

ESYLUX

www.esylux.com

GB OPERATING INSTRUCTIONS

Congratulations on your purchase of this high-quality ESYLUX product. To ensure correct device operation, please read these installation/operating instructions carefully and keep them in a safe place for future reference.

1 • SAFETY INSTRUCTIONS



WARNING! Work on electrical systems must be carried out by authorised personnel only, with due regard to the applicable installation regulations. Switch off the power supply before installing the system. Please observe the installation regulations laid out in the safety measure for separated extra-low voltage (SELV).

Use this product only as intended (as described in the user instructions). Do not make any changes or alterations as this will render any warranties null and void. You should check the device for damage immediately after unpacking it. If there is any damage, you should not install the device under any circumstances.

If you suspect that safe operation of the device cannot be guaranteed, you should turn the device off immediately and make sure that it cannot be operated unintentionally.



NOTE: this device must not be disposed of as unsorted household waste. Used devices must be disposed of correctly. Contact your local town council for more information.

2 • DESCRIPTION

The ESYLUX PD 360/8 KNX BASIC is a presence detector with a 360° field of detection and an integrated bus coupler for ceiling mounting. Follow the installation instructions provided when installing the device. For further features, please refer to the operating instructions "Description of applications". With a range of up to 8 m in diameter, the detector is suitable for use in small rooms and passageways with natural lighting.

The PD 360/8 KNX BASIC is only intended for use in a KNX (EIB), TP (twisted pair) bus system in conjunction with other KNX components.

If the PD 360/8 KNX BASIC detects that persons are present in its field of detection, it transmits controlling telegrams for light outputs, depending on ambient brightness.

- Blended light measurement is suitable for FL, PL, halogen and incandescent lamps.

Certified KNX/EIB training centres provide specialist training on how to plan, install, activate, document and apply the ETS (Engineering Tool Software) that is required for parameter setting.

3 • INSTALLATION / ASSEMBLY / CONNECTION



See separate assembly instructions.

For correct use of the device, ensure that the UC network (or KNX/EIB) to be connected is designed for protection class III.

4 • START-UP

All parameter settings are carried via the ETS (Engineering Tool Software). Pressing the programming button (see Fig.) activates the programming status for the physical address on the PD 360/8 KNX BASIC. This is indicated by the blue LED. The product database and application description are available to download at www.esylux.com.

5 • SWITCH-ON BEHAVIOUR / LED DISPLAY

- **Connect the bus supply**
This initiates a warm-up phase that lasts approx. 10 seconds. The red LED and green LED will slowly flash alternately (f = 1 Hz).
- **LED display after warm-up**
Each time motion is detected, this is indicated by 2 x flashes of the green LED.
- **In the "Slave" function** each detection is acknowledged by 2 x flashes of the green LED.

6 • TEST MODE

Parameters can be set via the ETS (Engineering Tool Software). Test mode switches to the RUN status after "storing", or 10 minutes after activating the test mode. The blue LED flashes to indicate movement.

7 • ESYLUX MANUFACTURER'S GUARANTEE

ESYLUX products are tested in accordance with applicable regulations and manufactured with the utmost care. The guarantor, ESYLUX Deutschland GmbH, Postfach 1840, D-22908 Ahrensburg, Germany (for Germany) or the relevant ESYLUX distributor in your country (visit www.esylux.com for a complete overview) provides a guarantee against manufacturing/material defects in ESYLUX devices for a period of three years from the date of manufacture.

This guarantee is independent of your legal rights with respect to the seller of the device. The guarantee does not apply to natural wear and tear, changes/interference caused by environmental factors or damage in transit, nor to damage caused as a result of failure to follow the user or maintenance instructions and/or as a result of improper installation. Any illuminants or batteries supplied with the device are not covered by the guarantee. The guarantee can only be honoured if the device is sent back with the invoice/receipt, unchanged, packed and with sufficient postage to the guarantor, along with a brief description of the fault, as soon as a defect has been identified.

If the guarantee claim proves justified, the guarantor will, within a reasonable period, either repair the device or replace it. The guarantee does not cover further claims; in particular, the guarantor will not be liable for damages resulting from the device's defectiveness. If the claim is unfounded (e.g. because the guarantee has expired or the fault is not covered by the guarantee), then the guarantor may attempt to repair the device for you for a fee, keeping costs to a minimum.

LIGHT CHANNEL OBJECTS**Object 0: "Input: Lock light channel" (length = 1 bit)**

The switching/dimming outputs for the light channel are locked with an ON telegram and unlocked with an OFF telegram.

