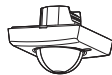


**Presence detector****SPHINX 104-360/2 DIMplus** 104 0 374**EN****1. Designated use**

- Designed for surface mounting in standard flush-mounted socket in the ceiling
- For use in residential property, offices, conference rooms and classrooms
- Automatic constant light control for constant lighting level
- 2 relays: channel 1 dependent on brightness and presence; channel 2 just dependent on presence
- Manual ON/OFF function, with external push button for activating the detector
- Dimming function: automatic dimming

**2. Essential safety instructions****WARNING**

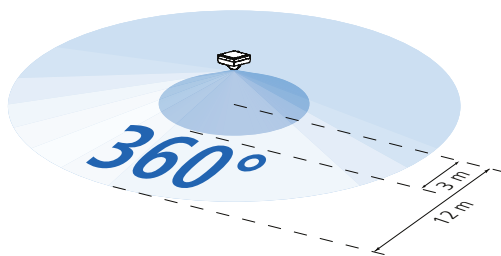
**Danger of death through electric shock or fire.**

- Must be installed by a fully-qualified electrician.

- The device conforms with EN 60669-2-1 subject to designated installation

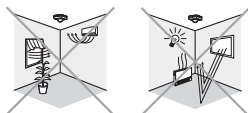
**3. Installation and connection****Detection area**

Detection area: recommended installation height 2.5 m to 3.5 m  
At a height of 2.5 m, the detection area is up to Ø 24 m  
and up to Ø 26 m at a height of 3.5 m.

**Installation tips**

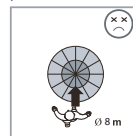
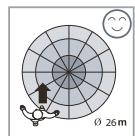
Avoid the following situations:

- Do not direct the presence detector at objects with very reflective surfaces (mirrors, monitors etc.)
- Do not install the presence detector near heat sources (heating outlets, air-conditioning systems, lamps etc.)
- Do not direct the presence detector at objects that move in the wind (curtains, large plants etc.)
- Take account of direction of motion when carrying out test. At an installation height of 3.5 m the detection area across the presence detector is Ø 26 m and Ø 8 m to the front of the detector.



reacts more sensitively to movements across the detection area

reacts less sensitively to movements directly at the presence detector

**Connection**

- Must be installed by qualified electrician!
- Disconnect power source.
- Cover or shield any adjacent live components.
- Ensure device cannot be switched on.
- Check power supply is disconnected.
- Earth and bypass.



The 1–10 V interface is not disconnected from the mains (no SELV).

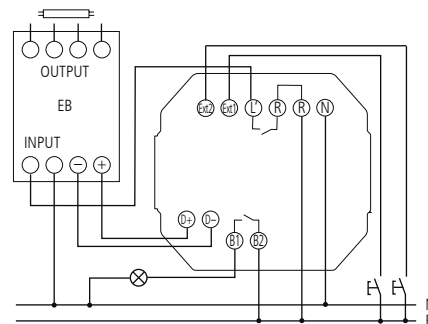
- Disconnect the device from the mains when working on the 1–10 V interface. During installation, treat the interface like a 230 V power line.

- Protect device with a series-connected automatic cut-out type B or C (EN 60898-1) of max. 6 A.

- Connect only one external conductor – do not use dissimilar external conductors.

- Only insert one cable (1.0–2.5 mm²) in each opening of the screwless terminal strip.

- Only use solid copper cables.

**Normal operation**

L' = channel 1

B1/B2 = channel 2

D+D- = 1–10 V interface

Ext1 = push button input channel 1

Ext2 = push button input channel 2

**Automatic mode**

1. The channels switch on automatically with movement in automatic mode. For channel 1, the ambient light level must also be below the set Lux value. If no motion is detected and the delay time has elapsed, the channels switch off automatically.
2. Depending on the changing ambient brightness, the presence detector automatically adjusts the switching On/Off delay time to avoid the channels switching On and Off unnecessarily.
  - Ambient brightness from light to dark: 10 s delay time
  - Ambient brightness from dark to light: 5 min delay time: If the set period of time is <5 min, the channels switch off in accordance with the set period of time.
3. If the level of ambient light exceeds the set lux value the lighting switches off automatically within 5 min (preset switch-on time >5 min). If the switch-on time < 5 min, the delay time is based on the preset value.

