Presence and motion detectors

# Switching and dimming light automatically



Clever sein. Kopp einschalten.



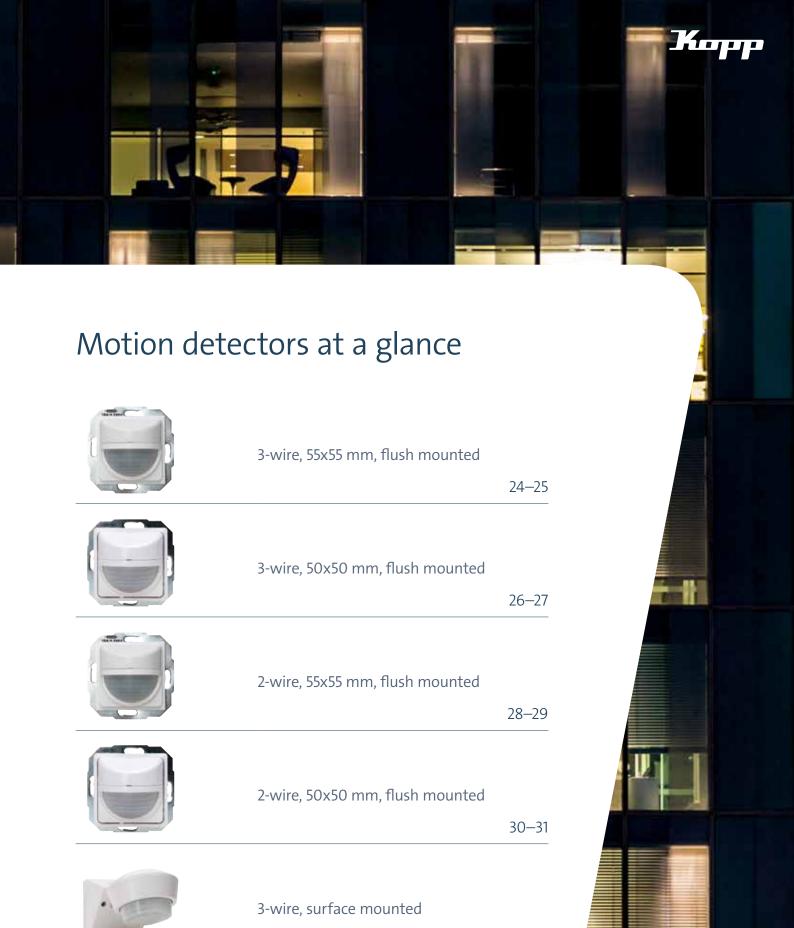
# **Heinrich Kopp GmbH** – a leading producer of electrical installation materials.

With the development and production of innovative smart home solutions and a broad range of switch programmes with high design standards, Kopp offers a large product portfolio for electrical installations in the specialist trade and DIY sector. Most of our products are manufactured at our own production facility in Germany. In addition, the company manufactures customised solutions for industrial customers. Kopp is part of the strong Alfanar Group, an internationally active group with a high level of expertise in the area of electrical engineering.



# Presence detectors at a glance





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# Automated switching and dimming of light

In today's world, the issues of climate and environmental protection, as well as saving energy costs, are more important than ever. In particular, there is a growing desire for intelligent and autonomous solutions in the area of energy efficiency in buildings. In the case of automatic lighting control, for example in offices, sanitary areas, stairwells and corridors, there is great potential for energy savings while at the same time increasing comfort.

With presence detectors from Kopp, the lighting can be switched intelligently and automatically depending on the ambient brightness and the presence of people. Built-in infrared sensors register heat radiation when a person enters the active detection area and turns the connected lighting on. Furthermore, active light measurement ensures that the lighting remains off or is switched off automatically as soon as there is sufficient daylight in the detection area.



### **Presence detectors DALI-2**



The DALI-2-certified presence detectors with integrated DALI application controller are used to control digital, dimmable ballasts. DALI stands for "Digital Addressable Lighting Interface", and is a cross-manufacturer interface used for energy-efficient lighting control. The Kopp DALI-2 presence detectors work via the broadcast method. Corresponding electronic ballasts for the lamps are controlled together. The detection ranges are 12 m and 30 m and can be extended using standard slave devices. They are ceiling or surface mounted.

DALI-2 presence detectors can be adjusted using an app (iOS, Android).

- Semi- and fully-automatic operation
- · Operation with constant light control or as switching output
- Features standby function
- Adjustable light switch-on and switch-off speed



#### Kopp-DALI-App

- Setting the presence detectors is simple and reliable using the Kopp-DALI-App.
- Communication via Bluetooth®











# Presence detectors with switching output

If the light dimming function is not required, presence detectors with switching output are used — with either one or two channels (switching outputs). For presence detectors with two outputs, one output is used for switching the light and the other for switching the heating, air conditioning or ventilation (HVAC) as required.

Presence detectors with additionally integrated acoustic sensors are ideal for applications in sanitary areas, for example in toilet cubicles. These presence detectors with either one or two channels (light + HVAC) have a built-in microphone. The acoustic sensor is activated if movement has been detected first. The light can be switched on again acoustically within 8 seconds after the lag time has elapsed.

Presence detectors with switching output also have detection ranges of 12 m and 30 m and are designed for ceiling installation or surface mounting. The detection ranges can be extended using slave devices.





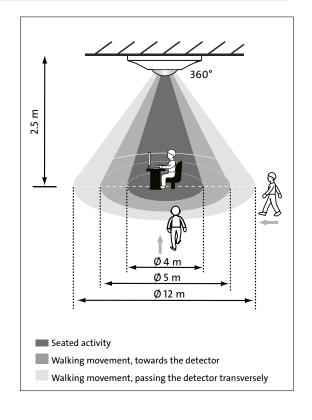
### Presence detector 1-channel



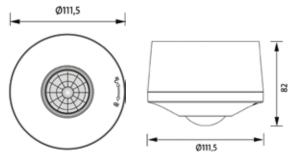
Presence detector **12 m**, ceiling installation or surface mounting, with or without additional acoustic sensor (microphone), NO contact (Normally Open), **master** 

Ceiling mounting, master with acoustics	PM360-DE-12-A-1-ws	827800009
Surface mounted, master with acoustics	PM360-AP-12-A-1-ws	827801000
Ceiling mounting, master without acoustics	PM360-DE-12-M-1-ws	827802001
Surface mounted, master without acoustics	PM360-AP-12-M-1-ws	827803002

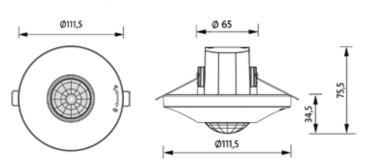
Technical Data:	
Detection range	12 m
Angle of detection	360°
Nominal voltage, frequency	230 V~, 50 Hz
Standby power	approx. 0.5 W
Number of channels	1
Sensor type	passiv infrared and microphone
Mounting height	2.5 m (min. 2 m-max. 4 m)
Detection area	12 m
Presence range	4 m
Remote controllable	yes
Calibration/warm-up time	approx. 60 s
Operating temperature	-20 +50°C
Channel potential-free	no
Switching current	10 A (to 230 V AC, cosφ=1)
Incandescent lamps	2,000 W
HV- halogen lamps	1,000 W
Fluorescent lamps	900 VA (100 μF)
Energy-saving lamps	600 VA
LED- lamps	400 W/VA
Lag time	30 s - 30 min
Pulse output	yes, approx. 1s
Response brightness	finitely adjustable, 10–2,000 Lux
Teach function	yes
Microphone setting	finitely adjustable, 74–61 dB; off



