

Shard SF25/XF25

The Shard micro-controller based, glassbreak detector utilizes Electronics Line 3000's Noise Averaging technique that continuously monitors the environmental background noise. This adjusts the detector's sensitivity automatically, according to the level of noise in the room, allowing flex and audio frequencies to be reliably detected while reducing the number of false alarms.

The XF25 model includes Supervision Trouble Verification, a trouble output to notify the control panel of supervision failure and can be wired using either a Normally Open (N.O.) or Normally Closed (N.C.) loop type.

Mounting Considerations

Consider the following before mounting the glassbreak detector:

- For optimum results, the detector should be mounted in direct line of sight of all windows to be protected, making sure that there is no acoustic interference between the detector and the glass.
- The detector should be mounted at a height between 1.1 to 1.6m (3.6 to 5.4ft).
- The detector should be mounted at a minimum of 1.2m (4ft) from the protected glass. The maximum installation distance is in accordance with the maximum detection range for the protected glass. Please refer to the distances listed in the technical specification located on the other side of this instruction sheet.
- Curtains, window coverings and shutters may affect the level of detection.
- Do not place bulky objects between the detector and the protected glass.
- To lower the risk of false alarms, avoid mounting the detector within 1.2m (4ft) of doorbells, cooling/heating vents, fans and any other noise emitting devices.
- The detector is best suited to rooms with moderate noise. Avoid mounting in garages, noisy kitchens, small bathrooms and other small acoustically live rooms.
- Do not define the detector's zone as 24hr.

Installation Instructions

1. Remove the front cover by pressing the pry-off slot at the bottom of the detector with a small screwdriver.
2. Break away the wiring knockout and thread the cable through the hole. **Note: Use 20-22 AWG connection cable.**
3. Connect the wires to the terminal block as shown in Figure 2.

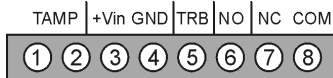


Figure 2: Wiring Connections

Terminals 1 & 2: Tamper Contacts (N.C.)

Terminals 3(+) & 4(-): Voltage Input

Terminal 5: Trouble Output*

Terminals 6, 7 & 8: Alarm Relay Output (N.C.) or (N.O)*

* The trouble output and N.O. relay output are only available with the XF25. In the SF25, terminals 5 & 6 are not used.

4. Before permanently mounting, test the detector using a glass break simulator – see *Testing Procedures*.
5. Mount the detector using the screws and wall plugs provided.
6. Replace the front cover.

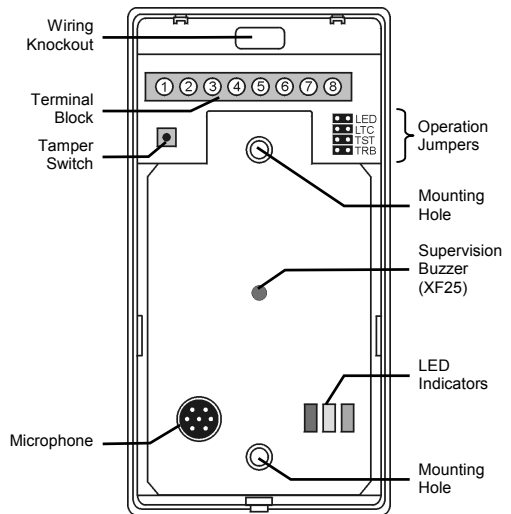


Figure 1: Shard SF25/XF25 (cover off)

Testing Procedures

Test mode is designed to verify the Shard's ability to detect the sound of breaking glass from the chosen mounting location. After installation, the detector should be tested at least once a year.

To test the detector:

1. Place the detector in the required mounting location.
2. Insert the Test jumper (TST); the yellow LED is lit.
3. Using Electronics Line 3000's GBS-7 glassbreak simulator, test the detector from various points on the protected glass; the red and green LEDs are lit for three seconds if a test is successful.
4. To exit test mode, remove the jumper. **Note: The detector will automatically exit test mode after five minutes (even if the jumper is still installed).**

Operation and Adjustment

LED Indication: The SHARD includes three colored LED indicators. Refer to Table 1 for a full explanation on the role of each LED.

Memory Latch: If more than one detector is connected to a zone, this feature enables you to identify the detector that generated the alarm. In Memory Latch mode, when an alarm occurs, the red LED will remain lit until the power supply is briefly interrupted. To set the detector to this mode, insert the Latch (LTC) jumper.

Power Supervision: If the voltage drops below 9V, an alarm is generated and the green LED is turned off.

Audio Supervision: If no sound whatsoever has been detected for 17 hours, the red LED flashes indicating audio supervision trouble. This trouble indication can be disabled by removing the Trouble (TRB) jumper. If the detector is functioning, any noise will restore the trouble condition.

Note: Audio supervision trouble indication overrides alarm memory indication (Memory Latch mode).

The XF25 includes an additional feature, Supervision Trouble Verification. Every 17 hours, the detector performs a self-test. A short tone is sounded to verify that the detector is functioning. The XF25 also includes an open collector trouble output to notify the control panel of supervision failure. The trouble output is normally closed (N.C.) and is opened in the event of supervision trouble.

Red	Steady: Alarm or Low Frequency Test Flashing: Supervision Trouble
Yellow	Test Mode
Green	Power/High Frequency Test

Table 1

Technical Specifications

	General		Shard Models	
			SF25	XF25
Voltage Supply	10.6 to 16VDC			
Low Voltage Indication	@ 9V	Detection Range		
Glass types	Plate (1/4" and 1/8") Laminated, Tempered and Wired (1/4")	(by glass type)		
Sensitivity Adjustment	Automatic, Noise Averaging	<i>Plate (3mm)</i>	7m/23'	7m/23'
Alarm Relay Output	N.C. or N.O. (XF25) contact rating: 10W max.	<i>Plate (6mm)</i>	8m/25'	8m/25'
Max. Switching Voltage	30VDC not to exceed 10W	<i>Wired (6mm)</i>	8m/25'	8m/25'
Max. Switching Current	0.3A not to exceed 10W	<i>Laminated</i>	8m/25'	8m/25'
Alarm Duration	3 seconds	<i>Tempered</i>	8m/25'	8m/25'
Microphone & Circuit Supervision	Trouble indication after 17 silent hours.	Current Consumption @12VDC (standby)	50mA	60mA
Trouble Output (XF25)	Open Collector, N.C. 100Ω series resistor	Alarm Relay Output	Form A NC	Form C NC & NO
Tamper Switch	N.C. contact rating 12VDC, 50mA max. Diode	Alarm Memory Latch	•	•
Reverse Polarity Protection		Low Voltage Indication	•	•
Operating Temp. Range	0°C to 55°C	Tamper Switch	•	•
Fire Protection	ABS	Visual Trouble Indication	•	•
Dimensions	105 x 57 x 27mm 4.1 x 2.3 x 1.1"	Trouble Output	-	•
		Supervision Trouble Verification	-	•



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