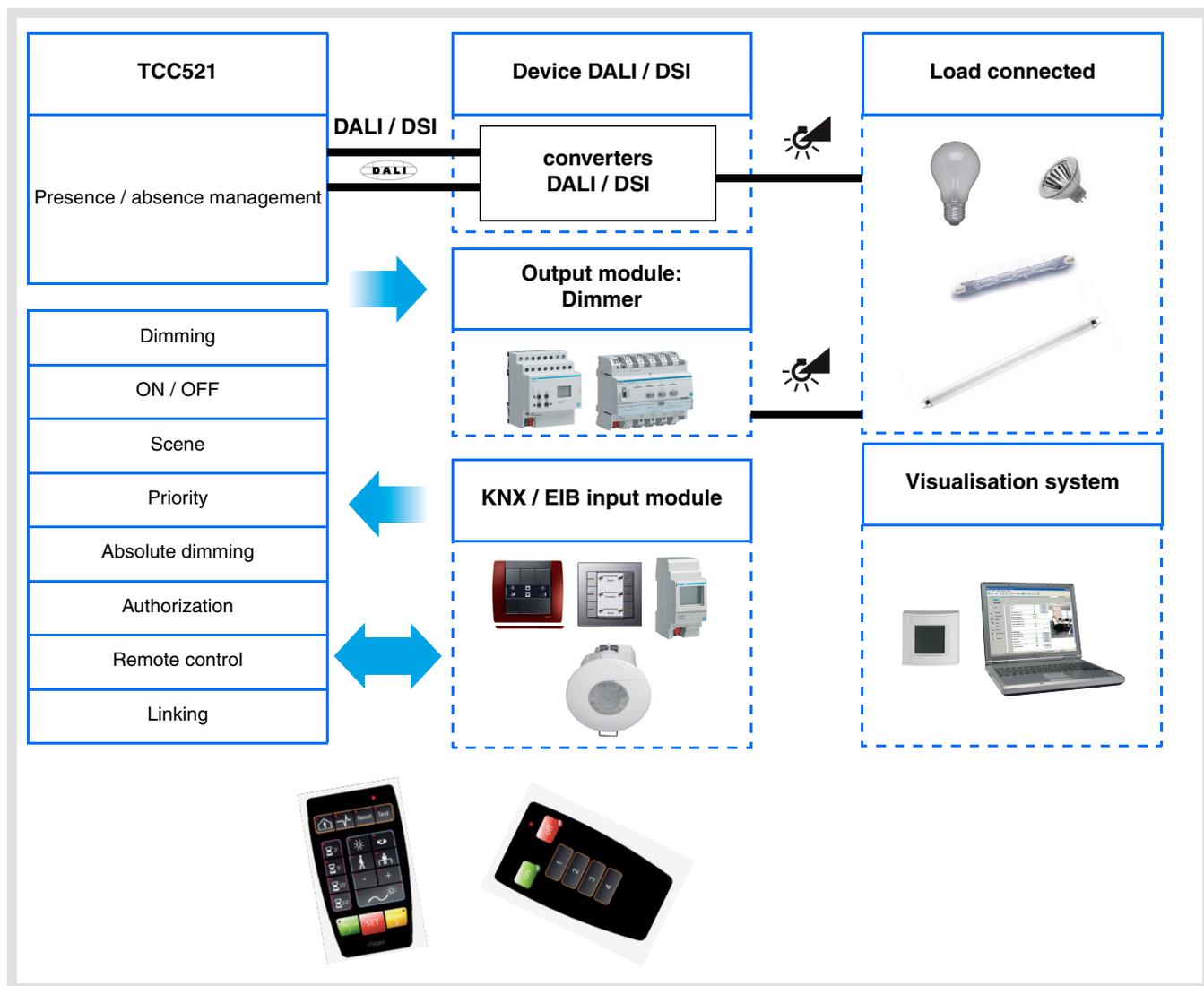


Tebis application software

- Manufacturers
- Hager Electro
- Infrared detectors
- Presence detectors

STCC521E Presence detector with integrated DALI/DSI interface

	Product reference	Product designation	TP device RF devices
	TCC521E	Presence detector with regulation DALI / DSI	
	TKK523PE TKK525PE	Presence detector with regulation DALI / DSI for klik.system	



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1. Function Description

The STCC521E software application is used to configure the TCC521E presence detector.

The TCC521E is a presence detector with integrated DALI/DSI interface. It can detect small movements (e.g. a person working in an office).

A pyroelectric sensor located under the detection lens is used for detection. The presence sensor constantly measures the brightness in the room and compares it to the brightness level setting. The brightness level can be set either with a remote control (EE807) or with the ETS or a rotating potentiometer on the device. According to the settings, different reactions to the measured brightness and presence can occur on the KNX bus or on the DALI / DSI local output.

The main functions are the following:

■ Presence detection, adjustment and lighting cycle brightness tests

The presence detector has 3 channels: 1 regulation channel and 2 presence channels. Using the TCC521E regulation channel, presence and brightness function controls can be sent on the KNX bus.

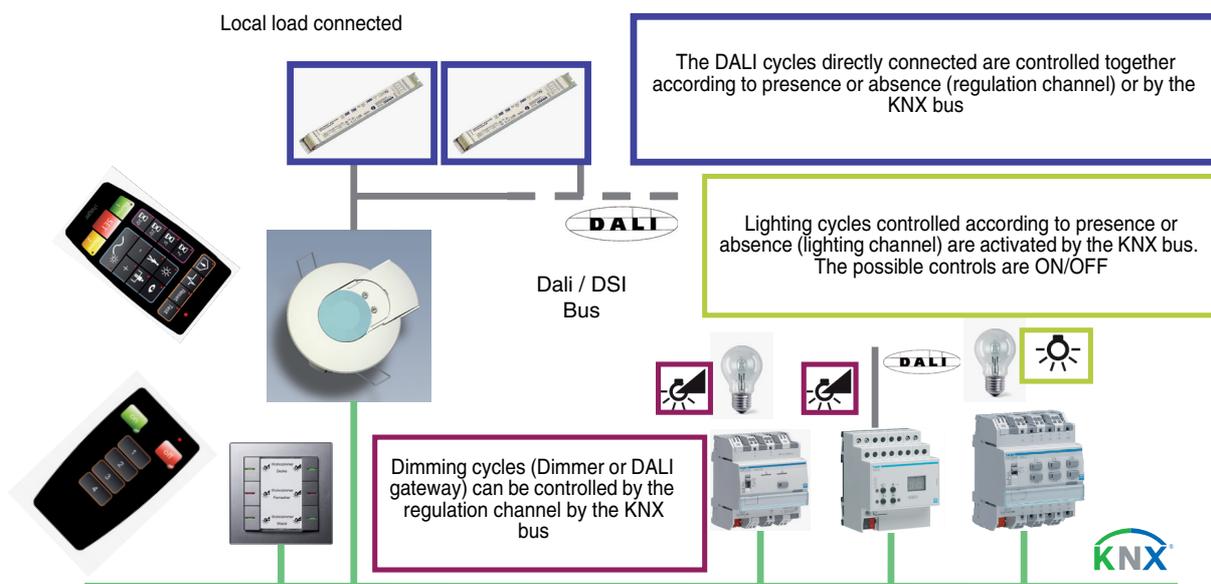
The regulation channel of the TCC521E acts directly on the integrated DALI/DSI interface for ballast control. Moreover, dimmers or gateways (TX216) can be controlled by the KNX bus by this channel.

The channel is activated according to presence. The following settings are possible for regulation:

- Active
- Not active

The regulation can be active or inactive:

- With the "active" setting, the detector regulates the brightness in the room to a setpoint value if anyone is in the room, and to another value if no one is there. According to the parameters, the setpoint value if anyone is present (ON) can be modified by the EE807 remote control.
- With the "inactive" setting, the detector sets a configurable absolute value (in %) for presence and other for absence.



■ Time delay Lighting and regulation functions

The time delay is restarted each time a presence is detected. At the end of the time delay, the presence detector switches to Absence status (No presence). The duration of the time delay can be set by ETS, a EE807 remote control or via a setting potentiometer directly on the TCC521E product.

■ ON or OFF authorisation Lighting and regulation functions

The presence detector can be locked or unlocked thanks to authorisation (e.g. with a clock at specific times).

■ Semi-automatic or automatic mode, remote control (Lighting and regulation functions)

In semi-automatic mode, the switch to Present status and switching on the lighting cycle are performed by sending a KNX message or by remote control (by the user). Switching to Absent status is performed by the TCC521E corresponding to presence detection and the disconnection time delay.

In automatic mode, it is possible to reverse the output status by a KNX control (**Remote control** object) to satisfy the requirements of specific applications (e.g. slide projection). If the presence detector is deactivated (Authorisation=OFF), it switches the lighting to Absence at the end of the disconnection time delay (Timer).

