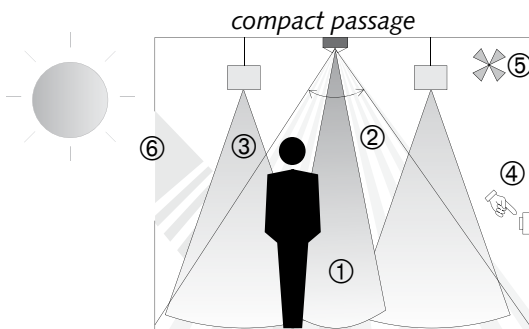
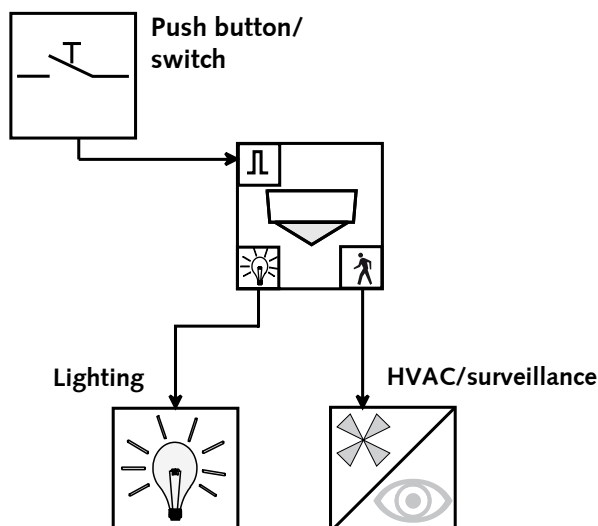


Presence detector compact passage



- ① Mixed light measurement
- ② Presence detection
- ③ Artificial light
- ④ Push button/switch for manual lighting control
- ⑤ HVAC/surveillance
- ⑥ Incident daylight



compact passage Product Features

- ◆ *Passive infrared presence detector for ceiling mounting*
- ◆ *Rectangular 360° detection range*
- ◆ *Automatic HVAC and lighting control as well as room surveillance*
- ◆ *Mixed light measurement*
- ◆ *Switched output for light (relay, 230V)*
Lighting control with brightness threshold value and self-learning switch off delay time
Fully or semi-automatic operation switch-selectable
Push button or switch connection for manual control
- ◆ *Push button function room/corridor*
- ◆ *Pulse function for staircase lighting timer*
- ◆ *Switched output for presence (potential-free relay)*
HVAC control with switch on delay and switch off delay time
Reduced response characteristic for room surveillance
- ◆ *Service remote control QuickSet plus (optional)*
- ◆ *User remote control clic (optional)*

Switched Output for Light

The switching behavior is controlled by presence and brightness. The contact closes in case of darkness **and** presence, and opens in case of brightness **or** absence.

The minimum switch off delay time (10s - 20min) and the desired brightness switching threshold (10 - 1500Lux) are adjustable. The switch off delay time automatically adapts to the occupant's behavior (self-learning characteristic), i.e. the unit is able to automatically extend the switch off delay time to max. 15min or reduce it to the minimum set time. The switch off delay time will not be changed if it is set to 2 min. or less.

Fully or Semi-automatic Operation

The compact passage optionally allows fully automatic lighting control for more convenience, or semi-automatic control for better energy-saving results.

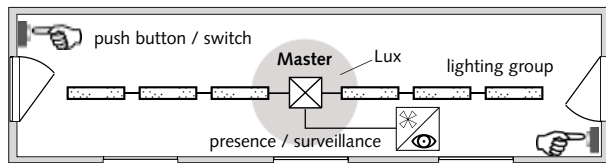
In the "fully automatic" operation mode, the lighting is switched on and off automatically depending on the presence and brightness in the room.

In the "semi-automatic" operation mode, the light must always be switched on manually. Switching off however is done automatically. In both operation modes, the light can always be switched manually by means of push buttons (or switches). Multiple push buttons can be connected to one control input (illuminated push buttons may only be used with neutral conductor connection).

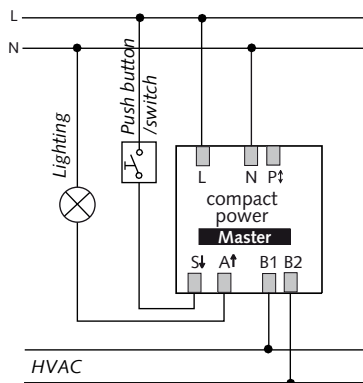
Switching Behavior in Fully Automatic Mode

If the lighting is switched on manually, it remains on for at least 30min if persons are present and is automatically switched off afterwards if the brightness is sufficient. If the room is vacated (earlier) the light is definitely switched off after the set switch off delay time. The lighting can always be switched off manually. The light remains off as long as persons are present in the room. If the room is vacant for a longer period (switch off delay time elapsed) the manual off status is deactivated, and the lighting returns to automatic switching.

