

Description

External triple-technology movement detection sensor (2 PIR+MW), with anti-masking. It has a DOPPLER MICROWAVE sensor and a DFIR (DOUBLE FREQUENCY INFRARED) system with 2 direction sensors with multiple elements (1 DOUBLE and 1 QUADRUPLE) which can reject any false alarms including those caused by oscillatory and repetitive movements (anti-oscillation, e.g. tree branches).

Together, the signals generated by the 2 systems are processed by an algorithm which can signal the presence of intruders, distinguishing them very efficiently from false alarms.

The movement sensor 4274 can thus perform the following functions: anti-, anti-masking and animal immunity.

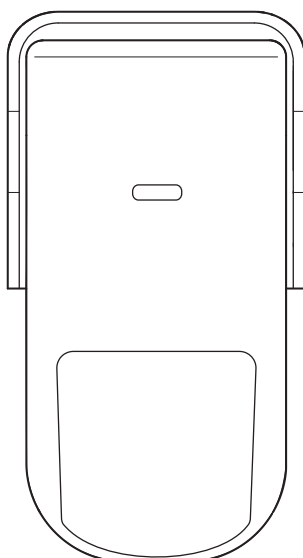
Technical data

IR sensor	two sensitive areas (double components) ; four sensitive areas (double components) (DFIR)
Supply voltage	9.6 – 14.5 Vdc
Absorption	50 mA max
Alarm relay	solid state, insulation 1500 Vrms
Tamper switch	form A (NC) 50 mA at 30 Vdc
Sensitivity	DFIR – selection: 2,3 steps or 6,7 steps
Microwave operating frequency	~10 GHz
Microwave Range	20 – 100% adjustable
Detection of events	anti-oscillation DFIR processor against false alarms
White light immunity	25000 lux
Operating temperature	(- 10) – (+ 55) °C
IP index	65

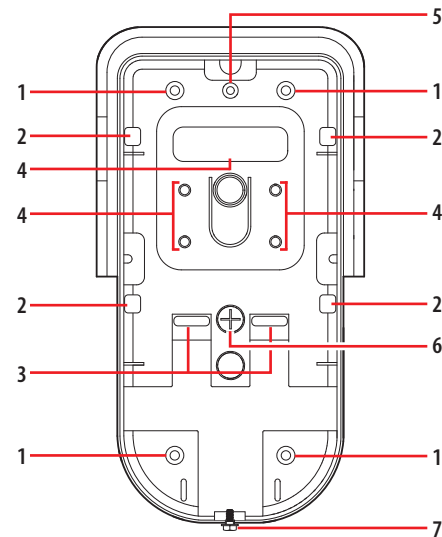
Dimensional data

Size: 171 x 76 x 61mm (H x L x D)

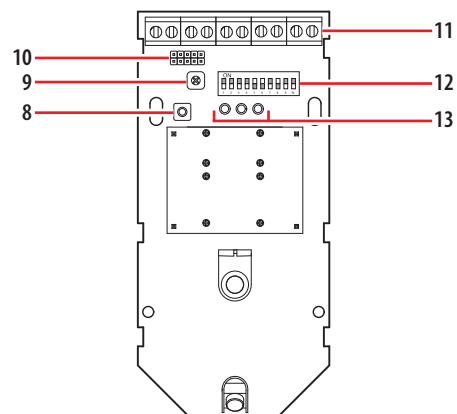
Front view



Front view without cover and without card



Card

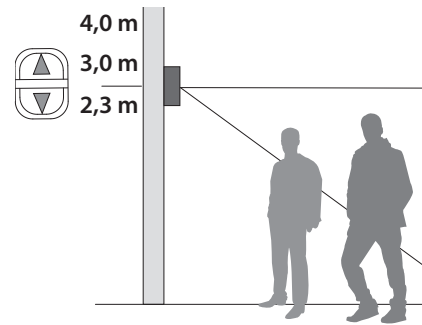


Legend

1. Wall fixing holes.
2. Holes for wall corner.
3. Opening for cable entry
4. Holes for fastening to the pivoting support.
5. Screw to fasten the electronics to the base.
6. Opening for anti-sabotage on the wall.
Fasten the sensor with a screw through this opening to activate the anti-tear off protection.
7. Front fixing screw.
8. Anti-sabotage tamper.
9. Microwave adjustment trimmer
Turn clockwise to increase the microwave detection area.
10. Programming jumper.
11. Connection clamps.
12. Dip-Switch.
13. Notification LED.

