USER MANUAL

2 – CHANNELS 360° PRESENCE DETECTOR

PD00A02KNX

Summary

1. Presentation of the 2-channel 360° presence detector's functions of the application software

The application software allows configuring the 2 channel presence detector 360°.

The main functions are the following:

■ **Presence detection and brightness measurement**

The 2-channel presence detector is sensitive to infrared rays associated with heat emitted by moving bodies. Lighting, roller shutter / blind, heating, priority and scene commands can be sent during movement detection, depending on the ambient brightness.

■ **Lighting channel**

The lighting channel controls a load in case of presence detection, when the ambient brightness is below an adjustable threshold.

■ **Presence channel**

The presence channel controls a load in case of presence detection, without taking account of the ambient brightness.

■ **Ambient brightness threshold**

The ambient brightness threshold can be defined by parameterizing or on the device via a potentiometer.

■ **Lighting and presence delay**

This function sends a command at the end of a delay when no presence has been detected during the delay ("absence" of persons). The delay value can be set by parameterizing or on the device via a potentiometer.

■ **Brightness probe locking (Lighting channel)**

This function inhibits the brightness measurement of certain detectors when they control the same output.

■ **Authorization ON or OFF (Lighting channel)**

This function authorizes or forbids presence detection by the lighting channel (by a clock, for example, at certain periods). The presence channel continues operating independently.

■ Semi-automatic or Automatic mode, override command (Lighting channel)

The operating mode (Automatic or Semi-automatic) is selected by parameterizing or via a switch directly on the device. In Automatic operation, detection is performed according to the movements. In Semi-automatic operation, a command on the override input must be actuated to activate Presence mode and detection.
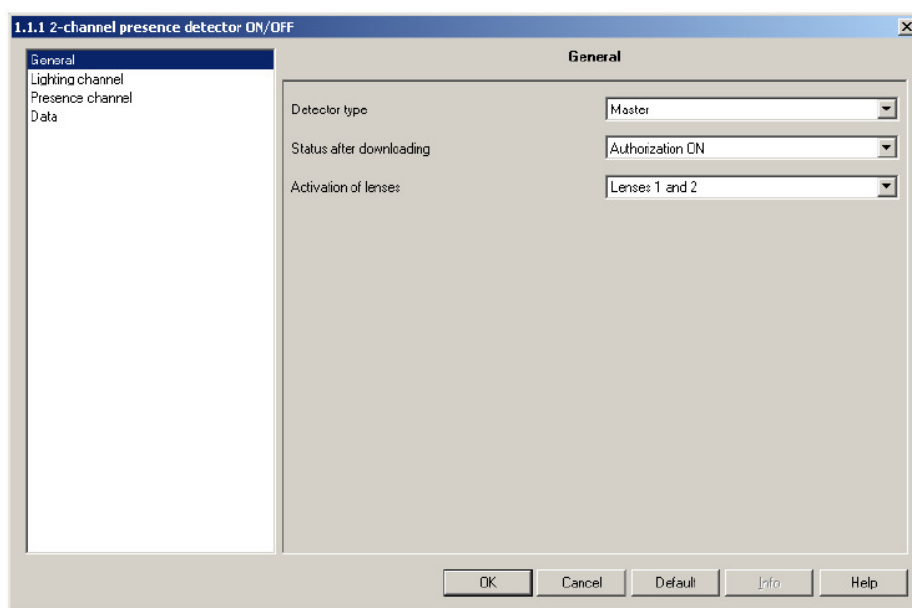
■ Master/Slave

This function extends the motion detector's detection area by associating it with several other detectors. The slave motion detectors capture movement (without taking account of the ambient brightness) and transmit the movement information to the master detector.

■ Scene execution

The Scene Execution function sends group commands to different kinds of outputs to create ambiences or scenarios (presence scenario, absence scenario, ...). It allows calling one scene in the case of presence of a person and another scene in the case of absence of persons.

