

# Operating Instructions

## Busch-Wächter®

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6854 AGM-...  
70 MASTERLINE



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## 1 Safety



### Warning

#### Electric voltage!

Risk of death and fire due to electrical voltage of 230 V.

- Work on the 230V supply system may only be performed by authorised electricians!
- Disconnect the mains power supply prior to installation and/or disassembly!

## 2 Intended use

The device is to be used exclusively with the components that are supplied and licensed as described in chapter "Setup and function".

## 3 Environment



### Consider the protection of the environment!

Used electric and electronic devices must not be disposed of with domestic waste.

- The device contains valuable raw materials which can be recycled. Therefore, dispose of the device at the appropriate collecting depot.

All packaging materials and devices bear the markings and test seals for proper disposal. Always dispose of the packaging material and electric devices and their components via the authorized collecting depots and disposal companies.

The products meet the legal requirements, in particular the laws governing electronic and electrical devices and the REACH ordinance.

(EU Directive 2002/96/EC WEEE and 2002/95/EC RoHS)

(EU REACH ordinance and law for the implementation of the ordinance (EC) No.1907/2006)

## 4 Setup and function

The Busch-Watchdog 70 MasterLINE is a movement detector with a reduced detection range and is suitable for use in small terraced houses.

Due to the small distance between the pavement and the house, the reduced detection range prevents the light from being constantly switched on when persons pass the house or when there is movement on the neighboring property.

The Busch-Watchdogs are passive infrared movement detectors which switch loads via the KNX bus when sources of heat move within its detection range.

Busch Watchdog is not an intrusion or attack alarm.

### 4.1 Features of function and equipment

- 12 meters coverage toward the front and 4 meters toward each side.
- 4 Detection levels
- Status display
- Switch-off delay and brightness switching threshold can be adjusted separately
- Reduced detection range

### 4.2 Detection ranges

#### 4.2.1 Overview of the detection ranges

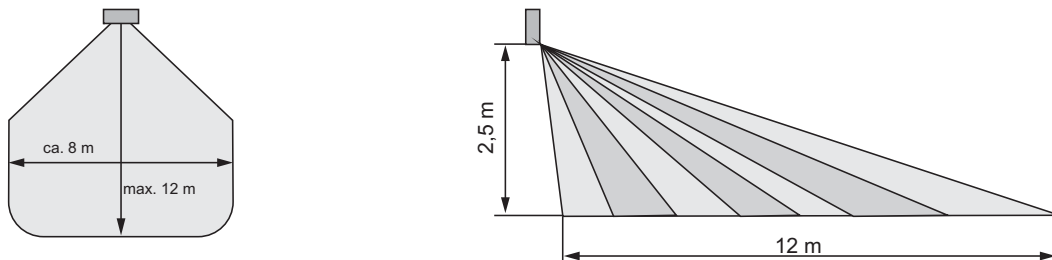


Fig. 1: Coverage

#### Detection range

- The detection range is 70° and the coverage is 12 m to the front and four meters to each side.

#### Wall mounting

- The movement detector offers optimum surveillance if mounted to the wall at a maximum height of 2.5 m.

## 5 Technical data

Designation	Value
Nominal voltage	230 V AC ± 10%, 50/60 Hz
Switching capacity	1380 W/VA
Maximum switching current:	6 AX
Maximum power loss	< 1 W
Twilight sensor	3, 15, ∞ lux
Switch-off delay	1, 3, 5 minutes
Coverage (if mounted 2.5 m high)	Maximum of 12 m
Operating temperature	-25°C ... 55°C
Protection type	IP 55



### Information for the connection of ballasts

Please observe the following points regarding high inrush currents for ballasts:

- The ballast manufacturer's specification determines the possible number of ballasts.

## 6 Installation and electrical connection

### 6.1 Requirements for the electrician



#### Warning

##### **Electric voltage!**

Install the device only if you have the necessary electrical engineering knowledge and experience.

- Incorrect installation endangers your life and that of the user of the electrical system.
- Incorrect installation can cause serious damage to property, e.g. due to fire.

