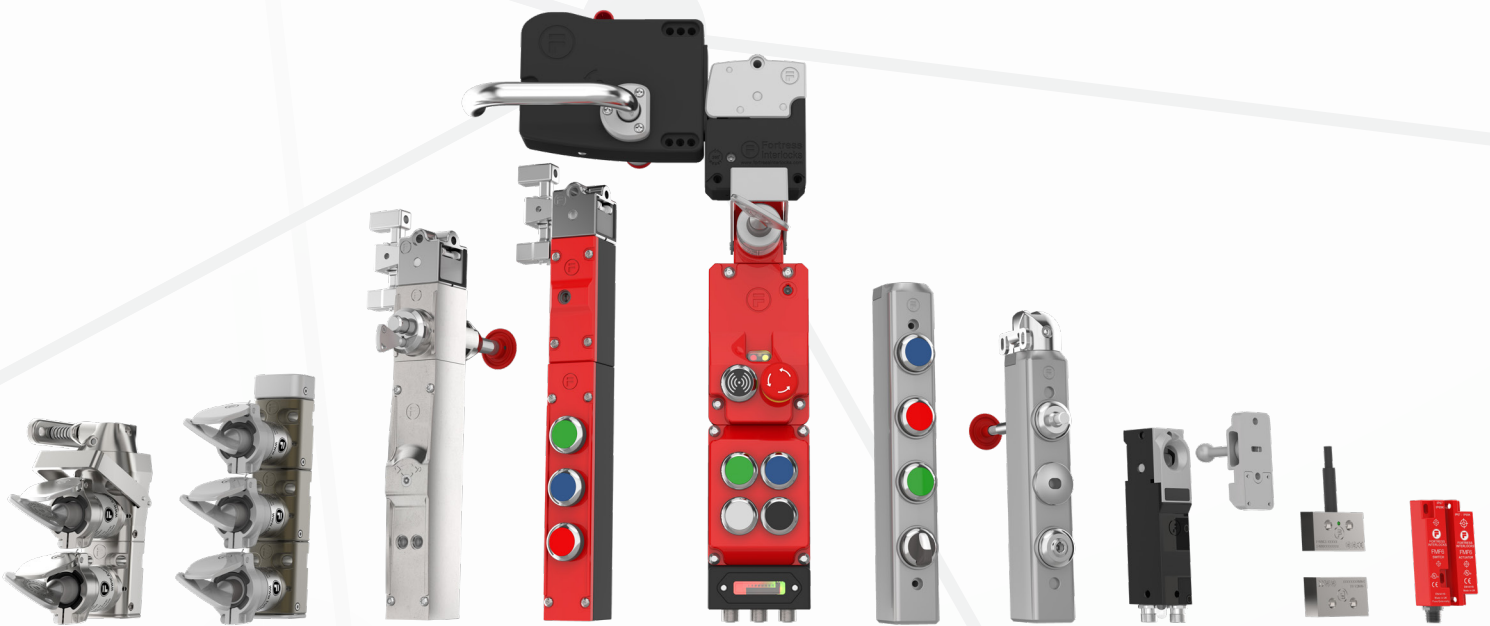


Protecting People, Protecting Productivity



## Robust Safety for Manufacturing Environments



THE QUEEN'S AWARDS  
FOR ENTERPRISE:  
INTERNATIONAL TRADE  
2018



us EtherNet/IP



## Introduction to Fortress:

**Fortress** designs and manufactures customised safety equipment, protecting lives in hazardous workplaces. Our reputation is as a global provider of robust safety specifications for manufacturing environments.

**Why Interlocks?** Interlocking is a method of controlling two or more interdependent operations which must take place in a predetermined sequence, if necessary remotely controlled or time delayed. The need for this sequence may be safety to personnel and equipment, or it may be to control processes and productivity.

Over the last 40 years, Fortress has become well known in the industry for innovative design, robust engineering and reliability. Headquarters are in Wolverhampton (UK), with supporting offices and manufacturing facilities in the USA, Netherlands, Australia and China, further supported by a global network of trusted distributors and channel partners.

