

Installation and Operating Instruction for B.E.G. PD4-S-DAA4G

1. Product information

- Slave occupancy detector designed for PD4-M-DAA4G compact DALI system
- For expansion of a master device's detection area
- When movement is detected, a switch pulse is sent to the master independent of ambient light level
- Simple mounting
- Automatic test mode via master device
- Plug & Play - no setup required

2. Safety advice

- Work on electrical equipment should only be undertaken by qualified electricians or by trained personnel under the instruction and supervision of a trained electrician, according to the regulations for electrical installation**
- Turn off the mains supply before fitting**
- This device is not to be used to isolate other equipment from the mains supply**
- After inserting the connection cable, fit the supplied cover to the detector**
- The push button inputs and the D+/D- terminals must not be connected to the mains supply**

3. Operation

3.1 General

The PD4-S-DAA4G is for expanding the detection area of a PD4-M-DAA4G. Motion detection is based on passive infrared technology. If people, animals or other heat sources move within the detection area, the detector forwards motion detection events to a PD4-M-DAA4G using a B.E.G. DALI protocol.

See Figure 3.1: Detection diagram

3.2. System characteristics

A maximum of four PD4-S-DAA4G can be controlled by one PD4-M-DAA4G. Ideally, the detection areas should overlap by about 30%. Power supply is via the DALI bus, with current consumption of about 7 mA on average. The DALI bus must only be supplied with the required voltage via the DALI power supply integrated into the PD4-M-DAA4G.

See Figure 3.2: Circuit diagram

3.3 In use

The PD4-S-DAA4G sends a B.E.G. DALI telegram to the master every 30 seconds, if motion is detected within this 30-second period. If the master is in test mode, and the slave detects motion, it sends a B.E.G. DALI telegram to the master every 2 seconds. After 3 minutes, the slave device automatically reverts to normal mode.

The PD4-M-DAA4G does not assign a short address to the PD4-S-DAA4G. During the PD4-M-DAA4G addressing phase, no-one should remain in the detection area of the PD4-S-DAA4G, as otherwise there is a risk that not all DALI electronic ballasts will be detected and addressed.

To be absolutely sure that no DALI telegram is sent from slave to master during addressing of the DALI electronic ballasts, it is recommended that the slaves are only connected to the DALI bus after addressing of all DALI electronic ballasts.

4. Mounting

4.1. General

The ideal mounting location is inside, 2.5 to 3 metres high, on the ceiling. Ventilation units should not be in the immediate vicinity of the detector, as otherwise "false alarm" motion detection events may be triggered.

4.2. Connecting for false ceiling

A circular opening of diameter 68 mm must first of all 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 clip.

4.3 Connecting for surface

The detector must be fixed on a smooth, solid surface. Before mounting, the lens must be removed. Turn the lens about 5° anti-clockwise and remove it. Undoing two screws allows the detector to be removed from the socket. After properly connecting the wiring,

and attaching the socket to the ceiling with 2 screws, the detector must be reattached to the socket with 2 screws. Then reattach the lens, turning it clockwise.

See Figure 4.3: Surface mounting

4.4 Light sensor

The light sensor on the exterior of the cover ring is intended for future applications.

5. Self-test cycle

In the first 60 seconds from when the mains voltage is turned on, the detector runs through a self-test cycle. During this period, the device does not react to movement.

6. Initial operation

6.1 General

The PD4-S-DAA4G is ready for use (after self-test cycle) in combination with the PD4-M-DAA4G. There is no need to change DIP and HEX settings. An LED indicates detected movements (white LED shines while movement is detected) and the self-test cycle (white LED is flashing regularly).

6.2 DIP switches

The DIP switches define the type of B.E.G. DALI telegram to be sent. It is possible to send detected movements and light values either together or separately. If, for example, only detected movements are to be sent to the master device, the setting "Movement" is recommended. This avoids needless traffic (no light values) on the DALI bus.

	DIP 1	DIP 2	DIP 3
Movements and light values	(for future applications)	OFF	OFF or ON
Light values	(for future applications)	ON	OFF
Movements*	(for future applications)	ON	ON

* Setting for use with DALI compact system PD4-M-DAA4G.

6.3 HEX switch

The value set via the HEX switch represents the DALI group (electronic ballasts of the same group) to be regulated.

HEX	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Group Broadcast	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15*	

* Setting for use with DALI compact system PD4-M-DAA4G.

7. Blocking out sources of interference

In order to block out sources of interference, for example copiers or air conditioning outlets, there is an option to fit clip-on covers to the lens.