#### PM360-AP-12-A-1-ws / PM360-AP-12-M-1-ws



#### PM360-DE-12-A-1-ws / PM360-DE-12-M-1-ws



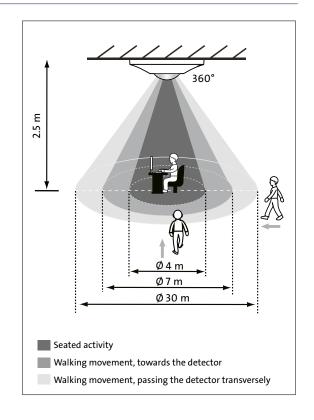




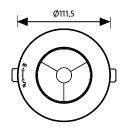
Presence detector **30 m,** ceiling installation or surface mounting, NO contact (Normally Open), **master 1-channel** 

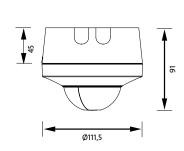
Ceiling mounting, master	PM360-DE-30-M-1-ws	827806005
Surface mounted, master	PM360-AP-30-M-1-ws	827807006

Technical Data:	
Detection range	30 m
Angle of detection	360°
Nominal voltage, frequency	230 V~, 50 Hz
Standby power	approx. 0.5 W
Number of channels	1
Sensor type	passiv infrared
Mounting height	2.5 m (min. 2 m – max. 3 m)
Detection area	30 m
Presence range	2 m
Remote controllable	yes
Calibration/warm-up time	approx. 60 s
Operating temperature	-20 +50°C
Channel potential-free	no
Switching current	10 A (to 230 V AC, cosφ=1)
Incandescent lamps	2,000 W
HV- halogen lamps	1,000 W
Fluorescent lamps	900 VA (100 μF)
Energy-saving lamps	600 VA
LED- lamps	400 W/VA
Lag time	30 s - 30 min
Pulse output	yes, approx. 1 s
Response brightness	finitely adjustable, 10–2,000 Lux
Teach function	yes
Microphone setting	finitely adjustable, 74–61 dB; off

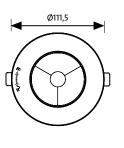


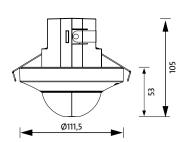
#### PM360-AP-30-M-1-ws





#### PM360-DE-30-M-1-ws





### Presence detector 1-channel + HVAC

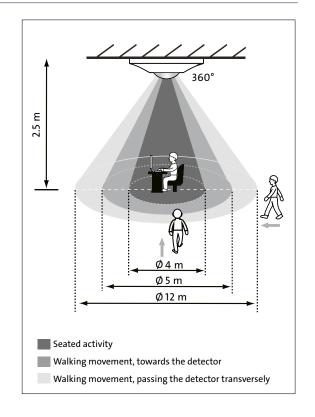


Presence detector **12 m,** ceiling installation or surface mounting, with or without additional acoustic sensor (microphone), NO contact (Normally Open), **master 1-channel + HVAC** 

Ceiling mounting, master with acoustics	PM360-DE-12-A-2-ws	827900002
Surface mounted, master with acoustics	PM360-AP-12-A-2-ws	827901003
Ceiling mounting, master without acoustics	PM360-DE-12-M-2-ws	827902004
Surface mounted, master without acoustics	PM360-AP-12-M-2-ws	827903005

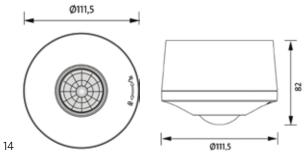
Technical Data:	
Detection range	12 m
Angle of detection	360°
Nominal voltage, frequency	230 V~, 50 Hz
Standby power	approx. 0.5 W
Number of channels	2
Sensor type	passiv infrared and microphone
Mounting height	2.5 m (min. 2 m – max. 4 m)
Detection area	12 m
Presence range	4 m
Remote controllable	yes
Calibration/warm-up time	approx. 60 s
Operating temperature	-20 +50°C
Channel 1 (light source)	
Channel potential-free	no
Switching current	10 A (to 230 V AC, cosφ=1)
Incandescent lamps	2,000 W
HV- halogen lamps	1,000 W
Fluorescent lamps	900 VA (100 μF)
Energy-saving lamps	600 VA
LED- lamps	400 W/VA
Lag time	30 s - 30 min
Pulse output	yes, approx. 1s
Response brightness	finitely adjustable, 10–2,000 Lux
Teach function	yes
Microphone setting	finitely adjustable, 74-61 dB; off
Channel 2 (device control [HVAC])	
Channel potential-free	yes
Switching current / switching power	max. 5 A (230 VAC, $\cos \phi = 1 \text{ od. } 30 \text{ VDC}$ ) max. 1 A (230 VAC, $\cos \phi = 0.4$ ) motor/fan: max.73 VA

30 s - 60 min

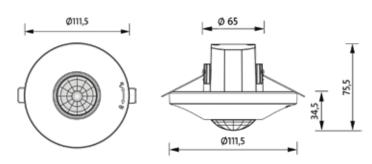


#### PM360-AP-12-A-2-ws / PM360-AP-12-M-2-ws

Lag time



#### PM360-DE-12-A-2-ws / PM360-DE-12-M-2-ws



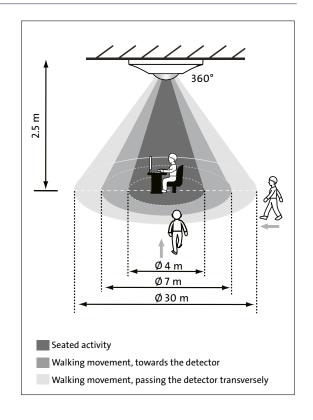




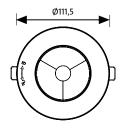
Presence detector **30 m,** ceiling installation or surface mounting, NO contact (Normally Open), **master 1-channel + HVAC** 

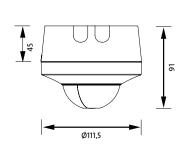
PM360-DE-30-M-2-ws 827904006 Ceiling mounting, master Surface mounted, master PM360-AP-30-M-2-ws 827905007

Technical Data:	
Detection range	30 m
Angle of detection	360°
Nominal voltage, frequency	230 V~, 50 Hz
Standby power	approx. 0.5 W
Number of channels	2
Sensor type	passiv infrared
Mounting height	2.5 m (min. 2 m – max. 3 m)
Detection area	30 m
Presence range	2 m
Remote controllable	yes
Calibration/warm-up time	approx. 60 s
Operating temperature	-20 +50°C
Channel 1 (light source)	
Channel potential-free	no
Switching current	10 A (to 230 VAC, cosφ=1)
Incandescent lamps	2,000 W
HV- halogen lamps	1,000 W
Fluorescent lamps	900 VA (100 μF)
Energy-saving lamps	600 VA
LED- lamps	400 W/VA
Lag time	30 s - 30 min
Pulse output	yes, approx. 1s
Response brightness	finitely adjustable, 10–2,000 Lux
Teach function	yes
Microphone setting	finitely adjustable, 74-61 dB; off
Channel 2 (device control [HVAC])	
Channel potential-free	yes
Switching current / switching power	max. 5 A (230 VAC, $\cos \varphi = 1$ od. 30 VDC) max. 1 A (230 VAC, $\cos \varphi = 0,4$ ) motor/fan: max.73 VA
Lag time	30 s - 60 min

