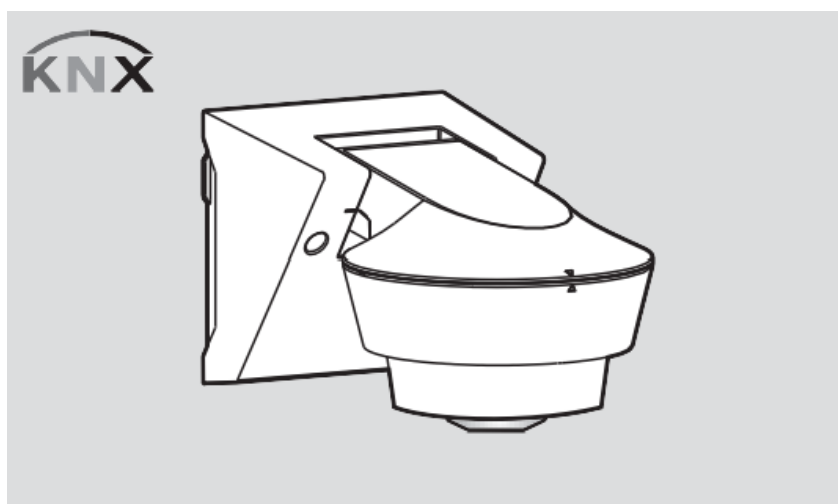


OUTDOOR PIR MOTION DETECTOR

for KNX® Home & Building Control System

PD00F01KNX

User manual



Product: PD00F01KNX

Description: Outdoor Motion Detector

Document Version: **1.0**

Date: 28/04/2025

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Disclaimer:

Any information contained in this manual may be changed without notice.

This manual can be freely downloaded from the website: www.eelectron.com.

Despite the correctness of the data contained within this document has been verified, it is not possible to exclude the presence of errors or typos; Eelectron therefore assumes no responsibility in this regard. Any corrections that will be necessary will be included in the updates of this manual

Symbol for relevant information



Important warning symbol



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Preamble

This manual is intended for use by installers. Installation and assembly of electrical equipment must be carried out by qualified electricians. Contact a qualified electrician in the event of fault or breakdown.

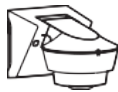
Technical specifications

Rated Voltage	21 - 30VDC (supply by KNX bus)
Current Consumption EIB / KNX	Operate: Approx. 10mA Standby: Approx. 5mA
Connection Type	Bus connection terminal Φ0.8mm, single core
Output	5 channels (2 channels for lighting, 2 channels for HVAC and 1 channel for alarm)
Settings	Settable by ETS
Detection Range	360°, up to Φ32m (R=16m) at height of 2.5m
Sensitivity	Adjustable via ETS in 4 steps
Light Measuring	10 - 2000Lux
Operating Temperature	-20 °C to +50 °C
Environmental Protection	IP55 (wall mount) IP54 (ceiling mount)
Material	Plastic
Standard and Safety	EN 61000-6-1 / EN 61000-6-3 / EN 55014 / EN 50491



- Do Not mount on conductive surface
- Do not open the enclosure frequently
- Circuit of PD00F01KNX is a low voltage circuit. Never connect it with standard 220V circuit or put it into the same Wiring Tube with the circuit.

Package Contents

Pattern			Rubber washer 
Item	Detector	Lens shield	Wood screw Φ4 x 25.4mm
Quantity	1	3	2

Pattern		
Item	Anchor	Manual
Quantity	2	1

Accessories for optional purchase

Pattern		
Item	Corner mounting bracket	Wood screw Φ4x10mm
Quantity	1	2

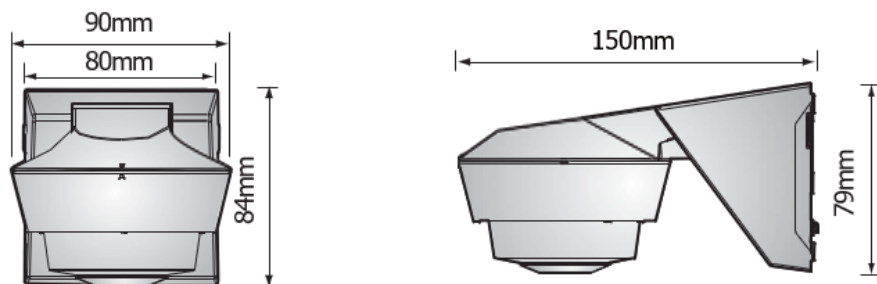
Product description

Features

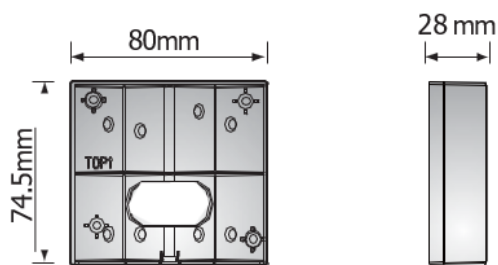
- The motion detector is used to control objects, such as: Lighting, HVAC, Alarm.
- For use in KNX (EIB), TP (twisted pair) bus system in conjunction with other KNX components.
- Parameter and function settings via ETS5.0 (Engineering Tool Software)
- User friendly design of un-falling mounting base and plug-in terminal block for installation convenience.

Dimensions

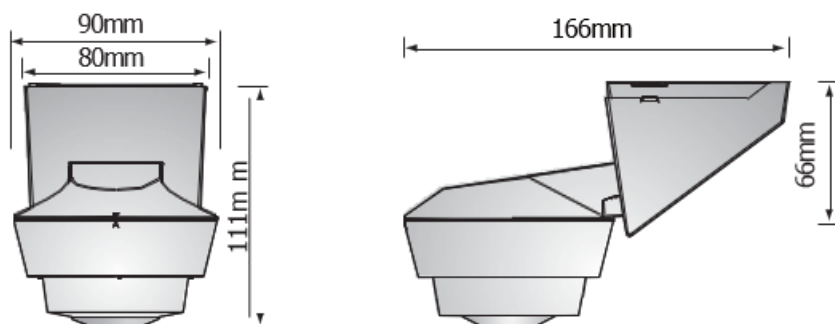
Wall mount: 150 x 90 x 84mm



Wall corner mounting bracket **PD00F01ACC** (not included - optional purchase): 80 x 74.5 x 28mm



Ceiling mount: 166 x 90 x 111mm



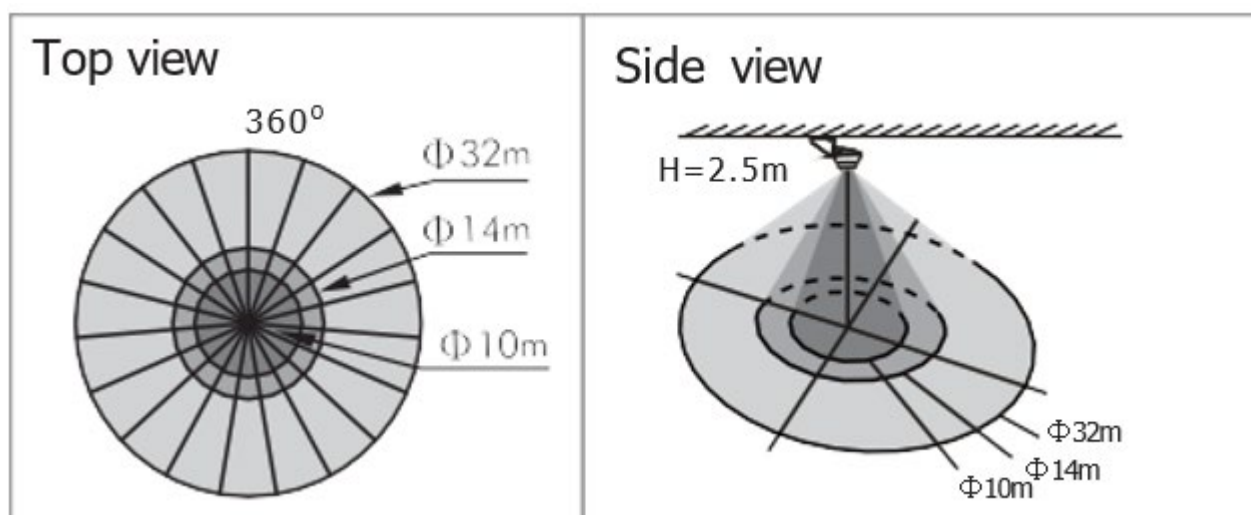
Installation and Wiring

 Please disconnect power completely and read the entire instruction manual carefully before installation.

