

Lighting & Controls

Motion & Presence Detectors





Let there be light But efficiently, please!

Lighting control plays an important role in modern facility management. Not only to produce ideal living and working conditions but also to achieve the best possible energy balance. At least 80% of total building costs are incurred during planning. Building operators wanting to reduce their running costs would be advised to appoint a few thrifty “controllers”: on-demand lighting solutions from Hager! They allow energy costs for lighting to be reduced by up to 63%.

This brochure shows you how. And to help you save energy at an early stage, Hager is happy to support you with the planning and implementation of your project.





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The full picture

With up to 360° vision

There is nothing better than good all-round visibility. That is why Hager's outdoor motion detectors have a detection angle of up to 360°. And the range of products you can choose from is similarly extensive. Hager has just the right solution for each intended use and location, ranging from our economical basic devices to our high-quality advanced units. All of Hager's outdoor motion detectors are fitted with keen Fresnel precision lenses and provide a reliable service even under adverse weather conditions thanks to their high IP55 protection rating.



Outdoor motion detectors

Basic - **EE820** (140°), **EE840** (360°), Enhanced - **EE860** (220°), **EE870** (220°/360°)

Vigilant: detection angle between 140° and 360°

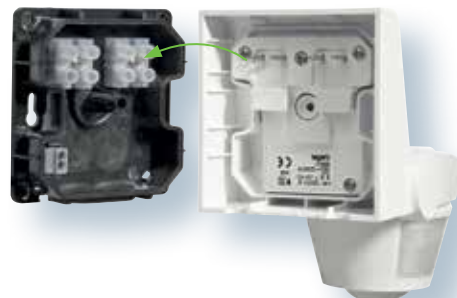
The detection angle varies between 140° and 360° depending on the requirements. The Enhanced EE87x motion detector even offers creep zone protection function. This ensures unbroken coverage even underneath the detector, which could otherwise be used to gain unnoticed access to grounds.

To position the detector in accordance with your requirements the following detection angles are recommended:

- Entrance areas, drives and courtyards: 140°
- Building facades: 220°
- Local detection with creep zone protection: 220°–360°

Perceptive: simple to mount and programme

All motion detectors can be wall- or ceiling-mounted or even corner-mounted with the help of a bracket from our range of accessories. All settings can be performed right at the front of the devices or, in the case of the Enhanced unit, by remote control. This is particularly useful if several detectors need to be programmed at the same time or if they are in places that are difficult to access. The power-on parameters can be changed from the ground at any time. No need for any ladder climbing, no risk of accidents – maximum safety!



Smart installation on the wall



LED lamp with PIR, 140° RF
EE610



LED Floodlight with PIR, 220/360° RF
EE600

Detection at very low-consumption

LED floodlights and LED lamps equipped with an IR motion detector allow the automatic control of light when movement is detected in the surveillance zone. They remain ON for a set period between 5sec and 15min if no further motion is detected. Based on the enhanced motion detectors and utilising the same features, the LED floodlights and LED lamps are part of a perfect night supervision for residential and commercial buildings.

Outdoor motion detector enhanced with pin contacts

The enhanced outdoor motion detectors from Hager have an innovative installation technique with pin-contacts making the mounting very easy and safe during installation. After fixing the base plate on the wall, the motion detector can be clipped on and fixed by screws. This device can then be installed faster than ever before.

Both the EE600 and EE610 can be programmed conveniently with a EE806 infra-red programming tool.



Infrared remote control EE806



From top to bottom

Surface mounted motion detectors

If you are looking to save energy in the long term, then raise your sights and think about Hager's ceiling motion detectors. They are quickly and securely mounted at heights between 2.5 and 3.5 metres. Thanks to their high response reliability and long working life, energy costs are reduced and the investment pays off within a matter of a few years, while the convenience and increase in safety will continue for much longer.



Surface mounted corridor motion detector
EE880

Corridor motion detector

With any project where occupancy sensors are being employed to provide consistent safety and energy saving considerations, the monitoring of corridors is always a challenge due to the shape and the number of doors or passageways feeding into the area. The EE880 corridor sensor has been designed to meet these requirements with a detection area 4m wide and 20m long it provides coverage to suit most corridors without the need to position a sensor every 6m. The overrun timer can be adjusted from 5secs to 15mins to give the facilities provider plenty of scope to tailor the output from the lighting to meet the needs primarily for safety while keeping an eye on efficiency



HF motion detector
EE883

Hyper Frequency technology

Hyper frequency motion detectors work on a different technology to traditional infra-red detectors. Instead of monitoring any movement to infra-red signals received by the sensor, the hyper frequency sensor is an active device which sends out a hyper frequency signal and monitors any changes in the signal bounced back to the sensor. Due to the hyper frequency sensors ability to detect through certain materials such as wood and glass it means that the sensor reduces blind spots in areas where there is partitioning for privacy such as toilets and dressing rooms.

