BEGA 24166 Wall Luminaire with PIR Motion and Light Sensor Instruction Manual

Contents

BEGA

BEGA 24166 Wall Luminaire with PIR Motion and Light Sensor

Product Information

The product is a freestanding wall luminaire with an integrated passive infrared motion and light sensor. It is designed to be used in an existing DALI system. The luminaire is made of aluminium alloy and crystal glass, providing a durable and stylish design.

Product Usage Instructions

1. Before installation, ensure that you have a separate DALI power supply. If not, it is recommended to use the DALI power supply models 71 094 or 70 866 (available as accessories).
2. To begin the installation, undo the hexagon socket head screws (wrench size 3 mm) through the opening in the luminaire housing until they stop. Then, lift the luminaire top.
3. Disconnect the earth conductor connection from the plug connection.
4. Disconnect the plug-connection of the LED connecting cable.
5. For configuration and monitoring of the DALI system, you can download the easy-to-use DALI Cockpit software from our website: **https://www.bega.com/dali-cockpit**. Alternatively, you can use the BEGA Tool app on your smartphone or tablet in conjunction with the Bluetooth DALI gateway models 71 075 or 71 151.
6. Ensure that the installation and operation of the luminaire comply with national safety regulations. Only a qualified electrician should carry out the installation and commissioning.
7. The manufacturer does not accept liability for damage caused by improper use or installation. If any modifications are made to the luminaire, the person responsible for these modifications will be considered the manufacturer.
8. For additional protection against overvoltage and transients, it is recommended to use separate overvoltage protection components. You can find them on our website at **https://www.bega.com**.

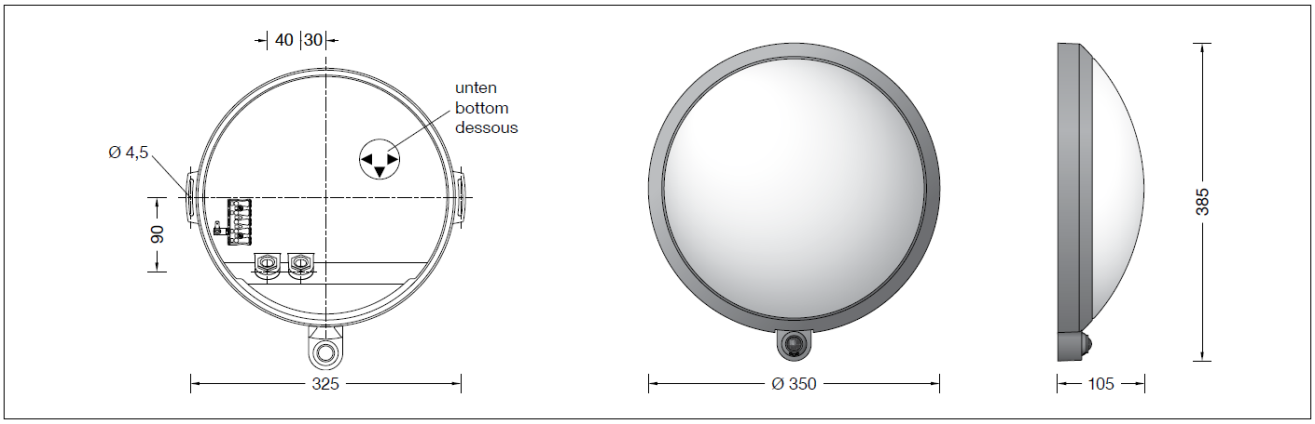
Instructions for use

Application
Unshielded wall luminaire with integral passive infrared motion and light sensor for use in an existing DALI system.
A luminaire made of aluminium alloy and crystal glass.

Product description

- Luminaire made of aluminium alloy, aluminium and stainless steel
- BEGA Unidure® coating technology
- Colour graphite or silver
- Crystal glass, white inside
- 2 mounting holes ø 4.5 mm
- Distance apart 325 mm
- 2 screw cable glands with strain relief for through-wiring power connecting cable
- ø 7–12 mm
- 1 screw cable gland closed at the factory with a dummy plug
- Connection terminal 2.5@
- Earth conductor connection
- Passive infrared motion sensor (PIR)

- Range up to 10 m
- Horizontal opening angle 110°
- Vertical opening angle 93°
- Minimum temperature difference between moving object and environment 4 °C
- Object speed 1 m/s
- Light sensor
- Measuring range adjustable using
- DALI Cockpit 0-2500 lx, Resolution 1 lx Power consumption on the DALI bus: Sensor: 3.5 mA
- Power supply unit: 2 mA
- Time hysteresis for suppressing rapid fluctuations in brightness
- LED power supply unit
- 220-240 V x 0/50-60 Hz
- DC 170-280 V
- DALI-controllable
- Basic insulation is provided between the mains and control cables
- BEGA Thermal Switch®
- Temporary thermal shutdown to protect temperature-sensitive components
- Safety class I
- Protection class IP 65
- Dust-tight and protection against water jets Impact strength IK05
- Protection against mechanical
- impacts < 0.7 joule
- CE – Conformity mark
- Weight: 4.3 kg
- This product contains light sources of energy efficiency class(es) C, D



