GE Indoor Standalone Sensors
MS-SA TYPE 1, MS-SA TYPE 2, MS-SA TYPE 3
GE Standalone Multi-Sensors

The purpose of GE standalone multi-sensor components in building technology is to facilitate the complete automation of a building. They are easy and quick to programme. For lighting systems, they allow flexible control regimes along with the best possible energy savings.

They are suitable for all lamps operated with electronic ballasts or drivers with a 1-10 V interface.

MS-SA TYPE 1
Standalone Multi-Sensor

Constant light control with presence detection and setting of target values at the device. Multi-sensor-dimmers MS-SA TYPE 1 have been designed to control light at the workplace or for complete rooms.

Features:
• 1-10 V interface to control electronic ballasts/drivers, transformers and dimmers
• Control of a constant lighting level by compensating for low or high levels of daylight
• Switches off in case of sufficient daylight or no presence detection in the room
• Switches on automatically in case of presence detection and insufficient daylight portion in the room
• Integrated switch output (5A)

For the MS-SA TYPE 1, the required light value can be set directly on the unit itself, no other operating element needs to be connected.

Advantages:
• Can be integrated easily into existing lighting systems if using dimmable electronic ballasts
• No manual operation necessary
• Can be used in rooms in which illumination is to remain constant
• Presence recognition can be switched off
**MS-SA TYPE 2**

**Standalone Multi-sensor with light level reduction or switch function**

The MS-SA TYPE 2 has been designed for the control from a high light level (when persons are present) to a low level (nobody present). Alternatively, it can be used for the presence dependent switching of lighting or other electrical devices.

**Features:**
- 1-10V output to control electronic ballasts/drivers, transformers and phase controlled or phase interval controlled dimmers
- A minimum light level can be set before the installed lighting system is comes into operation

For the MS-SA TYPE 2, the required light value can be set directly on the unit itself, no other operating element needs to be connected.

**Advantages:**
- Can be integrated easily into existing lighting systems if using dimmable electronic ballasts
- No manual operation necessary
- Can be used in rooms where no automatic switching off is desirable and where a high level of illumination is required in case of a presence e.g. in corridors, staircases, museums etc.
- The switching function of the device can be used to switch non-dimmable lights or other electrical devices.

**MS-SA TYPE 3**

**Standalone multi-sensor with light value-control switch function**

The light value switch MS-SA TYPE 3 has been designed to switch a non-dimmable lighting system which is dependent on presence recognition and light intensity.

**Features:**
- Switch output (5A) for direct switching of non-dimmed fluorescent or LED lamps (with filament transformers or non-dimmable electronic ballasts / drivers) as well as incandescent and halogen lamps.
- Switches off if there is sufficient daylight or no presence.
- Switches on in case of insufficient daylight or presence.
- Automatic recognition of the lighting level. Only the required switch-on value must be set.

The required light value can be either set at the device itself or by using an external target value potentiometer. Manual switching on and off is possible using an external pushbutton.

**Advantages:**
- Easy installation into existing illumination systems possible
- No manual operation necessary
- Can be used in rooms where illumination should not or cannot be dimmed, e.g. in foyers, corridors, staircases, warehouses, indoor pools, outdoor areas etc.
- Can be used in existing illumination systems to switch non-dimmed lights of any kind.
By combining presence recognition with constant light values or light value switching, the convenience of lighting is increased and the energy costs are decreased significantly.

Features:
• Reduced lighting costs thanks to energy savings up to 70%
• Short pay-back period
• Increased convenience of lighting
• Additional safety thanks to automatic switching on
• Lights are only burning when necessary
• If the room is no longer occupied and if there is sufficient daylight, the lighting is reduced automatically or switched off
• Components are easy to install and wiring is kept to a minimum
• Simple setting of required constant light level

Energy saving with the MS-SA TYPE 1 and MS-SA TYPE 2 standalone multi-sensors

Energy saving using the multi-sensor light value control switch MS-SA TYPE 3

MS-SA Type 1
Standalone MULTI-SENSOR-Dimmer
Constant light control with presence detection and rated value setting at the device.
The MS-SA TYPE 1 has a control output of 50 mA passive for approx. 50 electronic ballasts or drivers with a 1-10V interface (the main power supply coming from the electronic ballasts or transformers). If electronic ballasts, drivers and dimmers are to be jointly controlled, the control output has a capacity of a maximum of 50 mA passive and 3mA active.

