

**Automatic Switch Attachment 'Komfort'
System 2000**

Order no.: 0661 xx / 0671 xx

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**Safety Instructions**

Attention: The installation and assembly of electrical equipment may only be performed by a qualified electrician.

Not suitable for safety disconnection.

Depending on the type of switching or dimmer insert, the load will not be electrically isolated from the mains, even though the device is off.

To avoid electric shock, safely disconnect the corresponding device (switch off the automatic circuit breaker) prior to working on the automatic switch attachment or System 2000 insert, or before changing the lamp.

Non-observance of these installation instructions may cause fire or other hazards.

2. Function**2.1 Function Principle**

The System 2000 automatic switch attachments respond to thermal movements initiated by persons, animals or objects and trigger a switching process. The System 2000 automatic switch attachments remain switched on as long as some movements are detected, otherwise they will switch off after their shut-off delay time has elapsed.

The automatic switch attachment can also be set to shorttime operation, thus facilitating, for example, the triggering of acoustic signals (bell) to observe an entrance door.

The System 2000 automatic switch attachments must be operated in conjunction with a System 2000 switching or dimmer insert. In combination with the three-wire extension, the detection range can be extended.

i Important:
The System 2000 automatic switch attachments cannot be used on extension inserts.

On the basis of a modular principle, attachments and inserts can be combined for indoor and moisture-proof or outdoor applications (TX_44).

Depending on the lens used, the nominal installation height is 1.10 or 2.20 m.

The 2.20 m lens automatic switches can also be installed at the height of 1.10 m.

Fig. 1: 2.20 m lens at an installation height of 2.20 m or 1.10 m, respectively.

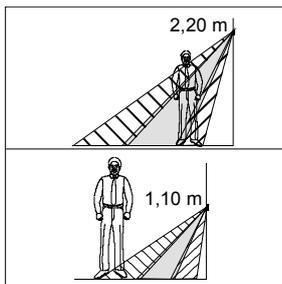
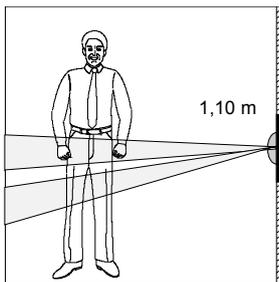


Fig. 2: 1.10 m lens at an installation height of 1.10 m.



i Important:
For how to connect the inserts, please refer to the operating instructions of the respective System 2000 insert.

2.2 Detection Field of the 1.10 m Lens Version

The 1.10 m automatic switches have a two-level detection field with an opening angle of 180° (Fig. 3).

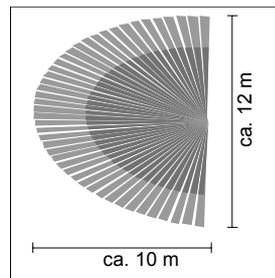
Detection field area (Fig. 3): approx. 10 m x 12 m

The information on the detection field area is referred to an installation height of 1.10 m.

For different installation heights, the nominal working range varies.

Due to the alignment of the upper lens level, the detection field is spatially not limited. This may, among other things, cause movements out of the specified detection field to trigger switching events (over-ranging).

Fig. 3:

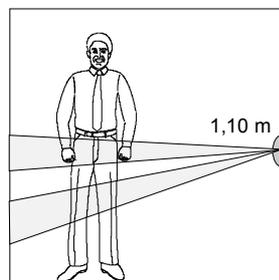


Important:

Due to the almost horizontal alignment of the upper detection level (Fig. 4), the automatic switches using the 1.10 m lens are, in general, suitable for indoor use only.

Otherwise, direct sun radiation may destroy the automatic switch.

Fig. 4:



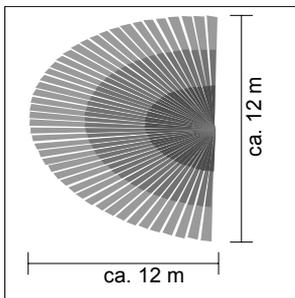
2.3 Detection Field of the 2.20 m Lens Version

The 2.20 m automatic switch attachments have a three-level detection field with an opening angle of 180° (Fig. 5).

