

Presence detector

SPHINX 104-360 104 0 370
SPHINX 104-360/2 104 0 372

**GB****1. Designated use**

- Flush mount type
- Apply to various locations: corridor, staircase, entrance, garage, indoor parking area, home, office, conference room, etc.
- SPHINX 104-360: Single relay (L') for controlling lighting devices
- SPHINX 104-360/2: Two relays for channel I and channel II: channel I is for lighting, and channel II potential free is for HVAC (Heating, Ventilation, Air Conditioner etc)
- Push-in terminal benefits easy and quick cable connection
- Manual ON/OFF function, additional push button to trigger the detector
- "Master/Slave" operation for multiple detectors in parallel control one load, LUX and TIME only controlled by the master detector, slave detector is only for detecting movement in order to enlarge the detection coverage

2. Basic safety instructions**WARNING****Danger of death through electric shock or fire!**

➤ Assembly may only be carried out by qualified electricians!

- The device corresponds to EN 60669-2-1 for designed installation; IP 41 in accordance EN 60529
- Designed for use in normal environment
- Intended for interior installation

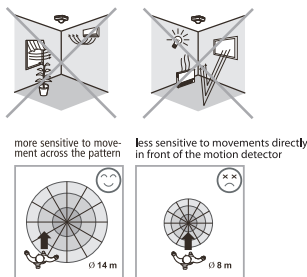
3. Installation and Connection**Detection pattern**

It is recommended to install at the height of 2.5 m – 3.5 m. The detection range is up to Ø 12 m at the height of 2.5 m, and up to Ø 14 m at the height of 3.5 m.

**Tips for installation**

Since the detector is in response to temperature change, please avoid the following conditions:

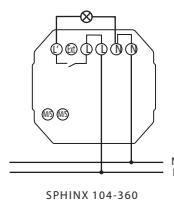
- Avoid pointing the detector toward the objects whose surfaces are highly reflective, such as mirror, monitor, etc.
- Avoid mounting the detector near heat sources, such as heating vents, air conditioners, vents as dryers, lights, etc.
- Avoid aiming the detector toward the objects which may be swayed in the wind, such as curtain, tall plants, miniature garden, etc.
- Pay attention to the walking direction in the test proceeding.
At an installation height of 3.5 m, the detection range covered by the motion detector is up to Ø 14 m diagonally and up to Ø 8 m to the front.

**Connection**

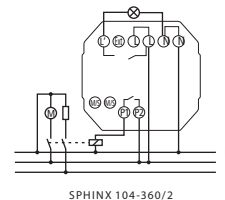
- Must be installed by professional electrician!
- Disconnect power source.
- Cover or shield any adjacent live components.
- Ensure device cannot be switched on!
- Check power supply is disconnected!
- Earth and bypass!

Protect channel 2 with a series-connected automatic cut-out of max. 6 A and channel 1 with max. 10 A.

Each hole of this plug-in type terminal block can be plugged in one cable only (1.0–2.5 mm²).

Normal operation

SPHINX 104-360

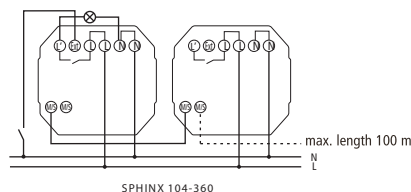


SPHINX 104-360/2

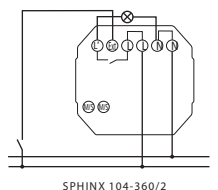
Master/slave operation

10 slave detectors max. can be connected to one master detector in parallel for master/slave connection.

➤ Slave: Set the LUX knob to SLAVE (see LUX knob setting)



SPHINX 104-360

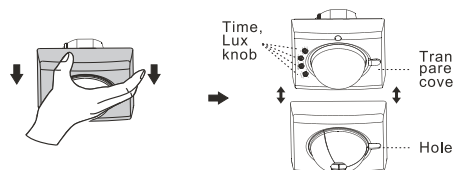


SPHINX 104-360/2

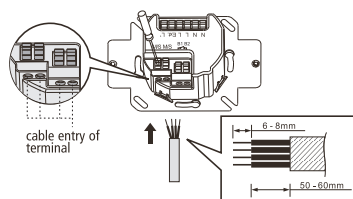
Installation procedure (connect cable)

SPHINX 104-360/104-360/2 can be installed with the standard flush-mounted socket.

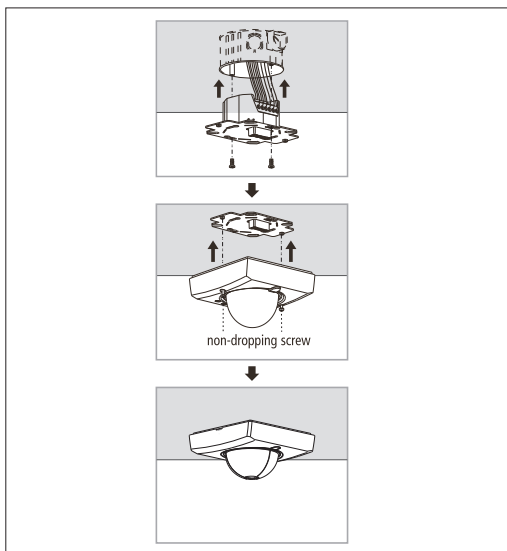
- Take off the decorative frame by hand with applicable pull force until time and Lux knob are visible.
- Disassemble the detector head from the power box by unscrewing the 2 screws in the detector head.