■ Scene

With the Scene function, pre-established brightness values (Lux) can be called in case of active regulation, or pre-established dimming values (%) in case of inactive regulation.

■ Infrared remote control using the EEK002 / EE808 remote control

The occupancy sensor embeds an infra red receiver. The infra red remote control offers the same functionalities as the KNX push button input. (**Remote control** object)

■ Infrared settings adjustment using the EEK001 / EE807 remote control

Some settings (remote control, automatic/semi-automatic mode, lighting functions) can be adjusted using the installer EEK001 / EE807 remote control. The possibility of using the remote control to adjust settings can be defined or locked by the ETS.

■ Linking Master / Slave

This function extends the presence detector's detection zone by combining it with other detectors. There are 3 different additional possibilities for connection:

- Master: The detector switches according to the brightness and presence in its own detection area and also takes into account up to 25 other detection areas,
- Slave: The detector switches according to the brightness and presence in its own detection area and also transmits presence information to a master detector, taking into account the brightness,
- Master/Slave: The detector switches according to the brightness and presence in its own area and can take into account up to 25 other detection areas. Moreover, it transmits the presence information for its own detection area to the master detector, taking into account the ambient brightness.

Operation of the presence detector is defined by an ETS parameter.

■ Surveillance channel 1 and 2

In addition to the lighting regulation channel, the detector can also activate an **ON / OFF** object solely linked to presence or absence. Luminosity is not taken into account for these 2 channels. These channels control the ventilation or heating circuits according to the presence of people in the rooms.

2. Configuration and General parameters

2.1 General parameters

In the **General** parameter area, it is possible to configure the main settings of the TCC521E operating mode.

→ Parameter Setting screen

Parameter	Value
Time delay	Potentiometer settings
Channel presence 1	Not used
Channel presence 2	Not used
Override operation	Automatic
Status after download	Authorization ON
Emission after initialization	Emission
Status at bus return when switched via detector	OFF
Scene memorisation by long key press	Used
Setup IR remote control	Not used
Detector type for linking master/slave	Not used
Digital control bus type (KNX/DALI)	DALI/DSI
Digital control bus type (DALI/DSI)	Automatic

Screen 1

2.2 Time delay

The time delay is activated if there is a switch from absence (no movement) to presence (movement) either for the regulation channel or the monitoring channel.

The presence sensor switches to absence mode either when the time delay expires or when the ambient brightness is sufficient (no movement).

If presence is detected, the time delay is automatically restarted.

The duration of the time delay can be set by a ETS, an EE001 / EE807 remote control or via the settings potentiometer directly on the TCC521E product.

Designation	Description	Value
Time delay	The time delay determines the time during which the output is activated (Presence) after a presence detection (brightness lower than the threshold value). If a new presence is detected before the end of the time delay, the time delay is restarted.	Potentiometer settings 5 s, 15 s, 30 s, 1 min, 3 min, 4 min, 5 min, 10 min, 15 min, 30 min, 1 h, 2 h, 3 h, 4 h, 8 h Default value: Potentiometer settings

2.3 Presence channels 1 and 2

The TCC521E presence detector has 2 presence channels which are solely controlled according to presence (luminosity is not taken into account). These parameters define if the surveillance channels 1 and 2 are used or not.

Designation	Description	Value
Presence channel*	Used to define if the presence channel is used or not.	Not used, Used Default value: Not used

* 1 or 2

2.4 Override operation

The **Remote control** object is used to control the regulation channel without taking into account the movements or brightness threshold value.

The mode (automatic or semi-automatic) is selected by an ETS parameter or by the EE807 remote control.

■ Semi-automatic - manual switching (If Authorisation=ON)

In this mode, the sensor must be set to Presence by an EEK002 / EE808 infrared remote control or by a KNX message (**Remote control** object).

Maximum energy savings can be achieved with this control type.

With an ON control on the **Remote control** object, the presence detector switches to the current presence status (presence/absence).

In case of presence, the detector uses the setpoint value for ON or the ON dimming value (in %) independently of the configured setting (active or inactive). In case of absence, the regulator first switches to the setpoint value for OFF, or the dimming value for OFF, then completely cuts off at the end of the time delay for the dimming value for OFF.

■ Automatic control (If Authorisation=ON)

In this mode, the lighting is controlled according to presence and the ambient brightness.

If a presence is detected and if the ambient brightness is lower than the setpoint value, the presence detector automatically switches to Presence. As long as a presence is detected and the time delay (**Disconnection time delay** parameter) has not expired, the detector remains on Presence.

When the presence detector switches off the lighting, a new presence detection is necessary, taking into account the ambient brightness, to switch back to Presence.

The mode used by the IR remote control can be modified (the default mode is Automatic). The remote control is used here (by KNX message or EE808 / EEK002 IR remote control) to switch from Presence to Absence.

By an ON control on the **Remote control** object, you switch from:

- Absence to Presence and from,
- Presence to Absence.

■ Remote control (If Authorisation=OFF)

In this case, the lighting channel is switched on by the KNX remote control object with an ON control on a timer (time delay duration) and is directly switched off by an OFF control. This function does not depend on presence or the ambient brightness.

Designation	Description	Value
Override operation	This parameter defines the remote control function of the presence detector. This concerns both the Remote control KNX object and the remote control.	Automatic Semi-automatic - Manual activation Default value: Automatic



User remote control EE808 / EEK002

2.5 Status after download

It is possible to adjust the authorisation status after ETS downloading by a parameter. Presence detection is only active with Authorisation=ON. With Authorisation=OFF, neither the DALI/DSI connected circuit nor the lighting circuits connected by the KNX will be controlled by the presence function of the detector. The control will now only be performed by the **Remote control KNX** object or by a remote control.

Designation	Description	Value
Override operation	This parameter sets the authorisation status after an ETS download.	Authorization ON, Authorization OFF Default value: Authorization ON

2.5.1 Emission after initialization

This parameter **Send status after switching on power to bus** determines if the movement detector will send the current status or not after the power to the bus is switched on. Sending the status can be useful e.g. to synchronise a visualisation.

Designation	Description	Value
Emission after initialization	This parameter defines whether the current status will be sent after a bus failure.	Not used, Emission Default value: Emission

2.5.2 Output status after the power to the bus is switched back on

Presence status of the detector after the power to the bus is switched back on can be set to ON (presence) or OFF (absence) by a parameter.

This parameter can be set by ETS or by a EEK001 / EE807 remote control.

Designation	Description	Value
Status at bus return	This parameter determines if the detector switches to Presence (ON) or Absence (OFF) after the power to the bus is switched back on.	ON, OFF Default value: OFF

2.5.3 Scene memorisation by long key press

Designation	Description	Value
Scene memorisation by long key press	This parameter authorizes or forbids scene the scene memorisation after a long key press. (Reaction to the scene message with the fixed "learning" bit)	Used, Not used Default value: Used

The functional parameters linked to the presence detector application can be determined via the ETS parameters or using the EEK001 / EE807 remote control.

Setting the parameters by the remote control can be activated or deactivated. When parameter setting is activated by the remote control, it is possible to define whether the settings are overwritten by ETS or not.

2.5.4 Setup IR remote control



EEK001 / EE807 remote control

Designation	Description	Value
Setup IR remote control	The possibility to set the parameters by a EE807 / EEK001 remote control can be activated or deactivated.	Used, Not used Default value: Used
ETS setting overwrite IR remote control data*	This parameter is used to define whether the parameter set by the remote control in the TCC521 can be overwritten or not by the parameter set in the ETS.	Used, Not used Default value: Used

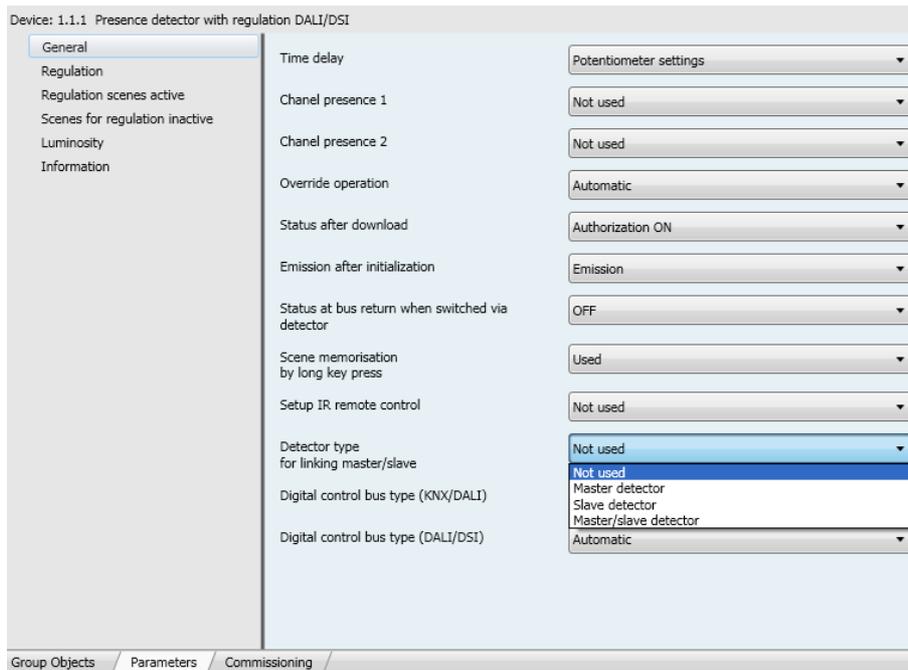
* This parameter is only visible if the **Setting parameters by IR remote control** parameter has the following value: Used.