## Fortress' current product portfolio includes:



**mGard** - The only range of mechanical interlocks independently certified to PLe



**amGardpro** - Heavy duty safety gate switches with connectivity and trapped key integration certified to PLe



**amGardS40** - Stainless steel IP69K safety gate switches independently certified to PLe

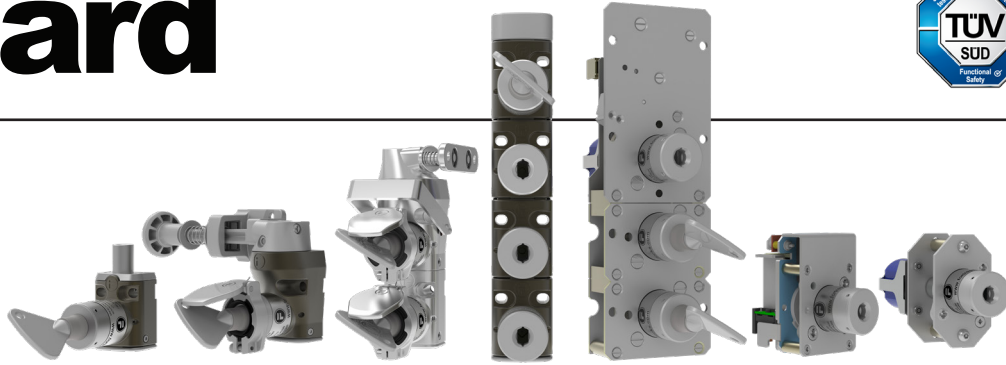


**tGard** - Medium duty interlocks with configurable built-in control functionality independently certified to PLd



**ncGard** - A range of safety switches with non-contact technology

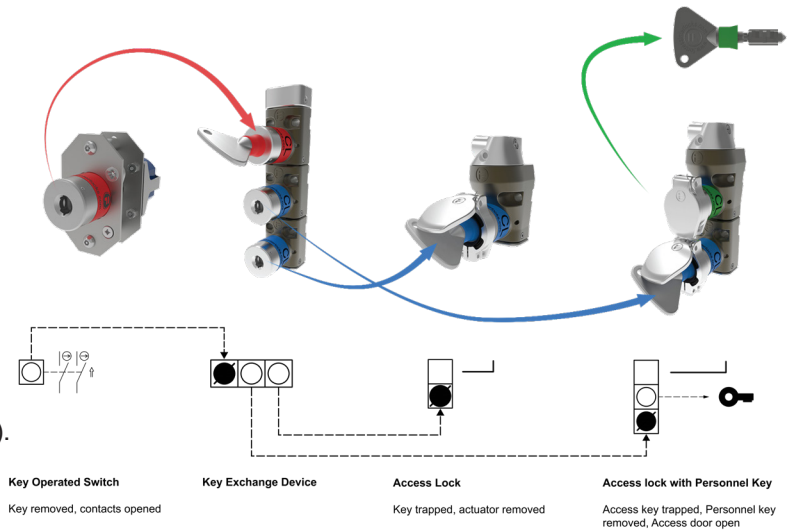




**mGard** is the only range of trapped key interlocks 3rd party approved as being capable of meeting PLe and is perfect for heavy duty applications.

Trapped key interlocking is a tried and tested method of mechanically safeguarding dangerous machines and hazardous processes. Mechanical keys eliminate most of the electrical wiring associated with other types of interlocks making it cost effective to install and maintain.

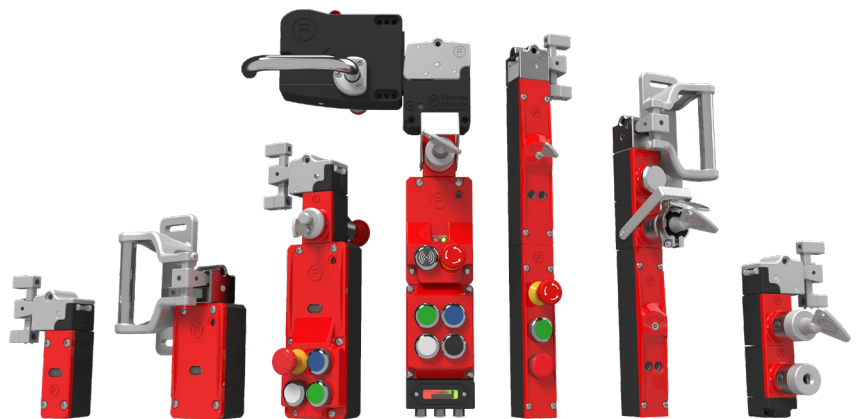
Fortress' **mGard** is suitable for use up to SIL3 (EN/IEC 62061), Category 4 and PLe (EN/ISO 13849-1).



