Viewguard Motion detctors
PIR and DUAL detectors

Passive infrared sensor
Passive infrared and microwave sensor

Viewguard
DUAL

Viewguard
DUAL AM

Viewguard
PIR

Viewguard
PIR AM

Variations PIR detectors:

- **Viewguard PIR AM BUS-2/BUS-1**
  VdS Class C
  EN 50131-1 and EN 50131-2-2, grade 3
  SES-EMA-RL-T2:2010-08

- **Viewguard PIR BUS-2/BUS-1**
  VdS Class B
  EN 50131-1 and EN 50131-2-2, grade 2
  SES-EMA-RL-T2:2010-08

- **Viewguard PIR AM FAI**
  VdS Class C
  EN 50131-1 and EN 50131-2-2, grade 3
  SES-EMA-RL-T2:2010-08

- **Viewguard PIR FAI**
  VdS Class B
  EN 50131-1 and EN 50131-2-2, grade 2
  SES-EMA-RL-T2:2010-08

VdS approval no. see page 7.

Variations DUAL detectors:

- **Viewguard DUAL AM BUS-2/BUS-1**
  VdS Class C
  EN 50131-1 and EN 50131-2-4, grade 3
  SES-EMA-RL-T2:2010-08

- **Viewguard DUAL BUS-2/BUS-1**
  VdS Class B
  EN 50131-1 and EN 50131-2-4, grade 2
  SES-EMA-RL-T2:2010-08

- **Viewguard DUAL AM FAI**
  VdS Class C
  EN 50131-1 and EN 50131-2-4, grade 3
  SES-EMA-RL-T2:2010-08

- **Viewguard DUAL FAI**
  VdS Class B
  EN 50131-1 and EN 50131-2-4, grade 2
  SES-EMA-RL-T2:2010-08

The detectors are suitable for intrusion alarm panels with BUS-2/BUS-1- or conventional connection technology and are available with or without **A**nti-**M**ask function (monitoring against covering).

To ensure optimum detection, detectors are equipped with high-quality mirror optics. Standard equipment includes a mirror for area optics.

The **Viewguard PIR detectors** are motion detectors based on the passive infrared principle.

If required, the detectors can be retrofitted on site to long-range optics or curtain optics with accessories that are available separately.

The Viewguard DUAL motion detectors comprise two sensor systems that operate independently:

• **Passive infrared sensor and microwave sensor.**

The functioning principle of the detector is based on an intelligent linking of the two sensor systems. This type of linking renders the detectors particularly insensitive to air and thermal turbulences. Their distinguishing features being optimum alarm detection and extremely high false alarm security.

Features

Anti-Mask function (only AM detectors)
- Detects covering, spraying or taping of the foil.

LED indication
- Clearly arranged indication of operating state via two LEDs. Walktest indication.

FAI-logic (First alarm indication, <u>all</u> types)
- The detector that is triggered first, can be identified with the aid of the LED indication.

Walk test function
- Easy way to check function and detection area.

Detector zone input (only BUS detectors)
- Integration of contacts/potential-free detectors in the BUS-2/ BUS-1 system (zone not erasable).

Microwave sensor (only DUAL detectors)
- Can be deactivated in the "disarmed" state.

