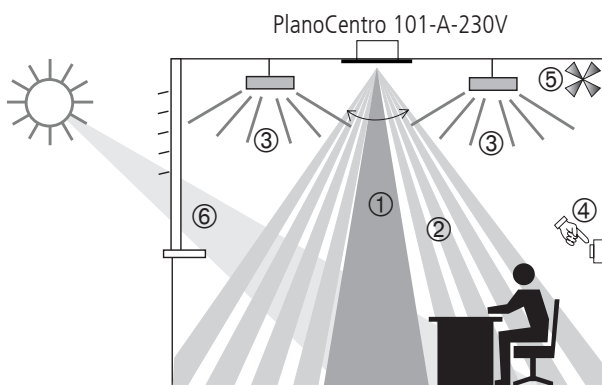
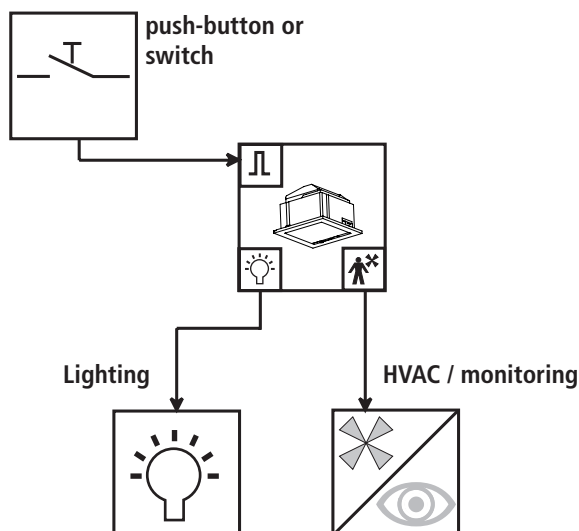


PlanoCentro 101-A-230V presence detector flush mounting



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



PlanoCentro 101-A-230V Product Features

- ◆ Passive infra-red presence detector for ceiling installation and flush-mounting
- ◆ Square 360° detection range (up to 100m² , 10 x 10m) enables reliable and straightforward planning
- ◆ Automatic presence and brightness-dependent control for lighting and HVAC systems
- ◆ Flat design with exchangeable cover frame in a range of shapes, colours and materials
- ◆ Mixed light measurement
- ◆ Suitable for fluorescent lamps, compact fluorescent lamps, halogen, incandescent lamps and LEDs
- ◆ Adjustable sensitivity
- ◆ Can be configured remotely and read out of the parameters
- ◆ 6 defined basic parameter settings directly on device
- ◆ 2 channels; 1 x light, 1 x presence
- ◆ Channel A, light: Relay, 230V
 - Crossover switch
 - Choice of fully or semi-automatic operation
 - Connection option for push-buttons or switch for manual switching with automatic recognition of push-button or switch control
 - Pulse function for staircase light control
 - Reduced switch-off delay time in case of a short presence
- ◆ Channel H, presence: Relay, potential-free
 - e.g. for HVAC control
 - Switch-on delay and switch-off delay time
 - Room monitoring
 - Switch to the functionality like the channel A, light
- ◆ SendoPro management remote control (optional)

Channel A, light

Switching behaviour is controlled by presence and brightness. The switch contact closes when dark and if somebody is present. It opens when sufficient natural light or if no one is present (see section on function modes).

The desired brightness set point value and the minimum switch-off delay time are adjustable. The switch-off delay time adjusts to occupants behaviour through auto-learning. It can increase automatically or fall back to the set minimum time. The switch-off delay time has auto learning facility of between 2 and 30 minutes.

Function mode (fully / semi-automatic)

The PlanoCentro optionally allows fully automatic lighting control for more convenience, or semi-automatic control for better energy-saving results. Lighting can be controlled manually at any time via push-button (or switches) with both function modes. Several push-buttons/switches can be connected to one control input (illuminated push button switches can only be used with neutral conductor connection).

