



INDUSTRY BRIEF

Rail

Tunnel, station and depot control systems,
designed to rail standards.

 MATRIX



What matters most

Assured, evidenced change

Every change to railway infrastructure needs hazard analysis, test evidence and sign-off. Control systems have to fit your safety management system and assurance process from day one.

Work in short possessions

Much of the work happens in short overnight possessions. New systems must arrive fully tested, cut over quickly and hand the railway back on time.

Tunnel and station safety

Tunnels and stations depend on ventilation, drainage pumping, lighting and fire interfaces working every time, with clear alarms and status for the control room and maintainers.

Cyber security

Connected stations, depots and power systems widen the attack surface. Networks and remote access need to be designed to rail cyber security guidance from the outset.

The standards that shape your project

Standard	What it covers
BS EN 50126 (RAMS)	Reliability, availability, maintainability and safety, specified and demonstrated through the railway system lifecycle.
BS EN 50716:2023	Software development for railway applications, replacing EN 50128 and EN 50657.
CLC/TS 50701	Cyber security for railway applications, applying the IEC 62443 approach to the rail environment.
ROGS 2006	The Railways and Other Guided Transport Systems (Safety) Regulations: safety management duties enforced by the ORR.
Common Safety Method (CSM-RA)	Risk evaluation and assessment of significant changes to the railway, with independent assessment where required.
Network Rail company standards	Requirements for design, equipment and works on Network Rail infrastructure, including product acceptance.

The standards listed are those most often relevant to control-system work in this sector. Which apply to your project, and how, is agreed with you at specification stage.

From specification to long-term support



Railway work is planned around possessions and assurance. We agree interfaces and hazard records early, prove logic against a simulated plant and in factory testing, and plan each cut-over to fit the possession with a tested fall-back. You receive the evidence your assurance process needs, and the code and documentation to maintain the system.

Systems we engineer

- Tunnel ventilation and smoke control
- Tunnel and station drainage pumping
- Station and infrastructure SCADA
- Lighting, power and building services
- Depot plant: train wash, lifting, fuelling
- Traction power SCADA interfaces

PLATFORMS WE WORK WITH

Siemens TIA Portal, S7 and PCS 7 • Rockwell • ABB • Schneider • Mitsubishi • Beckhoff • Emerson DeltaV • Honeywell • GE • WinCC, Ignition, AVEVA (Wonderware), FactoryTalk, iFIX and Citect SCADA

The evidence you receive at handover

✓ Functional design specification

✓ I/O list and cause-and-effect

✓ Alarm list and HMI interface

✓ FAT and SAT records

✓ As-built drawings and source code

✓ Method statements for common faults

Why customers choose us

Standards first

An ISO 9001 certified quality system, designing to the standards your sector demands, plus any you specify.

You own the system

Clear structure, open interfaces and complete documentation, so you can support it yourself or with any vendor.

Tested before site

Control code is version-controlled and tested against a simulated plant before factory and site acceptance.

Multi-vendor

Siemens, Rockwell, ABB, Schneider, Mitsubishi, Beckhoff, Emerson, Honeywell and GE platforms.

In it for the long term

For us a project is not finished until the control system is decommissioned. 24/7 support is available under a support agreement.

OUR PROMISE

Standards-led, fully documented control systems that you own and can support.

GET IN TOUCH

Talk to us about your project

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