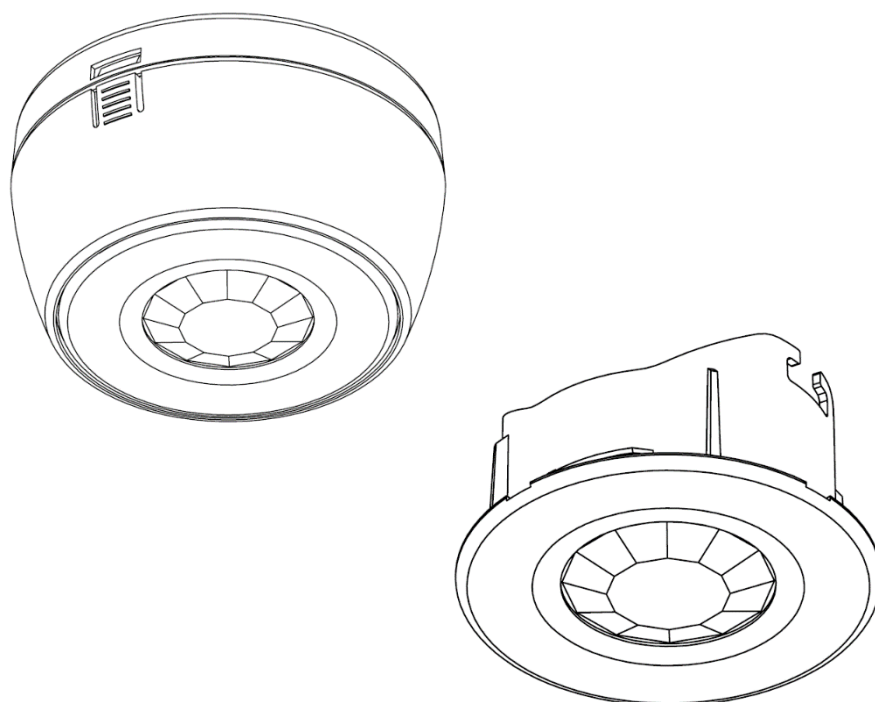


EAE KNX Presence Detector

Product Manual PD100



Order Number: 48018

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1 General

- PD100 KNX Presence Detector is ideal for interior rooms such as medium to large-size offices, corridors, classrooms, conference and meeting rooms, parking buildings, warehouses and sport halls. Detector is available in two models; flush mounted and surface mounted. Both models can detect the motion over 9m diameter at installation height of 2.5m.
- Constant light function can be applied in dependence of presence information thanks to integrated brightness sensor and movement sensor. PD100 regulates the ambient brightness to a defined brightness value.
- Lighting can be set to different brightness levels with corridor function based on occasions such as "motion detection, after movement, no action". Stay-on time can be changed by the end user.
- Air-conditioning and ventilation systems can be controlled by independent HVAC channel.
- Presence information can be sent to presence monitoring applications by independent presence channel.
- The EAE KNX Presence Detector PD100 can either be used as a standalone device or master-slave device (parallel operation with other PD100s) according to the necessity of the project.
- PD100 enables fully-automatic and semi-automatic lighting control.
- Test and calibration mode allows for easy installation.
- The device does not require an additional power supply.

NOTE: Device factory default physical address is "15.15.255".

1.1 Technical Data

Type of protection	IP 20	EN 60 529
Safety class	II	EN 61 140
Power supply :	Voltage	21V... 30V DC, KNX line
	Current consumption	< 10 mA
Application Area		Interior rooms
Sensor Type		Passive infrared
Installation	Location	Ceiling
	Recommended height	2,5m - 5m
Detection	Diameter (at height of 2,5m)	9m movement detection
	Area	64 m ²
	Angle	360°
	Light level	10 – 1000 lux
Additional channels		Brightness, presence channel, HVAC channel
Parallel operation		Master/Master, Slave/Master
Operating elements	LED (red) and button	For physical address
Temperature range	Ambient	-5° C + 45° C
	Storage	-25° C + 55° C
	Transport	-25° C + 70° C
Dimensions		42.5 x 42,5 x 12 mm
Weight	0.06 kg	
Box	Plastic, polycarbonate, colour white	
CE	In accordance with the EMC guideline and low voltage	
Application program	Communications objects	Number of addresses(max)
	44	255

NOTE: Device default physical address is 15.15.255. In order to configure KNX Presence detector, ETS application file “.knxprod” is needed. It’s possible to download the file on EAE website. ETS is required for programming the device. Parameter settings and related group addresses can be changed by ETS. Learn more by reading ETS help file.