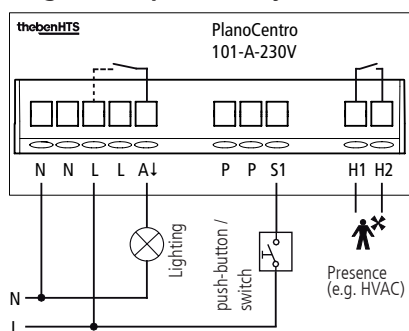
Fully automatic function mode

With "fully automatic" function mode, lighting switches on and off automatically depending on presence and brightness.

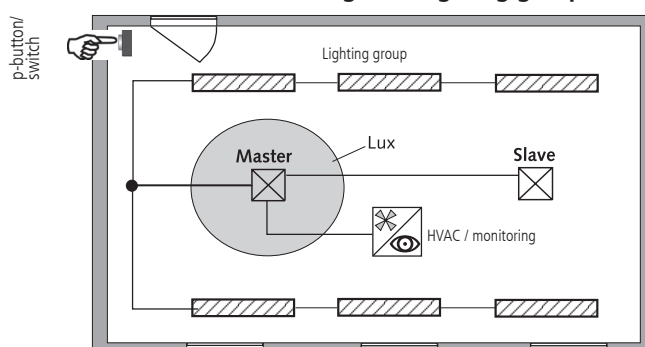
If the light is switched on manually, the light will remain on for at least 30 minutes providing people are present. It will then switch off when there is sufficient brightness. The light will go off after a preset switch-off delay time if the room is vacated.

Lighting can be switched off manually at any time. The light will remain off as long as people are present. If the room is unoccupied for a long time (switch-off delay time has expired) the lighting will switch automatically again.

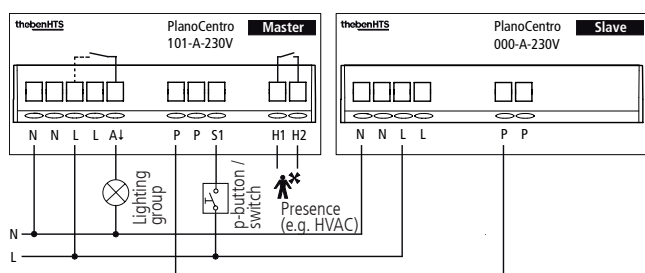
Single unit operation layout



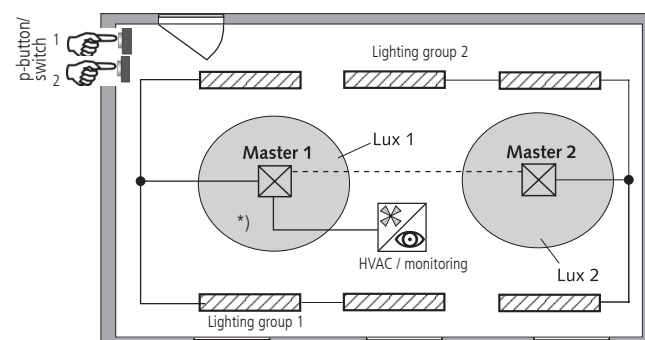
Parallel Master-Slave switching for a lighting group



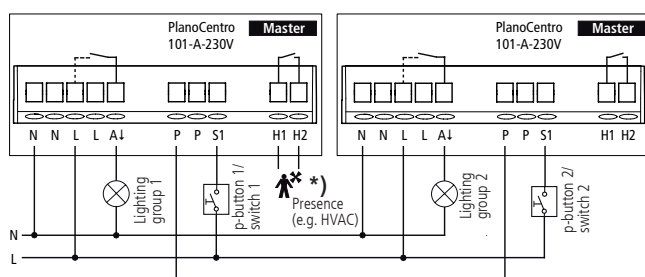
Master-Slave parallel switching layout



Master-Master parallel switching for two lighting groups



Master-Master layout for two lighting groups



*) The presence output can be tapped by any Master.

Semi-automatic function mode

In semi-automatic mode, switching on must always be performed manually: switching off occurs automatically. Otherwise, the presence detector operates as in fully automatic mode.

Staircase light function

The staircase light function can be set to On or Off using the Sento-Pro management remote control. Lighting can be switched on and off manually at any time in the 'Off' setting. The detector operates as staircase light control in the 'On' setting. Manual switch off is no longer possible.

