

B.E.G. PD4-M-1C-GH-SM

Installation and Operating Instruction for B.E.G. Controls - Occupancy sensor PD4-M-1C-GH-SM

1. Product information

- Occupancy detector designed for high-bay warehouses
- One potential-free (dry) contact
- Version as Master device
- Detection area can be extended with Slave devices
- Manual switching via pushbutton possible
- Simple operation with remote control (required)
- Factory settings 3 min and 1000 Lux






2. Operation

The occupancy detector controls the light automatically according to people present (movements) and the ambient brightness.

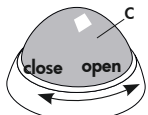
The integrated light sensor constantly measures the ambient light and compares it with the switch-on threshold set in the detector. If the ambient light is sufficient, lighting will not be switched on. If the ambient light level is below the brightness level, a movement activates the lighting in the room.

The detector switch the light off, if there is enough natural light for 15 min. or until the follow-up time do not recognized any movement in the room.

3. Safety information

-  **Work on the mains supply may only be carried out by qualified professionals or by instructed persons under the direction and supervision of qualified skilled electrical personnel in accordance with electrical regulations.**
-  **Disconnect supply before installing!**
-  **This device is not to be used to isolate other equipment from the mains supply.**
-  **The total number of switchable loads is limited due to high inrush currents of electronic ballasts and LED drivers. In case of a large number of connected loads please use an external contactor**
-  **For all connected loads, proper interference suppression is obligatory (we recommend to use our arc extinction kits).**

4. Installation of the PD4-M-1C-GH-SM



The detector must be installed on a solid and level surface. The circular cover ring must be removed prior to assembly. To do this, twist the lens (C) anticlockwise through approximately 5° and lift off.

Having connected up the wires in accordance with regulations, secure the detector with 2 screws.

After installation replace the lens and lock (turn clockwise). Mains to be connected.

ATTENTION: Install the unit in such a manner that both markings on the housing are positioned in the longitudinal axis of the area to be monitored (e.g. high-bay corridors).


When used in high-bay warehouses, care should be taken that, in the cross-aisles of the warehouse, detectors are installed that can detect movement only in the desired aisle locations, by using blinds or other technical arrangements.

5. Self-test cycle

The product enters an initial 60-second self-test cycle, when the supply is first connected. The occupancy detector is ready for operation.

During the self-test cycle, the following settings can be made:

Light stop active: (A)

Corridor function active (only via button ): (B) (see 8.)

6. Putting into operation / Settings

Factory settings


The PD4-M-1C-GH-SM is preset with time setting 3 min. and switch-on threshold 1000 Lux.

Attention:

No potentiometer settings are possible on the device. Changes to the settings can only be made by using B.E.G. Controls IR adapter for smartphones resp. remote control app.

7. Fully / Semi automatic mode

Full automatic operation

In this operating mode, the lighting switches automatically on and off for increased comfort, depending on presence and brightness. 

Semi-automatic operation

(Semi-automatic can only be activated by remote control!) 

In this operating condition, in order to gain increased savings, the lighting is energized only after being manually switched on. Switch-off takes place automatically.

The semi-automatic mode basically behaves like the full automatic one.

The channels can be switched back on automatically if there is movement in the 10 seconds after the end of the follow-up time.

After this time has elapsed, the respective push button must be pressed to switch on the channels.

8. Manual Switching

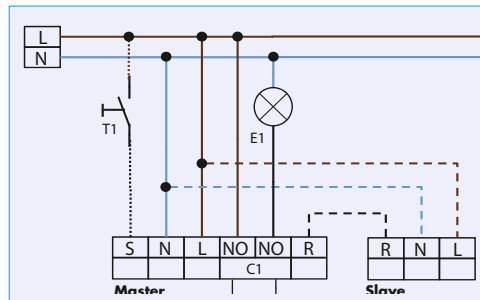
(A) To switch the light on and off, press the button briefly. The light remains switched on or off for as long as people are detected plus the set lag time.

(B) If the "Corridor" function was activated in the selftest cycle, the light remains off for 5 seconds after shutdown (red and green LEDs flash). Then the automatic function is active again.

9. Wiring diagram

Schematic diagram – when connecting the detector, please respect the labelling of the terminal connections at the detector!

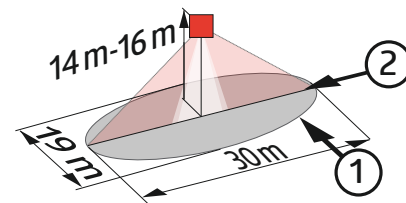
Standard mode with Master 1-channel occupancy detectors (NO) with R and S terminal



Optional

T1 = NO-button for semi automatic mode; Extension of the detection area with Slave devices

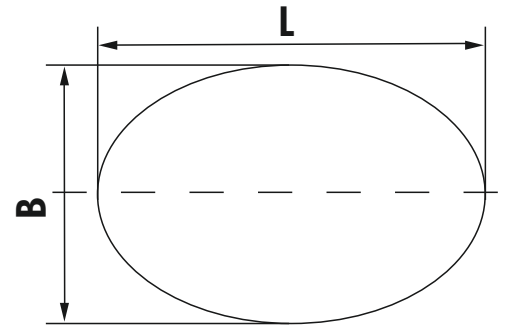
10. Range of Coverage



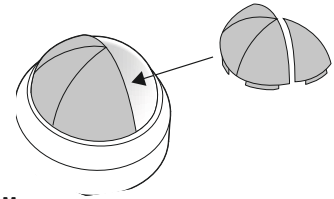
- ① Walking across
- ② Walking towards

11. Range in relation to mounting height

Mounting height H	Range (oval detection) (walking towards)	
	in longitudinal axis (L)	90° to longitudinal axis (B)
5.0 m	26.0 m	18.0 m
6.0 m	26.0 m	18.0 m
7.0 m	28.0 m	19.0 m
8.0 m	28.0 m	19.0 m
14.0 m	30.0 m	19.0 m



12. Exclude sources of interference



SM

If the detection zone is too large or areas are covered that should not be monitored, use the blinds to reduce or limit those areas.

