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NON-CONTACT MACHINE GUARD SAFETY SWITCHES



complete safety control for industry

# Mechan Controls

**Mechan Controls is a leading British designer and manufacturer of machine guard safety systems. The Company specialises in the production of non-contact safety switches and, since the early 1970's, has been producing some of the industry's best known and reliable products.**

The Company operates throughout the world, providing it's customers with durable, cost-effective safety switches, the reliability of which has been proven in some of industry's harshest, most demanding environments.

Efficient and innovative design has been key to the Company's success. Its ability to provide a practical solution for a diverse global market sees its product being used within businesses of any size.

With over 35 years experience, Mechan Controls has the necessary expertise for the development and manufacture of customised solutions to meet differing needs and demands. This, coupled with its flexible approach to problem solving, enables the Company to provide products and across the board technical support for a diverse range of public and private industry from independent enterprise, specialist engineering sectors right through to blue chip organisations.

**Available through a worldwide distributor network, which extends across Europe and from the United States to Australasia and the Pacific Rim, Mechan Controls' products constitute probably the most advanced and extensive array of non-contact safety switches currently available.**

## PRODUCTS

The growing demands for reliability and efficiency in the modern production environment have led to a large increase in the use of non-contact safety switches. Tolerant of dust, vibration, misalignment, high temperatures, high pressures and exposure to aggressive chemicals, Mechan Safety Switches are suitable for use in all machine guard applications to improve not only safety but also productivity.

Through a process of continuous development, Mechan Controls now manufactures a complete range of non-contact safety switches to suit most environments. These include standard magnetic safety switches in both ABS and stainless steel, sturdy slim-line models, coded magnetic safety switches right up to Category 4 fully electronic safety switches with the option of up to half a million unique codes.

The range of applications is endless and all are manufactured with BS EN ISO9000-2000 for quality assurance, and are tested and approved independently by TUV and UL to European and International safety standards.





## APPLICATIONS

Non contact safety switches for machine guarding applications Legislation compliance by employers has seen a growth in the use of safety systems over the last 20 years. This is especially the case in areas of production where there is a possibility of injury to an operator or environmental damage. With improvements in technology, together with the need to improve productivity, there has been a move away from the older, and arguably less reliable, mechanical type safety switches in favour of the non-contact safety switches such as those developed and manufactured by Mechan Controls.

The primary purpose of machine guarding safety systems is to immediately shut down production on demand. Demand can be a scheduled stop or when a hazardous situation occurs. Safety systems can also be used to improve productivity, signalling areas that require preventative maintenance. However, safety systems that are not up to the job can stop production dead when they fail. This can impact heavily on productivity. Reliability across all environments, including those that are wet or dusty, is therefore vital for the chosen application.

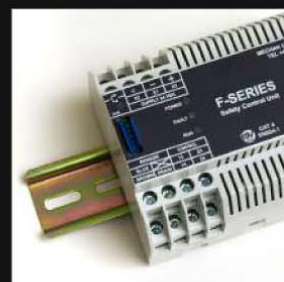
Mechan Controls' Non Contact Safety Switches are electronic or magnetically operated two part devices that are fitted to machine guards/doors so that when the guard/door is opened a circuit or signal is broken and the machine control system ensures that the machinery is stopped or does not start.

They have a number of advantages:

- Easy to install thus reducing cost and time
- Tolerant to misalignment
- Long term reliability means reduced call-outs to machinery for switching problems, therefore reduced maintenance costs.
- Size variety makes them easy to build in and hide to keep the 'design' of the machine clear

## F-SERIES ELECTRONIC SAFETY SYSTEM

- Electronic, tamper-proof, safety switches (up to 500,000 codes)
- Modular, multi-gate monitoring system
- 35mm DIN rail mounting control units
- Reliability & safety proven for more than 30 years
- TUV Category 4 Approval
- Guard status indication
- EMC tested, compliant with relevant EU Directives



## DESCRIPTION

The F-SERIES is a uniquely flexible, DIN rail mounting safety control unit designed for monitoring up to 30 Mechan safety switches.

## OPERATION

When the safety switch actuator is brought within the operating range of the sensor (10mm target to target), a signal is generated and transmitted to the safety control unit. The control unit evaluates this signal and if all gate inputs are correct and the control module's internal self-check is completed, the Mechan safety contacts will close.