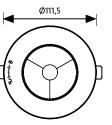


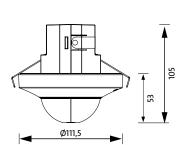
#### PM360-AP-30-M-2-ws











#### Presence detector DALI-2



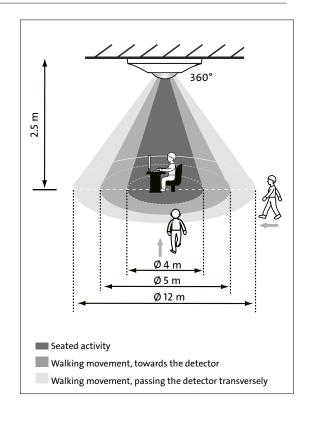


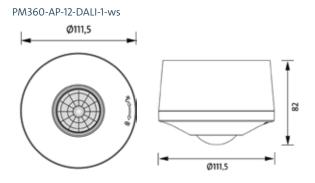
Presence detector **12 m**, ceiling installation or surface mounting, **DALI-2** certified, for controlling digital, dimmable ballasts by **broadcast** method

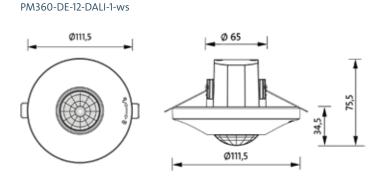
 Ceiling mounting, DALI-2
 PM360-DE-12-DALI-1-ws
 828000006

 Surface mounted, DALI-2
 PM360-AP-12-DALI-1-ws
 828001007

Technical Data:	
Detection range	12 m
Angle of detection	360°
Nominal voltage, frequency	230 V~, 50 Hz
Standby power	approx. 0.5 W
Number of channels	1
Sensor type	passiv infrared
Mounting height	2.5 m (min. 2 m – max. 4 m)
Response sensitivity adjustable	yes
Detection area	12 m
Presence range	4 m
Remote controllable	yes
Response brightness (finitely adjustable)	10-2,000 Lux
Teach function for response brightness	yes
Min. lag time	30 s
Max. lag time	30 min.
Operating temperature	-20 +50 °C
Protection class	IP20
Orientation light (duration)	1, 10, 15, 30, 60 min., ∞
Orientation light (brightness)	10 %, 20 %, 30 %, 60 % and OFF
Light sensor tilt angle	approx. ±15°
Communication (Kopp-DALI-App)	Bluetooth 5.0, range approx. 10 m (max. 30 m with no obstacles)
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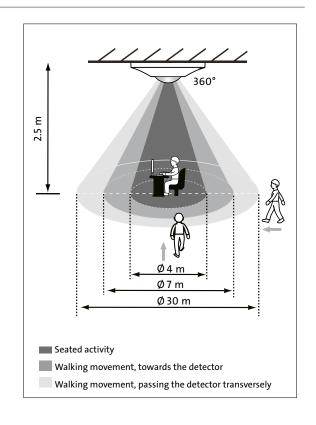




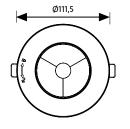
Presence detector **30 m**, ceiling installation or surface mounting, **DALI-2** certified, for controlling digital, dimmable ballasts by **broadcast** method

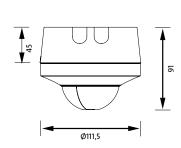
Ceiling mounting, DALI-2 PM360-DE-30-DALI-1-ws 828002008 Surface mounted, DALI-2 PM360-AP-30-DALI-1-ws 828003009

Technical Data:	
Detection range	30 m
Angle of detection	360°
Nominal voltage, frequency	230 V~, 50 Hz
Standby power	approx. 0.5 W
Number of channels	1
Sensor type	passiv infrared
Mounting height	2.5 m (min. 2 m – max. 4 m)
Response sensitivity adjustable	yes
Detection area	30 m
Presence range	4 m
Remote controllable	yes
Response brightness (finitely adjustable)	10-2,000 Lux
Teach function for response brightness	yes
Min. lag time	30 s
Max. lag time	30 min.
Operating temperature	-20 +50 °C
Protection class	IP20
Orientation light (duration)	1, 10, 15, 30, 60 min., ∞
Orientation light (brightness)	10 %, 20 %, 30 %, 60 % and OFF
Light sensor tilt angle	approx. ±15°
Communication (Kopp-DALI-App)	Bluetooth 5.0, range approx. 10 m (max. 30 m with no obstacles)
DALI-output	Max. 250 mA, 180 mA guaranteed

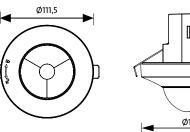


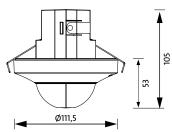
#### PM360-AP-30-DALI-1-ws





#### PM360-DE-30-DALI-1-ws





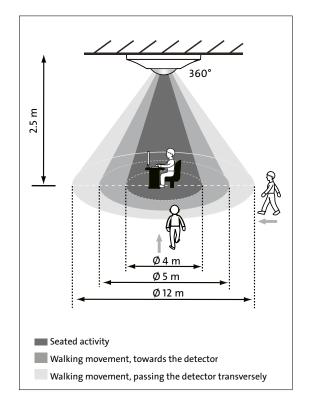
### Presence detector slave

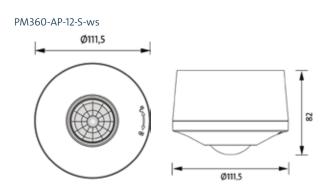


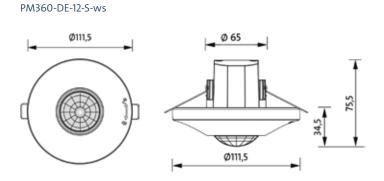
Presence detector **12 m**, ceiling installation or surface mounting, **slave**, for extending the detection range of DALI-2 and master presence detectors

Ceiling mounting, Slave	PM360-DE-12-S-ws	827804003
Surface mounted, Slave	PM360-AP-12-S-ws	827805004

Technical Data:	
Detection range	12 m
Angle of detection	360°
Nominal voltage, frequency	230 V~, 50 Hz
Standby power	approx. 0.5 W
Sensor type	passiv infrared
Mounting height	2.5 m (min. 2 m – max. 4 m)
Detection area	12 m
Presence range	4 m
Operating temperature	-20 +50°C







