KNX
**Product documentation**

GIRA

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# KNX motion detector Cube 240

## Order no. 2194 ..

GIRA

# 1. Information about the product

## 1.1. Detector function

The KNX motion detector Cube consists of three passive infrared (PIR) motion detectors with integrated brightness sensor, integrated IR receiver and integrated red light emitting diode (LED) for indicating a detected movement in test mode.

- Improved detection also of radial movements
- Insensitivity to heat sources in the detection range
- Diffuse and directional light measurement
- Dynamic self-learning delay time

## 1.2. Functions

- Light outputs 1-2 output – switching the lighting for up to 2 light outputs
- Presence output – brightness-independent switching in the event of presence
- Absence output – brightness-independent switching in the event of absence
- Twilight sensor output – brightness-dependent switching regardless of presence
- Brightness output – output of the measured brightness value
- IR remote control PIR KNX

Which of these functions is to be used (activated) is set using the "General Settings" parameter window with the Engineering Tool Software (ETS), version ETS 4.0 and higher.

## 1.3. Light output

The motion detector has two independent light outputs. Each light output can be parametrised with its own switching threshold. Several data point types are available for the output object. Depending on the data point type of the output object, input objects can be used for overriding accordingly. The light output can be set to fully or semi-automatic mode. The delay time can be set permanently or a dynamic delay time can be configured.

It is possible to set whether the light output uses the motion detector logic or the presence detector logic can be . With the motion detector logic, the sensor does not switch off according to the incident daylight. With the presence detector logic, the lighting is switched off when there is sufficient daylight. The presence detector logic is parametrised with an offset. If the measured brightness exceeds the "Twilight stage + twilight stage offset OFF" value, the delay time is not re-triggered when presence is detected. The output switches off when the delay time has expired.

In example one, presence is detected at the time $t_1$ and the light output switches on. From now on, presence is detected continuously.
At the time $t_2$ the sudden change in brightness is determined. From $t_3$ on, the brightness increases further. The measured brightness exceeds the "Twilight stage + twilight stage offset OFF" value from $t_4$ on.
Only from time $t_5$ on is the delay time no longer re-triggered. Here the measured brightness exceeds the "Twilight stage + twilight stage offset OFF + offset". At the time $t_6$ the delay time has passed and the light output is switched off.

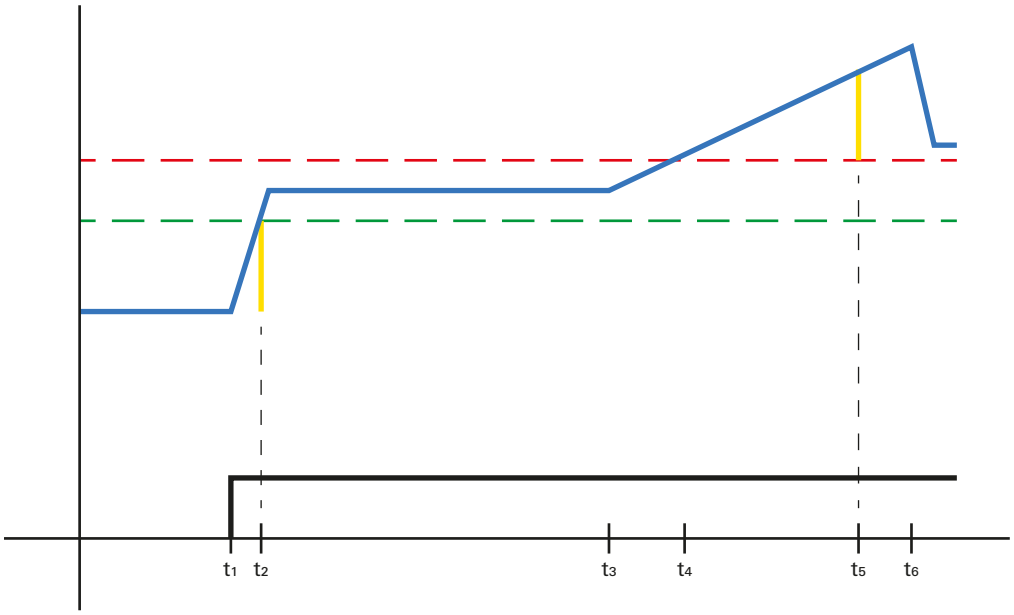



Bild 1: Example 1, brightness-based switching off

In example two, the light output 1 switches on first ($t_1$). The sudden change in brightness is determined at $t_2$. Then the measured brightness falls below the switching threshold of the light output 2 and switches the light output 2 on ($t_3$).

The sudden change in brightness is determined in $t_4$ and added to an offset with the sudden change in brightness of light 1.

From time $t_5$ on, the measured brightness exceeds the "Light 2 switching threshold + light 2 OFF switching threshold offset + offset" value and the delay time for light 2 is no longer re-triggered. Light 2 switches the output off after the delay time has passed ($t_6$). The sudden change in brightness is determined at $t_7$ and added to the offset.

From time $t_8$ on, the measured brightness exceeds the "Light 1 switching threshold + light 1 OFF switching threshold offset + offset" value and the staircase light time for light output 1 is no longer re-triggered. The light output 1 switches off after the delay time has passed ($t_9$).

