thebenHTS

307065

EN Motion detector

theMova S360-100 DE WH
1030560
theMova S360-100 DE GR
1030561

theMova S360-100 AP WH
1030550
theMova S360-100 AP GR
1030551

1. Product characteristics 4
2. Safety 5
3. Intended use 5
4. Function 6
Functional description 6
Channel A light 6
5. Detection area 7
Brightness measurement 8
6. Installation 10

Ceiling installation 10
Surface mount on ceiling 11
7. Switching 12
Individual switching 13
8. Settings 13
Parameters via remote control 13
Control commands via remote control 15
Brightness switching value Channel A light 16
Time delay channel A light 17
Detection sensitivity 18
Group address channel A light 18
LED display motion 19
Factory settings 19

9. Start-up 20
Switching behaviour 20
Test detection area 21
10. Technical data 21
Product overview 23
Troubleshooting 24
LED display 25
Guarantee 25
Dimensional drawings 27
11. Accessories 28
12. Contact 29

1. Product characteristics

- Passive infra-red motion detector for ceiling installation
- Circular detection area 360°, up to Ø 9 m (64 m^2)
- Automatic motion and brightness-dependent control for lighting
- Mixed light measurement
- Channel A light: relay, 230 V
- Operation as fully automatic device
- Brightness switching value configurable, teach-in function
- Pulse function for staircase light time switch
- Time delay configurable
- Detection sensitivity configurable
- Ready for immediate use due to factory presetting
- Test mode for checking function and detection area
- Installation in false ceilings with springs, type DE
- Surface mount on ceiling, type AP
- User remote control „theSenda S" (option)
- Management remote control „SendoPro" (optional)
- Service remote control „theSendaP" (option)

2. Safety

⚠ WARNING

Danger of death through electric shock or fire!

➢ Installation should only be carried out by a professional electrician!

- Work on electrical systems may only be carried out by electricians or by instructed persons under the leadership and supervision of an electrician in accordance with the technical regulations applying to electricity!
- Comply with the country-specific safety regulations for work on electrical systems! Ensure absence of voltage in the cable before installation!
- The device is maintenance-free. If the device is opened or penetrated with any objects the guarantee lapses.

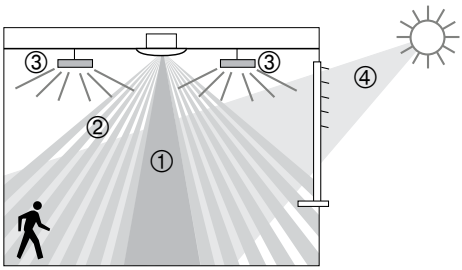
3. Intended use

The motion detector is intended for interior installation. The motion detector is exclusively intended for the use as contractually agreed between the manufacturer and the user. Any other use is considered to be unacceptable. The manufacturer does not accept liability for any resulting damages.

4. Function

The motion detector is primarily used in passage ways such as corridors, stairs, toilets, basements and garages for easy and energy-efficient control of lighting. The switch contact „light" switches lighting on with presence and insufficient brightness, and off with absence.

Functional description



① Mixed light measurement
② Motion detection
③ Artificial light
④ Incident daylight

Channel A light

Switching response is controlled by presence and ambient brightness. The switch contact for channel

A light closes during darkness and when someone is present. It opens with a delay once the room is vacated after the set time delay.

Time delay

The time delay enables delayed switching off of lighting after the room is vacated. The time delay is adjustable in a range of 10 s to 60 min.

Fully automatic

Lighting control of the motion detector operates fully automatically for increased comfort. In „fully automatic" the lights switch on and off automatically.

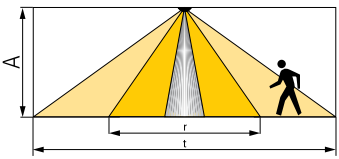
Pulse function

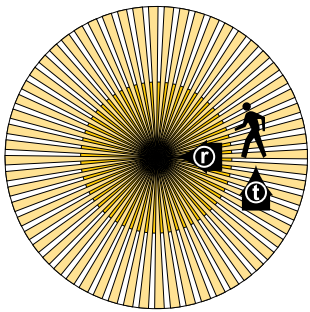
Time delay can be set to pulse for controlling existing staircase light timer switch. To do so, the light output produces every 10 seconds a pulse of 0.5 seconds duration if people are present or it is dark.