Detection Range

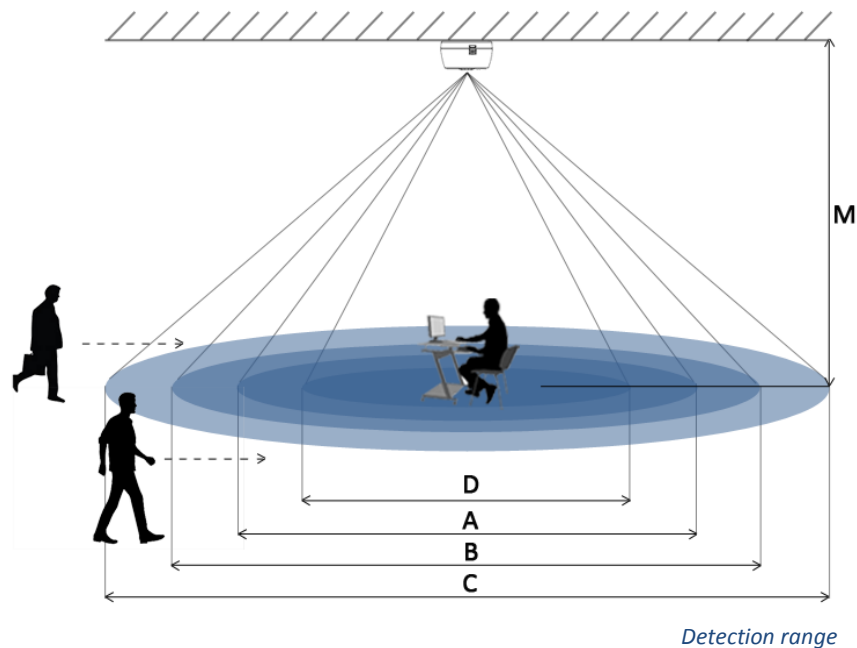
Detection range depends on movement types so that these types are divided as follows;

- Sitting position in working desk height (0,8m)
- Walking straight to the detector
- Walking across the detector
- Area of the brightness measuring in working desk height (0,8m)

Table 1 shows the maximum reachable diameter in meter of the different areas for different installation heights. (M)

Table 1 - Motion				
M	A	B	C	D
5.0m	-	12	18	Ø3.0
4.0m	-	10	15	Ø2.3
3.5m	5,5	8	13	Ø2.0
3.0m	5	7	11	Ø1.6
2.5m	4,5	6,5	9	Ø1.2

Table 2 - Presence				
M	A	B	C	D
5.0m	-	-	-	Ø3.0
4.0m	-	-	-	Ø2.3
3.5m	8,5	6,5	10	Ø2.0
3.0m	6,5	6	7	Ø1.6
2.5m	5,5	5	6	Ø1.2