The switch output has a resistive load capacity of a maximum of 5A. In case of a higher breaking capacity a relay has to be controlled.

The MS-SA TYPE 1 is a constant light control and presence detector in one unit. Both in terms of light stabilising and presence detection, the device controls the light in a sliding manner. In connection with the motion sensors, artificial light is quickly and progressively increased to the set value when someone enters the room. Upon leaving the same, it is slowly reduced after a delay period and finally switched off.

Operation

The light level which is supposed to be maintained at a constant level may be selected at the MS-SA TYPE 1. It picks up the mixed light of daylight and artificial light by means of an integrated photo-sensor and adjusts the artificial light up or down in accordance with the target value set. If there is sufficient daylight available, the artificial light is switched off after a delay period.

If no occupancy is detected in the room or at the place of work, the device dims the light slowly after a specified delay period and then switches it off altogether. As soon as the presence detector recognizes motion again, the artificial light is increased to the target value. Should the proportion of daylight be greater than the target value, no addition of artificial light will occur.

Presence detection can be deactivated at the device using a rotary switch (position '0'). In this case, the illumination is controlled in accordance with the set target value until it is not required any more because there is sufficient daylight available. In cases where the presence detection is deactivated at the device, an illuminated switch should be incorporated in the circuit in order to avoid it being switched on again unintentionally when daylight diminishes.
Area of recognition and extension of presence detection

Presence recognition covers an angle of approx. 100°. It surveys an area of approx. 7m in diameter if the height of the room is 3m.

If larger areas are to be jointly surveyed, the presence detection of several devices may be connected to each other. In this case, each device can work individually as a constant light control in its area.

The presence detection however, is done jointly for the whole area of the room. It is sufficient, if one of the devices detects motion.

Vice versa, all devices may be individually employed for presence detection in order to differentiate the area of recognition.

Mounting and wiring

The MS-SA TYPE 1 may be installed in three ways: either surface mounted on ceilings or clipped onto lamps or concealed (see special accessories).

The mounting plate of the surface mounted device is fixed to the ceiling using screws and then wired to the mains and an interface. Then the functional part is simply plugged on it.

The mounting plates and functional parts are strictly separate. This decreases the danger of damage to the functional part during assembly.

Area of detection of the presence sensor

Installation instructions

The actual light intensity value for the setting of the light level to be kept constant should always be picked up indirectly by the MS-SA TYPE 1 at the point of reference. Direct light on the sensor from interior illumination or the illumination of the place of work is to be avoided.

The lenses of the presence sensor are designed for a ceiling height of between 2.50m and 3.00m. In higher rooms, the area of detection increases, but the density of detection of the motion sensor decreases.

It is best to fit the device in such a way that the intensity adjustment trimmer points in the direction of the window. This will inevitably align the detection area of the photo-sensor correctly with the room.

Technical data

- **Device description, order no.** MS-SA TYPE 1, SKU: 85574
- **Operating voltage** 220-240V ~50/60 Hz, DC not permitted (destruction)
- **Fuse protection** externally 6A
- **Power input** approx. 1 W
- **Operating temperature** 0°C...+50°C
- **Adjustable light level** approx. 50-800 Lux (directly at the device)
- **Angle of detection** approx. 100° (photo-sensor and presence detection)
- **Mounting height** 2.5-3m (optimal height for motion detection)
- **Supply and load connection** L,N, activated L ( )
- **Control terminals** +,- (1...10V of electronic ballasts or transformers), M (parallel connection of motion indicators) base insulation in compliance with IEC 664 (10/92), no protective low voltage
- **Load capacity control output** 50 mA (for approx. 10 electronic ballasts or transformers - see manufacturer’s specifications)
- **Connections** see wiring diagram - wrong connection can lead to possible functioning failure or destruction
- **Load capacity switch output** 5A (wastage load) 50 p.* electronic ballasts 1 lamp 18W; 20 p.* electronic ballasts 2 lamps 18W; 20 p.* electronic ballasts 1 lamp 36W; 20 p.* electronic ballasts 2 lamps 36W; 20 p.* electronic ballasts 1 lamp 58W; 10 p.* electronic ballasts 2 lamps 58W
- **Fade time of control output** approx. 10-30 seconds (depending on control difference)
- **Switch off delay time** 1-3 minutes (depending on control difference)
- **Dimming period after leaving the room** can be set between 1 and 20 minutes
- **Parallel connection of devices** max. 5 devices (for presence recognition)
- **Protection sites, protection type** insulation protection III-IP 20
- **Max. length of cables** 100m (control cable 0.5mm², mains supply cable 1.5mm²)
- **Cable connection** terminal screws for solid wire or ritz wires D3-3-1.5mm² or with the 1.5mm² low resistant cable
- **Construction** plastic casing for mounting on ceilings or installation to louvres of lighting fixtures
- **Contamination level** 2 (Fine dust non-conductive, in compl. with IEC664, 10/92)
- **Dimensions, weight** WxHxD: 58.5x73.5x42mm, approx. 150g
- **CE requirements** EMC fulfilled in compliance with EN 61547 (04/96), low voltage in compliance with EN 60669-2-1 (82/91)