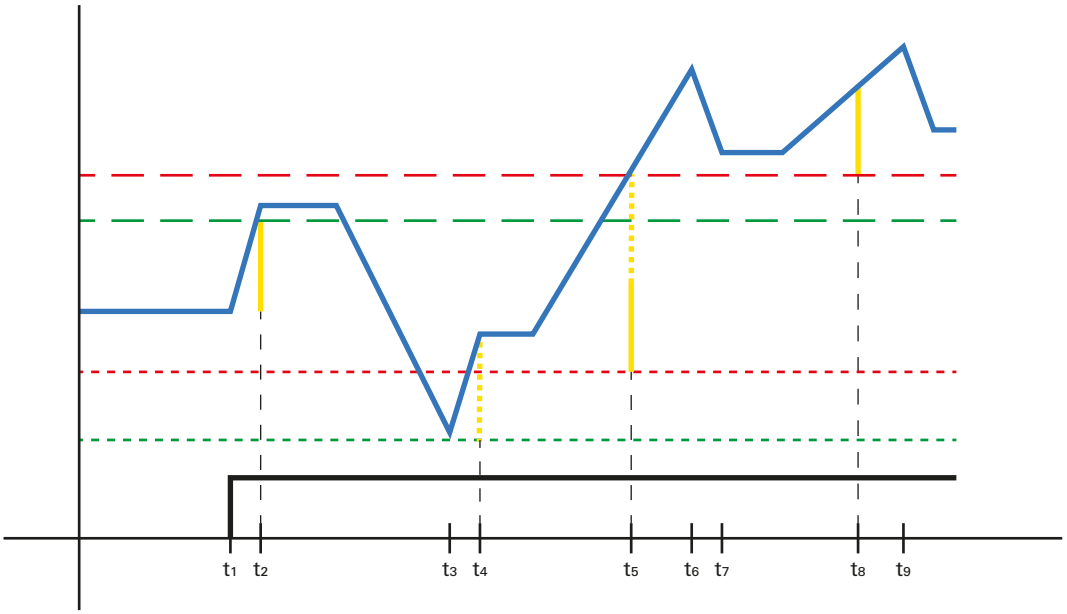



Bild 2: Example 2, brightness-based switching off

### 1.3.1. Dynamic delay time

If much movement is detected, the delay time is increased (5...20 min), so that the probability of switching off is small if there are still persons present.

However, if there is little movement, a short delay time is selected. If motion is detected the light is only on for a short time.

### 1.4. Presence output

The presence output operates independently of brightness. A switch-on delay and a delay time can be parametrised. It is possible to send the current status cyclically depending on the status.

### 1.5. Absence output

Just like the presence output, the absence output operates independently of brightness. A switch-on delay and a delay time can be parametrised. In this case the delay time passes as soon as someone enters the detection range. It is possible to send the current status cyclically depending on the status.

### 1.6. Twilight sensor

The twilight sensor output operates only according to the measured twilight stage and independent of the presence of persons. If the measured value is below the set threshold, the output is switched. Switching off the output takes place with a delay of 3 minutes.

#### 1.6.1. Function

The twilight sensor continuously measures the ambient brightness. When the light is switched on, it detects the increase in brightness caused by its own light (own light jump). This is recorded 60 seconds after switching on.

Based on this value, the twilight sensor calculates the switch-off threshold - i.e. the brightness value at which the light is deactivated again.

As soon as the measured ambient brightness rises above this switch-off threshold, a delay time of 3 minutes starts, after which the light is automatically switched off.

#### 1.6.2. Manual function test - procedure

1. Initial state:
   The twilight sensor is active, the ambient brightness is above the twilight threshold, the light is switched off.
2. Dimming:
   Darken the sensor completely by hand. The light should switch on. The dimming must be maintained for at least 60 seconds.
3. Restore the light supply:
   After the 60 seconds have elapsed, remove the hand so that sufficient light falls on the sensor again.
4. Switch-off delay:
   The sensor detects when the switch-off threshold is exceeded and starts the 3-minute switch-off delay. The light is then deactivated automatically.

### 1.7. Brightness measurement

The brightness measurement output sends the measured brightness value of the sensor on the bus either after a minimum change of the value or cyclically after a permanently defined interval.

## 2. Fully & semi-automatic

A parameter can be used to set whether the KNX motion detector Cube should operate in fully automatic or semi-automatic mode. The mode of operation can be set for the light outputs via the "Operating mode" parameter.

If operated in fully automatic mode, the lighting is switched on automatically when persons are present and, depending on the setting, either automatically or not depending on the brightness, and is switched off automatically when persons are absent or if brightness is sufficient.

If operated in "semi-automatic" mode, the lighting must be switched on manually. However, it is automatically switched off either depending on the brightness (depending on the setting) or when there is no longer a person in the detection range of the detector.

## 3. Day-night switchover

The "Day/night switchover" parameter can be used to define different settings for the switch-on and switch-off values of the lighting, delay times and twilight stage for the light output 1-2 outputs.

For each light output there is an input object that can be used to switch to "night mode".

## 4. Remote control, programming mode and feedback LED

### 4.1. Remote control

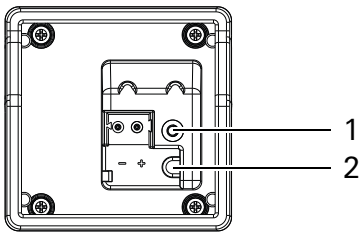
The remote control functions can be activated or deactivated under "General".

### 4.2. Remote control & programming mode

Via the IR remote control PIR KNX the security light can be set to KNX programming mode. Press the ☾ → ⛅ → 🚶 → ☼ buttons one after the other to do this.

### 4.3. Programming mode via programming button

Alternatively, a programming button (1) is available for activating programming mode, for programming the physical KNX address using the ETS. The LED (2) lights up red as soon as programming mode is activated.




