Presence detector with luminosity sensor for ceiling mounting - detection area of 30m diameter
ZPDC30LV2   **Installation tips**

DEVICE LOCATION

In order to improve the **Presence Detection** some tips must be considered:

- It must be installed on a horizontal surface; it is not suitable for slope ceiling or wall.

- Please, install it far from heat sources, such as suspended fixtures.

- Visibility between sensor and people must not be blocked by objects or furniture. Most of transparent materials, such as glass, block the sensor visibility.

- Avoid the installation near high or low temperature air flow which can be provoked by HVAC equipment or heaters.

- The detection sensitivity can get worse in the presence of great surfaces with high temperature, such as radiant floor.

- The device must not be installed higher than 4m because detection area decreases for high heights.

In order to improve the **Motion Detection**, it must be considered the higher sensitivity to tangential movements. Movements with axial direction to the sensor are detected worse than tangential ones.

If is needed to measure **luminosity** in order to "constant light control", these tips must be considered:

- Please, install the devise far from direct solar incidence areas

- Install the sensor over the work surface, which luminosity is wanted to be controlled on.

- Fixtures with upper-hemisphere light flow emission must not be installed under the height of the sensor.

- The work surface luminosity estimation will improve if the light source controlled by the device has the same direction and color than the natural lighting.
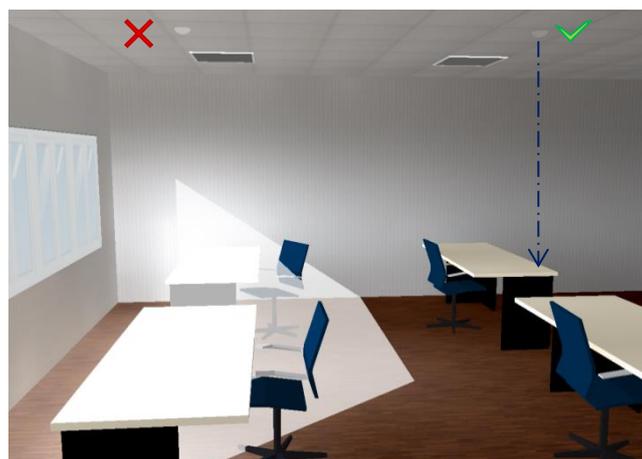
LUMINOSITY MEASUREMENT CALIBRATION

The device calibration must be done in a different way depending on the desired use:

Ceiling luminosity measurement

In this case, the measured luminosity depends on the light source type. In order to improve this measurement, the next steps must be followed:

1. With the more common environment lighting, and without direct solar light incidence, please measure, with the aid of a luxometer, the illuminance on the device installation location (ceiling). This value is called $E_{luxometer}$.

2. Read the value of the KNX object **Luminosity – Internal Sensor**; previously it must be parameterizer a Correction Factor = 1 and Periodical sending. This value is called $E_{measurement}$.

3. *Correction Factor* must be parameterized with the value closer to $E_{luxometer} / E_{measurement}$.

Work surface luminosity estimation

This case is used when a "Constant Light Control" is wanted to be done. The next steps must be followed:

1. Please place the furniture, auxiliar objects and more usual surface colors during the device operation.

2. Parametrise a *Correction Factor* = 1 and a periodical sending.

3. Avoiding the lighting flow from sources different to fixtures controlled by the device, increase the controlled fixtures lighting level to the maximum and wait for the luminosity stabilization.

   a. With the aid of a luxometer, measure the illuminance on the work surface under the device. This value will be called $E_{luxometer}$.

   b. Read the value of the KNX object **Luminosity – Internal Sensor**. This value is called $E_{work\_surface}$.

   c. Calculate $CF = E_{work\_surface} / E_{luxometer}$.

   d. Parameterise the *Correction Factor* with the value next lower value to CF.

Notes:

- In case of the room has side natural lighting (windows) or incandescent / halogen artificial lighting that is not controlled by the device, it is possible that the **Luminosity** estimation calculated by the detector would be greater than the work surface lighting level. In these cases it is recommended to decrease the value of the parameter *Correction Factor* or to increase the setpoint of the "Constant Light Control" channel.

- A change of the light source type, furniture, materials or environment colors in the room where the device is installed can have an influence on the work surface **Luminosity** estimation.