

## Installation and Operating Instruction for B.E.G. - Occupancy detectors PD9-Master-1C/-Slave-SDB-IP65(-GH)-FC

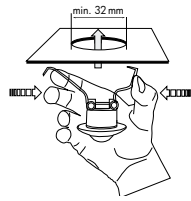
### 1. Mounting preparations

Work on the 230V 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 electrotechnical regulations.

**Disconnect supply before installing!**

When in Master/Slave mode of operation, the Master-appliance must always be installed at the location where there is least daylight.

### 2a. Installation

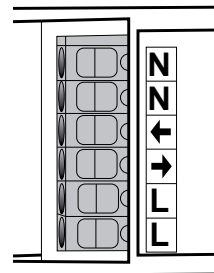


The detector has been designed and developed specifically for installation in suspended ceilings.

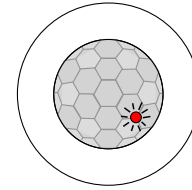
A circular opening of diameter min. 32 mm must be produced in the ceiling.

Having connected the cables in accordance with the regulations, connect the power supply via the RJ11 plug. Therefore, open the power supply with the help of the screws and close it afterwards. After that, put the power supply through the opening in the ceiling and mount the sensor onto the ceiling according to figure.

### 2b. Connecting terminals

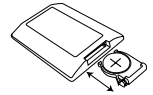


### 2c. Self test cycle



The LUXOMAT® PD9-M-1C-IP65(-GH) enters an initial 60-second self-test cycle, when the supply is first connected. The occupancy detector is ready for operation.

### 3. Settings carried out using remote control (optional)



**Remote control LUXOMAT® IR-PD9**

**Check Battery:**  
Open battery compartment by pressing the plastic springs together and removing the battery-holder.

### 4. Option:



IR-PD9

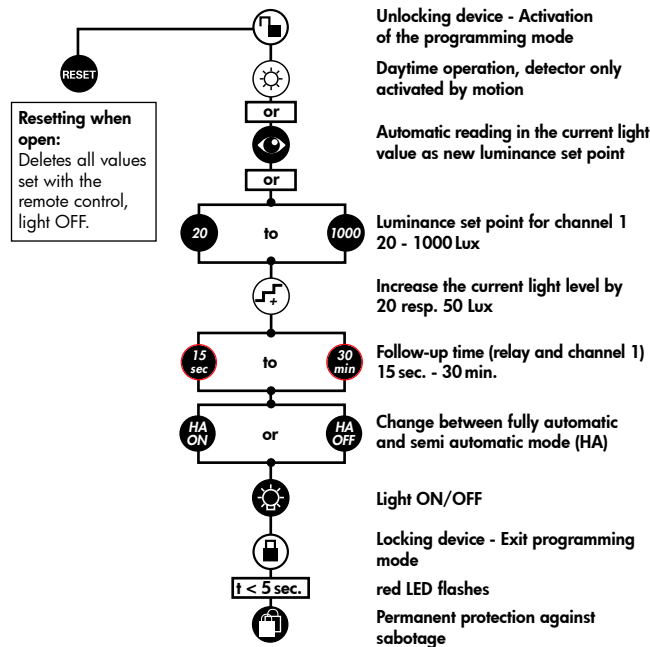


Wall bracket for remote control IR-PD9



IR-PD-Mini

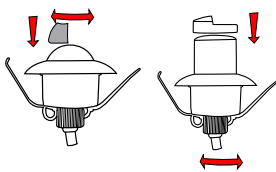
### 5. Settings by remote control



### 6. Key functions in closed state

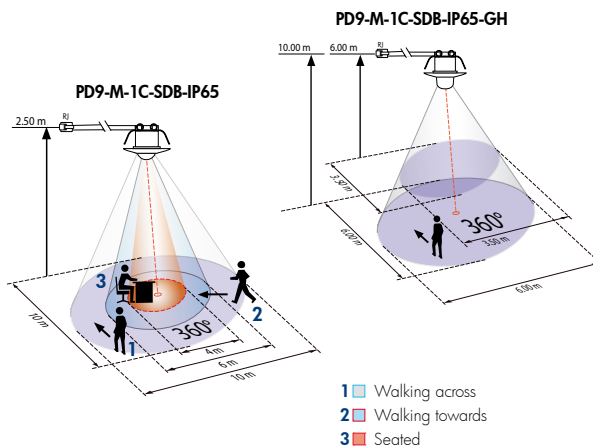
- Permanent protection against sabotage**  
This function blocks the unit permanently (green LED is illuminated). This operating mode can only be activated during the period of 5 seconds after pressing the "lock" button. This status will only permit actuating the function "Light on/Light off".  
The procedure for leaving this mode is as follows:
  - Switch off the current
  - Apply current for 31 – 59 seconds
  - Switch of the current again
  - Apply current
  - Open detector
- Light on/off when closed => (see page 2, point 11)**  
The light will remain switched on/off for as long as movements are detected in the areas of coverage. Once the last movement has been detected, the light will remain on for the duration of the follow-up time as per setting. The appliance will then return independently to the mode selected (Fully or Semi-automatic).
- Activation/Deactivation of the test function**
- Switches channel off and is immediately active again, exits all timers, interruption of light measurement**
- Confirmation**
- Changes to „open“ state**