Intelligent watchdogs

Surface and flush-mounted presence detectors

Presence detectors go a step further than motion detectors: they react not only to quick movements, but also to the presence of people carrying out activities either sitting down or standing. The sensors are that much more sensitive. Ideal for offices, classrooms, cafeterias, corridors, staff rooms and washrooms.

Hager's presence detectors are bright, not only when they switch on but also when they switch off: whilst motion detectors wait until the switch off delay has expired before turning off the lights, Hager's presence detectors are able to switch off the light when the natural light will be sufficient to achieve the set brightness level in an area. This saves additional energy costs.



Surface-mounted presence detector
EE810, EE811



Flush-mounted presence detector
EEK510B, EEK520B

Sitting pretty: the surface-mounted detector

Two see better than one! With the surface-mounted presence detector, two separately rotatable 360° sensors cover an extremely generous detection range of up to 18m x 9m. This means large rooms can be monitored by a single presence detector. The brightness value can be adjusted manually via the potentiometer. EE811 has a second channel for use with additional equipment such as air circulation fans. With the help of the surface-mounted casing from our range of accessories, the device can be retrofitted anywhere, quickly and economically.

Available in the following versions:

- EE810: Single-channel presence detector
- EE811: Dual-channel presence detector
- EE813: Surface-mounted casing for EE81x

Smooth line: the flush-mounted presence detector

It sees everything without being seen itself: Hager's flush-mounted presence detector can adapt to any surrounding thanks to its flat design. Its sensitive 360° sensor detects everything within a diameter of up to 7m. Brightness and switch-off delay can be set manually via a slide-open operating panel, without having to dismantle the detector. The use of a remote programming tool allows the sensor to be customised to operate exactly as required. remote control (EEK002) is available for end user control.

Available in the following versions:

- EEK510B: flush-mounted, 360°
- EEK520B: flush-mounted, 360° with DALI/DSI control



Infrared remote control to
adjust the settings
EEK001




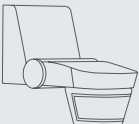
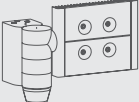

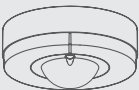
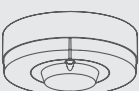
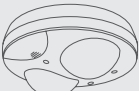
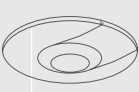
Infrared remote control to
operate the detector
EEK002

Well set: by remote control

With the flush mount presence detectors you and your customers will enjoy exceptional convenience: the IR remote control EEK001 provides easy adjustment of different parameters such as brightness, time delay, presence or absence. All these settings can be operated from the remote device when you don't have easy access to the detector. With the EEK002 at their fingertips, users can activate, deactivate or dim. In addition, stored light scenarios or brightness values can be activated at the touch of a button.




















All solutions

At a glance

Lighting solution	Product types	Recommended use
Outdoor motion detectors	 <p>Standard motion detectors</p> <ul style="list-style-type: none"> • 140°/360°, IP55 (EE82x, EE84x)  <p>Enhanced motion detectors</p> <ul style="list-style-type: none"> • 220°/220°-360°, IP55 (EE86x, EE87x) 	<ul style="list-style-type: none"> • Schools, sport and leisure centres, hotels, commercial buildings, apartment blocks, residential and nursing homes • 140°: entrances/driveways/backyards • 200°/220°: building facades • 220°-360°: local detection for creep zone protection
Outdoor motion detectors with LED	 <p>LED Floodlight detectors</p> <ul style="list-style-type: none"> • 220-360°, IP55 (EE600)  <p>LED Floodlight detectors</p> <ul style="list-style-type: none"> • 140°, IP55 (EE610) 	<ul style="list-style-type: none"> • Schools, sport and leisure centres, hotels, commercial buildings, apartment blocks, residential and nursing homes • 140°: entrances/driveways/backyards • 220°-360°: local detection for creep zone protection
Indoor motion detectors	 <p>Corridor motion detectors</p> <ul style="list-style-type: none"> • Surface mounted (EE880)  <p>HF detector</p> <ul style="list-style-type: none"> • EE883 	<ul style="list-style-type: none"> • Office and admin buildings • Hotels • Sport and leisure centres • Commercial and industrial plants, e.g. hallways, staircases, staff rooms, rest rooms
Presence detectors	 <p>Surface mounted presence detectors</p> <ul style="list-style-type: none"> • Single-channel (EE810) • Dual-channel (EE811)  <p>Flush mounted presence detectors</p> <ul style="list-style-type: none"> • 360° (EE815) • 360° DALI-/DSI (EE816) 	<ul style="list-style-type: none"> • Schools and office buildings • Doctors' surgeries and physiotherapy centres, e.g. corridors, waiting areas, conference rooms, treatment rooms, rest rooms