Configuration
The easy to use DALI Cockpit software for DALI systems configurations and for monitoring communication on the DALI bus can be downloaded from our website: **https://www.bega.com/dali-cockpit** Configuration is also possible via smartphone and tablet using the BEGA Tool app in conjunction with Bluetooth DALI gateway 71 075 or 71 151.

Safety
The installation and operation of this luminaire are subject to national safety regulations. Installation and commissioning may only be carried out by a qualified electrician. The manufacturer accepts no liability for damage caused by improper use or installation. If subsequent modifications are made to the luminaire, the person responsible for these modifications shall be considered the manufacturer.

Lamp

- Module connected wattage: 23.9 W
- Luminaire connected wattage; 27.2 W
- Rated temperature: ta = 25 °C
- Ambient temperature: ta max = 35 °C

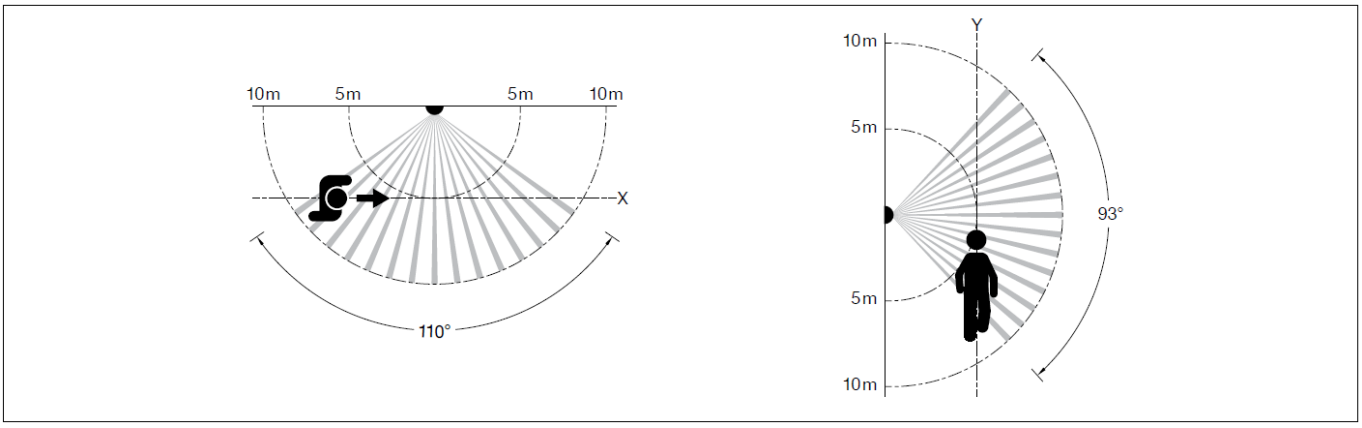
24 166 K3

- Module designation: LED-0993/830
- Colour temperature: 3000 K
- Colour rendering index: CRI > 80
- Module luminous flux: 3975 lm
- Luminaire luminous flux: 2651 lm
- Luminaire luminous efficiency: 97,5 lm / W

24 166 K4

- Module designation: LED-0993/840
- Colour temperature: 4000 K
- Colour rendering index: CRI > 80
- Module luminous flux: 4180 lm
- Luminaire luminous flux :2788 lm
- Luminaire luminous efficiency: 102,5 lm / W

Range / Detection area
The specifications for the range and detection area of the PIR motion sensor are reference values. The detection area is up to 110° horizontally and 93° vertically, with a depth of max. 10 m depending on the direction of motion (see sketch). Too minor temperature difference between the moving object and the ambient temperature can influence the detection range. Local conditions and external heat sources may affect both the range and the detection area.