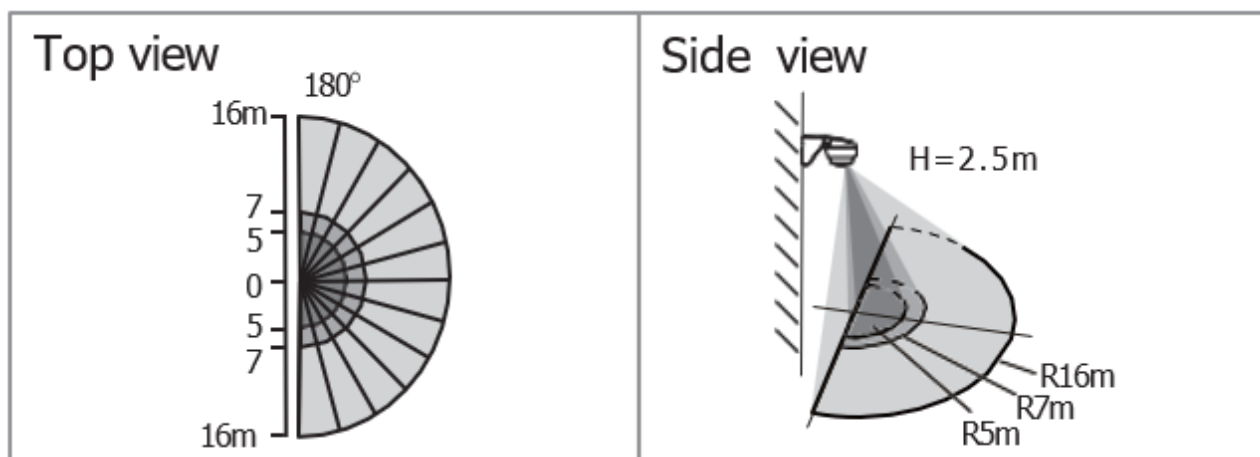
Select a proper location

This detector can be mounted at the height of 2-3m, the recommended installation height is 2.5m to gain the optimal detection range up to a radius of 16m and 360° angle.

Ceiling mount:

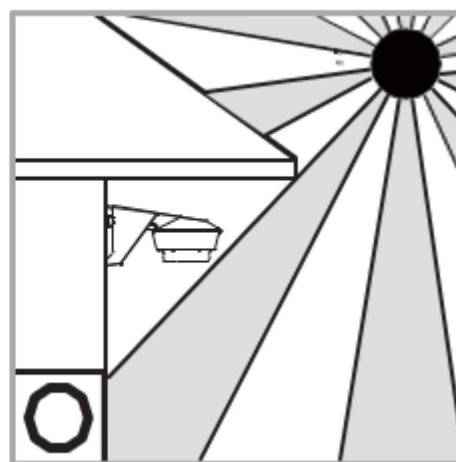
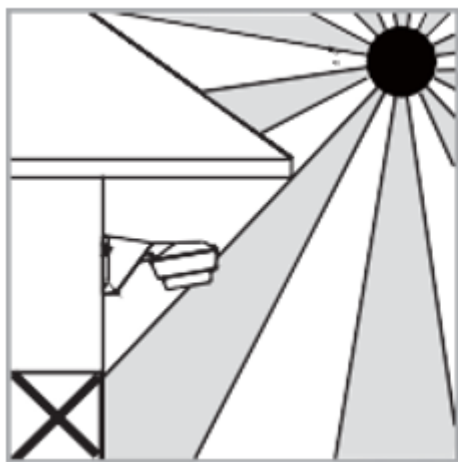
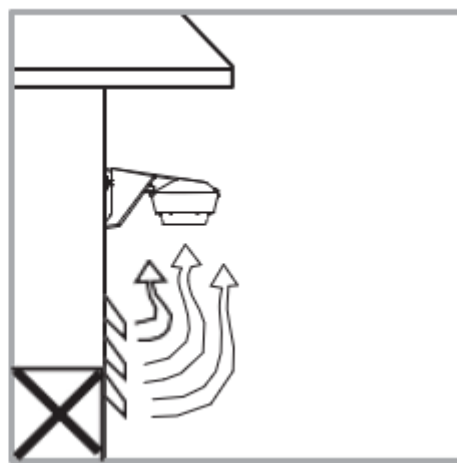


Wall mount:



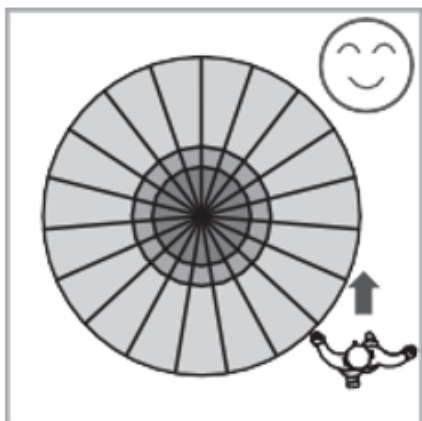
Helpful tips for installation

1. Optimal Installation Locations: The detector is best installed in areas such as gardens, corridors, staircases, entrances, garages, public restrooms, outdoor parking lots, homes, offices, and similar environments.
2. Installation Precautions. Since the detector is sensitive to temperature changes, please avoid the following conditions:
 - Do not position the detector towards highly reflective surfaces such as mirrors or glass.
 - Avoid installing the detector near heat sources, including heating vents, air conditioners, and lighting fixtures.
 - Do not aim the detector at objects that may move in the wind, such as curtains or tall plants.

