



FORTRESS

Saving lives by providing the best safety solutions



Tailored safety solutions from the specialists in automation safety and interlocking



THE QUEEN'S AWARDS
FOR ENTERPRISE:
INTERNATIONAL TRADE
2018



Who is Fortress?

Industry leader innovating automation safety products



Safety specialists active in international standards development



Protecting people in more than 40,000 facilities



Operating in 67 countries

Most robust and customisable solutions



Part of a global FTSE 100 group driving international safety



Halma

Fluid Power Safety

Protect people and productivity with the highest level of safety for hazardous pneumatic and hydraulic energy.

Safe Access Solutions

Our range of mechanical, electromechanical and network connected access solutions can be tailored to suit your exact safety needs.

Machine Control & Permissions

Configurable pre-wired or ethernet connected machine control devices make installation quick and simple. Plus, with RFID access control, ensure the right people are performing the right tasks, at the right time.

Machinery Safety Services

Machinery safety and its associated standards, laws, and regulations can be very complex. We support with tailored training and guidance to help you implement the best and safest solutions.

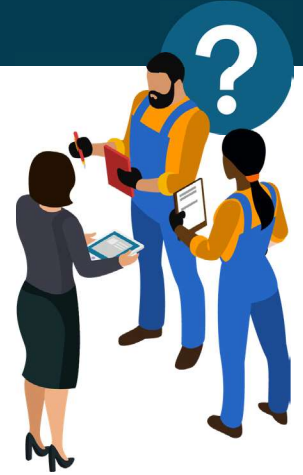
Machinery Safety Services

Customised safety services to fit your requirements

We have a team of machinery safety experts able to answer questions regarding international, European, and U.S. machinery safety standards. We have an array of free safety standard articles and webinars to help you navigate the complexity of the machinery safety standards.

We can provide tailored safety training related to U.S. and international machinery safety standards as well as standards related to specific applications. Contact us if you want to run company wide standards training or would like us to create tailored training for your applications.

We also offer, to existing customers, site surveys. We have a group of application and technical engineers who can help customers inspect Fortress devices to ensure they are installed and functioning as intended, as well as being maintained correctly.



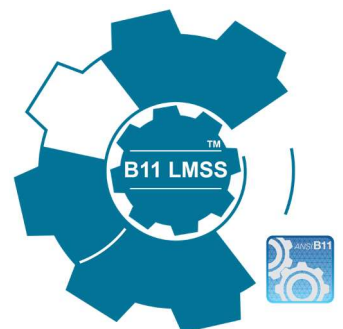
Become a B11 LMSS™ Licensed Machinery Safety Specialist

The B11 Licensed Machinery Safety Specialist certification is a five-module remote training course that sets out the key aspects of designing and implementing machinery safety solutions. This B11 Standards, Inc. certified course will enhance your ability to protect lives and improve your professional competence portfolio.

Course Modules:

- 1. Risk Assessment**
Intro to U.S. legislation and risk assessment
- 2. Risk Reduction**
Once you have a risk assessment, how do you reduce risk?
- 3. Functional Safety**
The application of safe control systems
- 4. Integrating Machines & Robotics**
Increased automation means more complex systems
- 5. LOTO & Electrical Safety**
Lock-Out Tag-Out and alternative methods to achieve safety

Become a safety specialist



Do you wish your machine control could be designed in one simple solution with plug and play cabling?

Fortress offers custom designed control devices with hardwired M12 / M23 connection or PROFINET or EtherNet/IP networked communication. Networked solutions can be configured as safe or non-safe I/O modules for external connections (for example to light curtains, enabling switches, and many more).

- Fully customisable and engravable (with text or symbols) buttons, lamps, and switches
- Easily integrate an emergency stop and external safe I/O
- Self-wired, hard-wired, or network connectable
- Robust, durable design utilising metal componentry for long lasting operation

Explore our access control & permissions solutions



Explore our machine control solutions



How do you manage who performs machinery control & hazardous access?

Permission-based technology can be integrated into your system with FRANK - the Fortress RFID Access Network Key - to ensure only authorised personnel access certain areas, perform hazardous tasks or put machines into certain modes.