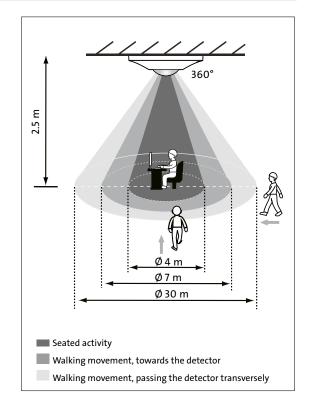




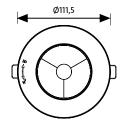
Presence detector **30 m**, ceiling installation or surface mounting, **slave**, for extending the detection range of DALI-2 and master presence detectors

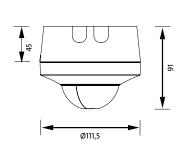
Ceiling mounting, Slave	e PM360-DE-30-S-ws	827808007
Surface mounted, Slav	e PM360-AP-30-S-ws	827809008

Technical Data:	
Detection range	30 m
Angle of detection	360°
Nominal voltage, frequency	230 V~, 50 Hz
Standby power	approx. 0.5 W
Sensor type	passiv infrared
Mounting height	2.5 m (min. 2 m – max. 4 m)
Detection area	30 m
Presence range	4 m
Operating temperature	-20 +50°C

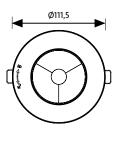


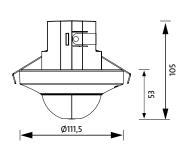
#### PM360-AP-30-S-ws





#### PM360-DE-30-S-ws





### Presence detector accessory



Kopp-DALI-App for easy and reliable setting of DALI-2 presence detectors with article number 8280.....



IR-remote control for presence detector with article number 8278..... and 8279.....

article number	806605027
Transmission range	10 m
Transmission angle	35°
Operating temperature	0°C +45°C



Surface mounted box (49mm) for presence detector with article number 8278..... and 8279.....

article number	828200002	
Diameter	111,5 mm	
Depth	49	



RC-element for presence detectors and motion detectors in case of inductive loads (e.g. fluorescent lamps) install parallel to the load

article number 840629041

To protect against impairments, e.g. reclosing (cycling) of the motion detector, by switched inductors (e.g. relay, contactor, fluorescent lamps, transformers, etc.).



### **Motion detectors**

Motion detectors have become indispensable for switching on lights as and when required and are used in large quantities in all areas of daily life.

Surface-mounted motion detectors are primarily used in outdoor areas, e.g. above doors, on garages and the like. In addition to the design of the motion detector itself, the detection range, the detection angle and the IP protection class are the decisive selection criteria.

Flush-mounted motion detectors are basically divided into two-wire and three-wire devices. The detection range is typically approx. 10 m and the detection angle in most cases is 180°. The IP protection class is normally not a decisive selection criterion for a flush-mounted motion detector, as these devices are mostly used indoors.

If a normal light switch is to be replaced by a flush-mounted motion detector, the choice in most cases is a two-wire device. Due to the existing installation, only two wires are available for connecting the motion detector – the current-carrying conductor (outer conductor) and the connecting conductor to the lamp ("lamp wire"). Using a three-wire device is not possible in this case due to the installation. The base load of the two-wire motion detectors is 5W or 40W. The motion detectors are available in different colour versions for the different ranges of switches.

For new installations, only three-wire motion detectors are installed. The advantage of these three-wire motion detectors is that the base load does not have to be taken into account. Modern relay technology allows the connection of all common lamps with the electrical outputs specified in the technical data. The motion detectors are available in different colour versions for the different ranges of switches.



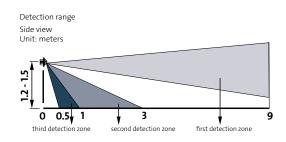


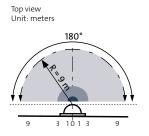


# Flush mounted motion detector, **3-wire**, for inner frame dimension **55 × 55 mm**, for switch range HK07

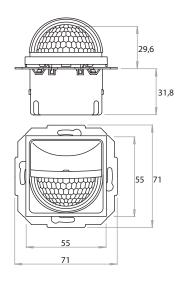
R 180° 55x55mm HK07	pure white	840629041
R 180° 55x55mm HK07	arctic white	on request
R 180° 55x55mm HK07	steel	on request
R 180° 55x55mm HK07	anthracite	on request
R 180° 55x55mm HK07	arctic white matt	on request
R 180° 55x55mm HK07	grey matt	on request
R 180° 55x55mm HK07	black matt	on request

Technical Data:	
Detection range	9 m
Angle of detection	180°
Nominal voltage, frequency	230 V~, 50 Hz
Standby power	< 1 W
Duty cycle (lag time)	5 set values: 20s/1/5/15/30 min. test-function: 2 s pulse output: 1 s ON/9 s OFF
Lens design	3 levels
Calibration/warm-up time	approx. 60-120 s
Twilight threshold	3 set values: 5 Lux, 30 Lux, 100 Lux programming range/memory function ambient brightness: 5–1,000 Lux
Settings	sliding switch: ON: permanent ON for 2 h, AUTO: automatic, OFF: permanent OFF push button: switch-off warning knob: twilight threshold knob: switch-on duration (lag time)
Switch-off warning	≤ 15 s: 1 × brief tone ≤ 10 s: 2 × brief tone ≤ 5 s: 3 × brief tone
Fuse	safety fuse T10A H 250V
Incandescent lamps	max. 2.000 W
HV-Halogen lamps	max. 1.200 W
Fluorescent lamps	max. 900 VA / 100 μF / (series compensated)
LV-Halogen lamps	max. 1,000 VA
energy-saving lamps	max. 600 VA
LED lamps	max. 500 W/VA
Operating temperature	0°C +45°C
Mounting height	1.2 - 1.5 m





Parallel connection of max. 10 devices.



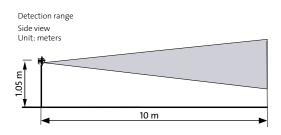


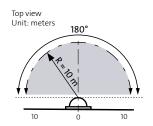


# Flush mounted motion detector, **3-wire**, for inner frame dimension **55 × 55 mm**, for switch range HK07

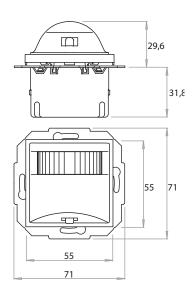
R 180° 55x55mm HK07	pure white	808429557
R 180° 55x55mm HK07	arctic white	808413554
R 180° 55x55mm HK07	steel	808447559
R 180° 55x55mm HK07	anthracite	808415556
R 180° 55x55mm HK07	arctic white matt	808432557
R 180° 55x55mm HK07	grey matt	808434559
R 180° 55x55mm HK07	black matt	808450559