Detector

Selection guide

Motion detectors				Presence detectors			Light with PIR	
Wall mounted				Ceiling	Ceiling		Wall mounted with LED	
IP55 Standard		IP55 Enhanced		Surface	Flush	Semi-Recessed	Flood light 60W	Lamp 15W
140°	360°	220°	220/360°	360°	360°	360°	220/360°	140°
EE820 white 	EE840 white 	EE860 white 	EE870 white 	EE880 white 	EEK510B 1 channel 	EE810 1 channel 	EE600 white 	EE610 white 
		EE861 anthracite 	EE871 anthracite 	EE883 white IP54 	EEK520B DALI/DSI 	EE811 2 channels 		
Accessories								
Ceiling EE827 white 	Remote control EE806 installer and user 		Remote control EEK001 EEK002 installer and user 			Remote control EE806 installer and user 		
Cnr mount EE825 white 	Corner mounting EE855 white 		EE856 anthracite 					

⁽¹⁾ Or 2 channels (300 W + 600 W) or 1 channel (900 W)
 Recommended for commercial applications



EE820



EE861



EE806

Outdoor IP55

These devices are made for automatic control of lighting in both the residential and private/public commercial sectors.

- Large range from 140° basic to 220/360°
- IP55 reinforced for weatherproofing
- Detection head with overmoulded fresnel lenses and PIR detectors

Features

- 140/220/360° frontal detection zone
- Twin 220°/360° to detect in a frontal and downwards zone.
- Time, lux and sensitivity are achieved locally, via potentiometers.
- The enhanced range and LED lights can be set with an IR remote control which provides speed and convenience when setting final adjustments.
- Detectors can be mounted in corners or to ceilings utilising the relevant mounting accessory

Power Supply

- Basic detector
- 230V AC (50/60Hz)
 - Output: 10A AC1 relay and cut phase
- Enhanced detector
- 230V AC
 - Output: 16A AC1 relay potential free



Complies with EN 60669-1 & EN 60669-2-1.

Description	Cat ref.
Basic Motion Detector 140° White	EE820
Basic Motion Detector 360° White	EE840
Enhanced Motion Detector Comfort 220° White	EE860
Enhanced Motion Detector Comfort 220° Anthracite	EE861
Enhanced Motion Detector Comfort 220/360° White	EE870
Enhanced Motion Detector Comfort 220/360° Anthracite	EE871
Remote Control for Motion Detector Comfort EE85./86./87.	EE806
Ceiling Mounting Accessory for Motion Detector White EE820/830	EE827
Corner Bracket for Motion Detector White EE820/830	EE825
Corner Bracket for Motion Detector Comfort White EE840/850/860/870	EE855
Corner Bracket for Motion Detector Comfort Anthracite EE841/851/861/871	EE856



EE883

Hyper Frequency

Description

The hyper frequency EE883 motion detector is applicable for wall and ceiling installations because of its practical two screw mounting system and it allows for a detection coverage of 360° without any dead angles. The detection range diameter is

adjustable within 1 to 8 metres. The hyper frequency (HF) detection is independent of the temperature detection, which can detect movement through partitions (drywall, wood, glass).

Features

- 230V AC

- IP54
- Detection zone of 8m
- Detection area 360°

Complies with EN 60669-1, EN 60669-2-1, EN 301489-1, EN 301489-3, EN 300440-1, EN 300440-2.

Description	Cat ref.
Circulation Sensor HF	EE883
Protection Basket	EEK006



EE880

Corridor Motion Detector

Description

Infra red corridor motion detector, for surface mounting on to a wall or ceiling.

Features

- 230V AC
- IP54
- Detection zone of 4m x 20m
- Overrun timer from 5 secs to 15 minutes

Complies with EN 60669-1 & EN 60669-2-1.

Description	Cat ref.
IR Corridor Motion Detector	EE880



EE810



EE813

Indoor Semi-Recessed Mounting

High performance detectors EE810 and EE811

High performance presence detectors that can be used in premises or in passage areas, where they increase comfort and reduce the energy costs drastically.

The presence area is especially useful in offices, where the motion area may be used in long corridors.

EE810 - 1 channel detector

Direct control of a light load or used as a slave in association with EE811 (Lux OFF) for detection area enlargement.

