

ZÖLLNER

Permanent Installation for Instant and Flexible Safety

Making sure all people working on and near the tracks are safe is what drives us at ZÖLLNER.

Not only do we develop fail-safe solutions to make sure everyone can be warned of an approaching train, we also strive to make those solutions as flexible as possible in order to accommodate different needs and situations. Different track layouts might require different ways to activate the warning system and different kinds of works will call for a variety of warning devices. While safety is the most important factor, we do understand that it is important to our customers to have warning systems that allow for a safe working environment while at the same time delivering an economical solution for each project.

For recurring works such as maintenance or patrolling we have therefore developed permanent warning systems. This means that the train detectors are permanently installed. The associated junction boxes and transmitters are also permanently installed in a track side cabinet. The train detectors are always

operational and thus monitored. As a result, there is no need to carry out planning and to enter the danger zone for the installation of a full warning system which saves staff and time, making this solution an economically viable option for areas which require regular track access. When the warning system is needed, the team simply brings along the warning devices and links them to the permanently operational system. Since different warning devices can be logged into the existing configuration, the system can be perfectly tailored for the type of work, team size, etc. This permanent installation therefore also offers the flexibility guaranteed by ZÖLLNER's modular design.

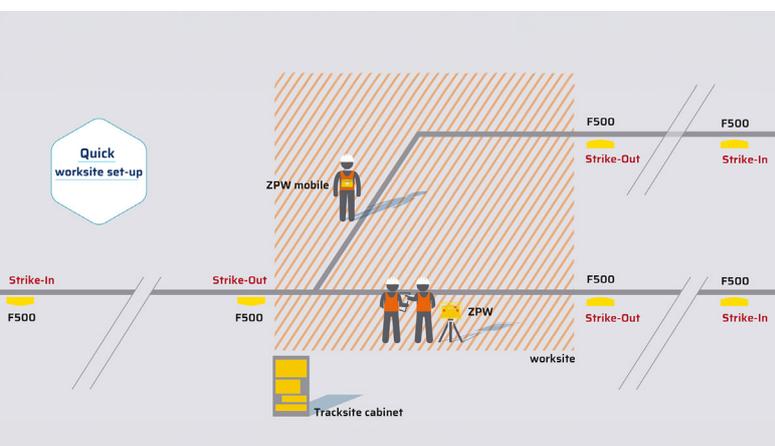
How Does the System Actually Work?

Permanent installations of automatic track warning systems (ATWS) use train counting systems to activate and cancel warnings for the workforce. When the wheel sensor F500 detects a train movement, the information is transmitted via the radio transmitter ZFS to the control unit which then counts one train into the system. The control unit activates a warning which is delivered via all connected warning devices.

Semi-automatic variants (SATWS) are widely in use for junctions. In this variant the warning is cancelled manually by the operator. Alternatively, the warning can be cancelled via a wheel sensor that serves as a strikeout point making the system fully automatic.

Permanent ATWS Using Axle Counting for Complex Track Junctions

For complex junctions or sites that include sections where trains might stop, reverse, split or merge, a system using axle counters is a powerful solution. The ZÖLLNER system counts axles moving in both directions



Even on grids with split lines, the axle counting system ensures that a track vehicle has the exact number of axles counted in and that the warning in the work zone stays active until all axles have been counted out

and only cancels a warning when the number of axles counted in and out is zero and the section is therefore guaranteed to be safe.

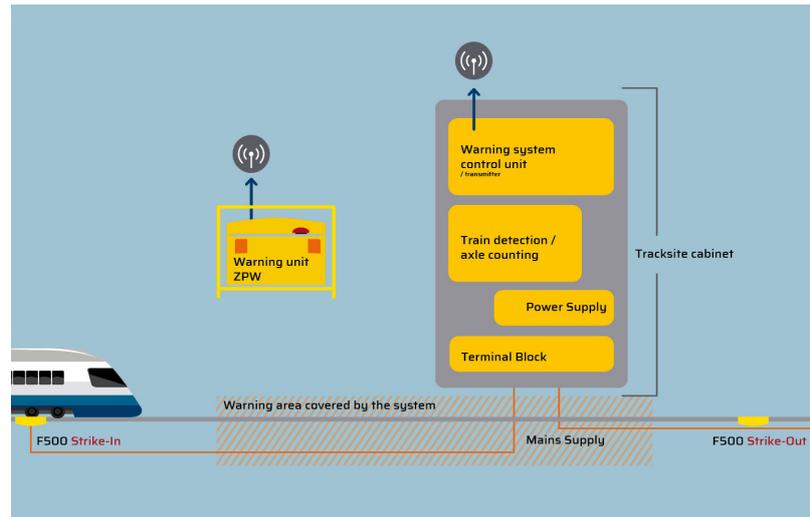
Due to the complexity of reversing, splitting or merging trains within a worksite, Network Rail has issued new requirements for permanent automatic warning systems (ATWS) in the UK, prompting the development of the ZÖLLNER system using axle counters. Our solution is suitable for both upgrading existing SATWS installations and for completely new installations. Existing SATWS installations can be upgraded easily as a lot of components including the cabinet can be re-used for the axle-counting fully automatic ATWS.

Upgrading Your Existing Installation?

Beneficially, our solution can be used for both retrofit and completely new installations. Should you already have one of ZÖLLNER's safety solutions installed, we can simply modify the set up with minimal disturbance. Our design team can configure your specific site and install our axle counting solution into the cabinet, utilising existing equipment merged with new. As users are already familiar with ZÖLLNER equipment this reduces any disruption and major change to the working environment. Alternatively, we can design and plan new installations, with thorough training and support to ensure you fully understand the system and added benefits for your team.



The trackside cabinet houses the transmitters, axle counters and control unit of the permanently installed warning system



When the first train axle is detected the FAdC reports the track section as occupied, triggering a warning to the mobile warning device. Only when the axle count is zero again is the warning cancelled. The FAdC and the stationary part of the warning system are installed in a trackside cabinet with the power supply.

Why ZÖLLNER Is the Ideal Partner for You and Your Next Project

“We design your safety solutions.” – A slogan we do not take lightly. At ZÖLLNER, our vision is not only to contribute to safety in rail transport worldwide but to ensure that every single person working on and around the track goes home safely. That is why we are proud to be the leading international provider and partner for solutions to improve safety for people in a complex, digitalised and globalised world.

We have been developing and producing solutions for railway safety for over 30 years. From track warning systems to infrastructure solutions like train speed control, remote controlled ETCS balises and the fully automatic temporary level crossing A-CROSS – our expertise covers a large variety of situations regarding railway safety which allows us to still see the bigger picture while zooming in on the details.

Through international subsidiaries and partners (e.g. in Great Britain, Poland, Spain/Portugal, France, North America, Israel and Australia) there is always a local contact person. This enables us to offer tailored advice and solutions taking into account national guidelines and regulations.

Let's get together and see how we can help keep you and your crew safe!

www.zoellner.de

Worksite Protection

Permanently installed warning devices on Forth Bridge, Scotland, enable the essential upkeep of the iconic structure



InnoTrans

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See you there!

PRESERVING NATIONAL HERITAGE Through Cutting-Edge Technical Innovation

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