FlexZone® Wireless Gate Sensor

Protection for Sliding and Swinging Gates

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 FlexZone 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 modules per FlexZone processor
- Comprehensive status reporting
  - Sensor and supervision alarms
  - Contact input state and supervision
  - RF link status
  - Power level

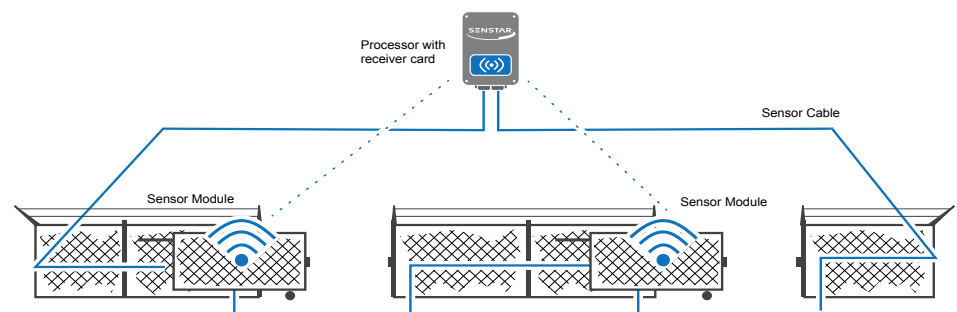## Simplified protection for sliding and swinging gates

The FlexZone® 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 FlexZone processor 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 FlexZone Wireless Gate Sensor consists of two main components: a sensor module and a receiver card installed inside a FlexZone processor. 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 by the FlexZone processor over its sensor network to the site's Security Management System (SMS). Gate sensor alarms may also be used to trigger the FlexZone processor's on-board output relays.

Site with two protected sliding gates

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.

Enhance existing equipment

The Wireless Gate Sensor enhances the existing FlexZone equipment protecting the perimeter. The receiver card is installed inside a FlexZone processor located up to 300 m (984 ft) from the gate and can be installed on top of the processor's 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). The Wireless Gate Sensor works on all FlexZone models.

Secure, reliable reporting

The Wireless Gate Sensor integrates into the existing FlexZone sensor network, with the host FlexZone processor 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.

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 FlexZone processor)

RF specifications
- Band: Unlicensed operation in regional ISM band
- RF output power: 17 dBm
- Receiver card supports up to 4 sensor modules

Electrical specifications
- Sensor module:
  - Solar panel version: Minimum 2 hours sunlight per day to fully charge
  - 5 days of operation with no sunlight when internal capacitor fully charged
  - Battery-only version: 'D' 1.5V battery, 1 year of operation
  - All versions: 1 month emergency reserve battery (non-rechargeable)
- Receiver card: 0.5W (receives power from FlexZone 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)
  - Cable entry point with compression gland for auxiliary input cable
  - Points for tie-wraps 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.

FlexZone Wireless Gate Sensor Module

Part	Description
E7EM0201	FlexZone Wireless Gate Sensor Module, solar powered
E7EM0202	FlexZone Wireless Gate Sensor Module, battery-only
E7EM0301	Receiver card for wireless gate sensor, plugs into FlexZone processor, comes with omnidirectional whip antenna
Contact Senstar for required training and installation support services.	

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