EC DECLARATION OF CONFORMITY

Hereby, Vanderbilt International (IRL) Ltd declares that this equipment is in compliance with all relevant EU Directives for CE marking. From 20/04/2016 it is in compliance with Directive 2014/30/EU (Electromagnetic Compatibility Directive).
The full text of the EU declaration of conformity is available at: https://vanderbiltindustries.com/compliance-documents
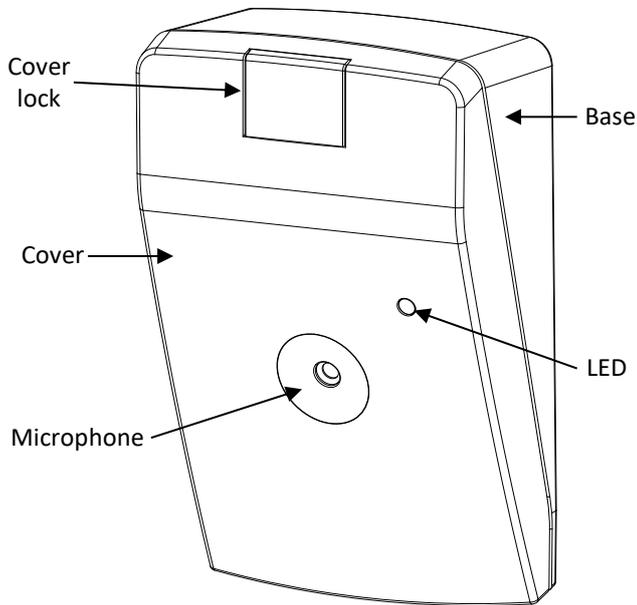
DESCRIPTION

AGB800 is an acoustic glass break detector giving an alarm when glass is smashed at intruder attempts through windows, doors and glazed walls.

The detector is based on advanced microcontroller technology and programmed to take a lot of relevant acoustic factors into account: The Digital Room Compensation (DRC). This makes the detector able to distinguish between a true glass break and other irrelevant sounds.

The detector is for indoor use. The coverage distance is 1–9 m. The coverage angle is 165⁰, which means that one detector can protect several windows in the same room. The detector can be mounted in the ceiling or on a wall with a free "line-of-sight" to the window being protected.

AGB800 is certified according to EN 50131-2-7-1:2012, security grade 2.
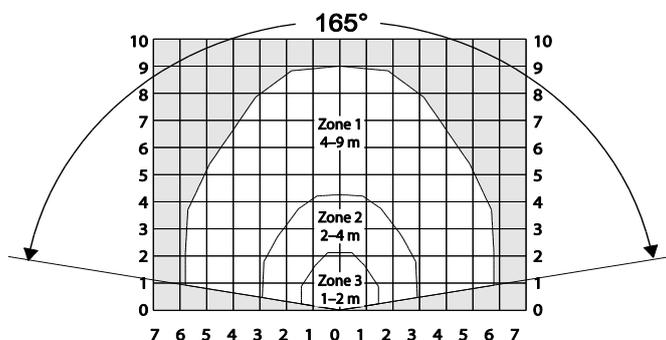
Coverage area in the acoustic room Zone 1–3

CONNECTION TO A 24-HOUR LOOP

The detector is constructed for continuous supervision and is extra resistant to different acoustic disturbances. It will function well in most environments. However in rooms with very high rates of disturbances as in industrial workshops and gyms, it is recommended to test the detector for 3–4 weeks before decid-ing to use it continuously. In rare cases a combination of random sounds can trigger an alarm.

SIGNALLED EVENTS

Detector has two relays and one micro-switch to signal detected and processed events to control panel in prioritised order as following signals:

- Glass break – signalled by INTRUSION relay
- Sabotage is signaled independently by TAMPER micro-switch.

Event	Signal sent by relay or micro-switch	
	INTRUSION	TAMPER
No stimulus	Closed	Closed
Intrusion	OPEN	Closed
Tamper	Closed	OPEN

SPECIAL TOOLS

In most rooms (e.g. offices) no special tools are required during the installation. In rooms with complicated acoustics, it is recommended to use the ADT700 tester. ADT700 can also be used for function test and annual service.

