

Simplified protection for sliding and swinging gates

Senstar's Wireless Gate Sensor is an accelerometer-based device that detects attempts to open, cut, climb, or otherwise break through a sliding or swinging gate.

The compact, all-weather sensor module is attached directly onto the gate fabric and transmits alarm data to a nearby system over an encrypted link. An ultra-low power device, the sensor module is powered from its built-in solar panel and/or internal batteries, eliminating the need to route cables from the fence to the gate, simplifying maintenance, and works reliably in the most harsh environments.

HOW IT WORKS

The Wireless Gate Sensor consists of two main components: a sensor module and a receiver card installed inside a processor or gateway. The sensor module analyzes vibration, motion and position data, and transmits intrusion and supervision alarms, power levels, RF link status, and auxiliary input state to the receiver card over the encrypted wireless link.

Alarms are forwarded over the sensor network to the site's Security Management System (SMS). Gate sensor alarms may also be used to trigger the processor or gateway's on-board output relays.

Features and Benefits

- Detect intrusion attempts on sliding and swinging gates
- Wireless operation eliminates need to route cables from fence to moving gate panels
- 300 m (986 ft) transmission range (nominal, line-of-sight) from processor
- Secure, 128-bit encrypted RF transmissions
- Sensor module
 - Protect each moving gate section with only one sensor module
 - Easily installed on chain-link, wire mesh, expanded wire mesh, and palisade-style fence gates
 - High Probability of detection (Pd)
 - On-board auxiliary input for monitoring gate contact
- Power options
 - Built-in solar panel (with internal battery backup) option eliminates the need to replace batteries
 - Up to one year of operation for battery-only model (batteries field-replaceable)
- Receiver
 - Monitor up to four sensor modules per processor
- Comprehensive status reporting
 - Sensor and supervision alarms
 - Contact input state and supervision
 - RF link status
 - Power level

SIMPLIFIED MAINTENANCE

The sensor module attaches directly to the gate fabric using metal or nylon cable ties. The sensor module includes an auxiliary input cable for monitoring gate contacts. Two power options are available: a solar panel version and a battery-only version. The solar panel version is virtually maintenance-free – it keeps enough reserve power for five days of operation in zero-light conditions and is designed for harsh environments. A super capacitor provides energy storage that does not suffer from battery ‘memory’ or cycle life limitations (500,000 charge-cycle guarantee). The battery-only version uses a standard, field-replaceable ‘D’ size battery which has a life-span of over a year. Both versions include on-board reserve emergency power for interim operation.

SECURE, RELIABLE REPORTING

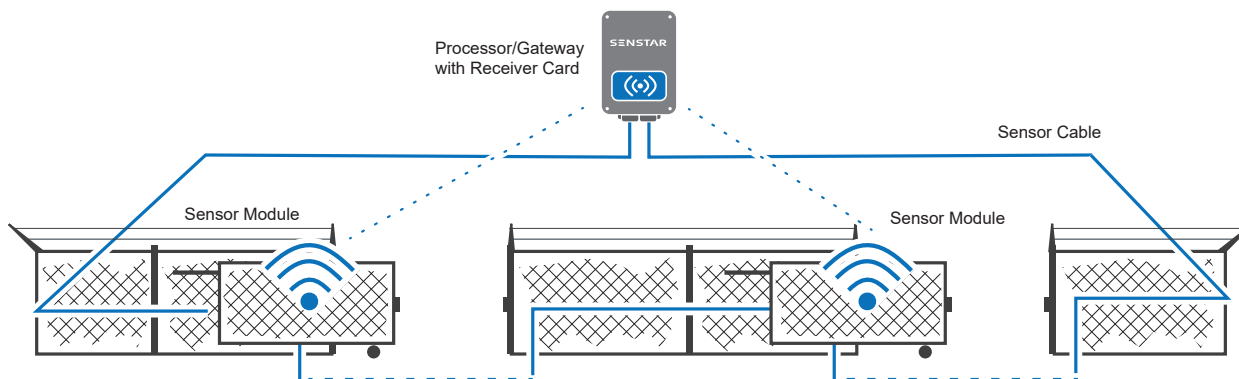
The Wireless Gate Sensor integrates into the existing sensor network, with the host device reporting the sensor’s alarm, tilt, RF link, power, and auxiliary input status. The RF link between the sensor module and receiver uses 128-bit encryption and the system generates a supervision alarm if anyone attempts to jam or otherwise interfere with the sensor module.

ENHANCE EXISTING EQUIPMENT

The Wireless Gate Sensor enhances the existing security equipment protecting the perimeter. The receiver card is installed inside a processor or gateway located up to 300 m (984 ft) from the gate and can be installed on top of an existing communications card, if present.

Each receiver card monitors up to four sensor modules. To avoid mutual interference, each receiver card must be configured to a different RF channel. With eight available RF channels, up to 32 sensor modules can be monitored per site (channel reuse may be possible, depending on RF conditions, antenna configurations, and physical site size).

PART	DESCRIPTION
E7EM0202	Wireless Gate Sensor Module, solar powered
E7EM0201	Wireless Gate Sensor Module, battery-only
E7EM0301	Receiver card for wireless gate sensor, plugs into FlexZone processor or Senstar LM100 gateway, comes with omnidirectional whip antenna



Site with two protected sliding gates

Technical Specifications

Environmental specifications*

- Operating temperature: –40 to 70 °C (–40 to 158 °F) *
- Humidity: 100% (condensing)
- Sensor module: All-weather acrylic casing, NEMA 4 (IP66) ingress rating
- Receiver card: Conformal-coated (installed inside processor)

RF specifications

- Band: Unlicensed operation in regional ISM band
- CE compliance:
 - Band: 863.0 to 870.0 MHz
 - RF output power (max. ERP): 12.0 dBm (receiver), 7.6 dBm (sensor module)
- FCC compliance:
 - Band: 915.4 to 920.5 MHz
 - RF output power: 13.2 dBm (receiver), 12.3 dBm (sensor module)
- Receiver card supports connection to up to 4 sensor modules

Electrical specifications

- Sensor module:
 - Solar panel version: Min. 2h sunlight per day to fully charge, 5 days of operation with no sunlight when internal capacitor fully charged, plus 1 month emergency non-rechargeable reserve
 - Battery-only version: ‘D’ 1.5V battery, 1 year of operation, plus 1 month emergency non-rechargeable reserve
- Receiver card: 0.5W (receives power from processor)

Physical specifications **

- Sensor module:
 - Dimensions (L/W/D): 12.0 x 9.5 x 4.3 cm (4.7 x 3.7 x 1.7 in) (not including auxiliary input cable)
 - Weight: 235 g (8.3 oz)
 - Entry point with compression gland for auxiliary input cable
 - Points for cable ties and/or mounting hardware

Receiver card

- Dimensions (L/W/D): 7.6 x 4.8 x 2.2 cm (3.0 x 1.9 x 0.9 in)
- Weight: 23 g (0.8 oz)
- 20-pin processor interface header
- RF connector for supplied antenna

* Outdoor temperature rating subject to battery chemistry, the use of high-quality lithium cells is recommended.

** Specifications do not include auxiliary input cable.