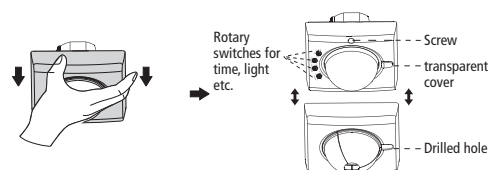
**Semi-automatic mode**

1. In semi-automatic mode, the channels can only be switched on by pressing an external push button connected to the terminals ext. 1 or ext. 2.
2. If the channels are switched on manually, they switch off automatically once the last movement has been detected and the preset time delay has elapsed or switched off by pressing the external push button.

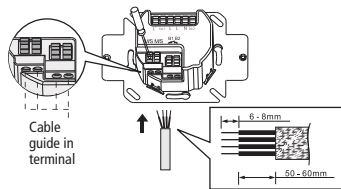
**Installation**

SPHINX 104-360/2 DIMplus can be installed in a standard flush-mounted socket.

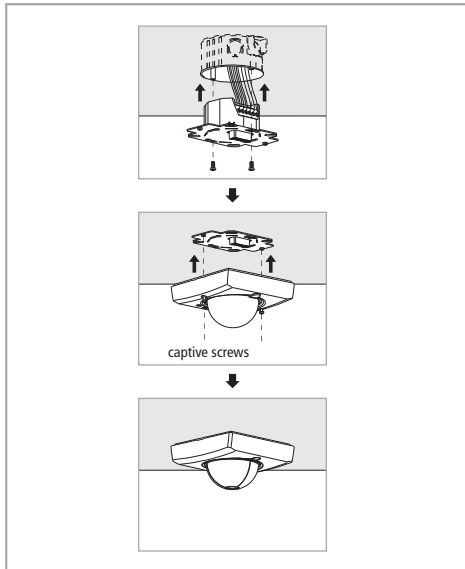
- Remove housing.
- Remove the head of the detector from the power unit by loosening both screws in the detector head.



- Strip back the core insulation by 6–8 mm (see figure).
- Press the terminals together to insert the electric cable in the terminal connections.



- Fasten wires securely.
- Place the wired power unit in the standard flush-mounted socket.
- Secure the power unit with suitable screws in the flush-mounted socket.
- Plug the detector head onto the power unit.
- Switch on the power and check device is working.
- Tighten the screws on the detector head.
- Attach frame correctly (check based on recess of transparent cover).



#### 4. Manual ON/OFF mode and dimming function

##### Manual lighting control

The first press of the button at terminal ext.1 reverses the relay status (case 1: ON → OFF; case 2: OFF → ON)

##### Case 1: Manual switch-off (independent of brightness):

If the lighting is switched on, it can be switched off again manually. If the lighting is switched off by pressing the button on terminal ext.1 (→ Activation of manual OFF mode), also remains off if people are present.

If the room is empty for a long period (time delay elapsed), the manual OFF mode is deactivated; the detector returns to automatic mode.

If the device is in manual OFF mode, a second push of the button activates the automatic mode.

##### Case 2: Manual switch-on (independent of brightness):

If the lighting is switched off, it can be switched on again manually. If the lighting is switched on manually by pressing the button on terminal ext.1 (→ Activation of manual ON mode), it stays on for 30 minutes if people are present. The device switches to automatic mode after 30 minutes.

##### Manual control or activation of channel 1 (light) (independent of brightness)

If channel II is in OFF mode, it can be switched on manually. If channel II is switched on manually by pressing the button on terminal ext. 2, it stays on until the last movement has been detected and the preset time delay has elapsed: It then switches off automatically.

