



Core features

- Guaranteed high Probability of Detection (PD)
- Very low FAR / NAR
- Inherent self-calibrating mechanism to ensure constant sensitivity
- Low power consumption
- Low maintenance costs
- Ideal when multiple wires are required

Description

YAEL is a physical barrier combined with high performance sensors. Taut wire is the most sophisticated and robust solution for perimeter intrusion detection. YAEL physically prevents intrusions into high security sites by unauthorized personnel; it has no environmental limitations and delivers a very high and guaranteed Probability of Detection (PD) with minimal false and nuisance alarm rates (FAR / NAR).

The technology of YAEL incorporates a single detector per zone, which collects and aggregates signals from many wires. It is therefore, a very cost effective solution for dense fences where multiple barbed wires are required (for example - high posts and / or densely populated fences used in prisons).

The design and materials used for YAEL make it the premier choice for installations located near the sea in salty climates and other corrosive environments. Many YAEL installations are operational in hundreds of sites near sea shores around the world with literally no corrosion.

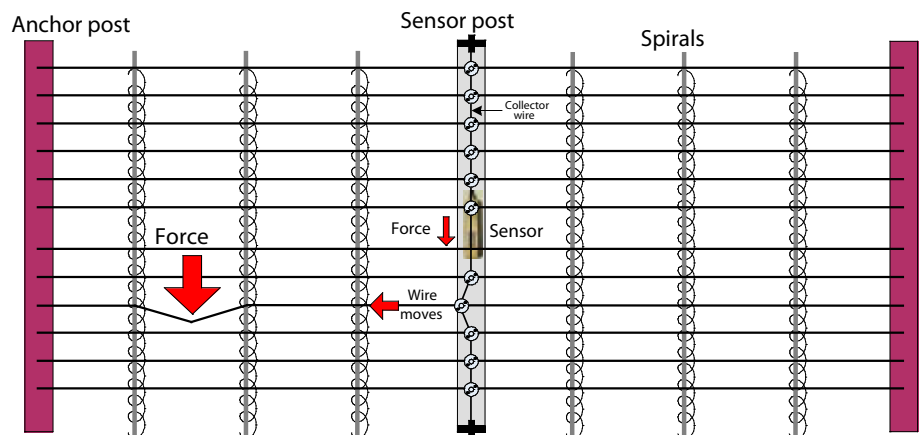
Markets

YAEL is an ideal solution for high profile CIP (Critical Infrastructure Protection) such as nuclear facilities, military sites and other sensitive locations like airports, energy utilities and prisons.

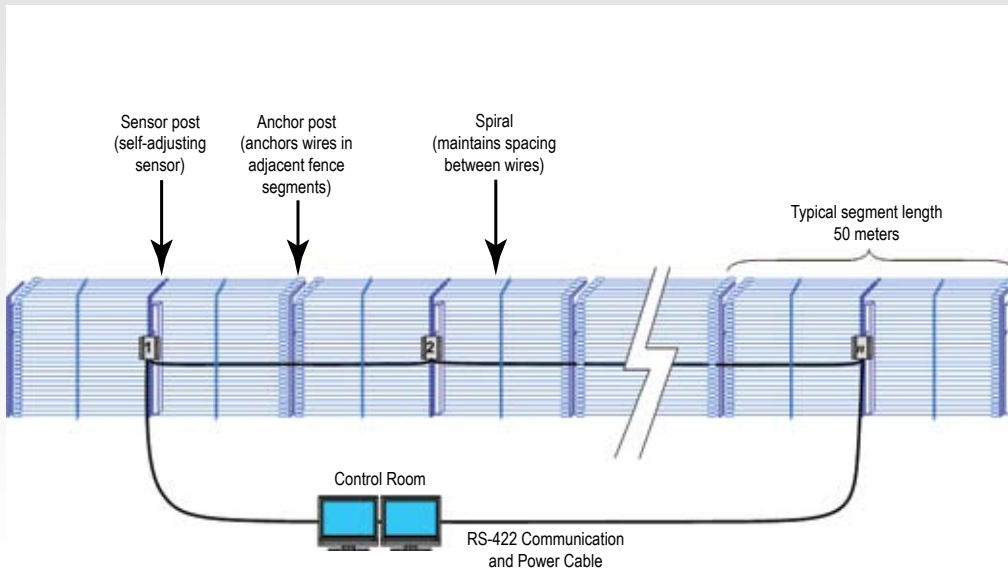
YAEL is also an excellent fit for long perimeters (such as borders or remote sites with minimal infrastructure), and installations situated in harsh climates.

How it works

YAEL consists of multiple horizontal twisted barbed wires, typically separated in 5 - 20 cm (2 - 8 in.) intervals and stretched along a typical segment of 50 meters (164 ft.). A solid state, self-balancing sensor and processor are located in the middle of each segment, collecting signals from all wires simultaneously. Power and communication are provided through a single cable connecting all segments into a single managed and controlled system - this combination serves as the backbone for the full length of a fence.



Basic layout



Creating a full system

YAEL offers complimentary solutions for gates, cross corners and obstruction areas through customization to provide a full system.



Cross corners



TECHNICAL SPECIFICATIONS

PHYSICAL DESCRIPTION

Fence Length: No practical limitation

Fence height and number of protected wires: Customer specified

Typical configuration options:

- 3 m (10 ft.) vertical, 34 wires
- 2 m (6.6 ft.) vertical, 24 wires + 1 m (3.2 ft.) inclined outrigger 10 wires

Sensitivity: adjustable and independent of climatic conditions

Deflection force: 15 - 30 kg (33 - 66 lbs.) force of a two-second duration will activate an alarm

False Alarm Rate (FAR): Maximum of one per 1 km (0.6 mile) per 3 months

INTERFACE

Every YAEL sensor is connected to a YAEL processor located nearby. The processor analyzes the analog signal from the sensor to decide on an alarm. The processors are connected to the control room by a multi-drop proprietary RS-422 cable, which also provides power to the system. The RS-422 communications has been optimized to support up to 127 processors on a single 5 Km (3 mile) cable. Alternatively, the processor provides three dry contact outputs to external systems.

Communication: 4 wires, multi-drop, proprietary RS-422

Number of processors: Up to 127 on a single cable

Length: Maximum 5 Km (3 miles) without repeater. Unlimited when assisted by repeaters.

Power supply: 12 to 30 VDC

Power consumption: RS-422 option - 2.5 mA. Dry contact option - 60 mA max.

PERFORMANCE

Reliability: MTBF sensor - 1.2 million hours

MTTR: 30 minutes

ENVIRONMENTAL

All external units are designed to meet MIL-STD-810F.

Temperature range: -40 °C to 72 °C (-40 °F to 160 °F)

Climatic: Unaffected by wind, temperature changes, rain, hail, snow, dust, UV radiation

Lightning & electronic transients: Complies with MIL-STD-9094

EMI / RFI: Complies with MIL-STD-461/462

Corrosive atmosphere: Stainless steel option available for corrosive environment

Water resistant sensor:

Immersion proof 1 m (39 in.); Processor: IP67

Specifications are subject to change without prior notice.