1.2 Operation and Display

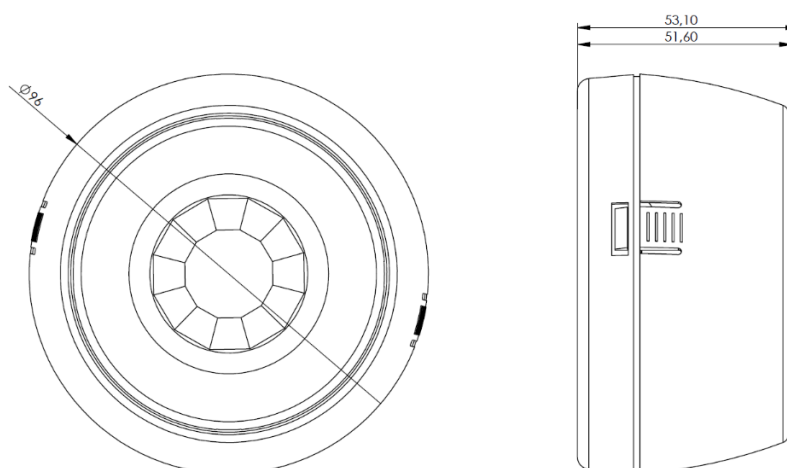


Figure 1: Surface mounted PD100

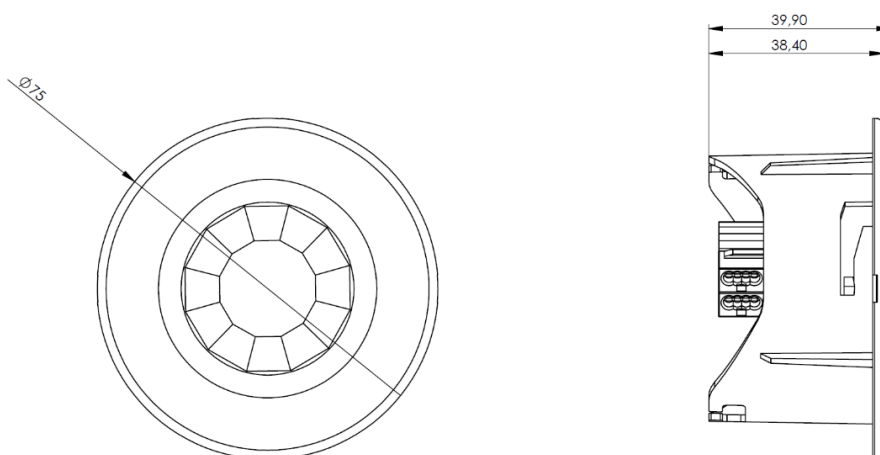


Figure 2: Flush mounted PD100

- 1 KNX connection terminal
- 2 Programming button
- 3 Blue movement LED

1.3 Scale Drawings

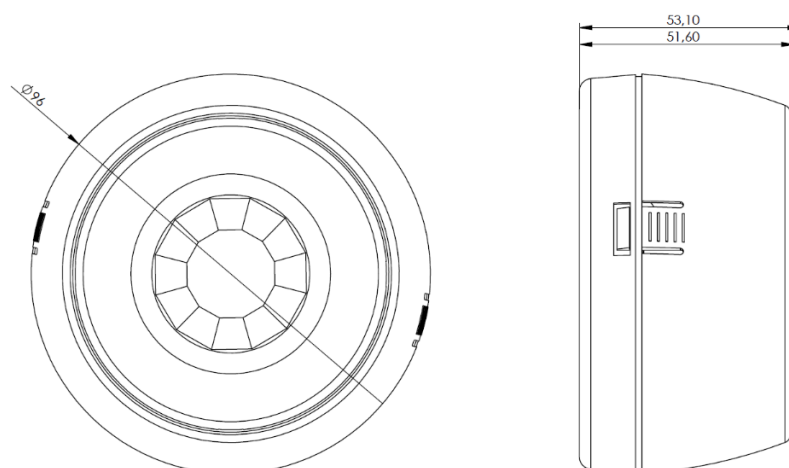


Figure 1: Surface mounted PD100

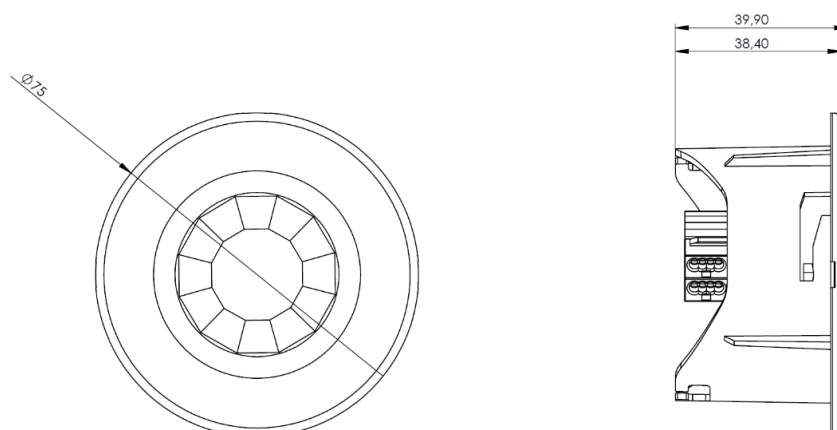


Figure 2: Flush mounted PD100

2 Communication Object Information

2.3 Communication Object Table

Following communication objects are available in PD100.

No	Name	Function	DPT Type	Length	Flags
0	General	In operation	DPT 1.002	1 bit	CWT
1	General	Presence slave 1	DPT 1.001	1 bit	CRW
2	General	Presence slave 2	DPT 1.001	1 bit	CRW
3	General	Presence slave 3	DPT 1.001	1 bit	CRW
4	General	Presence slave 4	DPT 1.001	1 bit	CRW
5	Presence	Presence output	DPT 1.001	1 bit	CRT
6	Presence	Disable presence	DPT 1.001	1 bit	CRW
7	Presence	Switch 'ON' delay time	DPT 5.005	8 bit	CRW
8	Presence	Lighting Stay 'ON' time	DPT 5.005	8 bit	CRW
9			
10	Brightness	Measured value	DPT 9.004	16 bit	CRT
11	Brightness	Calibration	DPT 9.004	16 bit	CRW
12	Constant Light	External brightness	DPT 9.004	2 byte	CRW
13	Constant Light	Set point value	DPT 9.004	2 byte	CRW
14	Constant Light	Switch 'ON' delay	DPT 5.005	1 byte	CRW
15	Constant Light	Lighting stay 'ON' time	DPT 5.005	1 byte	CRW
16	Group 1	Disable light level control	DPT 1.001	1bit	CRW
17	Group 1 - output	Switch light	DPT 1.001	1 bit	CRT
18	Group 1 - output	Dimming level	DPT 5.001	8 bit	CRT
19	Group 1 - input	Switch light	DPT 1.001	1 bit	CW
20	Group 1 – input	Dimming level	DPT 5.001	8 bit	CW
21	Group 1 – input	Dimming light	DPT 3.007	4 bit	CW
22	Group 2	Disable light level control	DPT 1.001	1bit	CRW
23	Group 2 - output	Switch light	DPT 1.001	1 bit	CRT
24	Group 2 - output	Dimming level	DPT 5.001	8 bit	CRT
25	Group 2 - input	Switch light	DPT 1.001	1 bit	CW
26	Group 2 – input	Dimming level	DPT 5.001	8 bit	CW
27	Group 2 – input	Dimming light	DPT 3.007	4 bit	CW
28	Group 3	Disable light level control	DPT 1.001	1bit	CRW
29	Group 3 - output	Switch light	DPT 1.001	1 bit	CRT
30	Group 3 - output	Dimming level	DPT 5.001	8 bit	CRT
31	Group 3 - input	Switch light	DPT 1.001	1 bit	CW
32	Group 3 – input	Dimming level	DPT 5.001	8 bit	CW
33	Group 3 – input	Dimming light	DPT 3.007	4 bit	CW
34	Group 4	Disable light level control	DPT 1.001	1 bit	CRW
35	Group 4 - output	Switch light	DPT 1.001	1 bit	CRT
36	Group 4 - output	Dimming level	DPT 5.001	8 bit	CRT
37	Group 4 - input	Switch light	DPT 1.001	1 bit	CW
38	Group 4 – input	Dimming level	DPT 5.001	8 bit	CW