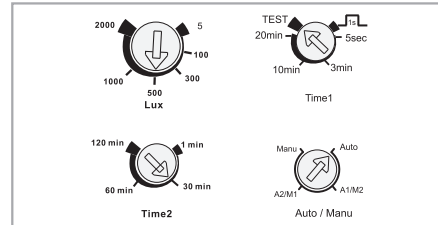
##### Constant light control

1. Automatic constant light control  
Depending on set brightness value, channel 1 (light) is automatically dimmed up or down to adjust the set brightness level (the lux value is the same as the light level of the consumer plus ambient light level).
2. Manual dimming function with external push button  
Press button for 2 s: It is dimmed up or down.  
Release push button when the desired brightness value has been achieved.

1. Automatic constant light control  
Depending on set brightness value, channel 1 (light) is automatically dimmed up or down to adjust the set brightness level (the lux value is the same as the light level of the consumer plus ambient light level).
2. Manual dimming function with external push button  
Press button for 2 s: It is dimmed up or down.  
Release push button when the desired brightness value has been achieved.

**Note:** The dimming direction is reversed each time the button is pressed.

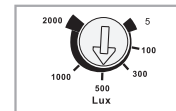
#### 5. Set potentiometer



- Do not set the potentiometer between 2 values in order to avoid false setting.

##### Light settings (lux)

SPHINX 104-360/2 DIMplus has 6 lux settings: 5/100/300/500/1000/2000 lux.



##### Time settings (TIME)

**Time1:** 4 settings: 5 s/3 min/10 min/20 min, plus TEST (2 s, lux measurement is irrelevant) and  $\downarrow$ TS (ON 1 s, OFF 9 s).

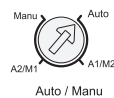
##### Test mode for checking detection area

- Set the time (TIME) rotary switch to test. The detector moves into test mode and is not influenced by the lux setting. If the device is started, both the consumers as well as the LEDs are switched on for 2 seconds and the presence detector is switched to test standby mode.

**Time2:** 4 settings: 1 min/30 min/60 min/120 min



##### Automatic/manual (semi-automatic) mode



**Manual:** Channel I and channel II are in manual mode (Semi-automatic mode)

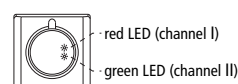
**Automatic:** Channel I and channel II are in automatic mode

**A1/M2:** Channel I is in automatic mode and channel II in manual mode (semi-automatic mode)

**A2/M1:** Channel I is in manual mode (semi-automatic mode) and channel II in automatic mode

#### 6. Direction test and set-up

- The SPHINX 104-360/2 DIMplus LED is located behind the lens.
- The LED can be used as an indicator for the direction test. If the detector is started, the LED and consumers switch on for 2 seconds. The lux setting has no influence.
- The LED switches on for 40 seconds in the warm-up phase.



## Direction test

The direction test serves to select the most suitable installation site for the best possible detection area.

- Install the presence detector correctly and connect the cable correctly.
- Switch on presence detector.
- Switch the time rotary switch (Time) to test and carry out direction test.
- Diagonally to detection area from outside.  
When the sensor is triggered, the LED and consumer switch on for 2 seconds.



If the detector is connected to the mains supply, it needs a warm-up phase of approximately 40 seconds (consumer and LED are switched on). The detector then moves into normal mode so that a direction test can be carried out.