Detection field area for an installation height of 2.20 m: approx. 12 m x 12 m.

Detection field area for an installation height of 1.10 m: approx. 6 m x 6 m.

Fig. 5:



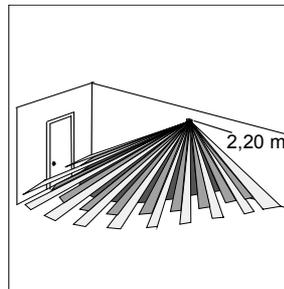
Note:

The detection levels of the automatic switch attachments using 2.20 m lenses are inclined from top to bottom (Fig. 6). This permits the use of the water-protected design (TX_44) also for outdoor applications.

Ensure that no direct sun radiation shines into the lens, or the sensor may be destroyed by the high thermal energy.

For installation heights other than 2.20 m, the working range varies. A bigger installation height leads to a correspondingly wider reach. It must, however, be noted that the energy radiated by a remote heat signal source may, under certain circumstances, not be sufficient to trip the automatic switch attachment.

Fig. 6:



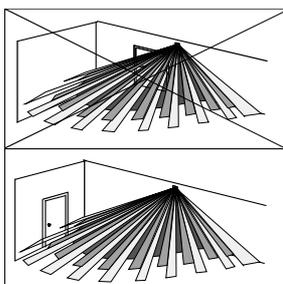
3. Installation

3.1 Information on the Place of Installation

The automatic switches will detect a movement to an optimum when they are installed laterally to the moving direction (Fig. 7).

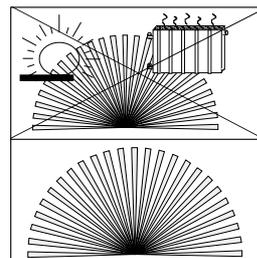
Otherwise, delayed detection will have to be expected.

Fig. 7:



- Reflection of thermal radiation from the light or too short a distance between the automatic switch attachment and the lamp may re-trigger the automatic switch attachment.
- Choose the place of installation so that no interference sources such as lamps or heating radiators are within the detection field. If this is not possible, use the slip-fit mask (refer to 'How to Use the Slip-Fit Mask', Para. 3.3).

Fig. 8:



To avoid unintentional switching events, please follow these instructions (Fig. 8) as early as during the installation:

3.2 Installation Directions

The System 2000 insert (1) must be installed into a wall box as per DIN 49073 (Fig. 9).

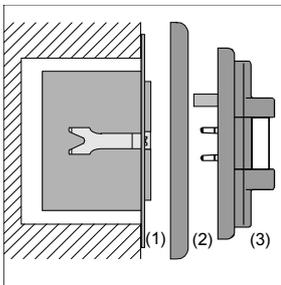
The connection terminals of the insert must be down, or malfunctioning will be the result.

Clip onto the insert frame (2) together with automatic switch attachment (3).

Note:

For how to connect the insert, please refer to the instructions that come with the respective System 2000 insert.

Fig. 9:



3.3 How to Use the Slip-Fit Mask

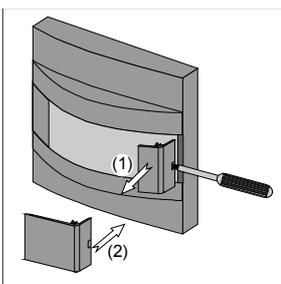
You can use the attached slip-fit mask to eliminate interference sources by limiting the detection field. The mask can cover the left or right half of the detection field (90° each) (Fig. 10).

Use a screwdriver to remove lateral covering (1). Snap in 90° mask (2).

Note:

Cutting out the mask for smaller angles will result in malfunctioning.

Fig. 10:



Detection field with mask (A) attached.