Function overview PIR detectors

Viewguard PIR motion detectors Function overview	Viewguard PIR						Viewguard PIR AM					
Type	**FAI**			**BUS-2/BUS-1**			**FAI**			**BUS-2/BUS-1**		
Item no.	033330.01			033332.21			033430.01			033432.21		
VdS approval	Class B			Class B			Class C			Class C		
As per EN 50131-2-2	Grade 2			Grade 2			Grade 3			Grade 3		
Operating mode / **Functions**	FAI View-guard	FAI SCM 3000	EL	BUS-2 View-guard 1)	BUS-2 SCM 3000	BUS-1	FAI View-guard	FAI SCM 3000	EL	BUS-2 View-guard 1)	BUS-2 SCM 3000	BUS-1
Area optics (state of delivery)	X	X	X	X	X	X	X	X	X	X	X	X
Convertible to long-range or curtain optics	X	X	X	X	X	X	X	X	X	X	X	X
Anti Mask uo to approx. ca. 30 cm (AM)	—	—	—	—	—	—	X	X	X	X	X	X
Anti Mask active or inactive in armed state	—	—	—	—	—	—	X	—	—	X	—	—
Anti Masc automatically inactive in armed state	—	—	—	—	—	—	—	X	—	—	X	X
Anti Mask allways ative	—	—	—	—	—	—	—	—	X	—	—	—
Alarm indication after disarming	X	X	—	X	X	X	X	X	—	X	X	X
First alarm indication via interval LED indication	X	X	—	X	—	—	X	X	—	X	—	—
Alarm memory	X	X	—	X	X	X	X	X	—	X	X	X
PIR sensitivity programmable in 2 stages	X	X	X	X	X	X	X	X	X	X	X	X
PIR range programmable in 4 stages	X	X	X	X	X	X	X	X	X	X	X	X
Detector group input (without clear function)	—	—	—	X	—	2)	—	—	—	X	—	2)
Temperature alarm, alarm thresholds can be programmed	—	—	—	X	—	—	—	—	—	X	—	—
Walk test function (with LED indication)	X	X	X	X	X	X	X	X	X	X	X	X
Walk test activation directly through the panel	X	—	—	X	—	—	X	—	—	X	—	—
Walk test activation via "clear detector group"	—	X	—	—	X	X	—	X	—	—	X	X
Walk test automatically active after initialising is completed	—	—	X	—	—	—	—	—	X	—	—	—
Cyclical self-test (PIR function)	—	—	—	—	—	—	X	X	X	X	X	X
Monitoring of operating voltage	X	X	X	X	X	X	X	X	X	X	X	X
Fault message to the panel	X	X	3)	X	X	X	X	X	3)	X	X	X
Fault/cover signal: save or don't save	X	X	—	X	X	—	X	X	—	X	X	—
Fault/cover signal: only don't save	—	—	X	—	—	X	—	—	X	—	—	—
Cover contact/tear-off protection	X	X	—	X	—	—	X	X	—	X	—	—

EL Easy Logic mode. Only operating voltage and alarm output used (not as per VdS)
1) Viewguard mode on BUS-2 is supported from panel software V07 (HB/MB24, HB/MB48, MB100).
2) Operation on BUS-1: The detector group is connected in an "OR" function with the alarm message
3) The "Alarm" and "Fault" outputs can be connected in series.

Detection range
- Range programmable in four stages.

Detection sensitivity
- Sensitivity programmable in two stages.

Save fault / do not save fault
- Save: Fault is saved until it is cleared.
- Do not save: Fault signal is reset automatically after eliminating the fault.

Self-test (only AM detectors)
- Correct functioning of the detector is monitored in cycles.

Monitoring of operating voltage
- Fault message if the operating voltage drops to low.

Temperature measurement (only BUS-2 application)
- Temperature alarm if ambient temperature is too high/too low. Programmable alarm thresholds.

