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KNX® EIB

sensIQ KNX
Application Description

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1.Detector functions

The sensIQ KNX presence detector comprises a passive infrared (PIR) motion detector with integrated light-level sensor, integrated IR receiver and integrated red light-emitting diode (LED) for indicating a movement detected. The detector is capable of performing the following functions:

- **1.1 Light output**
- **1.2 Presence output**
- **1.3 Close-up range output**
- **1.4 Photo-cell controllers**
- **1.5 Light level measured**
- **1.6 Sabotage protection**
- **1.7 Interconnection**
- **1.8 Pyros 1-4**

The function to be used (activated) is defined via the "General Settings" parameter window using the Engineering Tool Software (ETS) version ETS3.f and higher. Each of the detector functions provides the capability of setting a period after which a detected movement is to result in activation of the function concerned, of defining when the function concerned is to be deactivated again after detecting the last movement and of defining any light level from which the function is to be activated or deactivated.

1.1 Light output

When the light output is used for controlling lighting, light is switched ON as soon as anyone enters the detection zone after dark but only OFF again a certain time after the last person leaves the detection zone. If a person returns to the detection zone shortly after leaving it, the area is still illuminated, saving the need to switch the light back ON again. "Stay-ON time" is set to a fixed period. The soft-start function allows you to choose the option of switching light ON and OFF abruptly or of selecting "soft start" which is particularly pleasant on the human eye as light is switched ON and OFF across a dimming ramp. A further setting is provided in the form of the basic light level function. As soon as the ambient brightness falls below the defined threshold, a basic level of lighting is switched ON and can be dimmed to between 10 and 50%.

1.2 Presence output

This function watches over the detection zone. A signal is sent out as soon as a person's presence has been reliably detected. A signal is also sent out as soon as the presence of persons is no longer being detected. This surveillance function can, for example, be disabled during the day and only enabled for a specific duration at night as well as over the weekend.

1.3 Close-up range output

You can only use this function for watching over the close-up range near the sensor and operate further actuators in relation to movement detected in the close-up range.

1.4 Photo-cell controllers

The photo-cell controller defines a light level threshold (independently of the light output) at which an actuator is switched ON irrespective of detected movement when ambient brightness falls below this defined light level. This means that several lights can be switched ON at dusk, with further lights then being switched ON via the light output when movement is detected.

1.5 Light level measured

The light level measured function transmits the level of light currently being measured at the motion detector's light level sensor either after the light level changes by a defined minimum amount and/or cyclically after a defined interval.

1.6 Sabotage protection

Sabotage protection cyclically sends a signal as a way of being sure the sensor is not disconnected from the bus or faulty.

1.7 Interconnection

The interconnection function provides the capability of grouping together several detectors to create a large detection zone.

1.8 Pyros 1-4

The functions belonging to pyros 1-4 allow you to evaluate each of the four pyros in order, for example, to evaluate direction movement.

2. IR remote control

The sensIQ KNX comes with an IR remote control for setting various functions. Manual override (duration ON/OFF), time setting, light level (also via teach-IN, function learns current light level), test mode and reset.

3. Test mode

The motion detector's "test mode" can be switched ON and OFF via the ETS.
The "Lighting test mode" is used for testing reach. Lighting is switched ON in response to any movement detected and regardless of ambient brightness. To do this, the detector must have been configured via ETS and its objects linked with the objects of the buttons and actuators for lighting control.
In the lighting test mode, the white light-emitting diode integrated in the presence detector briefly flashes to indicate any movement detected. In addition, the lighting stay-ON time is set to 8 s for the duration of this test mode irrespective of the parameters selected for the presence detector. No other function is active.

4. Behaviour after a bus voltage failure and return as well as on re-starting and downloading

In the event of a bus voltage failure, the motion detector also ceases to operate as its electronic system is powered by the bus voltage. Prior to a bus voltage failure, all user entries are saved (light level setting, stay-ON time, photo-cell controller setting, remote-control code, all disable statuses, all night lengths) so they can be restored automatically when the bus voltage returns after a bus voltage failure. Once the bus voltage returns and after completely or partially uploading the product database to the motion detector by ETS (i.e. after restarting), the motion detector is disabled for approx. 40 seconds. Lighting is switched ON at the start of the disabling time and switched OFF for approx. 2 seconds at the end of the disabling time. From then on, the detector is ready for operation and sends the latest telegrams (outputs, light, presence, close-up range, photo-cell controller and light level measured) if the relevant outputs were not disabled prior to the bus voltage failure.

5. Behaviour after initial start-up and unloading

When installing a brand-new motion detector, it automatically goes into "presence test mode" as soon as the bus voltage is applied. In this mode, the red LED integrated in the motion detector flashes to indicate any movement detected. This shows that bus voltage is being applied to the detector and that it is in working order. However, light-level control is deactivated and no telegrams can be sent. If the presence detector's application programme is "unloaded" by ETS, the presence detector automatically goes into "presence test mode" in just the same way as it does after initial start-up.

6. Communication objects

A full list of the communication objects provided for the motion detector is shown below. Those visible and capable of being linked with group addresses are determined by the settings in the "General Settings" parameter window as well as by other parameter settings for chosen functions and communication objects.