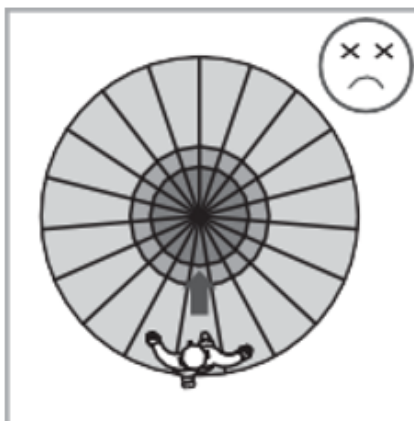


Pay attention to the walking direction in the test proceeding

More sensitive to movement
 across the detector



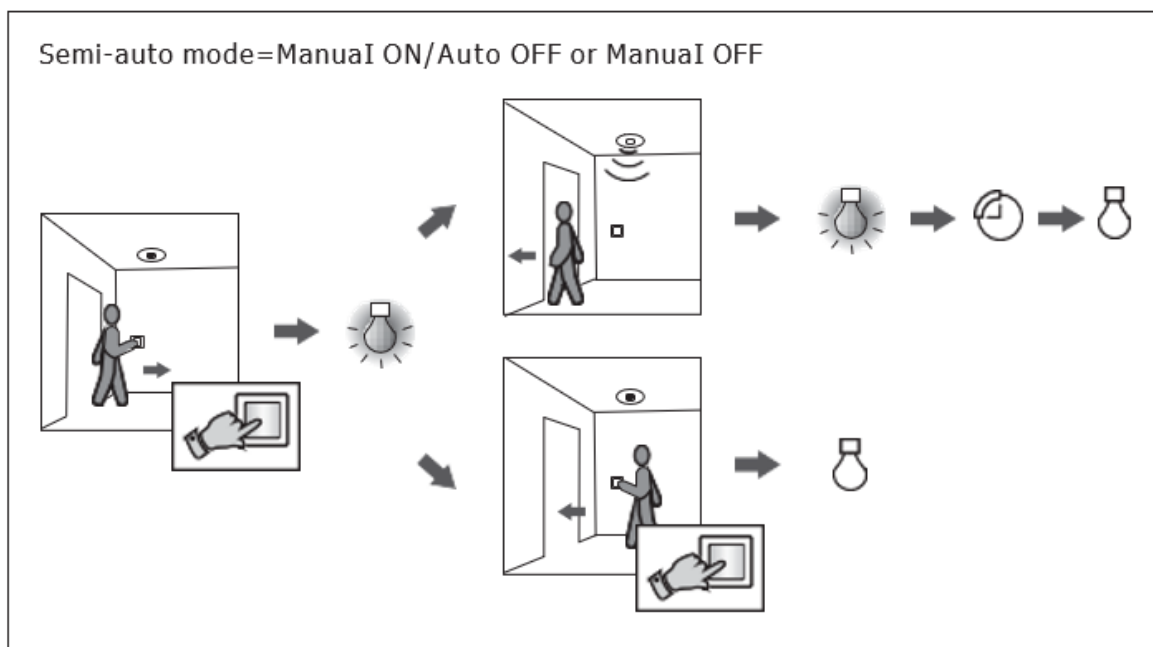
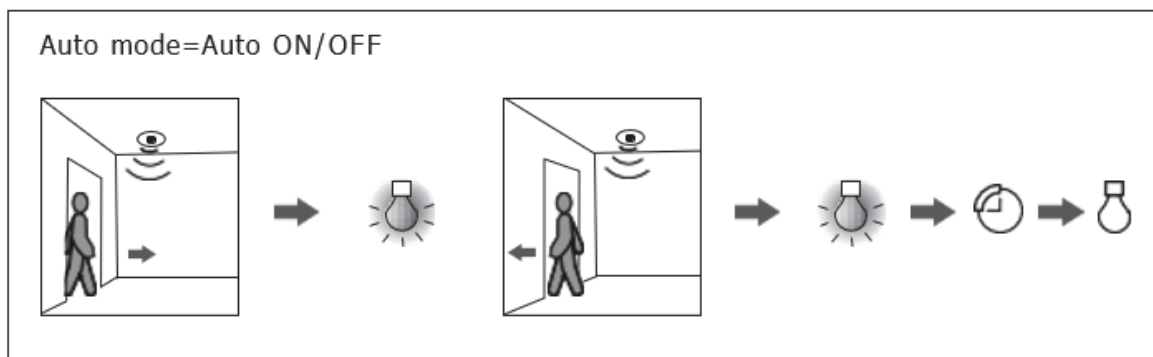
Less sensitive to movement
 directly towards detector



Function

Auto / Semi-auto mode

This function is enabled with ETS setting. Please refer to section 1 “Parameter setting” and 2 “Communication objects description” for detailed information.



Test mode

Parameters can be configured using ETS (Engineering Tool Software). When test mode is activated, the detector automatically switches to RUN mode either after parameters are stored or 10 minutes have passed since activation.

During test mode, the Lux setting does not control the load or the red LED. When the detector is triggered, both the load and the red LED turn on for 2 seconds, then turn off. The detector can be triggered again after a 2-second interval.

Manually ON & OFF and DIM Switching function

Switching and dimming modes can be selected through an external device. This functionality must be enabled using ETS settings.

For detailed information, please refer to Section 1: *Parameter Settings* and Section 2: *Communication Objects Description*.

Master/Subordinate selection

Can only be set by ETS software. Please refer to section 1 “Parameter setting” and 2 “Communication objects description” for detailed information.

Ambient Light Evaluation

The detector adjusts its delay time for turning the load on and off based on changes in the ambient light level, preventing unnecessary switching due to rapid fluctuations in light:

Ambient light level changes from bright to dark:

- To prevent the light from switching on or off due to temporary changes in ambient light (e.g., a passing cloud), the detector includes a 10-second delay before turning the light on. During this delay, any movement is ignored, and the red LED remains continuously on as an indication. The detector will not respond to movement within the 10-second delay period.

Ambient light level changes from dark to bright:

- If the ambient light level exceeds the switch-off Lux value for 5 minutes, the response depends on the time setting:
 - Time setting > 5min: The light will automatically switch off after 5 minutes.
 - Time setting < 5min: The light will turn off once the set time is reached, provided no movement is detected during the 5-minute period. However, if movement is detected within this time, the timer will reset and continue counting until the light switches off after the full 5 minutes.

2-Level (Standby Light) function

- In auto mode, when the ambient light level drops below the pre-set Lux value, the detector automatically switches to 2-level mode.
- When “STBY Time” is Set to “Infinity” (∞) in Auto Mode The detector will enter 2-level mode once the delay-off time expires. The load will turn on according to the “STBY Light” setting. If movement is detected, the load will turn on at the specified illumination level (either 100% or the dimmed illumination). Once movement ceases and the delay-off time expires, the load will revert to the illumination level set by “STBY Light.” This cycle will continue until the

ambient light level exceeds the switch-off Lux value for 5 minutes, at which point the light will turn off, and the detector will return to auto mode.

- When “STBY Time” is Set to a Value Other than “Infinity” (∞) in Auto Mode the detector’s behavior is similar to the scenario above, but the actions will be governed by the selected “STBY Time” duration rather than continuing indefinitely.
- When “STBY Light” is Set to “Disable” (OFF) the load will turn off once the delay-off time has expired.

Constant light control

Based on changes in the ambient light level, the load can automatically adjust its brightness either dimming or brightening to match the set Lux value. The Lux setting value (configured via ETS) measures the combined light level of both artificial and ambient light.

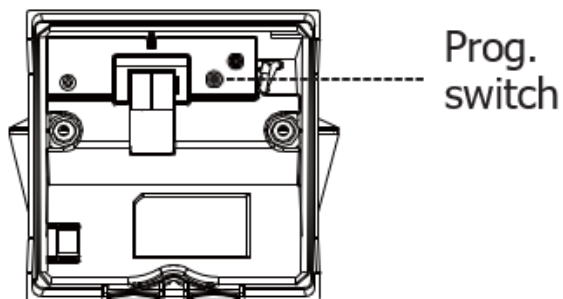
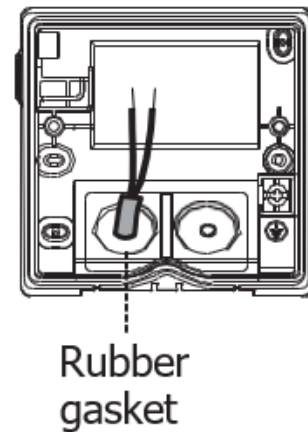
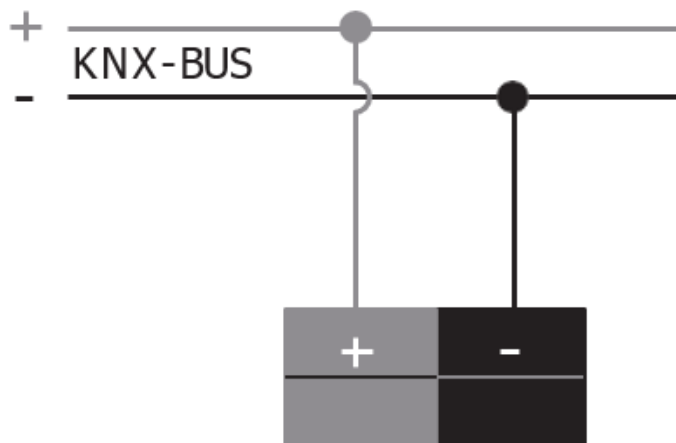
Alarm function

The alarm function can be configured to respond differently or identically when switching ON and OFF.

The alarm output (Object 17) can be locked using Object 16.

Options for behavior when switching the lock ON or OFF via Object 16 include: “No Reaction,” “Switch OFF,” and “Switch ON.” Additionally, the number of detected movements within a specified time frame can be configured.