2. General parameters
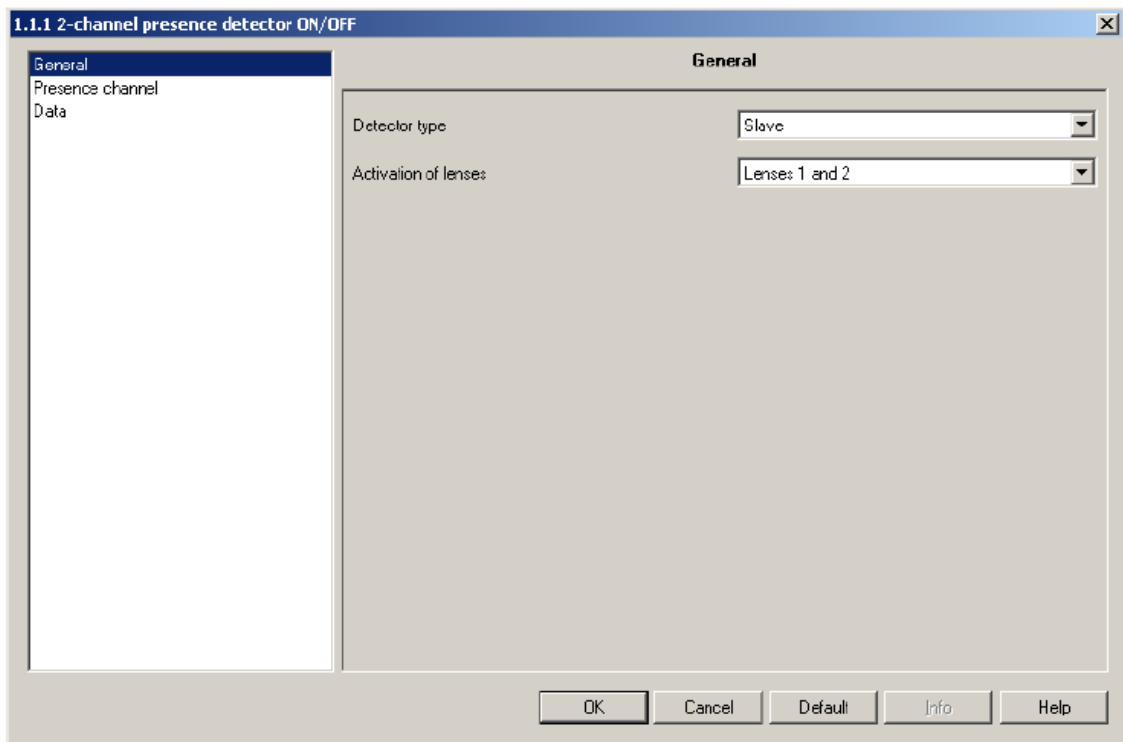
➜ Parameter Setting screen

Screen 1

➜ Parameters

Designation	Description	Values
Detector type	Allows configuring the detector as a Master (it measures and manages the brightness) or as a Slave (no brightness measurement).	Master, Slave Default value: Master
Status after download*	Allows initializing the type of authorization after a download.	Authorization ON, Authorization OFF Default value: Authorization ON
Activation of lenses	Allows selecting the active lenses	Lenses 1 and 2, Lens 1, Lens 2 Default value: Lenses 1 and 2

* This parameter only appears if the detector is configured as Master.

Note:
If the detector is configured as a Slave, only the Presence channel appears and the status after a download cannot be parameterized (in Slave configuration, the presence detection is always active).

Screen 2

Eelectron Spa, Via Magenta 77/22, I-20017 Rho (MI), Italia
Tel +39 02.9316639 - Fax +39 02.93507688
info@eelectron.com www.eelectron.com

3. Function parameters

3.1 Objects List

Object name	None	ON/OFF	Timer	Absolute dimming Presence/Absence	Shutters/Blinds	Heating	Priority	Scene Presence / Absence	General objects
ON/OFF	X	X		X		X	X		
Status indication ON/OFF		X	X	X	X	X	X	X	
Timer			X						
Shutters/Blinds					X				
Illumination value				X					
Heating mode						X			
Heating ON/OFF						X			
Priority							X		
Derogation (lighting channel only)		X		X	X	X			
Scene								X	
Output device status indication (lighting channel only)									X

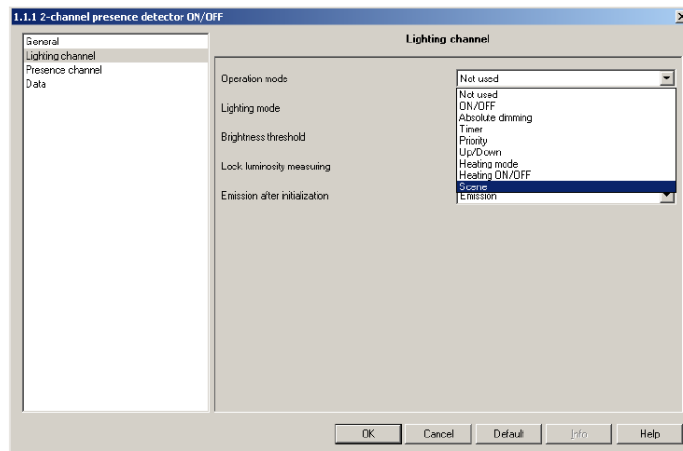| Authorization (lighting channel only)								X
Lock luminosity measuring (lighting channel only)								X
Slave detection								X
Slave output								X

All functions and objects are available on the lighting channel and on the Surveillance channel.