OPENING THE DETECTOR

❶ Slide the lock cover up

❷ Loosen the screw

❸ Pull cover to open
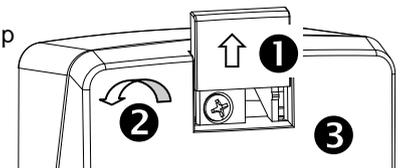
MOUNTING INSTRUCTIONS

- Detector should be installed on a ceiling or on a wall opposite to the glass to be protected
- Clear "line-of- sight" between the "microphone" of the detector and the glass is required
- Distance between the glass and the detector should be 1–9m
- Detector should be installed min. 50cm from a corner
- Detector should be installed min. 1m over the floor
- Detector should be installed min. 30cm from the ceiling (at wall mounting)
- Detector should be installed on a flat surface, which is free from objects in a radius of 50cm from the detector
- Detector should not be installed close to air vents or big sound reflecting obstacles
- Never mount the detector in the corners
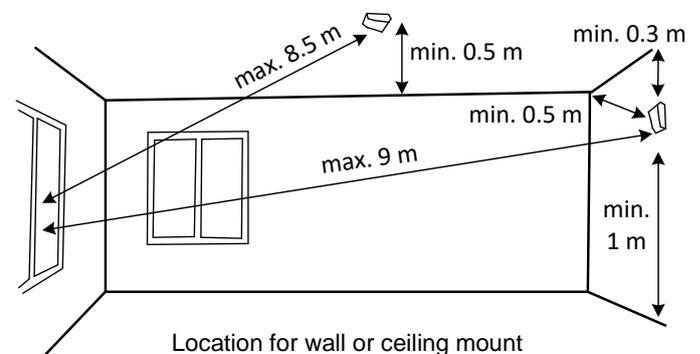
Location for wall or ceiling mount

DETECTOR BASE AFTER REMOVAL OF THE COVER
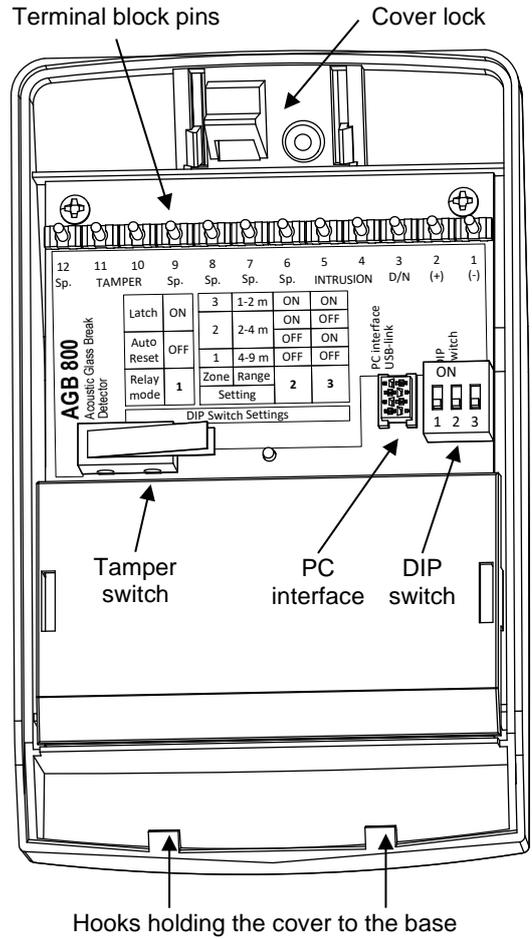
Cable jacket "knock-out"

Terminal block

Cover screw

Mounting hole #1

```
1    2    3    4        5    6    7    8    9   10    11    12
(-)  (+)  D/N  INTRUSION Sp.  Sp.  Sp.  Sp.  Sp.  TAMPER Sp.
```

Acoustic Glass Break Detector
EN 50131-2-7-1 Security Grade 2
EN 50130-5 Environmental Class I
VdS 117503

Vanderbilt Intl (IRL) Ltd.
Clonshaugh Business Park
Clonshaugh, Dublin, D17 KV84
Ireland, V54535-Z130-A100

AGB 800

VdS   Inspected. Approved. Safe.   ☒ CE

Mounting hole #2

↑ Slots for assembling the cover hooks ↑

Mounting hole #3

COVER SEEN FROM BELOW

Terminal block pins

Cover lock

```
12   11    10    9    8    7    6     5        4    3    2    1
Sp.  TAMPER Sp.  Sp.  Sp.  Sp.  Sp.  INTRUSION     D/N  (+)  (-)
```

AGB 800 Acoustic Glass Break Detector

Latch	ON	3	1-2 m	ON	ON
		2	2-4 m	ON	OFF
Auto Reset	OFF			OFF	ON
		1	4-9 m	OFF	OFF
Relay mode	1	Zone	Range	2	3
			Setting		