2.5.5 Master / Slave function

This function extends the presence detector's detection zone by combining it with other detectors.

There are three possibilities here. You can select them with the ETS **Type of detector for master/slave links** parameter.

→ Parameter Setting screen



Screen 2

■ Master detector

The master detector activates according to the brightness and presence in its own detection area and also always activates (independently of the brightness) if a presence is detected in one of the 25 possible detection areas.

A master detector should preferably be installed in a corridor (or a notional corridor). With a master detector, the aim is to ensure that if a presence is detected in a detection area, the lighting will come on simultaneously in the circulation areas (corridors, WC, etc.).

■ Slave detector

The slave detector informs the master detector of the presence (movement and reduced light) in its zone.

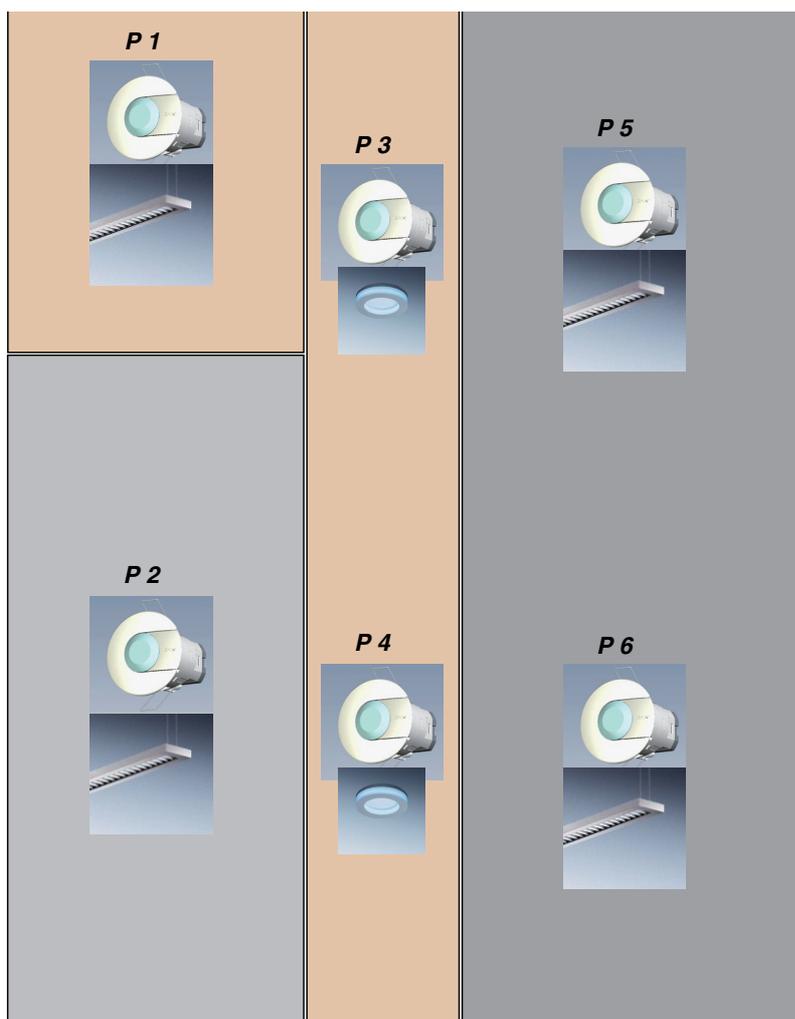
■ Master / slave detector

The master/slave detector activates according to the brightness and presence in its own detection area and can take into account up to 25 other detection areas. Moreover, it transmits the presence information for its own detection area to the master detector, taking into account the ambient brightness.

Designation	Description	Value
Detector type for linking master / Slave	This parameter defines the working way of the linking master / slave functionality.	Not used, Master detector, Slave detector, Master / slave detector Default value: Not used

The following example of Master / slave function demonstrates its application in an open office. There are presence detectors in working areas 1 to 3 and in the circulation area (notional corridor). Presence detectors P1, P2, P5 and P6 are defined as slave detectors. The presence detectors in the circulation area are master/slave detectors. The light in the circulation area comes on if a presence is detected in one of the working areas, independently of the measured brightness in the circulation area.

The light will also come on in the circulation area if a presence is detected only by the P3 or P4 presence detector. In this example, a presence is detected by P1, following which the lighting is activated in working area 1 and in the circulation area.



2.5.6 Bus type (KNX / Dali)

This parameter is used to define if the controls are sent on the KNX bus or on the DALI/DSI bus via the integrated output.

Designation	Description	Value
Bus type (KNX / DALI)	Used to define the bus used to send controls.	KNX, Dali / DSI Default value: KNX

2.5.7 Digital control bus type (DALI / DSI) (Only if Dali selected)

The detector embeds a digital interface to control digital ballasts, the protocols supported are DALI and DSI.

Designation	Description	Value
Digital control bus type (DALI / DSI)	The used digital interface can be defined via that parameter. Automatic means that the detector automatically recognises the type of lighting control devices connected.	Automatic, DALI (broadcast), DSI Default value: Automatic

The **DALI / DSI bus status** object indicates the status of the digital bus used. It can be used for maintenance needs.

Bit 7	Bit 6	Bit 5	Bit 3	Bit 2	Bit 1	Bit 0
			Bus status	Type of bus recognised	Parameter<<Digital control bus type (DALI / DSI)>>	

The 0 and 1 bits of the **DALI/DSI bus status** object give information concerning the type of bus selected in the **Type of bus** (DALI/DSI) parameter.

00: Automatic; the presence detector automatically recognises the type of digital bus connected (DALI/DSI),

01: DALI bus; the lighting control bus is linked to the parameter, in this case DALI,

10: DSI; the lighting control bus is linked to the parameter, in this case DSI.

Type of bus recognised: Bit 2

This bit indicates what type of bus the presence detector has recognised. If the bit is 1, DALI has been detected. If it is 0, neither DSI or DALI has been recognised.

Bus status: Bit 3:

0: No DALI bus,

1: Bus present.

This bit indicates if the DALI bus is available or not. The information is only valid if bit2 is set to 1. If not, it is not valid. This bit is used to recognise if DALI is connected or not (poor wiring).

2.5.8 Status of the load if the bus is cut off

When the KNX bus or the DALI bus is cut off, the product automatically sends the order to the ballast to switch on.

3. Configuration and parametering of the settings

3.1 Brightness setting functions

The TCC521E has 3 modes:

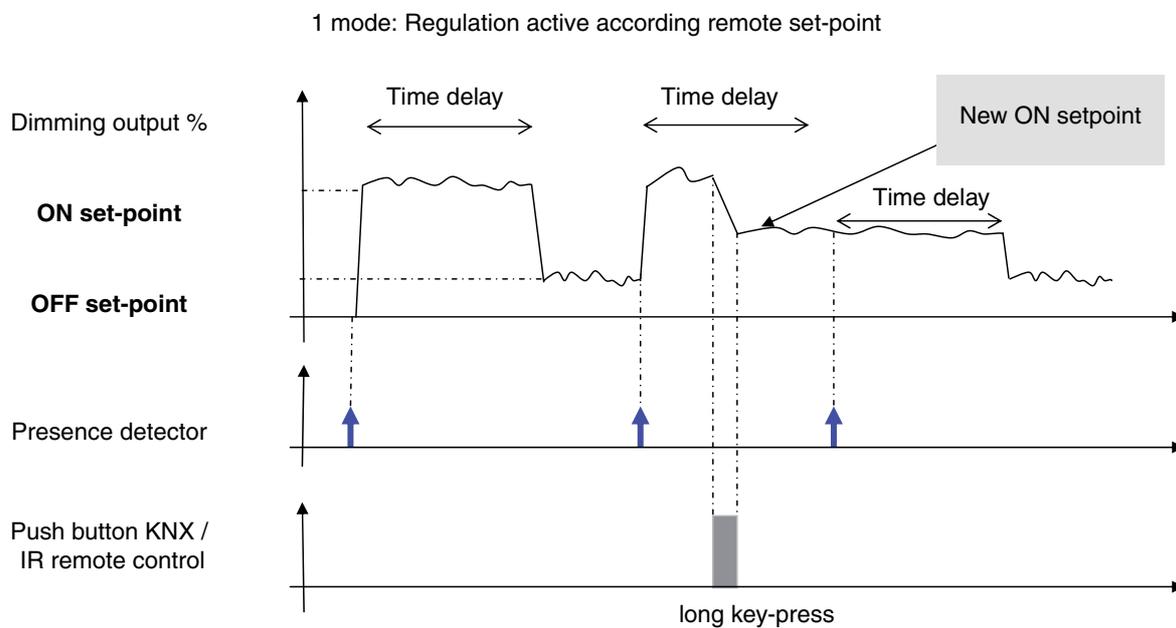
- Control type 1: Brightness setting with external setting of the setpoint values (automatic mode). The user can lastingly modify the brightness setpoint value,
- Control type 2: Brightness setting with local setting of the setpoint values. The user can adjust the brightness for a presence cycle to a fixed dimming value,
- Control type 3: Brightness setting inactive.

