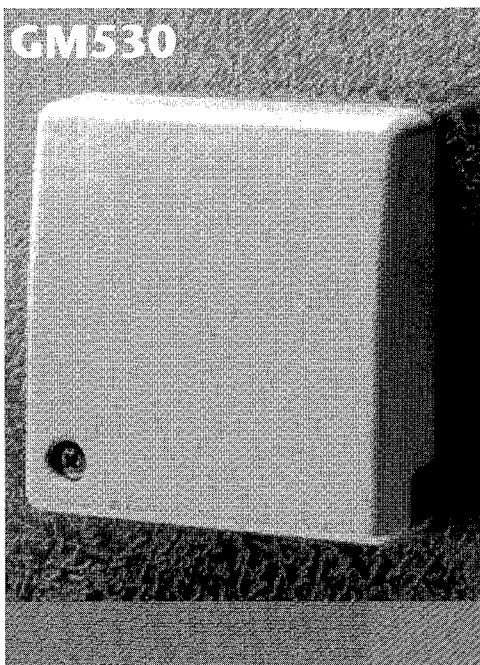


# Senstec Seismic Detector



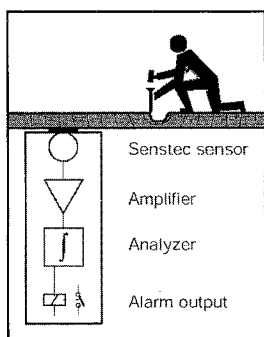
- New Senstec bimorph sensor technology for:
  - Optimum response to all known attack tools
  - Maximum immunity to environmental interference
- Signal analysis which has been designed to be independent of airborne sound enables mounting of the detector to the inside as well as the outside surface of the object to be protected, without the problem of false alarms
- Universal application potential for round-the-clock monitoring on:
  - Safes
  - ATMs
  - Strongroom doors
- Automatic cash dispensers
- Night safes
- Integrated self-test system rapidly checks for correct operation of the electronics and of the Senstec sensor
- Maximum performance is guaranteed, regardless of mounting pressure, thanks to the new Senstec sensor and signal evaluation technology
- Dipswitches for application-oriented programming:
  - Sensitivity adjustable in 4 levels
  - Response time adjustable in 2 levels
  - Shock setting for proper setting on or steel in 3 levels
- Full protection against electrical interference:
  - Metal encapsulation to shield from electro magnetic interference fields
  - Efficient filter circuits as a safeguard against conducted interference
- Designed for ease of installation:
  - Electric connection elements and pre-assembled mounting screws are readily accessible
  - Electronics protected against accidental contact

## GM530 Seismic Detector

### Application

The seismic detector is suitable for the detection of attacks on all known types of steel objects. Any attacks carried out by means of explosives, diamond-bit drills or thermic tools such as cutting torches and oxygen lances are promptly and reliably detected. Early alarm enables fast intervention by the security forces and thus prevents any major damage to the object to be protected. The detector is used on all known armoured safes, night safes, automatic cash dispensers as well as ATM's.

### Function

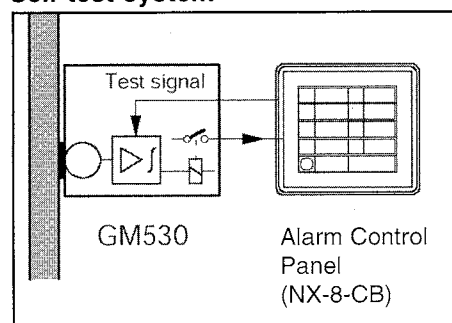


During burglary attempts where the attack is made by means of mechanical or thermic tools, mass acceleration is being created which generates oscillations in the material of the object to be protected. These are

propagated as structureborne noise and are picked up by the new Senstec bimorph sensor of the GM530 seismic detector rigidly mounted on the object to be protected. The Senstec sensor detects these structureborne noises in a very narrow and reproducible frequency spectrum so that an optimum differentiation can be made between the attack signals and any unwanted environmental interference. Among these are the

noise produced by automatic cash dispenser mechanisms and the vibrations caused by monitoring systems in the ultrasonic frequency range, in particular. The GM530 detector is immune to any airborne noise signals which are not required for alarm. Only the structureborne noise detected by the sensor is converted into electric signals and is used for producing an alarm by the microprocessor based signal analysis circuit. Varying with the type of attack, structureborne noise differs in intensity. The GM530 detector enables safe and reliable detection of all currently known attack tools and features constant monitoring of the Senstec bimorph sensor and of the evaluation electronics for correct operation.

### Self-test system



A self-test system is built into the detector. This configuration permits checking of the detector for correct operation by means of a simple external test command. Except for periodic checking for correct operation by means of the selftest sys-

tem, the GM530 seismic detector is absolutely maintenance-free.

### Installation

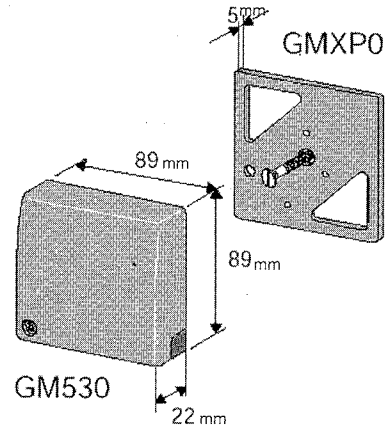
Installation of the GM530 detector is extremely easy, requiring just a few quick moves. In many cases, manufacturers of objects in need of protection (such as safe units for automatic cash dispensers) have already made provision for direct fitting of the GM530 detector by incorporating mounting holes into the object itself. Being independent of airborne sound, the GM530 detector can be mounted to the outside as well as the inside wall of the object to be protected. In order to precisely suit ambient conditions, dipswitches can be used for easy and, above all, exactly defined adjustment of the GM530 detector. Where the object to be protected does not come with mounting holes, a wide range of accessories are available which permit installation of the detector on surfaces and flush-type mounting on walls or in the floor.



# Seismic Detector Accessories

## Mounting plate GMXP0

The GMXP0 mounting plate is available for installation of the detector on uneven or hardened steel plates.



## Technical data

### Detection characteristics

— Operating radius/Coverage area on concrete and steel	
— for all types of tools (including thermic tools)	10Ft/314Ft <sup>2</sup>
— for mechanical tools only	28Ft/1217Ft <sup>2</sup>
— Sensitivity adjustment	4 stages
— Response time adjustment	2 stages
— Shock setting adjustment	3 stages
— Frequency range	13...19kHz

### Power supply

— Supply voltage (nominal 12VDC)	7...16VDC
— Max. alternating-current component	5%
— Current consumption at 12VDC	
— quiescent condition	3mA
— alarm	3.5mA

### Alarm outputs

— Relay (changeover contact)	max. 30VDC/100mA
— Open collector	LOW signal upon alarm
— Alarm hold time	approx. 2.5s

### Tamper monitoring

— Cover contact (microswitch)	max. 30VDC/100mA
— Supply voltage	≥6.5V

### Test output

analogue integration signal

### Control input for integrated self-test system

— LOW signal for remote test triggering	≥1V
— Test period	approx. 3s

### Ambient conditions

— Operating temperature	-4...+140∞°F
— Storage temperature	-58...+155∞°F
— Humidity, to DIN40040	Class F (≥95% r.h.)
— Housing protection category, to IEC529	IP43
— Electromagnetic compatibility	15V/m / CE

## Ordering data

Model	Description	Weight
GM530	Seismic detector	0.70lb
GMXP0	Mounting plate	0.60lb
NX-8-CB	Alarm Control Panel-8 Zones	15.0lb