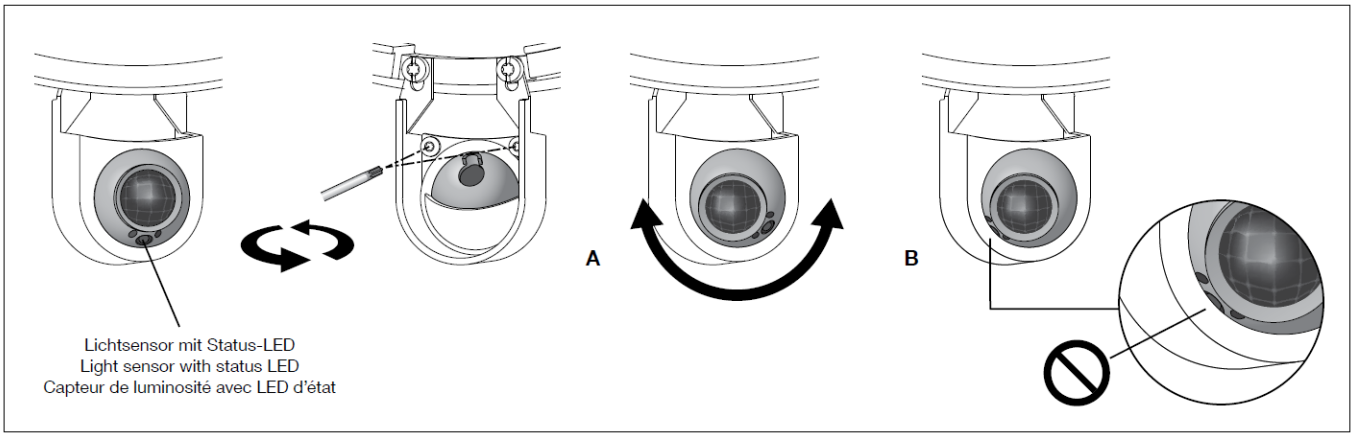
Overvoltage protection

The electronic components installed in the luminaire are protected against overvoltage in accordance with DIN EN 61547. To achieve an additional protection against e. g. transients, etc. we recommend separate overvoltage protection components. You can find them on our website at [www.bega.com.](http://www.bega.com)

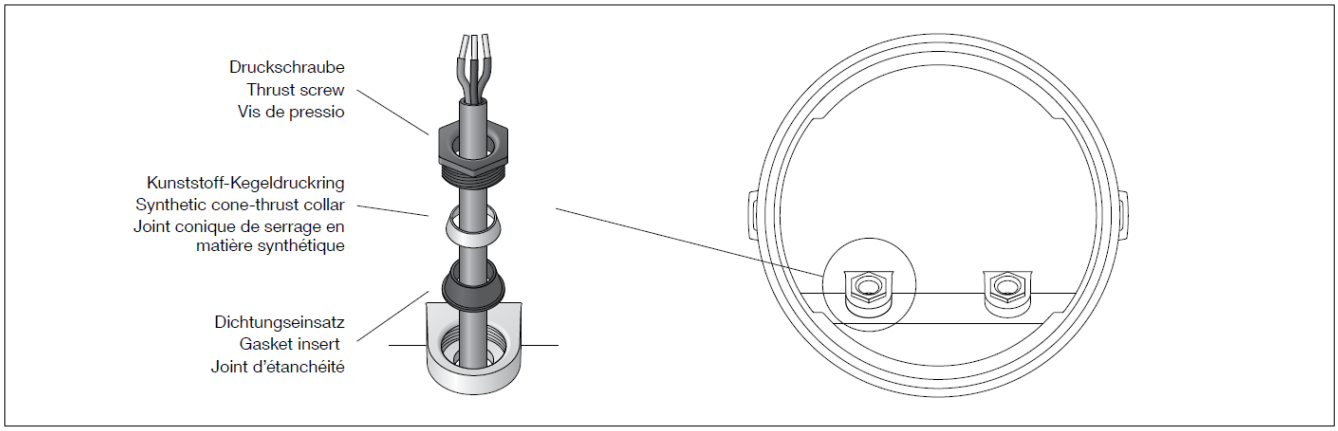
Installation

Please note:
A separate DALI power supply is required to operate the luminaire. If this is not provided by the customer, we recommend using DALI power supply 71 094 or 70 866 (see accessories). Undo hexagon socket head screws (wrench size 3 mm) through the opening in the luminaire housing up to the stop and lift luminaire top. Disconnect the earth conductor connection from the plug connection. Disconnect plug-connection of the LED connecting cable.

Orientation of the sensor
The sensor is factory-configured for the maximum detection area. In order to avoid the unintentional adjustment of the sensor in public areas, the alteration of the factory setting must be made before the luminaire base is mounted. To do so, loosen the two rear screws (Torx driver T10) slightly and rotate the sensor ball to the desired position (see Fig. A). In the process, make sure that the light sensor embedded in the sensor ball is not directed upwards or covered by the edge of the surrounding housing! (see Fig. B) Tighten the mounting screws evenly.