**amGardpro** is the ultimate range of modular safety gate interlocks for heavy duty applications with a retention force of 10,000N.

Its unique modular construction allows easy configuration; providing electro-mechanical solutions for practically any safeguarding application up to SIL3 (EN/IEC 62061), Category 4 and PLe (EN/ISO 13849-1).

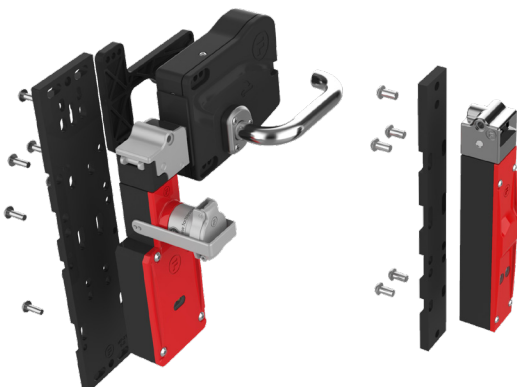
**proNet** is an addition to the **amGardpro** range that adds an Ethernet based networking capability to the product range.

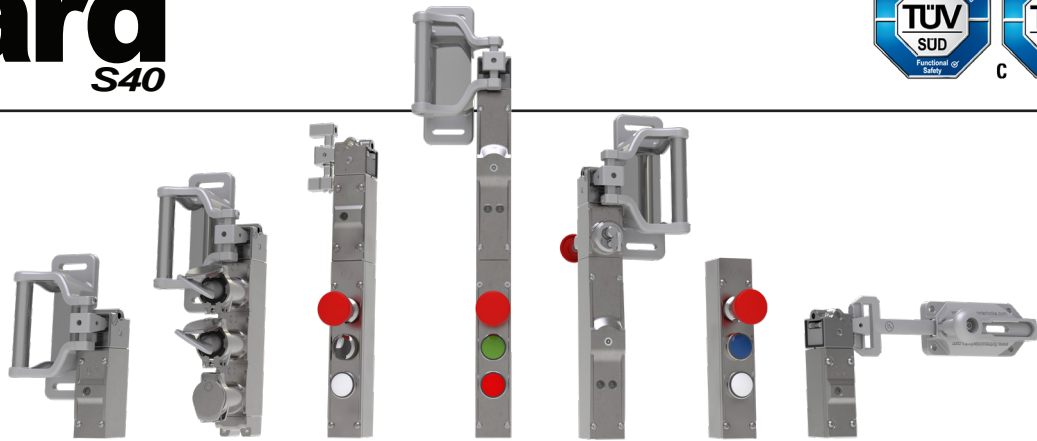


**Slimline pro** is also an option in the **amGardpro** range that houses the solenoid locking functionality in a body just 40mm wide.

The **proFit Mounting System** ensures most of our configured **amGardpro** safety gate interlocks can be easily and simply fitted to machine guarding. The units arrive pre-fitted when you select your desired Mounting Plate and/or Actuator Plate within your configured part number.

Note: Our online product configurators are available on our website: [www.fortressinterlocks.com/product-configurator](http://www.fortressinterlocks.com/product-configurator)





**amGardS40** is a range of safety gate switches 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 requiring IP69K.

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 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 guarding sections or areas where space is limited.

The rugged design and strength capability makes the *S40* range an ideal choice for applications in harsh, outdoor, chemical and construction material industries.

**tGard** 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 any combination of these three functions in one unit.

**tGard** offers “a customised safety solution, as standard”. Each order is defined by a range of **tGard** elements that include selector switches, safety switches (solenoid and non-solenoid), personnel keys, emergency release, pushbuttons, E-Stops, indicator lamps and a choice of operating handles for both hinged and sliding guard doors.

**tGard’s** metal body includes through-holes for quick installation on aluminium profiles, flat surfaces, doors and even back of panels without the need for mounting plates.

