B.E.G. LUXOMAT® PD9-M-DALI/DSI(-GH)

Installation and Operating Instruction for **B.E.G.** - Occupancy detectors PD9-M-DALI/DSI-FC und PD9-M-DALI/DSI-GH-FC

1a. Features

* For connection of up to 50 lamps
* Suitable for dimmable electronic ballasts and control modules
* DALI/DSI output
* Constant light control
* Manual switching/dimming
* Semi or completely automatic operation
* Luminance (brightness) set point, switch-off delay time for LIGHT and orientation-light adjustable
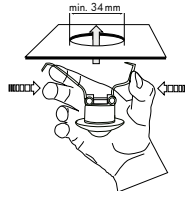* Sensor and power sections in one housing
* Infrared remote control

1b. Mounting preparations

Work on the 230 V 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.

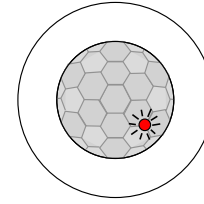### 2a. Installation LUXOMAT® PD9-M-DALI/DSI(-GH)-FC

min. 34 mm

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

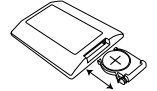A circular opening of diameter min. 34 mm must be produced in the ceiling.

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. Self test cycle

The **LUXOMAT®** PD9-M-DALI/DSI(-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)
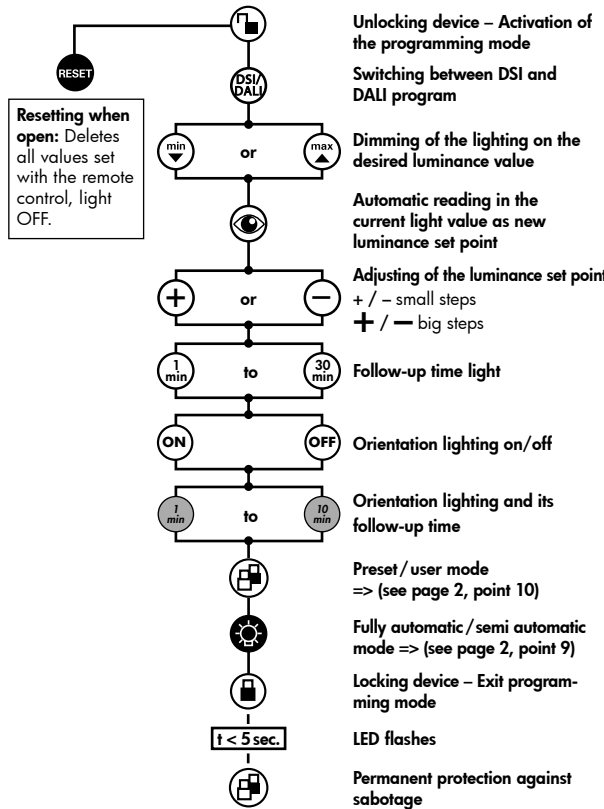

Remote control LUXOMAT® IR-PD-DALI

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

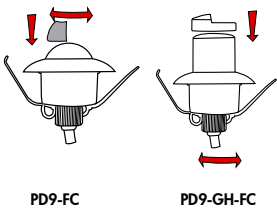---

Option:

Wall bracket for remote control IR-PD-DALI

4. Settings by remote control when open

RESET

Resetting when open: Deletes all values set with the remote control, light OFF.

Unlocking device – Activation of the programming mode

Switching between DSI and DALI program

Dimming of the lighting on the desired luminance value

Automatic reading in the current light value as new luminance set point

Adjusting of the luminance set point
+ / – small steps
+ / **—** big steps

Follow-up time light

Orientation lighting on/off

Orientation lighting and its follow-up time

Preset / user mode => (see page 2, point 10)

Fully automatic / semi automatic mode => (see page 2, point 9)

Locking device – Exit programming mode

LED flashes

Permanent protection against sabotage
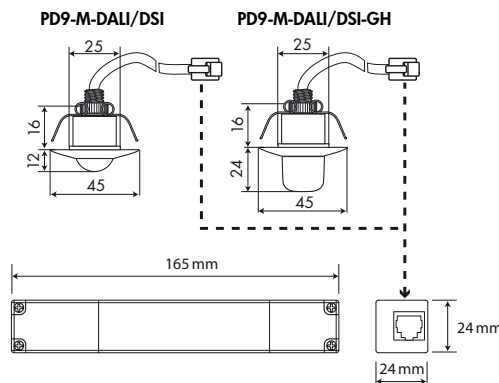
t < 5 sec.

