Electronic interlocking systems for every type of requirement

EXAMPLES OF APPLICATION AREAS

The **diaLOC** system enables a wide range of applications depending on the operational requirements:

→ **Industrial railways and trams:**
diaLOC can control single points or act as interlocking system for shunting

→ **Regional railways:**
diaLOC as a simplified electronic interlocking system with digital interfaces to the external systems

→ **Monitoring of level crossing safety systems:**
diaLOC for safe remote monitoring of level crossing safety systems via mobile communications

THE ADVANTAGES AT A GLANCE

→ **Flexible and modular system with digital interfaces**
→ **Ideal for customised modifications and individual solutionsn**
→ **Wireless communication between system components**
→ **Comprehensive diagnostics by the railway company and the EBE service centre using remote diagnosticse**
→ **Low maintenance requirements**
→ **Standardised components for all EBE safety systems, ensuring optimum supply of components and spare parts**

diaLOC

The innovative interlocking system: Precisely customised, safe and durable

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diaLOC

Flexible, modular system for every type of requirement

The **diaLOC** – digital interlocking – is an electronic interlocking system made up of proven and reliable components from industrial and railway technology. The focus here is on customised products for special applications. With **diaLOC**, the areas of application are wide-ranging – from individual point control to interlocking systems for regional railways or shunting areas.

diaLOC is based on an industrial safety control system already familiar from the ISIS-LC modular system for level crossings. The field elements, such as wheel sensors or LED signals, which have been specially developed for railway applications, are also used for both level crossings and interlocking systems.
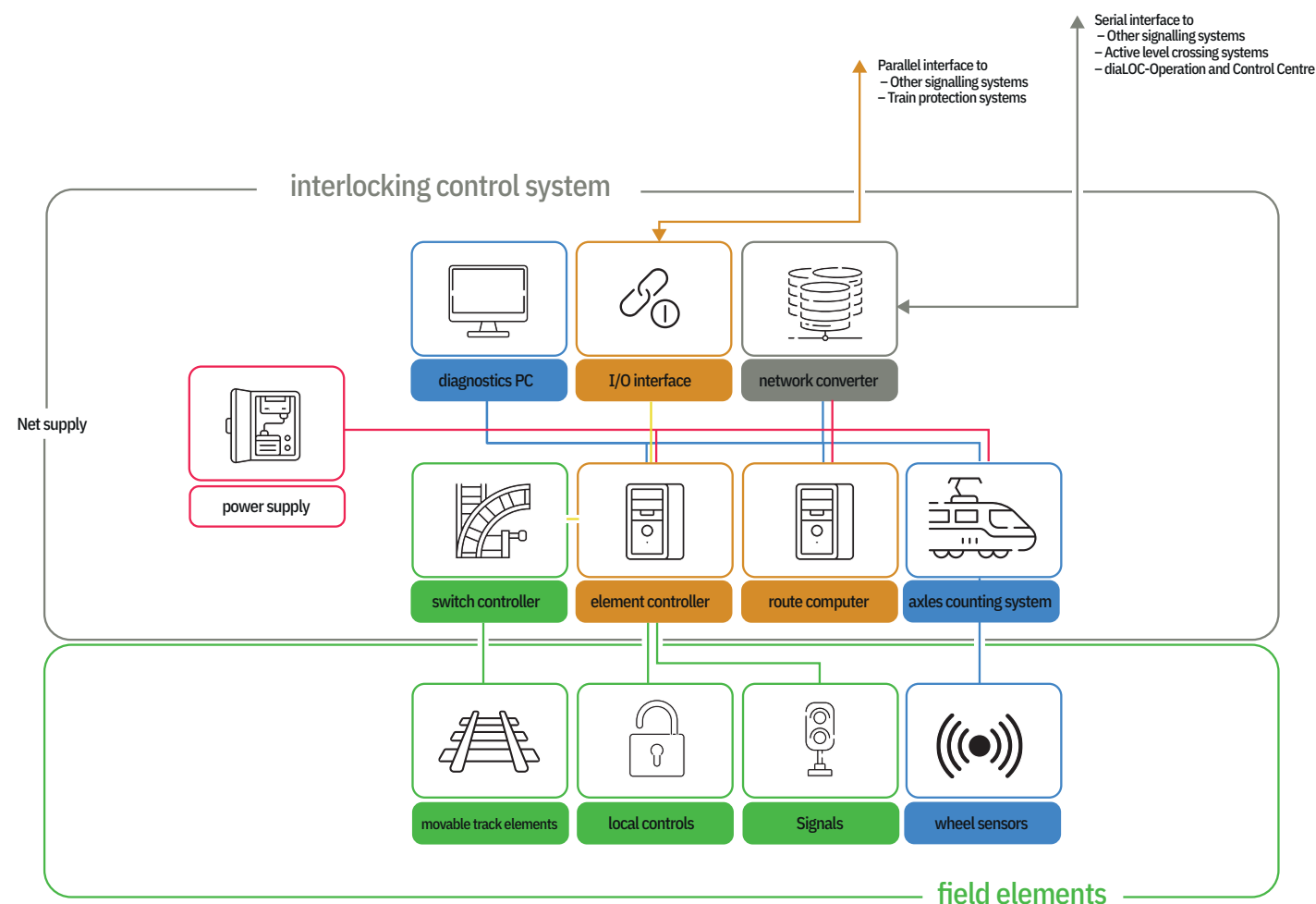
A large number of parallel and digital interfaces that have already been developed and tested enable uncomplicated connection to higher or lower-level train control systems, control centres or other safety systems.