## APPLICATIONS

Ideal for industries such as food processing, dairies, bottling plants, pharmaceutical, concrete block/building material manufacture and multi-gate systems on large production lines

[LOGOS plus text] – TUV Category 4 approved /UL Tested / CE



Mechan Controls safety systems are being used by:

HJ Heinz  
Premier International Foods  
Greencore Foods  
Warburtons  
Mars  
Nestle  
Arla Foods plc  
Dairy Crest  
Tetra-pak  
Coca Cola  
Pepsi  
Marshall  
Lafarge  
Ibstock  
AGG Industries  
Ball Packaging  
Bevcan  
Crown Packaging  
Rexam



## SSS ELECTRONIC STANDALONE SAFETY SWITCH

- Tamper-proof Electronic safety switching
- 10mm Switching distance
- Quick disconnect option
- UL approved
- Guard status indication
- IP67
- EMC tested, Compliant with relevant EU Directives

### DESCRIPTION

The SSS is a tamper-proof, standalone safety switch that can be used to switch relays, contactors or safety relays directly. Only a Mechan actuator will operate the SSS switch correctly.

The SSS safety switch provides 2 volt-free outputs (2 normally open or 1 normally open and 1 normally closed) and is suitable for use in dual channel circuits. It can also be used on it's own in lower category safety systems. The fixed switch has an LED, giving true indication of the SSS safety switch contacts.

### OPERATION

When the moving part (safety switch actuator) is brought within the operating range of the fixed switch (8mm target to target), a dynamic signal is generated in the actuator and transmitted to the switch. This signal will, along with a secondary switching system, allow the safety control relays to energise.

### APPLICATIONS

The SSS is ideal for industries including food processing, dairies, packaging machinery, bottling plants and pharmaceutical.

logos

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**Mechan Controls' Non Contact Safety Switches** are electronic or magnetically operated two part devices that are fitted to machine guards/doors so that when the guard/door is opened a circuit or signal is broken and the machine control system ensures that the machinery is stopped or does not start.

They have a number of advantages:

- Easy to install thus reducing cost and time
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## ISIS CODED MAGNETIC SAFETY SYSTEM

- Coded magnetic, tamper-resistant, safety switches
- E-Stop & Safety Switch Controller
- Multi-gate monitoring system
- 35mm DIN rail mounting control units
- TUV Category 3 Approval, UL Approved
- Guard status indication at all times
- EMC tested, compliant with relevant Directives

### DESCRIPTION

With the growing demand for simple, efficient, and yet more secure safety systems, the ISIS system offers the ideal solution. A major advantage of the ISIS safety system is that it detects both open and short circuit faults in the connections to the safety switches when they occur, giving immediate indication and moving the control unit to a safe state. This eliminates the possibility of faults accumulating without being detected.