### 4.4. Feedback LED

| Function | Colour | Type | Note |
|---|---|---|---|
| Initialisation of the sensor after download or bus voltage recovery (already parametrised) | Red | Flashing | 1x per sec. |
| Remote control command accepted | Red | Rapid flashing | 1x |
| KNX programming mode | Red | On | |
| Normal mode | | Off | |

## 5. Changing the values via the bus

Some of the setting parameters can be changed via the bus. For the light outputs, these are the switching thresholds or setpoints and time settings. The time settings for presence and absence.

## 6. Performance after a bus voltage failure and recovery or restart and download

In the event of a bus voltage failure, the KNX motion detector Cube fails because the electronics are supplied via the bus voltage. Before a bus voltage failure, all user inputs are saved (brightness values, delay times, switching thresholds, hystereses and disabled objects) so that they can be automatically restored when the bus voltage recovers after the bus voltage failure.

After bus voltage recovery as well as after a complete or partial loading of the product database into the motion detector using ETS (i.e. after a restart), the motion detector undergoes a disable time of between 10 and 40 seconds. At the start of the disable time the lighting is switched on and at the end of the disable time it is switched off for approx. 3 seconds. From then on the motion detector is ready for operation and sends the current telegrams of the outputs.

## 7. Communication objects

The maximum number of communication objects listed below are available for the KNX motion detector Cube. Which of them are visible and can be linked to group addresses is determined both by the setting in the "General" parameter window and by setting further parameters for desired functions and communication objects.

| Object | Object name | Function | DPT | Flag |
|---|---|---|---|---|
| 1 | Status | Status | 5.001 | KLÜ |
| 2 | Sensitivity | 0 to 100% | 5.001 | KLSÜ |
| 20 | Measured brightness value | Lux | 9.004 | KLÜ |
| 25 | Twilight sensor output | ON/OFF | 1.001 | KLÜ |
| 26 | Twilight stage | 2...1000 lux | 9.004 | KLSÜ |
| 27 | Disable twilight sensor output | ON/OFF | 1.001 | KSÜ |
| 28 | Twilight sensor output disable status | ON/OFF | 1.001 | KLÜ |
| 35 | Presence output presence | ON/OFF | 1.001 | KLÜ |
| 36 | Presence output delay time | 1s...65535s | 7.005 | KLSÜ |
| 37 | Presence output switch-on delay | 0s...10s | 7.005 | KLSÜ |
| 38 | Disable presence output | ON/OFF | 1.001 | KSÜ |
| 39 | Presence output disable status | ON/OFF | 1.001 | KLÜ |
| 45 | Absence output absence | ON/OFF | 1.001 | KLÜ |
| 46 | Absence output delay time | 1s...65535s | 7.005 | KLSÜ |
| 47 | Absence output switch-on delay | 1s...10s | 7.005 | KLSÜ |
| 48 | Disable absence output | ON/OFF | 1.001 | KSÜ |
| 49 | Absence output disable status | ON/OFF | 1.001 | KLÜ |
| 55 | Switch light output 1 | ON/OFF | 1.001 | KLSÜ |
| 56 | Light output 1 switch input | ON/OFF | 1.001 | KSÜ |
| 57 | Light output 1 dimming value | 0 to 100% | 5.001 | KLÜ |
| 58 | Dim light output 1 (DPT3) | brighter/darker | 3,007 | KLÜ |
| 59 | Light output 1 dim input | brighter/darker | 3,007 | KSÜ |
| 60 | Light output 1 dimming value input | 0 to 100% | 5.001 | KSÜ |
| 61 | Light output 1 scene | Call up scene | 18.001 | KLÜ |
| 62 | Light output 1 auxiliary unit input | ON/OFF | 1.001 | KSÜ |
| 63 | Light output 1 switching threshold | 2...1000 lux | 9.004 | KLSÜ |
| 64 | Light output 1 delay time | 10s...65535s | 7.005 | KLSÜ |
| 65 | Light output 1 external brightness | Lux | 9.004 | KSÜ |
| 66 | Light output 1 night input | ON/OFF | 1.001 | KSÜ |
| 67 | Disable light output 1 | ON/OFF | 1.001 | KSÜ |
| 68 | Light output 1 disable status | ON/OFF | 1.001 | KLÜ |
| 75 | Switch light output 2 | ON/OFF | 1.001 | KLSÜ |
| 76 | Light output 2 switch input | ON/OFF | 1.001 | KSÜ |
| 77 | Light output 2 dimming value | 0 to 100% | 5.001 | KLÜ |
| 78 | Dim light output 2 (DPT3) | brighter/darker | 3.007 | KLÜ |
| 79 | Light output 2 dim input | brighter/darker | 3.007 | KSÜ |
| 80 | Light output 2 dimming value input | 0 to 100% | 5.001 | KSÜ |
| 81 | Light output 2 scene | Call up scene | 18.001 | KLÜ |

| Object | Object name | Function | DPT | Flag |
|---|---|---|---|---|
| 82 | Light output 2 auxiliary unit input | ON/OFF | 1.001 | KSÜ |
| 83 | Light output 2 switching threshold | 2...1000 lux | 9.004 | KLSÜ |
| 84 | Light output 2 delay time | 10s...65535s | 7.005 | KLSÜ |
| 85 | Light output 2 external brightness | Lux | 9.004 | KSÜ |
| 86 | Light output 2 night input | ON/OFF | 1.001 | KSÜ |
| 87 | Disable light output 2 | ON/OFF | 1.001 | KSÜ |
| 88 | Light output 2 disable status | ON/OFF | 1.001 | KLÜ |