Fig. 11: Automatic switch attachment with 1.10 m lens

- (1) masked range
- (2) observed range

Fig. 11:

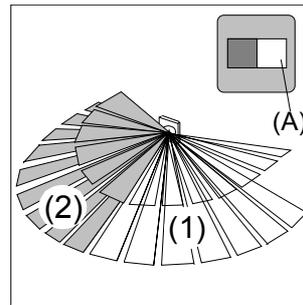
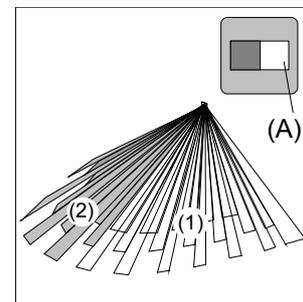


Fig. 12: Automatic switch attachment with 2.20 m lens

- (1) masked range
- (2) observed range

Fig. 12:



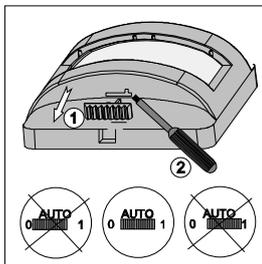
4. Modes of Operation

You can select three different modes of operation on the 'Komfort' automatic switch attachment. For this purpose, bring the selector to the desired position.

You can lock the switch to automatic position using a clip (Fig. 13).

1. Set automatic mode.
2. Use a screwdriver to carefully remove the selector.
3. Insert the locking clip.

Fig. 13:



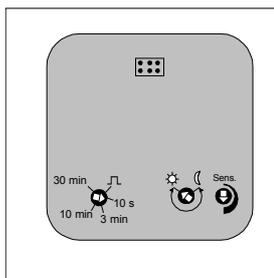
4.1 Permanent "OFF" (Fig. 14, A)

Switches the light permanently off. If a dimmer insert is used, the light will be dimmed down to minimum brightness and then switched off permanently after 30 seconds. Switching through extensions is not possible.

5. Settings

Shut-off delay (1), brightness (2) and sensitivity (3) can be individually set by means of three potentiometers. These are located on the back of the 'Komfort' automatic switch attachment (Fig. 15).

Fig. 15:



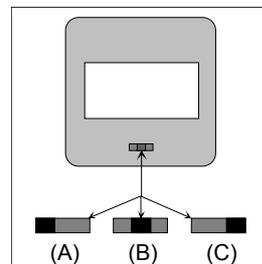
4.2 Automatic Mode (Fig. 14, B)

When it detects a movement, the 'Komfort' automatic switch attachment will switch on in dependence of the brightness and then switch off after the preset shut-off delay has elapsed, if no more movement is detected. Switching through extensions is possible.

4.3 Permanent "ON" (Fig. 14, C)

Switches the light permanently on. Switching through extensions is not possible.

Fig. 14:



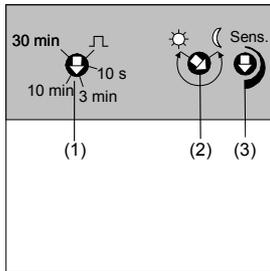
5.1 Shut-Off Delay

The shut-off delay determines how long the light will still remain on after no more movement was detected. This shutoff delay can be set within a range from 10 seconds to approx. 30 minutes. This setting is not linear, i. e. longer periods can only be preset within a relatively coarse raster.

To vary the shut-off delay, turn potentiometer (1) into the desired direction (Fig. 16).

If the 'Komfort' automatic switch attachment has switched on, any further movement detected will re-trigger the shut-off delay. This means that the shut-off delay will be re-started from the very beginning. The 'Komfort' automatic switch attachment does not include any forced shut-off. This means that continuous movements in the detection field will result in permanent light.

Fig. 16:



After the shut-off delay has elapsed, the light will be switched off. Switching inserts react differently from dimmer inserts.

Switching insert

After the shut-off delay has elapsed the 'Komfort' automatic switch attachment will switch off.

Dimmer insert

After the elapsing of the shut-off delay, the light will be dimmed down from maximum to minimum brightness within 30 seconds and then switched off. If dimming starts from a brightness value lower than maximum, minimum brightness will be reached faster. Nevertheless, final switching off will take place only after 30 seconds.

