

Protecting People, Protecting Productivity



Interlock switches and control
devices for automation safety

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The Company

“Who we are and What we do”

Fortress Interlocks helps customers protect their personnel and capital assets. The company has over 40 years of experience in the safety market, designing and manufacturing safety access and control systems based at its headquarters in Wolverhampton, UK. These systems create safe workplaces where employees in industrial environments are safeguarded from injury and equipment is protected from damage. A world leader in access control systems, Fortress products guarantee that actions and events are undertaken in a pre-determined sequence ensuring a safe working environment.

The company's products are suitable for applications across a wide industrial base including power generation and distribution, steel, automotive, recycling, building materials, food and beverage, robotics and palletisers. Its extensive product offering and interlocking experience allows Fortress to provide unique solutions for all safeguarding applications. It regularly creates bespoke solutions, often by customising its standard products.



Trapped Key Technology

m Gard is the premier range of modular robust trapped key interlocks for heavy duty applications. Trapped key interlocking is a tried and tested method of mechanically safeguarding dangerous machines and hazardous processes, and is suitable for use up to SIL3 (EN/IEC 62061) Category 4 and PLe (EN/ISO 13849-1).

It is called "Trapped Key" as it works by releasing and trapping keys in a predetermined sequence. After the control or power has been isolated, a key is released that can be used to grant access to individual or multiple doors.

The principles of trapped key technology apply to all industries where it is essential that all energy sources are isolated before gaining access to machinery. Almost all safety issues can simply be solved by selecting the required products in order of the steps shown on this page.



Gate Switch Technology

am Gard pro is the ultimate range of modular safety gate switch interlocks, for heavy duty applications. Its unique modular construction allows easy configuration and provides total electro-mechanical solutions for practically any safeguarding application up to SIL3 (EN/IEC 62061), Category 4 and PLe (EN/ISO 13849-1).

With its unrivalled design concept, amGardpro offers a range of fully integrated safety interlocks, including solenoid and non-solenoid safety switches complete with a host of additional options including key control modules, emergency release, redundant sensors, lock out/tag out and push buttons, e-stops and indication lights for enhanced functionality. The robust construction of this range makes it ideal for use in a wide range of industrial applications when safety, strength and reliability are of paramount importance.

The amGardpro system replaces all adaptations normally fitted within a guarding system, such that additional hardware like door catches, actuators, closing mechanisms, internal mechanisms, key functions including authorised access an deadlocks may be no longer needed. All of these separate functions can be incorporated into amGardpro configurations, resulting in the most flexible safety interlock solution available for today's industrial environment.



PROFIsafe Gate Switches

am Gard

Fortress has effectively harnessed this technology and embedded it into the amGardpro range of safety interlocks with proNet. It is therefore now possible to create the following types of interlocks with PROFIsafe built in:-

- Solenoid control guard switches with emergency release.
- Solenoid control guard switches with "safety key" protection.
- Solenoid control guard switches with machine control functionality.
- One cable for control, safety and communication.
- One cable for power - reducing installation time and cost.
- 100% diagnostic capability - increasing up time.
- Quick connect connections via M12 plug & socket or AIDA standard connectors.
- Addressing flexibility either by web interface or dip switches aiding installation and maintainability.



Stainless Steel Gate Switches

am Gard

^{S40} is the latest range of safety interlock switches from Fortress Interlocks. Manufactured in 316 stainless steel, the range is modular in design, allowing a wide range of safety interlock switches to be configured to suit many industrial applications.

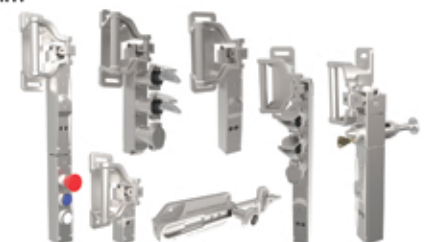
The choice of configurations include:

- Solenoid Locking Safety Switches
- Solenoid Locking Safety Switches with internal release
- Solenoid Locking Safety Switches with "safety keys" (for personnel protection)
- Solenoid Locking Safety Switches with machine control
- Non Solenoid Tongue Switches
- Non Solenoid Tongue Switches with machine control
- Mechanical Trapped Key Interlocks
- Machine Control Stations



The range is supplied in enclosures sealed to IP69K making it suitable to be pressure washed at high temperatures and has a retention force of 10,000N (greatest on the market) so it is ideal for ensuring guard doors are held closed until machines and/or processes are in a safe condition. Each module has a slim body design of 40mm so that it can be easily fitted to 50mm guarding sections or areas where space is limited.

The rugged design and strength capability makes the S40 range an ideal choice for applications in the Food & Beverage, Pharmaceutical, Chemical, and Construction Materials industries.



Integrated Control & Safety

tGard is the new innovative approach to controlling access to hazardous machinery and equipment. It is a compact metal bodied system that enables the configuration of various safety products including electrical safety gate switches (with or without guard locking), mechanical trapped key interlocks, and electrical operator controls, either as separate devices or integrated into one device.

tGard offers "a customised safety solution, as standard" and is defined by a range of tGard elements, including selector switches, safety switches (solenoid and non solenoid), personnel keys, emergency release, push buttons, eStops, indicator lamps and a choice of operating handles for both hinged and sliding guard doors. These elements are simply selected and then assembled into a robust housing, suitable for mounting onto machine guarding, providing the user with an exact configuration specific to the application.

tGard is quick and easy to install and can be mounted directly onto a flat surface, doors or extruded aluminium profiles without the need for mounting plates or brackets. It is IP65 as standard and has been designed to be fully compliant with the new machinery safety standards.



Non Contact Technology

am Gard_{nct} is a range of safety switches that utilise non contact technology. Designed with IP69K housings, these robust, coded, non contact, safety proximity switches are long lasting and virtually maintenance free with a high level of misalignment making them ideal for guarding applications across a range of industries.

NCS – Coded, Non-Contact Safety Switch

NCS is the new Fortress coded magnetic non-contact switch.

- Stainless Steel IP69K housing, ideal for food, beverage and pharmaceutical environments or anywhere hygiene or robustness are paramount.
- PLe Cat 4/SIL3 safety rating.
- Can be used as a coded interlock in accordance with EN14119.
- Based on solid state Hall Effect sensors that do not suffer from vibration and contact bounce.
- Copes with a very high level of misalignment
- Integrated electronics that monitors for faults and ensure the safety relay does not enter a fault state, irrelevant of the approach direction.
- Local user indication.
- Monitor outputs for use in the control system.
- Available with a variety of termination options; Mating cables are available.



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