- FRANK utilises your existing RFID cards to manage users, permissions, and access
- Data can be captured on this platform to offer productivity gains through identifying inefficiencies
- Can be used alongside trapped key systems, electromechanical interlocks or operator controls

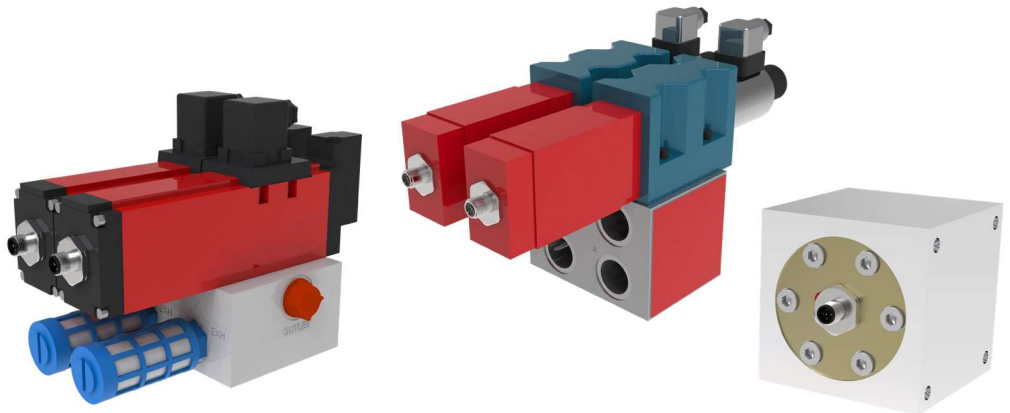
Fluid Power Safety

Pneumatic and hydraulic loads can be just as or even more dangerous than electrical energy. So how do you ensure they have the same level of safety?

Fluid power solutions from Fortress provide redundant means of operation, monitoring, and a unique cross link technology to guarantee no single component failure can affect safe isolation. Available for Category 4 (Cat. 4) and Performance Level e (PLe) applications. For run down times of a fluid system, zero pressure monitors are available to ensure safety is maintained.

- Positively driven dual mechanical contacts for reliable spool position monitoring when compared to alternative technology
- Crossed link exhausts to guarantee a path for pressure isolation
- Easily serviceable for minimal downtime
- Robust design for long lasting operation

Explore our solutions



Safety Redundancy

Dual channel safety, dual channel exhaust (pneumatic) and tank outlet (hydraulic)



Retro-fittable

Can be installed with no change to existing circuits and control valves



Robust & Durable

Built for longevity to guarantee a long operational lifetime



Fully Serviceable

Easily serviced by our team to maintain smooth operation



Leaders in Fluid Power

Operating as Fluidsentry for 20 years before joining Fortress

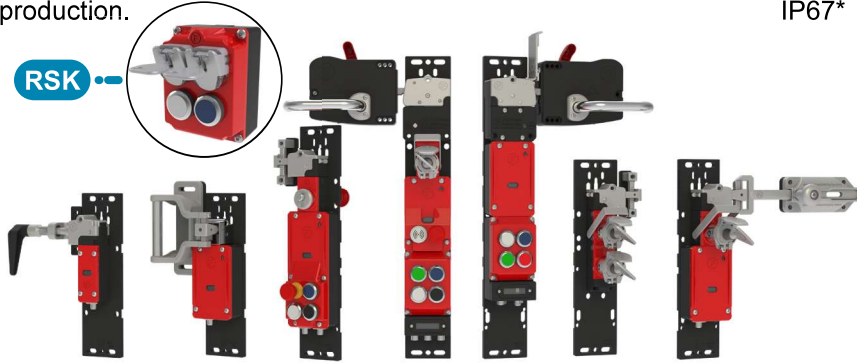


Heavy duty guard locking with PROFIsafe & CIP Safety

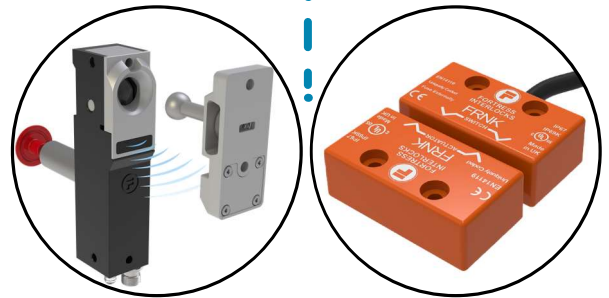
amGardpro

The most robust and configurable solution for applications up to Cat. 4, PLe. Combine ergonomic safe access with button controls, personnel protection, RFID access, and escape release functionality all in one device. RFID Safety Keys (RSK) to reduce the risk of lost keys impacting your production.

