detection Only, Master: Light level & Detection and Slave: Detection Only modes)

Parameters	Settings
US sensitivity	Low Medium **High** Very high
This parameter determines the sensitivity of ultrasound sensors	
PIR sensitivity	Low Medium High **Very high**
This parameter determines the sensitivity of PIR sensors	

12.7.2 System detection (only available for Master: Detection Only, Master: Light level & Detection and Slave: Detection Only modes)

Parameters	Settings
Initial scheme	PIR only US only **PIR and US** PIR or US
This parameter determines the sensor detection system for initialising motion detection	
Maintain scheme	PIR only US only **PIR and US** PIR or US
This parameter determines the sensor detection system for maintaining motion detection	

12. COMMUNICATION OBJECTS (continued)

■ 12.8 Advanced (continued)

12.7.3 Additional object for expert mode

Here shuold be explained the 2 objects "Additional object: setpoint" and "Additional object: Time delay"

With these 2 "Additional object, you change parametrs setpoint and Time delay"of the sensors by a supervisor for example.

Parameters	Settings
Additional Objec: setpoint	**No** Yes

No: Additional object cannot be used, no accessible communication objects

Parameters	Settings
Additional Objec: Timedelay	**No** Yes

No: Additional object cannot be used, no accessible communication objects

When additional object setpoint and time delay is yes: this object communication is available.

No.	Object name	Function	Size	Flags
15	**Setpoint**	**Setpoint**	**9.004 DP_Lux**	**CRW**

Occupancy setpoints are received via the group address linked to this object.
You can change day light level via the group adress linked to this object.
*Only accessible if internal or external daylight cell is used.

No.	Object name	Function	Size	Flags
17	**TimeDelay**	**TimeDelay**	**7.005 DP_Time_ Period_Sec**	**CRW**

Occupancy TimeDelays are received via the group address linked to this object.
If the value received is less than 5 s the time delay is set automatically to 5 s.
You can change the value by supervisor.
If the value received.

No.	Object name	Function	Size	Flags
19	**Recall**	**Recall**	**1.010 DP_Start/stop**	**CW**

Recalls are received via the group address linked to this object.
Start: Recalls the initial values of Setpoint and TimeDelay; the values configured
   before the changes operated via objects.
Stop: No reaction.

12. COMMUNICATION OBJECTS (continued)

■ **12.8 Virtual Keycard**

The function is triggered by the "door contact" event which launch the so called "Virtual keycard time delay", a time offset in which the sensor understand if the room is occupied or not, based on some informations: sensor detection, door contact events, push buttons event. Once the result of the function is "occupied" it remains until there is another "Door contact event" which trigger another "Virtual keycard time delay" to understand the room status and eventually turn OFF the lights, launch an absence scenario or launch any other logic related to vacancy event.