- Strip off 6–8 mm of cable sheathing by tool (refer to the wiring diagram).
- Press the terminal to insert the power cables into the corresponding terminal pin jack.



- Make sure the wires are securely fixed.
- Place the wired power unit in the standard flush-mounted socket.
- Secure the power unit in the flush-mounted socket with suitable screws and insert the detector head on the power unit. Ensure that the connection terminal and socket are properly attached.
- Supply power and check, if SPHINX 104-360/104-360/2 works normally.
- Fix the screws of the detector head.
- Fit decorative frame by aiming the hole to the transparent cover.



4. Manual Mode ON / OFF

Additional push button can be connected to the terminal "Ext" and "L" for manual operation (uncontrolled by Lux setting).

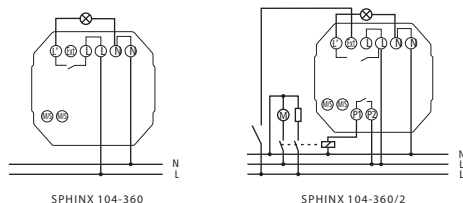
Manual switching by push buttons possible at all times (only necessary for relay 1 (light)). With the first pressing of the push button it inverts the relay status (case 1: ON => OFF; case 2: OFF => ON)

Manual ON switching

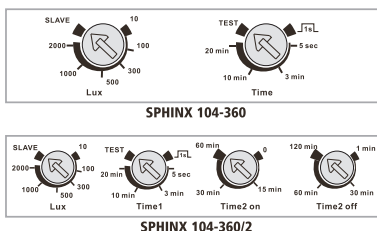
When the lighting is under off mode, it can be switched on manually by pressing a push button (activation of the manual ON mode), it remains ON for 30 min if persons are present. After 30 min, the device returns to auto mode. If you leave the room within the 30 min (no presence) and the vacant time is over the defined switch off delay time, then the presence detector returns to auto mode. If the device is in the manual ON mode, a second press on the push buttons activates the auto mode.

Manual OFF switching

When the lighting is under ON mode, it can be switched off manually by pressing a push button (activation of the manual OFF mode), it remains off as long as persons are present in the room. If the room is vacant for a longer period (switch off delay time elapsed), the manual off mode is deactivated, and the lighting returns to auto mode. If the device is in the manual OFF mode, the second press on the push buttons activates the auto mode.



5. Knob Setting

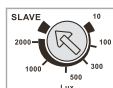


- Do not set knobs between two values figures to avoid failure setting.

Set brightness (LUX) rotary switch

SPHINX 104-360/104-360/2 has 6 infinity LUX adjustments: 10/100/300/500/1000/2000, and SLAVE. Master/slave function can be switched by setting the arrowhead towards the scale of SLAVE. The detection range can be enlarged by master/slave function:

When master detector or any slave detector is triggered, the TIME and LUX of load are controlled by master detector only.



TIME adjustments

SPHINX 104-360

- **TIME:** 4 infinity time adjustments: 5 s/3 min/10 min/20 min, plus TEST (2 s, LUX disable) and TEST (ON 1 s, OFF 9 s).

TEST Mode:

- Set TIME knob at TEST, detector enters into test mode and uncontrolled by LUX setting. Once the detector is triggered, both of light and LED will turn on for 2 s, then turns off, and detector enters into test standby mode.

SPHINX 104-360/2

- **TIME1:** 4 infinity time adjustments: 5 s/3 min/10 min/20 min, plus TEST (2 s, LUX disable) and TEST (ON 1 s, OFF 9 s).

TEST Mode:

- Set TIME1 knob at TEST, detector enters into test mode and uncontrolled by LUX setting. Once the detector is triggered, both of light and LED will turn on for 2 s, then turns off, and detector enters into test standby mode. The next trigger should be 2 s interval.

TIME2 ON: 0/15 min/30 min/60 min (4 adjustments).

TIME2 OFF: 1 min/30 min/60 min/120 min (4 adjustments).



Permanent light measurement (energy saving function)

- The light measurement remains active after movement is detected and the lighting is switched on.
- If the ambient brightness (daylight plus artificial lighting) exceeds the set brightness value, the lighting will be switched off despite movement being detected (demand-driven lighting).
- Ensure the permanent light measurement works with a delay of around five minutes to avoid switching errors.
- At the end of this period, at the earliest, the lighting will be switched off due to the permanent light measurement if the ambient brightness exceeds the set brightness value.

6. Walk Test and Adjustment

LED function

- The LED of SPHINX 104-360/104-360/2 is equipped behind of the lens.
- The LED can be used as an indicator in walk test. Once the detector is triggered, both of LED and load will turn on for 2 s. It is uncontrolled by LUX setting.
- The LED turns on for 40s while warming up.