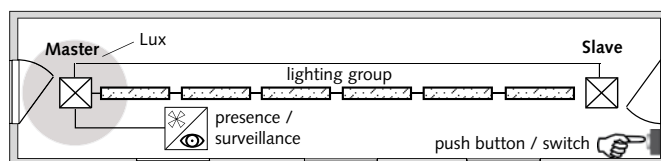
Single Unit Operation for One Lighting Row



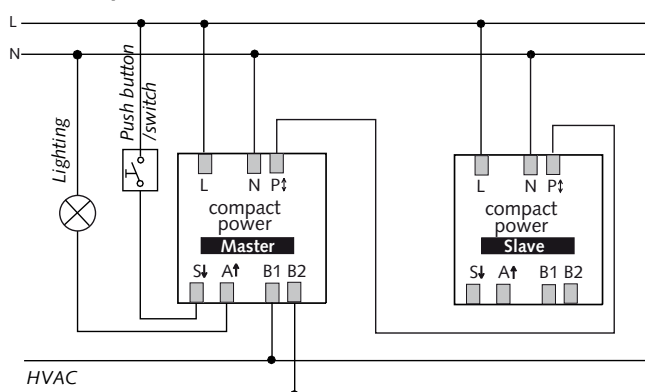
Schematic Wiring Diagram - Single Unit Operation



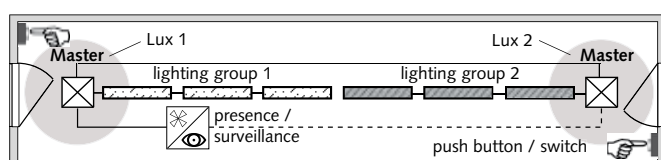
Master-Slave Parallel Circuit Operation for One Lighting Row



Schematic Wiring Diagram for Master-Slave Parallel Circuit Operation



Master-Master Parallel Circuit Operation for Two Lighting Rows



Switching Behavior in Semi-automatic Mode

The behavior in semi-automatic operation is basically the same as in fully automatic operation, except for the fact that the lighting is never switched on automatically, i.e. it must always be switched on manually.

“Room or Corridor” Push Button Function

By means of the DIP switches, the function of the push button(s) can be set to “Room” or “Corridor”. In the “Room” position, the lighting can always be switched on and off manually, whereas in the “Corridor” position, the detector is used as staircase lighting timer, i.e. the light cannot be switched off manually.

Pulse Function

In order to control existing staircase lighting timers, the switch off delay time can be set to “Pulse”. In this position, the switched output for light generates a short pulse (duration 0.5s) every 10 seconds in case of presence and darkness.

Switched Output for Presence

The switched output Presence is used for HVAC control and room surveillance. The switching behavior of the potential-free contact is only affected by presence but not by brightness. The contact closes in case of presence and opens in case of absence. The contact is not affected by push buttons.

HVAC Control with Switch-on Time Delay

The switch-on delay (0s - 10min) prevents that the system is switched on immediately. The contact does not close before the switch-on time delay has elapsed, provided of course that persons are present all the time. If the contact is closed the switch off delay time (10s - 120min) is restarted at each detection of movement.

Room Surveillance

If the switch-on time delay is set to “Surveillance”, the sensitivity of the switched output for presence is reduced. The contact closes in case of distinct movements only and thus reliably indicates the presence of persons. The switch-off delay time remains active whereas the switch-on time delay is inactive.

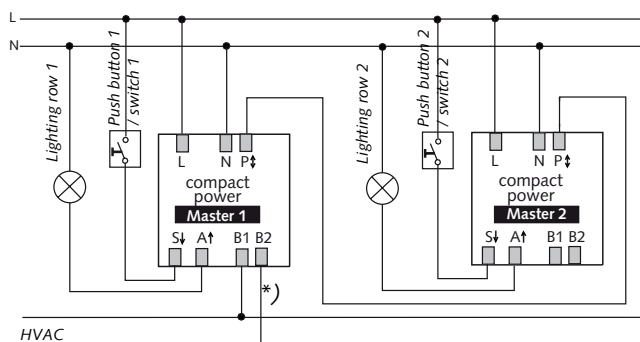
Interconnection

In single unit operation, the compact passage is set up to detect presence and brightness and controls the lighting and HVAC/surveillance by means of its two contacts. If the detection range of one detector is insufficient (e.g. in case of very large corridors) up to 10 detectors can be connected in parallel by interconnecting the P-terminals of the detectors. Depending on the application, a detector is referred to as master or slave. Master and slave are identical devices with different wiring.