3.2 Parameterizing of the functions of the presence detector

■ Operating mode of the lighting channel (only for Master detector) and of the presence channel (both for Master and Slave detectors). The Operating mode parameter allows selecting the command output after a valid presence detection ("presence" of a person) and, if required, the command output at the end of the lighting or presence delay ("absence" of a person).

- Valid presence detection:

- For the Lighting channel: detection of a presence and ambient brightness below the adjustable threshold.

- For the Presence channel: detection of a presence, whatever the ambient brightness.

- Lighting or presence delay: separately adjustable by parameterizing or on the device via a potentioneter.
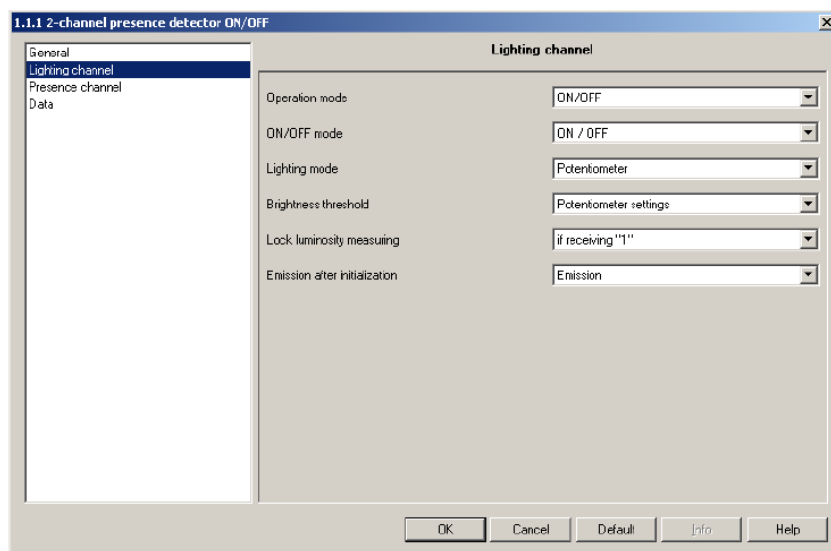
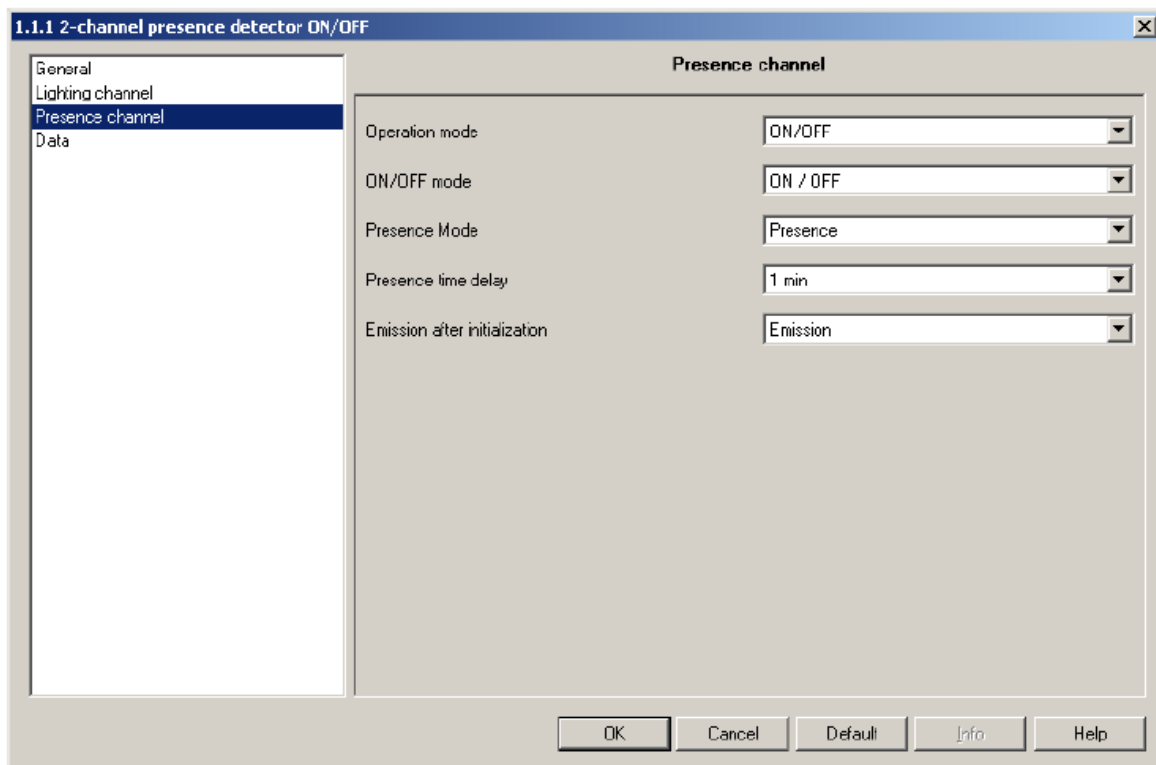➜ Parameter Setting screen