39	Group 4 – input	Dimming light	DPT 3.007	4 bit	CW
40	HVAC	Disable HVAC output	DPT 1.001	1 bit	CRW
41	HVAC	Switch ON delay	DPT 5.005	1 byte	CRW
42	HVAC	Lighting stay ON time	DPT 5.005	1 byte	CRW
43	HVAC	Switch	DPT 1.001	1 bit	CRT

2.4 Communication Object Description

No	Name	Function	DPT Type	Length	Flags
0	General	In operation	DPT 1.002	1 bit	CWT
<p>This object is used to report that device is still alive and connected to the KNX line by sending cyclic 1 bit telegrams. If a telegram is not received, device may be defective or KNX cable would be intercepted.</p> <ul style="list-style-type: none"> - Object will be activated if "Device alive operation active" parameter in the General tab is selected as "yes". - Telegram type (ON or OFF) can be selected via "In operation bit" parameter in General parameters tab. <p>Cyclic period of transmitted telegrams can be selected via "In operation send interval" parameter in General parameters tab.</p>					
1	General	Presence slave 1	DPT 1.001	1 bit	CRW
2	General	Presence slave 2	DPT 1.001	1 bit	CRW
3	General	Presence slave 3	DPT 1.001	1 bit	CRW
4	General	Presence slave 4	DPT 1.001	1 bit	CRW
<p>"Presence slave 1, 2, 3, 4" objects will be visible according to "Number of lighting group" parameter in "General" window.</p> <p>If required, 4 additional presence detectors can be connected to the master as slaves in order to extend the detection zone. Presence information of connected slave sensors are received via these communication objects by master sensor. Slave sensors send the value "1" when movement is present, otherwise send value "0". These values are processed in OR gate by master sensor. If the output value is "1", master sensor accepts that there is movement in area. In other words master sensor ascertains "overall presence".</p> <p>Note: Only one slave sensor should be in relation with one communication object. Lights can stay "ON", if slave sensors are disconnected from KNX line before the master sensor is switched off.</p>					
5	Presence	Presence output	DPT 1.001	1 bit	CRT
<p>Presence information of detector is sent via this object. Cyclic period of object can be selected. This object has a short reaction time (15s, 30s) so that detection tests can be done easily.</p> <ul style="list-style-type: none"> - Object value is "1" if movement is present. - Object value is "0" if there is no movement. 					
6	Presence	Disable presence	DPT 1.001	1 bit	CRW
<p>Presence output object can be disabled/enabled via this object.</p> <ul style="list-style-type: none"> - A write should be made to the object with value "1" to disable. - A write should be made to the object with value "0" to enable. 					
7	Presence	Switch "ON" delay time	DPT 5.005	8 bit	CRW
<p>This object is only visible if the "Switch-on delay and stay-on time change by bus" parameter is set to "yes" in the "Presence" parameter window.</p> <p>This object is used to receive presence detection switch-on time (in seconds) by the bus. After a detection, sensor waits until "Switch ON delay time" is expired and sends the presence information to "Presence output" with a secondary detection.</p>					

8	Presence	Lighting stay 'ON' time	DPT 5.005	8 bit	CRW
<p>This object is only visible if the "Switch-on delay and stay-on time change by bus" parameter is set to "yes" in the "Presence" parameter window.</p> <p>This object is used to receive Lighting stay-on time (in seconds) by the bus. Detector sends "on" telegram via presence output object at detected movement and stays "ON" until the adjusted time runs out.</p>					
10	Brightness	Measured value	DPT 9.004	16 bit	CRT
<p>This object is only visible if the "Enable brightness" parameter is set to "yes" in the "General" parameter window.</p> <p>"Measured value" can be send to the bus "on change or/and cyclically" by this object.</p>					
11	Brightness	Calibration	DPT 9.004	16 bit	CRW
<p>This object is only visible if the "Enable brightness" parameter is set to "yes" in the "General" parameter window.</p> <p>For an optimum function of constant light control a calibration of the sensor for brightness detection is required. Current brightness value of detection range of the sensor must be written to calibration object as a new lux value. Sensor will calculate the calibration factor according to new lux value automatically. Subsequent detections will be calculated with new calibration factor.</p>					
12	Constant Light	External Brightness	DPT 9.004	2 byte	CRW
<p>This object is only visible if the "Used brightness" parameter is set to "external" in the "Constant light level" parameter window.</p> <p>External brightness object is used to receive brightness value for constant light control from an external daylight sensor.</p>					
13	Constant Light	Set point value	DPT 9.004	2 byte	CRW
<p>This object is only visible if the "Set point type" parameter is set to "with parameter and object" in the "Constant light level" parameter window.</p> <p>Set point value for constant light level control can be written to this object. Any value received outside the permissible range of 10...1000 lux will be exchange to closest limit value.</p>					
14	Constant Light	Switch 'ON' delay	DPT 5.005	1 byte	CRW
<p>This object is only visible if the "ON times change by bus" parameter is set to "yes" in the "Constant light level - Lighting" parameter window.</p> <p>After a detection, sensor waits to start constant light level until "Switch ON delay time" is expired. Current "Switch On delay time" can be read from the object or a new "Switch on delay time" can be written to the object. Any value received outside the permissible range of 0...30 is rejected.</p>					
15	Constant Light	Lighting stay 'ON' time	DPT 5.005	1 byte	CRW
<p>This object is only visible if the "ON times change by bus" parameter is set to "yes" in the "Constant light level - Lighting" parameter window.</p> <p>This object is used to receive Lighting stay-on time (in minutes) for constant light level of group 1. Detector sends "on" telegram to output object at detected movement and stays "ON" until the adjusted time runs out. Current "Lighting stay ON time" can be read from the object or a new "Lighting stay ON time" can be written to the object. Any value received outside the permissible range of 0...120 is rejected.</p>					
16	Group 1	Disable light level control	DPT 1.001	1bit	CRW
<p>Light level control of group 1 can be disabled by this object. Group 1 stops the sending light level telegrams after disabling.</p> <p>Disable : 1 Enable : 0</p> <p>NOTE: Group 1, Group 2, Group 3 and Group 4 are identical groups. All parameters of group 1 are in use for additional groups (group 2, group 3 and group 4) except offset values.</p>					