### 7. Exclude sources of interference

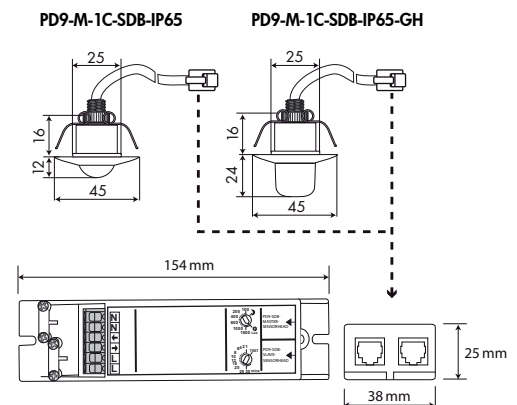


In case the sensing area of the LUXOMAT® PD9-M-1C-IP65(-GH) is too large or areas are being covered that should not be monitored, the range can be reduced or limited through use of the enclosed masking clips.

### 8. Range of Coverage



### 9. Dimensions



## 10. Fully/Semi automatic mode

(for IR-PD9 functions see page 1)

### Fully automatic operation (presence)

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

### Semiautomatic operation (absence)

(Semiautomatic can only be activated via the 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 semiautomatic mode basically behaves like the fully automatic one. However, the difference is that switching-on must always be carried out manually!



## 11. Manual Switching



You can switch the lighting on and off manually by pressing the pushbutton for a short time. It will stay on or off as long as people are detected plus the configured follow up time.

## 12. Determination of the switch on threshold to attain a calculatory target value

(for IR-PD9 functions see page 1)

### Example:

To do this, first: open, then select the channel.

Using remote control, you then enter a low Lux value, e.g. 100Lux. The red channel LED flashes quickly and looks "bright". You can now approach the switch-on threshold in steps of 20Lux by repeatedly pressing the step button.

(This only applies to a preselected value of less than 200Lux. If the preselected value is above 200Lux, the threshold is approached in steps of 50 Lux.)

Always take into account the response time of the LUXOMAT®; each time you press the button, you must wait for 4 sec.

Once the correct value is reached, the LED stops flashing. In this example, 100 Lux is entered and the button is pressed twice. If the LED goes out, the value seen by the PD9-M-1C-SDB-IP65(-GH) is approximately 140Lux.

If the light value actually measured on the working surface is 280Lux, for example, then:  $140 : 280 = 0.5$  (light distribution in the room).

If the specified value on the working surface is now to be 500Lux, the LUXOMAT® PD9-M-1C-SDB-IP65(-GH) must be programmed with a value of  $500 \text{ Lux} * 0.5 = 250 \text{ Lux}$ .

In the example, enter 200Lux and then press the button again.

### Steps:

Range 20 - 200 Lux ..... 20 Lux/step  
Range 200 - 1000 Lux ..... 50 Lux/step

### If the current luminosity is sufficient,

the button can be used to simply read in the light value as a brightness switching value (switch-on value).



## 13. Article / Part-Nr. / Accessory

Type	RAL9010	RAL9006
PD9-M-1C-SDB-IP65-FC	92912	92913
PD9-S-SDB-IP65-FC (only sensor part)	92915	
PD9-M-1C-SDB-IP65-GH-FC	92931	92932
PD9-S-SDB-GH-FC (only sensor part)	92933	

### LUXOMAT® Remote control:

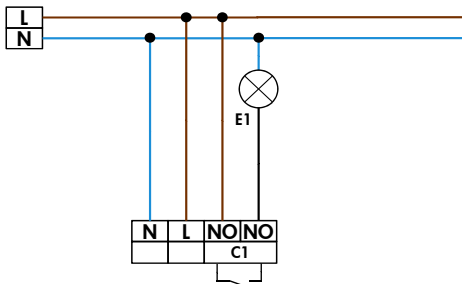
IR-PD9 (incl. wall bracket) 92201  
IR-PD-Mini 92159