Screen 3

An additional parameter, which allows specifying the operating mode, is associated with each valus of the Operating mode parameter:

Value of the Operating mode parameter	Additional parameter(s) which appear for the selected operating mode value
None	None
ON/OFF	Mode ON/OFF
Absolute dimming	Tripping illumination value
	Switching illumination value
Timer	None
Priority	Priority mode
Shutters/Blinds	Mode Shutters/Blinds
Heating mode	Heating mode
Heating ON/OFF	None
Scene execution	Scene number by presence
	Scene number by absence

Parameterizing screen types which appear for the lighting channel of the presence channel.

Screen 4: Lighting channel

Screen 5: Presence channel

A. ON / OFF and Timer operating modes

These functions allow switching ON or OFF a lighting circuit or any other load.
The ON/OFF function is performed by sending the ON/OFF object.
The Timer function is performed by sending the Timer object.
The status of the controlled output is received on the Info ON/OFF object, which can condition the initial command.

➡ Parameter Setting screen: refer to "Screen 4 Lighting channel" and "Screen 5 Presence channel".

➡ Parameters

Designation	Description	Values
Mode ON/OFF	Allows defining the command output after a valid presence detection and, if required, the command output at the end of the delay.	Stop, ON, OFF/ON, ON/OFF Command output after a detection / command output at the end of the delay. Default value: ON/OFF

B. Priority operating mode

The priority function sends priority-start or priority-stop commands.
The Priority action depends on the type of application controlled: Lighting, shutters/blinds, heating, etc.. The Priority function emits the Priority object.
The status of the controlled output is received on the ON/OFF.

➜ Parameter Setting screen: refer to "Screen 4 Lighting channel" and "Screen 5 Presence channel".

➜ Parameters

Designation	Description	Values
Priority mode	Allows selecting a Priority mode. The action depends on the type of application.	Priority ON, Priority OFF. Default value: ON/OFF

C. Absolute dimming operating mode

This function allows outputting lighting dimming commands on 2 levels: one value upon a presence detection and another value at the end of the lighting or presence delay.
The Absolute dimming function outputs the Illumination value object.

➜ Parameter Setting screen: refer to "Screen 4 Lighting channel" and "Screen 5 Presence channel".

➜ Parameters

Designation	Description	Values
Tripping illumination value	Allows defining the absolute dimming level of the output, which is output after a valid presence detection.	0 to 255 in 1 steps. 255 corresponding to 100%. Default value: 255.
Switching illumination value	Allows defining the absolute dimming level of the output, which is output at the end of the delay.	0 to 255 in 1 steps. 255 corresponding to 100%. Default value: 0.

D. Shutters/Blinds operating mode

This function allows controlling the Up or Down movement of a shutter or blind.
The Up/Down function emits the Up/Down object.

➜ Parameter Setting screen: refer to "Screen 4 Lighting channel" and "Screen 5 Presence channel".

➜ Parameters

Designation	Description	Values
Mode Shutters/Blinds	Allows defining the command output after a valid presence detection and, if required, the command output at the end of the delay.	Up, Down, Shutters/Blinds, Down/Up. Default value: Down/Up

E. Heating ON/OFF and Heating mode operating modes

These functions allow outputting heating commands:
The ON/OFF function is performed by sending the ON/OFF object.
The Heating function outputs the Heating mode object.

➜ Parameter Setting screen: refer to "Screen 4 Lighting channel" and "Screen 5 Presence channel".

➜ Parameters

Designation	Description	Values
Heating ON/OFF	The heating is switched ON upon a valid presence detection and switched OFF at the end of the delay.	
Heating mode	Allows defining the command output after a valid presence detection and, if required, the command output at the end of the delay.	Comfort/Eco, Comfort, Economy, Frost protection / Auto Command output after a detection / command output at the end of the delay. Default value: ON/OFF

F. Scene execution operating mode

The Scene Execution function sends group commands to different kinds of outputs to create ambiences or scenarios (leaving home scenario, reading ambience, etc.).
The Scene execution function outputs a Scene object.