- TÜV SÜD approved to meet Cat. 4, PLe (incl. guard locking)
- Restart prevention with personnel (safety) key
- Self-wired, hard-wired, or network connectable for installation ease
- Heavy duty design to protect in environments up to IP65 & IP67*



Our heavy duty options also contains compact products with high coding (Atom & FRNK)



*IP rating is dependent on product configuration.

Configurable access & control for machine guarding

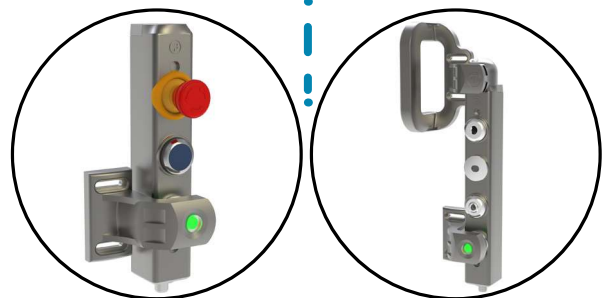
tGard

Simple but customisable range available as interlocks with built-in control functionality or standalone prebuilt pushbutton stations. Products are configured to order in a 40mm metal housing for simple mounting in a variety of manufacturing and automation applications.

- TÜV SÜD approved to meet Cat. 3, PLd
- New integrated RFID option to have a high-level coded actuator with more than 1000 variations, giving you guard monitoring up to Cat. 4, PLe
- Quick & easy installation with just two fixings and pre-wired connection



High-Level Coding (HLC)



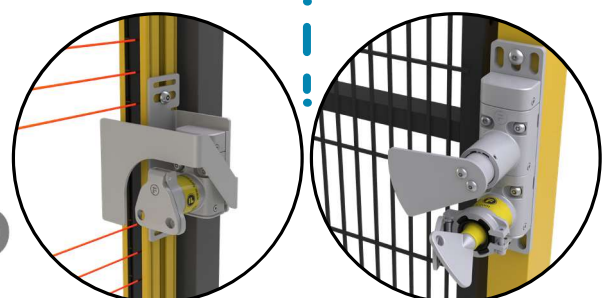
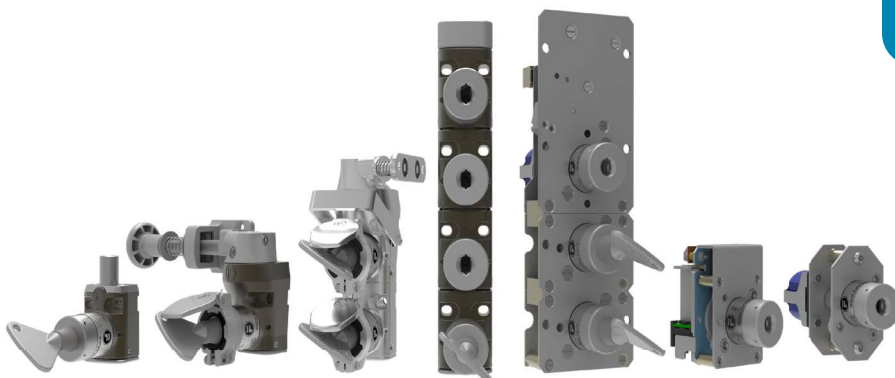
Mechanical trapped key interlocks

mGard

The mechanical range of robust trapped key products can be combined to create simple or complex key sequences to enforce processes at a fraction of the cost to electromechanical alternatives. Isolate all types of energy from a system and use personnel keys to prevent restart.