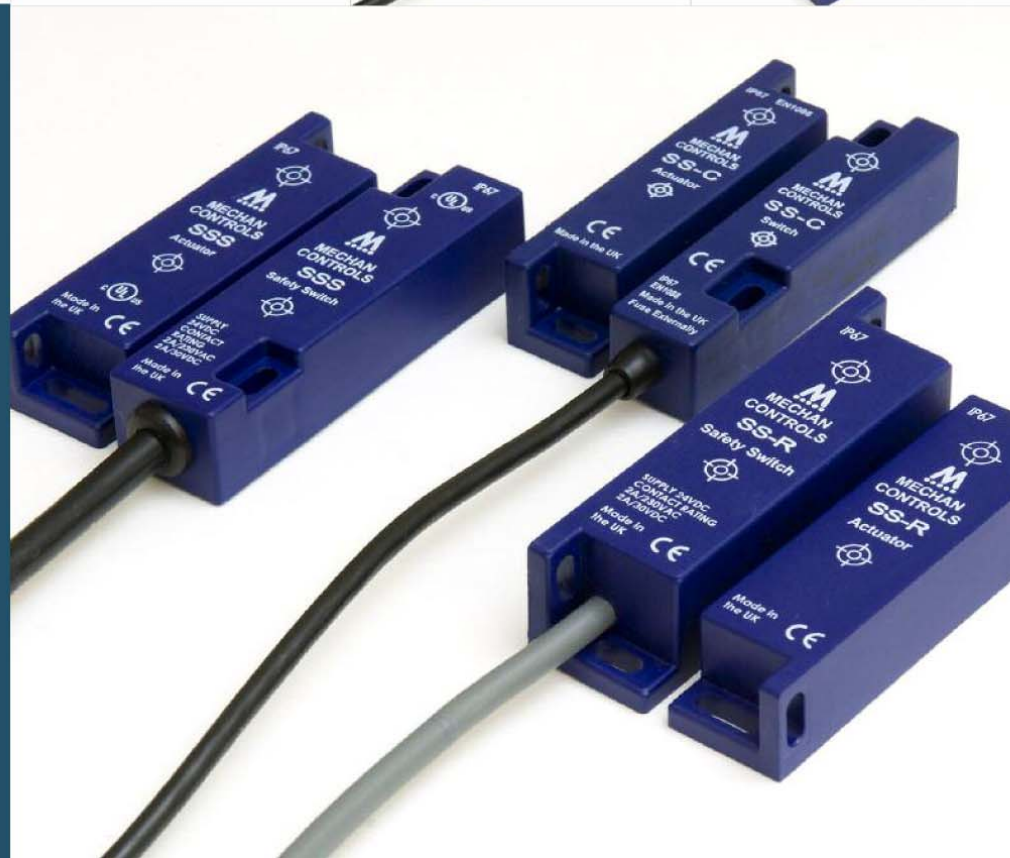
The ISIS-4 control unit can also be used to monitor the Emergency Stop buttons or mechanical safety switches, combining both safety functions into one DIN rail mounting unit.

### OPERATION

A required number of safety switches can be connected to the ISIS control unit with an internal switch used to select how many are in operation. With the power on and all the safety switches closed, the system 'self-check' is performed. The output safety contacts will only close if all activated safety switches are operating correctly and the internal self-check is completed successfully.