The mode is adjusted by the ETS parameters and the settings on the TCC521E.

3.1.1 Control type 1: Brightness setting with external setting of the setpoint values (automatic mode)

■ Brightness setting in the offices

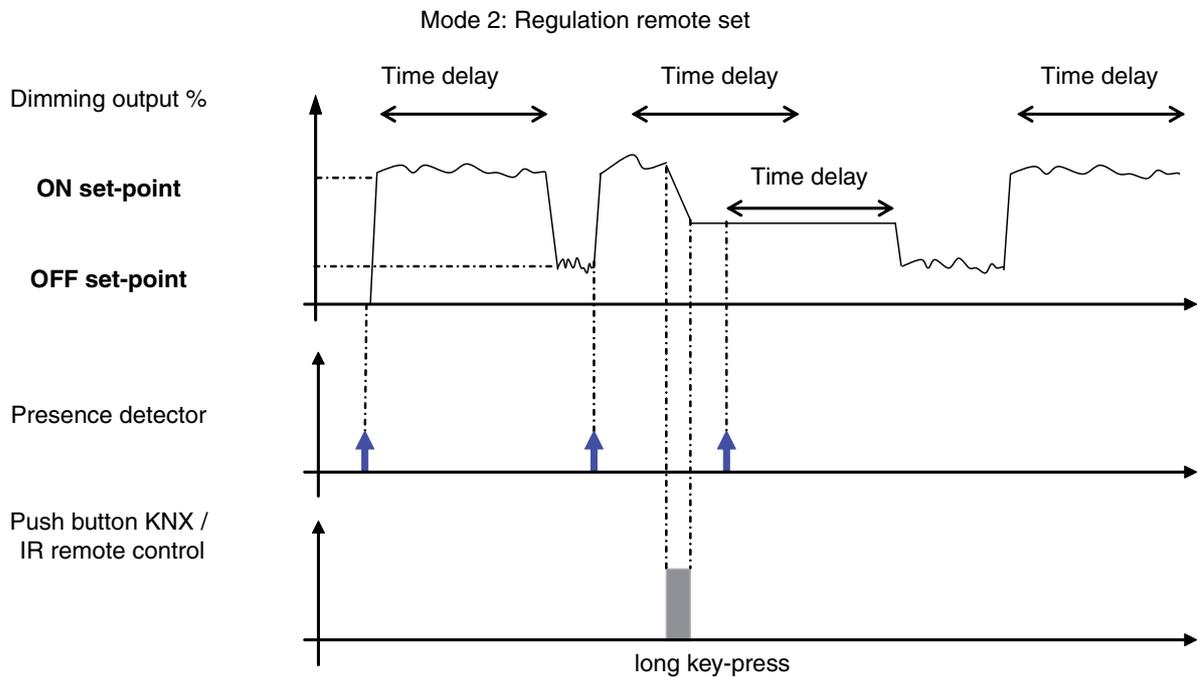
The installer fixes the predefined brightness values (Lux) according to the standards (e.g. 400 lux) and the customer can modify them using a KNX push button or by an IR remote control (EEK002 / EE808). The detector regulates an ON setpoint value during periods of presence and an OFF setpoint value for periods of absence.



3.1.2 Control type 2: Brightness regulation with local setting of the setpoint value

■ Brightness regulation with local setting of the setpoint value

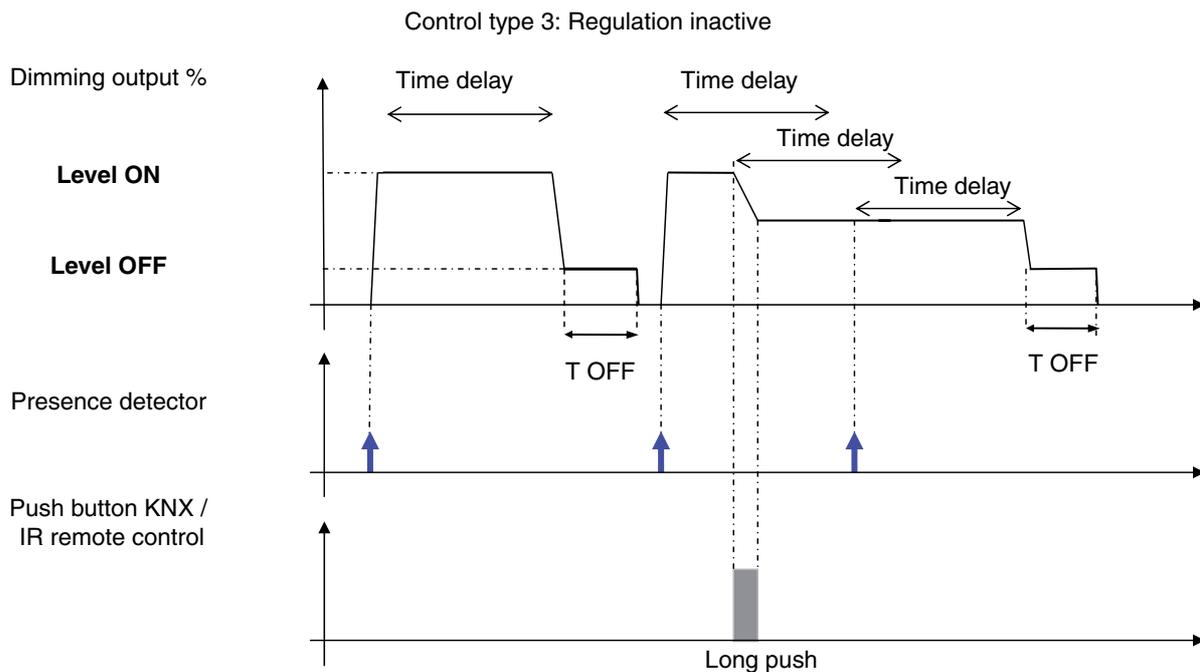
The installer fixes predefined brightness values (Lux) according to the standards (e.g. 400 lux). The customer can then modify the output level (in %) using a KNX push button or an IR remote control (EEK002 / EE808). The detector switches back to the installer setting after absence.



3.1.3 Control type 3: Brightness setting inactive

■ Installation of detectors in circulation areas (Corridors)

The idea is to plan total lighting if someone is present and 33% (for example) if no one is there, then to totally switch off the lighting after a long waiting period. The customer can modify the dimming value (%) for presence (ON) using a KNX push button or an IR remote control (EEK002 / EE808). The dimming value for Absence (OFF) is maintained for the duration of the disconnection time delay fixed in the parameters, then the lighting is totally switched off.



3.2 KNX objects of the presence detector for brightness regulation

The **Dimming output %** object (byte 1) sets lighting outputs by the KNX bus on which the calculated brightness setting dimming values (%) are set.

The **Variation** object (4 bit) can modify the brightness setpoint value or the dimming value currently fixed (%) according to the fixed mode (brightness setting active/inactive). This modification concerns both the DALI/DSI output and the lighting outputs controlled by the KNX bus (Dimming output %).

With the **Priority** object (2 bit), a brightness setpoint value (Lux) set in the parameters can be forced with the ON active priority value or, depending on the mode, a preset dimming value (%). The Priority active=OFF call sets the output value to OFF. With the **Scene number** object, brightness setpoint values (Lux) set in the parameters or depending on the mode, a preset dimming value (%) can be called.

The presence detector is activated or deactivated by the **Authorisation** object (1 bit). In case of Authorisation=OFF control, the presence detector also switches off the controlled lighting circuit.

The **Remote control** object is used to switch between Presence and Absence.