Obj	Object name	Function	DP type	Flags
0	Light-level setting	2 - 2000 lux	9.004 (16 bit)	CRWT
1	Light-level sensor input	2 - 2000 lux	9.004 (16 bit)	CWT
2	Switch light 1 output	ON/OFF	1.001 (1 bit)	CRT
3	Light 1 output dimming level	0 - 100%	5.001 (8 bit)	CRT
4	Switch light 2 output	ON/OFF	1.001 (1 bit)	CRT
5	Light 2 output dimming level	0 - 100%	5.001 (8 bit)	CRT
6	Disable light output	ON/OFF	1.001 (1 bit)	CWT
7	Light output disabling status	ON/OFF	1.001 (1 bit)	CRT
8	Switch light 1 input	ON/OFF	1.001 (1 bit)	CWT
9	Dim light 1 input	brighter / darker	3.007 (4 bit)	CWT
10	Light 1 input dimming level	0 - 100%	5.001 (8 bit)	CWT
11	Switch light 2 input	ON/OFF	1.001 (1 bit)	CWT
12	Dim light 2 input	brighter / darker	3.007 (4 bit)	CWT
13	Light 2 input dimming level	0 - 100%	5.001 (8 bit)	CWT
14	Light input interconnection	ON	1.001 (1 bit)	CWT
15	Light output interconnection	ON	1.001 (1 bit)	CRT
16	Time factor for light stay-ON time	1 - 255	5.005 (8 bit)	CRWT
17	Constant-lighting control governed by movement	ON/OFF	1.001 (1 bit)	CRWT
18	Presence output	ON/OFF	1.001 (1 bit)	CRT
19	Disable presence output	ON/OFF	1.001 (1 bit)	CWT
20	Presence output disabling status	ON/OFF	1.001 (1 bit)	CRT
21	Close-up range output	ON/OFF	1.001 (1 bit)	CRT
22	Disable close-up range output	ON/OFF	1.001 (1 bit)	CWT
23	Close-up range output disabling status	ON/OFF	1.001 (1 bit)	CRT
24	Photo-cell controller output	0 - 100%	1.001 (1 bit)	CRT
25	Light level threshold	2 - 300 lux	9.004 (16 bit)	CRWT
26	Disable photo-cell controller	ON/OFF	1.001 (1 bit)	CWT
27	Photo-cell controller disabling status	ON/OFF	1.001 (1 bit)	CRT
28	Light level measured	2 - 2000 lux	9.004 (16 bit)	CRT
29	Switch Pyro 1 output	ON/OFF	1.001 (1 bit)	CRT
30	Pyro 1 output dimming level	0 - 100%	5.001 (8 bit)	CRT
31	Switch Pyro 2 output	ON/OFF	1.001 (1 bit)	CRT
32	Pyro 2 output dimming level	0 - 100%	5.001 (8 bit)	CRT
33	Switch Pyro 3 output	ON/OFF	1.001 (1 bit)	CRT
34	Pyro 3 output dimming level	0 - 100%	5.001 (8 bit)	CRT
35	Switch Pyro 4 output	ON/OFF	1.001 (1 bit)	CRT
36	Pyro 4 output dimming level	0 - 100%	5.001 (8 bit)	CRT
37	Sabotage	ON/OFF	1.001 (1 bit)	CRT

Obj	Object name	Function	DP type	Flag
0	Light-level setting	2 - 2000 lux	9.004 (16 bit)	CRWT
The group address linked with this object is used for receiving the light-level control setting (in lux) via bus; this setting can be requested such at any time, also after making a change via ETS or IR remote control.				
1	Light-level sensor input	2 - 2000 lux	9.004 (16 bit)	CWT
This object is only visible if the "External Light-Level Sensor" parameter is set to "active" in the "Light Level" parameter window. The group address linked with this object is used for receiving the light level measured by a twilight sensor and then as the setting for controlling light level.				
2	Switch light 1 output	ON/OFF	1.001 (1 bit)	CRT
This object is always available. This object must be linked with the switching object of the actuator used for switching the lighting ON and OFF.				
3	Light 1 output dimming level	0 - 100%	5.001 (8 bit)	CRT
This object is only visible if the "Telegram Type" parameter is set to "active" in the "Light Output" parameter window, or if the "Basic Light Level" parameter is set to "active". This object must be linked with the dimming-level object of the actuator used for dimming lighting to the level being received. The group address linked with this object is used for sending the dimming value via bus to the actuator, with the capability of requesting such from the detector.				
4	Switch light 2 output	ON/OFF	1.001 (1 bit)	CRT
This object is only visible if the "Number of Light Outputs" parameter is set to "2" in the "Light Output" parameter window. This object must be linked with the switching object of the actuator used for switching the lighting ON and OFF.				
5	Light 2 output dimming level	0 - 100%	5.001 (8 bit)	CRT
This object is only visible if the "Telegram Type" parameter is set to "2" in the "Number of Light Outputs" parameter window, or if the "Basic Light Level" parameter is set to "active". This object must be linked with the dimming-level object of the actuator used for dimming lighting to the level being received. The group address linked with this object is used for sending the dimming value via bus to the actuator, with the capability of requesting such from the detector.				
6	Disable light output	ON/OFF	1.001 (1 bit)	CWT
This object is only visible if the "Disable Light Output" parameter is not set to "No" in the "Light Output" parameter window. The "Disable Light Output" parameter is also used for selecting whether disabling is to take place on receiving a value of "1" or on receiving a value of "0". When the output is disabled, the detector does not automatically send any telegrams for operating or dimming lighting. Telegrams received by the sensor from the "switch light ON/OFF input" object are sent to the "switch light ON/OFF output" object.				
7	Light output disabling status	ON/OFF	1.001 (1 bit)	CRT
This object is only visible if the "Disable Light Output" parameter is not set to "No" in the "Light Output" parameter window. The group address linked with this object is used for automatically sending the output's disabling status via bus after any change; the disabling status can be requested from the detector at any time.				
8	Switch light 1 input	ON/OFF	1.001 (1 bit)	CWT
This object is always available. It must be linked with the switching object of the pushbutton the user can switching lighting ON and OFF with. If a telegram is received via this object, lighting will be operated in line with the telegram's value and the "Action at Light Input" parameter in the "Light Output" parameter window.				