### 7.1. Description of status communication object

| Object | Description |
|---|---|
| Status | This object is always present.<br>This object is used to return whether the selected sensor under the sensor selection parameter matches the attached sensor in the general settings. If the sensor matches, the corresponding sensor type is returned. If the combination does not match, an error is returned and the sensor does not work. |

### 7.2. Description of light output X (1..2) communication objects

| Object | Description |
|---|---|
| Light output X<br>Switching | This object is always present when the light output is activated.<br>This object is used to switch the light output X.<br>The group address linked to this object is used to send the switching command to the actuator via the bus or to request the switching status from the motion detector. |
| Light output X<br>Switch input | This object is always present when the light output is activated.<br>If the "Operating mode" parameter is set to "Fully automatic" and a telegram is received via this object, light output X is disabled because the room user wants to switch the light output on or off permanently. It remains disabled until either a telegram for enabling is received via the "Disable light output X" object or until the motion detector detects that there is no longer a person in the room, enables light output X again and switches it off.<br>If the "Operating mode" parameter is set to "Semi-automatic" and a telegram "1" is received via this object, light output X is switched on for the set delay time. Every detected presence in the switched-on state triggers the delay time. If a "0" is received, the light output X switches off without disabling. |
| Light output X<br>Dimming value | This object is only visible if the "Light output X function" parameter is set to "Dimming value transmitter".<br>The group address linked to this object is used to send the dimming value to the actuator via the bus or to request it from the motion detector. |
| Dim light output X<br>(DPT3) | This object is only visible if the "Light output X function" parameter is set to "Dimming value transmitter". |

| Object | Description |
|---|---|
| Light output X<br>Dim input | This object is only visible if the "Light output X function" parameter is set to "Dimming value transmitter".<br>If a telegram is received via this object, light output X is disabled because the room user wants the light output to be permanently set to a different dimming value. It remains disabled until either a telegram for enabling is received via the "Disable light output X" object or until the motion detector detects that there is no person in the room any more, enables light output X again and switches it off. When enabled, the light output X sends its set value via the bus. |
| Light output X<br>Dimming value input | This object is only visible if the "Light output X function" parameter is set to "Dimming value transmitter".<br>If a telegram is received via this object, light output X is disabled because the room user wants the light output to be permanently set to a different dimming value. It remains disabled until either a telegram for enabling is received via the "Disable light output X" object or until the motion detector detects that there is no longer a person in the room, enables light output X again and switches it off. When enabled, the light output X sends its set value via the bus. |
| Light output X<br>Scene | This object is only visible if the "Light output X function" parameter is set to "Light scene auxiliary unit".<br>The group address linked to this object is used to send the scene to the actuator via the bus or to request it from the detector. |
| Light output X<br>Auxiliary unit input | This object is only visible if the "Auxiliary unit" parameter is not set to "inactive".<br>The group address linked to this object is used to receive the presence status from the auxiliary unit via the bus. |
| Light output X<br>Switching threshold | This object is always present when the light output is activated.<br>The group address linked to this object is used to receive or request the switching threshold (in lux) for the light output via the bus. |
| Light output X<br>Delay time | This object is always present when the light output is activated.<br>The group address linked to this object is used to receive the delay time for light output X via the bus. A received value that is outside the permissible range is rejected. This object can also be used to request the current delay time. |
| Light output X<br>External brightness | This object is only visible if the "Brightness sensor ON" parameter is set to "External".<br>The group address linked to this object is used to receive the brightness value measured by a brightness sensor and compare it with the switching threshold. |
| Light output X<br>Night input | This object is only visible if the "Day-night switchover" parameter is not set to "Inactive".<br>The group address linked to this object is used to receive the switchover between day and night. A "0" activates the parameters for the day. A "1" activates the parameters for the night. |
| Light output X<br>Disabling | This object is only visible if the "Polarity of disable object" parameter is not set to "No".<br>The "Polarity of disable object" parameter is also used to set whether disabling is to be carried out by a received value of "1" or a received value of "0". If the output is disabled, the output does not send any telegrams. An exception is manual overriding via the input objects. |

| Object | Description |
|---|---|
| Light output X<br>Disable status | This object is only visible if the "Polarity of disable object" parameter is not set to "No".<br>Via the group address linked to this object, the disable status is automatically sent via the bus with every change or the disable status can be requested at any time. |

### 7.3. Description of presence output communication objects

| Object | Description |
|---|---|
| Presence output presence | This object is always present when the presence output is activated.<br>The group address linked to this object is used to send information to the actuator via the bus on whether the presence of persons was detected (output="ON") or not (output="OFF") or the presence status can be requested at any time from the motion detector. |
| Presence output delay time | This object is always present when the presence output is activated.<br>The group address linked to this object is used to receive the delay time for the presence output via the bus. A received value that is outside the permissible range is rejected. This object can also be used to request the current delay time. |
| Presence output switch-on delay | This object is always present when the presence output is activated.<br>The group address linked to this object is used to receive the switch-on delay for the presence output via the bus. A received value that is outside the permissible range is rejected. This object can also be used to request the current delay time. |
| Disable presence output | This object is only visible if the "Polarity of disable object" parameter is not set to "No".<br>The "Polarity of disable object" parameter is also used to set whether disabling is to be carried out by a received value of "1" or a received value of "0". If the output is disabled, the output does not send any telegrams. |
| Presence output disable status | This object is only visible if the "Polarity of disable object" parameter is not set to "No".<br>Via the group address linked to this object, the disable status is automatically sent via the bus with every change or the disable status can be requested at any time. |