Number	Name	Object Function	Description	Group Addresses	Length	C	R	W	T	U	Data Type	Priority
0	Regulation channel	Dimming			4 bit	C	R	W	-	U	dimming control	Low
1	Regulation channel	ON / OFF			1 bit	C	R	W	-	U	on/off	Low
2	Regulation channel	Priority			2 bit	C	R	W	-	U	switch control	Low
3	Regulation channel	Scene number			1 Byte	C	R	W	-	U		Low
4	Regulation channel	Info ON / OFF			1 bit	C	R	W	-	U	on/off	Low
17	Authorization	Authorization			1 bit	C	R	W	-	U	on/off	Low
18	Regulation channel	Remote control			1 bit	C	R	W	-	U	on/off	Low
45	Bus Status DALI/DSI Maintenance				1 Byte	C	R	-	T	U		Low
49	Luminosity	Luminosity			2 Byte	C	R	-	T	U	lux (Lux)	Low

→ Parameter Setting screen

Device: 1.1.1 Presence detector with regulation DALI/DSI

General

Regulation

Scenes for regulation inactive

Luminosity

Information

Regulation type: Not active

Level OFF: OFF

Level ON (%): 100

Forced level (%): 100

Reflexion rates configuration: Simplified

Lighting type: Direct lighting

Group Objects / Parameters / Commissioning

Screen 3

3.2.1 Brightness setting

The type of setting can be fixed directly on the detector with the setting potentiometer or by the parameters in the ETS.

Three functional modes are available:

- Potentiometer settings (local settings),
- Active,
- Not active.

With Active setting, the brightness values (Lux) to be achieved in case of presence or absence can be configured and with Inactive setting, dimming values (%) in case of presence and absence can be configured.

Both the type of setting and the settings required can be performed directly on the device and by the ETS.

3.2.1.1 Active brightness setting

After a presence detection, the setting is active in automatic mode. The **Dimming output %** object and the DALI/DSI output are controlled during the time delay so that the brightness value (Lux) fixed in ETS or set on the device are achieved. The brightness setpoint value in case of presence (ON) is prescribed by the ETS parameter **Setting setpoint for ON**. At the end of the time delay, OFF setpoint is taken as the default value for the brightness setting.

The **Setpoint value for ON** can be modified by a KNX push button (Dimming object) or by an EEK002 / EE808 infrared remote control. You can define if this modification is permanent or temporary (return to the value defined in ETS the next time an absence is detected) using the **Modification of the ON setpoint** parameter.

The **ON / OFF** object is used to activate the detector when it is authorised. When an ON control (1) is received, the detector regulates based on the Regulation setpoint for ON (Présence) and the time delay starts. When an OFF control (1) is received, the Regulation setpoint for OFF is used. When an OFF control (0) is received, Regulation setpoint for OFF is used. The control will be ignored if Priority is active (setting setpoint, priority) or if Authorisation=OFF.

If the detector is active (Authorisation=ON), the **Remote control** object will be used to switch the detector (for details concerning this function, see § Override operation). The output switches to Dimming value=ON if the light is off and switches to Dimming value=OFF (0) if the light is already on.

If the detector is inactive (Authorisation=OFF), the remote control is used to switch the output status. When the switch to ON is made, the output for the time delay switches to 100%.

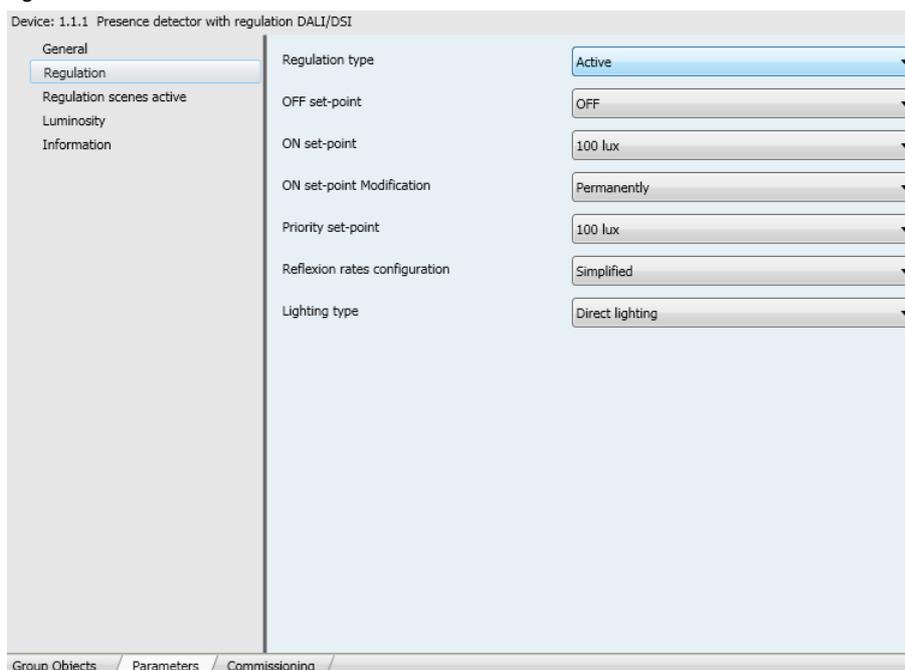
The detector is activated and deactivated using the **Authorisation** object. If the detector is inactive, it can be used as a timer with a KNX push button.

With the **Scene number** object, a brightness value saved in the parameters for the setting can be activated (e.g. Calling a scene for a setpoint value of 200 lux). This value will then be taken as the new setpoint value for Presence. The control will be ignored if a priority is running (Priority setpoint) or if Authorisation=OFF.

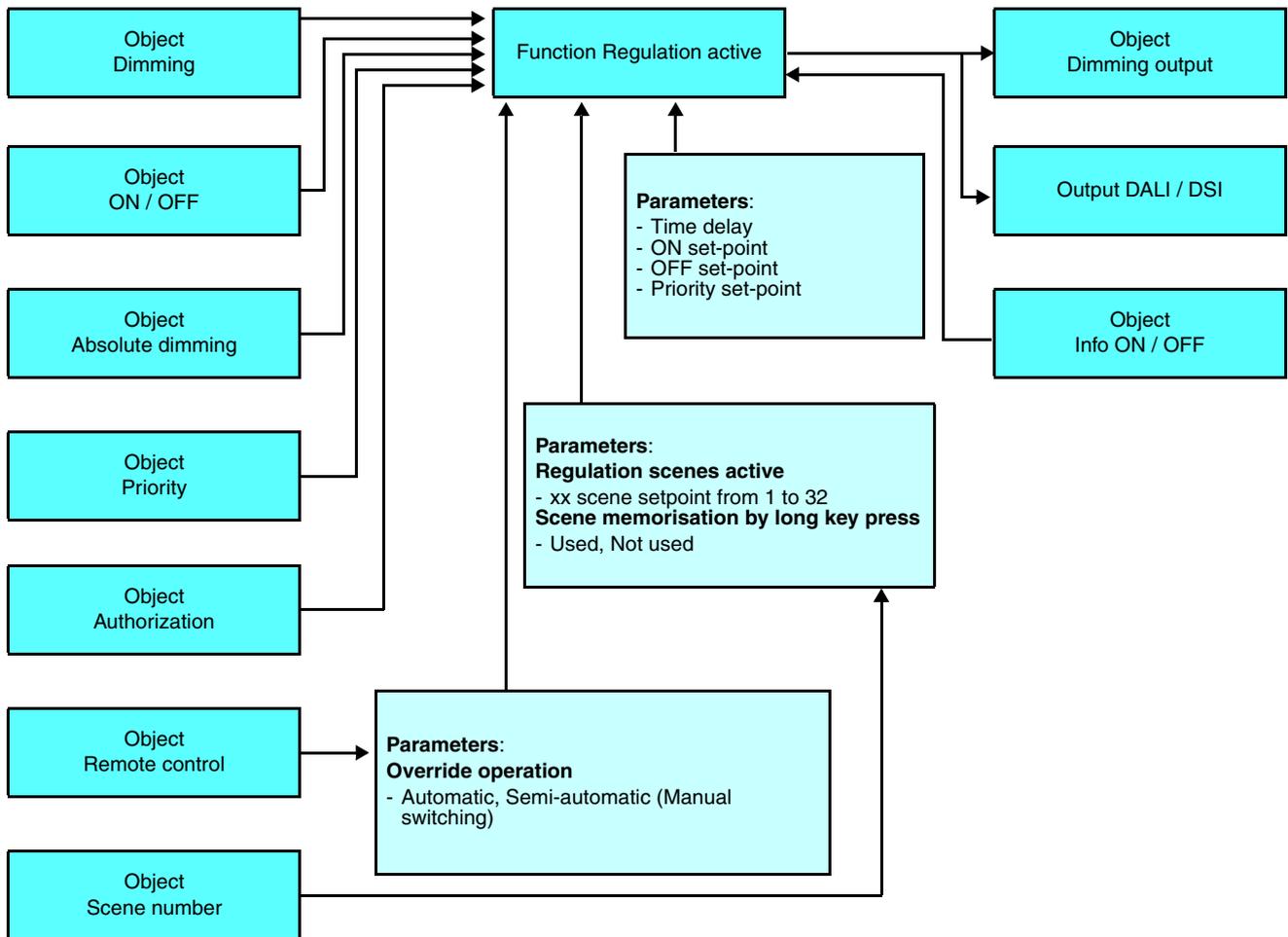
The Priority setpoint set in the ETS parameters (e.g. Priority setpoint 1000 lux) is used if the priority on the **Priority with ON** object has been activated. When the priority is active, no presence detection is performed.