DIP Switch Settings

PC interface USB-link

DIP switch
ON
1 2 3

Tamper switch

PC interface

DIP switch

Hooks holding the cover to the base

INSTALLATION

1. Choose the best mounting position on the wall or ceiling.
2. Loosen the cover screw and remove the upper part
3. Use the bottom part as a template and mark the place of the holes of with a pen
4. Use a 2.5mm drill for the self-tapping screws provided. If necessary, use wall anchors
5. If necessary, cut out the marked "knockout hole" on the back of the base with a pair of tongs
6. Pull the wiring cable through the "knockout hole" in the bottom plate
7. Connect the wires to the screw terminals

Pin	Marking	Function
1	(-)	Ground
2	(+)	Plus 7 to 30 V DC
3	D/N	Day and Night control of LED
4	INTRUSION	INTRUSION relay output C
5	INTRUSION	INTRUSION relay output NC
6	Spare	Spare contact (unconnected)
7	FAULT	Spare contact (unconnected)
8	FAULT	Spare contact (unconnected)
9	Spare	Spare contact (unconnected)
10	TAMPER	Tamper switch output C
11	TAMPER	Tamper switch output NC
12	Spare	Spare contact (unconnected)

8. Use the cable strap provided to fix the wiring cable to the detector.
9. Fix the detector firmly to the base with the enclosed screws.

UNDERSTANDING THE DIP SWITCH

INTRUSION relay mode (DIP1) → ON 1 2 3 ← Range setting (DIP2, DIP3)
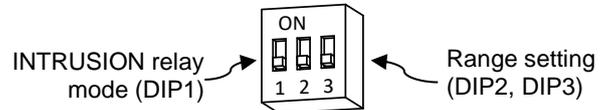
#	Function	Setting			
1	INTRUSION relay mode	ON – Latch		OFF – Auto	
		4–9m Zone1	2–4m Zone 2	1–2m Zone 3	
2	Range setting	OFF	OFF	ON	ON
3	Range setting	OFF	ON	OFF	ON

DIP1=ON: INTRUSION relay mode ON means the INTRUSION relay will Latch and be open in alarm.
DIP1=OFF: INTRUSION relay mode OFF means the INTRUSION relay will be auto reset after 2 seconds in alarm.

10. Set the desired range, i.e. the detector sensitivity setting by using the DIP switch no 2 and 3.

4–9m, Zone 1
OFF, OFF

2–4m, Zone 2
OFF, ON or ON,

1–2m, Zone 3
ON, ON
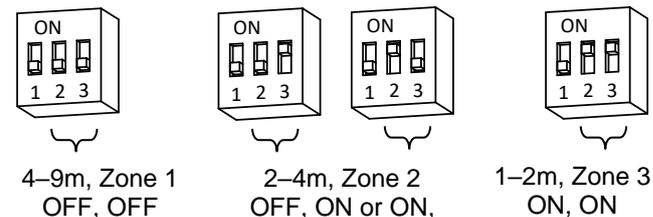
11. Check the window constructions and note what kind of glass is used and especially in the pane closest to the room.

SUGGESTED SETTINGS OF THE DETECTOR DEPENDING ON WINDOW DESIGN AND TYPE OF GLASS:
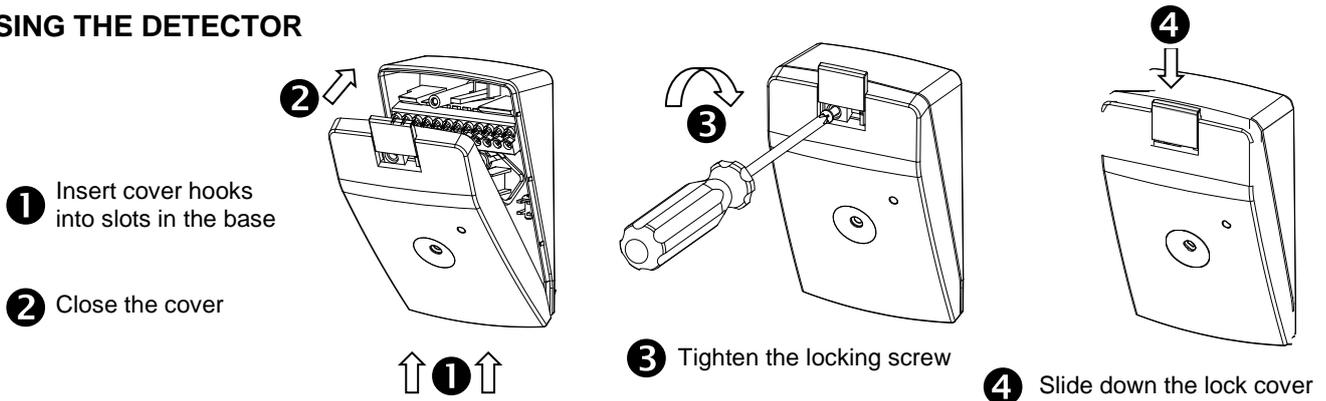
Check the window constructions and note what kind of glass is used and especially in the pane closest to the room.