### 7.4. Description of absence output communication objects

| Object | Description |
|---|---|
| Absence output absence | This object is always present when the absence output is activated.<br>The group address linked to this object is used to send information to the actuator via the bus on whether the absence of persons was detected (output="ON") or not (output="OFF") or the absence status can be requested at any time from the motion detector. |
| Absence output delay time | This object is always present when the absence output is activated.<br>The group address linked to this object is used to receive the delay time for the absence output via the bus. A received value that is outside the permissible range is rejected. This object can also be used to request the current delay time. |

| Object | Description |
|---|---|
| Absence output switch-on delay | This object is always present when the absence output is activated.<br>The group address linked to this object is used to receive the switch-on delay for the absence output via the bus. A received value that is outside the permissible range is rejected. This object can also be used to request the current delay time. |
| Disable absence output | This object is only visible if the "Polarity of disable object" parameter is not set to "No".<br>The "Polarity of disable object" parameter is also used to set whether disabling is to be carried out by a received value of "1" or a received value of "0". If the output is disabled, the output does not send any telegrams. |
| Absence output disable status | This object is only visible if the "Polarity of disable object" parameter is not set to "No".<br>Via the group address linked to this object, the disable status is automatically sent via the bus with every change or the disable status can be requested at any time. |

### 7.5. Description of twilight switch communication objects

| Object | Description |
|---|---|
| Twilight sensor output | This object is always present when the twilight sensor is activated.<br>The group address linked to this object is used to send information to the actuator via the bus on if the measured brightness is below the set twilight stage (output="ON") or not (output="OFF") or the twilight sensor status can be requested at any time by the motion detector. |
| Twilight stage | This object is always present when the twilight switch is activated.<br>The group address linked to this object is used to receive or request the switching threshold (in lux) for the light output via the bus. |
| Disable twilight sensor output | This object is always present if the twilight switch output is activated and the "Polarity of disable object" parameter is not set to "No".<br>The "Polarity of disable object" parameter is also used to set whether disabling is to be carried out by a received value of "1" or a received value of "0". |
| Twilight sensor output disable status | This object is only visible if the "Polarity of disable object" parameter is not set to "No".<br>Via the group address linked to this object, the disable status is automatically sent via the bus with every change or the disable status can be requested at any time. |

### 7.6. Description of brightness measurement communication objects

| Object | Description |
|---|---|
| Measured brightness value | This object is always present when brightness measurement is activated.<br>Via the group address linked to this object, the internal brightness value measured by the detector is sent via the bus or it can be requested from the detector at any time. |

# 8. ETS parameters

## 8.1. General parameters

| General parameters | | |
|---|---|---|
| **Name** | **Settings** | **Factory setting** |
| Number of light outputs | 0…2 | 1 |
| This parameter is used to set how many light outputs should be available. | | |
| | | |
| Presence output | inactive<br>active | inactive |
| active: The presence output with the corresponding parameters is also available.<br>inactive: The presence output is not available. | | |
| | | |
| Absence output | inactive<br>active | inactive |
| active: The absence output with the corresponding parameters is also available.<br>inactive: The absence output is not available. | | |
| | | |
| Twilight sensor | inactive<br>active | inactive |
| active: The twilight sensor output with the corresponding parameters is also available.<br>inactive: The twilight sensor output is not available. | | |
| | | |
| Brightness measurement | inactive<br>active | inactive |
| active: The measured brightness value output with the corresponding parameters is also available.<br>inactive: The measured brightness value output is not available. | | |
| | | |
| Remote control | inactive<br>active | |
| active: The IR remote control is activated. Some parameters, such as delay times, sensitivity and switch-on thresholds, can be changed with the IR remote control.<br>inactive: The IR receiver integrated in the motion detector is deactivated. | | |

## 8.2. Light output 1..2

### 8.2.1. General

| Light output X = 1…2 | | |
|---|---|---|
| **Name** | **Settings** | **Factory setting** |
| Light output X function | Switching<br>Dimming value transmitter<br>Light scene auxiliary unit | Switching |
| This parameter is used to set the object with which the output sends. | | |
| | | |
| Dimming value at start of detection (0…100%) | 0%…100% | 100% |

| Light output X = 1...2 | | |
|---|---|---|
| **Name** | **Settings** | **Factory setting** |
| This parameter is used to set which dimming value is sent for the ON state. | | |
| | | |
| Dimming value at end of detection (0...100%) | 0%...100% | 0% |
| This parameter is used to set which dimming value is sent for the OFF state. | | |
| | | |
| Send switching objects | ON/OFF telegram<br>ON telegram<br>OFF telegram | ON/OFF telegram |
| This parameter is used to set whether the ON and OFF switching commands or only ON or only OFF are to be sent for the dimming value transmitter function. | | |
| | | |
| Light scene number at start of detection (1...64) | 1...64 | 1 |
| This parameter is used to set which scene is sent for the ON state. | | |
| | | |
| Light scene number at end of detection (1...64) | 1...64 | 2 |
| This parameter is used to set which scene is sent for the OFF state. | | |
| | | |
| Send status cyclically | Do not send status cyclically<br>ON/OFF<br>ON<br>OFF | Do not send status cyclically |
| This parameter is used to set whether the output should not only be sent after each change but also cyclically and at which status.<br>Do not send status cyclically: No status is sent cyclically.<br>ON/OFF: The ON and OFF status is sent cyclically<br>ON: Only the ON status is sent cyclically.<br>OFF: Only the OFF status is sent cyclically. | | |
| | | |
| Time for cyclic transmission | hh:mm:ss | 00:00:30 |
| Time interval at which cyclic transmission takes place. The maximum time interval is 18:12:15. | | |
| | | |
| Operating mode | Fully automatic (Auto ON, Auto OFF)<br>Semi-automatic (Manual ON, Auto OFF) | Fully automatic (Auto ON, Auto OFF) |
| This parameter is used to set whether the light output should be switched on and off automatically (fully automatic) or whether it should only be switched off automatically (semi-automatic). | | |
| | | |
| Dynamic delay time | Active<br>Inactive | Inactive |

