

Main characteristics

POWER SUPPLY

- Operating range 40–60 V DC, nominal 48 V DC input
- Reliable power distribution within the subsystem

LOGIC MODULE

- Logical processing and network interface for system integration and data exchange

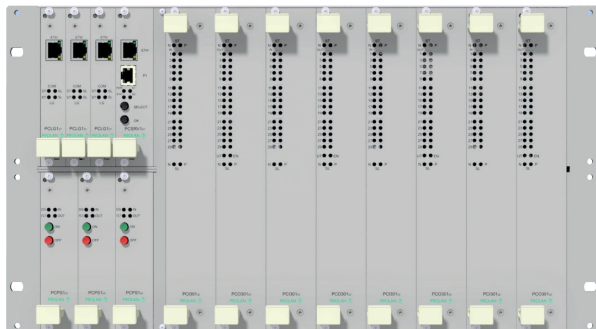
I/O MODULES

Safety-related signal acquisition and control:

- Up to 30 channels per module
- Safety capability up to SIL 4
- Redundant operation for increased availability

Module types:

- **30-Channel Input Module**
24 V DC | 30 channels | SIL 2 / SIL 4 (based on configuration)
- **30-Channel Output Module**
48 V DC | 30 channels | SIL 2
- **15-Channel Output Module**
48 V DC | 15 channels | SIL 4



PROLAN 

Railway Automation since 1990

35+ years of experience

230+ engineers

2000 km+ railway traffic control

SIL4 development capability

European railway references

Contact

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PROLAN 

ProSigma SIL4 Railway Safety Control Platform

Modular. Scalable. Future-ready.

A flexible safety platform for modern railway signalling and interlocking applications.



Overview

ProSigma is a SIL4-capable railway safety control platform providing the hardware and software foundation for safety-relevant railway applications.

Its generic, configurable architecture can be tailored to project-specific requirements, while application logic defines the operational behaviour. The reusable platform approach supports verification and validation, reduces project risk, and ensures long-term maintainability and scalability.

PROSIGMA PLATFORM FAMILY

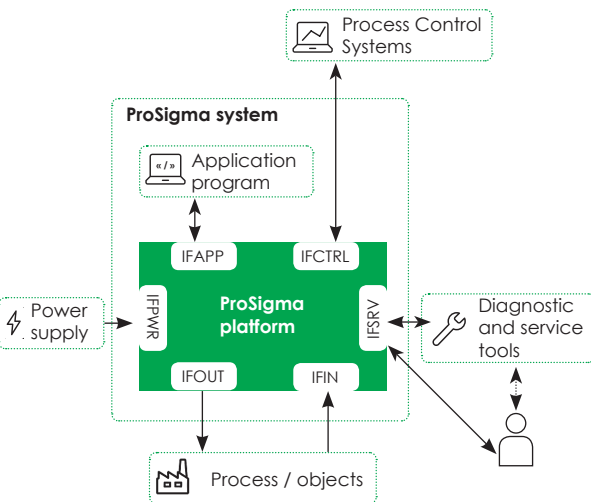
ProSigma-B

CERTIFIED Proven SIL4 platform

ProSigma-E

UNDER DEVELOPMENT

Next-generation platform



Modular Architecture

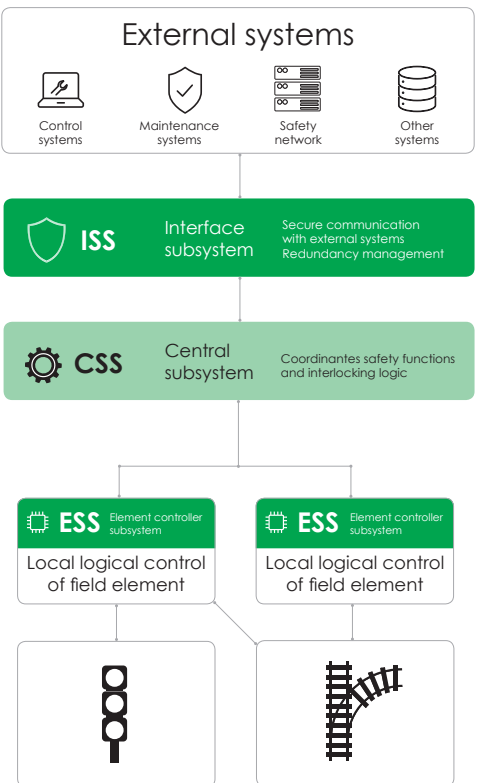
The **Element Controller Subsystem (ESS)**
Monitor and control functions of external elements.

The **Central Subsystem (CSS)**

Central functions with the cooperation of the Element Controller Subsystems.

The **Interface Subsystem (ISS)**

Interface to the external system, masking differences between the systems' specific characteristics.



Main Functions

Safety-Relevant Functions

ProSigma provides the core safety functions required to connect the application program with the railway process and external control systems.

Reading, processing and transferring process inputs

Receiving and processing data from the **process control system**

Executing the **application program**

Sending application data to the **process control system**

Controlling **process outputs** based on application logic

Service Functions

Service functions comprise the set of features that support the system's **commissioning, maintenance, and diagnostic** activities. These functions are carried out using dedicated service tools and, where required, manual intervention.