*Number of electronic ballasts to be connected in case of a 1.5mm² cable length of 15m from the distribution board to the control and further 20m to the ceiling of the lighting circuit impedance approx. 40Ohm, if the cable section is longer or if the cable is shorter, the permissible load is reduced (e.g. in the case of impedance of 80Ohm to 30Ohm)
MS-SA TYPE 1 as an individual device for controlling and switching of one area

Several MS-SA TYPE 1’s (max 5) with joint presence detection and joint daylight dependent controlling and switching

Several MS-SA TYPE 1’s with joint presence detection but individual daylight dependent controlling and switching

MS-SA TYPE with preceding control switch with deactivated presence detection (Function: only constant light control)

To electronic ballasts and electronic drivers with 1..10 interface

Mains 220-240V~/50/60 Hz

Wiring Diagrams

To electronic ballasts and electronic drivers with 1..10 interface

Mains 220-240V~/50/60 Hz

Wiring Diagrams

To electronic ballasts and electronic drivers with 1..10 interface

Mains 220-240V~/50/60 Hz

Wiring Diagrams
MS-SA Type 2
Standalone MULTI-SENSOR
Light level reduction or switch function.
MS-SA Type 2

The MS-SA TYPE 2 is a device combining the two functional areas of “light level reduction” and “activation dependent on the intensity of the ambient light”. Both functions may be set individually on the device itself.

Light level reduction

The task of the functional area “light level reduction” of the MS-SA TYPE 2 consists of reducing an undesired high level of light (e.g. in the case of the absence of people) to a lower level of light without switching the illumination off completely. A residual brightness is supposed to remain.

The light levels to be assumed in the presence and absence of persons are set on the device itself. If nobody is detected during the set time, the device dims the illumination to the pre-selected lower light level. Should someone enter the area of detection again, the device automatically assumes the originally determined higher light level.

Activation dependent on the intensity of ambient light

A switch output (relay output) has been integrated into the MS-SA TYPE 2 for this function which may be used for presence dependent switching. The intensity above which the relay should not be activated is set on the device itself.

Applicable to both functions:

1. Simultaneous usage of control and switch output is not possible as the target value setting (using a potentiometer) for the reduced light value is also used for the selection of intensity of the switch output. The functions “light value reduction” and “activation dependent on the intensity of the ambient light” are therefore to be used alternatively.

2. Area of detection, type of construction, assembly and performance data correspond to those of the MS-SA TYPE 1.

Control output application: light value setting for light level reduction

1. Adjust potentiometer for high light level (max.) to left stop (0%).
2. Adjust potentiometer for high light level (min.) to required light level for absence.
3. Set desired higher light level (max.) for presence.

Switch output application: setting of the desired brightness for the switch output

1. While the device is voltage free, set the potentiometer to left stop (0%) for minimum value (min.).
2. Connect the device to operating voltage. Turn the setting potentiometer (min.) to the right. The activating value may be determined as follows:
   - When the room has the intensity of light at which illumination should be activated, the potentiometer is turned to the right until the illumination is switched on.
   - If lower or higher values are required, the “min.” potentiometer is turned to left or right and, if necessary, corrected if the activating value is too high or low.
Area of detection and extension of presence detection

Presence detection covers an angle of approx. 100°. It surveys an area of approx. 7m in diameter in a room 3m high.

If larger areas with uniform daylight conditions are to be jointly surveyed, several devices may be connected to each other. One of the devices assumes the master function and operates the constant light control, the manual pushbutton-control and switching On/Off, whilst the other devices are responsible for the presence detection. However, each device switches the illumination not only on for its individual area but for the entire area.