13. Technical data

Sensor and power supply in one

Power supply:	110 - 240 VAC, 50/60 Hz
Power consumption:	< 1 W
Ambient temperature:	25°C to +50°C
Protection degree/class:	IP20 / II
Settings:	via remote control
Switch-on threshold IR-PD-LD:	10 - 2000 Lux
Detection area:	ovale 360°
Extension of detection area:	with Slave devices
Factory settings:	3 min. and 1000 Lux
Recommended height for mounting:	14 m
Range of coverage:	30 m x 19 m
Dimensions:	H 98 x Ø 63 mm
Light measurement:	daylight and artificial light
• Channel 1 (light control)	
Type of contact:	Contact NO, w/tungsten pre-make contact, µ-contact
Switching power:	2300 W cos φ=1 / 1150 VA cos φ=0,5
Follow-up time:	15 sec. - 30 min. / Test / pulse

EU Declaration of conformity

This product respects the directives concerning

1. electromagnetic compatibility (2014/30/EU)
2. low voltage (2014/35/EU)
3. restriction of the use of certain hazardous substances in electrical and electronic equipment (2011/65/EU)



14. Article / Part nr. / Accessory

Type	SM
PD4-M-1C-S-GH-SM (Master)	92245
PD4-S-GH-SM (Slave)	92265

LUXOMAT® Remote control:

IR-PD-LD (incl. wall bracket)	92479
IR-PD-Mini	92159
IR-Adapter for Smartphones	92726

Accessory:

Wire basket BSK	92199
Socket IP54	92161
Arc extinction kit	10880
Mini Arc extinction kit	10882

15. LED-functional indicators

LED function indicators after each mains recovery (60sec. self-test cycle)			
Operating state	LED function indicators		
Factory settings active	White, red and green flash in quick succession for 10 sec., then initialisation indicators, see below		
	Detector unprogrammed	Detector programmed	Indicators additional in case of forced shutdown active
Standard mode	Red flashes	Red flashes	Every 5 sec., 4 x white, red and green in quick succession
Corridor active	Red and white flash	Red and white flash quickly	Every 5 sec., 4 x white, red and green in quick succession

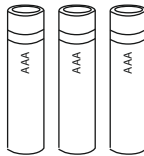
LED function indicators during operation	
Process	LED function indicators
Motion detection	Red flashes on each detected movement
Semi-automatic mode active	Red and green flash 3x every 5 sec.
Pulse mode active	Green flashes once per sec.
Light value higher than switch-on threshold	Red flashes

16. PD4-M-1C-GH: Settings by required remote control

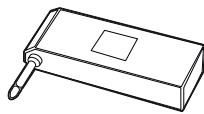
Optionen:



IR-PD-LD incl. wall bracket



3x AAA Batteries

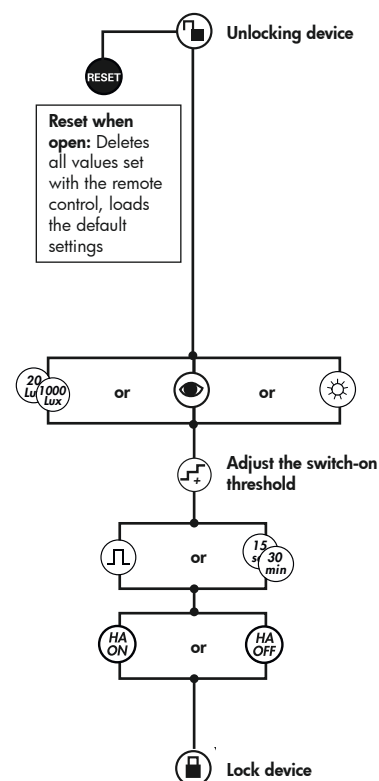


IR-Adapter for Smartphones



IR-PD-Mini

Settings by remote control



Explanation of button functions

During self-test cycle

The PD4-M-1C-GH enters an initial 60-second self-test cycle, when the supply is first connected. During this time the device does not respond to movement and the light stays on.

Corridor function (see "in open state")



The corridor function is activated by pressing this button.



The corridor function is deactivated by pressing the "Reset" button.

In closed state

Reset



In closed state

All running times are terminated. If the connected load is switched on, it is switched off. The detector is then again in the set mode.

In open state

The device is reset to the factory settings. The during the self-test cycle made settings are retained.

Light ON/OFF ; Corridor function



If the corridor function is activated, the light stay on for 5 sec., when the light is switched off. After that the automatic function is active again.

If the corridor function is deactivated, the light is switched on /switched off.



Switch-on threshold



Automatic reading in the current light value



"Sun" button - preset light value

Day
Test mode when open:
 not exited automatically
To deactivate: press reset



Follow-up time



Pulse function, fully automatic mode active



Switch between fully automatic/semi-automatic mode

Semi-automatic mode active: Red + green LEDs flash 3x every 5 seconds

Adjust the target value for brightness



Each time the push button is pressed, the device increases the current switch-on value in increments of 20 lux for a current switch-on value of < 100 lux and in increments of 50 lux for a current switch-on value of > 100 lux.

Test mode when closed:

exited automatically after 3 minutes



Test mode when open:

not exited automatically
To deactivate: press reset

Reset when closed

The lighting relay is switched off, i.e. opened and the lag times are reset.