- Lux level and ON delay (duration or pulse) defined via potentiometers.
- Test mode in order to set lux level and the detection pattern.

EE811 - 2 channels detector

- Lux level, ON delay setting

for light channel and presence channel via potentiometers.

- Input for slave (EE810) and/ or remote push button.
- 230V input used with push button to toggle the light channel state or with slave to enlarge the detection area.



Description	Cat ref.
Presence Detector 1 Channel	EE810
Presence Detector 2 Channel	EE811
Surface Mounting Box for EE810 and EE811	EE813



EEK510B



EEK001

Indoor Flush Mounting

High performance detectors EEK510B and EEK520B

High performance flush mounted presence detectors suitable for use in residential and commercial premises where energy control and/ or reduction is required.

EEK510B - detector ON/OFF

- Direct control of a light load.
- Lux level and ON delay

setting via potentiometers or EEK001 remote control.

EEK520B - detector for light regulation

- 3 functional modes.
- Lux level and ON delay setting via potentiometers or EEK001 remote control.
- DALI/DSI bus output accommodates up to 24 ballasts.

EEK001 - IR programming tool

- Installer remote control to commission settings.

EEK002 - IR remote control

- Customer remote control for override operation.

Complies with EN 60669-1 & EN 60669-2-1.



Description	Cat ref.
Flush Mount PIR Occupancy Sensor	EEK510B
Flush Mount Digital PIR Occupancy Sensor	EEK520B
Programming Tool	EEK001
Remote Control for the Customer	EEK002
Backbox Accessory for Surface BESA Detectors	EEK005



EE600

EE610

LED Lamp & Floodlight

Description

LED lights with an infrared sensor to easily replace any existing lighting fixture, to ensure automatic operation of lighting from the approach of a person. Integrated detector sensitive to

infrared radiation for operation during the day and night or only at night.

Features

- Architectural design
- LED energy saving technology

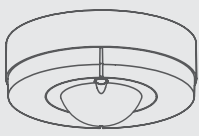
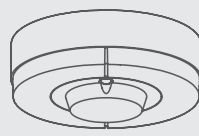
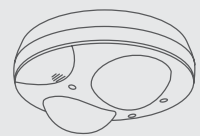
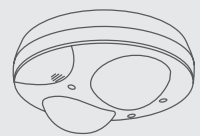
- 140° or 220/360° detection up to 12m
- IP55
- Settings can be adjusted with the EE806 IR remote control

Description	Cat ref.
LED Floodlight with PIR 220/360° White	EE600
LED Deco Lamp with IR Detector White	EE610

Euro Module

Description	Cat ref.
PIR Occupancy Sensor Euromodule 5m	WMMPiR05X
PIR Occupancy Sensor Euromodule 10m	WMMPiR10X

Occupancy Sensor Selection Chart

				
	IR Corridor Motion Detector	Circulation Sensor HF	Presence Detector 1 Channel	Presence Detector 2 Channel
Technical characteristics	EE880	EE883	EE810	EE811
Supply voltage	230V~ 50Hz	230V~ 50Hz	230V~ 50Hz	230V~ 50Hz
Detection Type	Motion	Motion	Presence	Presence
Detection (Length)	20m	1m to 8m	15.5m	15.5m
Detection (Width)	4m	1m to 8m	8m	8m
Detection angle	360°	360°	360°	360°
Detection Frequency	-	5.8 Ghz ± 0.075 Ghz	-	-
Receiver Class	-	2	-	-
Standby consumption	1W	1W	1.2W	1.2W
Duration of lighting output operation (S1)	5sec to 15 min	5sec to 15 min	1min to 30min	1min to 30min
Duration of time delay (S2)	-	-	30sec to 60min	30sec to 60min
Luminosity threshold	2 to 2000 lux	2... 2000 lux	5 to 1200Lux	5 to 1200Lux
Recommended installation height	3 m	2.5 m	3 m	3 m
Operating temperature	20°C to +50°C	20°C to +50°C	0°C to +45°C	0°C to +45°C
Storage temperature	35°C to +70°C	35°C to +70°C	10°C to +60°C	10°C to +60°C
Insulation class	II	II	II	II
Protection rating	IP54	IP54	IP41	IP41
Standards	EN 60669-1 EN 60669-2-1	EN 60669-2-1 EN 300 440-1 V1.3.1	EN 60669-1 EN 60669-2-1	EN 60669-1 EN 60669-2-1
Maximum installation altitude	2000m	2000m	-	-
Pollution degree	2	2	2	2
Connection stranded	Max 1.5mm ²	Max 1.5mm ²	1mm ² to 4mm ²	1mm ² to 4mm ²
Connection solid	Max 1.5mm ²	Max 1.5mm ²	1mm ² to 4mm ²	1mm ² to 4mm ²
Switching Channel	1	1	1	1 2
Lighting Loads 230V~ AC1	10A	10A	16A	16A 2A
Switching Capacity (Incandescent)	2300W	2300W	2300W	2300W
Halogen lamps LV	2300W	2300W	-	-
Halogen ELV (12 or 24V) via ferromagnetic or electronic transformer	1500VA	1500VA	1500W	1500W
Compact Fluorescent	20 x 20W	20 x 20W	20 X 18W	20 X 18W
LED	20 x 20W	20 x 20W	20 X 18W	20 X 18W
Parallel compensated fluorescent tubes	1000W/C=110µf	1000W/C=110µf	290W/C=32µf	290W/C=32µf
Fluorescent tubes non-compensated	1200W	1200W	-	-
Electronic ballast	580W	580W	580W	1000W
DSI/DALI ballast	-	-	-	-
Remote programming	x	x	x	x
Remote control	x	x	x	x
Adjustable shutters (supplied)	x	x	x	x
Dimensions (L*W*H)	125 x 125 x 60mm		110 x 110 x 70mm	110 x 110 x 70mm