“Master-Slave” Parallel Connection

The detector controlling the lighting is always referred to as master. The brightness measurement and the adjustment of all potentiometers is done centrally on the master. Any push buttons are connected to the master only, and the entire load is switched by the master. Any further detectors are referred to as slaves. Their only task is to supply the presence information.

Master-Master Schematic Wiring Diagram for Two Lighting Rows



*) The presence output can be tapped on any master.

Location

Detection Range

The rectangular detection range ensures a safe and simple planning. Because of the virtually horizontal detection of compact passage to both directions, the detection range of tangential (t) movements of persons is different to the range of radial (r) movements towards the detector.

The recommended mounting height is 2m - 3m.

The sensitivity of the detector decreases with increasing mounting height. The detection ranges of multiple detectors should overlap in their fringe zones. Ensure the horizontal installation of the detector.

M'height	radial (r)	tangential (t)
2,0m	16m x 3,5m ± 1m	30m x 3,5m ± 1m
2,5m	18m x 4,0m ± 1m	30m x 4,0m ± 1m
3,0m	20m x 4,5m ± 1m	30m x 4,5m ± 1m
3,5m	20m x 5,0m ± 1m	30m x 5,0m ± 1m

"Master-Master" Parallel Connection (Multiple Lighting Rows)

A parallel connection of several masters is also possible where each master uses its own brightness measurement to control a lighting row. Delay times and brightness threshold are set on each master individually. The switched load is split up between the individual masters, and the presence continues to be detected by all detectors together. The presence output can be tapped on any master.

Brightness Measurement

The compact passage presence detector is equipped with a mixed light measurement. As the mixed light measurement is influenced by artificial light, the brightness for indirect lighting on the site of installation must not exceed 2000Lux (for brightness threshold > 200Lux).

If the brightness threshold value is set to "on", the brightness measurement is deactivated (no influence by brightness desired).

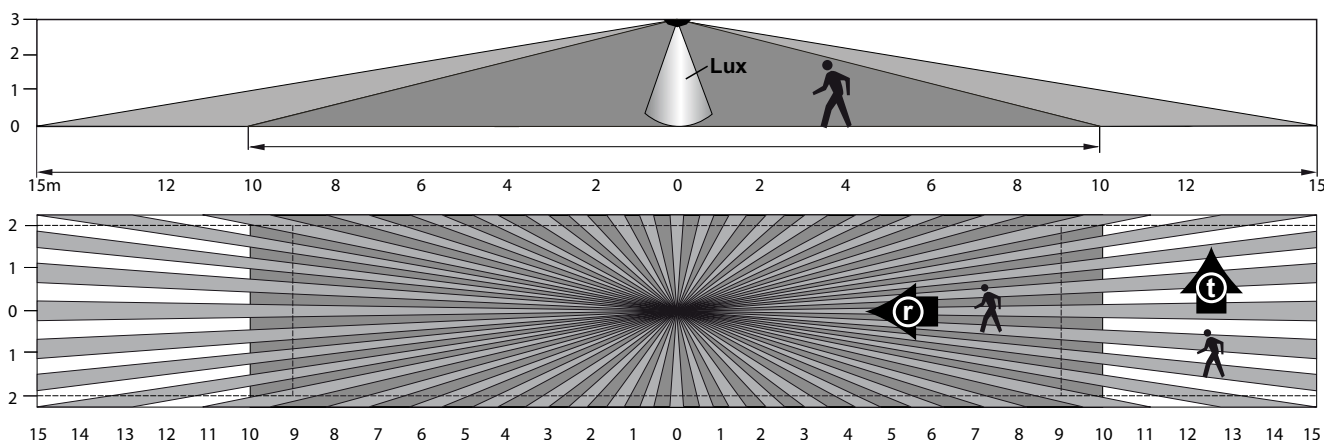
Suitable Lamps

The compact passage presence detector is designed for use with fluorescent lights (FL/PL) as well as halogen/incandescent lights.

The maximum number of electronic ballast that can be controlled is limited due to the high inrush currents. In case of high loads, this can be overcome by using an external protection.

In parallel connection, the load can be split up between multiple detectors. All loads switched must be provided with adequate interference suppression.

Detection Range (Mounting Height = 3.0m)



The detection range in side view (top) and top view (bottom).

