



GM 570 LSN Seismic Detector



The GM 570 LSN seismic detector is suitable for monitoring armored cabinets, cash boxes, automatic teller machines, strong rooms, night safes, modular vaults, and vault walls for all known burglary tools such as diamond-tipped drills, hydraulic rams, oxygen lances and explosives.

Functions

The seismic detector is suitable for monitoring armored cabinets, cash boxes, automatic teller machines, night safes, armored safes, and safe vault walls for all known burglary tools such as diamond-tipped drills, hydraulic rams, oxygen lances and explosives.

The GM 570 LSN is fitted with a double housing. This design gives the detector good protection against electromagnetic influences and from deliberate or accidental damage. Mechanical vibrations caused by a burglary attempt are detected and analyzed by the seismic detector sensor, and an alarm is triggered.

- ▶ **Completely protected against electrical influences**
- ▶ **Programmable sensitivity and response time via LSN**
- ▶ **Remote controlled reduction of sensitivity**
- ▶ **Pre-alarm memory with visual display**
- ▶ **Integrated test system**
- ▶ **Monitoring the power supply**
- ▶ **Alarm, tampering and faults are evaluated via the LSN bus**

Temporary reduction in sensitivity

To prevent false alarms caused by loud operational noises, e.g. use of the object intake mechanism on day/night vaults, the response sensitivity of the detector can be temporarily reduced to approx. 1/8 of the pre-set value via a control input (e.g. contact switch on the object intake mechanism).

Note When reducing sensitivity, compliance with the relevant VdS regulations within the context of the system must be checked and accepted by VdS.

GMXS1 test transmitter (optional)

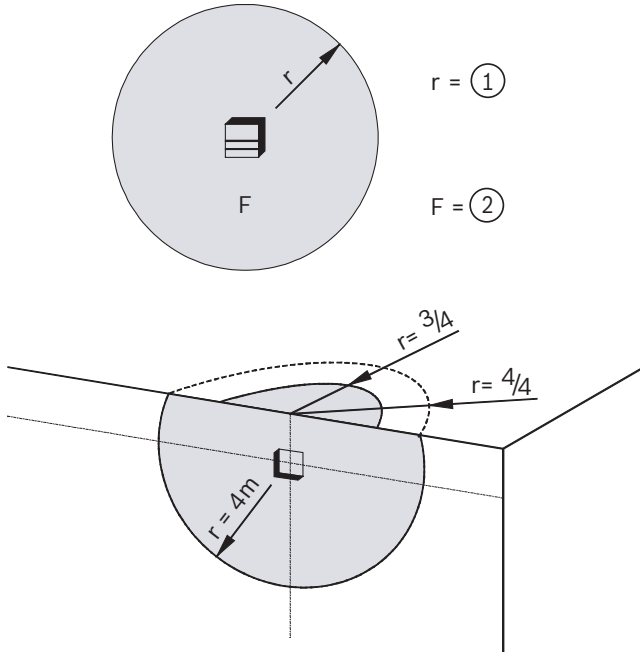
The GMXS1 test transmitter is a component of the test system for the GM 570 LSN seismic detector. Installing the test transmitter allows the seismic conductivity of the mechanical mountings to be checked along with the functionality of the electronics.

Certifications and Approvals

Region	Certification	
Germany	VdS	G 101165, C GM 570 LSN
Europe	CE	GM 570 LSN

Installation/Configuration Notes

Detection zone



- 1 Effective range
- 2 Detection zone

The GM 570 LSN seismic detector can be operated in a room with ultrasound detectors; the detection zone is not affected by this.

The detection zone is identified as the surface of a mechanical obstruction (vault or wall of an armored cabinet) that is being monitored by a detector. The detection zone is highly dependent on the material of the object being monitored. Due to practical experience, the effective range for steel and iron-reinforced concrete is $r = 4$ m.

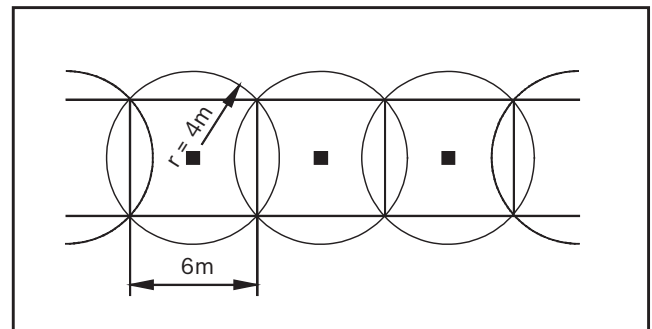
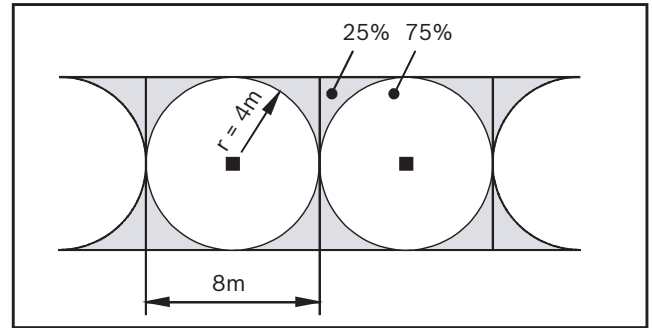
The detection zones for detectors on vault walls can extend along a part of the ceiling or the floor if the rebars are well connected to each other. In such cases the effective range is reduced to $3/4$ of the set zone.