Parameters can be set to determine the status of the light channel after locking and unlocking.

Object 1: "Input: Light channel manual ON/OFF" (length = 1 bit)**Please note: essential when in semi-automatic mode!**

Manual operation is maintained when persons are present until the switch-off delay time has elapsed if "while presence" is set in the parameters. Light measurement is not active for the set time if the parameter "With disabled light processing during off-period" has been selected. After this, the detector switches to normal operating mode. Manual operation has no impact on motion detection. The function is transmitted to communication objects 5/6.

Object 2: "Output: Light channel ON/OFF" (length = 1 bit)

If artificial lighting is required (switching threshold 1/set value via parameter) and persons are present, the output sends an ON telegram.

If natural light is sufficient and/or no persons are present, an OFF telegram is sent once the switch-off delay time has elapsed.

Object 3: "Input: Light channel 1/actuator acknowledgement" (length = 1 bit)

This object can be used to evaluate the status object of an actuator. In the event that the actuator is not only controlled by the detector, the detector will be switched on with an ON telegram and then switched off once the switch-off delay time has elapsed (provided no further movement is detected). If an OFF telegram is sent, the detector will be switched off and will then revert immediately to standby mode. This is only available if "actuator feedback" has been enabled.

LIGHT VALUE OBJECTS**Object 4: "Output: Current light value" (length = 2 bytes)**

This object can be used to output the light's current actual value.

This takes into account the offset and internal light value factor.

The light channel uses this value to evaluate the light value.

MOTION OBJECTS**Object 5: "Input: Lock motion detection" (length = 1 bit)**

An ON telegram locks the internal motion detection function, while an OFF telegram unlocks it again. The **red LED** lights up if motion detection is locked.

Object 6: "Input: Slave/Master motion" (length = 1 bit)

Trigger input for parallel connection of Master/Master or input of Slave.

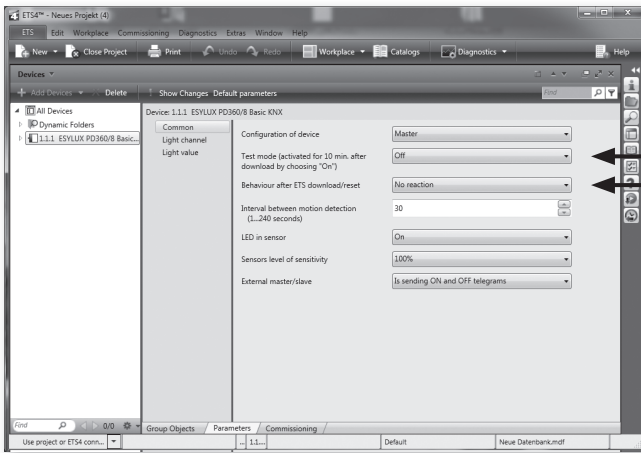
Object 7: "Output: Motion detection" (length = 1 bit)

Output of own PIR motion detection.

RESET OBJECT**Object 8: "Input: Reset" (length = 1 bit)**

An ON telegram via this object restarts the device.

DESCRIPTION OF APPLICATION



1. MASTER/SLAVE

The Master detects presence and evaluates it according to set parameters.

"Lighting ON/OFF"

The Slave is used exclusively for extending the field of detection. A presence is transferred to the Master (object 6) for evaluation according to the set parameters.

• **Master/Master selection**

To extend the field of detection, two Masters can work in parallel. Each Master evaluates the presence (object 7) according to its parameters set via the ETS (Engineering Tool Software) and controls the lighting appropriately.

Default setting: Master

2. TEST MODE

(Only for Master device configuration)

When test mode is "ON" → light measurement is disabled.

When test mode is enabled, the connection with the lighting system is checked.

If the motion sensor detects movement, the lighting will be "ON" for 5 seconds, followed by a dead time of 1 second "OFF".

The **blue LED** indicates that movement has been detected.

Test "ON" automatically switches to test "OFF" after 10 minutes, or when the parameters are stored.

NB: During test → Slave input enabled.