The **ON / OFF status** object communicates the switching status of the lighting circuits controlled via the bus to the detector. When the switching status changes to OFF, the detector briefly deactivates presence detection (less than 1 s). Erroneous detection which may occur when the lighting is switched off is thus avoided.

→ Parameter Setting screen



Screen 4



Designation	Description	Value
Regulation type	This parameter also determines if the ETS setting parameters have been fixed or if setting can be performed by the knobs on the device.	Active to select the regulation type active
OFF set-point	This parameter sets the brightness setpoint in case of absence (OFF).	OFF, 100 lux, 150 lux, 200 lux, 250 lux, 300 lux, 350 lux, 400 lux, 450 lux, 500 lux, 550 lux, 600 lux, 650 lux, 700 lux, 750 lux, 800 lux, 900 lux, 1000 lux Default value: OFF
ON set-point	This parameter sets the brightness setpoint in case of presence (ON).	OFF, 100 lux, 150 lux, 200 lux, 250 lux, 300 lux, 350 lux, 400 lux, 450 lux, 500 lux, 550 lux, 600 lux, 650 lux, 700 lux, 750 lux, 800 lux, 900 lux, 1000 lux Default value: 400 lux
Modification of the ON setpoint	This parameter is used to define if a modification of the setpoint is temporary or permanent.	Permanently, Temporary Default value: Permanently
Priority set-point	This parameter sets the brightness setpoint for ON priority. If Priority=OFF, the output is set to OFF (0%).	OFF, 100 lux, 150 lux, 200 lux, 250 lux, 300 lux, 350 lux, 400 lux, 450 lux, 500 lux, 550 lux, 600 lux, 650 lux, 700 lux, 750 lux, 800 lux, 900 lux, 1000 lux Default value: 1000 lux
Regulation scenes active	Setting setpoint for scene 1 to 32 This parameter sets the brightness setpoint which must be achieved when the scene is called.	OFF, 100 lux, 150 lux, 200 lux, 250 lux, 300 lux, 350 lux, 400 lux, 450 lux, 500 lux, 550 lux, 600 lux, 650 lux, 700 lux, 750 lux, 800 lux, 900 lux, 1000 lux Default value: specific to each scene

3.2.1.2 Brightness setting inactive

In this mode, no brightness setting is performed. The presence detector controls its outputs (locally or by KNX bus) in case of presence with a pre-set dimming value (default value: 100%). This can be modified by a KNX push button or by the EEK002 / EE808 IR remote control.

The **Dimming output %** object sets the dimming value for ON for the duration of the presence + the duration of the time delay (the duration of the time delay can be set directly on the device or by an ETS parameter). At the end of the time delay, the output is set (locally or by KNX bus) to the dimming value for OFF. At the end of the OFF level time delay (ETS parameter or 15 minutes by local setting) the output is totally switched off.

The ON dimming value can be modified (in %) via a KNX push button (Dimming object) or by an EEK002 / EE808 infrared remote control.

The **ON / OFF** object is used to activate the detector when it is authorised. When an ON control (1) is received, the detector commands the switch to Dimming for ON (in %) (Présence) and starts the time delay. When an OFF control is received (0), **Dimming for OFF** is used. The control will be ignored if Priority is active (setting setpoint, priority) or if Authorisation=OFF.

If the detector is active (Authorisation=ON), the **Remote control** object will be used to switch the detector (for details concerning this function, see § Override operation). The output switches to Dimming value=ON if the light is off and switches to Dimming value=OFF (0) if the light is already on.

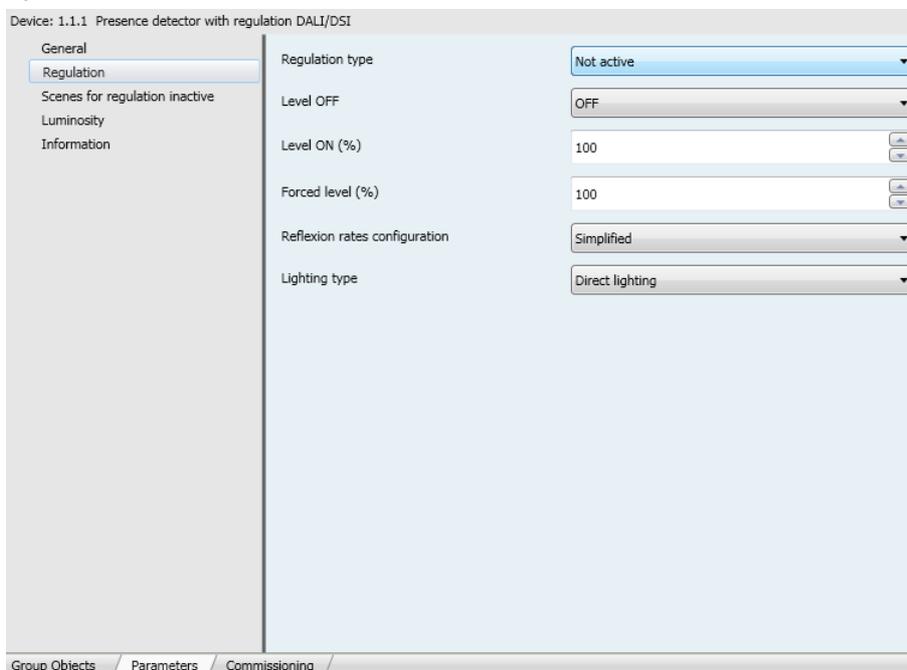
If the detector is inactive (Authorisation=OFF), the remote control is used to switch the output status. When the switch to ON is made, the output for the time delay switches to 100%.

The detector is activated and deactivated using the **Authorisation** object. If the detector is inactive, it can be used as a timer with a KNX push button. The **Scene number** object is used to activate the dimming value saved in the parameters (e.g. 10% dimming scene call). This dimming value is then considered as the new dimming value in case of presence. Calling the scene starts the time delay. This control will be ignored if a priority is active (Priority setpoint) and if Authorisation=OFF.

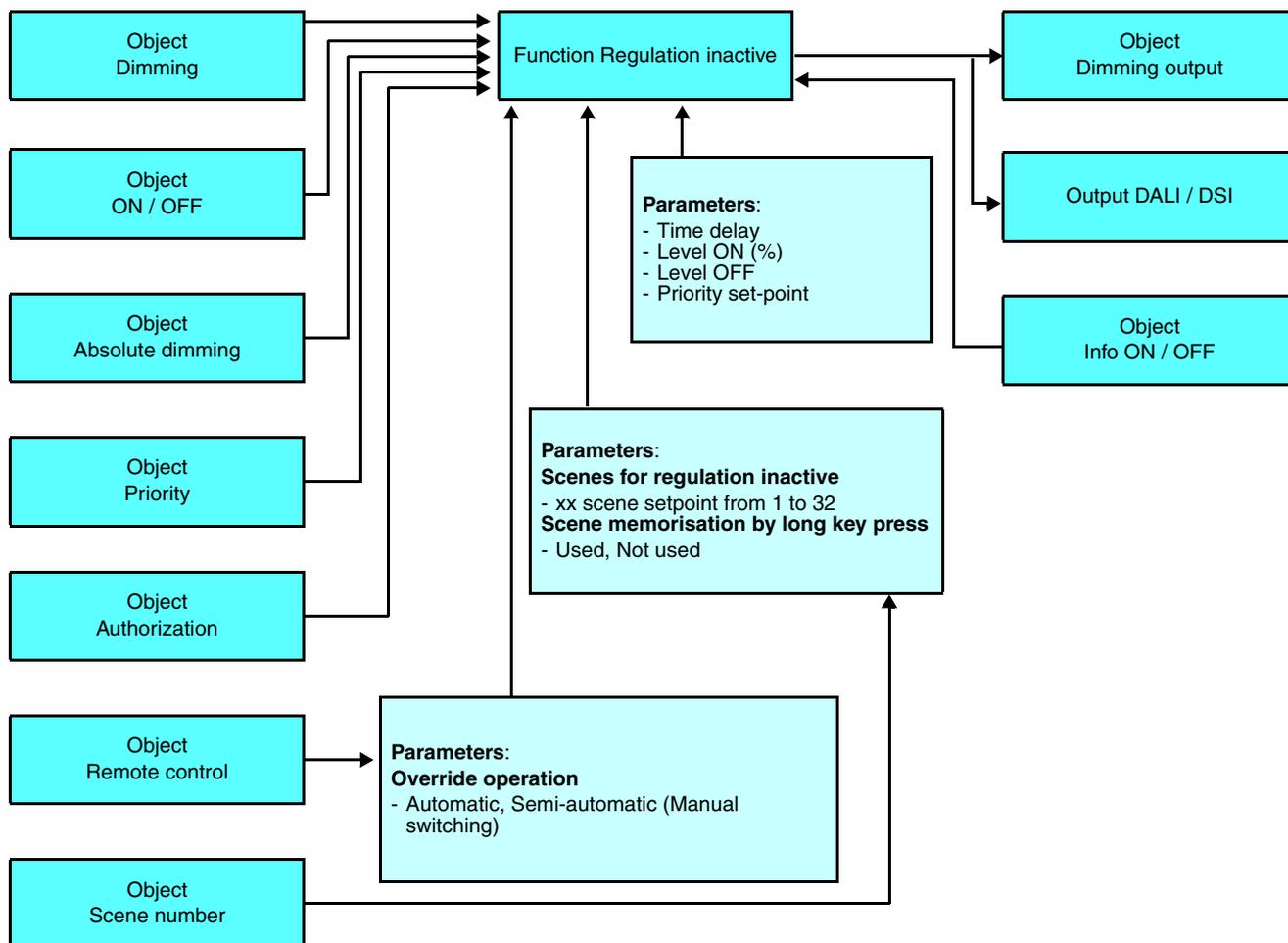
The level of priority (in %) configured in the ETS parameters is used if the priority has been activated by the **Priority** object with ON. When the priority is active, no presence detection is performed.

