



Components & Materials

Southco

Locking Out the Threat: Access Hardware Behind Rail Security

Rail security today means defending against vandalism, tampering, maintenance lapses and cyber threats simultaneously. Access hardware sits at the heart of that challenge. James Stroud, Director of Product Management at Southco, explains how a tiered approach to physical and digital threats is shaping the company's rail security product portfolio.

While vandalism, anti-social behaviour and accidental maintenance breaches have always been a risk to passenger safety and the security of high-value assets on rail carriages, the overall threat landscape has changed as trains have become increasingly connected digitally.

Rail security today involves protecting vehicles from both physical and digital threats.

Access hardware remains at the intersection of these two challenges: latching and locking solutions secure panels, control access to and prevent the unauthorised opening of containers and cabinets. They therefore reduce the risks of panels left open, tampering and theft and support broader efforts to protect against cyber threats.

[Southco](#), the leading global designer and manufacturer of engineered access hardware, offers some distinct categories of products that provide solutions to accommodate varying security requirements for rail applications.

The Versatility of Southco Compression Latch Security

Within a single rail carriage, there are a multitude of individual application points that require a panel latching solution that is robust, reliable and adaptable to varying levels of access restrictions. Southco's E3 VISE ACTION® Compression Latches do exactly that: ensuring tight, robust vibration-resistant door closure, helping reduce or eliminate noise and rattles caused by vibration and coming in a broad range of access configurations.

Southco offers many different head styles as standard, that require special tools or keys for operating the latch. Depending on the requirements of each application and the environment the latch is operated in, Southco's E3 VISE ACTION® Compression Latches ensure that they enhance application security at the required level, ranging from access via square and triangular keys of varying dimensions and

offered with or without recess to a much more secure tubular key option, which Southco can provide with customer-bespoke keycode variations.

In addition to these off-the-shelf solutions, Southco has been working with OEMs in the rail industry and other industrial markets for decades to develop custom head styles that suit their customers' latching needs. Southco's portfolio of compression latch security-enhancing head styles count into the hundreds.

Securing against Human Error

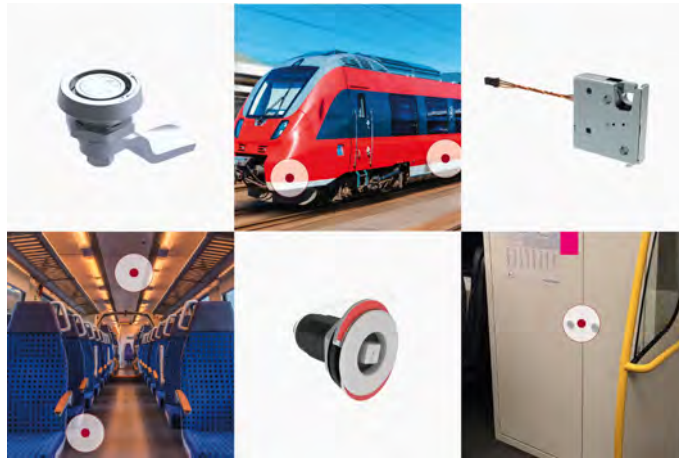
The most used head style is an 8.5mm square, commonly referred to as railway standard within the industry. It is used on maintenance panels inside the carriage as well as on the train's exterior, and is therefore a latch frequently accessed by staff. In these applications, the main security concern is risk of human error: maintenance staff accidentally not closing latches properly and panels being left open.

This is a major security concern for exterior applications where a panel left unsecured might fall off.

To avoid any such maintenance errors and ensure panels are securely latched, Make Safety Visible by Southco™ products provide visual indication of latch status and therefore show whether a latch is open or secured. The solutions that are best suited for the railway industry are again based on Southco's E3 VISE ACTION® Compression Latches. They have been enhanced through the addition of either reflective wings which deploy when the latch is opened and only retract when the latch is fully secure or a bi-stable cover that will stay open and cannot be closed as long as the product is unlatched. For rail carriage interior panel solutions which are less safety-critical, Southco also offers a range of latches with colour-coded markings etched into the latch face, making maintenance procedures easier and less prone to errors.