### Accessory:

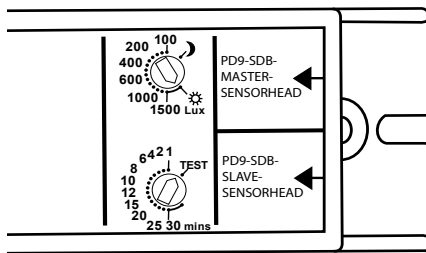
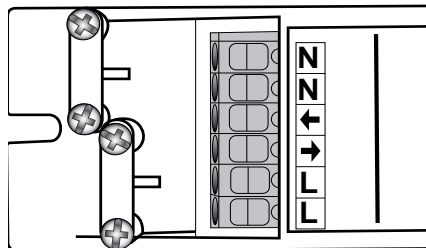
Wire basket BSK 92199  
Wall bracket for remote control as replacement 92100  
Covering for PD9 white 92238  
Covering for PD9 silver 92237  
Covering for PD9 anthracite 92235  
Blind PD9-GH for detection 180° white 33207

## 14. Wiring diagram

Standard mode with master 1-channel occupancy detectors (NO)



## 15. Connections



## 16. Putting into operation / Settings

### Follow-up time for light control

The time can be set infinitely variably at between 1 and 30 min.

Symbol TEST: test mode (every movement switches on the light for a period of 1 second, switching it off for a period of 2 seconds after that regardless of the level of brightness)



### Twilight-switch for light control (relay 1)

The switch-on value for the light can be set at between 100 and 1500Lux. Using the rotary control, the luminance set points can be set as desired.

Symbol ☾: Night-time operation

Symbol ☀: Daytime/Night-time operation



## 17. LED-functional indicators, fault-finding

The functional indicators in the case of the LUXOMAT® PD9-M-1C-SDB-IP65(-GH) (red and green LED's)

**Red LED indicating self-checking mode (over a period of 60 seconds following mains-supply lock-on)**

Flashing at intervals of 1 second  
EEPROM/memory empty

Flashing rapidly

EEPROM/memory contains information

**Red LED as an indicator of status**

Flashing irregularly

Movements are detected within the area of coverage

Flashing regularly

Detector identifies bright, light off (dependent upon operating mode)

Not illuminated

Detector identifies dark, light on (dependent upon operating mode)

Flashing extremely rapidly

Too bright / Too dark / Undefined

**Red LED as an acknowledgement of receipt for commands from the remote control**

Illuminated for 2 seconds

Signal validly received

Illuminated for 0.5 seconds

Not-accepted command, detector blocked

Flashing extremely rapidly

Not-accepted command, occurs, for example, when an attempt is made to input twilight-value are too bright or too dark

Lights up for 3 seconds

Display automatic: Lights up for 3 seconds

Flashing for 3 seconds

Display semi automatic

**Green LED as an indicator of status for "Permanent protection against sabotage"**

Flashing irregularly

Movements are detected within the area of coverage

Flashing regularly

Detector identifies bright, light off (dependent upon operating mode)

Not illuminated

Detector identifies dark, light on (dependent upon operating mode)

Illuminated for 2 seconds

Signal validly received

(only possible for status "Light on/Light off")

## 18. Technical data

Connection of sensor and power supply by means of telephone plug RJ11

**Power supply:**

230V- ±10%

**Power consumption:**

< 1W

**Ambient temperature:**

-25°C - +50°C

**Degree of protection/class:**

Detector: IP65 / II / CE

Supply: IP20 / II / CE

**Settings:**

**Light values:**

10 - 2000Lux  
(remote control)

**Extension of the detection area:**

with PD9-S-SDB

**Area of coverage:**

circular 360°

**Range Ø H 2.5 m / T = 18°C:**

PD9-M-1C-IP65

seated 4 m / tangential

10 m / radial 6 m

max. Ø 5.4 m

PD9-M-1C-IP65-GH

**Recommended height for mounting**

PD9-M-1C-IP65

2 - 3 m

PD9-M-1C-IP65-GH

5 - 10 m

**Light measurement:**

daylight and artificial light

**One channel to switch the lighting**

**Type of contact:**

NOC/with pretravel

tungsten contact

**Contact load:**

2300 W, 230V~,

1150 VA cos φ = 0.5

**Time-settings:**

15 sec. - 30 min. / Test

(remote control)

**Dimensions H x Ø [mm]**

Detector

Ø 45 x H 40 mm

Visible part

Ø 45 x H 12 mm

Power supply

L 165 x W 24 x H 24 mm

### Technical data PD9-Slave

Electrical data same as above, but just one channel for

signaling motion detection.

**CE Declaration of Conformity:** The product complies with the low voltage recommendation 2006/95/EC and the EMV recommendation 2004/108/EC.