Page only available for Master Detection Only and Master Light level & Detection modes.
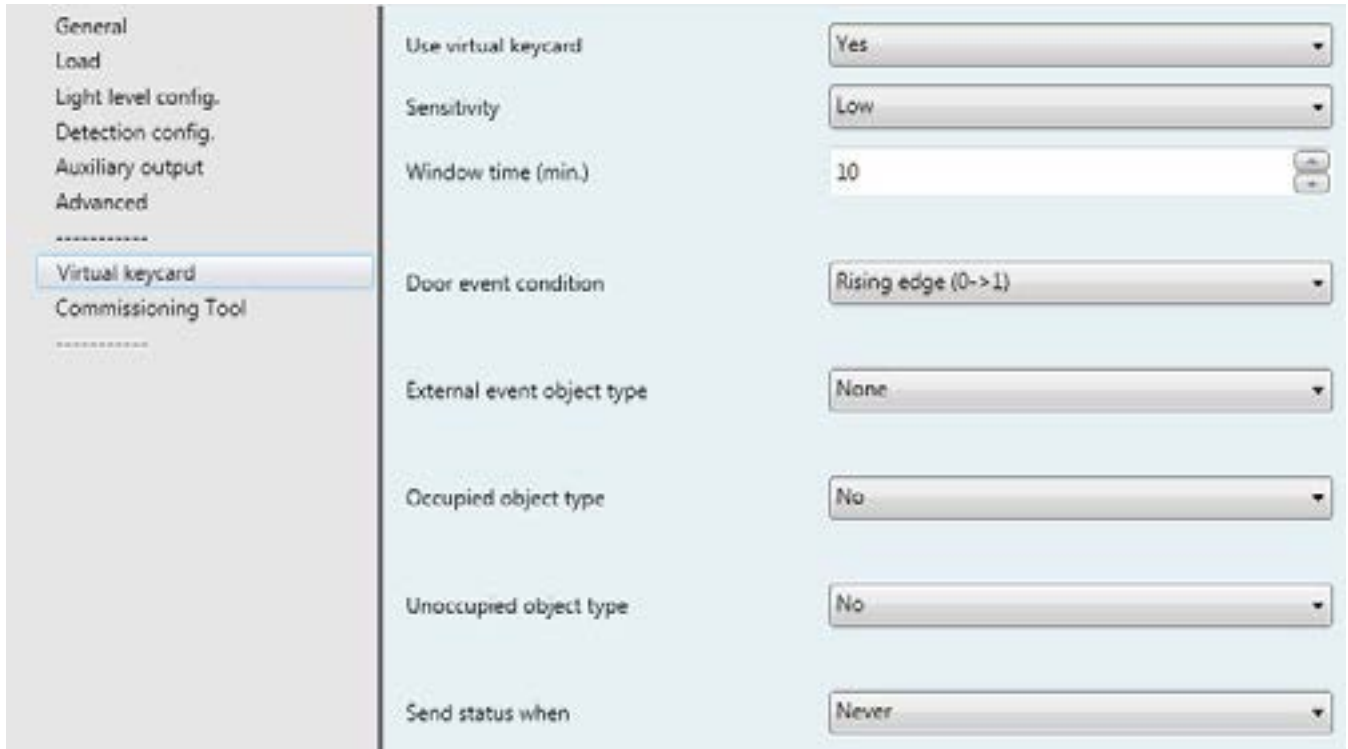
12.8.1 Use Virtual Keycard

Parameters	Settings
Use virtual keycard	**No**
	Yes

No: The virtual keycard function cannot be used, no accessible communication objects

When use virtualkeycard is yes: this object communication is available.

No.	Object name	Function	Size	Flags
31	**Virtual Keycard**	**Door contact**	**1.001 DP_On/Off**	**CRWTU**

VKC_Door_contact telegrams are received via the group address linked to this object

No.	Object name	Function	Size	Flags
33	**Virtual Keycard**	**Status**	**1 bit**	**CT**

VKC Statuses are sent via the group address linked to this object

No.	Object name	Function	Size	Flags
36	**Virtual Keycard**	**In detection**	**1.003 DP_Boolean**	**CW**

VKC in detection telegrams are received via the group address linked to this object

With object 36 is possible to associate others sensors and extend the detection zone of the first sensor.

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12. COMMUNICATION OBJECTS (continued)

■ **12.8 Virtual Keycard (continued)**

12.8.1 Use Virtual Keycard (continued)

12.8.1.1 Sensitivity

Parameters	Settings
Sensitivity	Low Medium **High** Very high

This parameter determines the numbers of detections needed to confirm presence.
Low: 5 detections in 20 seconds
Medium: 4 detections in 20 seconds
High: 3 detections in 20 seconds
Very high: 2 detections in 20 seconds

12.8.1.2 Window time (min)

Parameters	Settings
Window time (min)	3-255

This parameter is the "Virtual keycard time delay". It determines the delay after a door contact in which the sensor check if there is presence and change the status from absence (object status=0) to presence (object status=1).

12.8.1.3 Door event condition

Parameters	Settings
Door event condition	**Rising edge 0 → 1** Falling edge 1 → 0

This parameter determines the door event condition on the VKC door contact object.
It determines if the « door contact event » is measured on the rising or falling edge

No.	Object name	Function	Size	Flags
31	**Virtual Keycard**	**Door contact**	**1.001 DP_On/Off**	**CRWTU**

VKC_Door_contact telegrams are received via the group address linked to this object

12. COMMUNICATION OBJECTS (continued)

■ 12.8 Virtual Keycard (continued)

12.8.1 Use Virtual Keycard (continued)

12.8.1.4 External event object type

External event object type	Switch
External event comparator	==
Compared value	Off