17	Group 1 - output	Switch light	DPT 1.001	1 bit	CRT
<p>This object is always available. "Switch light" object must be linked with the switching object of the actuator used in conjunction with Group 1-lighting for switching ON and OFF. It is possible to request the switching status from the detector.</p>					
18	Group 1 - output	Dimming level	DPT 5.001	8 bit	CRT
<p>This object is only visible if the "Operating mode" parameter is set to "constant light control" in the Constant light level" parameter window.</p> <p>This object must be linked with dimming-level object of the actuator used for dimming lighting group 1. "Group 1 – input Dimming level" object can increase/decrease the output of this object according to parameters.</p>					
19	Group 1 - input	Switch light	DPT 1.001	1 bit	CW
<p>This object is always available. It must be linked with switching object of button that enables a room user to control lighting group 1.</p> <p>Receiving a telegram through this object has an alterable behaviour according to "Light level control" parameter in the "Constant light level" parameter window.</p> <p><u>Disable constant light and dim:</u> It remains disabled until detector itself ascertains no person is left in the room, re-enables the constant light control and switches the lighting OFF.</p> <p><u>Don't disable and no action:</u> No action receiving a telegram through Group 1 - input object.</p>					
20	Group 1 – input	Dimming level	DPT 5.001	8 bit	CW
<p>This object is only visible if the "Operating mode" parameter is set to "Constant light control" in the Constant light level" parameter window.</p> <p>Lighting groups which are linked to dimming output of Group 1 can be dimmed to brightness level by this object.</p> <p>Receiving a telegram through this object has an alterable behaviour according to "Light level control" parameter in the "Constant light level" parameter window.</p> <p><u>Disable constant light and dim:</u> It remains disabled until detector itself ascertains no person is left in the room, re-enables the constant light control and switches the lighting OFF.</p> <p><u>Don't disable and no action:</u> No action receiving a telegram through Group 1 - input object.</p>					
21	Group 1 – input	Dimming light	DPT 3.007	4 bit	CW
<p>This object is only visible if the "Operating mode" parameter is set to "constant light control" in the Constant light level" parameter window.</p> <p>It must be linked with relative dim object of button that enables a room user to dim lighting group 1. Receiving a telegram through this object has an alterable behaviour according to "Light level control" parameter in the "Constant light level" parameter window.</p> <p><u>Disable constant light and dim:</u> It remains disabled until detector itself ascertains no person is left in the room, re-enables the constant light control and switches the lighting OFF.</p> <p><u>Don't disable and no action:</u> No action receiving a telegram through Group 1 - input object.</p>					

3 Parameters

“Parameters” chapter describes ETS parameters of the device. Please find detailed descriptions of communication objects in [2.2 Communication Object Descriptions](#). **Default parameters** are written in bold letters.

3.3 General

Device: 1.1.1 XD100 Motion, Brightness Sensor

General	Detector mode	master
Presence	Number of lighting groups	no slave
Brightness	Enable presence	yes
Constant Light Level	Enable brightness	yes
Lighting	Enable HVAC	yes
HVAC	Overwrite settings for download	yes
	Device alive operation active	yes
	In operation bit	1
	In operation send interval [sec]	300

General Parameters

Detector mode	*master slave
----------------------	-------------------------

Operating mode of the detector can be changed to “master” or “slave” by this parameter.

Master : Detector will operate as a master or single detector. If there is no slave sensor which is in relation with master, it will operate as a single detector. In master mode, slave sensors are used to extend detection zone. (Presence information) Only the master sends light level telegram and HVAC telegram.

Slave : Slave sensors only deliver presence information to the master in order to extend detection zone of master sensor.