Obj	Object name	Function	DP type	Flag
9	Dim light 1 input	brighter / darker	3.007 (4 bit)	CWT
This object is only visible if the "Constant-Lighting Control" parameter is set to "Yes" in the "Light Output" parameter window. If a telegram is received via this object, and depending on the "Light-Level Control for Dim Light x Input" parameter setting, light-level control is either disabled with the relevant lighting group being dimmed, or light-level control is not disabled and the light-level control setting is increased or reduced accordingly, automatically resulting in a lighter or darker dimming of the lighting. If the detector establishes that nobody is left in the room, the altered light-level setting is returned to its original value and the lighting is switched OFF.				
10	Light 1 input dimming level	0 - 100%	5.001 (8 bit)	CRT
This object is only visible if the "Telegram Type" parameter is set to "Dimming Level" in the "Light Output" parameter window. It must be linked with the dimming-level object of the pushbutton the user can switching lighting ON and OFF with. If a telegram is received via this object, lighting will be operated in line with the telegram's value and the "Action at Light Input" parameter in the "Light Output" parameter window.				
11	Switch light 2 input	ON/OFF	1.001 (1 bit)	CWT
This object is only visible if the "Number of Light Outputs" parameter is set to "2" in the "Light Output" parameter window. It must be linked with the switching object of the pushbutton the user can switch lighting ON and OFF with. If a telegram is received via this object, lighting will be operated in line with the telegram's value and the "Action at Light Input" parameter in the "Light Output" parameter window.				
12	Dim light 2 input	brighter / darker	3.007 (4 bit)	CWT
This object is only visible if the "Number of Light Outputs" parameter is set to "2" in the "Light Output" parameter window and the parameter "Constant-lighting control" is set to "Yes". If a telegram is received via this object, and depending on the "Light-Level Control for Dim Light x Input" parameter setting, light-level control is either disabled with the relevant lighting group being dimmed, or light-level control is not disabled and the light-level control setting is increased or reduced accordingly, automatically resulting in a lighter or darker dimming of the lighting. If the detector establishes that nobody is left in the room, the altered light-level setting is returned to its original value and the lighting is switched OFF.				
13	Light 2 input dimming level	0 - 100%	5.001 (8 bit)	CRT
This object is only visible if the "Number of Light Outputs" parameter is set to "2" in the "Light Output" parameter window and the "Telegram Type" parameter is set to "Dimming Level". It must be linked with the dimming-level object of the pushbutton the user can switching lighting ON and OFF with. If a telegram is received via this object, lighting will be operated in line with the telegram's value and the "Action at Light Input" parameter in the "Light Output" parameter window.				
14	Light input interconnection	ON/OFF	1.001 (1 bit)	CWT
This object is only visible if the "Interconnection" parameter is set to "Yes" in the "Light Output" parameter window. The group address linked with this object is used by the sensor for receiving the presence status of the slave via the bus and, if applicable, linked with the presence status of further slaves as well as the sensor via a logical OR function. This input is used for extending the range of light output.				
15	Light output interconnection	ON/OFF	1.001 (1 bit)	CRT
This object is only visible if the "Interconnection" parameter is set to "Yes" in the "Light Output" parameter window. The group address linked with this object is used for sending the presence status from the sensor. This output is used for extending the range of light output.				