Tear-off protection/Cover contact

Function overview DUAL detectors

Viewguard DUAL motion detectors Function overview	Viewguard DUAL						Viewguard DUAL AM					
Type	**FAI**			**BUS-2/BUS-1**			**FAI**			**BUS-2/BUS-1**		
Item no.	033441.01			033443.21			033440.01			033442.21		
VdS approval	Class B			Class B			Class C			Class C		
As per EN 50131-2-4	Grade 2			Grade 2			Grade 3			Grade 3		
Operating mode / **Functions**	FAI View-guard	FAI SCM 3000	EL	BUS-2 View-guard 1)	BUS-2 SCM 3000	BUS-1	FAI View-guard	FAI SCM 3000	EL	BUS-2 View-guard 1)	BUS-2 SCM 3000	BUS-1
Area optics	X	X	X	X	X	X	X	X	X	X	X	X
Anti Mask uo to approx. ca. 30 cm (AM)	—	—	—	—	—	—	X	X	X	X	X	X
Anti Mask active or inactive in armed state	—	—	—	—	—	—	X	—	—	X	—	—
Anti Masc automatically inactive in armed state	—	—	—	—	—	—	—	X	—	—	X	X
Anti Mask allways ative	—	—	—	—	—	—	—	—	X	—	—	—
Alarm indication after disarming	X	X	—	X	X	X	X	X	—	X	X	X
First alarm indication via interval LED indication	X	X	—	X	—	—	X	X	—	X	—	—
Alarm memory	X	X	—	X	X	X	X	X	—	X	X	X
PIR sensitivity programmable in 2 stages	X	X	X	X	X	X	X	X	X	X	X	X
MW sensitivity programmable in 2 stages	—	—	—	X	—	—	—	—	—	X	—	—
MW sensitivity automatically as PIR sensitivity	X	X	X	—	X	X	X	X	X	—	X	X
PIR range programmable in 4 stages	X	X	X	X	X	X	X	X	X	X	X	X
MW range	PIR and MW operate automatically with the same range											
MW active or inactive in disarmed state	—	—	—	X	—	—	—	—	—	X	—	—
MW automatically inactive in disarmed state	X	X	—	—	X	X	X	X	—	—	X	X
MW allways ative	—	—	X	—	—	—	—	—	X	—	—	—
Detector group input (without clear function)	—	—	—	X	—	2)	—	—	—	X	—	2)
Temperature alarm, alarm thresholds can be programmed	—	—	—	X	—	—	—	—	—	X	—	—
Walk test function (with LED indication)	X	X	X	X	X	X	X	X	X	X	X	X
Walk test activation directly through the panel	X	—	—	X	—	—	X	—	—	X	—	—
Walk test activation via "clear detector group"	—	X	—	—	X	X	—	X	—	—	X	X
Walk test automatically active after initialising is completed	—	—	X	—	—	—	—	—	X	—	—	—
Cyclical self-test (PIR function)	—	—	—	—	—	—	X	X	X	X	X	X
Cyclical self-test (MW function)	—	—	—	—	—	—	X	X	X	in preparation		
Monitoring of operating voltage	X	X	X	X	X	X	X	X	X	X	X	X
Fault message to the panel	X	X	3)	X	X	X	X	X	3)	X	X	X
Fault/cover signal: save or don't save	X	X	—	X	X	—	X	X	—	X	X	—
Fault/cover signal: only don't save	—	—	X	—	—	X	—	—	X	—	—	—
Cover contact	X	X	—	X	—	—	X	X	—	X	—	—
Tear-off protection	X	X	—	—	—	—	X	X	—	X	—	—

EL   Easy Logic mode. Only operating voltage and alarm output used (not as per VdS)
1)   Viewguard mode on BUS-2 is supported from panel software V07 (HB/MB24, HB/MB48, MB100).
2)   Operation on BUS-1: The detector group is connected in an "OR" function with the alarm message
3)   The "Alarm" and "Fault" outputs can be connected in series.

Detection coverage Area optics

Optics

Area optics with sneak-by guard (state of delivery)

Lens splitting	22 zones at 5 levels
Opening angle	80° hor., 64° vert.
Range	8 / 11 / 13 / 15 m (PIR and MW operate automatically with the same range)

Mounting height

Recommended: **2.5 m** for optimal operating sensitivity.

Permitted: 2.2 m to 3.4 m PIR detectors
2.2 m to 4.0 m DUAL detectors

ATTENTION! Important note for mounting heights of **more than 3.00 m**:

In case of mounting heights of 3.00 to 3.40 m, the close range between 0 - 1.50 m cannot be monitored completely despite the requirements for VdS systems of class C (see detection coverage diagram on right side).

As the case may be, the respective areas must be monitored separately by appropriate means (such as a second detector).

Detection diagrams

The following diagrams refer to a range setting of 15 m.