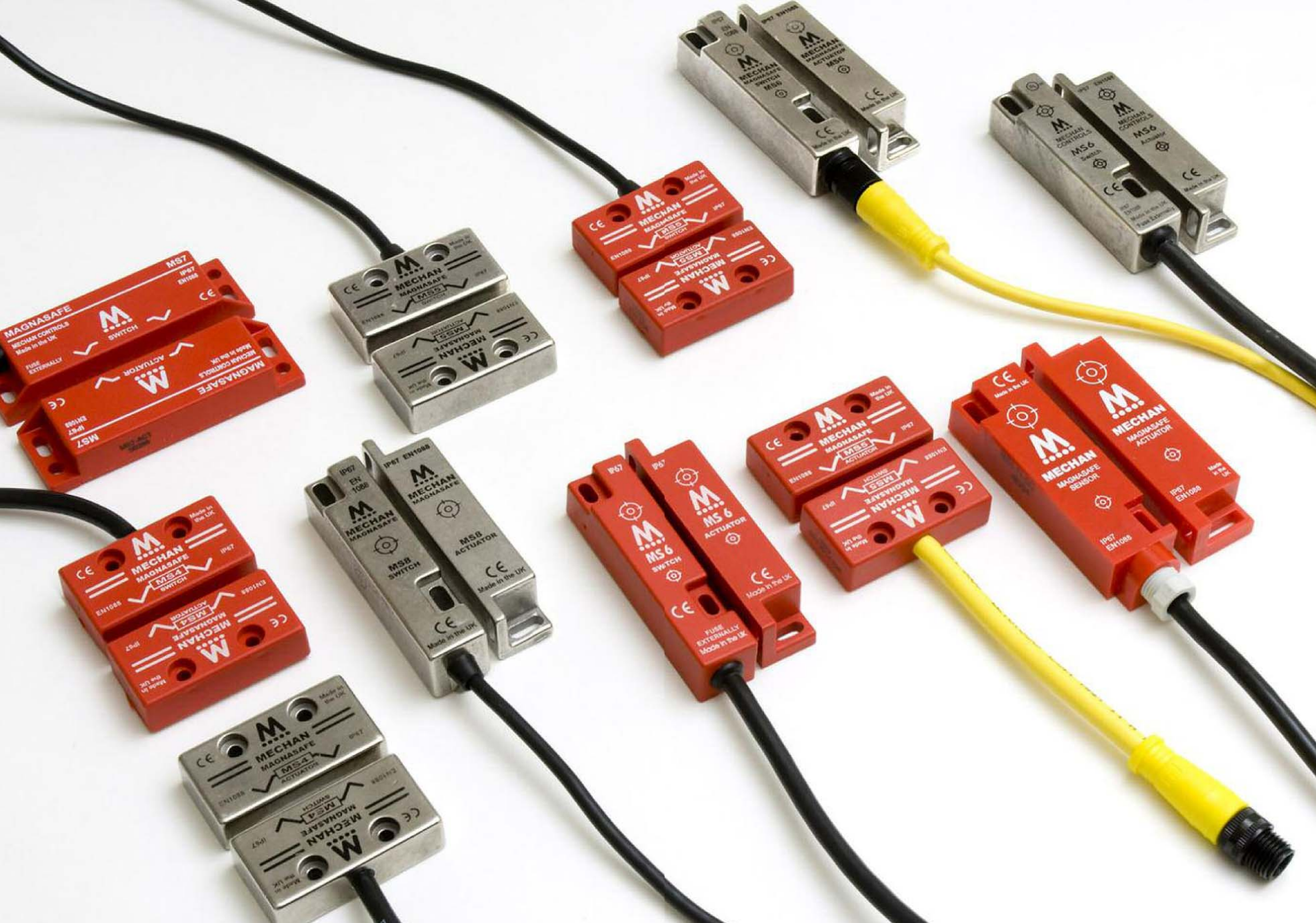
### APPLICATIONS

The ISIS system is ideal for all types of applications where additional security is required and in particular food processing, dairies, bottling plants, pharmaceutical, concrete block/building material manufacture and multi-gate systems on large production lines.



Mechan Controls safety systems are being used by:

- HJ Heinz
- Premier International Foods
- Greencore Foods
- Warburtons
- Mars
- Nestle
- Arla Foods plc
- Dairy Crest
- Tetra-pak
- Coca Cola
- Pepsi
- Marshall
- Lafarge
- Ibstock
- AGG Industries
- Ball Packaging
- Bevcan
- Crown Packaging
- Rexam



## APPLICATIONS

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The primary purpose of machine guarding safety systems is to immediately shut down production on demand. Demand can be a scheduled stop or when a hazardous situation occurs. Safety systems can also be used to improve productivity, signalling areas that require preventative maintenance. However, safety systems that are not up to the job can stop production dead when they fail. This can impact heavily on productivity. Reliability across all environments, including those that are wet or dusty, is therefore vital for the chosen application.

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## MAGNASAFE MAGNETIC SAFETY SWITCHES

- Non-contact safety switches
- 2A switching capability
- Tolerant to misalignment
- Quick disconnect options
- ABS or Stainless steel options
- Large range of sizes / fitting
- UL Approved
- Guard status indication available
- IP67
- Compliant with relevant EU Directives

### DESCRIPTION

MAGNASAFE is a complete range of non-contact magnetically operated switches for use in safety applications.

Constructed using special, heavy duty reed switches, encapsulated into ABS housings and protected with internal fuses, these switches can safely perform up to 1,000,000 operations at full load.

### OPERATION

When the switch and the actuator are apart, the safety contacts are open and the auxiliary contacts are closed. Moving the actuator to within the operating range of the switch (target to target) the safety contacts close and the auxiliary contacts open. Dual safety contact versions of the MS1, MS3 and MS5 can be used in conjunction with safety relays to provide a higher integrity safety system.

### APPLICATIONS

MAGNASAFE is ideal for use in wet, dusty, oily environments and wash-down areas and where hygiene is important, including food processing, pharmaceutical, dairies, packing machinery and bottling plants.



Mechan Controls safety systems are being used by:

HJ Heinz  
Premier International Foods  
Greencore Foods  
Warburtons  
Mars  
Nestle  
Arla Foods plc  
Dairy Crest  
Tetra-pak  
Coca Cola  
Pepsi  
Marshall  
Lafarge  
Ibstock  
AGG Industries  
Ball Packaging  
Bevan  
Crown Packaging  
Rexam