Obj	Object name	Function	DP type	Flag
16	Time factor for light stay-ON time	1 - 255	5.005 (8 bit)	CRWT
This object is always available. The group address linked with this object is used for receiving the stay-ON time (in minutes) via bus, this being the time for which lighting is to remain switched ON after the last person leaves the detection zone. Any value received outside the permissible range of 1 - 255 is rejected. This object can also be used at any time for requesting the time lighting is currently to stay ON for, also after making a change via ETS or IR remote control.				
17	Constant-lighting control governed by movement	ON/OFF	1.001 (1 bit)	CRT
This object is only visible if the "Constant-Lighting Control" parameter is set to "Yes" in the "Light Output" parameter window. This object can be used for switching constant-lighting control in relation to or independently of movement. ON: in relation to movement OFF: independently of movement.				
18	Presence output	ON/OFF	1.001 (1 bit)	CRT
This object is only visible if the "Presence Output" parameter is set to "active" in the "General Settings" parameter window. The group address linked with this object is sent to the actuator via bus, indicating whether persons have been detected ("presence output = ON") or not ("presence output = OFF"); presence status can be requested from the detector at any time.				
19	Disable presence output	0 - 255	1.001 (1 bit)	CWT
This object is only visible when the "Presence Output" parameter is set to "active" in the "General Settings" parameter window and when the "Disable Presence Output" parameter is not set to "No" in the "Presence Output" parameter window. The "Disable Presence Output" parameter is also used for setting whether disabling is to take place after receiving the value "1" or after receiving the value "0". When presence output is disabled, the detector sends no telegrams on presence status.				
20	Presence output disabling status	2 to 2000 lux	1.001 (1 bit)	CRT
This object is only visible if the "Presence Output" parameter is set to "active" in the "General Settings" parameter window. Sent via the bus, the group address linked with this object is used for indicating whether or not the presence output is disabled (presence output disabling status = ON). This can also be requested via the bus.				
21	Close-up range output	ON/OFF	1.001 (1 bit)	CRT
This object is only visible if the "Close-up Range Output" parameter is set to "active" in the "General Settings" parameter window. The group address linked with this object is sent to the actuator via bus, indicating whether persons have been detected on the close-up range ("close-up range output = ON") or not ("close-up range output = OFF"); status can be requested from the detector at any time.				
22	Disable close-up range output	ON/OFF	1.001 (1 bit)	CWT
This object is only visible if the "Close-up Range Output" parameter is set to "active" in the "General Settings" parameter window and if the "Close-up Range Output" parameter is not set to "No" in the "Close-up Range" parameter window. The "Disable Close-up Range Output" parameter is also used for setting whether disabling is to take place after receiving the value "1" or after receiving the value "0". When close-up range output is disabled, the detector sends no telegrams on close-up range status.				
23	Close-up range output disabling status	ON/OFF	1.001 (1 bit)	CRT
This object is only visible if the "Presence Output" parameter is set to "active" in the "General Settings" parameter window. Sent via the bus, the group address linked with this object is used for indicating whether or not the presence output is disabled (presence output disabling status = ON). This can also be requested via the bus.				
24	Photo-cell controller output	0 - 100%	1.001 (1 bit)	CRT
This object is only visible if the "Photo-Cell Controller Output" parameter is set to "active" in the "General Settings" parameter window. This object must be linked with the switching object of the actuator used for switching the twilight illumination ON and OFF. The group address linked with this object is used for sending the switching command via bus to the actuator, with it also being possible to request the switching status from the detector.				

Obj	Object name	Function	DP type	Flag
25	Light level threshold	2 to 300 lux	9.004 (16 bit)	CRWT
This object is only visible if the "Photo-Cell Controller Output" parameter is set to "active" in the "General Settings" parameter window and the "Changeable via Bus" parameter is set to "Yes" in the "Photo-Cell Controller" parameter window. The group address linked with this object can be used via the bus for changing the photo-cell controller threshold (in lux) at which twilight illumination is activated if the ambient light level is not sufficient and at which twilight illumination is switched OFF again when significantly exceeded. Any value received outside the permissible range of 2 - 300 lux is rejected. This object can also be used for requesting the current threshold value at any time, also after making a change via ETS.				
26	Disable photo-cell controller	ON/OFF	1.001 (1 bit)	CWT
This object is only visible if the "Photo-Cell Controller Output" parameter is set to "active" in the "General Settings" parameter window and if the "Disable Photo-Cell Controller" parameter is not set to "No" in the "Photo-Cell Controller" parameter window. The "Disable Photo-Cell Controller" parameter is also used for setting whether disabling is to take place after receiving a value of "1" or after receiving a value of "0". The detector sends no telegrams on light level status when the photo-cell controller is disabled.				
27	Photo-cell controller disabling status	ON/OFF	1.001 (1 bit)	CRT
This object is only visible if the "Photo-Cell Controller Output" parameter is set to "active" in the "General Settings" parameter window. Sent via bus or retrievable via bus, the group address linked with this object shows whether the photo-cell controller is disabled (photo-cell controller disabling status = ON) or not.				
28	Light level measured	2 to 2000 lux	9.004 (16 bit)	CRWT
This object is only visible if the "Light Level Measured" parameter is set to "active" in the "General Settings" parameter window. The group address linked with this object is used for sending the light level measured by the detector via bus, with it also being possible to request light level from the detector.				
29	Switch Pyro 1 output	ON/OFF	1.001 (1 bit)	CRT
This object is only visible if the "Pyro 1 Output" parameter is set to "active" in the "General Settings" parameter window. The group address linked with this object is sent to the actuator via bus, indicating whether persons have been detected in the Pyro 1 zone ("Pyro 1 output = ON") or not ("Pyro 1 = OFF"); presence status can be requested from the detector at any time.				
30	Pyro 1 output dimming level	0 - 100%	5.001 (8 bit)	CRT
This object is only visible if the "Pyro 1 Output" parameter is set to "active" in the "General Settings" parameter window and the "Telegram Type" parameter is set to "Dimming Level". The group address linked with this object is used for sending the dimming value via bus to the actuator, with the capability of requesting such from the detector.				
31	Switch Pyro 2 output	ON/OFF	1.001 (1 bit)	CRT
This object is only visible if the "Pyro 2 Output" parameter is set to "active" in the "General Settings" parameter window. The group address linked with this object is sent to the actuator via bus, indicating whether persons have been detected in the Pyro 2 zone ("Pyro 2 output = ON") or not ("Pyro 2 = OFF"); presence status can be requested from the detector at any time.				
32	Pyro 2 output dimming level	0 - 100%	5.001 (8 bit)	CRT
This object is only visible if the "Pyro 2 Output" parameter is set to "active" in the "General Settings" parameter window and the "Telegram Type" parameter is set to "Dimming Level". The group address linked with this object is used for sending the dimming value via bus to the actuator, with the capability of requesting such from the detector.				
33	Switch Pyro 3 output	ON/OFF	1.001 (1 bit)	CRT
This object is only visible if the "Pyro 3 Output" parameter is set to "active" in the "General Settings" parameter window. The group address linked with this object is sent to the actuator via bus, indicating whether persons have been detected in the Pyro 3 zone ("Pyro 3 output = ON") or not ("Pyro 3 = OFF"); presence status can be requested from the detector at any time.				

