

Solution Anybus CompactCom & Ixxat Safe T100
Country Germany
Company ASSA ABLOY GmbH
Content Connection of machine safety doors to a local bus system



OPENING THE DOOR TO MORE TIGHTLY INTEGRATED SAFETY

Safety is considered an essential element of the operational matrix, as information from safety systems can have an effect on productivity. Tight integration into existing communication infrastructures is now becoming more commonplace as end users look to create unified channels for operational information.

THE CHALLENGE

Assa Abloy is known the world over for its class-leading access solutions, in applications ranging from hotels, through shopping malls and commercial premises, and onto highly demanding industrial safety applications.

And it is in this latter application that it deploys technology from HMS Networks to address a growing need from its customers to integrate safety and protective solutions into existing bus networks, in order to pull operational data and metrics into a single data pool.

The issue it faces is the proliferation of industrial fieldbus protocols. Assa Abloy cannot standardize on one interface, as it serves customers around the globe using a wide variety of different communication standards. It needed a solution that could interact with all leading protocols to provide a single, unified data connectivity to the bus system.

THE EFFECTS

- ✓ Support of different fieldbus standards with one interface solution
- ✓ Important safety protocols addressed, like PROFI-safe, CIP Safety or FSoE
- ✓ Safety information now fed into operational data pool for other systems to interrogate

"We are seeing higher demand from our customer to connect our doors to their bus systems, so we chose what was best for them in terms of how easy it is to connect to existing bus systems."

Jan-Erik Eliasson
ASSA ABLOY GmbH

THE SOLUTION

Assa Abloy's MCC door-control solution is now available with a network module mounted on the exterior containing the HMS Networks solutions. These comprise an Ixxat Safe T100, which can be deployed to control safe I/O signals using a safe fieldbus protocol. The module meets the SIL3 safety requirement level as defined by IEC 61508 and PLe / Category 4 in ISO 13849-1.

In this application, the Safe T100 is used with Anybus CompactCom, which provides a simple but powerful means to deploy network connectivity into existing devices. Communication of safety information from the Safe T100 and through the Anybus CompactCom uses the black-channel principle. For PROFINET, CompactCom performs the tasks of a PROFINET IO device, while Safe T100 includes the PROFINET layer and safe control of three dual-channel inputs as well as one dual-channel output.

Using the HMS fieldbus-enabling modules, Assa Abloy can give its users the ability to share essential operational data for the door control, such as confirmation of normal operation (open/closed) or for disbursement of error messages, which may necessitate machine shutdown or reversion to a safe state. For applications using PROFINET with PROFINET, the door's safe input and output data is also communicated to an external automation PLC.



THE BIGGER PICTURE

Primarily used for production lines at car manufacturers, the Assa Abloy doors are essential elements of holistic safety infrastructures and, as such, must be tightly integrated into existing systems to ensure the highest amount of interactivity.

With digitalized data capabilities becoming standard in almost all industries, the ability to interrogate any device or module that can have a positive or negative impact in uptime is now an imperative. Companies look to leverage this operational data – no matter how small it is – to create proactive maintenance procedures and to improve operational throughput and efficiencies.

But to gain this level of insight, companies need to have access to networking solutions that offer the widest possible choice of fieldbus compatibility, while also delivering mandated safety requirements such as SIL 3 and PLe. This is where HMS Networks excel, with thousands of successful deployments across the globe in a huge variety of demanding and sensitive applications.

Learn more on
www.ixxat.com

Under the Ixxat brand, HMS Industrial Networks offers communication solutions for machines, safety as well as energy and automotive applications. This includes standardized software and

hardware as well as customized OEM solutions. Ixxat solutions enable CAN, CAN FD and Industrial Ethernet based communication inside industrial automation devices, battery storage systems,

cars, medical equipment, etc. The Ixxat brand also includes safety solutions for industrial grid communication as well as gateways for smart grid energy systems.