Wiring diagrams

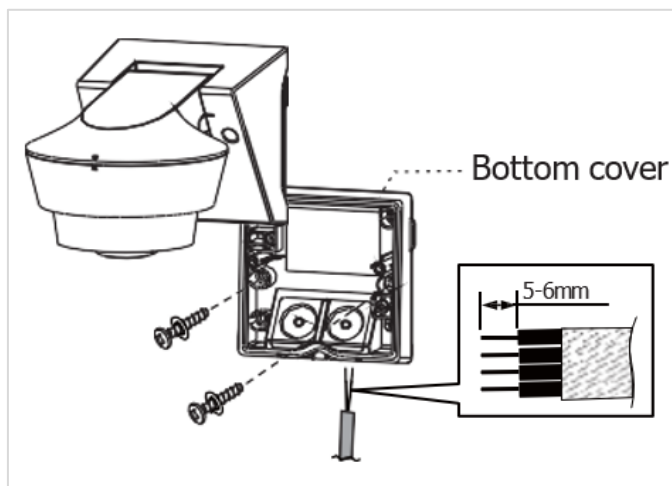
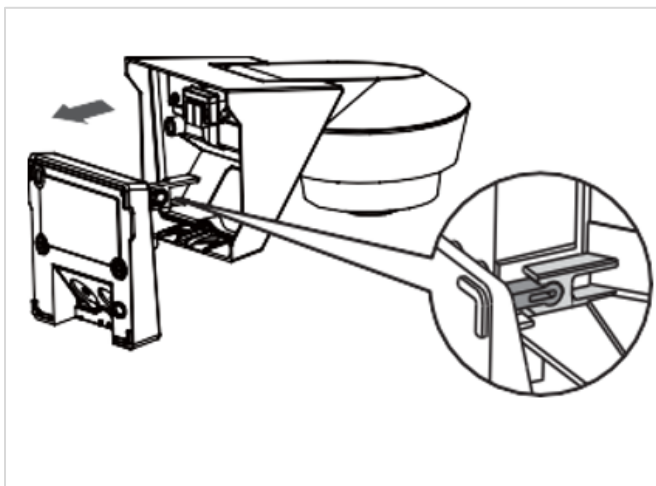
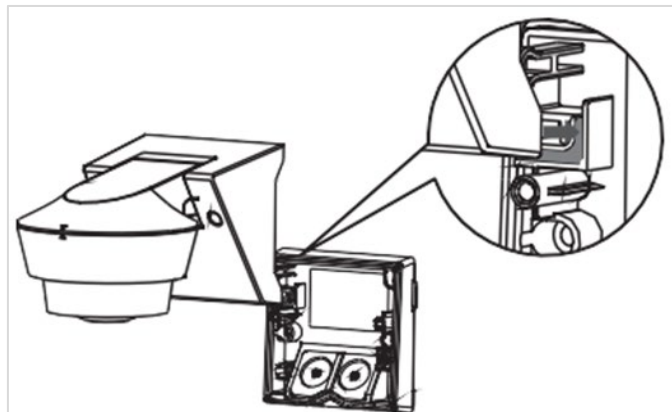
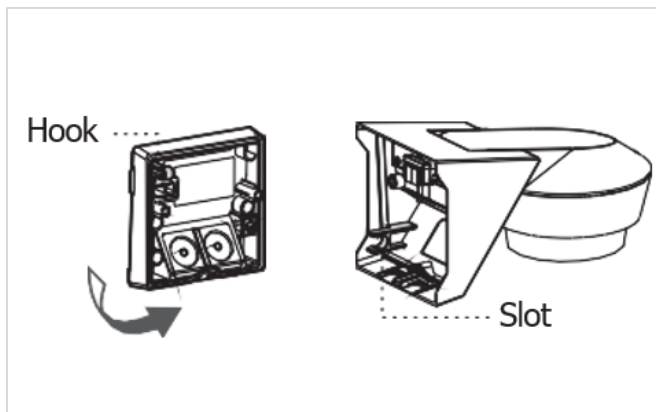


Installation procedure

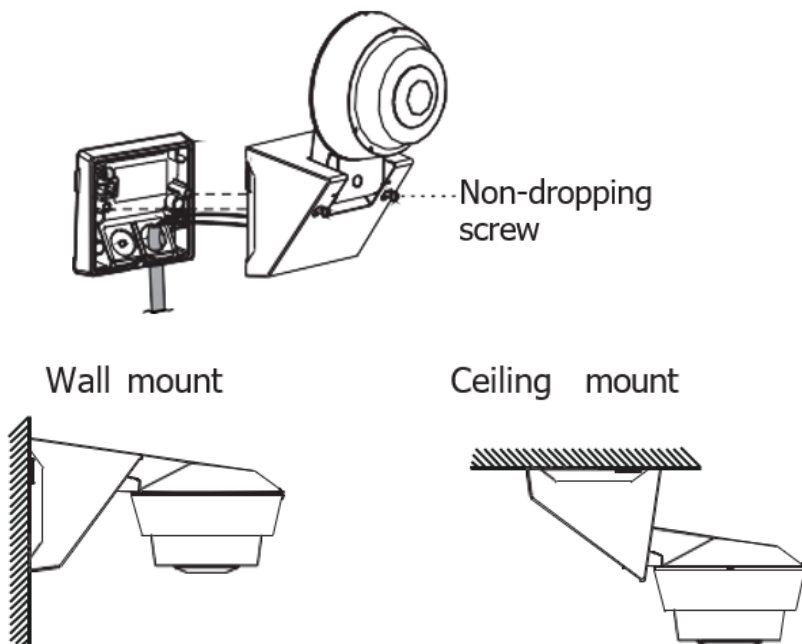
This outdoor motion detector can be mounted directly on the wall or ceiling. Alternatively, it can be installed with the **PD00F01ACC** mounting bracket (sold separately) for recess/corner mounting or on a European standard junction box.

Wall mount and ceiling mount

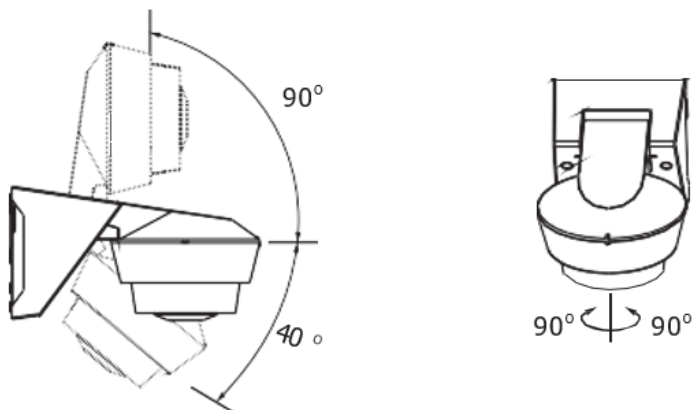
- During installation, the junction box can be attached to the bottom cover by inserting the hook into the slot. This design allows for hands-free installation, making the process more convenient.
- Before installation, use a tool to strip 5-6mm of the cable sheathing.
- Feed the electrical cables through the rubber gasket (see previous page) and refer to the KNX-BUS illustration for proper wiring. Then, secure the bottom cover to the wall or ceiling with two screws.



Attach the detector head to the bottom cover and adjust it to ensure it is positioned correctly.

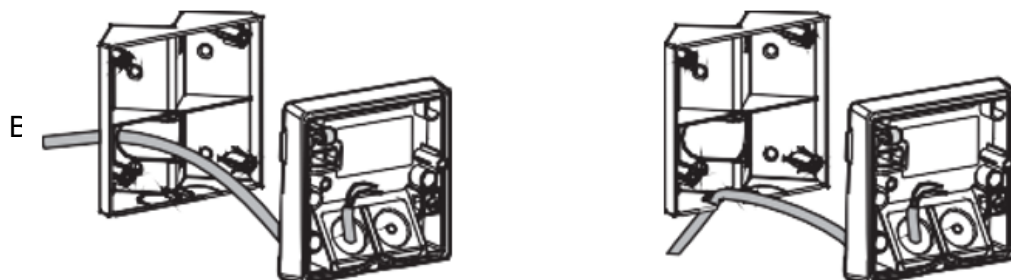


The detector head can be adjusted downward by a maximum of 40° to reduce the detection range, or rotated horizontally up to 90° left or right. Adjust the detector head to achieve the desired detection area.