LED	Function	LED status
	Switching on phase	ON
	Test mode	ON for 1 second
RED	Alarm	ON for 5 seconds if the LED is enabled
	Masking or Fault	Blinking
	Normal	OFF
YELLOW	Microwave Detection	ON
Test mode	No detection	OFF
GREEN	DFIR detection	ON
Test mode	No detection	OFF

Installation rules

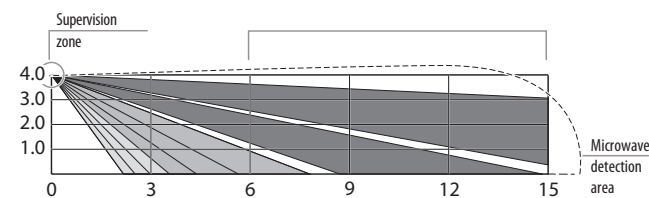
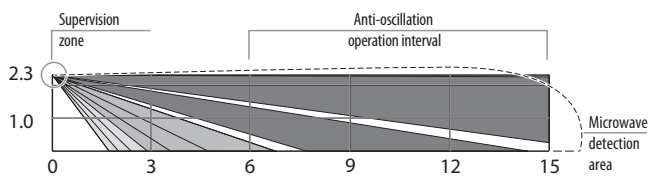


Technical specifications

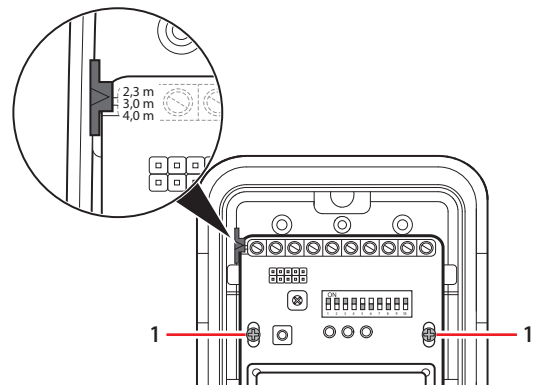
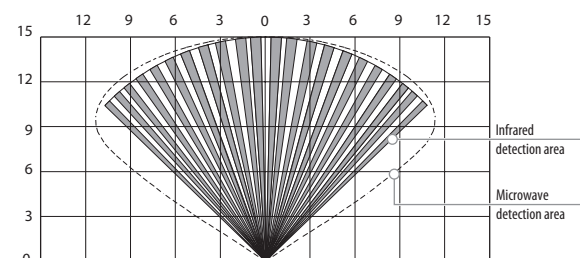
Coverage graphs detected with sensor mounted vertically

Covering diagram side view in metres

- Short range (26 beams)
- Medium range (38 beams)
- Long range (88 beams)



Covering diagram upper view in metres



Caution: set the selector switch on the sensor to 2.3, 3, or 4 metres, depending on the assembly height required. Slacken the screws 1 and delicately move the electronics vertically to the position required.