Parameters	Settings
External event object type	**None** Switch Scaled value Scene 2-bytes 4-bytes
This parameter determines the Data point type of the VKC external object. This object is used to improve the function effectiveness, it is an additional object used to confirm the presence information. It can be a command switch, detection in the room, window contact…	
External event comparator	**== (equal)** != (different) < (less than) <=(less than or equal) >(greater than) >=(greater than or equal)
This parameter determines the type of comparison between the value on a VKC external object and the value to be compared	
Compared value	On (Switch) **Off (Switch)** 0-100 (Scaled value) 1-64 (Scene) 0-64 (Scene) 0-65535 (2-bytes) 0-4294967295 (4 bytes)
This is the type of value to be compared	

No.	Object name	Function	Size	Flags
32	**Virtual Keycard**	**External event**	**DPT depend on the choice made in the settings**	**CW**
VKC_external event telegrams are received via the group address linked to this object. DPT depend on the choice made in the settings				

12. COMMUNICATION OBJECTS (continued)

■ **12.8 Virtual Keycard (continued)**

12.8.1 Use Virtual Keycard (continued)

12.8.1.5 Occupied and Unoccupied object type

Action on presence and absence event.

| Occupied object type | No ▼ |

| Unoccupied object type | No ▼ |

Parameters	Settings
Occupied object type	**No** Switch Scaled value HVAC Mode Scene 2-bytes value
This parameter determines the Data point type of the VKC presence action object	
Value	On (Switch) Off (Switch) 0-100 (Scaled value) 0-255 (HVAC Mode) 1-64 (Scene) 0-65535 (2-bytes)
Value to send to the VKC occupied object	
Unoccupied type object	**No** Switch Scaled value HVAC Mode Scene 2-bytes value
This parameter determines the Data point type of the VKC absence action object	
Value	On (Switch) Off (Switch) 0-100 (Scaled value) 0-255 (HVAC Mode) 1-64 (Scene) 0-65535 (2-bytes)
Value to send to the VKC Unoccupied object	

• **Example with a Switch object type**

Occupied object type	Switch ▼
Value	On ▼
Unoccupied object type	Switch ▼
Value	Off ▼

No.	Object name	Function	Size	Flags
34	Virtual Keycard	VKC_presence_ action_1bit	Switch	CT

VKC presence actions are sent via the group address linked to this object.
DPT depend on the choice made in the settings

No.	Object name	Function	Size	Flags
35	Virtual Keycard	VKC_absence_ action_1bit	Switch	CT

VKC absence actions are sent via the group address linked to this object.
DPT depend on the choice made in the settings

12. COMMUNICATION OBJECTS (continued)

■ **12.8 Virtual Keycard (continued)**

**12.8.1 Use Virtual Keycard (continued)**

12.8.1.6 Send status when

| Send status when | Never ▾ |

Parameters	Settings
Send status when	**Never**
	Occupied only
	Unoccupied only
	Occupied & unoccupied

This parameter determines when to send a value on the VKC status object
Never: No value sent to VKC status, but can be read on request
Occupied: Only occupied is sent to VKC status (Occupied)
Unoccupied: Only unoccupied is sent to VKC status (Not occupied)
Occupied & unoccupied: Both are sent to VKC status (Occupied and Not occupied)