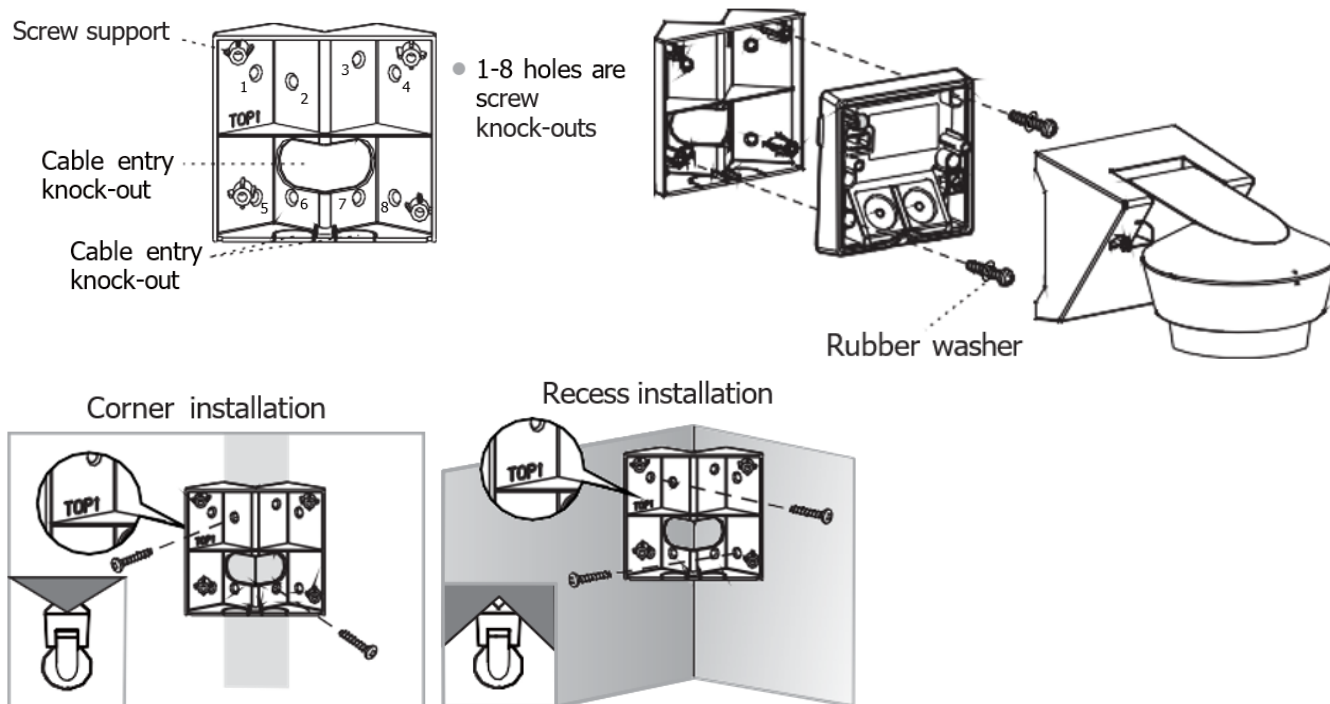


Corner / recess mount with mounting bracket PD00F01ACC (not included)

Cable entry knockouts are provided on the back and bottom sides. Choose the appropriate holes and break them open for wiring.

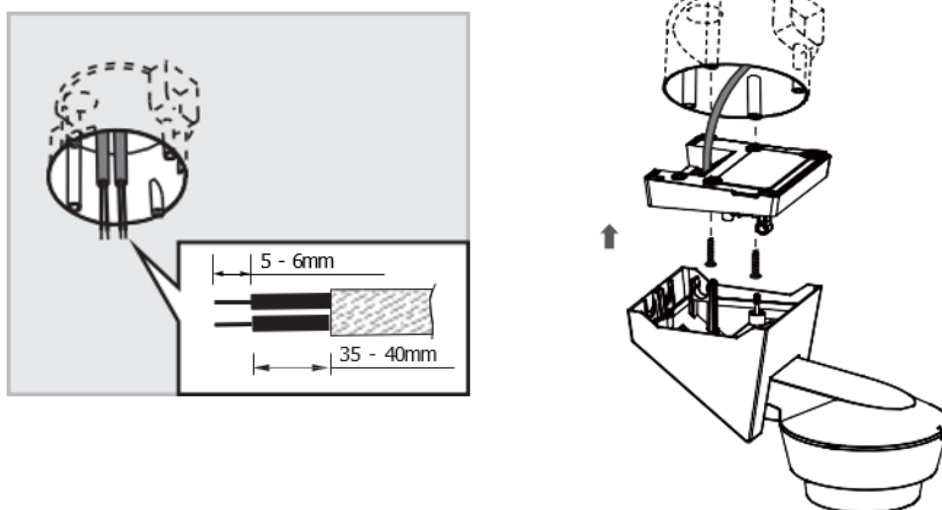


Next, secure the PD00F01ACC mounting bracket to the corner/recess using wood screws, and then attach the bottom cover to the bracket. Refer to the "Wiring Diagrams" for connecting the power cables. Finally, attach the detector head to the bottom cover and adjust it to the correct position.



Wall / ceiling mount with European standard junction box

- Pull the cables from the EU standard junction box and strip 5-6mm of the cable sheathing for wiring.
- Feed the electrical cables through the rubber gasket and refer to the "Wiring Diagrams" for correct wiring. Then, securely attach the bottom cover to the EU standard junction box using 2 screws.
- Attach the detector head to the bottom cover and adjust it to the correct position.



Walk test and Lens shield

Walk test

The purpose of the walk test is to select the optimal location and achieve the desired detection coverage. Set the operating mode to "Test" using the ETS software, then follow the steps below to conduct the walk test. Note that the Lux setting value will be ignored during this process.



The detector requires approximately 60 seconds to warm up after power is supplied. Once warmed up, it enters normal operation mode and is ready for a walk test.

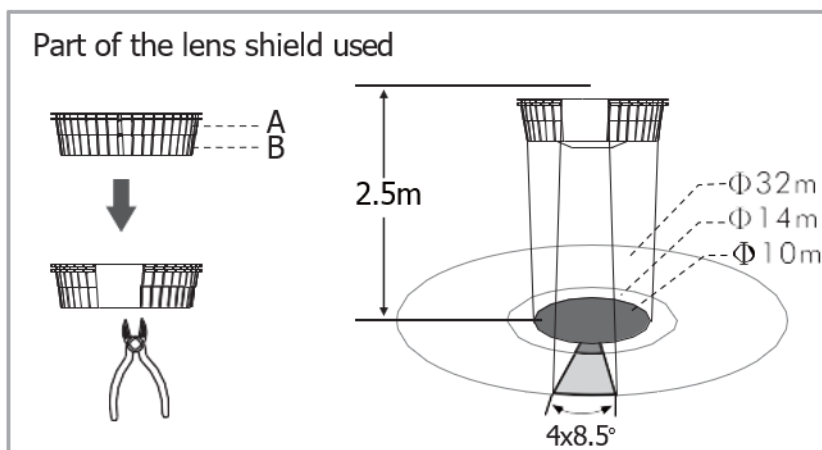
Walk test procedure

1. The tester must be within the detection coverage area.
 2. Switch on the power.
 3. The PD00F01KNX takes approximately 60 seconds to warm up. During this time, the load and red LED will turn on, then turn off once the warm-up is complete.
 4. Walk through the detection pattern from the outside until the red LED and load turn on for approximately 2 seconds, then turn off. The next trigger should occur after a 2-second interval (see figure below).
 5. Adjust the detector head to aim in the desired detection direction (refer to page 13 for details).
 6. Use ETS to adjust the sensitivity (Meter) setting to achieve the desired coverage.
 7. Adjust the Time setting via ETS to modify the switch-off delay time.
 8. Refer to the "Usage of Lens Shield" section for instructions on how to modify the detection range and angle using the lens shield.
 9. Repeat steps 4 to 7 until the desired results are achieved.
-
1. Do not attempt to open or repair the unit without the assistance of a qualified electrician if it is malfunctioning.
 2. The following conditions may reduce sensitivity:
 - On very foggy days, sensitivity may decrease due to moisture collecting on the lens.
 - On extremely hot days, sensitivity may be reduced as the ambient temperature approaches body temperature.
 - On very cold days, when wearing heavy clothing or covering the facial area, the body emits minimal heat, which may result in decreased sensitivity.
 - Cleaning: Only wipe the detector with a dry cloth. Using soap or abrasive cloths may damage the detector lens.

Usage of Lens shield

PD00F01KNX has provided 3 lens shields for masking the undesired detection area.

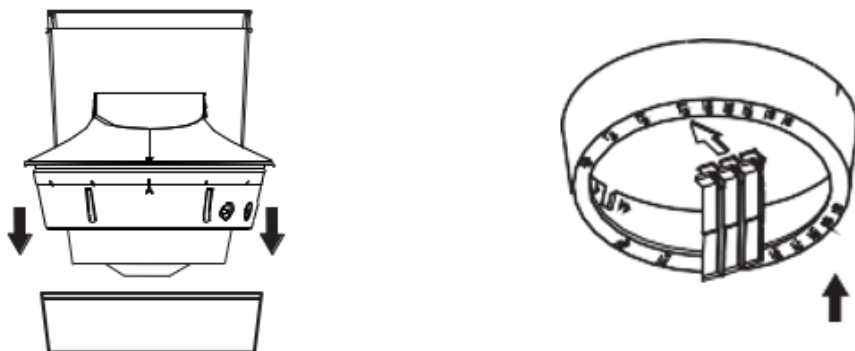
Used Lens Shield	Covered detection range
None	Φ 32 m
Small segment	8.5° each segment
A+B	Φ 10 m
A	Φ 14 m



! The shaded area of the lens shield in the figure above represents the cutoff portions.