If any movement is detected during the dim-down phase, the 'Komfort' automatic switch attachment will return to its stored brightness value (memory value).

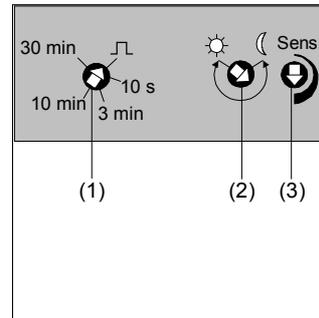
5.2 Short-Time Mode

In conjunction with a System 2000 switching insert (no dimmer insert), the 'Komfort' automatic switch attachment can also be set to short-time operation as a special mode. The short-time mode works independently of the brightness and can, for example, be used to actuate a bell.

For this purpose, set shut-off delay potentiometer (1) to the shortest time \lrcorner symbol (Fig. 17).

If a movement is detected, the 'Komfort' automatic switch attachment will switch on for 0.5 seconds. The detection of any further movements will cause another switching-on event only after a locking time of 3 seconds has elapsed.

Fig. 17:



Important:

System 2000 dimmer inserts do not facilitate short-time operation.

In conjunction with a dimmer insert, the 'Komfort' automatic switch attachment will respond in dependence of the brightness, even though the short-time mode has been selected.

The shut-off delay is approx. 10 seconds.

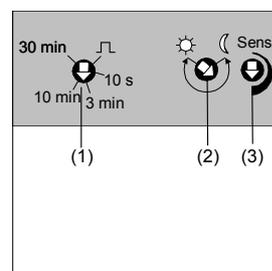
5.3 Brightness Threshold

Threshold value of the brightness, from which a movement detected triggers a switching event. The brightness threshold can be set within a range from approx. 0 to 80 lux.

To vary the brightness threshold, turn potentiometer (2) into the desired direction (Fig. 18).

If potentiometer (2) is set fully clockwise to the "sun" symbol (> 80 lux), the 'Komfort' automatic switch attachment will be in daytime operation, thus switching **independently of the brightness**.

Fig. 18:



i **Important:**

If the 'Komfort' automatic switch attachment should no longer respond to any movement detected when set fully anticlockwise to the "moon" symbol (night operation, 0 lux), please turn back the potentiometer in clockwise sense towards the "sun" symbol.

5.3.1 Insensitivity to Extraneous Light

The high insensitivity causes

- that the 'Komfort' automatic switch attachment will not interpret the brief flash of light, for instance from a torch, as 'brightness threshold exceeded' and thus be prevented from switching in spite of movements.
- that the 'Komfort' automatic switch attachment will not interpret unintentional brief shading, for instance by a person, as 'brightness below preset level' and thus switch because of detected movements.

This insensitivity to extraneous light is obtained by a timedelay stage.

For a transition from bright to dark, the preset brightness threshold must be undercut for at least 10 seconds before any movements detected will trigger a switching event.

The same applies to any transition from dark to bright. Only after the preset brightness threshold has been exceeded for at least 10 seconds, any movements detected will no longer trigger any switching.

Exception:

If the 'Komfort' automatic switch attachment has just switched off, the 10 s time delay will not be active.

5.4 Teach Function

You can use the teach function to store the current ambient brightness as brightness threshold. The brightness threshold preset by the potentiometer will then no longer be evaluated.

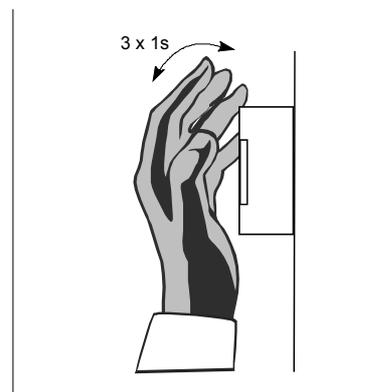
Any other storing of a brightness threshold will overwrite the previous value.