Obj	Object name	Function	DP type	Flag
34	Pyro 3 output dimming level	0 - 100%	5.001 (8 bit)	CRT
This object is only visible if the "Pyro 3 Output" parameter is set to "active" in the "General Settings" parameter window and the "Telegram Type" parameter is set to "Dimming Level". The group address linked with this object is used for sending the dimming value via bus to the actuator, with the capability of requesting such from the detector.				
35	Switch Pyro 4 output	ON/OFF	1.001 (1 bit)	CRT
This object is only visible if the "Pyro 4 Output" parameter is set to "active" in the "General Settings" parameter window. The group address linked with this object is sent to the actuator via bus, indicating whether persons have been detected in the Pyro 4 zone ("Pyro 4 output = ON") or not ("Pyro 4 = OFF"); presence status can be requested from the detector at any time.				
36	Pyro 4 output dimming level	0 - 100%	5.001 (8 bit)	CRT
This object is only visible if the "Pyro 4 Output" parameter is set to "active" in the "General Settings" parameter window and the "Telegram Type" parameter is set to "Dimming Level". The group address linked with this object is used for sending the dimming value via bus to the actuator, with the capability of requesting such from the detector.				
37	Sabotage	ON/OFF	1.001 (1 bit)	CRT
This object is only visible if the "Sabotage" parameter is set to "active" in the "General Setting" parameter window. An ON or OFF telegram is sent cyclically to the group address linked to this object while the sensor is not disconnected from the bus or if it is faulty.				

7. Parameters

Note: the factory parameter settings are shown in bold type.

7.1 "General Settings" parameter window

This parameter window is always available. It is used for setting the detector operating mode as well as the chosen detector functions.

Parameters	Settings
Presence output	**inactive;** active
active: the "Presence Output" parameter window is also available for setting the associated parameters as well as the associated objects. inactive: the detector provides no presence detection function. The "Presence Output" parameter window and associated objects are not available.	
Close-up range output	**inactive;** active
active: the "Close-up Range Output" parameter window is also available for setting the associated parameters as well as the associated objects. inactive: the detector provides no close-up range detection function. The "Close-up Range Output" parameter window and associated objects are not available.	
Photo-cell controller output	**inactive;** active
active: the "Photo-Cell Controller Output" parameter window is also available for setting the associated parameters as well as the associated objects. inactive: the detector provides no light-level detection function. The "Photo-Cell Controller Output" parameter window and associated objects are not available.	
Light level measured	**inactive;** active
active: object 17 "light level measured" is added. This is used for sending the light level that is measured (in lux) by the motion detector. inactive: the light level measured by the detector is not sent. The required object 17 is not available.	
Pyro 1 output	**inactive;** active
active: the "Pyro 1 Output" parameter window is also available for setting the associated parameters as well as the associated objects. inactive: the detector provides no Pyro 1 detection function. The "Pyro 1 Output" parameter window and associated objects are not available.	
Pyro 2 output	**inactive;** active
active: the "Pyro 2 Output" parameter window is also available for setting the associated parameters as well as the associated objects. inactive: the detector provides no Pyro 2 detection function. The "Pyro 2 Output" parameter window and associated objects are not available.	
Pyro 3 output	**inactive;** active
active: the "Pyro 3 Output" parameter window is also available for setting the associated parameters as well as the associated objects. inactive: the detector provides no Pyro 3 detection function. The "Pyro 3 Output" parameter window and associated objects are not available.	
Pyro 4 output	**inactive;** active
active: the "Pyro 4 Output" parameter window is also available for setting the associated parameters as well as the associated objects. inactive: the detector provides no Pyro 4 detection function. The "Pyro 4 Output" parameter window and associated objects are not available.	
Sabotage output	**inactive;** active
active: the "Sabotage" object is added for cyclically sending a telegram to register manipulation or a fault. inactive: the "Sabotage" object is not available.	
LED	inactive; **active**
active: the LED is ON. inactive: the LED is OFF. **Note:** the LED is automatically deactivated if parameters for measuring light level are activated. These are, for example, the "Photo-Cell Controller Output" and "Light Level Measured" parameters.	
Lighting test mode	**inactive;** active
active: to run the "Lighting test mode", the detector must have been configured via ETS and its objects linked with the objects of the buttons and actuators for lighting control. In this test mode, the red light-emitting diode integrated in the motion detector briefly flashes to indicate any movement detected. In addition, the lighting stay-ON time is set to 8 s for the duration of this test mode irrespective of the parameters selected for the presence detector. The motion detector is restarted after completing the test mode (when this parameter has been reset to "inactive"). The parameters changed at the beginning of the test mode are now reset to the values selected with ETS. inactive: the motion detector is in normal mode.	

7.2 "Light Level Setting" parameter window

This parameter window is always available.

Parameters	Settings
Light-level setting (in lux)	2 - 2000; **(200)**
This parameter is used for selecting the setting for evaluating light level.	
External light-level sensor	**inactive;** active
These parameters are used for activating an input object for external light-level measurement. This level is used instead of the light level measured internally.	

7.3 "Light Output" parameter window

This parameter window is always available.