3. BEHAVIOUR AFTER ETS DOWNLOAD/RESET

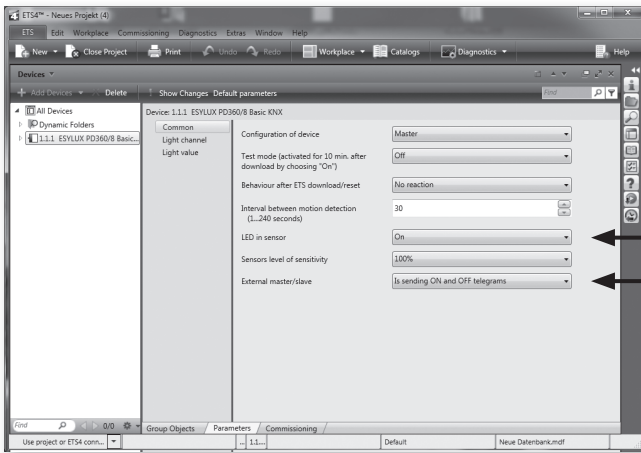
Choose from: "No reaction", "ON", "OFF"

During the process, the following objects are sent:

Switching operating mode:

- Object 2: "Output: Light channel 1 ON/OFF"

DESCRIPTION OF APPLICATION



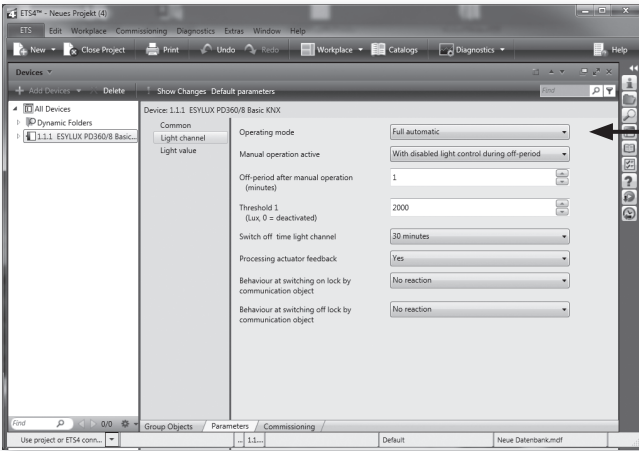
4. LED IN SENSOR

Options: choose between one of the LED brightness levels or "OFF"
 The LED can be switched ON or OFF to indicate whether or not motion is detected (2 x flashes).

5. EXTERNAL MASTER/SLAVE

This parameter can be used to determine whether the external Master/Slave only sends ON telegrams when motion is detected, or whether the external device sends an ON telegram when motion is detected and OFF telegrams when no movement is detected.

DESCRIPTION OF APPLICATION



6. LIGHT CHANNEL

6.1 Light channel operating mode

• "Fully automatic" operating mode

Lighting is automatically switched on if the detector detects presence and the ambient lighting level has fallen below the preset brightness threshold or set value. The lighting is automatically switched off if no persons are present and once the set switch-off delay time has elapsed.

The lighting will also switch off if the preset brightness threshold or set value is exceeded, regardless of presence. When persons are present, in order to avoid sudden changes in brightness caused by undesired switching on/off of the lighting, the detector will only be triggered after a time delay.

Example: a passing cloud could potentially cause unnecessary switching.
 Time delay from light to dark: 30 seconds
 Time delay from dark to light: 5 minutes

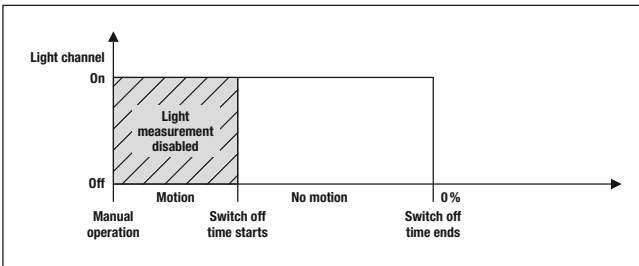
• Additional manual lighting control in "Fully automatic" mode

The lighting can be switched on or off manually by telegrams, e.g. by pressing external KNX/EIB buttons.

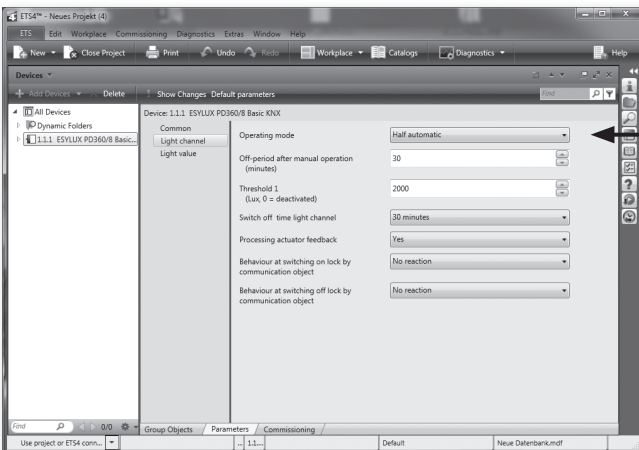
If "Manual operation active while presence" is set, the light can be switched on manually. This will remain switched on for as long as the detector continues to detect movement, regardless of the ambient brightness.