5. Key functions in closed state

Lock device

Test mode
Reset to deactivate

Resetting when closed
The lighting relay is switched off, i.e. opened and the follow-up times reset.

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".

t < 5 sec.

The procedure for leaving this mode is as follows:

1. Switch off the current
2. Apply current for 31 – 59 seconds
3. Switch of the current again
4. Apply current
5. Open detector

Light on/off when closed
=> **(see page 2, point 9)**
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).

8. Range of Coverage

PD9-M-DALI/DSI

2.50 m

☐ Walking across
☐ Walking towards
☐ Seated

3   2
1   360°

PD9-M-DALI/DSI-GH

Overview range in dependence from the mounting height	
Mounting height	Range (circular detection) T=18°C walking across
5.00 m	Ø=3.00 m
6.00 m	Ø=3.50 m
7.00 m	Ø=4.20 m
8.00 m	Ø=4.80 m
9.00 m	Ø=5.40 m
10.00 m	Ø=6.00 m

9.00 m
360°
5.40 m

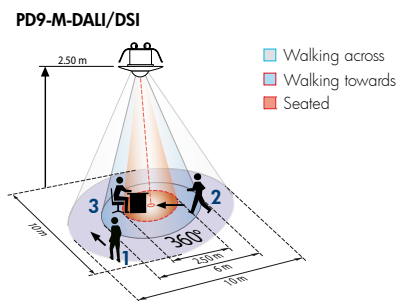### 6. Exclude sources of interference

PD9-FC   PD9-GH-FC

In case the sensing area of the **LUXOMAT®** PD9-M-DALI/DSI(-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.
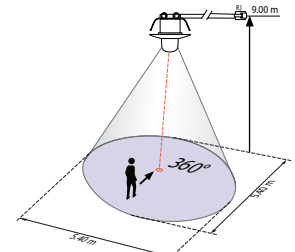
7. Dimensions

PD9-M-DALI/DSI

25
16
12
45

PD9-M-DALI/DSI-GH

25
16
24
45

165 mm

24 mm

24 mm

9. Fully / Semi automatic mode
(for IR-PD-DALI functions see page 1)

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

Semiautomatic operation
(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!

As many (closer-contact) buttons as desired can be wired in parallel on the "S" button input (ON/OFF Dimm).

10. Manual Dimming – Preset / User
(for IR-PD-DALI functions see page 1)

You can dim manually by pressing the pushbutton for a long time (> 2 sec). When the button is released, the current dimming value is retained. Upon renewed dimming, the dimming direction is reversed.

PRESET – the luminance set point is set during start-up operation by the installer and remains unchanged. The luminance set- point configured through manual dimming is only applied for the time being.
Caution:
The constant light regulation is now deactivated!
The currently set artificial light is retained independent of the ambient/daylight brightness!
After switching off and then back on, the originally set luminance set-point is reset = constant light regulation is activated.

USER – can only be activated via the remote control!
The luminance set-point is changed upon each manual dimming and re-adjusted by the user (Conformation through relay clicking!)
The constant light regulation remains activated!

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. Article / Part nr. / Accessory

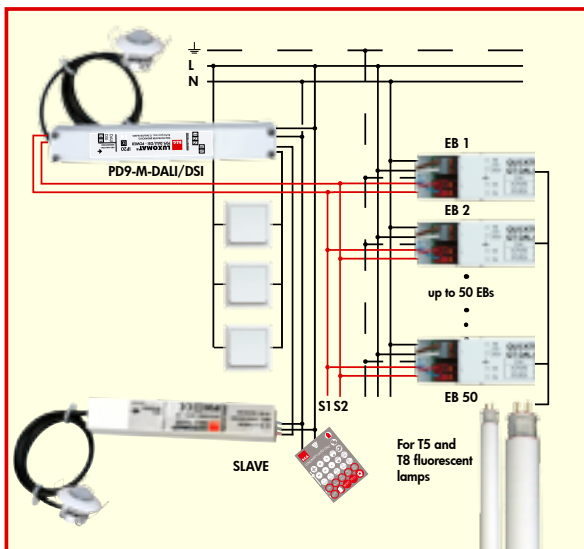| Type	FC
PD9-M-DALI/DSI – Master	92920
PD9-M-DALI/DSI-GH – Master	92938
PD9-S – Slave	92905
PD9-S-GH – Slave	92928