5. Detection area

The circular detection area of theMova S motion detector covers an average detection area. Note that moving persons can be detected in differently-sized areas. The recommended installation height is 2.0 m – 4.0 m. As installation height increases, the sensitivity of the presence detector decreases. The

extent and distance between the active and passive zones of the motion detector also increases. The detection range is reduced as temperatures increase.



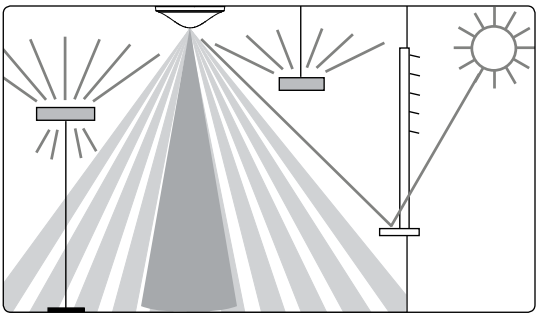


Installation height (A)	Moving persons Frontal (r)		Moving persons Across (t)	
2.0 m	5 m2	Ø 2.5 m	38 m2	Ø 7 m
2.5 m	7 m2	Ø 3 m	38 m2	Ø 7 m
3.0 m	13 m2	Ø 4 m	50 m2	Ø 8 m
3.5 m	13 m2	Ø 4 m	50 m2	Ø 8 m
4.0 m	13 m2	Ø 4 m	64 m2	Ø 9 m

Brightness measurement

The motion detector measures the ambient brightness below the detector at an opening angle approx. 120°. The installation site is a reference point for the lighting level. The light measurement

is switched off when the light relay is switched on. If the brightness measurement is deactivated, the channel A light only switches depending on the presence (brightness switching value set to „measurement off" via the remote control).

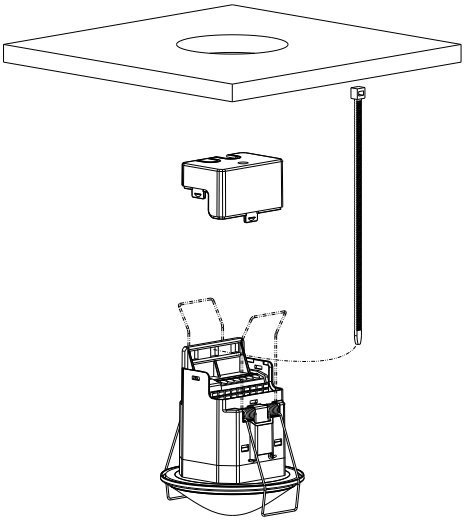


Suitable lamps loads

The motion detector is designed for the operation of fluorescent lamps, compact fluorescent lamps, halogen / incandescent lamps and LEDs. The maximum number of switchable lights is restricted due to the high inrush current levels of the EBs and LED drivers. The use of an external contactor helps with large loads. All switched loads must be properly suppressed.

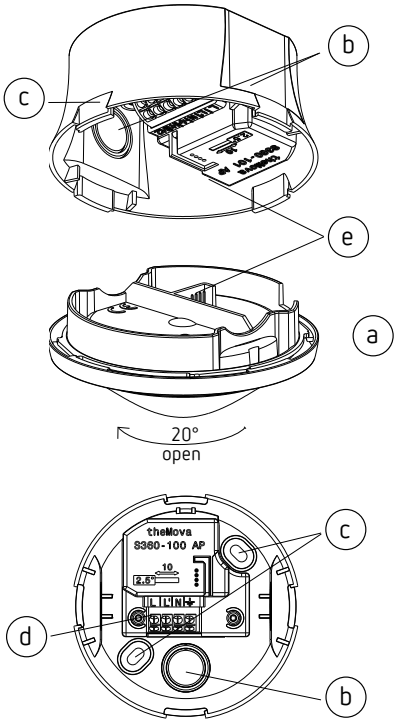
6. Installation

Ceiling installation



Installation in false ceilings for ceiling thicknesses of 0.5 mm to 3 cm. The diameter of ceiling cutouts must be between 62 mm and 70 mm. The cable strain relief is with using a cable tie (width: 3.5 – 4.8 mm).
The detector requires a clear line of sight to people. The installation height must not be less than 1.7 m and should not exceed 4 m.

