



KEEPING WORK CREWS SAFE WITH INTELLIGENT TRAIN DETECTION

Automatic Track Warning Systems (ATWS) enhance the safety of workers operating on or near railway tracks by providing alerts during ongoing tasks. SATEL's SATEL-TR4+ module is an excellent solution for this type of application, thanks to its compact size and easy integration.

A Track Warning System (ATWS) is a crucial railway safety technology that alerts track workers to approaching trains through automated visual (lights) and audible (sirens) signals. These warnings are triggered by sensors that detect train movement, allowing personnel to clear the danger zone in time. By replacing manual lookout methods, ATWS significantly enhances worker protection during track maintenance and construction, increases overall safety, and maximizes productive work time.

ATWS warns construction site workers of an approaching train, and for as long as the system is generating warning signals, personnel must remain away from the affected track and allow the train to pass safely.

Each ATWS unit integrates the SATEL-TR4+ data transceiver module, which transmits real-time data and contributes to keeping workers safe.



HOW IT WORKS

- 1. Detection:** Sensors installed on the track detect an approaching train.
- 2. Activation:** Once detection occurs, the sensors transmit a signal to a central control unit, which activates the warning devices.
- 3. Warning:** Audible alarms (sirens) and bright flashing lights are triggered at the worksite – typically at high decibel levels to ensure they are heard in all conditions.
- 4. All-Clear:** After the train has safely passed the worksite, the sensors automatically deactivate the alarms.

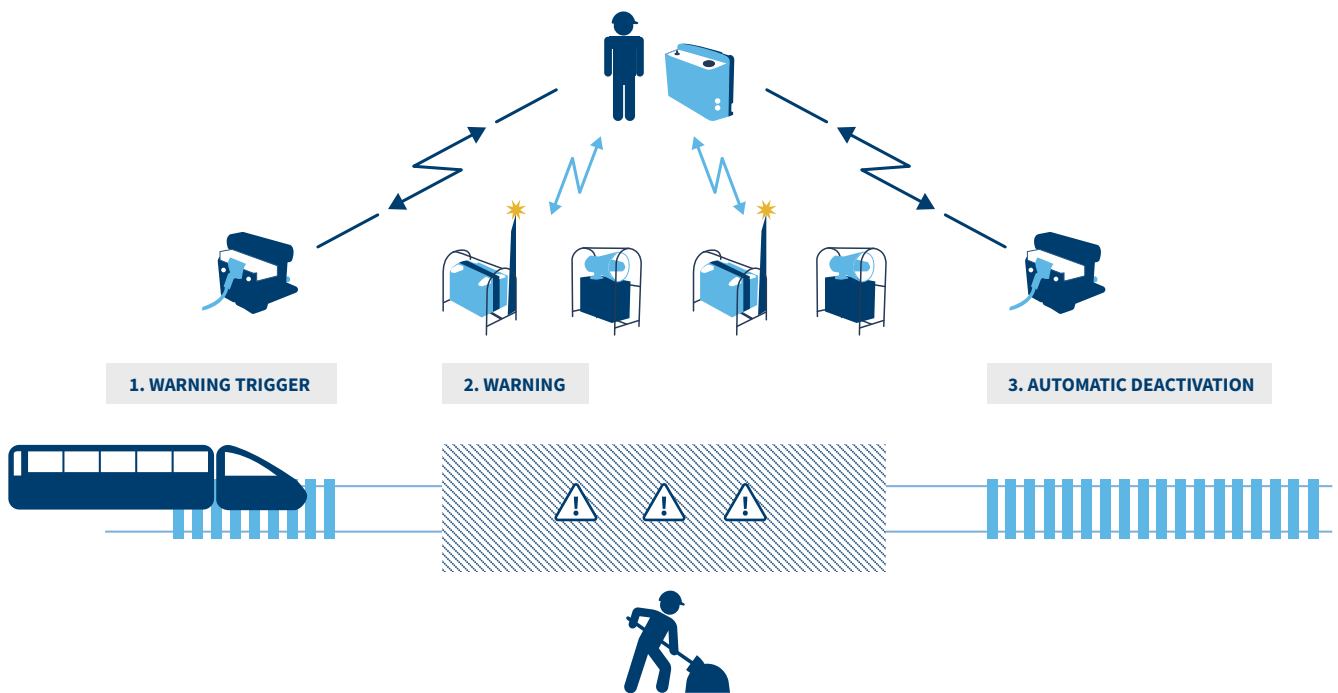
BENEFITS

- **Enhanced Safety:** Provides reliable, consistent warnings in all conditions (night, fog, bends). ATWS is considered safer than the non-automated solution, where one worker must constantly watch for approaching trains and alert colleagues.
- **Increased Productivity:** Reduces dependence on manual lookouts, allowing more uninterrupted time for work.
- **Flexibility:** Systems can be mobile or fixed, wired or wireless, and scaled for different worksite sizes.

KEY COMPONENTS

- **Sensors:** Detect train presence on the track.
- **Central Unit/Controller:** Manages the system and triggers warnings.
- **Warning Units:** Sirens and strobe lights positioned along the work area to alert workers.

INTELLIGENT TRACK WARNING SYSTEM



Each ATWS device features a built-in SATEL-TR4+ transceiver, ensuring continuous real-time data flow for improved on site safety.

SATEL – Your technology partner

SATEL is the world's leading expert and innovator in wireless networking technology. We design, manufacture and offer high quality connectivity solutions that enable secure, mission-critical connections, utilizing the best characteristics of each technology for real-life use-cases.

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