| Light output X = 1...2 | | |
|---|---|---|
| **Name** | **Settings** | **Factory setting** |
| This parameter is used to set whether the light output delay time is to be selected via a parameter (inactive) or whether the dynamic delay time is to automatically and continuously adapt the delay time between 5 and 20 minutes to the use of the room (active). | | |
| | | |
| Light output delay time | hh:mm:ss | 00:05:00 |
| The delay time is started if no presence is detected. It is used to prevent the output from being switched off immediately when the room is briefly left and being switched on again when the room is returned.<br>The delay time can be set from 00:00:10 to 18:12:15. | | |
| | | |
| Auxiliary unit | Inactive<br>ON telegram<br>ON/OFF telegram | ON |
| This parameter defines whether the auxiliary unit input expects an ON telegram or an ON and OFF telegram. | | |

### 8.2.2. Brightness

| Light output X = 1...2 | | |
|---|---|---|
| **Name** | **Settings** | **Factory setting** |
| Day mode | Yes<br>No | NO |
| Setting whether the light output should switch independently of the brightness. | | |
| | | |
| Brightness sensor ON | Internal<br>External | Internal |
| This parameter defines the brightness measurement with which the sensor compares its switching threshold. | | |
| | | |
| External brightness sensor initial value | 2 lux ... 1000 lux | 200 lux |
| This parameter defines the value with which the sensor operates until the first value is received via the KNX bus. | | |
| | | |
| External brightness sensor weighting | 1 % ... 100 % | 100 % |
| This value defines to what extent the external value is weighted. | | |
| | | |
| Twilight stage ON | 2 lux...1000 lux | 50 lux |
| This parameter is used to set the brightness and detected presence used to switch on the light output. | | |
| | | |
| Switch off depending on brightness | Yes<br>No | Yes |

| Light output X = 1...2 | | |
|---|---|---|
| **Name** | **Settings** | **Factory setting** |
| Yes: The light output is switched off when there is sufficient brightness despite presence detection.<br>No: The light output remains switched on until the delay time has passed. The delay time is re-triggered when presence is detected. | | |
| | | |
| Twilight stage offset OFF | 10 lux...1000 lux | 100 lux |
| This parameter is used to set the offset above which the light output is switched off. | | |

### 8.2.3. Basic illumination (only visible if „Function light output X = Dimmer“)

| Light output X = 1...2 | | |
|---|---|---|
| **Name** | **Setting** | **Factory setting** |
| Basic illumination | Inactiv<br>Activ | Inactiv |
| Setting whether the basic illumination should be activated. | | |
| | | |
| Basic illumination ON | For limited time<br>Depending on light level<br>Dim<br>Always | For limited time |
| If required, basic illumination can be activated either for a limited time after the end of the run-on time or always when the brightness falls below a threshold value.<br><br>For limited time: At the end of the run-on time, the output switches the lighting to basic illumination if the detector has been parameterised in day mode or the currently measured brightness is below the "Twilight stage ON" + "Twilight stage offset OFF".<br><br>Depennding on light level: If no presence is detected by the detector, the output is not switched off but the basic illumination is activated if the brightness measured by the sensor is below the basic brightness threshold value at this time. It remains switched on until either presence is detected or until the measured brightness significantly exceeds the basic brightness threshold value. The brightness measurement setting from the "Brightness sensor ON" parameter is used.<br><br>Dim: The sensor automatically dims the lighting down gradually until it switches off.<br><br>Always: The basic illumination is always active when the output is not switched on. | | |
| | | |
| Basic illumination dimming level | 1...100 % | 10 % |
| This parameter is used to set the dimming value to which the basic illumination is switched on. | | |
| | | |
| Basic illumination light-level threshold | 2...1000 lux | 50 lux |
| This parameter is used to set the threshold value below which the basic illumination is activated and above which it is deactivated again.<br>This takes place regardless of whether there are people in the detection area or not. | | |
| | | |

| Light output X = 1...2 | | |
|---|---|---|
| **Name** | **Setting** | **Factory setting** |
| Basic illumination ON period | hh:mm:ss | 00:15:00 |
| After the switch-on time set here has elapsed, the basic illumination is switched off.<br>The switch-on time can be set from 00:00:10 to 18:12:15. | | |