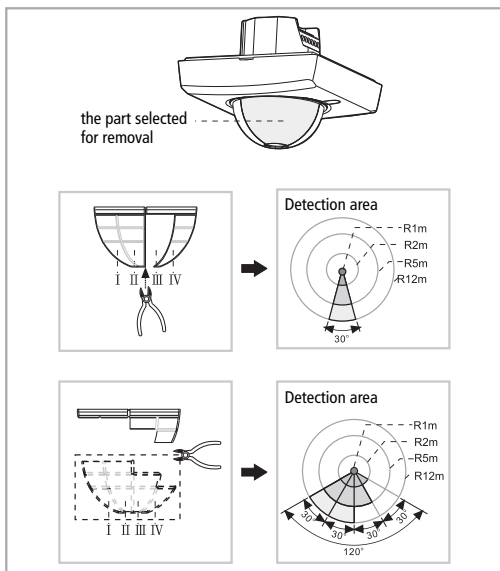
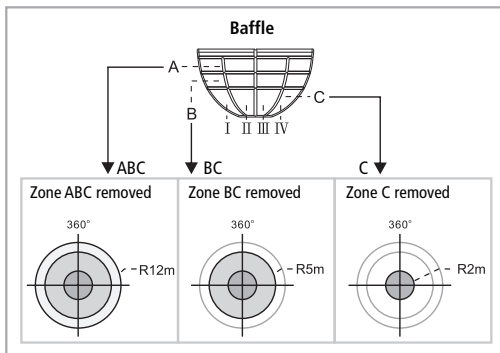
## Restriction of detection area

SPHINX 104-360/2 DIMplus has 3 baffles, each with 3 zones (A,B,C). Each layer is divided into 4 small units (I, II, III, IV) where each unit can cover an angle of approximately 30 °.

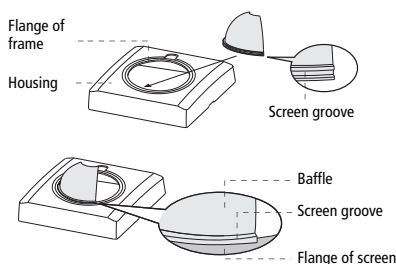
The detector is installed at a height of 2.5 m (see figure):

- Remove zones A+B+C: Detection area has a radius of approximately 12 m circular
- Remove zones B+C: Detection area is approximately 10 m, circular
- Remove zone C: Detection area is approximately 4 m, circular

The inner coverage has a Ø of 1 m. The individual zones of the baffle can be removed using pliers in order to adjust to the desired detection area.



- Secure cover: remove cover and attach relevant baffles:



## 7. Technical data

Operating voltage:	230 V~ +10 % / -15 %
Frequency:	50–60 Hz
Standby:	approx. 1W
Brightness setting range:	5–2000 lx
Detection angle:	360°
Detection area (at a height of 3 m)	
walking diagonally / towards/ sitting:	ø 24 m / ø 10 m / ø 6 m
Recommended installation height:	2.5–3.5 m
max. total load (channel 1 + 2):	1400 W

### CHANNEL 1 LIGHT

Switching output:	230 V (not floating)
Light switch-off delay:	1 s–20 min
Dimming output light:	1–10 V DC, max. 100 mA
Switching capacity LIGHT:	4 A (bei 230 V AC, cos φ = 1)
Incandescent lamp load:	1000 W
Compact fluorescent lamps:	4 x 7 W, 3 x 11 W, 3 x 15 W, 3 x 20 W, 3 x 23 W
Fluorescent lamps (EB):	400 VA
Fluorescent tubes conventional ballast not corrected, series-corrected:	900 VA
Fluorescent tubes conventional ballast not corrected, parallel-corrected:	400 VA (42µF)

### CHANNEL 2 PRESENCE

Presence switch-off delay:	1–120 min
Presence switch-on delay:	---
Switching capacity Presence:	2 A (cos φ = 1) µ, 30 V DC or 250 V AC
Incandescent lamp load:	400 W
Compact fluorescent lamps:	2 x 7 W, 2 x 11 W, 1 x 15 W, 1 x 20 W, 1 x 23 W
Fluorescent lamps (EB):	40 VA
Fluorescent tubes conventional ballast not corrected, series-corrected:	200 VA
Fluorescent tubes conventional ballast not corrected, parallel-corrected:	60 VA (7µF)

Ambient temperature:	–10 °C ... +55 °C
Protection class:	II
Protection rating:	IP 40

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