Number of slave	*no slave 1 2 3 4
------------------------	--------------------------------------

If detector mode is selected as master, parameter will be visible. “Presence slave 1...4” objects will be created according to number selected.

Enable presence	*yes no
------------------------	-------------------

Parameter enables/disables presence parameters and objects.

Enable temperature	*no yes
---------------------------	-------------------

Parameter enables presence parameters and objects.

Enable brightness	*no yes
--------------------------	-------------------

Parameter enables brightness parameters and objects.

Enable HVAC	*no yes
--------------------	-------------------

Parameter enables brightness parameters and objects.

Overwrite settings for download	*yes no
--	-------------------

This parameter is used to decide whether settings stated below are overwritten or not by downloading application to the device.

Presence : stay on time, delay time

Constant light control : stay on time, delay time, set point, calibration value

HVAC : stay on time, delay time

Device alive operation active	yes *no
--------------------------------------	-------------------

This object is used to report that device is still alive and connected to KNX line. (Heartbeat) If alive telegram is not received, device may be defective or KNX cable can be disconnected. If parameter is selected "yes", following parameters come up.

In operation value	*send value "0" send value "1"
---------------------------	--

Telegram value can be selected as "1" or "0".

Operation send interval [sec]	1... *300 ...65535
--------------------------------------	---------------------------

Telegram value is sent cyclically according to time interval.

3.4 Presence

Device: 1.1.1 XD100 Motion, Brightness Sensor

General	Movement LED	show movement
Presence	Presence switch on delay [sec]	0
Brightness	Presence stay on time [sec]	10
Constant Light Level	Break in presence detection [sec]	0
Lighting	Switch on delay and stay on time change by bus	no
HVAC	Send presence cyclically	inactive
	Disable presence output	no

Presence Parameters

Blue LED	*show movement off	
-----------------	------------------------------	--

If “show movement” is selected, blue LED inside the detector lights up with movement detection.

Presence switch ‘ON’ delay [sec]	*0...5	
---	---------------	--

Parameter defines presence detection switch-on time (in seconds). After a detection, sensor waits until “Switch ON delay time” is expired and sends the presence information to “Presence output” with a secondary detection.

Min. number of movements detected during switch ‘ON’ delay	*1...20	
---	----------------	--

“Presence switch ON delay” is started after detecting first movement. Detector waits for selected number of movements during “Presence switch ON delay” time in order to send that the presence information is “ON”.

Presence stay ‘ON’ time [sec]	1... *10...255	
--------------------------------------	-----------------------	--

This parameter defines lighting stay-on time (in seconds). Detector sends “on” telegram via presence output object at detected movement and stays “ON” until the adjusted time runs out.

Break in presence detection[sec]	*0...255	
---	-----------------	--

Movements detected are ignored during the period selected. This parameter is used to avoid incorrect detections if temperature changes after lights switched “OFF”.

Switch ‘ON’ delay and stay ‘ON’ time can be changed by bus	*no yes	
---	-------------------	--

If parameter is selected “yes”, “Switch ON delay time” and “Lighting stay ON time” communication objects will be visible.

Send presence cyclically	*inactive 15s 30s 1 min 5 min	
---------------------------------	--	--

	10 min 15 min 30 min 60 min
--	--------------------------------------

Presence information will be sent cyclically in selected period via "Presence output".

Disable presence output	*no ON for disabling / OFF for enabling OFF for disabling / ON for enabling
--------------------------------	--

This parameter is used to make visible "Disable presence output" object and which telegram to use disable and re-enable presence output object. If any parameter is selected except "no", "Disable presence output" object will be visible.

ON for disabling / OFF for enabling: Presence output is disabled with the value "1" and re-enabled with value "0".

OFF for disabling / ON for enabling: Presence output is disabled with the value "0" and re-enabled with value "1".

Behaviour disable lighting	*no action Light ON Light OFF
-----------------------------------	--

This parameter is used for selecting whether to send a telegram from the "presence output object" before disabling it and, if so, with which value.

No action: No telegram is sent before disabling presence output object.

Light ON: Presence output object is set to the value "1" before disabled.

Light OFF: Presence output object is set to the value "0" before disabled.

Behaviour enable lighting	*no action Light ON Light OFF
----------------------------------	--

This parameter is used for selecting whether to send a telegram from the "presence output object" before enabling it and, if so, with which value.

Continue control: After enabling the presence output object, detector keeps the current status of presence output object.

Light ON: After enabling the presence object, it is set to the value "1".

Light OFF: After enabling the presence object, it is set to the value "0".

3.5 Brightness

Device: 1.1.1 XD100 Motion, Brightness Sensor

General	Send brightness on change	50 lux
Presence	Cyclical sending of light value	inactive
Brightness	Calibration	via object
Constant Light Level		
Lighting		
HVAC		

Brightness Parameter

Send brightness on change of	<i>inactive</i> <i>10 lux</i> <i>20 lux</i> <i>30 lux</i> <i>40 lux</i> <i>*50 lux</i> <i>60</i>	
-------------------------------------	---	--

This parameter is used to select which level the brightness value last sent must have changed by for the brightness measured to be sent again.