Pulse function

The switch-off delay time can be set to pulse for controlling existing staircase light control. The light output produces a pulse if people are present or it is dark.

Channel H, presence

Channel H, presence, is used for HVAC control or room monitoring. The switching behaviour of the floating contact is only influenced by presence and not by brightness. If the contact is closed, the switch-off delay time will be restarted at every movement. The contact closes if people are present and opens when the room is vacated. Push-buttons or switches do not influence the contact.

Switch-on delay

The switch-on delay prevents instantaneous switch on. The contact only closes when the switch-on delay is completed providing people are present all the time.

Switch-off delay time

The switch-off delay time enables delayed switching off of HVAC devices and system after the room is vacated.

Room monitoring

If the switch-on delay is set to monitoring this reduces the sensitivity of the presence switching output. The contact closes with significant movement and indicates the presence of people with a high degree of certainty. The switch-off delay time remains active. The switch-on delay is inactive.

Interconnection

In single unit operation, PlanoCentro detects presence and brightness and its two channels control lighting and HVAC/monitoring. If the detection area covered by one detector is insufficient (larger rooms), then up to 10 detectors can be operated in parallel. The detectors are connected to each other via P-terminals. Depending on the application, the devices are designated as Master or Slave. A device without the light and presence channels is available for the Slave application.

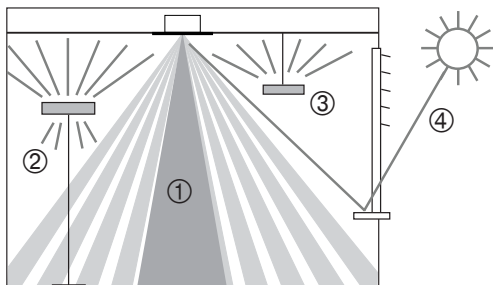
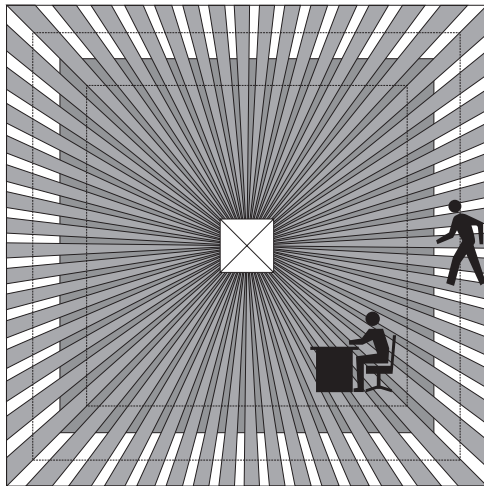
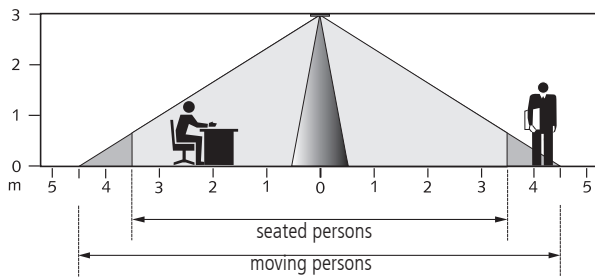
Master/slave parallel connection

A detector is designated as a Master if it switches lighting. Brightness measurement and the setting of all parameters is only performed centrally with the Master. Push-button/switch are only lead to the Master. The Master switches the load. All other detectors are designated as Slaves. They only provide presence information.