Lead the mains supply cable through the screw cable gland into the luminaire back housing. Notice position of use “arrow down” of the luminaire back plate. The installed black gasket insert is intended for cables ø < 10 mm. For cables ø 10-12 mm the enclosed grey gasket insert must be used. In case of through-wiring replace the factory installed dummy plug with the enclosed corresponding gasket insert. At the same time, use the enclosed synthetic cone-thrust collar between gasket insert and thrust screw (wrench size 22 mm) (see sketch).



Notice position of use “arrow down” of the luminaire back plate. Fix luminaire base with enclosed or any other suitable fixing material onto the mounting surface. Tighten screw cable gland. Make the earth conductor connection and the electrical connection. For digital control please use the connecting terminal DA, DA. In case this terminal is not used the luminaire will be operated at full light output. In order to guarantee the maximum service life of the electrical components, the enclosed desiccant pouch must be placed in the luminaire. Remove the desiccant pouch from the foil packaging and place it in the position marked by the red information label immediately before finally closing the luminaire. Connect the LED connection cable by means of a plug connector. Make earth conductor connection between luminaire top and luminaire base. Push plug into coupler as far as it will go. Make sure that gasket is positioned correctly. Install luminaire top and tighten.

Cleaning · Maintenance

Clean luminaire regularly with solvent-free cleansers from dirt and deposits. Do not use high pressure cleaners.

Functions and settings

A combination of several DALI motion and light sensors in one DALI line is possible. Following installation, the PIR motion and light sensor can be immediately operated in its factory settings; configuration is not required in this case.

The factory settings as are follows:

- Holding time: 5 min
- Brightness threshold: almost dark /100 lx
- Target address: broadcast
- Constant light control: off
- Status display: Green LED off (can be activated and deactivated using the DALI Cockpit software)
- Time hysteresis: 1 min
- Threshold hysteresis: 0 lx

Function testing

After the power supply and the DALI power supply have been switched on, the luminaire is switched on for the duration of hysteresis (factory setting 1 min). After this period has expired, the lighting switches off automatically. If the lighting does not switch on again automatically (after the end of hysteresis) during commissioning or on the return of power, the light sensor must be darkened for the duration of hysteresis. If the brightness threshold is exceeded (factory setting “almost dark /100 lx“), a movement in the detection area does not cause the lighting to switch itself on. For function testing, the light sensor must be darkened. Brightness must be below the threshold for the duration of hysteresis; only then does a movement in the detection area cause the lighting to switch itself on. The lighting now remains switched on for the duration of the holding time (factory setting5 min). If there are any more movements in the detection area, the holding time starts over again. Movement in the detection area does not cause the lighting to switch itself on when the holding time has expired and the brightness threshold has been exceeded for the duration of hysteresis.

DALI configuration
To adjust the settings and for additional functions such as basic brightness (luminaire switches to adjustable dimming value 1 if the brightness threshold is not reached and to adjustable dimming value 2 if movement is detected), a DALI USB interface (71 024 or
71 054) and the DALI Cockpit software are additionally required. DALI Cockpit is available as a free download from our website at **www.bega.com.** A reset to the factory settings is performed via the DALI reset in the DALI Cockpit software.

Replacing the LED module
The designation of the LED module is noted on a label in the luminaire. The light colour and light output of BEGA replacement modules correspond to those of the modules originally fitted. The module can be replaced by qualified persons using standard tools. Disconnect the system and open the luminaire. Please follow the installation instructions for the LED module. Inspect and, if necessary, replace the luminaire gaskets. Defective glass must be replaced. Close the luminaire.

Accessories

- 71 094: DALI Power supply 30 mA in switch and cavity boxes or installed cable connection box
- 70 866: DALI Power supply 240 mA for DIN rail mounting

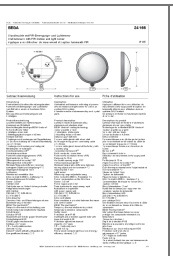
Separate instructions for use can be provided upon request.

Spares

- Spare glass: 11 003 519
- PIR Light sensor: 61 001 632
- LED power supply unit: DEV-0365/700i
- LED module 3000 K: LED-0993/830
- LED module 4000 K: LED-0993/840
- Gasket glass: 83 001 927
- Gasket wall plate: 83 002 166 B1

BEGA Gantenbrink-Leuchten KG
Postfach 31 60
58689 Menden
info@bega.com
www.bega.com

Documents / Resources

	**BEGA 24166 Wall Luminaire with PIR Motion and Light Sensor** [pdf] Instruction Manual 24166, 24166K3, 24166K4, 24166 Wall Luminaire with PIR Motion and Light Sensor, Wall Luminaire with PIR Motion and Light Sensor, PIR Motion and Light Sensor, Light Sensor, Sensor

References

- **BEGA · Das gute Licht.**
- **DALI-Cockpit · BEGA**