### 8.2.4. Day-night parameters

| Light output X = 1...2 | | |
|---|---|---|
| **Name** | **Settings** | **Factory setting** |
| Day-night switchover | Inactive<br>Active | Inactive |
| If day/night switchover is activated, the parameter setting can be switched over via an input object. | | |
| | | |
| Dimming value at start of detection (0...100%)<br>(only for "General" parameter: light output X function, dimming value) | 0%...100% | 100% |
| This parameter is used to set which dimming value is sent for the ON state. | | |
| | | |
| Dimming value at end of detection (0...100%)<br>(only for "General" parameter: light output X function, dimming value) | 0%...100% | 0% |
| This parameter is used to set which dimming value is sent for the OFF state. | | |
| | | |
| Light scene number at start of detection (1...64%)<br>(only for "General" parameter: light output X function, light scene auxiliary unit) | 1...64 | 1 |
| This parameter is used to set which scene is sent for the ON state. | | |
| | | |
| Light scene number at end of detection (1...64%)<br>(only for "General" parameter: light output X function, light scene auxiliary unit) | 1...64 | 2 |
| This parameter is used to set which scene is sent for the OFF state. | | |
| | | |
| Day mode | Yes<br>No | No |
| Setting whether the light output should switch independently of the brightness. | | |
| | | |
| Twilight stage ON | 2 lux...1000 lux | 50 lux |

| Light output X = 1...2 | | |
|---|---|---|
| **Name** | **Settings** | **Factory setting** |
| This parameter is used to set the brightness and detected presence used to switch on the light output. | | |
| | | |
| Switch off depending on brightness | Yes<br>No | No |
| This parameter is used to set whether the light output should switch off depending on brightness despite presence. | | |
| | | |
| Twilight stage offset OFF | 10 lux...1000 lux | 100 lux |
| This parameter is used to set the offset above which the light output is switched off. | | |
| | | |
| Light output delay time | hh:mm:ss | 00:05:00 |
| The delay time is started if no presence is detected. It is used to prevent the output from being switched off immediately when the room is only briefly left and being switched on again when the room is returned to.<br>The delay time can be set from 00:00:10 to 18:12:15. | | |

### 8.2.5. Disabling

| Light output X = 1...2 | | |
|---|---|---|
| **Name** | **Settings** | **Factory setting** |
| Polarity of the disable object | No<br>0 = enable / 1 = disable<br>0 = disable / 1 = enable | No |
| This parameter is used to set whether the output can be disabled and with which telegram the output is disabled and re-enabled.<br>No: The output cannot be disabled.<br>0 = enable / 1 = disable: The output is disabled by a telegram with the value "1" for the disable object and enabled by a telegram "0".<br>0 = disable / 1 = enable: The output is disabled by a telegram with the value "0" for the disable object and enabled by a telegram "1". | | |
| | | |
| Telegram at start of disabling | None<br>ON telegram<br>OFF telegram | None |
| This parameter is used to set whether the output should be switched on or off before disabling or whether the output should remain unchanged.<br>None: No further action is taken before disabling.<br>ON telegram: The output is switched on before disabling.<br>OFF telegram: The output is switched off before disabling. | | |
| | | |
| Telegram at the end of disabling | Enable and do not send a telegram<br>Enable and send ON telegram<br>Enable and send OFF telegram | Enable and do not send a telegram |

| Light output X = 1...2 | | |
|---|---|---|
| **Name** | **Settings** | **Factory setting** |
| This parameter is used to set whether the output resumes its activity after being enabled or whether the output is switched on or off first.<br>Enable and do not send a telegram: The output is in normal mode immediately and sets the output according to the configuration.<br>Enable and send ON telegram: After enabling, the output is switched on. After a waiting period of 5 seconds, normal mode is reactivated.<br>Enable and send OFF telegram: After enabling, the output is switched off. After a waiting period of 5 seconds, normal mode is reactivated. | | |

### 8.3. Presence output

| Presence output | | |
|---|---|---|
| **Name** | **Settings** | **Factory setting** |
| Switch-on delay | 0 s...10 s | 1 sec. |
| A movement must be detected over the entire time of the switch-on delay. Only then does the output switch ON. | | |
| | | |
| Delay time | hh:mm:ss | 00:00:10 |
| The delay time is started if no presence is detected. It is used to prevent the output from being switched off immediately when the room is briefly left and being switched on again when the room is returned.<br>The delay time can be set from 00:00:00 to 18:12:15. | | |
| | | |
| Send status cyclically | Do not send status cyclically<br>ON/OFF<br>ON<br>OFF | Do not send status cyclically |
| This parameter is used to set whether the output should not only be sent after each change but also cyclically and at which status.<br>Do not send status cyclically: No status is sent cyclically.<br>ON/OFF: The ON and OFF status is sent cyclically<br>ON: Only the ON status is sent cyclically.<br>OFF: Only the OFF status is sent cyclically. | | |
| | | |
| Time for cyclic transmission | hh:mm:ss | 00:00:30 |
| Time interval at which cyclic transmission takes place. | | |
| | | |
| Polarity of the disable object | No<br>0 = enable / 1 = disable<br>0 = disable / 1 = enable | No |
| This parameter is used to set whether the output can be disabled and with which telegram the output is disabled and re-enabled.<br>No: The output cannot be disabled.<br>0 = enable / 1 = disable: The output is disabled by a telegram with the value "1" for the disable object and enabled by a telegram "0".<br>0 = disable / 1 = enable: The output is disabled by a telegram with the value "0" for the disable object and enabled by a telegram "1". | | |

| Presence output | | |
|---|---|---|
| **Name** | **Settings** | **Factory setting** |
| | | |
| Telegram at start of disabling | None<br>ON telegram<br>OFF telegram | None |
| This parameter is used to set whether the output should be switched on or off before disabling or whether the output should remain unchanged.<br>None: No further action is taken before disabling.<br>ON telegram: The output is switched on before disabling.<br>OFF telegram: The output is switched off before disabling. | | |
| | | |
| Telegram at the end of disabling | Enable and do not send a telegram<br>Enable and send ON telegram<br>Enable and send OFF telegram | Enable and do not send a telegram |
| This parameter is used to set whether the output resumes its activity after being enabled or whether the output is switched on or off first.<br>Enable and do not send a telegram: The output is in normal mode immediately and sets the output according to the configuration.<br>Enable and send ON telegram: After enabling, the output is switched on. After a waiting period of 5 seconds, normal mode is reactivated.<br>Enable and send OFF telegram: After enabling, the output is switched off. After a waiting period of 5 seconds, normal mode is reactivated. | | |