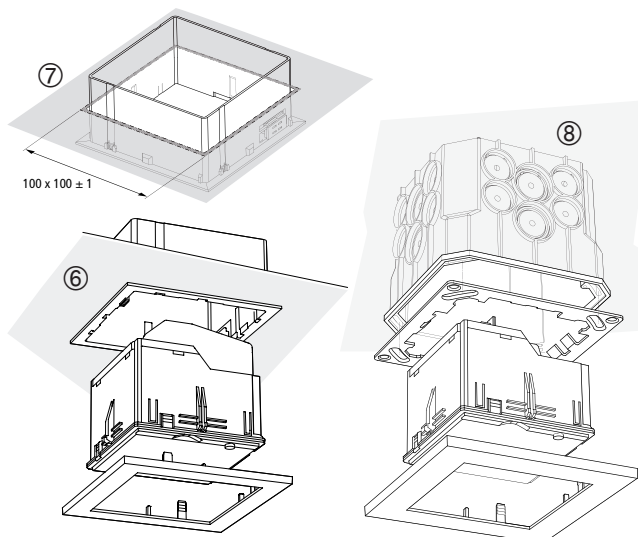
Master-Master parallel connection (for several lighting groups)

Several Masters can be used in parallel connection setup. Each master controls its lighting group according to its own brightness measurements. Delay times and brightness threshold are set individually on each Master. The switching load is allocated to the individual Masters. Presence continues to be detected by all the detectors.

Detection range (mounting height 3.0 m)



- ① Mixed light measurement
- ② Artificial light
- ③ indirect lighting
- ④ Available daylight



Placement

Detection range

The square detection area guarantees accurate and simple planning. A whole room can be covered with parallel connections. Note that seated and moving persons can be detected in differently-sized areas.

The recommended mounting height is 2.5 - 3.5 m.

The sensitivity of the detector reduces with higher mounting heights. The detection areas of several detectors should meet in the marginal zones.

M.height	seated persons	moving persons
2.0 m	20 m ² 4.5m x 4.5m	36 m ² 6,0m x 6,0m ± 0,5m
2.5 m	36 m ² 6.0m x 6.0m	64 m ² 8,0m x 8,0m ± 0,5m
3.0 m	49 m ² 7.0m x 7.0m	81 m ² 9,0m x 9,0m ± 1,0m
3.5 m	64 m ² 8.0m x 8.0m	100 m ² 10,0m x 10,0m ± 1,0m

Seated persons

The presence detector is very sensitive and reacts to the slightest movements. This is particularly required for office areas where people are seated for a long period of time. The details relate to the detection area for movements at table height (approx. 0.80 m).

Moving persons

This area is for motion detection such as walking.

Brightness measurement

PlanoCentro measures artificial and daylight that is reflected directly below the detector. The installation site is a reference point for the lighting level. Brightness measurement can be adapted to the conditions in a room with the room correction factor.

With indirect lighting, the artificial light at the detector installation site must not exceed 2,000 lux (with brightness threshold >200 lux). Direct light influences the light measurement.

If the brightness set point value is set to On, channel A light only switches on dependent on presence (the brightness measurement is switched off).

Suitable light sources

PlanoCentro is designed to operate fluorescent lamps, compact fluorescent lamps, halogen, incandescent lamps and LEDs.

The maximum number of switchable lights is restricted due to the high switch-on peaks of the EBs. The use of an external contactor helps with large loads. Parallel connection enables allocation of load to several Masters. All switched loads must be properly suppressed.

Installation types

The PlanoCentro is available in installation sets for ceiling mounting and flush-mounted installation. The housing conforms with the fire safety standard EN 60670-1 (glow wire tested 850°).

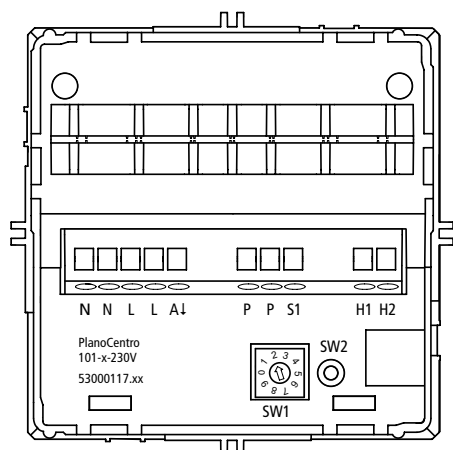
False ceiling installation (false ceilings) ⑥

The false ceiling installation is completed using a supplied installation frame into a ceiling cut out of 100 x 100 mm ⑦

Flush-mounted installation (set into concrete ceiling) ⑧

The PlanoCentro fits in the Agro/Kaiser flush-mounted junction box/ connection box 115 x 115 x 100 mm. The concrete installation of the junction box has to be done at the time of the building construction.

