B.E.G.

LUXOMAT® PD4-M-DALI/DSI-C

GB

Installation and Operating Instruction for B.E.G.-Occupancy detectors PD4-M-DALI/DSI-C-SM/-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

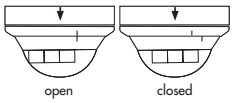
Work on the 230 V mains supply may only be carried out by qualified professionals or by instructed persons under the direction and supervision of qualified skilled electrical personnel in accordance with electrotechnical regulations.

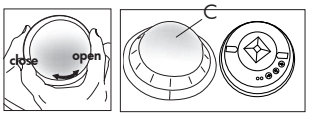
Disconnect supply before installing!

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

2a. Installation of the LUXOMAT® PD4-M-DALI/DSI-C-SM

ATTENTION: For maximum sensitivity the corridor detector-, lens- and corridor-axis must match.

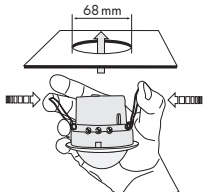




The detector must be installed on a solid and level surface. The circular cover ring must be removed prior to assembly. To do this, twist the lens (C) anticlockwise through approximately 5° and lift off.

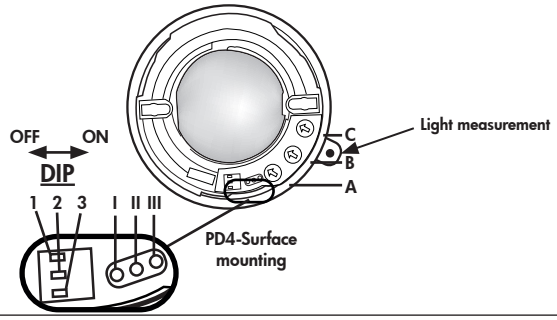
Having connected up the wires in accordance with regulations, secure the detector with two screws. After installation replace the lens and lock (turn clockwise). Mains to be connected.

2b. Installation of the LUXOMAT® PD4-M-DALI/DSI-C-FC

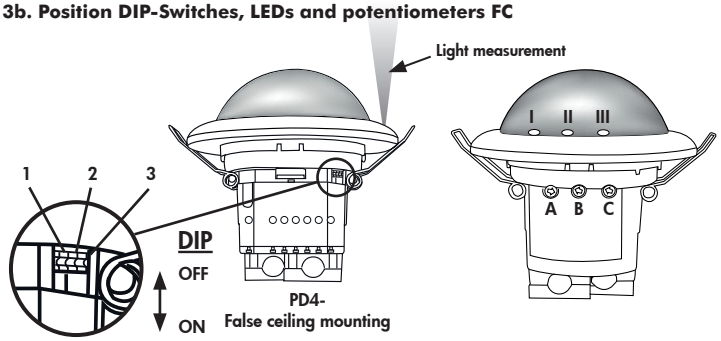


A circular opening of diameter 68 mm must be produced in the ceiling. Having connected up the cables in accordance with regulations, the detector is inserted into the opening as shown in the drawing opposite and fixed into position with the assistance of the spring clips.

3a. Position DIP-Switches, LEDs and potentiometers SM



3b. Position DIP-Switches, LEDs and potentiometers FC



DIP 1 = Change between fully automatic and semi automatic mode
DIP 2 = Change between HVAC-function and light control*
DIP 3 = Change between DALI/DSI mode

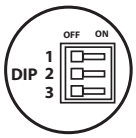
Potentiometer A Lux channel1
Potentiometer B Time channel1
Potentiometer C Orientation lighting

LED I green
LED II red
LED III white

The DIP switch settings are overriden using the remote control.

4. DIP switch functions

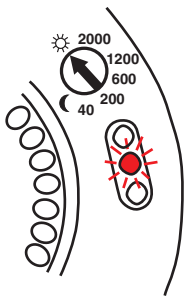
DIP-switch	ON	OFF
1	Semi automatic mode	Fully automatic mode
2	Corridor mode	Normal mode
3	DSI mode	DALI mode



The DIP settings are enabled again by:
- Adjusting the DIP switches when closed
- Reset with test sun setting at the potentiometers
- Reset when open

Corridor function: After deactivation by an external push button, the detector switches off and returns to automatic mode after 5sec.

5. Self test cycle



The PD4-M-DALI/DSI-C enters an initial 60-second self-test cycle, when the supply is first connected. The occupancy detector is ready for operation.