The Next Generation of Protection through Compression Latch Security

Southco is developing a further evolution of their E3 VISE ACTION® Compression Latch platform: a key-lockable variant engineered to offer a near-indefinite number of keycode combinations. This solution, which will be firstly showcased at this year's InnoTrans, specifically targets data-carrying enclosures and cabinets which demand a very high level of access security. The industry continues to favour mechanical over electromechanical latching solutions as a mechanical solution carries no risk of a digital attack.



Controlling Access Electronically

Electronic access control or Connected Access represents Southco's most technologically advanced approach to security. Electronic access control adds a layer of monitoring and management, allowing operators to track, restrict and audit access in real time.

[Southco's Connected Access range](#) targets applications where the consequences of unauthorised entry are most severe: doors to individual compartments on sleeper services or the driver's cab. As with a commercial aircraft cockpit, the vulnerability of a train driver to unwanted intrusion carries significant safety implications. Electronic access control manages that risk with a level of precision that mechanical solutions alone cannot match.

In practice, this can mean mobile app-based access management: Southco's recently launched plug-and-play solution, the Keypanion® app combined with a Southco lock and Bluetooth® controller allows door access to be controlled and monitored via a smartphone, offering flexibility without compromising security.

While electronic access in the rail industry remains a developing

area, Southco continues to invest in solutions for this space, anticipating that growing connectivity and autonomy across the industry will bring demand in line with the technology's potential.

Security Across Every Level

[Southco](#) offers a tiered approach to rail security, one that gives operators and OEMs the flexibility to match the level of protection to the specific demands of each application.

Rail security requires solutions that can address physical and digital threats. When OEMs are seeking their highest levels of protection, the industry continues looking to mechanical solutions because they carry no digital attack surface. However, there is clear potential to integrate electronic solutions and Southco is well-placed to introduce Connected Access solutions onboard.

Southco will showcase its full range of security-supporting access hardware at **InnoTrans in Hall 3.1, Stand 300** including new developments in high-security mechanical latching making their public debut at the show.

[Book an exclusive unveil of Southco's brand-new solutions for rail security at InnoTrans here.](#)

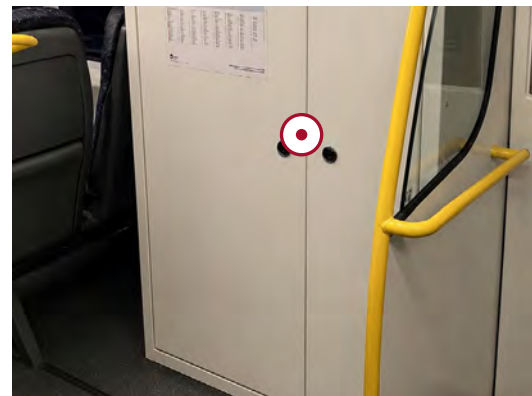
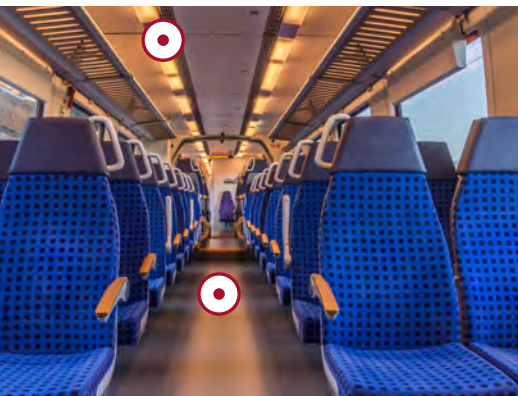
Rail Security starts with the Latch

Hall 3.1 | 300

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Southco's brand-new solutions
for Rail Security at InnoTrans!



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Visual Indication for Secure Panel Closure



EN 45545 Compliance for Fire Safety



Connected Access for Controlled Monitoring



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Restricted Access for High Security Protection



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