It is IP65 as standard and has been designed to be fully compliant with the machinery safety standards.





ncGard's newest addition to the range is **ATOM** which is a compact and ultra-robust Solenoid Interlock with High-Coded as per ISO 14119 RFID in the actuator. It is suitable for use in applications up to PLe (Category 4).

**ATOM** provides a discreet, easy-to-install solution with monitored inputs and OSSD outputs (**O**utput **S**ignal **S**witching **D**evice).

Daisy-Chain connections enables easier wiring installation and OSSD prevents fault masking powered from the same supply.

### Key features and benefits of the ATOM:

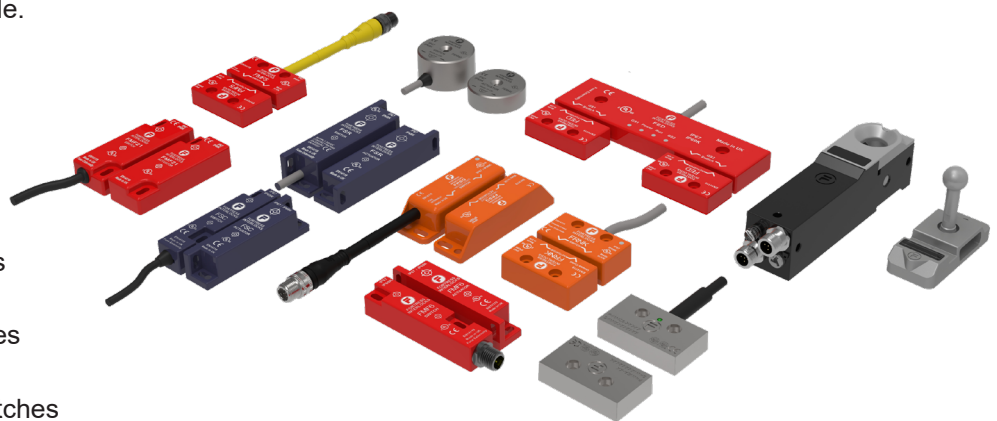
- Solenoid controlled interlock which only allows access when you decide
- High-Coded RFID which prevents actuator substitution
- Robust actuator design with high locking and retention force of 8kN
- 140mm x 33mm ultra-compact mounting footprint, easy to mount with 4 x M5 screws
- Safeguarding applications up to PLe and SIL3 rating
- Provides OSSD outputs with Daisy-Chain connection of up to 8 **ATOMs** in series, reducing your installation costs
- High Mechanical Misalignment which allows for wider guarding positioning
- Compact design for installation in discreet locations
- Sealed to IP65 and IP67
- TUV Safety Certification Approved



ncGard is Fortress' range of non-contact safety switches for safeguarding machinery.

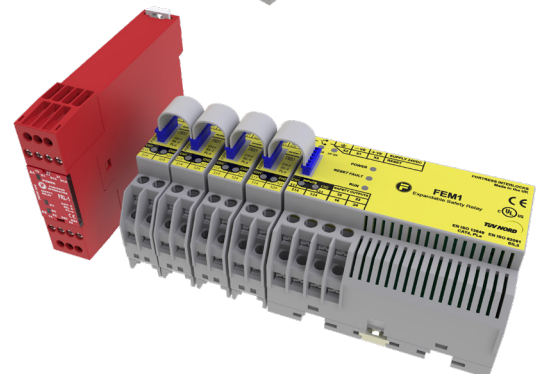
Magnetic switches are available in both Polymer and Stainless Steel housings. For severe hygiene critical areas, high temperature versions are also available.

- **NCS**  
IP69K solid state hall effect sensor
- **FM Range**  
Magnetic Safety Switches
- **FE Range**  
Magnetically Coded Safety Switches
- **FS Range**  
Generic Coded RFID Safety Switches
- **FR Range**  
Individually Coded RFID Safety Switches



The ncGard product range also hosts **Safety Relays** that can be integrated with our **amGardpro** and **tGard** products.

Fortress' **Safety Relays** are independently certified to PLe and are suitable for use with emergency stop (E-Stop) buttons and/or any two normally open safety devices.





# FORTRESS

## Protecting People, Protecting Productivity

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