Detection range 10 m  Angle of detection 180°  Nominal voltage, frequency 230 V~, 50 Hz  Standby power < 1 W  Duty cycle (lag time) approx. 4 s to 240 s finitely adjustable  Lens design 1 levels, 18 segments  Calibration/warm-up time approx. 60-120 s  Twilight threshold day operation right-hand stop night operation left-hand stop sliding switch:  O: permanent OFF,  A: automatic,  l: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  Incandescent lamps max. 1,000 W  HV-Halogen lamps max. 1,000 W  Fluorescent lamps max. 1,000 VA  LV-Halogen lamps max. 1,000 VA  LV-Halogen lamps max. 1,000 VA  LV-Halogen lamps max. 300 W/VA  Operating temperature 0°C +45°C  Mounting height 1.05 m		
Angle of detection 180°  Nominal voltage, frequency 230 V~, 50 Hz  Standby power < 1 W  Duty cycle (lag time) approx. 4 s to 240 s finitely adjustable  Lens design 1 levels, 18 segments  Calibration/warm-up time approx. 60-120 s  Twilight threshold day operation right-hand stop night operation left-hand stop sliding switch:  O: permanent OFF,  A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  Incandescent lamps max. 1,000 W  HV-Halogen lamps max. 1,000 W  Fluorescent lamps max. 1,000 VA  LV-Halogen lamps max. 1,000 VA  LV-Halogen lamps max. 300 W/VA  Operating temperature 0°C +45°C	Technical Data:	
Nominal voltage, frequency  Standby power  C1 W  Duty cycle (lag time)  Lens design  Calibration/warm-up time  Twilight threshold  Settings  Settings  Calibration  Settings  Ture in the permanent OFF, A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  Incandescent lamps  Max. 1,000 W  HV-Halogen lamps  Max. 1,000 VA  LV-Halogen lamps  Max. 300 W/VA  Operating temperature  230 V~, 50 Hz  240 S finitely adjustable  Levels, 18 segments  approx. 60-120 s  day operation right-hand stop  sliding switch:  O: permanent OFF, A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  max. 1,000 W  parallel-compensated max. 2 × 40 VA  or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps  max. 300 W/VA  O°C +45°C	Detection range	10 m
Standby power  Outy cycle (lag time)  Lens design  1 levels, 18 segments  Calibration/warm-up time  approx. 60-120 s  Twilight threshold  Settings  Settings  Calibration  Settings  A: automatic, I: permanent OFF, A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  Incandescent lamps  max. 1,000 W  HV-Halogen lamps  parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps  max. 1,000 VA  LV-Halogen lamps  max. 300 W/VA Operating temperature  o °C +45°C	Angle of detection	180°
Duty cycle (lag time)  approx. 4 s to 240 s finitely adjustable  Lens design  1 levels, 18 segments  approx. 60-120 s  Twilight threshold  approx. 60-120 s  day operation right-hand stop night operation left-hand stop  sliding switch:  O: permanent OFF,  A: automatic,  I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  Incandescent lamps  max. 1,000 W  HV-Halogen lamps  max. 1,000 W  Fluorescent lamps  parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps  max. 300 W/VA  Operating temperature  o°C +45°C	Nominal voltage, frequency	230 V~, 50 Hz
Duty cycle (lag time)  Lens design  1 levels, 18 segments  Calibration/warm-up time  approx. 60-120 s  Twilight threshold  Comparison left-hand stop night operation left-hand stop sliding switch:  O: permanent OFF,  A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  Incandescent lamps  Max. 1,000 W  HV-Halogen lamps  Max. 1,000 W  Fluorescent lamps  Provided in the permanent of the perma	Standby power	< 1 W
Calibration/warm-up time  approx. 60-120 s  day operation right-hand stop night operation left-hand stop sliding switch: O: permanent OFF, A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  Incandescent lamps  max. 1,000 W  HV-Halogen lamps  max. 1,000 W  Fluorescent lamps  parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps  max. 300 W/VA Operating temperature  approx. 60-120 s  day operation right-hand stop night operation left-hand stop sliding switch: O: permanent OFF, A: automatic, I: permanent ON knob: switch-on duration (lag time) max. 1,000 W  max. 1,000 W  Derivative day of the series of the seri	Duty cycle (lag time)	, · ·
Twilight threshold  day operation right-hand stop night operation left-hand stop  sliding switch: O: permanent OFF, A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  Incandescent lamps  max. 1,000 W  HV-Halogen lamps  max. 1,000 W  Fluorescent lamps  parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps  max. 1,000 VA  LED lamps  max. 300 W/VA Operating temperature  o°C +45°C	Lens design	1 levels, 18 segments
night operation left-hand stop  sliding switch: O: permanent OFF, A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  Incandescent lamps  max. 1,000 W  HV-Halogen lamps  max. 1,000 W  parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps  max. 1,000 VA  LED lamps  max. 300 W/VA Operating temperature  night operation left-hand stop sliding switch: O: permanent OFF, A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  max. 1,000 W  parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps  max. 300 W/VA Operating temperature	Calibration/warm-up time	approx. 60-120 s
O: permanent OFF, A: automatic, I: permanent ON knob: twillight threshold knob: switch-on duration (lag time)  Incandescent lamps max. 1,000 W  HV-Halogen lamps max. 1,000 W  Fluorescent lamps parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps max. 1,000 VA  LED lamps max. 300 W/VA Operating temperature  O°C +45°C	Twilight threshold	
HV-Halogen lamps max. 1,000 W  Fluorescent lamps or 1 × 65 VA; series-compensated max. 2 × 40 VA  LV-Halogen lamps max. 1,000 VA  LED lamps max. 300 W/VA  Operating temperature 0°C +45°C	Settings	O: permanent OFF, A: automatic, I: permanent ON knob: twilight threshold
parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA LV-Halogen lamps max. 1,000 VA LED lamps max. 300 W/VA Operating temperature  parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA	Incandescent lamps	max. 1,000 W
Fluorescent lamps or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps max. 1,000 VA  LED lamps max. 300 W/VA  Operating temperature 0°C +45°C	HV-Halogen lamps	max. 1,000 W
LED lamps max. 300 W/VA Operating temperature 0°C +45°C	Fluorescent lamps	or 1 × 65 VA;
Operating temperature 0°C +45°C	LV-Halogen lamps	max. 1,000 VA
o em 13 e	LED lamps	max. 300 W/VA
Mounting height 1.05 m	Operating temperature	0°C +45°C
	Mounting height	1.05 m





Parallel connection of max. 10 devices.

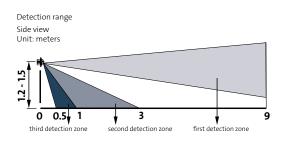


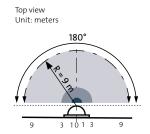


# Flush mounted motion detector, **3-wire**, for inner frame dimension **50 × 50 mm**, for switch range HK07 and HK05

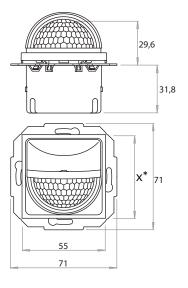
R 180° 50x50mm HK07/05	pure white	840602057
R 180° 50x50mm HK07	arctic white	840629058
R 180° 50x50mm HK07	steel	840647050
R 180° 50x50mm HK07	anthracite	840615057
R 180° 50x50mm HK07	arctic white matt	840632058
R 180° 50x50mm HK07	grey matt	840634050
R 180° 50x50mm HK07/05	black matt	840650050