					
Basic Motion Detector 140° EE820	Basic Motion Detector 360° EE840	Enhanced Motion Detector 220° White & Anthracite EE860 / EE861	Enhanced Motion Detector 220/360° White & Anthracite EE870 / EE871	PIR Occupancy Sensor EEK510B	Digital PIR Occupancy Sensor EEK520B
230V~ 50Hz	230V~ 50Hz	230V~ 50Hz	230V~ 50Hz	230V~ 50Hz	230V~ 50Hz
Motion	Motion	Motion	Motion	Presence	Presence
16m	12m	16m	16m	7m	7m
12m	12m	16m	16m	7m	7m
140°	360°	220°	220°/360°	360°	360°
-	-	-	-	-	-
-	-	-	-	-	-
1.2W	1.2W	1.2W	1.2W	2.4VA/270mW	60mW
5 s... 15 min	5 s... 15 min	5secs to 30min	5secs to 30min	1min to 1hour	1min to 1hour
-	-	-	-	-	-
5... 1000 lux	5... 1000 lux	5... 1000 lux	5... 1000 lux	5 to 1000 Lux	5 to 1000 Lux
2.5m (2m-4m)	2.5m (2m-4m)	2.5m (2m-4m)	2.5m (2m-4m)	2.5m	2.5m
20°C to +55°C	20°C to +55°C	20°C to +55°C	20°C to +55°C	-10°C to +45°C	-10°C to +45°C
20°C to +60°C	20°C to +60°C	20°C to +60°C	20°C to +60°C	-20°C to +60°C	-20°C to +60°C
II	II	II	II	II	II
IP55	IP55	IP55	IP55	IP41	IP41
EN 60669-1 EN 60669-2-1	EN 60669-1 EN 60669-2-1	EN 60669-1 EN 60669-2-1	EN 60669-1 EN 60669-2-1	EN 60669-1 EN 60669-2-1	EN 60669-1 EN 60669-2-1
-	-	-	-	-	-
2	2	2	2	2	2
Max 1.5mm ²	Max 1.5mm ²	Max 1.5mm ²	Max 1.5mm ²	0.5mm ² to 1.5mm ²	0.5mm ² to 1.5mm ²
Max 1.5mm ²	Max 1.5mm ²	Max 1.5mm ²	Max 1.5mm ²	0.5mm ² to 1.5mm ²	0.5mm ² to 1.5mm ²
1	1	1	1	1	1
10A	10A	10A	10A	16A	-
1500W	2300W	2300W	2300W	2300W	-
-	-	-	-	-	-
1500VA	1500VA	1500VA	1500VA	1500W	-
10 X 20W	20 x 20W	20 x 20W	20 x 20W	23 X 23W	-
	20 x 20W	20 x 20W	20 x 20W	20 X20W	-
290W/C=32µf	400W/C=45µf	400W/C=45µf	400W/C=45µf	1000W	-
-	-	-	-	1000W	-
580W	580W	580W	580W	-	-
-	-	-	-	-	24
✘	✘	EE806	EE806	EEK001	EEK001
✘	✘	✘	✘	EEK002	EEK002
✓	✘	✓	✓	✘	✘
127 x 83 x 97mm	127 x 83 x 97mm	127 x 83 x 97mm	127 x 83 x 97mm	80 x 80 x 70mm	80 x 80 x 70mm

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