6. Putting into operation / Settings

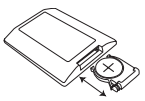
Follow-up time for light control
The time can be set infinitely variably at between 1 and 30 minutes.
Symbol **TEST**: Test mode
Every movement switches on the light for a period of 1 second, switching it off for a period of 2 seconds after that regardless of the level of brightness.

Twilight-switch for constant 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

Orientation lighting
The orientation lighting can be set at between 5 and 60 min. This rotary controller serves to determine the working time of the orientation lighting.
„ON" for permanent orientation lighting.
„OFF" for deactivation of orientation lighting.

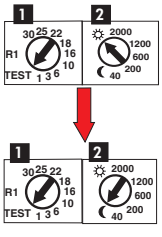
Pulse spacing PD-Slave
2 or 9 seconds can be set for the pause between 2 pulses sent to the master. The setting can be made with activated (✸) or deactivated (○) LED indicator.
For devices with a separate slave input, 2 sec. can be set.

7. 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 and potentiometer 2 **not** at the same time at "TEST" and 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.

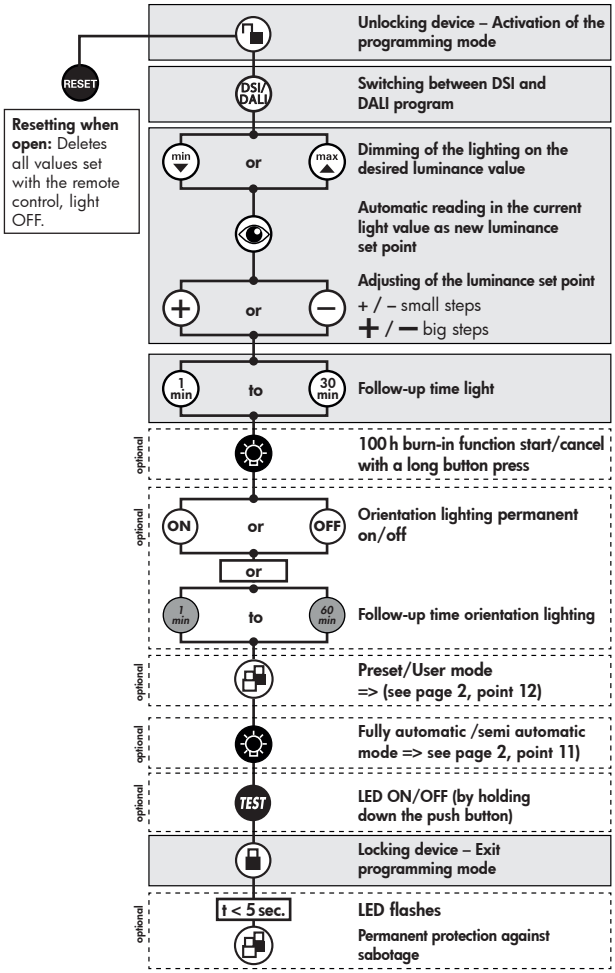
Caution:
Settings with remote control override the potentiometer or DIP switch settings.

8. Option:

IR-PD-DALI

Wall bracket for remote control IR-PD-DALI

9. Settings by remote control when open



10. Description of the key functions

Light on / off when closed
=> (see point 13)

Start/cancel of the 100 h burn-in fuction in opened state to burn-in of of the connected fluorescent lamps with long button press
=> (see page 3, point 18)

Dimming in the closed state

Test operation in the closed condition to enable
Disable the test mode: press reset

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 (LED flashes) 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, wait for self test cycle
5. Open detector

Dim in the open state
To set a target value, proceed as follows (example workplace):Place one lux meter flat on the desk. Set the light. With the help of remote control IR-PD-DALI by pressing the buttons „max" or „min" as necessary. Wait until the desired light level is reached.

Confirmation by the preset value

If necessary, gradually adjusting the brightness current set point.

Light during the initialization
The light is on by default in the initialization time.
On / off with the „Light" button during Initialization. The final condition is then active.

Adjustment of the orientation lighting in the open state
Note: Also during the orientation phase of the light constant light control is active: With sufficient brightness is < 20 % dimmed and turned off the lights if necessary.

11. Fully / Semi automatic mode

(for IR-PD-DALI functions see page 1)

Toggle between fully and semiautomatic operation by switching the button in opened state. The relevant status is shown by flashing of the red /resp. green LED.

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

Semiautomatic operation
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).

The switch by IR-PD-DALI acts only on the lightchannel.

12. 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.