Technical Data:	
Detection range	9 m
Angle of detection	180°
Nominal voltage, frequency	230 V~, 50 Hz
Standby power	< 1 W
Duty cycle (lag time)	5 set values: 20s/1/5/15/30 min. test-function: 2 s pulse output: 1 s ON/9 s OFF
Lens design	3 levels
Calibration/warm-up time	approx. 60-120 s
Twilight threshold	3 set values: 5 Lux, 30 Lux, 100 Lux programming range/memory function ambient brightness: 5–1,000 Lux
Settings	sliding switch: ON: permanent ON for 2 h, AUTO: automatic, OFF: permanent OFF push button: switch-off warning knob: twilight threshold knob: switch-on duration (lag time)
Switch-off warning	≤ 15 s: 1 × brief tone ≤ 10 s: 2 × brief tone ≤ 5 s: 3 × brief tone
Fuse	safety fuse T10A H 250V
Incandescent lamps	max. 2.000 W
HV-Halogen lamps	max. 1.200 W
Fluorescent lamps	max. 900 VA / 100 μF / (series compensated)
LV-Halogen lamps	max. 1,000 VA
energy-saving lamps	max. 600 VA
LED lamps	max. 500 W/VA
Operating temperature	0°C +45°C
Mounting height	1.2 - 1.5 m





Parallel connection of max. 10 devices.



x\* HK07: 55 HK05: 57,5

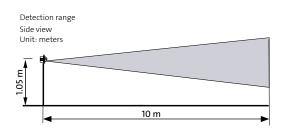


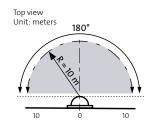


# Flush mounted motion detector, **3-wire**, for inner frame dimension **50 × 50 mm**, for switch range HK07, HK05 and HK02

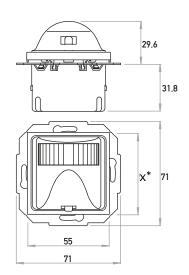
R 18	0° 50x50mm HK07/05/02	arctic white	808402006
R 18	0° 50x50mm HK07	pure white	808429007
R 18	0° 50x50mm HK07	anthracite	808415006
R 18	0° 50x50mm HK07/05	black matt	808450009

Technical Data:	
Detection range	10 m
Angle of detection	180°
Nominal voltage, frequency	230 V~, 50 Hz
Standby power	< 1 W
Duty cycle (lag time)	approx. 4 s to 240 s finitely adjustable
Lens design	1 levels, 18 segments
Calibration/warm-up time	approx. 60-120 s
Twilight threshold	day operation right-hand stop night operation left-hand stop
Settings	sliding switch: O: permanent OFF, A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)
Incandescent lamps	max. 1,000 W
HV-Halogen lamps	max. 1,000 W
Fluorescent lamps	parallel-compensated max. $2 \times 40 \text{ VA}$ or $1 \times 65 \text{ VA}$ ; series-compensated max. $1,000 \text{ VA}$
LV-Halogen lamps	max. 1,000 VA
LED lamps	max. 300 W/VA
Operating temperature	0°C +45°C
Mounting height	1.05 m





Parallel connection of max. 10 devices.



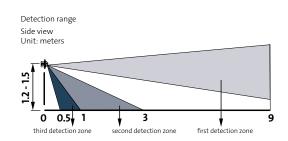
x\* HK07: 55 HK05: 57,5 HK02: 55

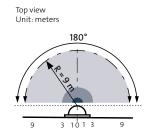


# Flush mounted motion detector, **2-wire**, for inner frame dimension **55 × 55 mm**, for switch range HK07 and HK05, base load min. 5 W

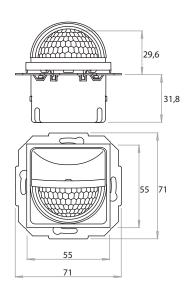
T 180° 55x55mm HK07	pure white	840429045
T 180° 55x55mm HK07	arctic white	on request
T 180° 55x55mm HK07	steel	on request
T 180° 55x55mm HK07	anthracite	on request
T 180° 55x55mm HK07	arctic white matt	on request
T 180° 55x55mm HK07	grey matt	on request
T 180° 55x55mm HK07	black matt	on request

Technical Data:	
Detection range	9 m
Angle of detection	180°
Nominal voltage, frequency	230 V~, 50 Hz
Standby power	< 1 W
Duty cycle (lag time)	7 set values: 5 / 20 s 1 / 5 / 15 / 30 min. / Test Test function: 2 s
Lens design	3 levels
Calibration/warm-up time	approx. 60-120 s
Twilight threshold	4 set values: 5 / 30 / 100 / 300 Lux programming range/memory function ambient brightness: 5–1,000 Lux
Settings	sliding switch: ON: ON for 2 h, AUTO: automatic, OFF: permanent OUT
Switch-off warning	≤ 15 s: 1 × brief tone ≤ 10 s: 2 × brief tone ≤ 5 s: 3 × brief tone
HV-Halogen lamps	5 - 300 W
Fluorescent lamps	5 - 300 W
LV-Halogen lamps	5 - 150 VA
LED lamps	5 - 100 W/VA
Operating temperature	0°C +45°C
Mounting height	1.2 - 1.5 m





Parallel connection of max. 5 devices.



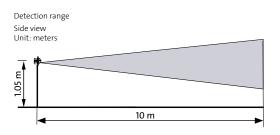


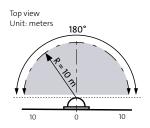


# Flush mounted motion detector, **2-wire**, for inner frame dimension **55 × 55 mm**, for switch range HK07, base load min. 40 W

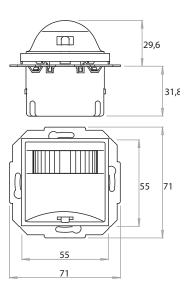
T 180° 55x55mm HK07	pure white	805829556
T 180° 55x55mm HK07	arctic white	805813553
T 180° 55x55mm HK07	steel	805847558
T 180° 55x55mm HK07	anthracite	805815555
T 180° 55x55mm HK07	arctic white matt	805832556
T 180° 55x55mm HK07	grey matt	805834558
T 180° 55x55mm HK07	black matt	805850558