- TÜV SÜD approved for applications up to Cat. 4, PLe
- Quick & simple installation with no wiring required
- Enforced sequencing protects people and processes

Retrofittable personnel keys can be added to electromechanically systems & light curtains with our interlock blocking solutions (Osborn)



Hygienic interlocking for washdown environments

Louis

Louis is our range of stainless steel interlocks suitable for clean environments such as food production. Stainless non-contact switches, trapped key products, customisable control stations and the first ever 3-A approved, food safe interlock, the HGL (Hygienic Guard Lock) approved for clean in place procedures.

- All mechanical products work with a large temperature range & highly robust with no electrical parts that can fail
- 3-A approved interlock prevents bacterial growth for interlocking in a non-product food zone
- HGL actuator has high misalignment for easy install & protection against machine wear as well as having over 1000 coding's

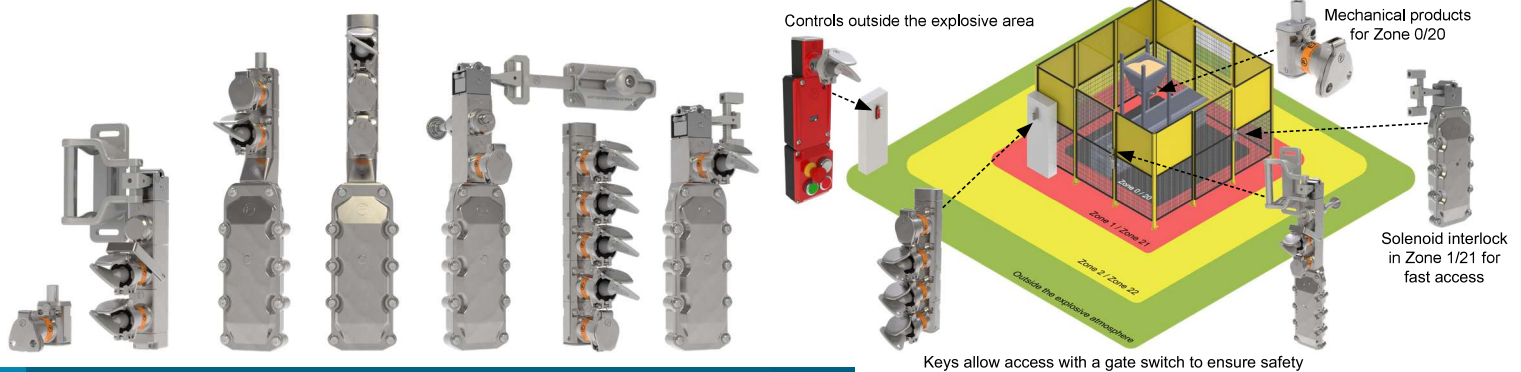


Interlocks for explosive atmospheres and hazardous locations

Alfred

Alfred is a range of robust and customisable interlocking solutions certified for safe use in explosive atmospheres and hazardous locations. The flameproof and IP69 enclosure guarantees the safe use in the harshest safeguarding conditions to protect your people and productivity.

- Integrated restart prevention for up to three operators
- Certified to ATEX, IECEx, CCCEX, & North American standards
- Monitoring & guard locking devices for use in Zone 1/2/1
- Fully mechanical access devices for use in Zone 0/20



Tailored safety solutions

We are able to accommodate and design tailored safety products to fit your complex requirements. We have a design engineering consultation team happy to help build custom solutions.

- Fast & cost effective engineering team to meet your exact needs
- Achieve your safety requirements & interlocking safety goals
- Using our TÜV SÜD approved mechanisms to build your desired system



Find the right interlock



All our interlocks are designed to be configured to your exact requirements, the QR code will take you to our product wizard to help guide you to which one is your best fit. Contact us directly for tailored safety solutions.



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“ We have the peace of mind that our workers are safe and protected by Fortress equipment. ”



FORTRESS

“ Fortress’ best quality is providing each customer the most robust and safe solution - all while being completely customizable and retaining a high level of quality. ”



FORTRESS

“ Fortress is best at providing customised solutions at a rapid turnaround - reacting immensely to a challenge to put the customer’s needs first. ”



FORTRESS

“ We value suppliers that can help navigate the standards and provide guidance that is directly linked to our applications. ”



Fortress Global Offices and Manufacturing Facilities

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