

## Installation and Operating Instruction for B.E.G. -Occupancy detectors PD4-M-DUO-DALI-FC

### 1a. 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.

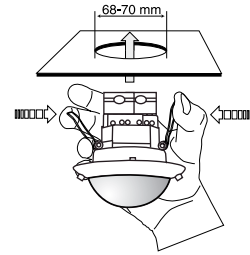
Disconnect supply before installing!

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

### 1b. Features

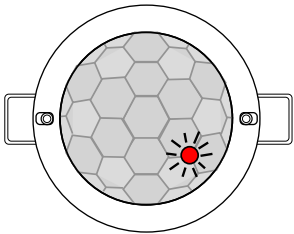
- \* For connection of up to twelve lamps for every DALI-output
- \* Suitable for dimmable electronic ballasts and control modules
- \* Two DALI outputs
- \* Constant light control
- \* Manual switching/dimming
- \* Semi or completely automatic operation
- \* Luminance (brightness) set point and switch-off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

### 2a. Installation of the LUXOMAT® PD4-M-DUO-DALI-FC



A circular opening of diameter 68 – 70 mm must be produced in the ceiling. Having connected up the cables in accordance with regulations, the detector is inserted into the opening as shown in the drawing above and fixed into position with the assistance of the spring clips.

### 2b. 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.

### 3. Putting into operation / settings



#### Follow-up time for light control

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

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

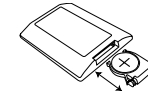
The switch-on value for the light can be set at between 10 and 2000 Lux. Using the rotary control, the luminance set points can be set as desired.

Symbol ☾: Night-time operation

Symbol ☀️: Daytime/Night-time operation

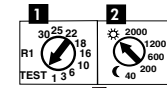
### 4. Settings carried out using remote control (optional)

#### Remote control LUXOMAT® IR-PD-DALI



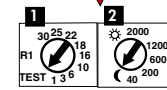
#### 1. Check Battery:

open battery compartment by pressing the plastic springs together and removing the battery-holder.



#### 2. IMPORTANT

Please pay attention, that the setting is Potentiometer 1 at "TEST" and Potentiometer 2 **not** at "SUN". All values which have been programmed using the remote control will be deleted in the event of power failure in the position "TEST/SUN". Please switch Potentiometer 2 over to "MOON" or any other value.



#### Caution:

Settings with remote control supersede the settings of the potentiometers.

### Option:



Wall bracket for remote control IR-PD-DALI

#### Unlocking device

**Luminance set point for constant light regulation**  
+ / - small steps + / - big steps

**Dimming**  
The following approach will prove useful when setting a command value (example workplace): Place a luxmeter flat on the desk, then, using the remote control IR-PD-DALI, adjust the light up or down by pressing the keys max or min until the desired command value which best suits your requirements has been reached.

**Automatic reading in the current light value as new luminance set point**  
Individual light value 2 - 2500Lux

**Follow-up time (relay and channel 1)**  
1 upto 30 min.

**Orientation lighting and its follow-up time**  
**OFF button:** No orientation light  
**Grey button:** Programming the switch-off delay time  
**On button:** Orientation light is permanently activated.

*Note:* During the orientation light phase, the constant light regulation is also active: if there is sufficient brightness, dimming occurs < 2 V and, if applicable, the lighting is switched off.

**Preset / user mode => (see page 2, point 6)**

**Fully automatic / semi automatic mode => (see page 2, point 5)**  
Semi automatic: green LED,  
Fully automatic: red LED on for ca. 3 sec.

**Resetting when open**  
All values which have been programmed using the remote control IR-PD-DALI are deleted, and those values which have been set by potentiometer are activated.

**Lock device**

(Button is without function.)

**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".

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**  
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).

## 5. 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).

## 6. 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!

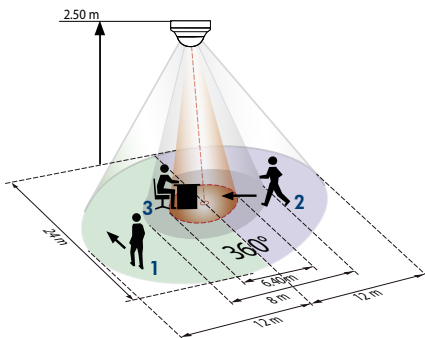
## 7. Manual Switching



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.

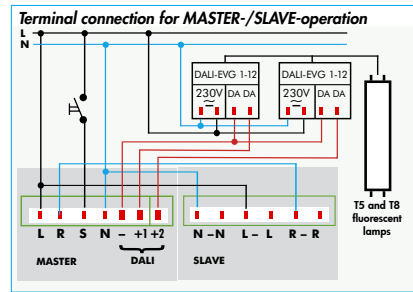
## 8. Range of Coverage

### PD4-M-DUO-DALI



- 1 Walking across
- 2 Walking towards
- 3 Seated

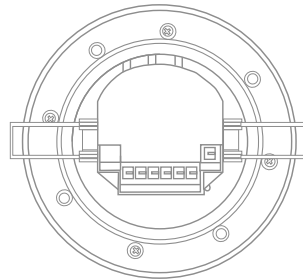
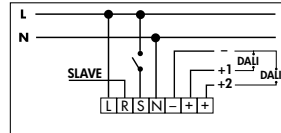
## 9. Wiring diagram



Up to twelve electronic ballasts (EB) are connectable.

## 10. PD4-M-DUO-DALI

### Connections



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

Type	FC
PD4-M-DUO-DALI-Master	92276
PD4-Slave	92254

### LUXOMAT® Remote control:

IR-PD-DALI (incl. wall bracket) 92094

### Accessory:

BSK Ball basket guard 92199

Wall bracket for remote control as replacement 92100

SM-Socket IP54 92161

## 12. Technical data PD4-M-DUO-DALI

Sensor and power supply in one case

**Power supply:** 230V~ +6%/-10%

**Power consumption:** < 1 W

**Ambient temperature:** -25°C – +50°C

**Degree of protection/class:** IP20 / II

**Settings:** locally and by remote control with IR-PD-DALI

**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:**

seated 6.40 m / tangential 24 m / radial 8 m

**Recommended height for mounting:** 2 - 3 m

**Light measurement:** Mixed light, daylight + artificial light

**Lux values-Potentiometer:** 10 - 2000 Lux

### • DALI-Output

digital BUS control wire, 2-core, no polarity (broadcast only)

**Max. no. of series-connected electronic ballasts:** up to 12

**Time-settings:** 1 - 30 min. / Test

**Dimensions HxØ [mm]**

PD4-M-DUO-DALI 101 x 97

Visible part false ceiling mounted 40 x 97

## Technical data PD4-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.

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

The functional indicators in the case of the LUXOMAT® PD4-M-DUO-DALI (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

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

Lights up for 3 seconds

Semi automatic or user signal correctly received

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

Flashing irregularly

Movement 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 (dependent upon operating mode)