Surface mount on ceiling

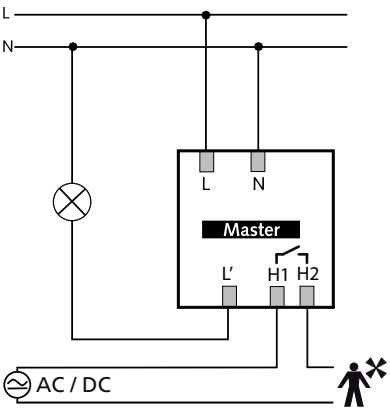


- Rotate sensor assembly approx. 20° anticlockwise until it clicks.
- Detach sensor assembly.
- Open knock-outs as needed to feed wires through.

- Mount power assembly on ceiling via the fixing holes.
- Connect wiring according to markings on push-in terminals; conductor cross-section 0.25 – 2.5 mm .
- Attach sensor assembly (a), taking care to insert plug-in connector (e)

7. Switching

The motion detectors are operated as a master in individual circuits. With parallel connection of the light outputs (L'), it must be ensured that all detectors connected in parallel are connected to the same phase.



Individual switching

In individual switching, the motion detector as master detects presence and brightness and controls lighting.

8. Settings

Motion detector theMova S does not have a setting potentiometer. The motion detector is supplied with a basic setting ready for operation. The reference values for the basic settings are optimised for typical applications. The „SendroPro 868-A" management remote control and „theSenda P" service remote control are optionally available for start-up. They allow the remote adjustment of the setting values.

Parameters via remote control

The following parameters can be queried or changed via the remote control for support during installation as well as servicing:

Parameter	Description	Can be queried Sendo-Pro 868-A	Can be changed Sendo-Pro 868-A	Can be changed the-Senda P
Brightness switching value Channel A light	Value range in lux	x	x	x
	Measurement off	x	x	
Brightness actual value channel A light	Value range in lux	X		
Lighting time delay	Value ranges in seconds and minutes		x	x
	Pulse		x	x
Detection sensitivity (PIR)	Value range in levels		x	x
Group address channel A light	All / I / II / III		x	
LED display motion	Off / On		x	

The parameters are sent to the motion detector with the „SendoPro 868-A" management remote control or with „theSenda P" installation remote control via infra-red. Changed parameters are immediately applied and used by the detector.

With the „SendoPro 868-A" management remote control, parameters can be queried by sending values level-by-level to the detector. If the sent values are below the set parameter, the LED illuminates briefly. If the sent values are equal or above the set parameter, the LED flickers for 2 seconds.

Control commands via remote control

Control command	Description	Can be triggered SendoPro 868-A	Can be triggered the-Senda P
Teach-in channel A light	The currently measured brightness value will be accepted as the brightness switching value. Values outside the permitted range will automatically be set to the appropriate limit value.	x	x
Switch lights on / off	Lighting group can be switched on and off.	x	x
Test detection area	On / Off	x	x
Restart	Restart detector	x	x

Control command	Description	Can be triggered SendoPro 868-A	Can be trig-gered the-Senda P
Factory regulations	Set all parameters and settings to factory setting.	x	

Brightness switching value Channel A light

The brightness switching value defines the minimum desired brightness. The current prevailing brightness is measured below the motion detector. If the prevailing brightness is below the switching value, the light switches on as soon as motion is detected.