→ Parameter Setting screen: refer to "Screen 4 Lighting channel" and "Screen 5 Presence channel".

→ Parameters

Designation	Description	Values
Scene number by presence	Allows defining the number of the scene output upon a valid presence detection.	Scene 1 to Scene 8 Default value: Scene 1
Scene number by absence	Allows defining the number of the scene output after the delay.	Scene 1 to Scene 8 Default value: Scene 2

■ **Lighting mode, lighting delay and brightness threshold of the lighting channel**

The output controlled by the lighting channel is only activated when a presence is detected and when the brightness is below a parameterizable threshold (darkness condition).

Designation	Description	Values
Lighting mode	Allows defining whether the delay and the operating mode of the Derogation are to be set via the potentiometers on the devices or by ETS.	Potentiometer, Parameter Default value: Potentiometer
Lighting time delay*	Allows defining the time during which the output switches to ON upon a valid presence detection (brightness below the threshold). If a presence is detected before the end of the delay, the delay re-starts.	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: 1 min
Override operation*	Allows defining the operation of the Derogation command output by a communicating pushbutton (refer to the Derogation function section).	Automatic, Semi-Automatic Default value: Automatic.
Brightness threshold	Allows defining the brightness threshold below which the lighting is switched on when a presence is detected (darkness condition). It also allows authorizing or disabling the setting via the potentiometer on the device.	Potentiometer settings, brightness measure inactive, 5 lux, 50 lux, 100 lux, 200 lux, 300 lux, 400 lux, 500 lux, 600 lux, 700 lux, 800 lux, 900 lux, 1000 lux, 1100 lux, 1200 lux. Default value: Potentiometer settings

* This parameter only appears if the value of the Lighting mode parameter is set to Parameter.

■ Derogation function

The derogation function is started by the Derogation function.

In Automatic mode (with authorization ON):

- Receiving the Derogation ON object allows:
- Switching to Presence when in Absence.
- Switching to Absence when in Presence.
- Receiving the Derogation OFF object allows cancelling a current derogation.

In Semi-automatic mode (with authorization ON):

- Only receiving the Derogation ON object allows switching to Presence when in Absence.
- Receiving the Derogation OFF object switches the product to Absence.

■ Presence mode and presence delay of the presence channel

In the case of the presence channel, only the presence detection is taken into account, the ambient brightness has no effect on the control of the output. The control of the output may occur after a monitoring delay of 30 s or of 15 min (operating mode 1 or 2) or immediately upon a detection (mode 3).

➜ Parameter Setting screen: refer to "Screen 5 Presence channel".

➜ Parameters

Designation	Description	Values
Presence mode	Allows defining whether the operating mode of the presence channel and the delay are to be set via the potentiometers on the device or by ETS.	Potentiometer, Presence, temporised Default value: Potentiometer The Presence value corresponds to mode 3 and the Temporised value corresponds to mode 1 or 2.

Designation	Description	Values
Presence time delay*	Allows defining the time during which the output switches to ON upon a valid presence detection. If another presence is detected before the end of the delay, it re-starts.	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: 1 min.

* This parameter only appears if the value of the Presence mode parameter is set to Parameter or Temporised.

■ Locking the brightness measurement of the lighting channel

This function inhibits the brightness measurement of the lighting channel upon receipt of the Lock luminosity measuring object.

→ Parameter Setting screen: refer to "Screen 4 Lighting channel"

→ Parameters

Designation	Description	Values
Lock luminosity measuring	Allows defining the operation of the locking.	if receiving "1", if receiving "0", Not used Default value: if receiving "1"

■ Emission after the initialization of the lighting channel and of the presence channel

The motion detection of the lighting channel or of the surveillance channel can be enabled or disabled at the initialization.

→ Parameter Setting screen: refer to "Screen 4 Lighting channel" and "Screen 5 Presence channel".

→ Parameters

Designation	Description	Values
Emission after initialization	Allows defining the behaviour after a bus breakdown, a download or a restart of the application. Allows avoiding to switch the light off by inhibiting the output of an OFF command after the initialization.	Emission, No emission Default value: Emission

KNX

4. Main characteristics

Max. number of group addresses	252
Max. number of links	254
Parameters	28
Objects	15

5. Physical addressing

To perform physical addressing or check for the presence of the bus, press the physical address pushbutton located on BCU (mechanism) of the product.

The product remains in physical addressing until the physical address has been transmitted by ETS or until the next time the physical addressing button is pressed.