Parameters	Settings
Number of light outputs	**1;** 2
This parameter is used for setting the number of light outputs.	
Light level related	**Yes**; no
Yes: the "Light-Level Setting" parameter is evaluated for evaluating the light level from the "Light Level" parameter window. No: light level evaluation is deactivated. The output only sends a switching command in relation to movement	
Stay-ON time (in minutes)	1 - 255; **(5)**
The stay-ON time starts when movement is detected. This has the purpose of preventing the lighting from switching OFF immediately if the detection zone is only vacated for a short time and switching it back ON again when a person returns to the detection zone. 1 - 255 minutes: lighting stay-ON time can be set to a fixed period of between 1 and 255 minutes.	
Telegram type	**ON / OFF;** dimming level
This parameter is used for setting whether to switch the light output ON/OFF or send a dimming level.	
constant-lighting control	No; **Yes**
No: this mode must be set if lighting can only switched ON and OFF. The detector then switches the lighting ON when presence is detected and the level of light being measured it below the light-level setting, and OFF again either when presence is no longer being detected or daylight is sufficient for illumination. Yes: this mode must be set if it is possible not only to switch lighting ON and OFF but also to dim it. The presence detector switches the lighting ON when presence is detected and the level of light being measured is below the light-level setting and dims it until the light-level measured coincides with the light-level setting selected. Lighting is switched OFF when nobody remains in the detection zone or if enough daylight is available that lighting is dimmed to below minimum dimming level.	
Constant-lighting control governed by movement	No; **Yes**
This parameter can be used for setting constant-lighting control in relation to movement or independently of movement. Yes: constant-lighting control is only active when presence is being detected. No: constant-lighting control is always active.	

Parameters	Settings
ON level	1 - 100%; **(80%)**
This parameter defines the ON level in % when the "Telegram Type" parameter is set to "Dimming Level".	
Max. variation from the setting	15 lux; **30 lux**; 45 lux; 60 lux
This parameter is only visible if the "Constant-Lighting Control" parameter is set to "Yes". It defines the precision with which the required level of light is controlled. This is necessary because lighting is controlled in dimming steps. Setting an insufficient maximum variation from the set level can therefore sometimes result in a further "brighter" adjustment step exceeding the set level and in a further "darker" adjustment step taking illumination below the set level. This leads to light being dimmed or brightened all the time (i.e. continuously fluctuating light level). If this is the case, the max. permissible variation from the set level must either be increased or the dimming step reduced.	
Max. dimming step	0.5%; 1%; 1.5%; **2%**; 2.5%; 3%; 5%
This parameter is only visible if the "Constant-Lighting Control" parameter is set to "Yes". This parameter is used for setting the maximum dimming "step" (this being the maximum level by which a new dimming level may increase or decrease from the previous level with constant-lighting control). **Note:** the larger the "Max. dimming step", the smaller the "Max. variation from the setting" should be.	
Send new dimming level after	0.5 s; 1 s; **2 s**; 3 s; 4 s; 5 s
This parameter is only visible if the "Constant-Lighting Control" parameter is set to "Yes". This parameter is used for setting the delay after which a new dimming level is sent in constant-lighting control mode. This ensures that even if actuator dimming times are short they do not result in constant-lighting control producing any abrupt change in light level that a room user may find unpleasant.	
Lighting with sufficient daylight	**switch OFF;** dim to minimum dimming level
This parameter is only visible if the "Constant-Lighting Control" parameter is set to "Yes". This parameter is used for selecting whether to switch the lighting OFF completely when presence = ON and there is sufficient daylight or whether to leave it ON but dim it to the selectable "minimum dimming level". switch OFF: lighting is switched OFF when the dimming level determined by the light-level controller is at 0% for 7 minutes. It is automatically switched back ON again as soon as the light level falls below the level that is set. dim to minimum dimming level: lighting remains switched ON and is dimmed to "minimum dimming level" even if the dimming level measured by the light-level controller is below the "minimum dimming level" selected. It is only brightened again when the dimming level measured by the light-level controller is above the "minimum dimming level" selected.	
Minimum dimming level	**0.5%**; 1%; 2%; 3%; 4%; 5%; 6%; 7%; 8%; 9%; 10%
This parameter is only visible if the "Constant-Lighting Control" parameter is set to "Yes". If the light-level controller measures a dimming level that is below the level set here, lighting is switched OFF or left ON and dimmed to the level selected via the preceding parameter.	
Light 2 offset to light 1 dimming level	-100% - **0%** - +100%
This parameter is only visible if the "Number of Light Outputs" parameter is set to "2" and the "Telegram Type" parameter is set to "Dimming Level". This parameter is used for selecting the offset value for light output 2 that must be added to or subtracted from the dimming level measured by the light-level controller for light output 1 (depending on whether light output 2 is further away from or closer to the window than light output 1) to provide a workplace below light output 2 with a level of light that is more or less the same as that provided at the light-level setting selected for light output 1.	

