



KEEP THIS GUIDE FOR FUTURE REFERENCE

This information is designed to help suitably qualified personnel install and operate Mechan Safety Switch equipment. Before using this product, read this guide thoroughly along with any relevant European and/or National standards e.g. Machinery Directive 89/392/EEC and its amendments, Provision and Use of Work Equipment Regulations.

Further information can be obtained from
Mechan Controls

Description

Mechan SS-R safety switches are electronically operated non-contact safety switch for use in machine guarding applications.

The non-contact operation makes the SS-R easy to install and tolerant to misalignment, providing a simple reliable solution to machine guard interlocking.

The electronic switching provides additional security and a single point switching, leading to a more reliable and secure long term switching solution. The switch and actuator are IP67 rated and can be used in wet or dusty environments and are ideal for connecting to any safety relay.

Operation

The SS-R has 2 x N/O safety contacts and 1 x N/C indicator contact along with a dual colour LED for simple diagnostics.

When installed on a machine guard, power is applied, and the switch and actuator are within the specified operating range (See table on page 4 for switching distances). The **Safety Contacts** will be closed and the **Auxiliary Contact** will be open. The dual colour LED will be GREEN.

When the actuator moves out of the operating range, the **Safety Contacts** will open the **Auxiliary Contact** will close for indication. The dual colour LED will be RED.

The SS-R safety switch and actuator have a 8 mm switching distance can approach each other from most angles. When the switch is closed the targets on the printed face of the switch must be aligned. To avoid physical damage, do not use the switch and actuator as a stop, set a 2 mm gap for best operation and tolerance to machine guard vibration.

Applications

Interlocked guards where additional security required.
Door locking is not required.

Food and Beverage packing/filling systems
Diary Pharmaceutical Paper Industry
Can Forming and Filling, (Aluminum, Steel, Plastic)
Semiconductor Manufacture/Assembly.



Pending

SS-R



Approvals

CE	Complies with the relevant sections of the CE marking directive.
UL	Pending UL 508 Industrial Control Equipment

EUROPEAN DIRECTIVES

Machinery Directive 98/37/EC
Low Voltage Directive 73/23/EC
Electromagnetic Compatibility Directive 89/336/EC

EUROPEAN STANDARDS

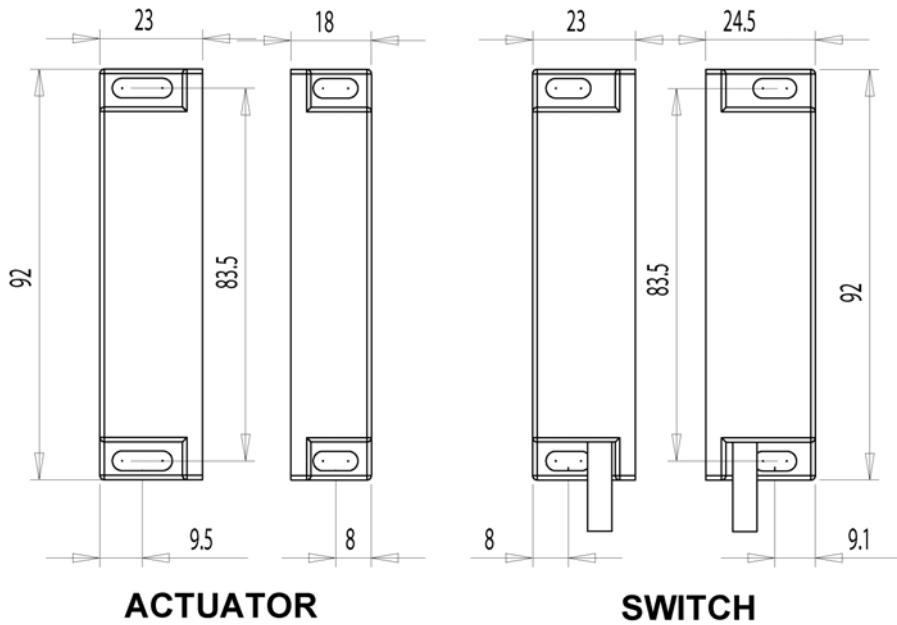
EN292	Safety of Machinery Basic concepts, general principles for design.
EN 60204	Safety of Machinery Electrical equipment of machines.
EN 954-1	Safety of Machinery Safety related parts of controls systems
EN 1088	Interlocking devices associated with guards.
EN 60947-5-3	Safety of Machinery Specification for low voltage switchgear and control gear.

Declaration of Conformity

A Declaration of Conformity may be obtained from Mechan Controls PLC, Tel +44(0)1695 722264 or from the Mechan Web Site at www.mechancontrols.co.uk

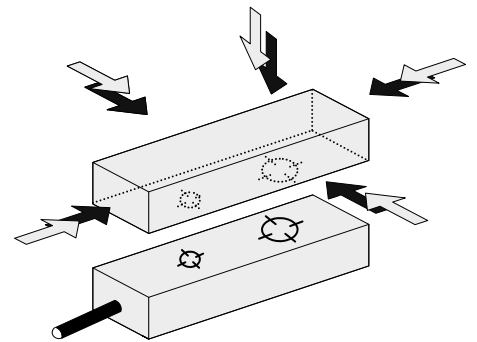
DIMENSIONS

Dimensions in MM



MOUNTING

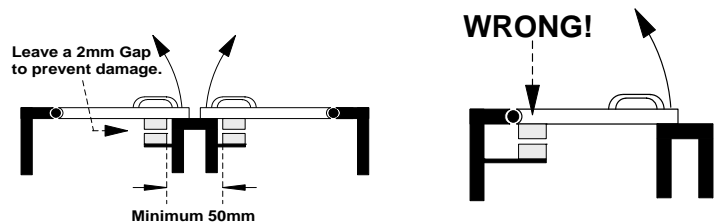
The SS-R safety switches can approach each other from most angles. When the guard is closed the targets on the printed face of the switch and actuator must be aligned.