The minimum necessary expert knowledge and requirements for the installation are as follows:

- Apply the "five safety rules" (DIN VDE 0105, EN 50110):
  1. Disconnect from power;
  2. Secure against being re-connected;
  3. Ensure there is no voltage;
  4. Connect to earth and short-circuit;
  5. Cover or barricade adjacent live parts.
- Use suitable personal protective clothing.
- Use only suitable tools and measuring devices.
- Check the supply network type (TN system, IT system, TT system) to secure the following power supply conditions (classic connection to ground, protective earthing, necessary additional measures, etc.).

## 6.2 Mounting



### Warning

#### Electric voltage!

Risk of death and fire due to electrical voltage of 230 V.

- Work on the 230V supply system may only be performed by authorised electricians!
- Disconnect the mains power supply prior to installation and/or disassembly!



### Warning

#### Electric voltage!

Danger from touching current-carrying parts when opening the device.

- Always disconnect the mains voltage before opening the device!

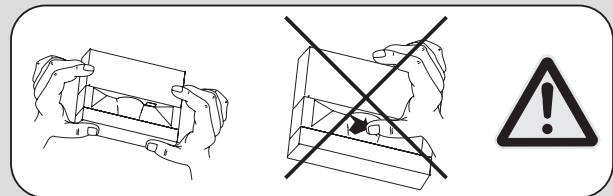


### Caution

#### Risk of damaging the device!

The lens of the device is sensitive and can easily sustain damage.

- Do not press on the lens when setting the device!



### 6.2.1 Installation sites

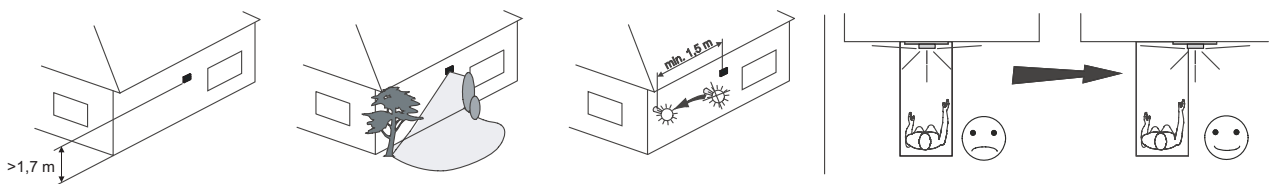


Fig. 2: Installation sites

- The mounting height of the device should be between 1.7 m and 2.5. m.
- The distance between light and movement detector should be at least 1.5 m.
- For optimum detection of persons the approach into the detection range should always be offset and never frontal.

### 6.2.2 Preparing the installation

To prepare the installation of the device, perform the following steps:

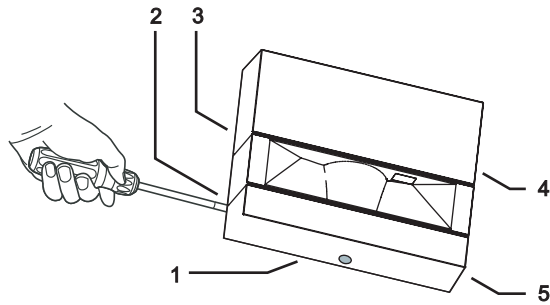


Fig. 3: Preparing the installation

1. Remove the locking screw (1) (if installed).
2. Press in the clamps (2 ... 5) on the sides of the housing with a suitable tool.
3. Carefully remove the front of the device.

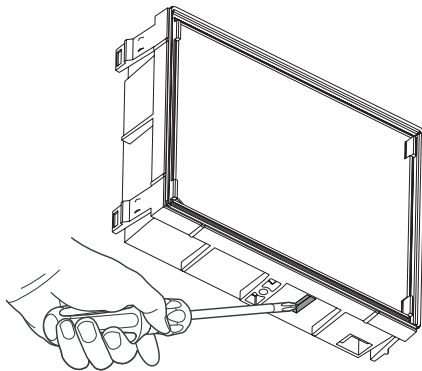


Fig. 4: Opening the water drain

Depending on where the device is installed, the water drain may have to be opened.

- To do this, pierce the plastic membrane on the bottom of the device.

The installation is prepared.



