

# EURO LOCKING



**APPROVED**

## Safety First

“Safety first!” The motto is universal. It applies to aviation, to process industries but also – and especially – to the railways. Eurolocking is designed to ensure the safety of rail infrastructure. It prevents collisions between trains, and between trains and road vehicles. It detects dangerous situations, takes corrective action and so ensures the safe operation of railway traffic. In short, Eurolocking forms the heart of a railway signalling system.

## In service on mainline

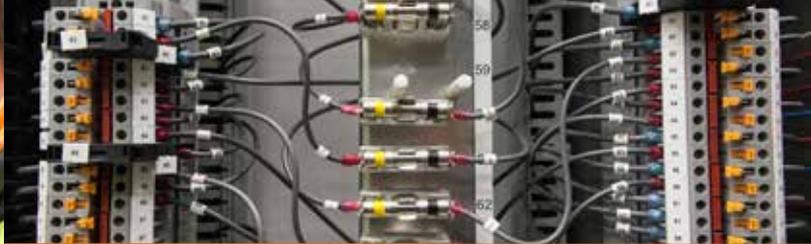
Movares launched the Eurolocking concept in 2006 and worked with Dutch rail infrastructure provider ProRail to develop what became the PLC Interlocking. PLC Interlocking came into service in July 2012, at Santpoort Noord Yard. It is now for more than 2,5 years in service without any disturbances. This was the first COTS based SIL4 PLC Interlocking on a main line in the Netherlands and the first in the world. In December 2012, ProRail approved PLC Interlocking for use throughout the Netherlands, paving the way for worldwide utilization of the system.

## The best of two worlds

Eurolocking combines the best of two worlds: it utilizes the extensive experience that the process industries have built up in the field of safety systems, and it capitalizes on the knowledge that Movares has acquired over many decades of experience with rail infrastructure. The result is a modern, cost-efficient, powerful, flexible, scalable, customer-maintained railway signalling system.

Eurolocking utilizes open communication standards, together with standard industrial hardware that is already widely used in the process industries. Like the railways, those industries demand high levels of safety and reliability. They therefore make extensive use of safety systems, have acquired substantial experience with them and can develop such systems rapidly.

**Cost-efficient  
SIL4 interlocking**



## Proven hardware and specialist software

Eurolocking combines off-the-shelf hardware with dedicated software, designed for the railway environment. The hardware component is not tied to one supplier.

Current implementations are based on the Hima Safety Controller, which is widely used in process industries, where it plays an essential role in controlling safety-critical processes in refineries and chemical factories.

## A wide range of applications

Movares, with its extensive knowledge of railway signalling, was able to develop a flexible interlocking suitable for both main and regional lines. The knowledge and experience acquired with programmable logic controller (PLC) technology, together with the application software, means it is also possible to use the system for light rail, level crossings, tunnel systems, bridges, freight yards and marshalling yards.

## The advantages of Eurolocking

- **Cost-efficient:** Eurolocking allows customers to save up to 30% of the LCC of a signalling installation
- **Flexible:** Eurolocking systems are scalable, use standard communication infrastructure and protocols (Ethernet/IP/OPC) and are suitable for use on ERTMS corridors
- **Easy to use:** if required, maintenance and modifications can be carried out with the system in service – Eurolocking can be switched on and left on

- **Powerful:** Eurolocking can process large quantities of input and output data at high speeds
- **Open:** Eurolocking uses open, accessible system architecture
- **Independent:** Eurolocking hardware is not tied to one supplier
- **Scalable:** Eurolocking is fully scalable with regard to reliability, availability and size
- **Traffic control:** EuroDispatch, a graphical user interface, can be used to control Eurolocking, e.g. set routes, give command to point machines etc.
- **Up to date:** Eurolocking meets applicable EU standards and is approved to CENELEC safety level SIL 4

Movares Nederland is an engineering consultancy company and is part of the Movares Group.

Movares employs over 1100 highly qualified engineering professionals and is one of the leading Dutch consulting engineers, providing consultancy and engineering services covering the fields of infrastructure, public transport, mobility, power, waterways and urban development. Movares offers these services to infrastructure managers, Ministry of Infrastructure and Environment, public transport companies, local authorities and other clients. We operate from five offices in the Netherlands, including our head office in Utrecht.

Movares has been working on international projects since 1995. During this time the company has gathered experience world-wide, mainly in countries of the European Union, but also in Central & Eastern Europe, Asia, the Middle East, the Americas and Australia. These projects have been performed in cooperation with local companies.

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