- **Single glazed** (float & tempered) – Set the detector at the measured distance from the glass to the detector.
- **Double glazed** (float & tempered). If there are high disturbances in the surroundings – set the detector at the measured distance from the glass to the detector. At normal or low disturbances – the detector shall be set at Zone 1.

- **Double glazed** where the inner pane is covered **with security film** – Set the detector at Zone 1 apart from the measured distance.
- **Triple glazed** (float & tempered) – Set the detector at Zone 1 apart from measured distance.
- **Laminated glass** – Set the detector at Zone 1 apart from the measured distance.

	Window design	Glass type of pane inside room		Range		
				1–2m	2–4m	4–9m
1	Single glazed	Float & tampered		Zone 3	Zone 2	Zone 1
2	Double glazed	Float & tampered	High disturbances	Zone 3	Zone 2	Zone 1
			Low disturbances	Zone 1		
3	Triple glazed	Float & tampered		Zone 1		
4	Double glazed with security film	Float with security film		Zone 1		
5	Single & multi-glazed	Laminated		Zone 1		

CLOSING THE DETECTOR

❶ Insert cover hooks into slots in the base

❷ Close the cover

⇧❶⇧

❸ Tighten the locking screw

❹ Slide down the lock cover

CHECK THE SETTINGS WITH ADT700 TESTER

If the detector is placed too far or too close from the glass, it will not respond. At DRC testing the LED of the detector will flash 1, 2 or 3 times to show it is in a certain Zone. If it does not flash a better place must be selected.

1. Put the cover on and make sure it hooks properly into the base of the detector.
2. Apply power – LED will now indicate your range setting by blinking 1–3 times.
3. Use ADT700 to test and calibrate the detector for optimal position.

TESTING AND CALIBRATING

ADT700 tester is a specially developed tool for calibrating and adjusting the detector AGB800 for optimal function in the acoustic room – the DRC Digital Room Compensation procedure. When testing the detector settings you do not need to open it again as the tester will communicate with the detector acoustically. Never test the AGB800 with a cover disassembled from a base. Make sure the cover is fastened properly.

Caution: Do not use the ADT700 tester in proximity to your ears as the tester produces loud noises.

DIGITAL ROOM COMPENSATION PROCEDURE

Prepare the acoustic detector for DRC by setting the D/N line (if used) in DAY mode – D/N line should be left open or Low.

1. Press the START button of the ADT700 tester to put the power on. Green LED will light.
2. Hold the tester 1 to 3m from the detector and aim the speaker at it.
3. Press the START button once more to initiate the DRC mode. The LED on the detector will start to flicker.
4. Go to the furthest distance (max. 9m) of the glass to be protected and aim the speaker at the detector.
5. Press the DRC button to send a DRC signal out. Make this 2–10 times from different angles of the protection area for optimal capability.

The LED will flash confirming it has received the signal. The LED will then start to blink and flicker.
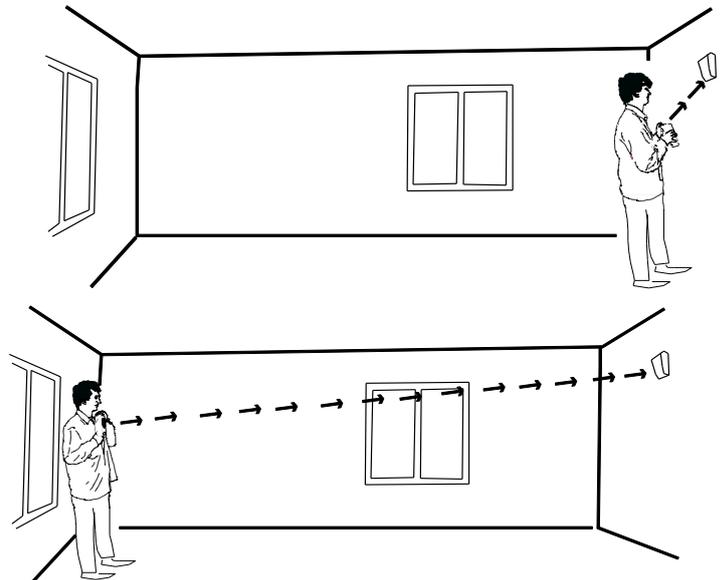
The DRC range calculated by the detector will be displayed as a number of pulses from 1 to 3. In case of too weak or too strong signals outside the compensation range (means that the detector is placed too close or too far from the object to be protected), the detector will then not show DRC range.