12.8.2 Virtual keycard function operating diagram
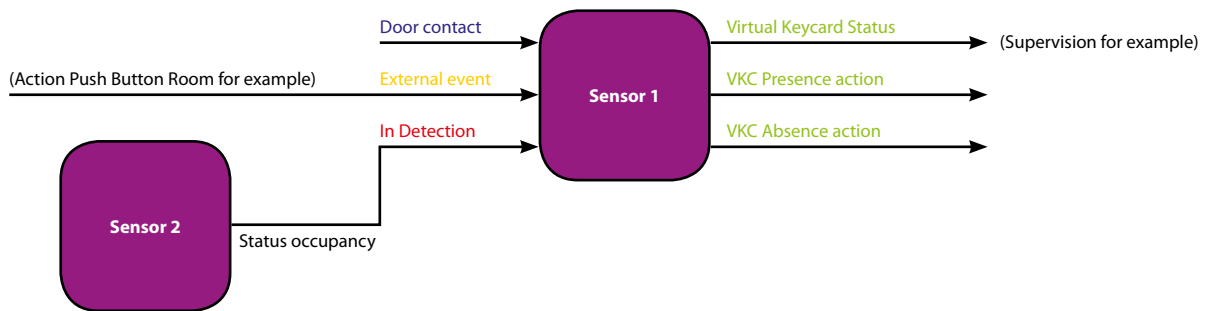
Virtual keycard behaviour:
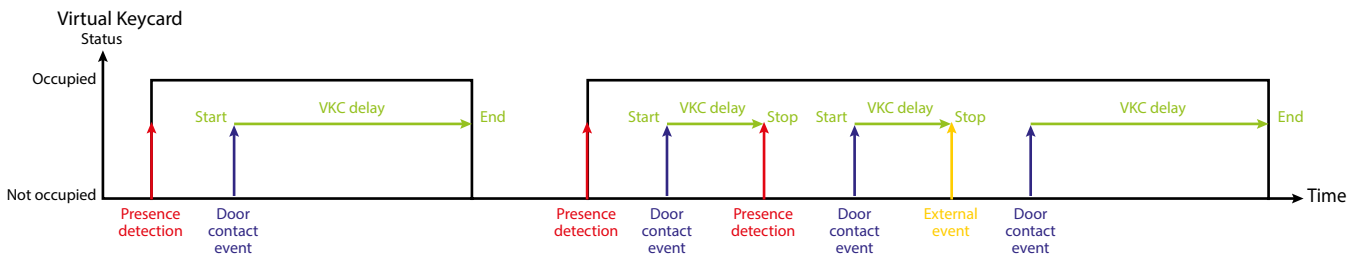
VKC function is triggered by "door contact" event after which begins the "VCK time delay" to understand if there is or not presence in the room. If during this time offset nothing is detected the result of the function is "vacancy" and the logics tied to the VKC function are not activated (first half of the above diagram). In case of detection during the time offset the result of the function is "occupancy", the "VKC time delay" is stopped and the related logics are triggered (second half of the above diagram). The VCK time delay restarts after another "door contact event". During the "VCK time delay" the "occupancy "status can be determined by the combination of more events: presence sensor "detection event" or external events (window contact, push-button pressure...).

12. COMMUNICATION OBJECTS (continued)

■ **12.9 Commissioning Tool**

Parameters	Settings
Use commissioning tol	**Yes**
	No

No: The sensor parameters can be only read with the commissioning tool
Yes: The sensor parameters can be changed with the commissioning tool

No: modification are saved	**No**
	Yes

No: Modifications are saved to the memory but change when a new application with ETS is downloaded
Yes: Modifications are applied for 1 hour 30 minutes after the product has reloaded the default value; or if the product is disconnected from the bus, the default value is reloaded when the product is reconnected

13. APPLICATION'S EXAMPLES

Following are described some common applications.
Here are listed the involved products and the needed objects, to be connected, in order to realize the described functions.

■ 13.1 Mode Auto ON/OFF – Load ON/OFF

The represented associations are valid in the following configuration cases:
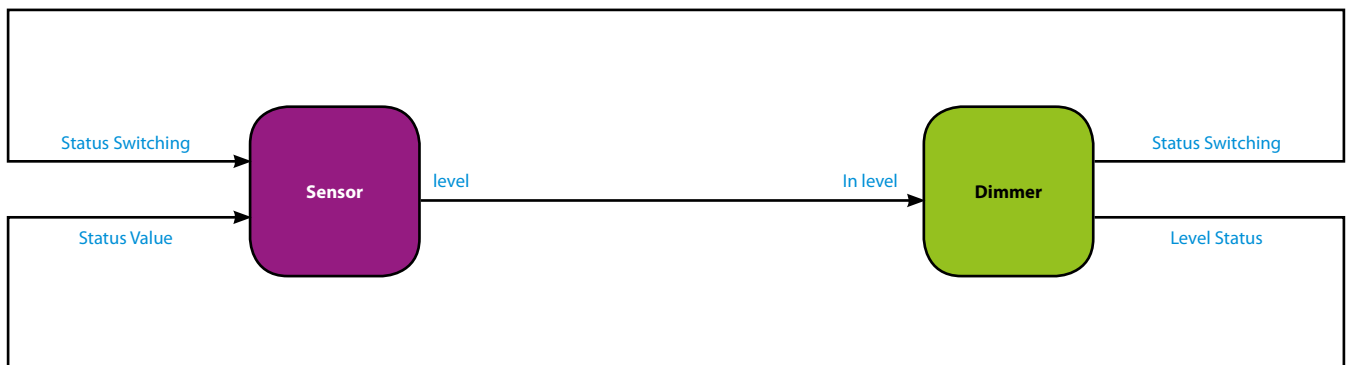- light level only with regulation
- detection only without regulation
- light level and detection without regulation
- light level and detection with regulation