Mounting and wiring

The MS-SA TYPE 2 may be installed in three ways: as a surface mounted device to be fitted to ceilings or to be clipped onto lamps or as a concealed device (see special accessories).

The mounting plate of the surface device is fixed to the ceiling using screws and then wired to the mains and the interface. The function unit is then merely plugged to the wired plate. This means that function unit and mounting plate are completely separate which reduces the danger of damage to the function unit during the installation.

When the device is clipped onto lamps, it needs a minimum louvre width of 60mm on the lamp fixture. It can be placed on both fluorescent lamps T5 with a 16mm diameter and also T8 with a 26mm diameter and also onto compact fluorescent lamps. It is immediately connected just to one lamp of the group by its cable.

Area of detection of the presence sensor

Installation instructions

The actual light intensity value for the setting of the light level to be kept constant should always be picked up indirectly by the MSD at the point of reference. Direct light on the sensor from interior illumination or workplace illumination should be avoided.

The lenses of the presence sensor have been designed for a ceiling height of between 2.5m and 3.0m. In higher rooms the area of detection increases, but the density of detection of the motion detector decreases.

It is best to fix the device in such a way that the setting trimmer points in the direction of the window. This will inevitably align the detection area of the photo-sensor with the room correctly.

Technical data

Device description, order no. MS-SA TYPE 2, SKU: 85575

- **Operating voltage**: 220-240V~ 50/60 Hz, DC not permitted (destruction)
- **Fuse protection**: externally 6A
- **Power input**: approx. 1 W
- **Operating temperature**: 0°C...+50°C
- **Adjustable light level**: approx. 10-2300 Lux directly at the device
- **Angle of detection**: approx. 100° (photo-sensor and presence detection)
- **Mounting height**: 2.5-3m (optimal height for motion detection)
- **Switch/analogue connection**: 1.5 mm² (min)
- **Control terminals**: +, -, 10V or 0, 10V (parallel connection of motion indication)
- **Base insulation in compliance with IEC 664 (10/92), no protective low voltage
- **Load capacity control output**: 1...10 V – max. 100 mA (for approx. 100 electronic ballasts or transformers – see manufacturer’s specifications)
- **Connections**: see wiring diagram – wrong connection can lead to possible functioning failure or destruction
- **Load capacity switch output**: 5A resistive load
  - 20 p.* electronic ballasts 1 lamp 18W, 20 p.* electronic ballasts 2 lamps 18W
  - 20 p.* electronic ballasts 1 lamp 36W, 20 p.* electronic ballasts 2 lamps 36W
  - 20 p.* electronic ballasts 1 lamp 58W, 10 p.* electronic ballasts 2 lamps 58W
- **Fade time of control output**: approx. 10 seconds (100% to 1%)
- **Dimming period after leaving the room**: can be set between 30 seconds and 30 minutes max.
- **Parallel connection of devices**: max. 5 devices (for presence recognition)
- **Protection class, protection type**: Insulation protection IP 20
- **Max. length of cables**: 100m (control cable 0.5mm², mains supply cable 1.5 mm²)
- **Cable connection**: terminal screws for solid wire or for wire conductors Ø 0.75 to 2.5 mm² or with the 1.5 m UV-resistant cable
- **Construction**: plastic casing for mounting on ceilings or installation to the louvres of lighting fixtures
- **Contamination level**: 2 (dry non-conductive, in compliance with IEC664, 10/92)
- **Dimensions, weight**: Width x Height x Depth = 58 x 70 x 42 mm, approx. 150 g

*Number of electronic ballasts to be connected in case of a 1.5mm² cable length of 12m from the distribution board to the control and further 20m to the center of the lighting circuit (impedance approx. 400 mΩ if the cable section is longer or if the cable is thinner; the permissible load is reduced by 1/3, in the case of impedance of 800 mΩ or 200 mΩ...
MS-SA TYPE 2 as an individual device for light value reduction in case of absence of persons (dimming from high to low light level)

Several MS-SA TYPE 2’s with joint presence recognition; each one reduces the light level separately if there are no persons present in its area of detection

Several MS-SA TYPE 2’s for light value reduction of a large area in case of absence of persons and for joint presence recognition

To electronic ballasts and electronic drivers with 1..10 interface

Utilization of additional devices to extend the area is possible in the same way as it is for the light reduction function

MS-SA TYPE 2 for presence dependent activation of an undimmed load or a load which cannot be dimmed.