Back of sensor part



Settings on PlanoCentro (figure above)

- SW1 Rotary switch for basic settings
SW2 Push-button for presence test mode and reset

Technical data

Presence detector		PlanoCentro 101-A-230V
detection angle	horizontal	360°
Recommended installation height		2.5 - 3.5 m
Detection range	3.5m installation height	100 m² (10 x 10 m)
Light measurement		Mixed light
Brightness range		approx. 5 - 2000 Lux
Light measurement deactivated		Measurement off
Mains voltage		230V ± 10%, 50Hz
Power consumption		0.8 W
P-button pulse length in automatic mode		< 70ms
Parallel switching max. number of presence detectors		10
Connection type		Screwless terminals, 1x 2.5 mm²
Strip length		10 - 11 mm
Receiving communication data		IR
sending data		Radio 868 MHz
Ambient temperature		0° - +50°C
Storage temperature		-25° - +60°C
Protection rating		IP 20 IP 40 (when fitted)
Channel A, light		
Type of contact		Relay 230V / 10A
Upstream protection device		13 A
Maximum switching capacity	cos φ 1 resistive	2300 W
Maximum switching capacity	cos φ 0.5	1150 VA
Maximum switching capacity	LED	see respective manufacturer
	LED < 2 W	60 W
	LED 2 - 8 W	180 W
	LED > 8 W	200 W
Electronic transformer for low-voltage incandescent lamps		1150 VA
Iron core transformer for extra low-voltage incandescent lamps		1150 VA
"Light" switch-off delay time		10 sec. - 60 min.
Short pulse		0.5 sec. "on" / 9.5 sec. "off"
Maximum number EB T5/T8		20x 54/58W
A relay or contactor is to be provided for bigger outputs. The number is to be halved when using the 80W-FL in comparison to the 58W-FL.		25x 35/36W 10x 2x 54/58W 15x 2x 35/36W

PlanoCover cover

A wide range of designs (colour, material and shape) allow the flat PlanoCentro presence detector to be harmoniously integrated in great number of architectural styles.

PlanoCovers are available in the standard colours of white, black or silver.

Individual covers in various shapes, colours and materials are available to suit the individual ambience of rooms and open up a wide range of opportunities to provide a particular look.

Accessories:

Management remote control SendoPro 868-A

The SendoPro management remote control is available for start-up, configuration and service. All parameters are easy to set remotely.

Channel H, presence	
Type of contact	Relay, potential-free, basic insulation
Maximum voltage	220V DC / 230V AC
Maximum switching capacity	60 W / 62.5 VA
Recommended minimum load	10mV / 10mA
"Presence" switch-off delay time	10 sec. - 120 min.
"Presence" switch-on delay	0 sec. - 10 min.
Room monitoring	
Ceiling installation (false ceilings)	
Installation type	PlanoFix E installation frame
Ceiling cut out	100 x 100 mm ± 1 mm
Ceiling strength	up to approx. 26 mm
Flush-mounted installation (concrete ceiling)	
Installation type	PlanoFix U in flush-mounted junction box
Flush-mounted junction box, Agro/Kaiser	115 x 115 x 100 mm 9908.01/1298-07
PlanoFix U (Assembly plate)	Metal 118 x 118 mm
Item numbers	
PlanoCentro 101-EWH, false ceiling installation set, white	203 0 102
PlanoCentro 101-UWH, flush-mounted installation set, white (set into concrete ceiling)	203 0 202
PlanoCentro 101-A-230V (spare part)	203 0 000
Management remote control SendoPro 868-A	907 0 675
PlanoCover EWH-112x112, white	907 0 677
PlanoCover EBK-112x112, black	907 0 678
PlanoCover ESR-112x112, silver	907 0 679
PlanoCover UWH-123x123, white	907 0 680
PlanoCover UBK-123x123, black	907 0 681
PlanoCover USR-123x123, silver	907 0 682

CE declaration of conformity

This device complies with the protection regulations of the EMC directives 2014/30/EU and of the Low Voltage directive 2014/35/EU.