Parameters	Settings
Light-level control for dim light x input	disable and dim; **do not disable and alter setting**
disable and dim: if a telegram is received via the "Dim Light x Input" object, light-level control is disabled and the addressed lighting group dimmed. This setting is recommended if room lighting consists of several lighting groups. do not disable and alter setting: light-level control is not disabled after receiving a telegram via the "Dim Light x Input" object. After receiving a telegram, a delay of approx. 5 seconds elapses before the new light-level value is adopted as the set level. This setting is recommended if only one lighting group is used for illuminating the room.	
Switch OFF lighting if daylight is sufficient	No; **Yes**
This parameter is only visible if the "Constant-Lighting Control" parameter is set to "No" and the "Light-Level Related" parameter is set to Yes. This parameter is used for selecting whether to switch the lighting OFF completely when there is sufficient daylight or whether to leave it ON if presence is detected. Yes: lighting is switched OFF if the light-level setting has been exceeded. No: lighting remains switched ON if presence is detected.	
Disable light output	**No;** disable ON / enable OFF; Disabling OFF / enabling ON
This parameter is used for selecting whether to add object 6, "Disable Light Output", and which telegram to use for disabling and re-enabling the output. If the output is disabled, no telegrams are sent for switching lighting ON and OFF. No: the "Disable Light Output" object is not available. Disabling with ON / enabling with OFF: the output is disabled to the "Disable Light Output" object by a telegram with value "1" and enabled by a telegram with value "0". Disabling with OFF / enabling with ON: the output is disabled to the "Disable Light Output" object by a telegram with value "0" and enabled by a telegram with value "1".	
Behaviour on disabling	**no telegram;** ON; OFF
This parameter is only visible if the preceding "Disable Light Output" parameter is not set to "No". This parameter is used to select whether to switch lighting ON or OFF completely before disabling the output or whether to leave the lighting status unchanged. no telegram: no further action takes place before disabling the output. ON: lighting is switched ON before disabling the output. OFF: lighting is switched OFF before disabling the output.	
Action at light input	ON / OFF; 1 hour; 2 hours; 3 hours; **4 hours**
This parameter is used to select how to switch the output upon receiving a switching command through the "Switch light ON/OFF input". ON/OFF: the output is permanently switched in the way defined by the switching command being received. **Note: enabling not possible without object 6** 1 hour: the output is switched for one hour in the way defined by the switching command. 2 hours: the output is switched for two hours in the way defined by the switching command. 3 hours: the output is switched for three hours in the way defined by the switching command. 4 hours: the output is switched for four hours in the way defined by the switching command.	
Interconnection	**inactive;** active
For enlarging the light output's detection zone. inactive: no enlargement active: communication objects 14 "Interconnect Light Input" and 15 "Interconnect Light Output" are also provided. Object 15 is used for sending the Presence=ON status depending on the "Send Presence Interconnection Status Cyclically" parameter.	
Send presence interconnection status cyclically	10 s; 15 s; **30 s**; 1 min; 5 min; 10 min; 15 min; 30 min; 60 min
This parameter is used for selecting the cycle time after which the "Interconnect Light Output" object is re-sent when the detector identifies movement.	

Parameters	Settings
Basic illumination	**inactive;** active
If required, a motion detector installed can be set to provide basic illumination when ambient brightness falls below the light level setting so that it is never completely dark in the detection zone. active: this additionally provides the "Basic Illumination Dimming Level" and "Basic Illumination Duration" parameters that can be used for setting basic illumination brightness and how long it is to be switched ON for. inactive: the basic illumination function is not available.	
Basic illumination dimming level (in percent)	1 - 100; **(25)**
This parameter is only visible if the preceding "Basic Illumination" parameter is set to "active". This parameter is used for setting the percentage to switch lighting to when ambient brightness falls below the light level setting. The following parameter is used for setting how long basic illumination remains switched ON for.	
Basic illumination duration	half the night; **all night**
This parameter is only visible if the "Basic Illumination" parameter is set to "active". Basic illumination is switched OFF after expiry of the duration set here. The lengths of the nights last measured are averaged for defining the duration of a night. half the night: basic illumination is switched OFF between midnight and 1 a.m. all night: basic illumination is switched OFF after ambient brightness rises above the light level setting.	

7.4 "Presence Output" parameter window

This parameter window is only provided when the "Presence Output" parameter is set to "active" in the "General Settings" parameter window. It is used for setting the operating behaviour on detecting presence.

Parameters	Settings
Switch-ON delay (in seconds)	0 - 10; **(5)**
Switch-ON delay can be set to between 0 and 10 seconds.	
Presence stay-ON time (in seconds)	1 - 255; **(10)**
The stay-ON time can be set to a period of between 1 and 255 seconds. It is restarted each time a movement is detected. **Note:** a "presence output = OFF" signal is delivered if a person in the detection zone remains still during the time set here. Depending on the person's activity, it may be necessary to select a longer stay-ON time.	
Disable presence output	**No; disable O**N / enable OFF; Disabling OFF / enabling ON
This parameter is used for selecting whether to add object 19 "Present Output", and which telegram to use for disabling and re-enabling the output. If the output is disabled, no telegrams are sent for switching lighting ON and OFF. No: the "Disable Light Output" object is not available. Disabling with OFF / enabling with ON: the output is disabled to the "Disable Presence Output" object by a telegram with value "1" and enabled by a telegram with value "0". Disabling with OFF / enabling with ON: the output is disabled to the "Disable Presence Output" object by a telegram with value "0" and enabled by a telegram with value "1".	
Behaviour on disabling	**no telegram; O**N; OFF
This parameter is only visible if the preceding "Disable Presence Output" parameter is not set to "No". This parameter is used to select whether to switch lighting ON or OFF completely before disabling the output or whether to leave the lighting status unchanged. no telegram: no further action takes place before disabling the output. ON: output is switched ON before disabling the output. OFF: output is switched OFF before disabling the output.	

7.5 "Close-up Range Output" parameter window

This parameter window is only provided when the "Presence Output" parameter is set to "Active" in the "General Settings" parameter window. It is used for setting the operating behaviour on detecting presence.

