

# REDEFINING TRAIN DETECTION TO EASE CUSTOMER EXPERIENCE

At a time when digital transformation is moving ahead at full speed, there is an increased need to ensure robust train detection systems that can keep pace with the accelerated growth in railways.

Owing to rapid digitalisation, old methods of train detection are being put to test, leading to more operators worldwide choosing advanced axle counters. Real-time train detection must fulfil the customer requirements not just in terms of being reliable and available, but also in terms of technological advancements. Hence, axle counter-based train detection systems are poised to become widely adopted in India and worldwide given their vast potential for meeting all present & upcoming customer requirements in terms of availability, reliability, flexibility, low life cycle cost and remote diagnostics enabling predictive maintenance.

## Frauscher innovations paving the way

Frauscher India has implemented many technological firsts in the railway sector in the last few years including the drill-free installation of wheel sensor, no active electronics on field, serial data interface with interlocking, data-driven applications, and IP-based remote diagnostics. What's more, Frauscher's intelligent functionalities like Counting Head Control CHC and Supervisor Track Sections STS help address transient interferences, while also maximising availability and operational efficiencies.

## Minimal active electronics on field

Frauscher axle counters are engineered in such a way that there are no electronic components on track. This shields our safety-critical systems from challenging outdoor conditions such as external electromagnetic interferences, surges, and transients. Moreover, maintenance and troubleshooting become hassle-free as minimal outdoor inspection is required.

## Easy, drill-free installations

The Frauscher Advanced Counter FAdC® makes installations a breeze as wheel sensors can be installed without the cumbersome process of drilling holes in the rail, which makes it an economical, time-saving option that does not impact the structural integrity and life of the rail.

## Transition to open software-based interfaces and interlocking

Electronic interlockings have become a critical element of modern rail signalling in India. However, electronic components still communicate primarily via relay-based interfaces, which require lots of wiring, relays, associated

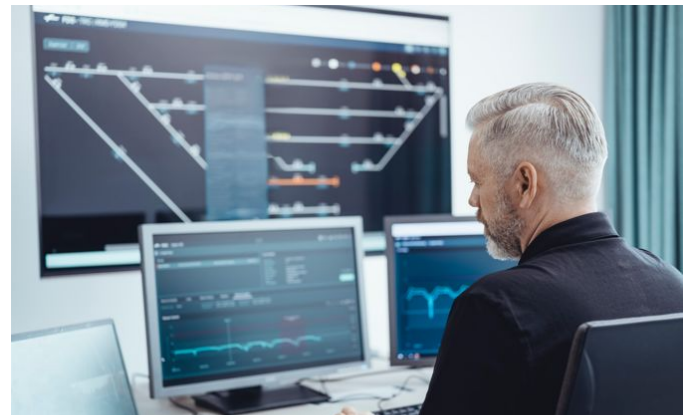
installation and maintenance efforts. Modern signalling systems require a high degree of integration of all subsystems and efficient exchange of data between the subsystems that can best be achieved with software interfaces. Open software-based interfaces are now available that eliminate need for relays and associated wiring while reducing components (I/O boards) on both axle counter system and electronic interlocking.



*Frauscher Advanced Counter FAdC®*  
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FAdC® comes equipped with parallel and serial interfaces that can be easily and quickly integrated into different infrastructures through a wide range of Ethernet protocols, including the open source & SIL 4, Frauscher Safe Ethernet FSE, making it highly future proof. To make proper data utilisation possible, Frauscher Insights – a central platform – enriches and bundles railway operations data and makes it easily accessible via two applications: Diagnostics and Motion. These applications help minimize errors while optimising railway operations on the ground.

These advantages make Frauscher solutions a more popular choice when it comes to modernising signalling systems.



*Frauscher Insights Diagnostics*  
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