Fixing Lens shield

Remove the decorative frame from the detector head and insert the lens shield into the slot of the frame, as shown in the following illustrations. Then, reattach the decorative frame to its correct position on the detector head.



Troubleshooting

When PD00F01KNX works abnormally, check assumptive problems and suggested solutions in following table that will hopefully solve your problem.

Problem	Possible cause	Suggested solution
Lighting / HVAC device does not turn on	1. Power does not turn on 2. Incorrect wiring 3. Incorrect Lux setting 4. Malfunctioning load. 5. Unable to detect movement	1. Turn on the power. 2. Refer to the wiring diagrams for correct connections. 3. Verify that the Lux setting is correctly adjusted. 4. Replace the faulty load with a new one. 5. Check the detection range setting.
Lighting / HVAC device does not turn off	1. Auto-off time is set too long. 2. Detector is being nuisance-triggered. 3. Incorrect wiring.	1. Set the auto-off time to a shorter duration and check if the load switches off according to the pre-set delay off time. 2. Stay outside the detection coverage area to prevent activating the detector during the test. 3. Refer to the wiring diagrams for correct connections.
Red LED does not turn on	1. Not set to Test mode 2. Exceeding the detection range 3. LED indicating function is set to "Disable"	1. Set the detector to test mode. 2. Walk within the effective detection range of Ø32m. 3. Enable the LED indication function via ETS software.
Noise triggered	There are heat sources, highly reflective surfaces, or objects that may sway in the wind within the detection coverage area.	Avoid positioning the detector towards heat sources such as air conditioning units, electric fans, heaters, or highly reflective surfaces. Also, ensure there are no swinging objects within the detection area.

ETS® software settings

The PD00F01KNX database is designed for use with ETS® 5.0 (or higher). Please refer to the following sections for details on the interface and application parameters of the functions. The detector features five output channels: Light Control Output C1, Light Control Output C2, HVAC Control Output C3, HVAC Control Output C4, and the Alarm Function. Each channel operates independently, with C1 and C2 being part of the same channel, and C3 and C4 also sharing the same channel. Therefore, understanding the operation of C1, C3, and the alarm function is sufficient. Detailed information is provided below.

Parameter settings

General-Master

Menu	Function	
The device type is Default: Master	The function of the detector is set as a master or slave device. Detector is set to: Both master and slave	
	Master	When the detector is enabled as the master detector, all functions are operational, and it can receive triggering signals from one or more slave detectors. The signal reception channel can be selected based on the specific requirements.
	Slave	When the detector is enabled as a slave detector, it is used solely to extend the detection field. The presence data is transmitted to the master detector for evaluation based on the configured parameters.

Menu	Function	
Input Slave Default: Light output C1	Set C1 - C4 to receive slave signal or not.	
	Light output C1	Assign channel to receive the signal from slave detector. Please refer to above mentioned section "Master/ slave" for detailed information.
	Light output C2	
	HVAC output C3	
	HVAC output C4	
Light control output C1 Default: Enable	When "Enable" the light control output C1, the relevant setting interface is shown, otherwise it is hidden.	
	Disable	Disable Light control output C1 interface functions.
	Enable	Activate the Light control output C1 interface function.
Light control output C2 Default: Disable	When "Enable" the light control output C2, the relevant setting interface is shown, otherwise it is hidden.	
	Disable	Disable Light control output C2 interface functions.
	Enable	Activate the Light control output C2 interface function.
HVAC control output C3 Default: Enable	When "Enable" the HVAC control output C3, the relevant setting interface is shown, otherwise it is hidden.	
	Disable	Disable HVAC control output C3 interface functions.
	Enable	Activate the HVAC control output C3 interface function.
HVAC control output C4 Default: Disable	When "Enable" the HVAC control output C4, the relevant setting interface is shown, otherwise it is hidden	
	Disable	Disable HVAC control output C4 interface functions.
	Enable	Activate the HVAC control output C4 interface function.
Alarm function Default: Disable	When "Enable" the alarm function output, the relevant setting interface is shown, otherwise it is hidden.	
	Disable	Disable Alarm interface functions.
	Enable	Activate the Alarm interface function.

General-Slave

General

Sensor warm-up time after voltage recovery

Need about 60sec to stabilize the sensor

Motion sensors

The device type is

☐ Master
☒ Slave

General

When the device type is selected by

Slave

Motion sensors

> Sensor sensitivity (Front area)

Maximum

> Sensor sensitivity (Lower area)

Maximum

LED ON when PIR triggered

☐ Disable
☒ Enable

Menu	Function	
Sensor sensitivity (Front area) Default: Maximum	It is used to increase or decrease the sensitivity of PIR for front area fixed in detector. The sensitivity can be adjusted according to user's requirement, no matter the detector is master or slave.	
	Maximum	Highest sensitivity.
	High	Higher sensitivity.
	Medium	Medium sensitivity.
	Low	Lowest sensitivity.
	OFF	Deactivate the detecting function of PIR for front area.
Sensor sensitivity (Look-down area) Default: Maximum	It is used to increase or decrease the sensitivity of PIR for look-down area fixed in detector. The sensitivity can be adjusted according to user's requirement, no matter the detector is master or slave.	
	Maximum	Highest sensitivity.
	High	Higher sensitivity.
	Medium	Medium sensitivity.
	Low	Lowest sensitivity.
	OFF	Deactivate the detecting function of PIR for look-down area.
LED turns on when PIR is triggered Default: Enable	It is used to set if switching on the LED for indication when PIR is triggered.	
	Disable	Waive the LED indicating function when PIR is triggered. But other LED indicating functions are remained.
	Enable	LED will turn on for 1sec for indication when PIR is triggered.

Motion sensor

General	External switch as ON/OFF/Dim input	☐ NO ☒ YES
Motion sensors	Lux/Time/Meter/STBY selected by	☒ ETS ☐ IR
Light control output C1	> Test mode(activated for 10min. After download by choosing "Enable")	☐ Disable ☒ Enable
HVAC control output C3	> Sensor sensitivity (Front area)	Maximum
	Sensor sensitivity (Lower area)	Maximum
	LED ON when PIR triggered	☐ Disable ☒ Enable

Menu	Function										
External switch as ON / OFF / Dim input Default: NO	The Manual ON/OFF and DIM function is operated by the switch built-in/connected with KNX interface module on KNX bus system. <table> <tr> <td>NO</td><td>Disable this feature.</td></tr> <tr> <td>YES</td><td>Enable this feature.</td></tr> </table>	NO	Disable this feature.	YES	Enable this feature.						
NO	Disable this feature.										
YES	Enable this feature.										
Test mode Default: Disable	Test mode is activated after download the program and exited automatically 10min later, and then enters into auto mode or semi-auto mode according to the setting item of "Auto-Semi-auto select". <table> <tr> <td>Disable</td><td>Test mode function is disabled.</td></tr> <tr> <td>Enable</td><td>Test mode function is activated. Once the movement is detected, both of load and LED will be 2sec on 2sec off.</td></tr> </table>	Disable	Test mode function is disabled.	Enable	Test mode function is activated. Once the movement is detected, both of load and LED will be 2sec on 2sec off.						
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Maximum	Highest sensitivity.										
High	Higher sensitivity.										
Medium	Medium sensitivity.										
Low	Lowest sensitivity.										
OFF	Deactivate the detecting function of PIR for front area.										
Sensor sensitivity (Lower area) Default: Maximum	It is used to increase or decrease the sensitivity of PIR for look-down area fixed in detector. The sensitivity can be adjusted according to user's requirement no matter the detector is master or slave. <table> <tr> <td>Maximum</td><td>Highest sensitivity.</td></tr> <tr> <td>High</td><td>Higher sensitivity.</td></tr> <tr> <td>Medium</td><td>Medium sensitivity.</td></tr> <tr> <td>Low</td><td>Lowest sensitivity.</td></tr> <tr> <td>OFF</td><td>Deactivate the detecting function of PIR for look-down area.</td></tr> </table>	Maximum	Highest sensitivity.	High	Higher sensitivity.	Medium	Medium sensitivity.	Low	Lowest sensitivity.	OFF	Deactivate the detecting function of PIR for look-down area.
Maximum	Highest sensitivity.										
High	Higher sensitivity.										
Medium	Medium sensitivity.										
Low	Lowest sensitivity.										
OFF	Deactivate the detecting function of PIR for look-down area.										
LED turns on when PIR is triggered Default: Enable	It is used to set if switching on the LED for indication when PIR is triggered. <table> <tr> <td>Disable</td><td>Waive the LED indicating function when PIR is triggered. But other LED indicating functions are remained.</td></tr> <tr> <td>Enable</td><td>LED will turn on for 1sec for indication when PIR is triggered.</td></tr> </table>	Disable	Waive the LED indicating function when PIR is triggered. But other LED indicating functions are remained.	Enable	LED will turn on for 1sec for indication when PIR is triggered.						
Disable	Waive the LED indicating function when PIR is triggered. But other LED indicating functions are remained.										
Enable	LED will turn on for 1sec for indication when PIR is triggered.										

