Product Spotlight:

Safer Switching & Greater Uptime for Data Centres:

How **Camlocks** work to enable safe, controlled switching in critical power infrastructure

In today's data centres, power availability is everything. Operators are under constant pressure to maintain uptime while carrying out routine maintenance, upgrades and testing across increasingly complex electrical infrastructure.

To achieve this, modern facilities rely on multiple power sources, redundant systems and sophisticated switchgear arrangements. Yet as power systems become more complex, so too does the challenge of ensuring operations are performed correctly and consistently.

Air Circuit Breakers (ACBs) play a critical role within low-voltage switchboards and distribution systems, controlling the flow of power to critical loads and enabling operators to transfer supplies, isolate equipment and perform maintenance. While these devices are fundamental to power resilience, incorrect switching or isolation activities can introduce risks for the operator and risK serious damage to the equipment.

This is where trapped key interlocking plays an important role.

Our Castell FS, Kirk Tyc, KC40 or C900 or our STi HBA camlock are designed to integrate directly into OEM switchgear and air circuit breakers, providing a robust and reliable method of mechanically enforcing predefined operating sequences.

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Designed for integration with OEM Switchgear

One of the most prominent advantages of our camlocks is their ability to integrate directly into OEM equipment.

Many leading switchgear manufacturers provide dedicated mounting provisions within their equipment, enabling camlocks to be incorporated directly into breaker mechanisms using OEM-approved mounting accessories.

This allows designers and operators to implement trapped key interlocking without extensive modification to the original equipment.

Castell FS, Kirk Tyc, KC40 or C900 or our STi HBA camlocks can be integrated into a wide range of applications, including:

- Air Circuit Breakers (ACBs)
- Switchboards
- Distribution panels
- Incomer and feeder arrangements
- Bus coupler schemes
- Generator and standby power systems

Available in multiple sizes, mounting configurations and rotational arrangements, camlocks can be specified to suit a broad range of switchgear platforms and operational requirements.

Benefits of OEM integration

Seamless incorporation into new switchgear designs

Suitable for retrofit and existing installations

Compatible with leading manufacturers' mounting provisions

Supports a wide range of switchgear manufacturers and configurations

Enforcing the correct switching sequence

Trapped key interlocking uses a simple but effective mechanical principle: A key remains trapped until equipment reaches a predefined operating condition. Once released, that key becomes necessary to enable the next action in the sequence. And at the Sentric Safety Group™, along with our Castell™, Kirk™ and Serv Trayvou Interverrouillage™ (STi) brands, this is what we specialise in and have been doing for over 100 years.

For example, in a data centre redundant power application:

- Incomer A is supplying the load and retains a trapped key.
- Opening Incomer A releases the trapped key.
- The released key is used to enable the next step in the sequence.
- Maintenance activities can only proceed once the required interlocked operating state has been achieved.

This approach helps support consistent operating procedures and provides operators with a clear, visible method of controlling switching activities.

Engineered for Demanding Industrial Environments

Electrical infrastructure within data centres operates in environments where reliability and durability are essential. Our camlocks are designed as to be suitable for demanding applications where equipment may be subjected to frequent operation over many years of service.

Key features include:

- Robust metal construction
- Durable mechanical operation
- Designed for repeated industrial use
- Suitable for critical power applications
- Long service life with minimal maintenance requirements

The result is a reliable interlocking solution that can be incorporated into critical infrastructure where operational consistency is paramount.

Secure Coding Systems Designed for Enhanced Protection

Not all trapped key systems are created equal. A key differentiator of our camlocks is the use of high-security key coding systems designed to support the integrity of the interlocking scheme.

Each interlocking system can be configured using unique key coding arrangements that significantly reduce the risk of unauthorised key duplication and help prevent keys being incorrectly exchanged between equipment.

This provides important operational advantages:

- Reduces the likelihood of human error resulting in a bypassing of the system
- Helps prevent keys being transferred between unrelated systems
- Supports the integrity of the interlocking sequence
- Helps minimise opportunities for override or circumvention
- Provides greater confidence in the security of the interlocking scheme

For critical applications such as data centres, where switching activities form part of wider operational and maintenance procedures, maintaining the integrity of the key system is an important consideration.

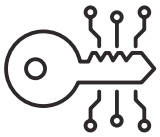
Why data centre operators choose Castell, Kirk and STi camlocks

Data centre operators require more than a simple locking device.

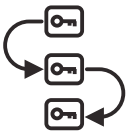
They need a solution that integrates seamlessly into critical infrastructure, supports established operating procedures and performs reliably throughout the life of the installation.

Our camlocks provide:

Equipment integration with leading manufacturers
Designed to integrate directly into switchgear and breaker mechanisms using manufacturer's mounting provisions.



High-security key systems
Advanced key coding technology that helps protect the integrity of the interlocking scheme.



Mechanical enforcement of operating sequences
Supports controlled switching and isolation procedures through trapped key interlocking.

Flexible application
Available in a range of sizes, configurations and mounting arrangements to suit a wide variety of switchgear applications, and additional engineering services for custom solutions designed to suit bespoke applications.

Industrial reliability
Robust construction designed for demanding operational environments.

Talk to our experts

In complex power infrastructure, the effectiveness of a trapped key interlocking scheme depends on the quality, security and integration of its components.

Castell, Kirk and STi camlocks combine proven mechanical interlocking principles with OEM equipment integration, industrial-grade durability and high-security key coding technology.

The result is a versatile interlocking solution that helps operators maintain control of critical switching and isolation activities while supporting the safe and efficient operation of electrical infrastructure.

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