Angle of detection  Nominal voltage, frequency  Standby power  C1 W  Duty cycle (lag time)  Lens design  Calibration/warm-up time  Twilight threshold  Settings  Settings  Angle of detection  Settings  Angle of detection  180°  C1 W  approx. 4 s to 240 s finitely adjustable  Lens design  1 levels, 18 segments  day operation right-hand stop night operation left-hand stop sliding switch: O: permanent OFF, A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  Incandescent lamps  Max. 1,000 W  HV-Halogen lamps  Max. 1,000 W  Fluorescent lamps  Parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps  Max. lagtimeVA  LED lamps  Max. 300 W/VA Operating temperature		
Angle of detection  Nominal voltage, frequency  Standby power  Outy cycle (lag time)  Lens design  Calibration/warm-up time  Twilight threshold  Settings  Settings  Settings  Angle of detection  180°  230 V~, 50 Hz  240 s finitely adjustable  1 levels, 18 segments  approx. 60-120 s  day operation right-hand stop night operation left-hand stop sliding switch: O: permanent OFF, A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  Incandescent lamps  Max. 1,000 W  HV-Halogen lamps  Max. 1,000 W  Fluorescent lamps  Pluorescent lamps  Max. 1,000 W  parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps  Max. 1agtimeVA  LED lamps  Max. 300 W/VA  Operating temperature  O°C +45°C	Technical Data:	
Nominal voltage, frequency  Standby power  < 1 W  Duty cycle (lag time)  Lens design  Calibration/warm-up time  Twilight threshold  Settings  Settings  Incandescent lamps  HV-Halogen lamps  Lens design  1 levels, 18 segments  approx. 60-120 s  day operation right-hand stop night operation left-hand stop sliding switch: O: permanent OFF, A: automatic, l: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  Provided the section of t	Detection range	10 m
Standby power  C1 W  Duty cycle (lag time)  Lens design  Calibration/warm-up time  Twilight threshold  Settings  Settings  Incandescent lamps  HV-Halogen lamps  LED lamps  Duty cycle (lag time)  approx. 4 s to 240 s finitely adjustable  levels, 18 segments  approx. 60-120 s  day operation right-hand stop night operation left-hand stop sliding switch: O: permanent OFF, A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  max. 1,000 W  parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps  max. lagtimeVA  max. 300 W/VA O°C +45°C	Angle of detection	180°
Duty cycle (lag time)  approx. 4 s to 240 s finitely adjustable  Lens design  1 levels, 18 segments  approx. 60-120 s  Twilight threshold  day operation right-hand stop night operation left-hand stop  sliding switch:  O: permanent OFF,  A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  Incandescent lamps  Max. 1,000 W  HV-Halogen lamps  parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps  max. 1agtimeVA  LED lamps  O°C +45°C	Nominal voltage, frequency	230 V~, 50 Hz
Duty cycle (lag time)  Lens design  Calibration/warm-up time  Twilight threshold  Settings  Settings  Incandescent lamps  HV-Halogen lamps  Fluorescent lamps  LED lamps  Duty cycle (lag time)  Incandes design  I levels, 18 segments  approx. 60-120 s  day operation right-hand stop  night operation left-hand stop  sliding switch:  O: permanent OFF,  A: automatic,  I: permanent ON  knob: twilight threshold  knob: switch-on duration (lag time)  max. 1,000 W  parallel-compensated max. 2 × 40 VA  or 1 × 65 VA;  series-compensated max. 1,000 VA  LV-Halogen lamps  max. lagtimeVA  max. 300 W/VA  O°C +45°C	Standby power	<1W
Calibration/warm-up time  approx. 60-120 s  day operation right-hand stop night operation left-hand stop sliding switch: O: permanent OFF, A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  Incandescent lamps  max. 1,000 W  HV-Halogen lamps  max. 1,000 W  parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps  max. lagtimeVA  LED lamps  max. 300 W/VA Operating temperature  approx. 60-120 s  day operation right-hand stop night operation left-hand stop night operation	Duty cycle (lag time)	• •
Twilight threshold  day operation right-hand stop night operation left-hand stop sliding switch: O: permanent OFF, A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  Incandescent lamps  max. 1,000 W  HV-Halogen lamps  max. 1,000 W  parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps  max. lagtimeVA  LED lamps  max. 300 W/VA Operating temperature  day operation right-hand stop night operation left-hand stop night operation left-hand stop night operation right-hand stop night operation left-hand	Lens design	1 levels, 18 segments
night operation left-hand stop  sliding switch: O: permanent OFF, A: automatic, I: permanent ON knob: twillight threshold knob: switch-on duration (lag time)  Incandescent lamps max. 1,000 W  HV-Halogen lamps max. 1,000 W  Fluorescent lamps parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps max. lagtimeVA  LED lamps max. 300 W/VA Operating temperature  night operation left-hand stop sliding switch: O: permanent OFF, A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time) max. 1,000 W  max. 1,000 W  parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps max. 300 W/VA Operating temperature	Calibration/warm-up time	approx. 60-120 s
O: permanent OFF, A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)  Incandescent lamps max. 1,000 W  HV-Halogen lamps max. 1,000 W  Fluorescent lamps parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA  IV-Halogen lamps max. lagtimeVA  LED lamps max. 300 W/VA Operating temperature  O°C +45°C	Twilight threshold	
HV-Halogen lamps max. 1,000 W  Fluorescent lamps or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps max. lagtimeVA  LED lamps max. 300 W/VA  Operating temperature 0°C +45°C	Settings	O: permanent OFF, A: automatic, I: permanent ON knob: twilight threshold
parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA LV-Halogen lamps max. lagtimeVA LED lamps max. 300 W/VA Operating temperature  parallel-compensated max. 2 × 40 VA or 1 × 65 VA; series-compensated max. 1,000 VA  max. 300 V/VA	Incandescent lamps	max. 1,000 W
Fluorescent lamps or 1 × 65 VA; series-compensated max. 1,000 VA  LV-Halogen lamps max. lagtimeVA  LED lamps max. 300 W/VA  Operating temperature 0°C +45°C	HV-Halogen lamps	max. 1,000 W
LED lamps max. 300 W/VA Operating temperature 0°C +45°C	Fluorescent lamps	or 1 × 65 VA;
Operating temperature 0°C +45°C	LV-Halogen lamps	max. lagtimeVA
- F. S.	LED lamps	max. 300 W/VA
Mounting height 1.05 m	Operating temperature	0°C +45°C
	Mounting height	1.05 m





Parallel connection of max. 5 devices.

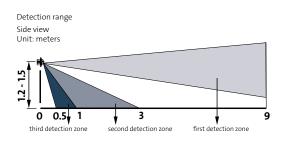


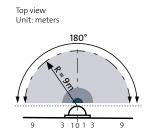


# Flush mounted motion detector, **2-wire**, for inner frame dimension **50 × 50 mm**, for switch range HK07 and HK05, base load min. 5 W

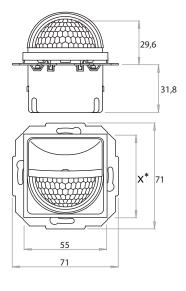
T 180° 50x50mm HK07/05	pure white	840402051
T 180° 50x50mm HK07	arctic white	840429052
T 180° 50x50mm HK07	steel	840447054
T 180° 50x50mm HK07	anthracite	840415051
T 180° 50x50mm HK07	arctic white matt	840432052
T 180° 50x50mm HK07	grey matt	840434054
T 180° 50x50mm HK07/05	black matt	840450054

T. I. S. I.	
Technical Data:	
Detection range	9 m
Angle of detection	180°
Nominal voltage, frequency	230 V <sup>~</sup> , 50 Hz
Standby power	< 1 W
Duty cycle (lag time)	7 set values: 5 / 20 s 1 / 5 / 15 / 30 min. / Test Test function: 2 s
Lens design	3 levels
Calibration/warm-up time	approx. 60-120 s
Twilight threshold	4 set values: 5 / 30 / 100 / 300 Lux programming range/memory function ambient brightness: 5–1,000 Lux
Settings	sliding switch: ON: ON for 2 h, AUTO: automatic, OFF: permanent OUT
Incandescent lamps	5-300 W
HV-Halogen lamps	5-300 W
Fluorescent lamps	5-150 VA(uncompensated)
LV-Halogen lamps	5-150 VA
LED lamps	5-100 W/VA
Operating temperature	0°C +45°C
Mounting height	1.2 - 1.5 m





Parallel connection of max. 5 devices.