See FIGURE 7: Exclude sources of interference

8. LED Indication

Nr.	Indication	white
1	Self-test cycle	Blinking
2	Movement detected	Short ON

9. Article / Part nr.

Typ	Part	Info
PD4-S-DAA4G-FC	92721	Slave, version for false ceiling mounting
PD4-S-DAA4G-SM	92759	Slave, version for surface mounting

10. Technical data

- Power supply:** max. 22V DC over DALI-Bus
Area of coverage: circular, 360°
Range of coverage: Ø 8 m towards
 Ø 24 m transverse
 Ø 6.4 m seated
 Ø 6.4 m towards
- Protection type/class:** SM IP54, FC IP20 / II / CE
Ambient temperature: -25°C / +50°C
Dimensions FC : Ø 98 x 96 mm
Dimensions SM : Ø 101 x 69 mm
- Housing:** Polycarbonate, UV-resistant
Puls interval: 30 seconds (2 seconds in the test mode for a period of 3 minutes) Slave
- DALI:** Power supply via DALI bus of PD4-M-DAA4G
 Power consumption: about 7 mA
 maximum 4 slaves in combination with a PD4-M-DAA4G

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)

11. Potential problems

There can be many causes of problems with lighting control. The following shows a selection of possible causes.

Current draw of connected DALI units too high

In designing your system, please take into account the total current draw of all DALI units (electronic ballasts and any slave devices). The DALI power supply integrated into the PD4-M-DAA4G can provide a stable supply voltage when total current draw of all DALI units is 150 mA. Each DALI electronic ballast requires 2 mA. A slave device requires 7 mA.

Too many slave devices connected

If more than 4 slave devices are connected to the PD4-M-DAA4G DALI compact system, unexpected lighting control errors can occur.

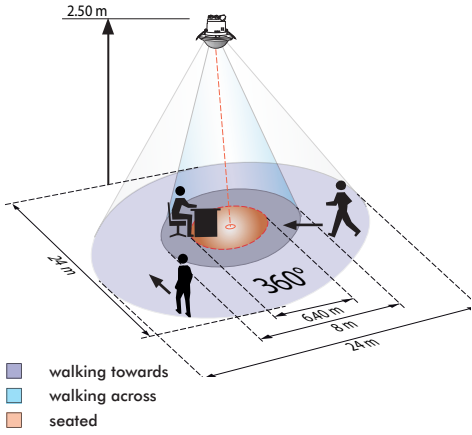
Heat sources in vicinity

If, for example, the detector is in the immediate vicinity of ventilation outlets or a projector, the warm air coming from these can trigger motion detection. Position the detector sufficiently far from potential sources of interference, such as ventilation outlets, projectors, video units, copiers, printers etc.

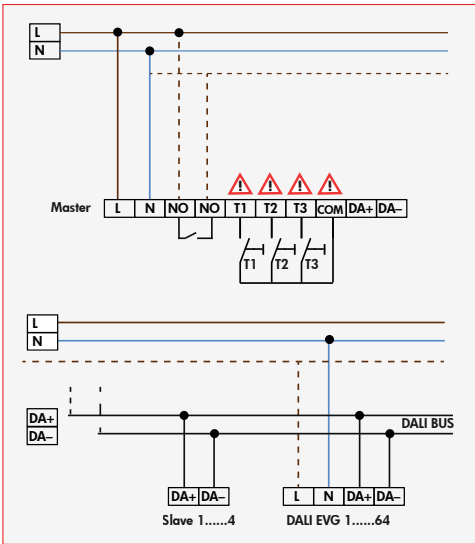


Figures PD4-S-DAA4G-SM/FC

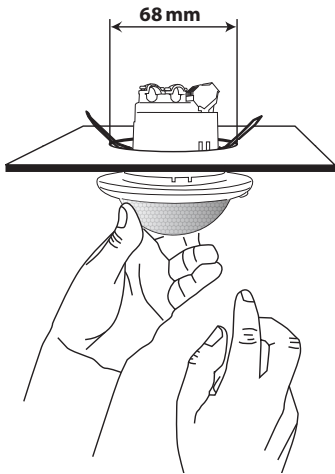
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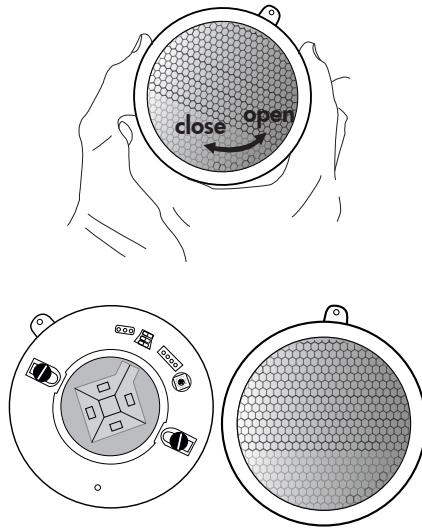
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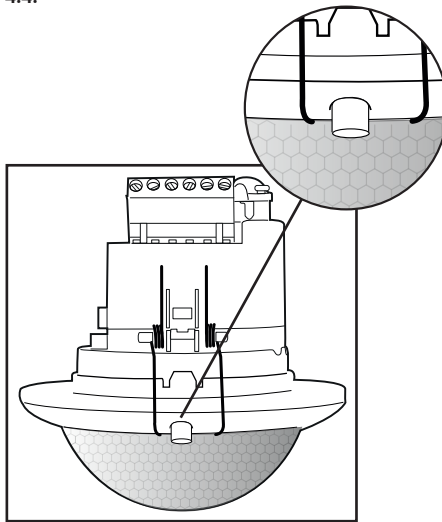
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7.

