

Sirio-LX

Obstacle Detection System for Level Crossings



Sirio-LX is an automatic radar-based system for preventing trains from colliding with obstacles on the track at level crossings. It has been designed to ensure the highest level of safety standard (SIL4, CENELEC 50129).

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Sirio-LX

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Features

- **Safe:** Safety Integrity Level (SIL) 4, based on CENELEC EN 50129
- **Flexible:** Observes a parallelogram shaped area with configurable angles and size
- **Modular:** Up to 4 radar sensors can be used in the same installation site covering all geometries of level crossing
- **Performance:** Extremely low false alarm probability, even in harsh weather conditions (fog, rain, snow) and in all light conditions
- **Reliable:** MTBF > 10 years
- **Diagnostic Video Camera:** Video (closed circuit TV) transmission when obstacle detection occurs for system diagnostic purposes

Technical Characteristics

Minimum Detectable Obstacle Size	Sphere of 60 cm diameter
Obstacle Materials	Any
Reliability	MTBF > 10 years
Safety Requirements	CENELEC 50129, SIL 4
Reaction Time	3 sec

Sirio-LX Architecture

The basic configuration is 1 radar and 1 outdoor cabinet.

Radar Sensor:

- Obstacle detection
- Communicates with the cabinet through RS485

Corner Reflector:

- Sensor diagnostic functions

Cabinet:

- Interfaces with signaling through relays
- Provides power to the radar sensor
- Records video of the monitored area
- Transmits information to the remote control system

Remote Control Terminal:

- Receives all information about the status of the level crossing via LAN or GSM-R



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