### 6.2.3 Mounting steps

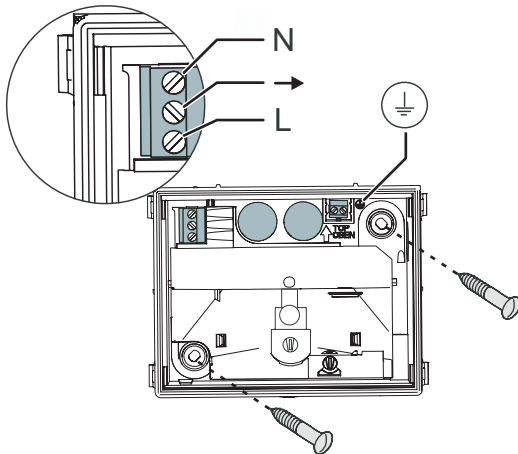
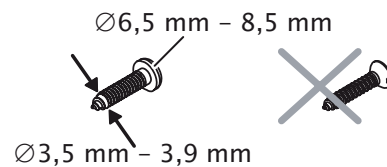


Fig. 5: Fixing to the wall

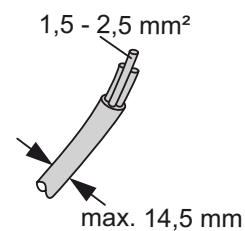
### Connecting terminals

Connection	Function
N	Neutral conductor
→	switched phase?
L	Phase (230 V AC, 50 / 60 Hz)
⏚	Grounding conductor connection

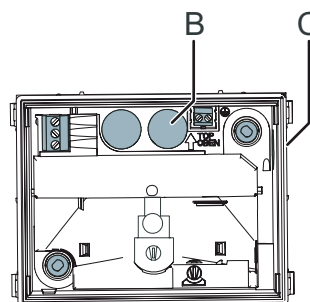
- Mount the device on the wall.
  - Do not use countersunk head screws for mounting to the wall.
  - Use screws with a head diameter of 6.5 mm - 8.5 mm.



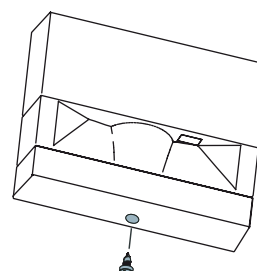
- Connect the power to the device, see section 6.3.
  - Observe the maximum admissible cable cross sections.



- For cable cross sections larger than 1.5 mm<sup>2</sup> use only cable entry (B) or (C).



3. To protect the device against unauthorized opening, the enclosed screw can be used on the bottom of the device.
  - To protect the device against unauthorized opening, screw the enclosed screw into the bottom of the device.



### 6.3 Electrical connection

#### 6.3.1 Standard connection

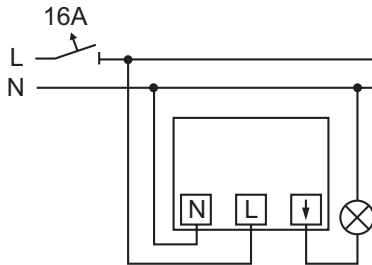


Fig. 6: Universal relay insert

#### 6.3.2 Standard connection with extension unit push-button

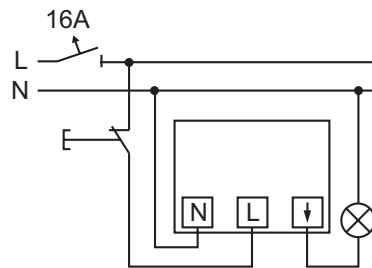


Fig. 7: Universal relay insert with extension unit push-button



#### Note

For more information see chapter "Extension unit operation" 8.3 on page 15.