Joints always create attenuation between two materials for impact sound transmission.

Note It is essential that each folding door on a vault is fitted with a detector. The body of a vault must be fitted with at least one detector.

Note If the vault dimensions go beyond the detection zone of one detector, (particular attention must be paid to range reduction over body edges), additional detectors should be included in planning. When used on modular vaults, please take the panel structure into consideration when allocating detectors.

Surface monitoring



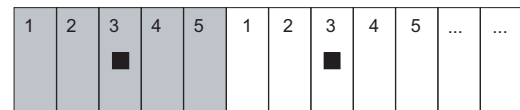
To facilitate planning for large surfaces, convert the circular detection zone into a square:

- For 75% surface monitoring, convert diameter to 8 m x 8 m square
- For 100% surface monitoring, create a 6 m x 6 m square within circle

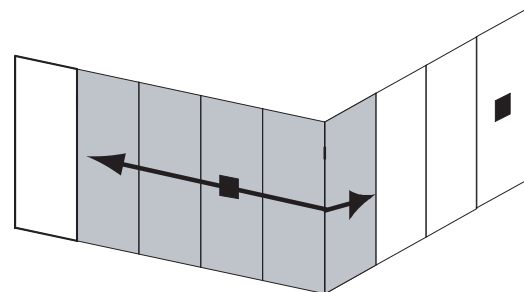
Interim values can also be selected. Multiple detectors do not mutually influence each other.

Panel-structured strong room

Vault with detector allocation



Weld wall/wall corner connection end to end



General guidelines

Guidelines apply to the following element dimensions:
Thicknesses of 100 mm to 400 mm

Widths up to 1000 mm

Lengths up to 6500 mm

When using a seismic detector on steel and concrete modular vaults, the following principles must be observed:

- One detector for a maximum of five wall panels, with the detector placed on the central panel.
- All joints between panels must also be welded to a screw connection every 40 to 50 cm with a weld seam 3 to 4 cm long.
- Corner connections for wall panels must be welded from end-to-end if the detection zone is to be used over the corners.
- For wall panels with assembled detectors set to sensitivity A, the directly adjacent floor and/or ceiling panel can be included in the detection zone, if the relevant impact position is welded end-to-end.
- With mixed structures that combine various panel thicknesses, impact positions must always be welded end-to-end.
- Avoid placing detectors directly on panels where bearings from cassette transport lifts, ventilators or other mechanical units are fixed.
- Panels with an inlet or outlet opening should always be fitted with a detector that also monitors the adjacent panels.
- Always place a detector on each individual door.
- Settings in accordance with installation manual for GM 570 LSN seismic detectors:

Application	Sensitivity	Response time
Max. 5 elements	A	Standard
Max. 3 elements	B	Standard
On doors	C or D	Delayed

Information on night safes:

Dropping cash boxes into night safes results in brief, acute seismic signals. There are several ways of reducing these.

- Joint between inlet channel and night safe
- Acoustic insulation between inlet channel and night safe
- Coating the opening cover and the inside of the safe with sound-absorbing material
- Using plastic cash boxes

Parts Included

Type	Qty.	Component
GM 570 LSN	1	Seismic detector

Technical Specifications

LSN operating voltage	Max. 33 V _~
LSN current consumption	2.43 mA
Measurement output, terminal 9	Analog integration signal
• Standby level	Approx. 0.7 V
• Integration start	2.5 V
• Max. interference level	3.2 V
• Alarm threshold (no load)	4.0 V
Sensitivity reduction input, terminal 10	
• For reduction	LOW ≤ 1.5 V/HIGH ≥ 3.5 V
• Reduction	up to 1/8 of the current setting (SW programmable, depending on control panel)
Sensitivity adjustable in	6 fixed levels + 1 freely programmable object (SW programmable, depending on control panel)
Effective range (concrete and steel)	R=4 m (with default setting)
Detection zone (concrete and steel)	50 m ²
Operating temperature	-20 °C to +70 °C
Humidity: DIN class F	< 95%
Housing protection category (EN60529, EN50102)	IP 43
VdS environmental class	III
EMC strength 0.01 to 2 GHz (IEC801-3)	30 V/m
Housing	
• Material	Metal
• Color	Light gray
Weight	Approx. 0.4 kg
Dimensions (H x W x D)	40 x 90 x 90 mm
GMXBO floor socket (optional)	
Dimensions (H x W x D)	
• GMXBO floor socket	150 x 150 x 50 mm
• Floor socket with flange	220 x 150 x 50 mm
Maximum load	1000 kg
Protection category	IP 50

Ordering Information**GM 570 LSN Seismic Detector** **4998085573**

For monitoring vault doors, modular vaults and vault walls

Accessories**ISN-GMX-B0 floor socket** **ISN-GMX-B0**

For floor mounting a seismic detector. Weight: 2.08 kg. A surface at least 30 cm x 30 cm and at least 80 cm deep is required.

ISN-GMX-S1 test transmitter **ISN-GMX-S1**

For installation under a seismic detector. Checks the detector and the physical contact between the detector and the protected object.

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