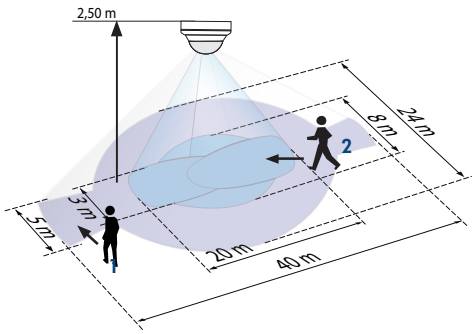
USER – can only be activated via the remote control!
The luminance set-point is changed upon each manual dimming and re-adjusted by the user.
The constant light regulation remains activated!

13. 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.

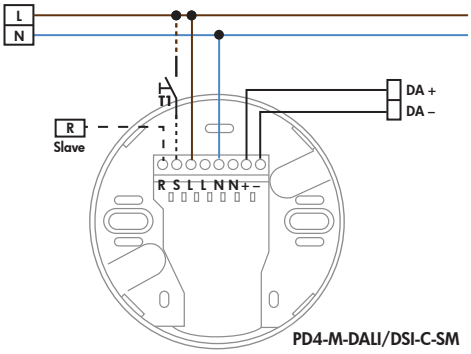
14. Range of coverage

PD4-M-DALI/DSI-C

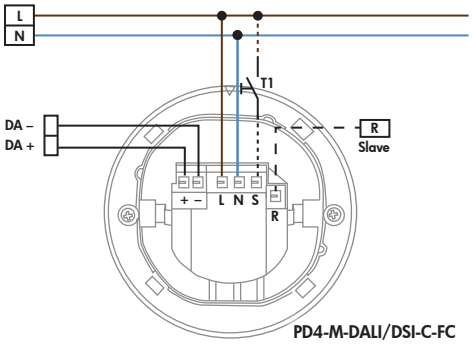


1 Walking across
2 Walking towards

15. PD4-M-DALI/DSI-C – Connections



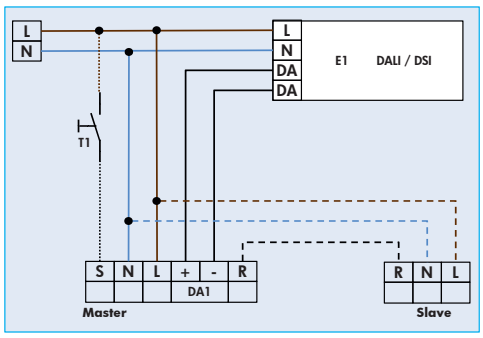
PD4-M-DALI/DSI-C-SM



PD4-M-DALI/DSI-C-FC

16. Wiring diagram

Standard mode with Master-DALI occupancy detectors



17. Technical data PD4-M-DALI/DSI-C

Sensor and power supply in one case

Power supply: 230 V~ ±10 %
Power consumption: < 1 W
Ambient temperature: -25°C to +50°C
Degree of protection/class: IP20 (with accessory IP54) / II
Settings: locally and by remote control
Light values - IR-PD-DALI: 50 - 1500 Lux
Parallel operation: Master / Slave
Area of coverage: circular 360°
Range of coverage Ø H 2,5 m / T = 18°C: max. 40 m (tangential)
Recommended height: 2 - 3 m
Light measurement: Mixed light, daylight + artificial light, suitably for constant light control
Lux values-Potentiometer: 10 - 2000 Lux

• DALI/DSI

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]	SM	FC	FM
	73 x 101	97 x 103	97 x 84

Visible part when built into ceiling H x Ø [mm]: 34 x 103

Technical data PD4-Slave

Power supply: 230 V~ ±10 %
Impulse output: Optocoupler max. 2 W
Impulse pause: 2 sec. or 9 sec.

Dimensions H x Ø [mm]	SM	FC	FM
	73 x 101	97 x 103	97 x 84

CE **Declaration of Conformity:** This product respects the directives concerning

1. electromagnetic compatibility (2004/108/EU)
2. low voltage (2006/95/EU)
3. restriction of the use of certain hazardous substances in electrical and electronic equipment (2011/65/EU)

18. 100 h-function

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.

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

19. Article / Part nr. / Accessory

Type	SM	FC	FM
PD4-M-DALI/DSI-C-Master	92530	92328	–
PD4-Slave-C	92536	92444	92445

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

20. LED-Funktionsanzeigen

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.	
100 h burn-in function active	Red and green flashes alternate	