### 6.3.3 Standard connection with triple-step switch

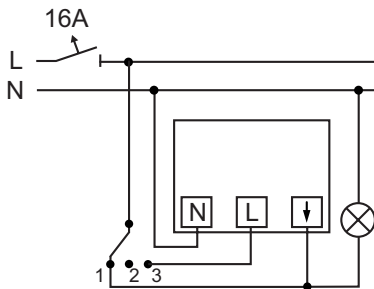


Fig. 8: Universal relay insert with triple-step switch

The connection is made with a triple-step switch such as 2713 U, 2710 U

Step switch function:

1. Continuous light
2. System off
3. Movement detector

### 6.3.4 Standard connection with RC suppressor 6899 and relay

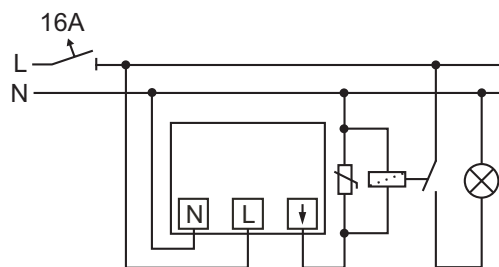


Fig. 9: Universal relay insert with RC suppressor 6899 and relay

## 7 Commissioning

### 7.1 Setting the coverage

Use the following steps to set the coverage:

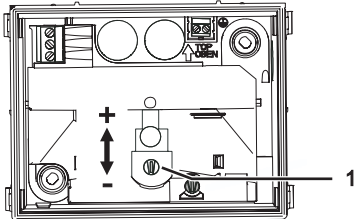


Fig. 10: Setting the coverage

1. Set the coverage of the device by turning the controller (1).
  - The sensor shifts when the controller is turned. The higher the setting of the sensor the smaller is the coverage.
  - The adjustment range of the sensor ranges from 6 m (sensor position at the top) to a maximum of 12 m (sensor position at the bottom).

### 7.2 Activation test

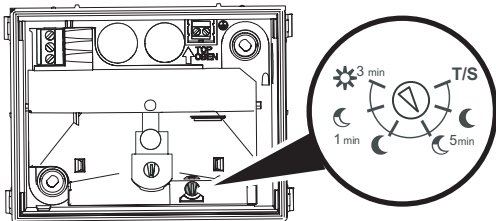


Fig. 11: Control element

To carry out the activation test, perform the following steps:

1. Set selector switch to T/S.
  - The device is now in test mode for 10 minutes (daytime operation, switch-off delay 2 sec.). In addition, each detection is indicated by the status LED flashing quickly.
  - After this, the device switches back to standard operating mode.
2. To carry out an additional activation test, set the selector switch back to position T/S or interrupt the operating voltage supply for more than 15 seconds.
  - The device is now in test mode for another 10 minutes. Test mode is exited automatically after 10 minutes or by adjusting the brightness.

The activation test has been carried out.

## 8 Operation

### 8.1 Standard operation

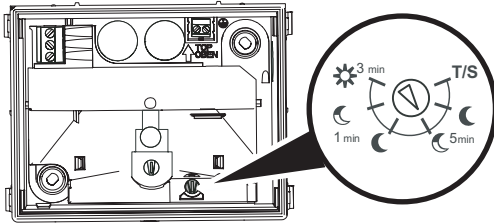


Fig. 12: Control element

Set the ON period and the switch-on brightness on the rotary switch.

#### ON period and switch-on brightness

Icon	Function
3 min	ON period during daytime operation
1 min	ON period at the start of twilight
1 min	ON period during advancing twilight
5 min	ON period at the start of twilight
5 min	ON period during advancing twilight
T/S	Selector switch

### 8.2 Function status LED

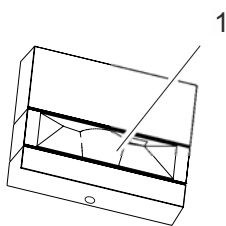


Fig. 13: Status LED

#### Status LED (1)

LED	Status
-Flashes fast	Detection in test mode
-Flashes 3 times	Detection in standard mode

### 8.3 Auxiliary post operation

#### 8.3.1 Operation with extension unit push-button

Aside from the movement detector being triggered by the infrared radiation in the detection range, manual operation is possible via an extension unit push-button.

For example, when an exit is not within the detection range of the movement detector, the extension unit push-button can be used. The lighting can there be switched on or off manually with the push-button.

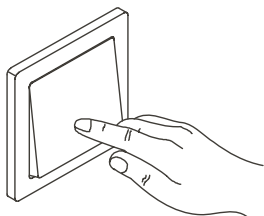


Fig. 14: Operation with extension unit push-button

- When operating with an extension unit push-button, the lighting for the set operating mode is switched on.

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