Wiring Diagrams

Mains 220-240V~/50/60 Hz

MS-SA TYPE 2

On / Off optional

To electronic ballasts and electronic drivers with 1.10 interface

Mains 220-240V~/50/60 Hz

MS-SA TYPE 2

On / Off optional

To electronic ballasts and electronic drivers with 1.10 interface

Mains 220-240V~/50/60 Hz

MS-SA TYPE 2

To further device

To electronic ballasts and electronic drivers with 1.10 interface

Mains 220-240V~/50/60 Hz

MS-SA TYPE 2

To electronic ballasts and electronic drivers with 1.10 interface

Load

Utilization of additional devices to extend the area is possible in the same way as it is for the light reduction function.
MS-SA Type 3
Standalone MULTI-SENSOR
With a function as light value control switch.
The MS-SA TYPE 3 is a control which switches the lighting on and off depending on the ambient brightness and the presence of persons. It is preferably used in rooms where lighting is not to be dimmed or cannot be dimmed, e.g. in corridors, staircases, lobbies, schools, swimming pools, outdoor areas. It is ideally suited as an inexpensive means of re-fitting existing lighting systems and is suitable for switching fluorescent lamps with non-dimmable ballasts and lamps which cannot be dimmed.

Light level reduction
A light value at which the lighting is to be switched on can be set directly on the MS-SA TYPE 3 or externally with a potentiometer. If this value is not reached, the LED flashes. Lighting is switched on immediately if a presence is detected. If sufficient daylight is available the LED switches off once a switching hysteresis of 12.5% has been exceeded. If this value is exceeded for a delayed switching off time of 5 minutes, the lighting is switched off. During these switching processes, the device determines the proportion of artificial light in the room and takes this into consideration so that after the lighting has been switched off, the room is still sufficiently bright and the lighting is not switched on again immediately.

If no persons are present in the room, the device switches the lighting off after the delay period, which is adjustable, has expired. If a person moves into the area of detection, the lighting is switched on.

External switching value setting
As an alternative to setting the value at which the lighting is switched on at the device itself, this value can also be set using a potentiometer (22 kΩ) or via a 1...10 V control voltage. To do this, the switch-on brightness on the device must be set to maximum (turn right to the stop). When setting different values (on the device and potentiometer), the smallest value is valid.

Switching On/Off manually
If a pushbutton is connected to the MS-SA TYPE 3, this can be used to switch the lighting on and off manually. This is indicated by the LED blinking briefly. Manual switching mode remains in force until no presence is detected (adjustable delay) or until it is canceled by pressing the push-button for longer than 3 seconds. The light level setting and switching ON/OFF can be combined in one potentiometer with integrated ON/OFF pushbutton.

MS-SA Type 3
Area of detection and extension of presence detection

Presence detection covers an angle of approx. 100°. It surveys an area of approx. 7m in diameter in a room 3m high.

If larger areas with uniform daylight conditions are to be surveyed jointly, several devices may be connected to each other. Each of the devices can control an area individually (manual switching On/Off is not possible). Switching can also be controlled from just one device. It is sufficient if one of the devices detects the presence.

Mounting and wiring

The Multi-Sensor Control MS-SA TYPE 3 may be installed in three ways: as a surface mounted device to be fitted to ceilings or to be clipped onto lamps or as a concealed device (see special accessories).

The mounting plate of the surface device is fixed to the ceiling using screws and then wired to the mains and the interface. The function unit is then merely plugged to the wired plate. This means that function unit and mounting plate are completely separate which reduces the danger of damage to the function unit during the installation.

When the device is clipped onto lamps, it needs a minimum louvre width of 60mm on the lamp fixture. It can be placed on both fluorescent lamps T5 with a 16mm diameter and also T8 with a 26mm diameter and also onto compact fluorescent lamps. It is immediately connected just to one lamp of the group by its cable (MS-SA TYPE 3/K) or wired with other suitable cables.

Accessories for concealed mounting

To mount the device so that it is concealed behind the ceiling, a wall recessed housing with cover plate is required (see page 27).

Installation instructions

If possible, the MS-SA TYPE 3 should be mounted directly above the workplace for which the lighting is to be controlled.

The actual light intensity value of the room should always be picked up indirectly by the MS-SA TYPE 3 at the point of reference. Direct light on the sensor from interior illumination or workplace illumination should be avoided.