Walk test

The purpose of the walk test is to select a proper installation place to get the best detection range.

- Install the detector correctly, make sure wiring is connected well.
- Switch on power.
- Turn TIME knob to TEST (LUX disable), then conducting a walk test.
- Walk from outside across to the detection pattern.

Once the sensor is triggered, both LED and load will turn on for 2 s.



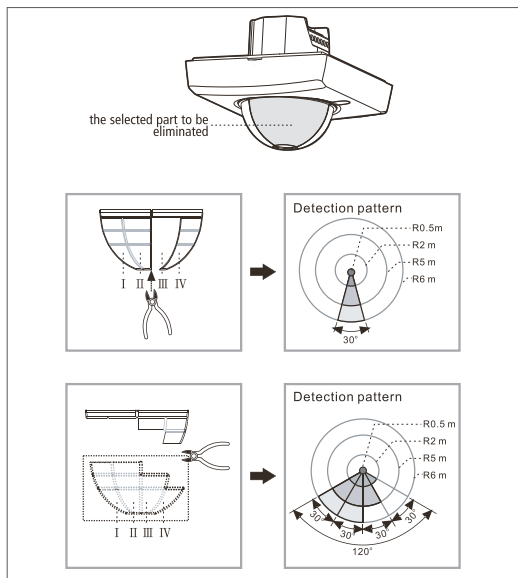
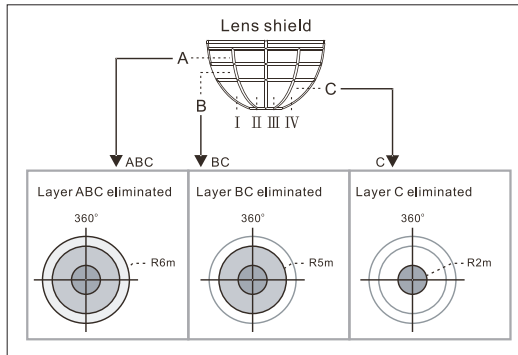
Note: It takes approx. 40s to warm up with LED and loads on after power is supplied, then enters into normal mode, thus a walk test can be carried out.

Usage of lens shield

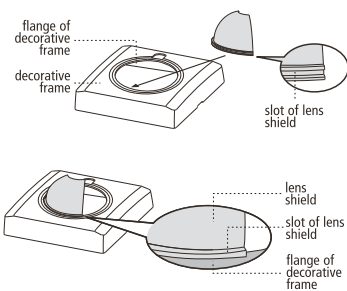
SPHINX 104-360/104-360/2 has three lens shields, each one consists of three layers (A, B, C), each layer is divided into four small units (I, II, III, IV), and each unit can mask an angle of approx. 30°. When mounting the detector at the height of 2.5 m, the outer coverage is (see next ill.):

- To eliminate layer A+B+C: detection coverage is approx. 12 m in circular.
- To eliminate layer B+C: detection coverage is approx. 10 m in circular.
- To eliminate layer C: detection coverage is approx. 4 m in circular.

The inner coverage is a circular with diameter of 1 m. Separate lens shield can be eliminated as each user's desired detection area.



- Fix the shield: Take off the decorative frame, then fix the flange into the slot of lens shield firmly.



7. Technical Data

Nominal voltage:	230V ~ +10%/-15%
Nominal frequency:	50-60Hz
Brightness range:	10-2000 Lux
Power consumption:	approx. 1 W/typ 8 VA
Contact:	NO-contact (μ)
Switching capacity:	8 A (cos φ = 1) / 8 AX (cos φ = 0,3)
Incandescent lamp load:	1800 W max.
Halogen lamp load:	1800 W max.
Fluorescent lamps:	uncompensated: 900 VA max. series-corrected: 900 VA max. parallel-corrected: 400 VA (42μF) lead-lag circuit (duo): 900 VA max.
Compact fluorescent lamps:	capacitive ballast: 400 VA max. electronic ballast: 4 x 7 W, 3 x 11 W, 3 x 15 W, 3 x 20 W, 3 x 23 W
Detection angle:	360° circular
Mounting height:	Sitting: max. 4-6 m, walking: max. 12-14 m 2.5-3.5 m
LUX adjustment:	10/100/300/500/1000/2000 and SLAVE (6 infinity adjustments)
Light channel run-on	TIME1 (L): Impulse (1 s)/TEST (2 s)/5 s/3 min/ 10 min/20 min (6 infinity adjustments)

only SPHINX 104-360/2

Presence contact, floating (HVAC):	3 A max.
Switch-on delay:	TIME2 ON (B1-B2): 0/15 min/ 30 min/60 min (4 infinity adjustments)
Presence channel	TIME2 OFF (B1-B2): 1 min/30 min/ 60 min/120 min
run-on time (HVAC):	
Protection class:	II
Protection rating:	IP 41
Operating temperature:	-10 °C to 55 °C

SPHINX can also be controlled by infrared remote control (RC 104 Pro and RC 104) to make the operation more easily and simple.

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