If you want to re-activate the brightness threshold preset by the potentiometer, just detach the 'Komfort' automatic switch attachment from the insert and re-plug it.

5.5 Executing the Teach Function

1. To activate the teach function, fully cover the 'Komfort' automatic switch attachment for a short time at least three times (approx. 1 second) within 9 seconds (Fig. 19).
2. Once the 'Komfort' automatic switch attachment has detected three light changes, the teach function will be active.
3. To confirm, the light will be switched off when it is ON and then be switched on for 3 seconds. When the light is OFF, it will be switched on for 3 seconds.
4. Step back from the 'Komfort' automatic switch attachment for the next minute to enable it to correctly measure and store the current brightness.
5. To confirm storage, the light will be switched on for 3 seconds.
6. Then the 'Komfort' automatic switch attachment will change to the preset mode.

Fig. 19:



i **Important:**

Any voltage failure exceeding approx. 2 seconds will lead to the loss of the brightness threshold stored.

Storing any value in excess of 80 lux as brightness threshold will set the 'Komfort' automatic switch attachment to daytime operation and make it respond independently of the brightness.

5.6 Setting the Sensitivity

The 'Komfort' automatic switch attachment has an internal algorithm which provides for automatic adaptation to the ambient conditions. This will render almost impossible any unintentional switching events.

Normally, the potentiometer should be set to maximum sensitivity (Fig. 21).

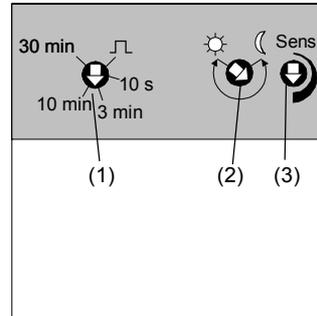
If it should be necessary in some exceptional cases, you can vary the sensitivity manually.

To vary the sensitivity of the 'Komfort' automatic switch attachment, turn the potentiometer (3) into the desired direction.

The internal algorithm to avoid unintentional switching events will remain active.

Only the "basic sensitivity" has been shifted.

Fig. 20:



6. Start-Up / Operation

6.1 Recommended Test Settings

To check the function and detection behaviour of the 'Komfort' automatic switch attachment after its installation, please perform the following settings (already factory-set):

1. Select automatic mode; bring selector (3) into middle position (Fig. 21).
2. Set brightness potentiometer (2) to daytime operation (fully anticlockwise to the "sun" symbol) (Fig. 22).
3. Set shut-off delay potentiometer (4) to approx. 10 seconds (Fig. 22).
4. Set sensitivity potentiometer (1) to maximum value (Fig. 22).

Perform your desired settings after checking.

Fig. 21:

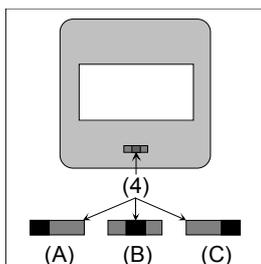
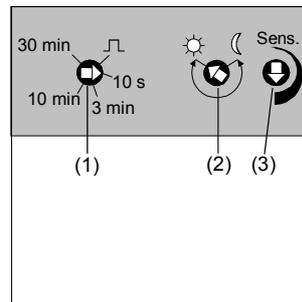


Fig. 22:



6.2. What Will Happen if the 'Komfort' Automatic Switch Attachment is detached from the Insert

If the 'Komfort' automatic switch attachment is detached from the insert, the respective switching state of the insert will be maintained.

Re-plugging makes the 'Komfort' automatic switch attachment respond in the same way as after a power failure of longer than 2 seconds.

This means that the 'Komfort' automatic switch attachment will make a self-test. The latter will last some 90 seconds.

During this time, the light will be on. Then the light will be switched off, with the preselected mode being active.

i Important:

Detaching the 'Komfort' automatic switch attachment from the System 2000 insert will lead to the loss of the stored brightness threshold and of the memory value.

i Important:

Any voltage failure exceeding approx. 2 seconds will lead to the loss of the brightness threshold stored and of the memory value.