If "Manual operation active during off-period" is set, the detector turns the lighting to 100 % during this period. Once the off-period comes to an end, the device will start evaluating the light value.

If no more movement is detected, the detector will revert to the previous automatic mode after the set switch-off time has elapsed.



! NB: Applies to all light channel operating modes.



• "Semi-automatic" operating mode

If "semi-automatic" mode has been selected, the lighting must be switched on manually by telegrams, e.g. by pressing external KNX/EIB buttons. This means that the detector does not automatically switch "ON" the lighting when persons are present.

However, should the natural lighting level increase and the ambient lighting level exceed the preset light value, the detector will automatically switch the lighting off 5 minutes after reaching the preset light value, regardless of any presence.

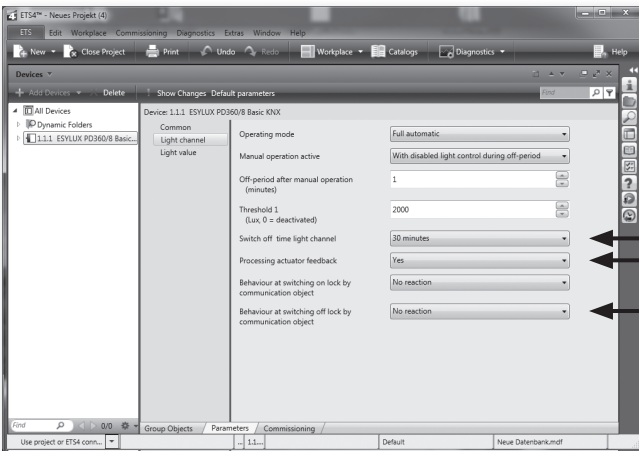
The lighting can subsequently be switched back on manually at any time.

If "Manual operation active during off-period" is set, during this time the detector behaves in the same way as when the setting "Manual operation active while presence" is set. The detector then switches to normal operating mode. This means that the light can be switched on by the user even if the threshold value has been exceeded, but will then be automatically switched off again once the preset time has elapsed.

! NB: External ON telegram, e.g. through KNX/EIB button, is essential in semi-automatic mode! Applies to all light channel operating modes.

Default setting: Fully automatic

DESCRIPTION OF APPLICATION



6.2 Switching

Threshold 0 = disabled, motion detection only
 Direct entry 0 – 2000 lux
 Default setting: 500 lux

6.3 • Switch-off delay time (light)

• Switch-off delay time (light)
 Options: 0 seconds, 30 seconds – 12 hours

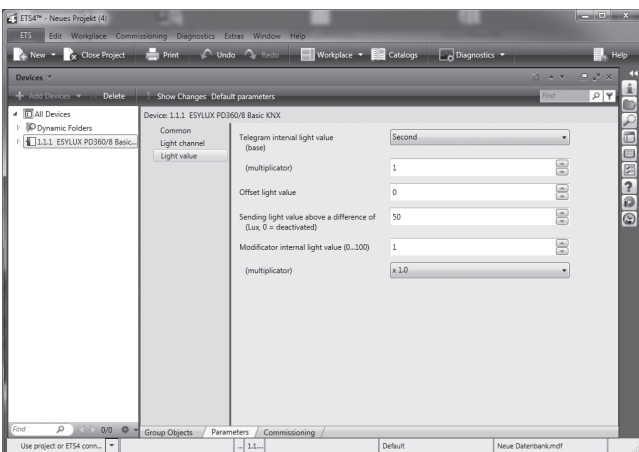
Default setting: 5 min

6.4 Processing actuator feedback

Object 3 can be used to evaluate the status object of an actuator. In the event that the actuator is not only controlled by the detector, the light channel switches to standby mode if the status of the channel differs from that of the actuator.

6.5 Behaviour at switching lock ON or OFF

Options for each include: "No reaction", "Switch off" or "Switch on" the light channel.



7. LIGHT VALUE

The current light value can be transmitted either in cycles or from a specified offset to the last actual value sent. This value is calculated as follows:

$$\text{Value} = [\text{light value from sensor} \times \text{modifier} \times \text{multiplier}] + \text{offset}$$