Note: The detectors have a high immunity against false alarms without reference surface

1. Mounting height 2.5 m (2.20 to 3.00 m)

Horizonal detection coverage
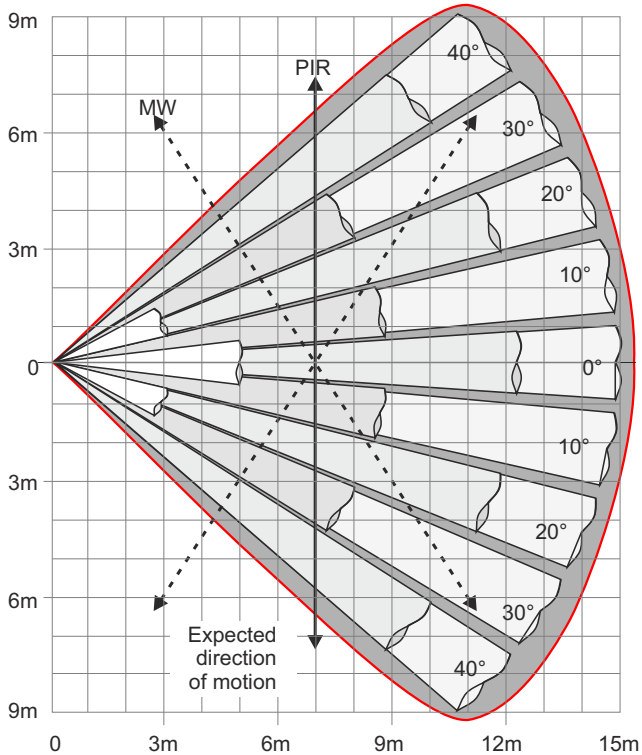
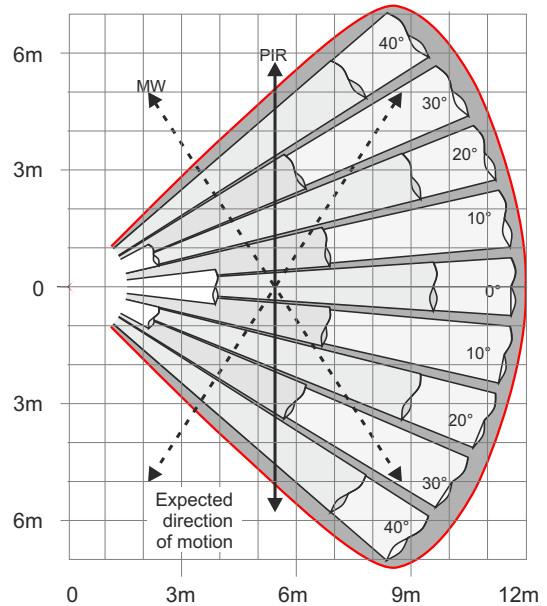Due to the additional microwave, the dual detector has a very high detection capacity even with diagonal movement.
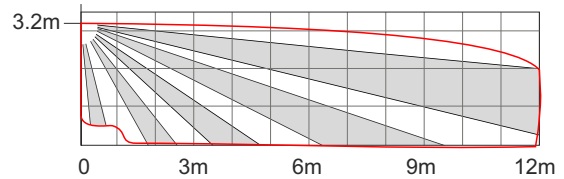
Vertical detection coverage

Vertical inclination 0°
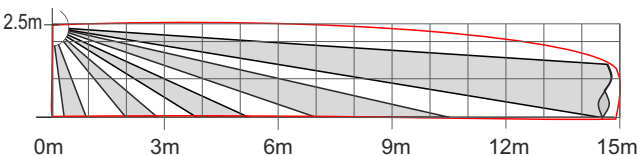
2. Mounting height 3.20 (3.00 m to 3.40 m
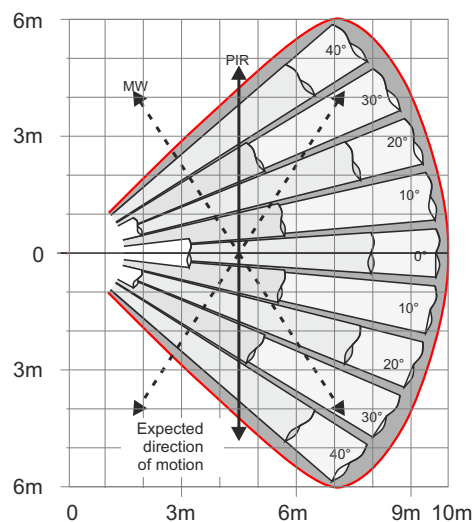
Horizonal detection coverage