6.3. What Will Happen in Case of Mains Failure

Shorter than 200 ms:	No change of the switching state.
200 ms to be approx. 2 seconds:	Upon system recovery, the light will be switched on for the shut-off delay.
Longer than 2 seconds:	Upon system recovery, the 'Komfort' automatic switch attachment will make a self-test. The latter will last some 90 seconds. During this time, the light will be on. Then the light will be switched off, with the pre-selected mode being active. Permanent "OFF": Off Automatic Mode: shut-off delay on Permanent "ON": On

6.4. Storing a Memory Value

The memory value is the brightness, on the basis of which the light will be switched on when a dimmer insert is used.

The memory value can be set through an extension and stored in the 'Komfort' automatic switch attachment:

1. To begin with, set the light to the desired brightness through the extension.
2. To store the brightness value, actuate the entire surface of the extension for at least 3 seconds when the latter is on. (Refer to Para. 8.1.)

i Important:

- In case of power failure, or when the 'Komfort' automatic switch attachment is detached from the insert, the memory value will be erased.
- The memory value can be stored by means of a system 2000 extension only (no mechanical push-button).

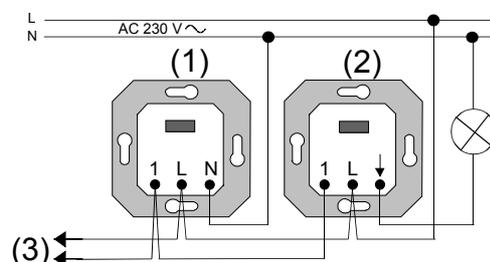
7. Extending the Detection Field

The detection range of a main unit can be enlarged by extensions. For this purpose, you can combine a 'Komfort' automatic switch attachment with a System 2000 presence detector and automatic switch attachment extension and connect it to the main unit.

Connection example:

System 2000 presence detector and automatic switch attachment extension (1) connected to main unit, e. g. dimmer insert (2), for further extensions (3), refer to Fig. 23.

Fig. 23:



i Important:

Parallel connection of automatic switch main units is not allowed.

The 'Komfort' automatic switch attachment cannot be used on the System 2000 extension insert.

The main unit must also use an automatic switch or presence detector attachment. Otherwise, no function will be provided.

Extensions are not suitable for any direct switching of loads and only transmit brightness-independent movement signals to the main unit.

If the main unit and the extension have a 'Komfort' automatic switch attachment each, the brightness will be evaluated by the main unit only. The shut-off delay will also be determined by the main unit.

For this combination, the mode selector as well as the brightness and shut-off delay potentiometers of the 'Komfort' automatic switch attachment on the extension insert will have no functions.

Any settings must be exclusively done on the main unit.

If required, you can still use the corresponding potentiometer to adapt the sensitivity of the 'Komfort' automatic switch attachment plugged onto the extensions (refer to 'Settings').

For the combination between the 'Komfort' automatic switch attachment and the System 2000 presence detector and automatic switch attachment extension insert, please note that a locking time of approx. 3 seconds will elapse after the light has been switched off before it can be switched on again through the extension.

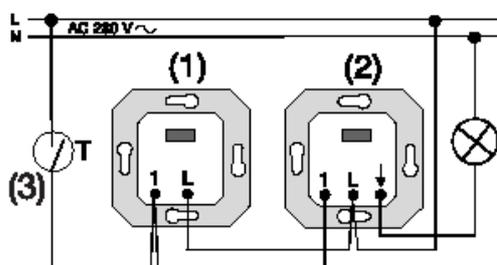
8. Operation from Extensions

With the aid of a System 2000 extension provided with a shortstroke key or a mechanical pushbutton (normally open contact), you can operate the 'Komfort' automatic switch attachment from several extensions when the automatic mode is active.

Example of a System 2000 extension and/or a mechanical pushbutton connected to a main unit, refer to Fig. 24.

- (1) System 2000 extension
- (2) main unit
- (T) pushbutton

Fig. 24:



i Important:

Parallel connection of automatic switch main units is not allowed.