Status Switching → **Sensor** → Switching → In on/off → **Actuator ON/OFF** → Status Switching

■ 13.2 Mode Auto ON/OFF – Dimming load

The represented associations are valid in the following configuration cases:
- detection only without regulation
- light level only with regulation
- light level and detection without regulation
- light level and detection with regulation

Status Switching → **Sensor** → level → In level → **Dimmer** → Status Switching

Status Value → **Sensor**

Dimmer → Level Status

■ 13.3 Mode Manual ON/Auto OFF – Load ON/OFF

The represented associations are valid in the following configuration cases:
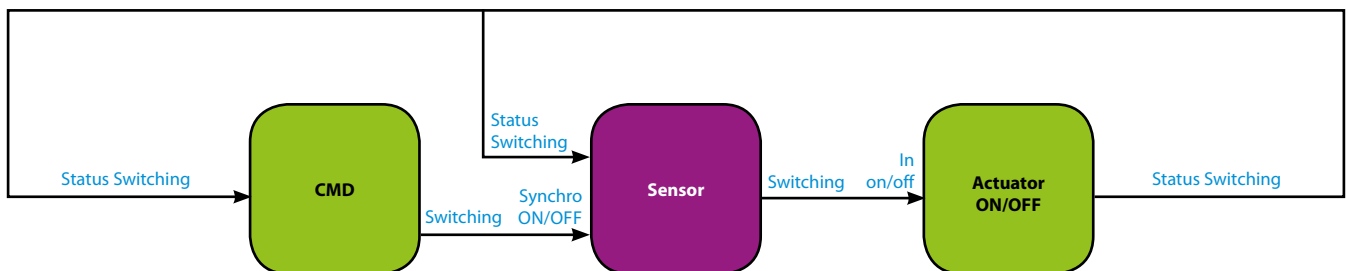- detection only without regulation
- light level only with regulation
- light level and detection without regulation
- light level and detection with regulation

Status Switching → **CMD** → Switching / Synchro ON/OFF → **Sensor** (Status Switching) → Switching → In on/off → **Actuator ON/OFF** → Status Switching

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13. APPLICATION'S EXAMPLES (continued)

■ **13.4 Mode Manual ON/AutoOFF – Dimming load**

The represented associations are valid in the following configuration cases:
   • detection only without regulation
   • light level only with regulation
   • light level and detection without regulation
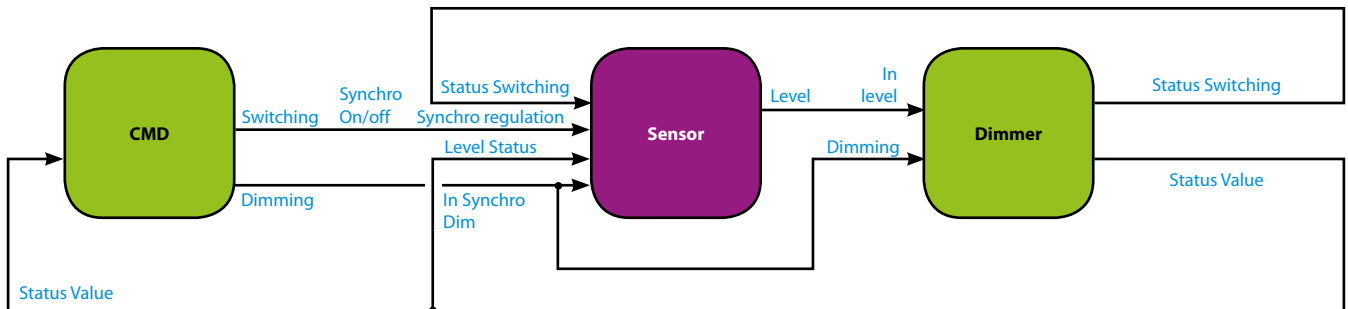   • light level and detection with regulation

■ **13.5 Master/Slave detection**

The represented associations are valid in the following configuration cases:
Ex: without regulation/load ON/OFF

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