Light control output C1 / C2 - Switching

General	Auto/Semi auto select	☒ Auto ☐ Semi auto
Motion sensors	Output type	☒ Switching ☐ Dimming
Light control output C1	When Lux/Time/Meter/STBY selected by	ETS
HVAC control output C3	> Switch ON Lux value	2000Lux
	> Lighting delay time	5sec.

Menu	Function	
Auto/ Semi-auto select Default: Auto	It is used to activate / deactivate Auto or Semi-auto mode of Light control output C1	
	NO	Under auto mode, the load will turn on automatically when 4 bit movement is detected and the ambient light level is below the Lux setting value. When movement is no longer detected and the delay time has expired, the load will turn off automatically.
	YES	Under semi-auto mode, load can only be manually switched on by operating the connected external push button. When the load is switched on, it will keep on if the movements are detected constantly. Load will turn off only when movement is no longer detected and the delay time has expired.
Menu	Function	
Output type Default: Switching	It is used to set the output type of detector to be Switching or Dimming.	
	Switching	Set the output type of C1 to switching so that it can connect the switching actuator for ON/OFF operation.
	Dimming	Set the output type of C1 to dimming so that it can connect the dimming actuator for the operation of output with absolute brightness, standby brightness and/or constant brightness control.
Output type Default: Switching	It is used to set sensor switch on Lux value and select the value via drop-down list.	
	5 ~ 2000 Lux	Click the menu of Lux value in the edit interface to set the desired switch on Lux value for Light control output C1.
	Infinity	Infinity: Uncontrolled by Lux value.
Lighting delay time Default: Switching	It is used to set Auto off time, and select the value via drop-down list.	
	5 sec ~ 60 min	Click the menu of delay off time in the edit interface to set the desired value for Light control output C1.

Light control output C1 / C2 - Dimming

General	Auto/Semi auto select	☒ Auto ☐ Semi auto
Motion sensors	Output type	☐ Switching ☒ Dimming
Light control output C1	> Dimming value during ON phase	60%
HVAC control output C3	> Constant light control	☒ Disable ☐ Enable
	When Lux/Time/Meter/STBY selected by	ETS
	> Switch ON Lux value	2000Lux
	> Lighting delay time	5sec.
	> Light standby time	☒ Disable ☐ Enable

Menu	Function	
Dimming value during ON phase Default: 100%	It is used to set the initial value while switching on the lighting.	
	1 ~ 100 %	Output setting of absolute brightness.

Light control output C1 / C2 – Standby values

General	Auto/Semi auto select	☒ Auto ☐ Semi auto
Motion sensors	Output type	☐ Switching ☒ Dimming
Light control output C1	> Dimming value during ON phase	60%
HVAC control output C3	> Constant light control	☒ Disable ☐ Enable
	When Lux/Time/Meter/STBY selected by	ETS
	> Switch ON Lux value	2000Lux
	> Lighting delay time	5sec.
	> Light standby time	☐ Disable ☒ Enable
	Standby time	30sec.
	Standby brightness	40%

Menu	Function	
Light standby time Default: Disable	Select "Disable" means deactivating the standby light function and load will turn off directly when the delay time is elapsed.	
	Disable	Deactivate the standby light function and load will turn off directly when the delay time is elapsed.
	Enable	Activate the standby light function and detector enters into standby light control mode when the delay time is elapsed.
Standby time Default: 5 min	It is used to set standby brightness delay time and select STBY time via drop-down list.	
	30 sec ~ 60 min	Click the menu of standby delay off time in the edit interface to set the desired value for Light control output C1.
Standby brightness Default: 10%	It is used to set standby brightness and select STBY light via drop-down list.	
	1% ~ 60%	Click the menu of standby brightness in the edit interface to set the desired value for Light control output C1.

Light control output C1 / C2 – Constant light

General
Motion sensors
Light control output C1
HVAC control output C3

Auto/Semi auto select
☒ Auto ☐ Semi auto
Output type
☐ Switching ☒ Dimming
> Dimming value during ON phase
60%
> Constant light control
☐ Disable ☒ Enable
- Preset setpoint
300Lux
- Lux deviation
10
- Time after switch-on until constant light control starts
1min.
When Lux/Time/Meter/STBY selected by
ETS
> Switch ON Lux value
2000Lux
> Lighting delay time
5sec.
> Light standby time
☒ Disable ☐ Enable

Menu	Function	
Constant light control Default: Disable	It is used to activate or deactivate the constant light control function.	
	Disable	Deactivate the constant light control function.
	Enable	Activate the constant light control function.
Preset setpoint Default: 300 Lux	It is used to set the pre-set Lux value for constant light control function and only can be set by ETS.	
	10 Lux ~ 2000 Lux	The preset setpoint in Lux for constant light control can be preset by ETS.
Lux deviation Default: 10 Lux	It is used to set the deviate value of constant dimming function, that is the detector will react refer to what the deviation of the ambient light level is.	
	0 ~ 255	The deviation of dimming up / down the ambient light level.
Time after switch-on until constant light control starts Default: 1 Min	It is used to set the standby time of starting to execute the constant light control function after the load is switched on.	
	1 sec ~ 5 min	It executes the standby time of constant dimming, it is mainly used to set the time of lighting from power on to stable.

! The ETS® setting logic for C2 is the same as for C1.

HVAC control output C3 / C4

General	Auto/Semi auto select	☒ Auto ☐ Semi auto
Motion sensors	HVAC switch-'ON' delay	0
Light control output C1	HVAC delay time	30sec.
HVAC control output C3	Behaviour at switching on lock by communication object	Switch on
Alarm function	Behaviour at switching off lock by communication object	Switch off

Menu	Function	
Auto/ Semi-auto select Default: Auto	It is used to activate / deactivate Auto or Semi-auto mode of HVAC control output C3	
	Auto	In auto mode, the load will automatically turn on when a 4-bit movement is detected and the ambient light level is below the Lux setting. The load will turn off automatically once movement is no longer detected and the delay time has expired.
	Semi-auto	In semi-auto mode, the load can only be manually switched on by operating the connected external push button. Once the load is switched on, it will remain on as long as movement is detected continuously. The load will turn off only when no movement is detected, and the delay time has expired.
HVAC switch-‘ON’ delay Default: 1 Min	This parameter sets the detector to send an ON telegram after detecting the presence of a person for a specified period. For example, when motion is detected, the channel will not be activated immediately. It will only activate if motion is still detected after the switch-on delay expires. Example: If the channel controls the fans in a classroom, you can set a delay start time of 2 minutes. If the classroom is briefly occupied, the fan will not turn on. However, if motion is still detected after 2 minutes, the fan will be switched on.	
	1 ~ 30 min	this menu can set the switch on delay parameter of HVAC.
HVAC delay time Default: 5 Min	It is used to set the read-in delay time when the detector is triggered, and use the drop-down list for time selection.	
	5 sec ~ 60 min	Click the menu of delay off time in the edit interface to set the desired value for HVAC control output C3.
Behaviour at switching on lock by communication object Default: No reaction	It is used to set the output status of detector when it is triggered and switched on.	
	No reaction	The menu can set the operation mode when HVAC is switched on.
	Switch off	
	Switch on	
Behaviour at switching off lock by communication object Default: No reaction	It is used to set the output status of detector when it isn’t triggered and switched off.	
	No reaction	The menu can set the operation mode when HVAC is switched off.
	Switch off	
	Switch on	

 The ETS® setting logic for C4 is the same as for C3.