While **diaLOC** currently speaks many 'languages' (interfaces) in order to communicate with the peripheral systems in current projects, the system has been prepared for the future use of EULYNX.

The consistent use of IP-based network components right from the start makes **diaLOC** fully fit for the future.

Specially developed protocols, which have been particularly adapted for reliable and secure use in wireless networks, enable the use of mobile radio to reduce complex, cost-intensive cable routes and excavation work.

interlocking control system

Parallel interface to
– Other signalling systems
– Train protection systems

Serial interface to
– Other signalling systems
– Active level crossing systems
– diaLOC-Operation and Control Centre

Net supply

diagnostics PC | I/O interface | network converter

power supply

switch controller | element controller | route computer | axles counting system

field elements

movable track elements | local controls | Signals | wheel sensors

OPERATION AND VISUALISATION

Depending on the area of application, simple pushbuttons and route control panels or graphical user interfaces and remote control systems are used for operation.

The graphical user interface is customised to the requirements of the railway company and, if necessary, supplemented with functionalities for dispatching and administrative tasks.
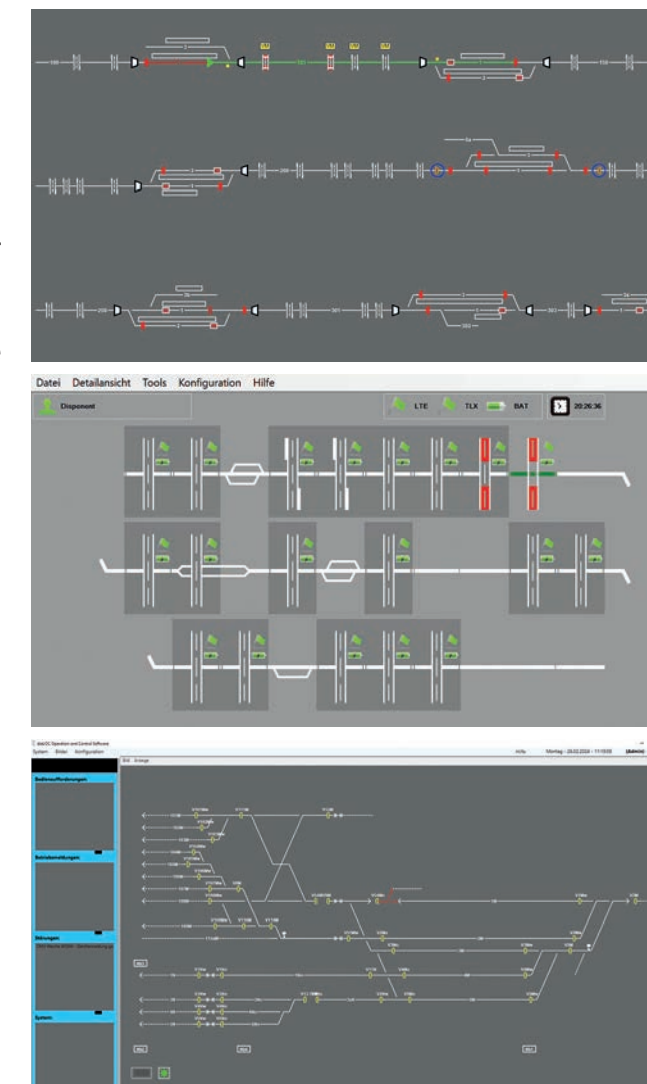
TECHNICAL SPECIFICATIONS

→ Centralised or decentralised architecture
→ Highly reliable track clearance
→ Developed and assessed in accordance with CENELEC standards including EN50126, EN50128, EN50129
→ Customisable safety architecture (SIL4 or SIL2 version)
→ Indoor and outdoor systems fulfil extended temperature range (control components can be housed in outdoor cabinets)

CORE ELEMENTS

The element controller and route computers form the heart of the **diaLOC** system. The entire control and functionality is implemented by these safety computers (in SIL4 or SIL2 depending on the architecture selected).

All field elements report the current status to the control computer. This includes the signals, the highly reliable track vacancy detection system based on wheel sensors with state-of-the-art algorithms and the point machines.

The route computer receives all the information it needs from the control computers to set the routes selected by the control centre or the operating computer.

The control computers can be expanded at any time and additional safety elements (such as track gates, key locks, etc.) can be integrated as required or as requested by the customer.