Cyclical sending of light value	<i>*inactive</i> <i>5s</i> <i>10s</i> <i>20s</i> <i>40s</i> <i>1 min</i> <i>2 min</i> <i>4 min</i> <i>6 min</i> <i>8 min</i> <i>10 min</i> <i>15 min</i> <i>20 min</i> <i>30 min</i>	
--	--	--

This parameter is used to adjust cyclical sending period of "Brightness value" object.

Calibration	<i>*via object</i> <i>with calibration factor</i>	
--------------------	---	--

This parameter is used select calibration method of the brightness sensor inside the detector. There are two options in order to calibrate the brightness sensor.

Via object: Calibration value is written via "Calibration" object. Brightness value which is measured by a lux meter in the detection range of the sensor must be written to the "calibration" object as a new lux value. Adjustment factor is calculated by detector.

With calibration factor: Detected brightness value is calibrated by calibration factor to current brightness value. Calibration factor only should be written to calibration factor parameters.

Calibration factor (x 0.1)	1... *30 ...200	
------------------------------------	------------------------	--

This parameter is used specify the calibration factor of brightness sensor. Any value written outside the permissible range of 1...200 is rejected.

3.6 Constant light level

Device: 1.1.1 XD100 Motion, Brightness Sensor

General	Operating mode	constant light control
Presence	Lighting group count	1
Brightness	Setpoint type	with parameter
Constant Light Level	Setpoint value [lux]	500
Lighting	Used brightness	internal
HVAC	Maximal variation from setpoint	30 lux
	Max. step size for dimming	5%
	Transmit dimming interval	1s
	Finish constant light	only dimming value telegram
	Lighting level control	disable constant light and dim

Constant Light Level Parameters

Operating mode	*Constant light control <i>Brightness on/off control</i>
-----------------------	--

This parameter is used to select operating mode of constant light level.

Constant light control: Lighting groups are controlled by “Dimming level” object until reaching the set point value for constant light control. “Switch” object is only used to %100 and %0 percentages when it is needed.

Brightness on/off control: Lighting groups are only controlled by “switch” object according to set point value. If measured brightness value is greater than the set point value, “switch” object is set to the value “0”. If measured brightness value is less than the set point value, “switch” object is set to the value “1”.

Lighting group count	*1 2 3 4
-----------------------------	--------------------------

This parameter is used to specify the lighting group count which are controlled by constant light function.

Set point type	*parameter parameter and object	
-----------------------	---	--

This parameter is used selecting “Set point type”.

Parameter: Set point is only specified by parameter on ETS.

Parameter and object: Set point is specified by parameter on ETS, it also can be changed via “set point value” object by bus.

Used brightness	*internal external	
------------------------	-------------------------------------	--

This parameter determines that brightness value which is used for constant light control will be internal or external.

Maximal variation from set point value	15 lux *30 lux 45 lux 60 lux	
---	--	--

This parameter is used to adjust hysteresis value for set point value. (-30...set point value...+30)
Dimming level is only sent by “dimming level” object if current brightness value is out of the range specified with maximal variation of set point value.

Max step size for dimming	0.5% 1% 1.5% 2% 2.5% 3% *5%	
----------------------------------	--	--

This parameter is used to select step size dimming for constant light control. “Dimming level” object sends the dimming values (1 byte) with selected step size to reach the appropriate brightness in the room for set point value. (%100, %95, % 90 etc.)

Transmit next dimming value after	0.5s *1s 2s 3s 5s	
--	--------------------------------------	--

This parameter is used to specify the time interval between two sending dimming value. After sending a dimming value (%60), next dimming value (%55) will be sent after the time interval selected.

Finish constant light level control with	*only dimming value telegram switching off	
---	---	--

This parameter defines the way in which constant light level control will end.

Only dimming value telegram: If there is sufficient ambient light in a room, constant light level control is ended by only dimming value telegram.

Switching off: If there is sufficient ambient light in a room, constant light level control is ended by switch (OFF) telegram.

Lighting group X offset to dimming level for group 1	-100... *0 ...100
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This parameter is used to express offset value of additional Lighting Group X (X: 2, 3, and 4) according to “Lighting Group 1”. An offset parameter will be created for every additional lighting group.

Lighting level control	*disable constant light and dim don't disable and no action
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This parameter is used to select the behaviour of lighting level control when any telegram is received via input objects of related lighting group. (Input switch, input dimming level, input dimming light)

Disable constant light and dim: When input telegram is received, constant light level control will be disabled until re-enabling via “Disable constant light” object of the lighting group and lighting group will be dimmed.

Don't disable and no action: Constant light control is not disabled when any input telegram is received. Lighting group performs the command which is sent by input until to next constant light level telegram.

3.7 Lighting

Device: 1.1.1 XD100 Motion, Brightness Sensor

General	Operation lighting	automatically 'ON' and 'OFF'
Presence	Switch on delay [sec]	0
Brightness	Lighting stay ON time [min]	1
Constant Light Level	ON times change by bus	no
Lighting	Disable light level control	no
HVAC		

Lighting Parameters

Lighting section consists of presence detection parameters which will be used for constant light level control.