6. Press the STOP button from a distance of 1 to 3m from the detector to terminate the DRC procedure. If DRC range measured by the detector is different from actual DIP-switch settings, the LED will continue to blink 1–3 times showing the correct range number to be set in the detector.

- The LED blinks 1 time: set to Zone 1 (4–9 m)
- The LED blinks 2 times: set to Zone 2 (2–4 m)
- The LED blinks 3 times: set to Zone 3 (1–2 m)
7. Press the STOP button again. The LED will continually display the correct programed zone and the AGB will exit the DRC mode.

PROTECTING SEVERAL WINDOWS BY ONE DETECTOR

Detector can protect several windows in one room if the windows are within the coverage area. Make independent DRC test for each window to be protected. Follow the procedure above for each window. The detector shall be set to the lowest Zone number that is the longest range from the detector.

TIMEOUT

Both the AGB800 detector and ADT700 tester are equipped with a timeout feature. The AGB800 will stop the DRC mode and the ADT700 will switch off power if no activity has happened within 3–4 minutes.

D/N CONTROL (Day/Night)

The D/N makes it possible to remote control the alarm indications of the detectors and remote reset during DAY->NIGHT transition. The D/N increases the security of the detector, as it enables the alarm indications to be concealed in NIGHT mode without any influence on the relay function.

SELF-TEST

Detector is continuously checking all vital parts responsible for proper detection of glass break signal using internal self-test procedure.

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UNDERSTANDING THE LED WHEN THE DETECTOR IS IN OPERATION

LED	Detector status
Flashes 1–3 times when powered ON	Indication of range setting after power-on
Off	Normal state, no alarms
Permanently on	Intrusion detected – if detector in Latch mode
Permanently on with 1 dip per 3s	Masking detected
Permanently on with 2 dips per 3s	Low supply voltage or self-test failure

UNDERSTANDING THE LED WHEN TESTING THE DETECTOR WITH ADT700 TESTER

LED	Detector status
Flickers	In test mode
Flickers and blinks	In calibration mode
Flashes 1.5s	Confirms received signal
Blinks slowly 1 time each 2.5s after calibration	Set range setting to Zone 1 (4–9m)
Blinks slowly 2 times each 2.5s after calibration	Set range setting to Zone 2 (2–4m)
Blinks slowly 3 times each 2.5s after calibration	Set range setting to Zone 3 (1–2m)

TROUBLESHOOTING

Detector does not respond
- Check the supply voltage and polarity

LED permanently on
- Switch off the detector for a short period
- Check if LED is in latching mode (DIP1=ON)

LED permanently on with 2 dips per 3 s
- Check supply voltage – should be higher than 7 V

No alarm
- Check the INTRUSION and FAULT relay wiring
- Check the alarm loop wiring

TECHNICAL DATA

Type (thickness) of protected glass	Float (4mm), laminated P2, P4 (4mm + 4mm)
Size of protected glass	Min 40 × 40 cm
Max range	9m radius/165°
Range setting	Zone 1 = 4–9m
	Zone 2 = 2–4m
	Zone 3 = 1–2m
Supply voltage	7–30V DC
Max. voltage ripple	2 Vpp at 12V, 4 Vpp at 24V
Voltage monitoring	Fault signaled at < 7V
Current consumption quiescent state	12mA @ 12V, 7.3mA @ 24V
D/N signal levels	DAY = D/N open or < 2.5V, NIGHT = D/N > 2.5V
INTRUSION output, FAULT output	Relay
INTRUSION and FAULT relay contact rating	50mA, 50V DC/peak AC, Rs ≤ 30Ω
TAMPER contact rating	50mA/50V DC/peak AC
Intrusion/fault indication	LED
Environmental class	EN50130-5:2011, VdS 2110 Class I
Operating temp. range	+5°C to +40°C
Operating humidity range	Max. 93% RH
Housing material	Plastic ABS, white or black
Dimensions [WxHxD]	69 x 110 x 39 mm
Security grade	EN 50131-2-7-1:2012/A1:2013, Grade 2, VdS class B
Approvals	

ORDERING INFORMATION

Type	Art No.	Description	Weight
AGB800	V54535-Z130-A100	Acoustic glass break detector G2	0.126Kg
ABG800-BL	V54530-Z130-A300	Acoustic Glass Break Detector Black	0,126Kg
Accessory			
ADT700	N54535-Z100-A100	Acoustic glass break tester	0.743Kg