Parameters	Settings
Close-up range stay-ON time (in seconds)	1-255; **(10)**
The stay-ON time can be set to a period of between 1 and 255 seconds. It is restarted each time a movement is detected. **Note:** a "close-up range output = OFF" signal is delivered if a person in the detection zone remains still during the time set here. Depending on the person's activity, it may be necessary to select a longer stay-ON time.	
Disable close-up range output	**No;** disable ON / enable OFF; Disabling OFF / enabling ON
This parameter is used for selecting whether to add object 22 "Close-up Range Output", and which telegram to use for disabling and re-enabling the output. If the output is disabled, no telegrams are sent for switching lighting ON and OFF. No: the "Disable Light Output" object is not available. Disabling with OFF / enabling with ON: output is disabled to the "Close-up Range Output" object by a telegram with value "1" and enabled by a telegram with value "0". Disabling with OFF / enabling with ON: the output is disabled to the "Close-up Range Output" object by a telegram with value "0" and enabled by a telegram with value "1".	
Behaviour on disabling	**no telegram;** ON; OFF
This parameter is only visible if the preceding "Close-up Range Output" parameter is not set to "No". This parameter is used to select whether to switch lighting ON or OFF completely before disabling the output or whether to leave the lighting status unchanged. no telegram: no further action takes place before disabling the output. ON: output is switched ON before disabling the output. OFF: output is switched OFF before disabling the output.	

7.6 "Photo-Cell Controller" parameter window

This parameter window is only provided when the "Photo-Cell Controller Output" parameter is set to "active" in the "General Settings" parameter window apart from when a detector has "slave" status. It is used for setting the photo-cell controller's operating behaviour.

Parameters	Settings
Light level threshold (in lux)	2 - 300; **(50)**
Switch-ON delay can be set to between 0 and 10 seconds.	
Disable presence output	**No;** disable ON / enable OFF; Disabling OFF / enabling ON
This parameter is used for selecting whether to add object 15, "Disable Photo-Cell Controller", and which telegram to use for disabling and re-enabling the output. If the output is disabled, no telegrams are sent for switching lighting ON and OFF. No: the "Disable Light Output" object is not available. Disabling with ON / enabling with OFF: the output is disabled to the "Disable Photo-Cell Controller" object by a telegram with value "1" and enabled by a telegram with value "0". Disabling with ON / enabling with OFF: the output is disabled to the "Disable Photo-Cell Controller" object by a telegram with value "0" and enabled by a telegram with value "1".	
Behaviour on disabling	**no telegram;** ON; OFF
This parameter is only visible if the preceding "Disable Photo-Cell Controller" parameter is not set to "No". This parameter is used to select whether to switch lighting ON or OFF completely before disabling the photo-cell controller output or whether to leave the lighting status unchanged. no telegram: no further action takes place before disabling the output. ON: output is switched ON before disabling the output. OFF: output is switched OFF before disabling the output.	

7.7 "Light Level Measured" parameter window

This parameter window is only provided when the "Light Level Measured" parameter is set to "active" in the "General Settings" parameter window apart from when a detector has "slave" status.

Parameters	Settings
Min. light-level change	20 lux; **30 lux**; 40 lux; 50 lux; 60 lux
This parameter is used to select which level the light-level value last sent must have changed by before the light level measured is to be sent again.	
Send measured level cyclically	**inactive**; 10 s; 15 s; 30 s; 1 min; 5 min; 10 min; 15 min; 30 min; 60 min
This parameter is used to select whether or after which cycle time to send the "Light Level Measured" object, even if the light level measured has not changed in the meantime.	

7.8 "Pyro 1-4" parameters

A parameter window is provided for each pyro 1-4. This window is only provided when the relevant "Pyro X Output" parameter is set to "active" in the "General Settings" parameter window.

Parameters	Settings
Light level related	**Yes**; no
Yes: the "Light-Level Setting" parameter is evaluated for evaluating the light level from the "Light Level" parameter window. No: light level evaluation is deactivated. The output only sends a switching command in relation to movement	
Stay-ON time (in minutes)	1 - 255; **(5)**
The stay-ON time starts when movement is detected. This has the purpose of preventing the lighting from switching OFF immediately if the detection zone is only vacated for a short time and switching it back ON again when a person returns to the detection zone. 1...255 minutes: the lighting stay-ON time can be set to a fixed period of between 1 and 255 minutes.	
Telegram type	**ON / OFF;** dimming level
This parameter is used for setting whether to switch the light output ON/OFF or send a dimming level.	
ON level	1 - 100%; **(80%)**
This parameter defines the ON level in % when the "Telegram Type" parameter is set to "Dimming Level".	
Switch OFF output in sufficient daylight	No; **Yes**
This parameter is used for selecting whether to switch the output OFF completely when there is sufficient daylight or whether to leave it ON if presence is detected. Yes: the output is switched OFF if the light-level setting has been exceeded. No: the output remains switched ON if presence is detected.	

7.9 "Sabotage" parameter

This parameter window is only provided when the "Sabotage Output" parameter is set to "active" in the "General Settings" parameter window.

Parameters	Settings
Send sabotage cyclically	10 s; 15 s; 30 s; **1 min**; 5 min; 10 min; 15 min; 30 min; 60 min
This parameter is used to select whether or after which cycle time to send the "Light Level Measured" object, even if the light level measured has not changed in the meantime.	
Telegram	**ON;** OFF
This parameter defines whether to send an ON telegram or OFF telegram cyclically.	