Value range

Lux values with "SendoPro 868-A" management remote control The "theSenda P" installation remote control offers the following values (The currently measured brightness value (Lux) can be adopted with the "SendoPro 868-A" management remote control, with the teach-in control command or with the "theSenda P" installation remote control via the teach-in button.) Values outside the permitted range will automatically be set to the appropriate limit value.	30 - 3000 Lux 30, 300, 500, 800 lux

- Deactivating the brightness measurement (the brightness has no influence) Channel A lighting always switches with presence/absence. "SendoPro 868-A" Management remote control, "theSenda P" installation remote control	Measurement off Button ☼

Time delay channel A light

Value range

Adjustable values with "SendoPro 868-A" management remote control In the "theSenda P" installation remote control, the following values are available	10 s - 60 min 10 s, 30 s, 60 s, 2 min, 10 min, 20 min, 60 min

Control for staircase light timer switch (0.5 s "on" / 10 s "off") "SendoPro 868-A" "theSenda P"	 Pulse Button ⎍1

Detection sensitivity

The detector has 5 sensitivity increments. The basic setting is the middle level (3).
If test detection area mode is selected, the set sensitivity increment is not changed.
With the „SendoPro 868-A" management remote control, levels 1 to 5 can be selected and sent to the detector.
With the „theSenda P" installation remote control, the sensitivity can be reduced or increased by one level with every button press.

Level	Sensitivity
1	very insensitive
2	insensitive
3	Standard
4	sensitive
5	very sensitive

Group address channel A light

This parameter is applied when using the „theSenda P" user remote control.

A group address can be assigned to the channel A light.
The „SendoPro 868-A" or „theSenda S" can be used to program the group addresses in the detector.

Group address value range

Adjustable values "SendoPro 868-A"	I, II , III , All
Adjustable values "theSenda S"	I, II

LED display motion

The motion detection can be displayed via the LED.

Value range

No display of motion detection.	Off
The LED switches on when motion is detected, otherwise switches off.	On

Adjustment possible only with „SendoPro 868-A".

Factory settings

The theMova P360-100 motion detector is supplied with the following parameter values:

Parameter	Value
Brightness switching value Channel A light	300 lux
Lighting time delay	10 min

Parameter	Value
Detection sensitivity (PIR)	Stage 3
Group address channel A light	T
LED display motion	Off

9. Start-up

Switching behaviour

Every time the power supply is switched on, the motion detector first runs through a start-up phase of 30 s, and then switches to normal operation. A LED displays the current status:

1. Start-up phase (30 seconds)

- The red LED flashes every second, the switch contact is closed (light on). The wiring is therefore also checked automatically.
- The detector does not react to remote control commands.
- When no one is present both contacts open after 30 seconds.

2. Operation

The detector is ready for operation (LED off).

Test detection area

The test mode detection area is used for checking the detection area. The test mode detection area can be activated with the „Sendo-Pro 868-A" management remote control and with the „the-Senda P" installation remote control.

Setting test mode detection area with remote control

- The detector goes directly into test mode when the test mode is set via the remote control:
  - Every movement is indicated by the LED.
  - The light switch contact closes upon motion.
  - When no one is present the light switch contact opens after 10 seconds.
  - Brightness measurement deactivates, detector does not react to brightness.
  - Teach-in cannot be activated in test mode.
- Test mode ends automatically after 10 mins. The detector performs a new start (see switch-on behaviour).

10. Technical data

Operating voltage	230 V AC +- 10 %
Frequency	50 Hz
Upstream protection device:	13 A

Power consumption	approx. 0.5 W
Type of installation	Ceiling installation
Recommended installation height	2.0 – 4.0 m
Minimum height	> 1.7 m
Detection area horizontal vertical	360° 120°
Maximum range	Ø 4 m (Mh. 3 m) / 13 m^2 radially moving Ø 8 m (Mh. 3 m) / 50 m^2 tangentially moving
Setting range brightness switching value	30 – 3000 Lux
Lighting time delay A light	10 s – 60 min / Pulse
Channel A light	Relay 230 V / 10 A, µ-contact
Max. switching capacity cos φ = 1 resistive	2300 W
Max. switching capacity cos φ = 0.5	1150 VA
Max. switching capacity LED Guide values	see manufacturer concerning cos φ < 2 W : 25 W / > 2 W : 70 W
Guidance value max. inrush current level	400 A / 200 µs
Maximum number EBs T5/T8	10 x 54/58 W, 16 x 35/36 W 5 x 2 x 54/58 W 8x 2x 35/36 W
Connection type	Screwless terminals
Max. cable cross-section	max. 2.5 mm^2

Protection rating: theMova S360-100 DE Protection rating: theMova S360-100 AP	IP 20 IP 40 in installed state IP 54
Ambient temperature	-15 °C to +50 °C
CE Declaration of Conformity	This device conforms to the safety regulations of the EMC directive 2004/108/EC and of NSR 2006/95/EC.