The **ON / OFF status** object communicates the switching status of the lighting circuits controlled via the bus to the detector. When the switching status changes to OFF, the detector briefly deactivates presence detection (less than 1 s). Erroneous detection which may occur when the lighting is switched off is thus avoided.

→ Parameter Setting screen



Screen 5



Designation	Description	Value
Regulation type	This parameter also determines if the ETS setting parameters have been fixed or if setting can be performed by the knobs on the device.	Not active to select the regulation type inactive
Level OFF	This parameter sets the dimming value in case of absence (OFF).	OFF, 5%, 10%, 15%, 20%, 25%, 30%, 35%, 40%, 45%, 50% Default value: OFF
Level ON (%)	This parameter sets the dimming value in case of presence (ON).	0 to 100 step 1 Default value: 100
Forced level (%)	This parameter sets the dimming value for Priority=ON. If Priority=OFF, the output is set to OFF (0%).	0 to 100 step 1 Default value: 100
OFF level time delay	This parameter sets the duration of the disconnection warning. During this period, the detector switches to the dimming value for OFF then switches off completely.	Permanent OFF, 5 min, 10 min, 15 min, 30 min, 45 min, 1 h, 2 h, 3 h, 4 h
Scenes for regulation inactive	Scene xx set-point xx: 1 - 32 This parameter fixes the dimming value to be set if a scene is called.	0 to 100 step 1 Default value: specific to each scene xx

3.2.1.3 Local brightness setting

The type of regulation can be selected directly by the rotating potentiometers on the product. There are three types of function.

- Type of function 1: Active regulation with external setpoint (automatic mode)
- Type of function 2: Active regulation with local setpoint
- Type of function 3: Regulation inactive

In the types of function 1 and 3, the detector provides the same functionality as for ETS setting.

The type of function 2 is only accessible via the local settings. The regulation is active after detection with the recorded brightness setpoint. The **Dimming output %** object and the DALI/DSI output are controlled during the time delay (by ETS or locally) in order to achieve the brightness level (Lux) set on the device. At the end of the time delay duration, the **OFF setpoint** object defined in ETS is considered as the setpoint value for brightness regulation.

The ON setpoint can only be modified directly on the device by its potentiometer.

The Dimming output (%) can be modified by a KNX push button for a presence cycle.

With the **Scene number** object, a brightness value saved in the parameters for the setting can be activated (e.g. Calling a scene for a setpoint value of 200 lux). The brightness level is then taken as the setpoint value for a presence cycle.

The Priority setpoint set in the ETS parameters (e.g. Priority setpoint 1000 lux) is used if the priority on the **Priority with ON** object has been activated. When the priority is active, no presence detection is performed.

Designation	Description	Value
Regulation type	This parameter also determines if the ETS setting parameters have been fixed or if setting can be performed by the knobs on the device.	The settings on the device are used to select the operating mode. The regulation can be active or inactive according to the setting of the potentiometer (type of function 1, 2 or 3).
OFF set-point	This parameter sets the regulation setpoint in case of absence (OFF).	OFF, 100 lux, 150 lux, 200 lux, 250 lux, 300 lux, 350 lux, 400 lux, 450 lux, 500 lux, 550 lux, 600 lux, 650 lux, 700 lux, 750 lux, 800 lux, 900 lux, 1000 lux Default value: OFF
ON set-point	This parameter sets the brightness setpoint in case of presence (ON).	OFF, 100 lux, 150 lux, 200 lux, 250 lux, 300 lux, 350 lux, 400 lux, 450 lux, 500 lux, 550 lux, 600 lux, 650 lux, 700 lux, 750 lux, 800 lux, 900 lux, 1000 lux Default value: 400 lux
Priority set-point	This parameter sets the brightness setpoint for ON priority. If Priority=OFF, the output is set to OFF (0%).	OFF, 100 lux, 150 lux, 200 lux, 250 lux, 300 lux, 350 lux, 400 lux, 450 lux, 500 lux, 550 lux, 600 lux, 650 lux, 700 lux, 750 lux, 800 lux, 900 lux, 1000 lux Default value: 1000 lux
Level OFF	This parameter sets the dimming value in case of absence (OFF).	OFF, 5%, 10%, 15%, 20%, 25%, 30%, 35%, 40%, 45%, 50% Default value: OFF
Level ON (%)	This parameter sets the dimming value in case of presence (ON).	0 to 100 step 1 Default value: 100
Forced level (%)	This parameter sets the dimming value for Priority=ON. If Priority=OFF, the output is set to OFF (0%).	0 to 100 step 1 Default value: 100

Designation	Description	Value
OFF level time delay	This parameter sets the duration of the disconnection warning. During this period, the detector switches to the dimming value for OFF then switches off completely.	Permanent OFF, 5 min, 10 min, 15 min, 30 min, 45 min, 1 h, 2 h, 3 h, 4 h
Scenes for regulation inactive	Brightness setpoint for scenes 1 to 32 This parameter fixes the dimming value to be set if a scene is called.	0 to 100 step 1 Default value: specific to each scene xx
Regulation scenes active	Scene xx set-point xx: 1 - 32 This parameter sets the brightness setpoint which must be achieved when the scene is called.	OFF, 100 lux, 150 lux, 200 lux, 250 lux, 300 lux, 350 lux, 400 lux, 450 lux, 500 lux, 550 lux, 600 lux, 650 lux, 700 lux, 750 lux, 800 lux, 900 lux, 1000 lux Default value: specific to each scene xx

3.2.1.4 Levels of reflection of natural and artificial light

Luminosity measurement by the detector may be influenced by its environment. To compensate for this, it is possible to adjust this measurement according to two modes which can be selected via the **Reflection level configuration** parameter:

- Simplified: the detector offers two possibilities: Direct lighting and Indirect lighting. The light reflection levels are automatically adjusted,
- Expert: the levels of reflection of natural light and artificial light must be adjusted manually.

Designation	Description	Value
Reflection level configuration	Used to select the method for setting the light reflection level.	Simplified, Expert Default value: Simplified
Type of lighting*	Defines the type of lighting in the installation.	Direct lighting, Indirect lighting Default value: Indirect lighting
Level of reflection of natural light**	Defines the level of reflection of natural light.	0 - 50 Default value: 25
Level of reflection of artificial light**	Defines the level of reflection of artificial light.	1 - 12 Default value: 10

* This parameter is only visible if the **Reflection level configuration** parameter has the value Simplified.

** This parameter is only visible if the **Reflection level configuration** parameter has the value Expert.

■ Method for determining the level of reflection of natural light

In full daylight, with the artificial light off.

Using a luxmeter, measure the luminosity in zone 1 on the surface under the detector. Then measure the luminosity at the ceiling, next to the detector.

Level of reflection of natural light = Surface luminosity / Ceiling luminosity

■ Method of determining the level of reflection of artificial light

With the shutters closed or at night, with the artificial light at 100%.