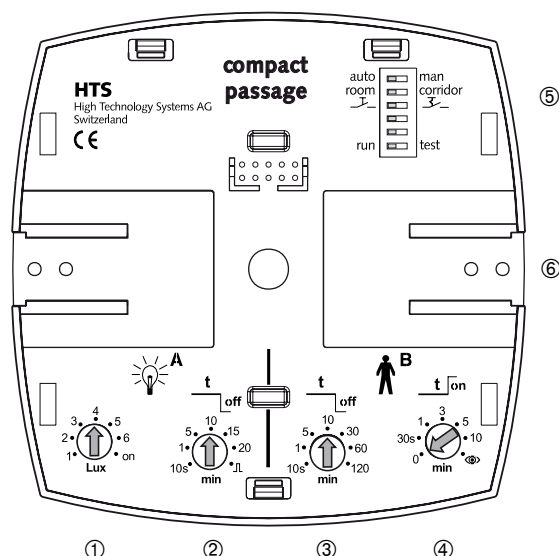
Radial Movements (r):

For movements directly towards the compact passage, the detection is reduced to a limited zone within a distance of 10m max. to the detector.

Tangential Movements (t):

Movements crosswise to compact passage are detected up to a distance of 15m max. to the detector.

Sensor Module - Rear Side



Settings on the compact passage (see figure above)

- ① Brightness threshold (Lux)
- ② Switch off delay for light/ activation of pulse function
- ③ Switch off delay for presence (HVAC/surveillance)
- ④ Switch on delay for HVAC/ activation of room surveillance function

Accessories

QuickSet plus Service Remote Control

For the start-up procedure, the QuickSet plus service remote control is available for the installation personnel or the technical service. It allows convenient remote adjustment of all potentiometer values. Manual adjustment of the potentiometers directly on the device remains possible at all times.

clic User Remote Control

The clic user remote control is available for the user enabling product-spreading, individual switching of up to two lighting groups. The user can choose between two programmable scenes. Adjoining groups can be demarcated from each other.

Surface Frame

A suitable frame for surface mounting is also available.

⑤ DIP switches:

- DIP1 Lighting control: fully/semi-automatic
- DIP2 Push button function: Room/Corridor
- DIP3 Push button/switch control
- DIP6 Operation mode: normal operation/test

⑥ Mechanical safety lock

The mechanical lock serves to secure the sensor module firmly on the power module.

Technical Specifications for Presence Detector compact passage

Sensor module	compact passage
Detection range:	horizontal 360° vertical 160°
Recommended mounting height (Mh)	2.0 - 3.0m
Maximum range	30 x 4 m (Mh. 2.5m) 30 x 5 m (Mh. 3.5m)
Mixed light control Light measurement deactivated	ca. 10 - 1500Lux „on“
Switch off delay for light Short pulse	10sec. - 20min. 0.5sec. „on“ / 10sec. „off“
Switch off delay for presence	10sec. - 120min.
Switch on delay for presence Room surveillance	0sec. - 10min. 👁
Power module	compact power
Mains voltage	230V ±10%, 50Hz
Relay output A for light	Relais, 230V
Nominal voltage	230V ±10%
Max. switching capacity: incandescent lamps, halogen	1400VA 1200W
Max. number of electronic ballasts *) A relay or contactor must be connected in case of more powerful devices	10x (1x58W); 5x (2x58W) 16x (1x36W); 8x (2x36W) 16x (< 36W)

*) Use of T5-FL: When using T5-FL lamps with a comparable wattage, the same number of electronic ballasts may be connected to the detector's switching contact as for the T8-FL. When using the 80W-FL, the number should be halved in comparison to the 58W-FL.

Relay output B for presence	Relay potential-free
Maximum voltage	220V DC / 250V AC
Maximum switching capacity	50W / 50VA
Recommended minimum load	0.5mV / 10mA
Depth Diameter Mounting plate	40mm 48mm 70 x 70mm
Screw terminals	max. 2x 2.5mm ²
Size of concealed housing (for flush-mounting)	Dim. 1, (NIS,PMI)
Ambient temperature	0° - 50°C
Degree of protection	IP 40
Article numbers	
compact passage complete	201 0 090
• Sensor module compact passage	
• Power module compact power	
Surface frame for compact office	907 0 514
Service remote control QuickSet plus	907 0 532
User remote control clic	907 0 515

Declaration of CE conformity

This device complies with the protection regulations of the EMC directives 89/336/EEC, of the Low Voltage directive 73/23/EEC and of the amending directives 92/31/EEC and 93/68/EEC.