The lenses of the presence sensor have been designed for a ceiling height of between 2.5m and 3.0m. In higher rooms the area of detection increases, but the density of detection of the motion detector decreases. It is best to assemble the device in such a way that the LED points in the direction of the window. This will inevitably correctly align the detection area of the photo sensor with the room.

Area of detection of the presence sensor

---

Technical data

<table>
<thead>
<tr>
<th>Device description, order no.</th>
<th>MS-SA TYPE 3, SKU: 85784</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage</td>
<td>220-240V~ 50/60 Hz, DC not permitted (destruction)</td>
</tr>
<tr>
<td>Fuse protection</td>
<td>externally 6A</td>
</tr>
<tr>
<td>Power input</td>
<td>approx. 1 W</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>0°C...+50°C</td>
</tr>
<tr>
<td>Adjustable light level</td>
<td>approx. 50 - 500 Lux directly at the device</td>
</tr>
<tr>
<td>Maximum switch-off value</td>
<td>approx. 50 - 1000 Lux directly at the device</td>
</tr>
<tr>
<td>Angle of detection</td>
<td>approx. 100° (photo- sensor and presence detection)</td>
</tr>
<tr>
<td>Mounting height</td>
<td>2.5-3m (optimal height for motion detector)</td>
</tr>
<tr>
<td>Supply and load connection</td>
<td>L,N, uncontrolled L1</td>
</tr>
<tr>
<td>Control terminals</td>
<td>+,- (potentiometer or controlling device with a 1 - 10V interface), M (operating button or parallel connection of motion indication)</td>
</tr>
<tr>
<td>Connections</td>
<td>see wiring diagram – wrong connection can lead to possible functioning failure or destruction</td>
</tr>
<tr>
<td>Delay switch-off</td>
<td>5 minutes after set light level has been constantly exceeded</td>
</tr>
<tr>
<td>Delay period for switching</td>
<td>can be set to be between 30 seconds and 50 minutes max.</td>
</tr>
<tr>
<td>Parallel connection of devices</td>
<td>max. 5 devices (including the presence detector)</td>
</tr>
<tr>
<td>Switching hysteresis</td>
<td>approx. 12.5% of switch-off value (switch-on value + artificial light + hysteresis)</td>
</tr>
<tr>
<td>Protection class, protection type</td>
<td>Insulation protection IIP 2D</td>
</tr>
<tr>
<td>Insulation protection</td>
<td>Insulation protection IIP 2D</td>
</tr>
<tr>
<td>Max. length of cables</td>
<td>100 m branch cable 0.5 mm², mains supply cable 2.5 mm²</td>
</tr>
<tr>
<td>Cable connection</td>
<td>terminal screws for solid wire or fia area 0.1 - 1.5 mm² or with the 1.5 mm² UV-resistant cable</td>
</tr>
<tr>
<td>Construction</td>
<td>plastic casing for mounting on ceilings or installation to the boxes of lighting fixtures</td>
</tr>
<tr>
<td>Compartiment level</td>
<td>2 (dry rain, conductive, in compliance with EC664, 10/92)</td>
</tr>
<tr>
<td>Dimensions, weight</td>
<td>Width: 98 x 75 x 75 mm, approx. 110g</td>
</tr>
<tr>
<td>CE requirements</td>
<td>EN 61547 (04/96), low voltage in compliance with EN 60839-3-1 (01/92)</td>
</tr>
</tbody>
</table>
MS-SA TYPE 3 as individual device to switch lights in an area

Wiring Diagrams

MS-SA TYPE 3 as individual device with external preset potentiometer and pushbutton for manual switching On / Off

Wiring Diagrams

An MS-SA TYPE 3 to switch a large area with additional devices to extend area of detection

Wiring Diagrams

Several MS-SA TYPE 3's with joint presence detection, each one works separately as light value control switch in its area
Dimensional Drawings

Dimensions MS-SA TYPE 1, MS-SA TYPE 2, MS-SA TYPE 3

Front view

Side view

Rear view

With clip for 26 mm Ø fluorescent lamp

With clip for 16 mm Ø fluorescent lamp

With wall recessed housing (also for false ceilings)
GE Lighting is constantly developing and improving its products. For this reason, all product descriptions in this sheet are intended as a general guide, and we may change specifications time to time in the interest of product development, without prior notification or public announcement. All descriptions in this publication present only general particulars of the goods to which they refer and shall not form part of any contract. Data in this guide has been obtained in controlled experimental conditions. However, GE Lighting cannot accept any liability arising from the reliance on such data to the extent permitted by law.