LUXOMAT® Remote control:
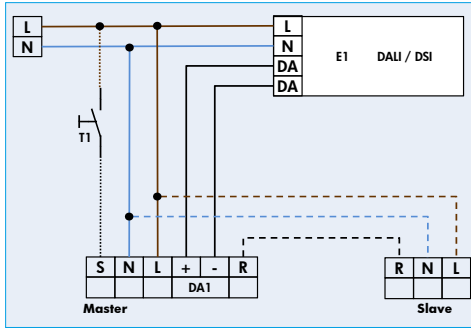IR-PD-DALI (incl. wall bracket)   92094
Accessory:
Wall bracket for remote control as replacement   92100
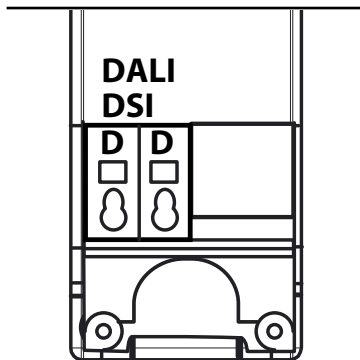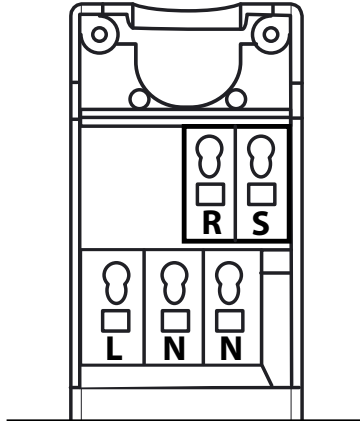Blind PD9-GH for 180° detection   33207

Circuit diagram

13. Wiring diagram

Standard mode with master DALI occupancy detectors

14. PD9-M-DALI/DSI(-GH) – Connections

15. Technical data PD9-M-DALI/DSI(-GH)

Power supply: 230 V~ ±10 %
Power consumption: < 1 W
Ambient temperature: -25°C to +50°C
Degree of protection/class: IP20 / II
Settings: by remote control
Light values - IR-PD-DALI: 50 - 1500 Lux
Extension of the detection area: with Slaves
Area of coverage: circular 360°
Range of coverage Ø H 2.50 m / T = 18°C:
PD9-M-DALI/DSI   seated 2.50 m / tangential 10 m / radial 6 m
PD9-M-DALI/DSI-GH   max. Ø 5.40 m
Recommended height for mounting:
PD9-M-DALI/DSI   2 - 3 m
PD9-M-DALI/DSI-GH   5 - 10 m
Light measurement: mixed light, daylight and artificial light
• **DALI-Output**
digital BUS control wire, 2-core, no polarity
(broadcast only)
Max. no. of series-connected electronic ballasts:
up to 50
Time-settings: 1 - 30 min. / Test
Dimensions H x Ø [mm]:
PD9-M-DALI/DSI   Ø 45 x H 28 mm
PD9-M-DALI/DSI-GH   Ø 45 x H 40 mm
Power supply   L 165 x W 24 x H 24 mm

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

WE RECOMMEND THAT BEFORE DIMMING OF THE CONNECTED LIGHTS A 100 h BURN IN (T5 TUBES OR 80 HOURS FOR T8 TUBES) FUNCTION TAKES PLACE. THIS CAN BE IGNORED BY USING THE REMOTE CONTROL TO DEACTIVATE.

THE LIFESPAN OF THE LAMPS CAN BE REDUCED IF THE BURN IN DOES NOT TAKE PLACE.

16. LED-functional indicators

LED function indicators		
Process	**Standard mode**	**Double-locked**
Initialisation time unprogrammed	Red flashes	Green flashes
Initialisation time programmed	Red flashes quickly	Green flashes quickly
Motion detection	Red flashes on each detected movement	Green flashes on each detected movement
Too bright detected	Red flashes 2x each second	Green flashes 2x each second
Too bright / too dark / undefined in opened state	Red flashes very quickly	Green flashes very quickly
Switching DALI/DSI DSI active	Red shines 3 sec.	
Switching DALI/DSI DALI active	Green shines 3 sec.	
Switching HA/VA VA active	Red shines 3 sec.	
Switching HA/VA HA active	Green shines 3 sec.	
Switching Preset/User Preset active	Red shines 3 sec.	
Switching Preset/User User active	Green shines 3 sec.	
IR signal valid received	Red shines 3 sec.	
IR signal invalid received	Red shines 0,5 sec.	