Alarm function

General	Duration of one switch-on window	0.3sec.
Motion sensors	Number of switch-on windows	10
Light control output C1	Duration of one switch-off window	0.3sec.
Light control output C2	Number of switch-off windows	10
HVAC control output C3	Behaviour at switching on lock by communication object	No reaction
HVAC control output C4	Behaviour at switching off lock by communication object	No reaction

Alarm function

Menu	Function	
Duration of one switch-on window Default: 0.3 sec	It is used to set the time condition for the alarm to be turned on.	
	0.3 sec ~ 1 hour	It is used to set the time condition for the alarm to be turned on.
Number of switch-on windows Default: 10	It is used to set the number of times the object moves within a certain period to turn on the alarm.	
	0 ~ 100	It is used to set the number of times the object moves within a certain period to turn on the alarm.
Duration of one switch-off window Default: 0.3 sec	It is used to set the number of times the object moves within a certain period to turn on the alarm.	
	0.3 sec ~ 1 hour	It is used to set the time condition for the alarm to be turned off.
Number of switch-off windows Default: 10	It is used to set the number of times the object moves within a certain period to turn off the alarm.	
	0 ~ 100	It is used to set the number of times the object moves within a certain period to turn off the alarm.
Behaviour at switching on lock by communication object Default: No reaction	It is used to select the behaviour when ON: "no reaction", "OFF", "ON".	
	No reaction	It is used to select the behaviour when ON: "no reaction", "OFF", "ON".
	Switch off	
Behaviour at switching off lock by communication object Default: No reaction	Switch on	It is used to select the behaviour when OFF: "no reaction", "OFF", "ON".
	No reaction	
	Switch off	It is used to select the behaviour when OFF: "no reaction", "OFF", "ON".
	Switch on	

Communication objects description

This section introduces the communication objects, which will be displayed when the function is enabled.

Overview

The following table shows the default settings of the communication objects:

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
1	Slave input	Slave motion			1 bit	C	-	W	-	-	trigger	Low
3	Test output	ON/OFF			1 bit	C	R	-	T	-	switch	Low
4	C1 manual input	ON/OFF/Dim			1 bit	C	-	W	-	-	switch	Low
5	C2 manual input	ON/OFF/Dim			1 bit	C	-	W	-	-	switch	Low
6	C3 manual input	ON/OFF			1 bit	C	-	W	-	-	switch	Low
7	C4 manual input	ON/OFF			1 bit	C	-	W	-	-	switch	Low
8	C1 Light control output	ON/OFF			1 bit	C	R	-	T	-	switch	Low
9	C1 Light control dimming value	Dim value			1 byte	C	R	-	T	-	percentage (0..100%)	Low
10	C1 Constant light control output	output			4 bit	C	R	-	T	-	3-bit controlled, dimming control	Low
11	C2 Light control output	ON/OFF			1 bit	C	R	-	T	-	switch	Low
12	C2 Light control dimming value	Dim value			1 byte	C	R	-	T	-	percentage (0..100%)	Low
13	C2 Constant light control output	output			4 bit	C	R	-	T	-	3-bit controlled, dimming control	Low
14	C3 HVAC control output	ON/OFF			1 bit	C	R	-	T	-	switch	Low
15	C4 HVAC control output	ON/OFF			1 bit	C	R	-	T	-	switch	Low
16	Lock alarm	"1" locks ; "0"un...			1 bit	C	-	W	-	-	enable	Low
17	Alarm output	ON/OFF			1 bit	C	R	-	T	-	alarm	Low

The default values for the communication objects can be found in the chart above. The priority of each communication object, as well as the flags, can be adjusted by the user as needed.

N°	Object name	Object function	Flags	Data type
01	Slave input	Slave signal input	CW	1bit DPT1.001
	When install the detector in a large space, one or more slave detectors can be parallely connected to the master detector to enlarge the detection coverage if one master detector cannot meet user's requirement.			
02	Slave output	Slave signal output	CRT	1bit DPT1.001
	Send the detecting telegram from slave detector while set the detector to Slave.			
03	Test output	Test mode output	CRT	1bit DPT1.001
	Used to check and adjust the detection coverage while installing the detector.			
04	C1 manual input	Channel 1 – ON / OFF / Dim manual control	CW	1bit DPT1.001
	- When the object receives the "1&0" telegram (equivalent to a short press and release of the reset switch), the detector will send an ON/OFF telegram. If movement is detected during this time, the detector will remain ON/OFF until no movement is detected, and the lighting delay-off time expires, at which point it will return to standby mode. - When the object receives a "1" telegram (equivalent to pressing the reset switch), the detector will begin cyclic dimming. Once the brightness meets the required level, it will send a "0" telegram (equivalent to releasing the reset switch), at which point the detector will stop dimming and maintain the current brightness. During this time, the brightness will remain constant as long as movement is detected. Even if ambient brightness changes, the constant light control function will not activate until no movement is detected and the lighting delay-off time expires, after which the detector will return to standby mode.			

N°	Object name	Object function	Flags	Data type
05	2C manual input	Channel 2 – ON / OFF / Dim manual control	CW	1bit DPT1.001
	Refer to the description of Object 4.			
06	C3 manual input	Channel 3 – ON / OFF / manual control	CW	1bit DPT1.001
	When inputs “1” for this object, the “C3 HVAC control output” object will send on signals to the bus and send off signals while inputting “0”.			
07	C4 manual input	Channel 4 – ON / OFF / manual control	CW	1bit DPT1.001
	When inputs “1” for this object, the “C4 HVAC control output” object will send on signals to the bus and send off signals while inputting “0”.			
08	C1 Light control output	Settings for lighting channel 1 – ON / OFF	CRT	1bit DPT1.001
	When the movement is detected and the ambient light level is below the pre-set Lux value, the output sends an ON telegram. If ambient light is sufficient and / or no person is present, an OFF telegram is sent once the switch- OFF delay time has elapsed.			
09	C1 Light control dimming value	Settings for lighting channel 1 - Absolute dimming control	CRT	1byte DPT5.001
	This object is a absolute object for lighting control channe of detector. When the movement is detected or receiving a telegram form slave detector, the output sends a pre-set light level telegram via this object and enters delay off mode. When the delay off time is elapsed, the output sends a pre-set Standby brightness telegram and enters Standby mode and sends an OFF telegram once the Standby delay time has elapsed.			
10	C1 Constant light control	Settings for lighting channel 1 - Relative dimming control	CRT	4bit DPT3.001
	This object is a constant lighting control object of detector When the movement is detected or receiving a telegram form slave detector, the output sends an ON telegram via this object and execute constant lighting control function refer to the setting of Preset set point during delay off time. If no person is present, an OFF telegram is sent once the switch- OFF delay time has elapsed.			
11	C2 Light control output	Settings for lighting channel 2 - ON/ OFF	CRT	1bit DPT1.001
	Refer to the description of Object 8.			
12	C2 Light control dimming value	Settings for lighting channel 1 - Absolute dimming control	CRT	1byte DPT5.001
	Refer to the description of Object 9.			
13	C2 Constant light control	Settings for lighting channel 2 - Relative dimming control	CRT	4bit DPT3.001
	Refer to the description of Object 10.			
14	C3 HVAC control output	Settings for HVAC channel 3 – ON / OFF	CRT	1bit DPT1.001
	If persons are detected, depending on the input delay, an ON telegram is sent. If no persons are detected, depending on the switch-off delay time, an OFF telegram is sent.			
15	C4 HVAC control output	Settings for HVAC channel 4 – ON / OFF	CRT	1bit DPT1.001
	Refer to the description of Object 14.			
16	Lock alarm	“1” locks / “0” unlocks	CW	1bit DPT1.003
	“1” locks the alarm function, while “0” unlocks the alarm function.			
17	Alarm output	Settings for Alarm channel 3 – ON / OFF	CRT	1bit DPT1.005
	An alarm is triggered if a continuous number of movemen are detected within a parameter is able time frame. Different time frames can be defined for the switching ON and OFF of an alarm.			



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