Product overview

Type of installation	Channel	Operating voltage	Colour	Type	Item No.
Ceiling installation	Light	230 V AC	White	theMova S360 -100 DE WH	1030560
Ceiling installation	Light	230 V AC	Grey	theMova S360 -100 DE GR	1030561
Ceiling installation	Light	230 V AC	Special colour in accordance with customer information	theMova S360 -100 DE SF	1030563
Ceiling installation	Light	230 V AC	White	theMova S360 -100 AP WH	1030550

Ceiling installation	Light	230 V AC	Grey	theMova S360 -100 AP GR	1030551
Ceiling installation	Light	230 V AC	Special colour in accordance with customer information	theMova S360 -100 AP SF	1030553

Troubleshooting

Fault	Cause
Light does not switch on if presence is detected and in darkness	Lux value is set too low; light was switched off via theSenda S; person not within detection area; obstruction(s) interrupting detection; time delay set too short
Light does not switch off and/or light switches on spontaneously when no one is present	Wait for time delay; Thermal sources of interference in the detection area: fan heaters, incandescent lamps/halogen spotlights, moving objects (e.g. curtains hanging in an open windows); Load (EBs, relays) not cleared
Error flashing (4 x per second)	Error in self-test; Device not properly functional!

LED display

LED	Description
Blinking in 1 second cycle	The motion detector is in the start-up phase.
Flickering for 2 s	The command sent from the remote control via infrared was accepted by the motion detector.
Lights up briefly	The command sent from the remote control via infrared was rejected by the motion detector. The command is not valid. Check the detector type or parameter selected in the "SendoPro".
Fast blinking	Error blinking; The motion detector has found an error.
Lights or flickers irregularly	The motion detector is in detection area test mode or "LED display movement" is activated. The LED displays detection of movement.

Guarantee

ThebenHTS motion detectors are manufactured with the utmost care and using state-of-the-art technology and are quality-tested. Theben HTS AG therefore guarantees perfect operation when used correctly. Should a fault occur, however, Theben HTS AG will fulfil the guarantee within the scope of the general terms and conditions.
Please note in particular:

- that the guarantee period lasts 24 months from the date of manufacture.
- that the guarantee is invalidated if you, or a third party, make changes or undertake repairs to the devices.
- that, insofar as the motion detectors are connected to a software-controlled system, the guarantee for this connection is only valid when the indicated interface specification is complied with.

We undertake to repair or place as quickly as possible all components of the delivered device that have become defective or unusable through demonstrably poor material, faulty construction or incomplete delivery up to the end of the guarantee period.

Returns

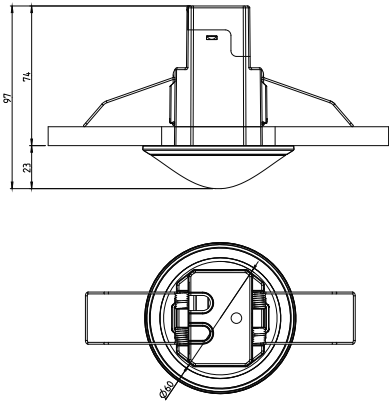
In the event of a guarantee claim, please return the device to the relevant dealer together with the delivery note and a brief description of the fault.

Industrial property rights

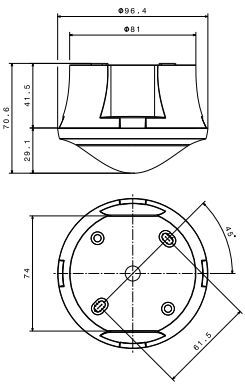
The design as well as hardware and software of these devices are protected by copyright.

Dimensional drawings

theMova S360-100 DE



theMova S360-100 AP



11. Accessories

SendoPro 868-A
Item No: 9070675
Details > www.theben.de

theSenda S
Item No: 9070911
Details > www.theben.de

theSenda P
Item No: 9070910
Details > www.theben.de

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