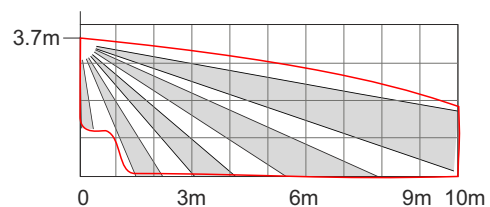Vertical detection coverage

Vertical inclination 3° downward

3. Mounting height 3.70 (3.40 m to 4.00 m) (only DUAL detectors)

Horizonal detection coverage

Vertical detection coverage, vertical inclination 7° downward

Detection coverage Viewguard PIR Replacement Mirror sets

The Viewguard PIR Replacement Mirror sets are not suitable for DUAL detectors.

VdS approval in combination with all VdS approved Viewguard PIR detectors (approval no. see page 7).
- Viewguard PIR   Class B
- Viewguard PIR AM   Class C

• Curtain optics

**033434 Viewguard PIR mirror, Curtain optics**
         (PU = 3 piece)

The curtain mirror is suitable for monitoring possible intrusion locations.

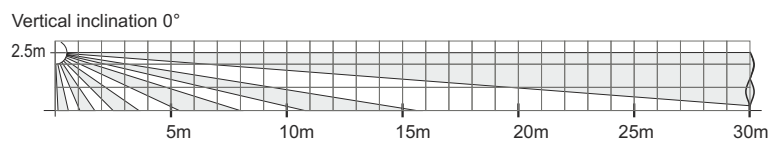|	
mirror distribution	11 zones on 11 levels
acceptance angle	7.5° hor., 85° vert.
range	17 / 21 / 25 / 30 m

Mounting height:
- Recommended: 2.50 m
- Permitted: 2.20 m to 3.00 m

Horizonal detection coverage

Vertical detection coverage, Mounting height 2.50 m

Vertical inclination 0°
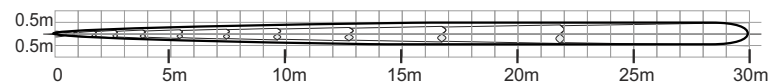
• Long-range optics

033435 Viewguard PIR mirror, Long-range optics
         (PU = 3 piece)

The long-range mirror is suitable for monitoring corridors.

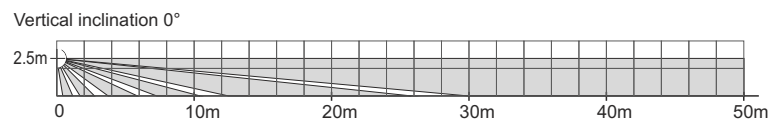|	
mirror distribution	8 zones on 6 levels
acceptance angle	30° hor., 78° vert.
range	29 / 35 / 42 / 50 m

Mounting height:
- Recommended: 2.50 m
- Permitted: 2.20 m to 3.00 m

Horizonal detection coverage

Vertical detection coverage, Mounting height 2.50 m.
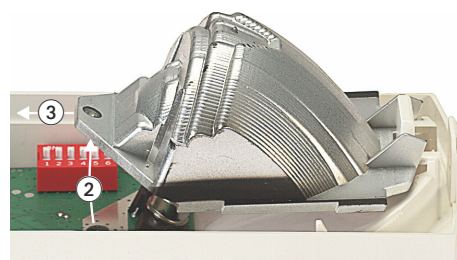
Vertical inclination 0°

Retrofitting of the mirror optics

Easy retrofitting of the mirror optics on site:

1.   Remove screw
2.   Fold up mirror
3.   Remove mirror

Installation:
Insert the new mirror in reverse order. Insert the screw and tighten slightly. Close housing.
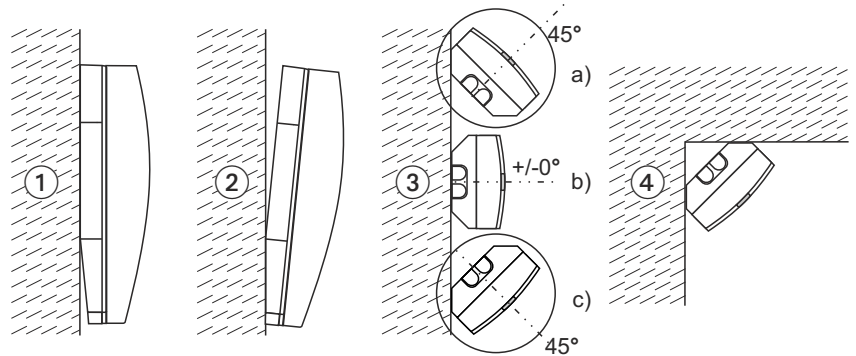
Mounting

1. Mounting directly on the wall

Mounting possibilities:

- 0° Vertical at a 0° downward angle ①
- 3° Vertical at a 3° downward angle ②
- 45° Horizontal at a 45° angle to the left or right ③
- Corner mounting ④

Please note:

When installed in accordance with VdS systems class B and C, the **backtamper must be used**.

Backtampre is not possible when installing as per Fig. ③ a) and ③ c) (PIR detectors) or Fig. ③ c) (DUAL detectors)

The only exceptions are class B detectors without backtamper.

### 2. Mounting on Adjustable joint (Accessories, Item no. 033390.17)

Should the mounting possibilities in accordance with Fig. above not suffice, the detector can be mounted on the "Adjustable joint".

Swivel range: ±20° horizontal, +4° to -8° vertical.

Detector on Adjustable joint as per **EN grade 2**.

Mounting possibilities:

- Mounting directly on the wall ⑤
- 45° Horizontal at a 45° angle to the left or right ⑥
- Corner mounting ⑦
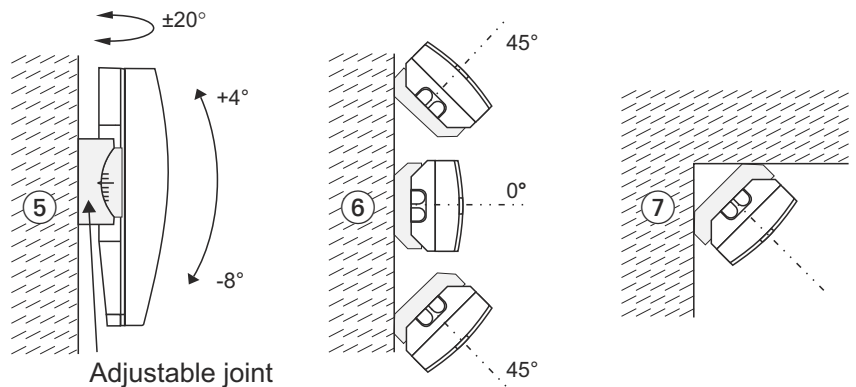
Adjustable joint

The adjustable joint is not provided with a backtamper!

For the installation in VdS systems of class B and C, a solid basis with the defined inclination is required on site to ensure proper functioning of the backtamper.

The only exceptions are class B detectors without backtamper.

3. Mounting on Ball-and-socket set (Accessories, Item no. 033588.17)

The Ball-and-socket set provides the most versatile adjustment possibilities.

Swivel range: ±45° horizontal, ±20° vertical.

Mounting on Ball-and-socket set not as per VdS and EN.