Using a luxmeter, measure the luminosity in zone 1 on the surface under the detector. Then measure the luminosity at the ceiling, next to the detector.

Level of reflection of natural light = Surface luminosity / Ceiling luminosity

4. Configuration of Presence Channels 1 and 2

→ Parameter Setting screen

An additional parameter is associated with each value of the **Function** parameter in order to specify the operating mode.

Function parametr value	Additional parameter(s) appearing for the Function value
Lighting	Control on Presence
	Absence control
Timer	Control limitation time delay
Shutters / blinds	Control on Presence
	Absence control
Heating	Control on Presence
	Absence control
Metering activation	Control on Presence
	Absence control
Scene	Control on Presence
	Absence control
Value in %	Choice of edge
	Control on Presence
	Absence control
Priority	Control on Presence
	Absence control

4.1 Lighting function

This function is used to switch the lighting circuit or any other load ON or OFF . The Lighting function emits the **ON / OFF** object. The status of the controlled output is received on the **Info ON/OFF** object which can condition the initial control.

Designation	Description	Value
Control on Presence	This parameter is used to define the control emitted after presence detection.	Not used, ON, OFF, Toggle switch Default value: ON
Control on absence	This parameter is used to define the control emitted when there is no presence detection.	Not used, ON, OFF, Toggle switch Default value: OFF

4.2 Timer function

This function is used to switch the lighting circuit or any other load ON or OFF. The Timer function sends the **Timer** object. The status of the controlled output is received on the **Info ON/OFF** object which can condition the initial control.

Designation	Description	Value
Control on Presence	This parameter is used to define the control emitted after presence detection.	Not used, Start, Stop Default value: Start
Control on absence	This parameter is used to define the control emitted when there is no presence detection.	Not used, Start, Stop Default value: Not used
Control limitation time delay (in seconds)		1 - 30 Default value: 15

4.3 Shutter/Blind function

This function is used to control raising and lowering of the shutter circuit. The Shutter/Blind function emits the **Up/ Down** and **StepStop** objects.

Designation	Description	Value
Control on Presence	This parameter is used to define the control emitted after presence detection.	Not used, Up, Down, Stop Default value: Up
Control on absence	This parameter is used to define the control emitted when there is no presence detection.	Not used, Up, Down, Stop Default value: Down

4.4 Priority function

This function is used to control a heating circuit according to the presence or absence of people. The Heating function emits the **HVAC Mode** object.

Designation	Description	Value
Control on Presence	This parameter is used to define the control emitted after presence detection.	Not used, Auto, Comfort, Standby, Night set-point, Frost protection Default value: Auto
Control on absence	This parameter is used to define the control emitted when there is no presence detection.	Not used, Auto, Comfort, Standby, Night set-point, Frost protection Default value: Frost protection

4.5 Heating Activation function

This function is used to activate or deactivate the heating according to the presence or absence of people. The Heating Activation function emits the **HVAC Heating Enable** object.

Designation	Description	Value
Control on Presence	This parameter is used to define the control emitted after presence detection.	Not used, Heating activation, Heating deactivation Default value: Heating activation
Control on absence	This parameter is used to define the control emitted when there is no presence detection.	Not used, Heating activation, Heating deactivation Default value: Heating deactivation

4.6 Scene function

The Scene and Presence/Absence Scene functions are used to send group controls to different types of outputs to create ambiances or scenarios (leave scenario, reading ambience, etc.). These functions send the **Scene** object. Please note, the product can only activate a scene. To record a scene another input must be used (which you can remove after recording).

Designation	Description	Value
Control on Presence	Defines the number of the scene sent after a presence is detected.	Not used, Scene 1 to 32 Default value: Not used
Control on absence	Defines the number of the scene sent at the end of the time delay.	Not used, Scene 1 to 32 Default value: Not used

4.7 Value in %

This function is used to emit the lighting dimming controls on 1 or 2 levels: a value after presence detection and possibly another value at the end of the presence time delay. This function emits the **ON / OFF** and **Lighting value** objects. The status of the controlled output is received on the **Info ON/OFF** object which can condition the initial control.

Designation	Description	Value
Choice of edge	Used to chose which event triggers sending the object.	Presence, Absence, Presence / Absence Default value: Presence / Absence
Control on Presence	This parameter is used to define the control emitted after presence detection.	0% - 100% Default value: 100%
Control on absence	This parameter is used to define the control emitted when there is no presence detection.	0% - 100% Default value: 0%

4.8 Priority

The Priority function sends priority-start or priority-stop controls. The Priority action depends on the type of application controlled: lighting, blinds, heating, etc. The Priority function emits the **Priority** object.

Designation	Description	Value
Control on Presence	This parameter is used to define the control emitted after presence detection.	Not used, Priority ON / Down / Comfort, Priority OFF / Up / Frost protection, ON priority end - Down - Comfort OFF priority end - Up - Night set-point Default value: Priority ON / Down / Comfort
Control on absence	This parameter is used to define the control emitted when there is no presence detection.	Not used, Priority ON / Down / Comfort, Priority OFF / Up / Frost protection, ON priority end - Down - Comfort OFF priority end - Up - Night set-point Default value: ON priority end - Down - Comfort

4.9 Time delay

The lighting time delay is activated when switching from Absence (no movement) to Presence (movement) on the presence channel. The presence sensor returns to Absence mode (no movement) at the end of the time delay whatever the ambiance luminosity level may be. That timer is automatically retriggered after detection. The time delay can be set by the ETS or via the setting potentiometer on the device or with the installer remote control EEK001 / EE807.

Designation	Description	Value
Time delay	Defines the period during which the output switches to ON when a presence is detected. If a presence is detected before the end of the delay, the timer is triggered again (Time delay restarts.)	Potentiometer settings, 5 s, 15 s, 30 s, 1 min, 2 min, 3 min, 4 min, 5 min, 10 min, 15 min, 30 min, 1 h, 2 h, 3 h, 4 h, 8 h, Default value: 5 min

4.10 Emission time delay

Designation	Description	Value
Emission time delay	This parameter defers sending the control after detection.	Not active, 1 s, 2 s, 3 s, 5 s, 10 s, 15 s, 20 s, 30 s, 45 s, 60 s, 1 min 15, 1 min 30, 2 min, 2 min 30, 3 min, 5 min, 10 min, 15 min Default value: Not active

4.11 Surveillance sensitivity

This parameter is used to define detection sensitivity. High sensitivity allows the detector to validate presence at the first detection. Low sensitivities define the interval during which 3 detections allow the presence event to be validated.

Designation	Description	Value
Surveillance sensitivity	This parameter defines the sensitivity of detection.	Low sensitivity, High sensitivity (1 detection) Default value: High sensitivity (1 detection)
Low sensitivity*	This setting is used to define the interval during which the detection validates the presence event.	3 detections in 10 seconds, 3 detections in 30 seconds, 3 detections in 1 min, 3 detections in 5 min Default value: 3 detections in 10 seconds

* This parameter is only accessible when surveillance sensitivity is set to Low.

4.12 Authorization

This function authorizes or inhibits presence detection (by a clock, for example, at certain periods).

Designation	Description	Value
Authorization	This parameter authorises or forbids presence detection.	Used, Not used Default value: Used

4.13 Emission after initialization

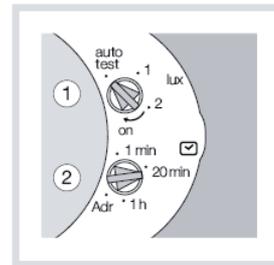
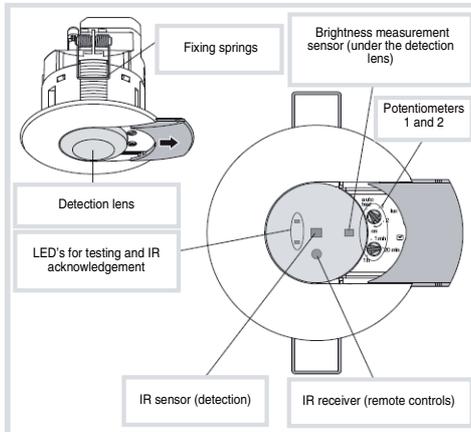
The **Emission after initialisation** parameter defines whether the presence detector sends the current status (depending on the defined function ON/OFF, the scene number or the luminosity) via the Regulation Channel after power is restored. Sending the status can e. g. be helpful when synchronizing a visualization.

Designation	Description	Value
Emission after initialization	This parameter defines whether the input status is sent on the bus upon initialisation.	Used, Not used Default value: Used

5. Physical addressing

The detector can be passed into the KNX addressing mode via the local potentiometers or by the aid of the remote control EE808.

Move the potentiometer 2 to "Adr" or use **remote control** EE807 (long push > 5 s on the SET key), the red LED behind the lenses is switched-ON to indicate the **addressing mode**.



Remote control EEK001 / EE807