Operation lighting	*automatically 'ON' and 'OFF' <i>semi-automatic only 'OFF'</i>
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This parameter is used to select operation type of lighting.

Automatically 'ON' and 'OFF': Lighting group is controlled automatically by detector according to presence information. If person is present in the room, “ON” command is sent to the lighting group if no person is present, “OFF” command is sent to the lighting group.

Semi-automatic only 'OFF': Lighting group is controlled semi-automatically according to presence information. The lighting group waits the “ON” command from user in order to light up, it does not light up even if a motion is detected. But, “OFF” command is sent automatically by detector if there is no person in the room.

Switch 'ON' delay [min]	*0...30
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This parameter is used to determine “Switch ON delay time”. After a movement detection, sensor waits until “Switch ON delay time” is expired and sends the presence information to “Presence output” with a secondary detection.

Stay 'ON' time [min]	*1...120
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This parameter is used to determine “Stay ON time” for lighting group. “ON” telegram is sent to the lighting group with a detected motion and lighting group stays “ON” until “Stay ON time” is expired.

Switch 'ON' delay and stay 'ON' time can be changed by bus	*yes no
---	-------------------

This parameter determines whether “Switch ON delay time” and “Stay ON time” can be changed by bus or not.

Yes: “Switch ON delay time” and “Stay ON time” objects are created and possible read/write to these objects.

No: “Switch ON delay time” and “Stay ON time” objects are not visible.

Disable light level control	*no <i>ON for disabling / OFF for enabling</i> <i>OFF for disabling / ON for enabling</i>
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This parameter determines the value type for disabling/enabling light level control.

No: Disable constant light level object is not visible.

ON for disabling / OFF for enabling: Light level control is disabled with the value “ON” and enabled with the value “OFF”.

OFF for disabling / ON for enabling: Light level control is disabled with the value “OFF” and enabled with the value “ON”.

Behaviour disable lighting	*no action <i>Light ON</i> <i>Light OFF</i>
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This parameter is used for selecting whether a telegram is sent to lighting group before disabling “light level control” and, if so, with which value.

No action: No telegram is sent before disabling “light level control”.

Light ON: Lighting group is set to the value “ON” before disabled.

Light OFF: Lighting group is set to the value “OFF” before disabled.

Behaviour enable lighting	*no action <i>Light ON</i> <i>Light OFF</i>
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This parameter is used for selecting whether a telegram is sent to lighting group after enabling “light level control” and, if so, with which value.

Continue control: After enabling the “light level control”, detector keeps the current status of lighting group.

Light ON: After enabling the “light level control”, it is set to the value “ON”.

Light OFF: After enabling the “light level control”, it is set to the value “OFF”.

3.8 HVAC

Device: 1.1.1 XD100 Motion, Brightness Sensor

General	Switch on delay [min]	0
Presence	Stay on time [min]	15
Brightness	ON times change by bus	no
Constant Light Level	Disable light level control	no
Lighting		
HVAC		

HVAC Parameters

Switch 'ON' delay [min]	*0...30
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This parameter is used to determine "Switch ON delay time". After a movement detection, sensor waits until "Switch ON delay time" is expired and checks the presence object for presence information. If value of presence object is still "ON", sensor sends the value "ON" to "HVAC – Output" object.

Stay 'ON' time [min]	*1...120
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This parameter is used to determine "Stay ON time" for HVAC output. "ON" telegram is sent to the output with a detected motion and HVAC output stays "ON" until "Stay ON time" is expired.

Switch 'ON' delay and stay 'ON' time can be changed by bus	*yes no
---	-------------------

This parameter determines whether "Switch ON delay time" and "Stay ON time" can be changed by bus or not.

Yes: "Switch ON delay time" and "Stay ON time" objects are created and possible read/write to these objects.

No: "Switch ON delay time" and "Stay ON time" objects are not visible.

Disable light level control	*no <i>ON for disabling / OFF for enabling</i> <i>OFF for disabling / ON for enabling</i>
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This parameter determines the value type for disabling/enabling HVAC output object.

No: "Disable HVAC output" object is not visible.

ON for disabling / OFF for enabling: HVAC output is disabled with the value "ON" and enabled with the value "OFF".

OFF for disabling / ON for enabling: HVAC output is disabled with the value "OFF" and enabled with the value "ON".

Behaviour disable lighting	*no action <i>Light ON</i> <i>Light OFF</i>
-----------------------------------	--

This parameter is used for selecting whether a telegram is sent to HVAC output before disabling HVAC and, if so, with which value.

No action: No telegram is sent before disabling HVAC output.

Light ON: HVAC output is set to the value “ON” before disabled.

Light OFF: HVAC output is set to the value “OFF” before disabled.

<i>Behaviour enable lighting</i>	<i>*no action</i> <i>Light ON</i> <i>Light OFF</i>
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This parameter is used for selecting whether a telegram is sent to HVAC output after enabling HVAC and, if so, with which value.

Continue control: After enabling the HVAC output, detector keeps the current status of HVAC output.

Light ON: After enabling the HVAC output, it is set to the value “ON”.

Light OFF: After enabling the HVAC output, it is set to the value “OFF”.