8.1 System 2000 Extension

Operation from the switched-off state

Short actuation (shorter than 400 ms) UPPER, LOWER button, or entire surface:

Switching on the light for the shut-off delay period independently of the brightness. If any movements are detected, the shut-off delay will be re-triggered.

Long actuation (longer than 400 ms) for dimmer inserts only UPPER button, or entire surface:

Switching on the light to minimum brightness, keeping it for 1 second, and dimming it up to maximum brightness.

LOWER button:

Switching on the light to minimum brightness.

Operation from the switched-on state

Short actuation (shorter than 400 ms) UPPER, LOWER button, or entire surface:

For safety reasons, the light cannot be switched off manually.

Long actuation (longer than 400 ms) for dimmer inserts only UPPER button:

Increasing (dimming up) the brightness to maximum.

LOWER button:

Decreasing (dimming down) the brightness to minimum.

Actuation of the entire surface:

Storing a memory value (initial brightness to be switched on when a dimmer insert is used).
For this purpose, actuate the extension for at least 3 seconds.
To confirm storage, the light will be switched off and then switched on with the stored brightness value.

i Important:
When a switching insert is used, long actuation will be synonymous with short actuation.
Control from an extension unit is possible only if the attachment on the main unit is in place.

**8.2 Mechanical Pushbutton
(Normally Open Contact)**

With the aid of a mechanical pushbutton, the light can be switched on independently of the brightness. It will not be possible to switch off or dim the light.

i Important:
Storing a memory value and dimming are not possible with the mechanical pushbutton (normally open contact).

Illuminated mechanical pushbuttons must have a separate N terminal.

Control from an extension unit is possible only if the attachment on the main unit is in place.

9. Use in Conjunction with a System 2000 HLK relay insert

The use of the 'Komfort' automatic switch attachment on a HLK relay insert is possible.

For the exact functionality in conjunction with an HLK relay insert, please refer to the corresponding operating instructions.

10. Technical Data - 1.10 Lens Version

Opening angle:	approx. 180°	Sensitivity:	approx. 20 % to 100 %
Detection field:	approx. 10 m x 12 m	Switching capacity:	refer to flush-mounted insert operating instr.
Installation height:	1.10 m	Number of extensions extension, pushbutton:	unlimited
Number of lenses/ lens levels:	18 / 2	extension for presence detector:	refer to Operating Instructions extension for presence detector
Rated voltage:	refer to insert operating instructions	Different types of extension units can be combined:	
Operating temperature:	approx. -20 °C to 45 °C	Total length of extension connecting cable:	max. 100 m
Shut-off delay:	approx. 10 s to 30 min		
Immunity period (for short-time operation only):	3 s		
Brightness:	infinitely variable from approx. 0 lux to 80 lux and daytime operation		

11. Technical Data - 2.20 Lens Version

Opening angle:	approx. 180°	Sensitivity:	approx. 20 % to 100 %
Detection field:	approx. 12 m x 12 m	Switching capacity:	refer to flush-mounted insert operating instr.
Installation height:	2.20 m	Number of extensions extension, pushbutton:	unlimited
Number of lenses/ lens levels:	26 / 3	extension for presence detector:	refer to Operating Instructions extension for presence detector
Rated voltage:	refer to insert operating instructions	Different types of extension units can be combined.	
Operating temperature:	approx. -20 °C to 45 °C	Total length of extension connecting cable:	max. 100 m
Shut-off delay:	approx. 10 s to 30 min		
Immunity period (for short-time operation only):	3 s		
Brightness:	infinitely variable from approx. 0 lux to 80 lux and daytime operation		

Acceptance of guarantee

We accept the guarantee in accordance with the corresponding legal provisions.

Please return the unit postage paid to our central service department giving a brief description of the fault:

Gira
Giersiepen GmbH & Co. KG
Service Center
Dahlienstrasse 12
D-42477 Radevormwald



The CE sign is a free trade sign addressed exclusively to the authorities and does not include any warranty of any properties.

Gira
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