Technical Data

Operating voltage U_b	12 V DC
Operating voltge range	8.0 V to 15 V DC
Current consumption at U_b=12 V DC:	
PIR	PIR detector: 1.6 mA (BUS-2 and FAI), 3.0 mA (BUS-1)
	DUAL detector: 6.6 mA (BUS-2 and FAI), 9.0 mA (BUS-1)
LED	4 mA
Detection range (programmable):	
Area optics	8 / 11 / 13 / 15 m
Long-range optics (Item no. 033435)	29 / 35 / 42 / 50 m
Curtain optics (Item no. 033434)	17 / 21 / 25 / 30 m
Detection sensitivity (programmable):	normal / high
PIR sensor	temperature compensated
Anti-Mask function (only AM detectors)	up to 30 cm
Frequency microwave (only DUAL detectors)	9.35 GHz (X band)
Contacts: (only FAI detectors)	
Alarm- and fault contact	15 V DC / 0.1 A, Internal resistance $\leq 25\ \Omega$
Tamper contact	15 V DC / 0.1 A, Internal resistance $\leq 10\ \Omega$
Protection category as per EN 60529	IP 30
Environmental class as per VdS	II
Operating temperature range	-10 °C to +55 °C
Storage temperature range	-25 °C to +70 °C
Dimensions W x H x D	PIR detector: 64 x 130 x 48 mm
	DUAL detector: 64 x 158 x 48 mm
Colour	traffic white (similar to RAL 9016)

VdS approval no.

Item no. 033432.21	**Viewguard PIR AM BUS-2/BUS-1**	G108036, IDS Class C, with area optics
		G108037, IDS Class C, retrofitted with curtain optics
		G108038, IDS Class C, retrofitted with long-range optics
Item no. 033332.21	**Viewguard PIR BUS-2/BUS-1**	G108509, IDS Class B, with area optics
		G108510, IDS Class B, retrofitted with curtain optics
		G108511, IDS Class B, retrofitted with long-range optics
Item no. 033430.01	**Viewguard PIR AM FAI**	G107087, IDS Class C, with area optics
		G107088, IDS Class C, retrofitted with curtain optics
		G107091, IDS Class C, retrofitted with long-range optics
Item no. 033330.01	**Viewguard PIR FAI**	G107509, IDS Class B, with area optics
		G107510, IDS Class B, retrofitted with curtain optics
		G107513, IDS Class B, retrofitted with long-range optics
Item no. 033442.21	**Viewguard DUAL AM BUS-2/BUS-1**	G108039, EMT Class C
Item no. 033443.21	**Viewguard DUAL BUS-2/BUS-1**	G108512, EMT Class B
Item no. 033440.01	**Viewguard DUAL AM FAI**	G108078, EMT Class C
Item no. 033441.01	**Viewguard DUAL FAI**	G108518, EMT Class B

Ordering information

PIR AM   PIR   DUAL AM   DUAL

Item no.	Designation
033432.21	**Viewguard PIR AM BUS-2/BUS-1**
033332.21	**Viewguard PIR BUS-2/BUS-1**
033430.01	**Viewguard PIR AM FAI**
033330.01	**Viewguard PIR FAI**
033442.21	**Viewguard DUAL AM BUS-2/BUS-1**
033443.21	**Viewguard DUAL BUS-2/BUS-1**
033440.01	**Viewguard DUAL AM FAI**
033441.01	**Viewguard DUAL FAI**

Accessories

Curtain mirror

Long range mirror

Adjustable joint

Ball-and-socket set

Seal

Item no.	Designation
	Mirrors sets:
033434	**Viewguard PIR Replacement Mirrors Curtain mirror**, (PU = 3 piece)
033435	**Viewguard PIR Replacement Mirrors Long range mirror**, (PU = 3 piece)
	Mounting Accessories:
033390.17	**Adjustable joint for motion detectors** suitable for wall and corner mounting horizontal ±20°, vertical +4° to -8° as per EN grade 2
033588.17	**Ball-and-socket set for wall and corner mounting** horizontal ±45°, vertical ±20° not as per VdS and EN
033391.17	**Seal** (PU = 20 piece)
033436	**Viewguard spare parts wall-tamper**

P01543-22-0G0-03
04.2015 · Subject to change without notice
© 2015 Honeywell International Inc.

Honeywell