Mount the switch on to the machine frame and the Actuator on to the opening edge of the door. Always try to mount the switch on non-ferrous material. (*Ferrous materials may reduce the switching distance.*)

Use the tamper proof screws provided to make more secure.

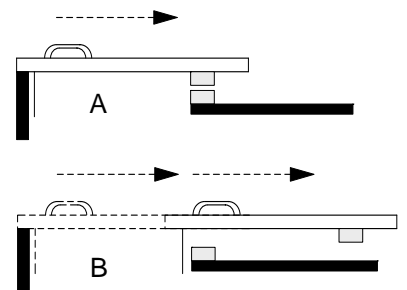
Do not use the safety switch as a door stop. Leave a minimum of 50 mm between any adjacent switches.



EN 1088

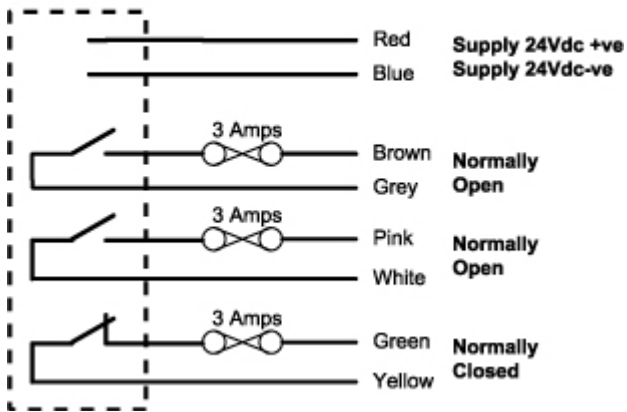
Provides some mounting suggestions, see example opposite.

When fixing the safety switch to a sliding door (A), ensure that when the door is opened (B) it is not easily accessible, helping prevent the system being overridden



CONTACTS, CONNECTIONS & FUSES

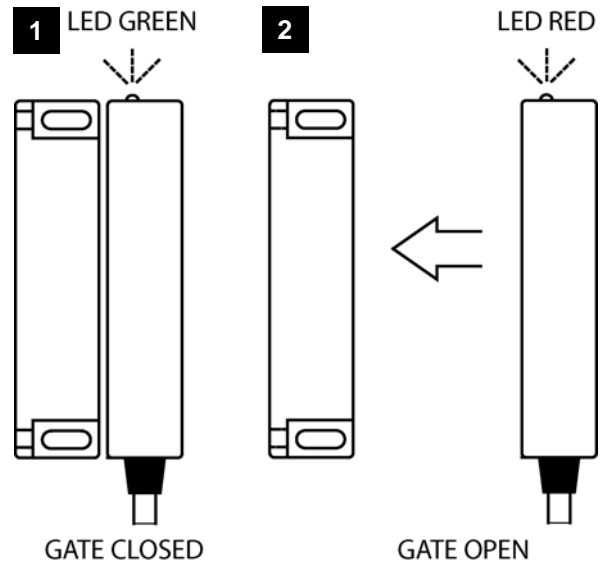
SS-R SAFETY SWITCH



NOTE

SS-R Contact states shown when Actuator is not in place.

OPERATION



1 POWER ON, GATE CLOSED

When the switch has power and the actuator is in place, the LED will be GREEN. The N/O contacts will be closed and the N/C contact will be open.

2 POWER ON, GATE OPEN

When the switch has power and the actuator is out of range, the LED will be RED. The N/O contacts will be open and the N/C contact will be closed.

TECHNICAL SPECIFICATION

TYPE		SS-R
Power Supply		24vDC
Power Consumption		2VA / 2W
Contacts Arrangements:		2 x N/O Safety Contacts; 1 x N/C Auxiliary Contact
Safety Contact Rating	AC	230Vac / 2A
	DC	24Vdc / 2A
Auxiliary Contact Rating	AC	230Vac / 2A
	DC	24Vdc / 2A
Contact Operating Distance		8mm ON / 10mm OFF
External Fuse (Customer Supplied)	AC / DC	3 Amps Fast Acting
IP Rating		IP67
Vibration / Shock		50—100Hz / 10g
Operating Temperature		-10 to +55C
Mounting & Fixture		Target to Target
Connection		Pre-wired
Cable length		Max 100 metres
Construction		Blue ABS Resin Filled

SPECIFICATION CHANGES

In the interest of product development, specifications are subject to change without notice.

It is the responsibility of the user to ensure compliance with any acts or by-laws that may be in force.

All information regarding Mechan Equipment is believed to be accurate at the time of printing. Responsibility cannot be accepted for errors or omissions.

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