### 8.4. Absence output

| Absence output | | |
|---|---|---|
| **Name** | **Settings** | **Factory setting** |
| Switch-on delay | 0...10 sec. | 1 sec. |
| No movement may be detected over the entire time of the switch-on delay. Only then does the output switch ON. | | |
| | | |
| Delay time | hh:mm:ss | 00:00:10 |
| The delay time is started if no absence is detected. It is used to prevent the output from being switched off immediately when the room is only briefly left and being switched on again when the room is returned to.<br>The staircase light time can be set from 00:00:10 to 18:12:15. | | |
| | | |
| Send status cyclically | Do not send status cyclically<br>ON/OFF<br>ON<br>OFF | Do not send status cyclically |
| This parameter is used to set whether the output should not only be sent after each change but also cyclically and at which status.<br>Do not send status cyclically: No status is sent cyclically.<br>ON/OFF: The ON and OFF status is sent cyclically<br>ON: Only the ON status is sent cyclically.<br>OFF: Only the OFF status is sent cyclically. | | |

| Absence output | | |
|---|---|---|
| **Name** | **Settings** | **Factory setting** |
| | | |
| Time for cyclic transmission | hh:mm:ss | 00:00:30 |
| Time interval at which cyclic transmission takes place. | | |
| | | |
| Polarity of the disable object | No<br>0 = enable / 1 = disable<br>0 = disable / 1 = enable | No |
| This parameter is used to set whether the output can be disabled and with which telegram the output is disabled and re-enabled.<br>No: The output cannot be disabled.<br>0 = enable / 1 = disable: The output is disabled by a telegram with the value "1" for the disable object and enabled by a telegram "0".<br>0 = disable / 1 = enable: The output is disabled by a telegram with the value "0" for the disable object and enabled by a telegram "1". | | |
| | | |
| Telegram at start of disabling | None<br>ON telegram<br>OFF telegram | None |
| This parameter is used to set whether the output should be switched on or off before disabling or whether the output should remain unchanged.<br>None: No further action is taken before disabling.<br>ON telegram: The output is switched on before disabling.<br>OFF telegram: The output is switched off before disabling. | | |
| | | |
| Telegram at the end of disabling | Enable and do not send a telegram<br>Enable and send ON telegram<br>Enable and send OFF telegram | Enable and do not send a telegram |
| This parameter is used to set whether the output resumes its activity after being enabled or whether the output is switched on or off first.<br>Enable and do not send a telegram: The output is in normal mode immediately and sets the output according to the configuration.<br>Enable and send ON telegram: After enabling, the output is switched on. After a waiting period of 5 seconds, normal mode is reactivated.<br>Enable and send OFF telegram: After enabling, the output is switched off. After a waiting period of 5 seconds, normal mode is reactivated. | | |

## 8.5. Twilight sensor

| Twilight sensor | | |
|---|---|---|
| **Name** | **Settings** | **Factory setting** |
| Twilight stage | 2... 1000 lux | 10 lux |
| This parameter is used to set the brightness above which the twilight sensor output switches on. | | |
| | | |

| Twilight sensor | | |
|---|---|---|
| **Name** | **Settings** | **Factory setting** |
| Polarity of the disable object | No<br>0 = enable / 1 = disable<br>0 = disable / 1 = enable | No |
| This parameter is used to set whether the output can be disabled and with which telegram the output is disabled and re-enabled.<br>No: The output cannot be disabled.<br>0 = enable / 1 = disable: The output is disabled by a telegram with the value "1" for the disable object and enabled by a telegram "0".<br>0 = disable / 1 = enable: The output is disabled by a telegram with the value "0" for the disable object and enabled by a telegram "1". | | |
| | | |
| Telegram at start of disabling | None<br>ON telegram<br>OFF telegram | None |
| This parameter is used to set whether the output should be switched on or off before disabling or whether the output should remain unchanged.<br>None: No further action is taken before disabling.<br>ON telegram: The output is switched on before disabling.<br>OFF telegram: The output is switched off before disabling. | | |
| | | |
| Telegram at the end of disabling | Enable and do not send a telegram<br>Enable and send ON telegram<br>Enable and send OFF telegram | Enable and do not send a telegram |
| This parameter is used to set whether the output resumes its activity after being enabled or whether the output is switched on or off first.<br>Enable and do not send a telegram: The output is in normal mode immediately and sets the output according to the configuration.<br>Enable and send ON telegram: After enabling, the output is switched on. After a waiting period of 5 seconds, normal mode is reactivated.<br>Enable and send OFF telegram: After enabling, the output is switched off. After a waiting period of 5 seconds, normal mode is reactivated. | | |

### 8.6. Brightness output

| Brightness output | | |
|---|---|---|
| **Name** | **Settings** | **Factory setting** |
| Send measured value | Change<br>Cyclically | Change |
| This parameter is used to set whether the measured values are sent on the bus only when a change occurs or cyclically. | | |
| | | |
| Min. change in brightness | 1...255 lux | 30 lux |
| This parameter is used to set the minimum value by which the last measured value sent must have changed in order for the measured value to be sent again. | | |
| | | |

| Brightness output | | |
|---|---|---|
| **Name** | **Settings** | **Factory setting** |
| Cyclic transmission of the measured value | hh:mm:ss | 00:00:30 |
| Time interval at which all measured brightness values are sent cyclically. | | |