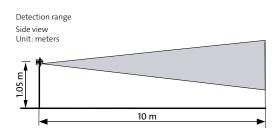
x\* HK07: 55 HK05: 57.5

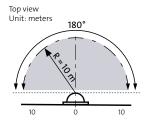


Flush mounted motion detector, **2-Draht**, for inner frame dimension **50 × 50 mm**, for switch range HK07, HK05 and HK02, base load min. 40 W

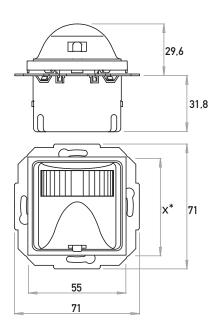
T 180° 50x50mm HK07/05/02	arctic white	805800003
T 180° 50x50mm HK07	pure white	805829006
T 180° 50x50mm HK07	anthracite	805815005
T 180° 50x50mm HK07/05	black matt	805850008

10 m
180°
230 V~, 50 Hz
< 1 W
4 s - 240 s, infinitely adjustable
1 levels, 18 segments
approx. 60-120 s
day operation right-hand stop night operation left-hand stop
sliding switch: O: permanent OFF, A: automatic, I: permanent ON knob: twilight threshold knob: switch-on duration (lag time)
safety fuse T1,6A H 250V
40-400 W
40-400 W
0°C +45°C
1.05 m





Parallel connection of max. 5 devices.



x\* HK07: 55 HK05: 57,5 HK02: 55

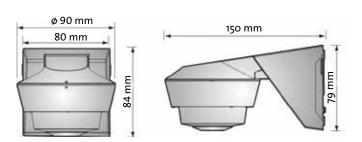
### Motion detector 3-wire surface mounted

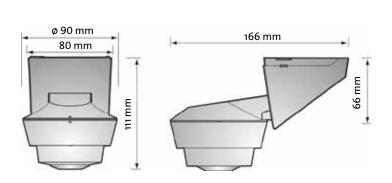


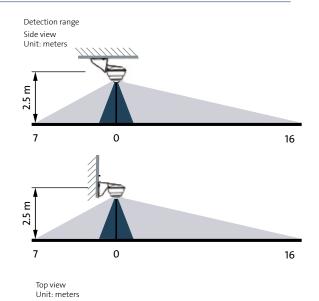
Surface-mounted motion detector, detection angle 240°, IP55, switching at zero voltage crossing, potential-free contact

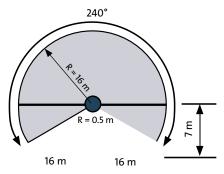
R 240°	white	824602019
R 240°	black	824615019

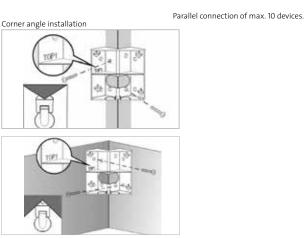
h.,
16 m
240°
230 V~, 50 Hz
< 0,9 W
10 A
90 s
infinitely adjustable 5 Lux – ∞, learning mode
approx. 5 s – approx. 30 min., test, pulse 1s
max. 2.300 W
max. 1,000 W
max. 900 VA (series compensated)
max. 600 VA
max. 400 W/VA
-20°C +40°C











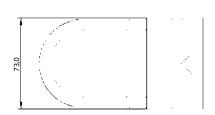


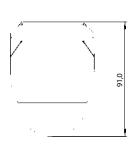


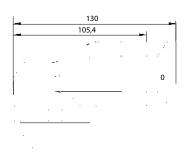
# Surface mounted motion detector, angle of detection 240°, IP54

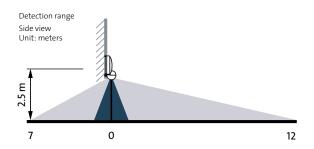
R 240°	white	824617011
R 240°	black	824605012

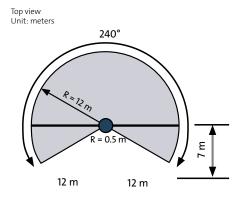
Technical Data:	
Detection range	12 m
Angle of detection	240°
Nominal voltage, frequency	230 V∼, 50 Hz
Standby power	< 0,9 W
Permanent current	8 A
Calibration/warm-up time	90 s
Twilight threshold	infinitely adjustable 20–300 Lux
Switch-on duration (lag time)	infinitely adjustable approx. 5 s (-) – approx. 720 s(+)
Incandescent lamps	max. 2.000 W
HV-Halogen lamps	max. 2.000 W
Fluorescent lamps	max. 500 VA (series compensated)
Energy-saving lamps	max. 300 VA
LED lamps	max. 200 VA
Operating temperature	max. 200 W/VA
Operating temperature	-20°C +40°C





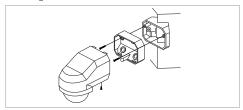


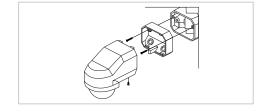




Parallel connection of max. 10 devices.







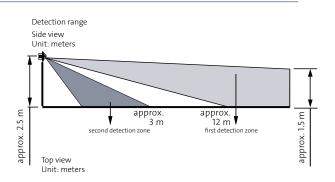
### Motion detector 3-wire surface mounted

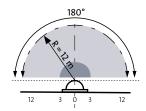


# Surface mounted motion detector, angle of detection 180°, IP44

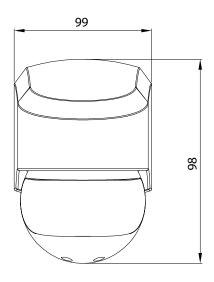
R 180°	white	823802014
R 180°	black	823805017

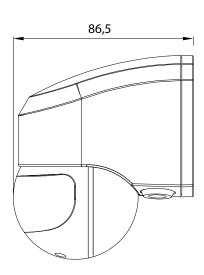
Technical Data:	
Detection range	12 m
Angle of detection	180°
Nominal voltage, frequency	230 V~, 50 Hz
Standby power	< 1 W
Permanent current	4 A
Starting current	16 A (maximum 0.4 s)
Calibration/warm-up time	approx. 60 –120 s
Twilight threshold	infinitely adjustablenight (moon) / day (T)
Settings	infinitely adjustable approx. 5 s (T) – approx. 720 s (+)
Incandescent lamps	max. 1,500 W
HV-Halogen lamps	max. 1,500 W
Fluorescent lamps	max. 1,000 VA (series compensated)
LV-Halogen lamps	max. 400 VA
LED lamps	max. 300 W/VA
Operating temperature	-10°C +50°C





Parallel connection of max. 10 devices.







# Already discovered?

### The self-powered Bluetooth® motion detector

- For integration into the smart-home-system Blue-control®
- Operation in combination with Blue-control® actuators
- For motion detection and brightness measurement
- With passive infrared sensor
- Integrated solar cell, no power supply required
- Range 10m



## The smart-home-system Blue-control®



The latest generation smart home.

Easy to connect, even without a gateway.

Simple, reliable and endlessly expandable

The latest technology: Bluetooth® 5 Mesh.

- Switching and dimming light
- Control shutters, awnings and blinds
- · Control light colour
- Create customised plans (schedules, timers, scenes)
- Simple control (app, voice control)



Further information on the topic Blue-control®



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