Warning

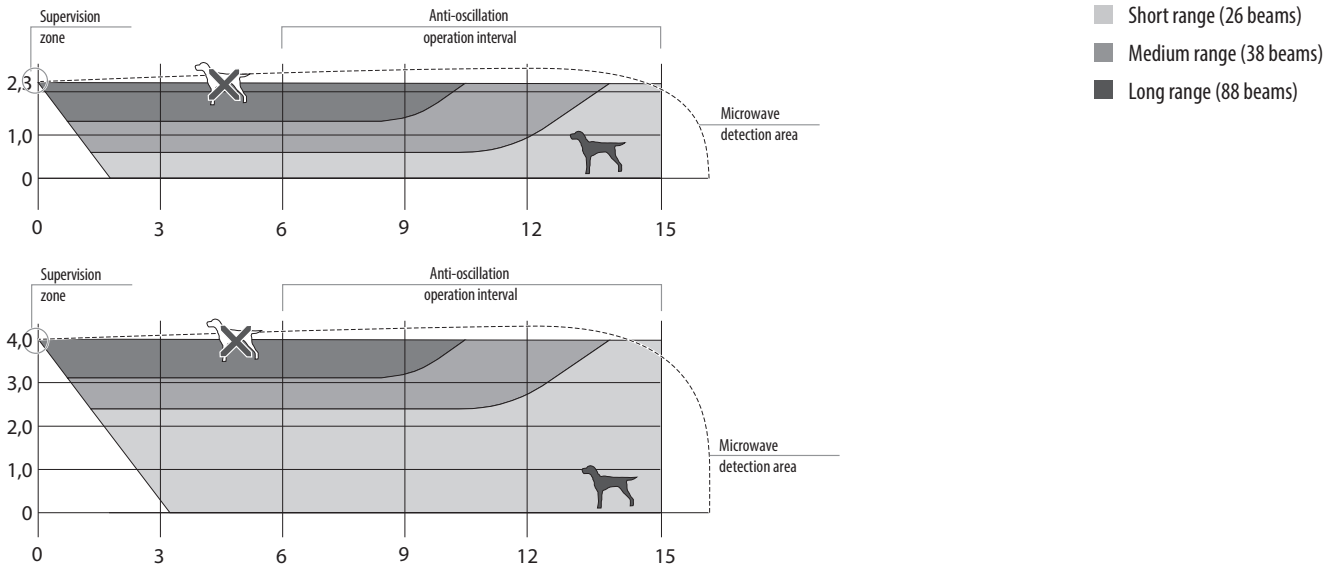
Leave the view from the sensor to the monitored area free; The glass hampers the view of the DFIR sensor and the metal blocks the view of the microwave sensor. The sensor is oriented so that the trajectories of any intruders cross the two visual fields. Keep objects with oscillatory (repetitive) movements at 6 m. To avoid interferences the sensors must be installed at a distance of more than 3 metres from each other. The microwave sensor can detect moving cars even at more than 15 metres. Avoid the sensor being installed in the direction of roads or appreciably reducing the microwave output.

Operation

Pet immunity

The 4274 movement detector is designed to allow the presence of small domestic animals (up to 10 Kg) in the controlled room without an alarm being given. The diagram below shows the zones of greatest discrimination between human being and domestic animal. The sensor must be installed so that domestic animals only move in the spaces with lighter colouring.

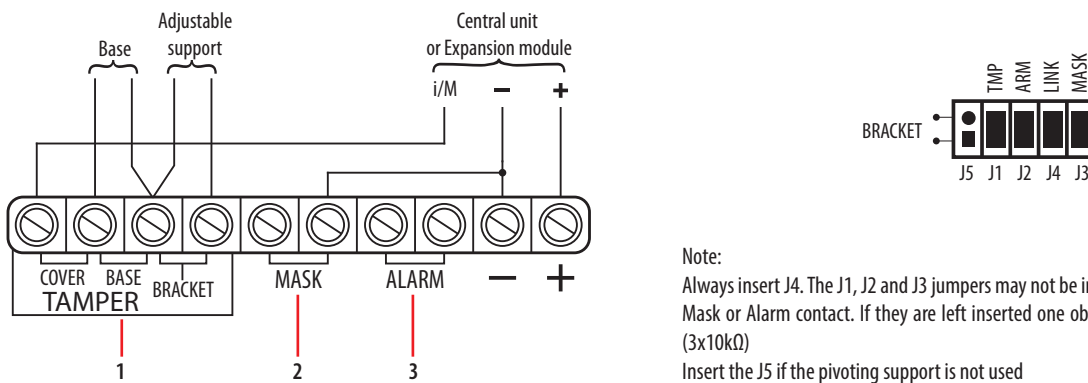
Covering diagram side view in metres



Note: the size datum is purely indicative because the animal's behaviour could also cause an alarm to be given. In any case we recommend that you check with an animal present that it does not activate the alarm.

Wiring

Sensor wiring diagram (with adjustable support) to the central unit or expansion module and jumper setting for triple parallel balance (3 x 10KΩ)



- 1 – connect to use clean tamper contacts
- 2 – connect to use clean mask contacts
- 3 – connect to use clean alarm contacts

Note: the triple parallel balancing (3x10kΩ) must be set on the zone involved, with TiAlarm software.