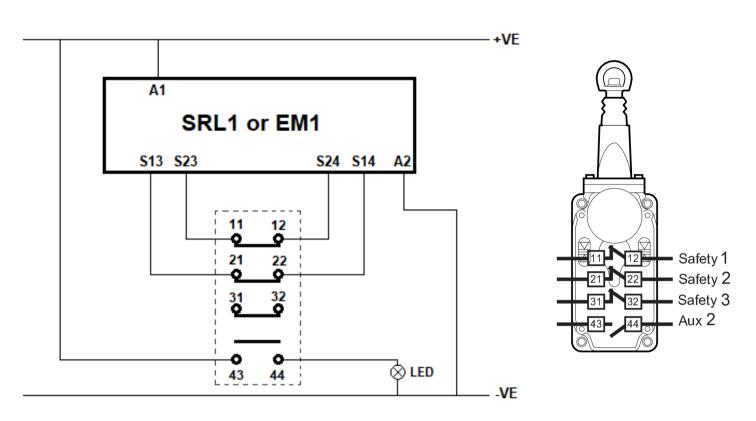
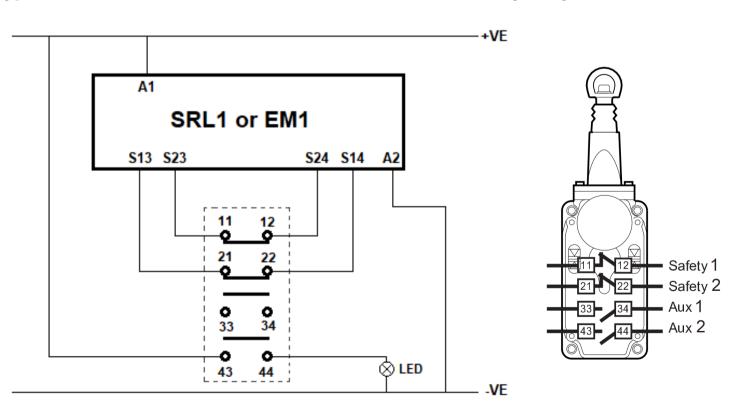
## **Standard Connection**

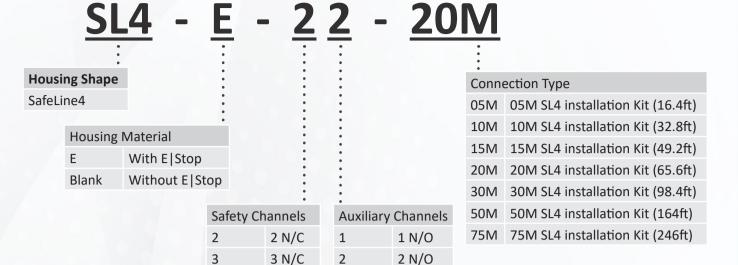
Typical connection for SL4 3 NC & 1 NO with Mechan safety relay



#### Typical connection for SL4 2 NC & 2 NO with Mechan safety relay



## **Product Selection**



| Stock<br>Code | Part Description | Inputs | Outputs | Connection                        |
|---------------|------------------|--------|---------|-----------------------------------|
|               | SL4-E-22-05M     | 2      | 2       | 05M SL4 installation Kit (16.4ft) |
|               | SL4-E-22-10M     | 2      | 2       | 10M SL4 installation Kit (32.8ft) |
|               | SL4-E-22-15M     | 2      | 2       | 15M SL4 installation Kit (49.2ft) |
|               | SL4-E-22-20M     | 2      | 2       | 20M SL4 installation Kit (65.6ft) |
|               | SL4-E-22-30M     | 2      | 2       | 30M SL4 installation Kit (98.4ft) |
|               | SL4-E-22-50M     | 2      | 2       | 50M SL4 installation Kit (164ft)  |
|               | SL4-E-22-75M     | 2      | 2       | 75M SL4 installation Kit (246ft)  |
|               | SL4-E-31-05M     | 3      | 1       | 05M SL4 installation Kit (16.4ft) |
|               | SL4-E-31-10M     | 3      | 1       | 10M SL4 installation Kit (32.8ft) |
|               | SL4-E-31-15M     | 3      | 1       | 15M SL4 installation Kit (49.2ft) |
|               | SL4-E-31-20M     | 3      | 1       | 20M SL4 installation Kit (65.6ft) |
|               | SL4-E-31-30M     | 3      | 1       | 30M SL4 installation Kit (98.4ft) |
|               | SL4-E-31-50M     | 3      | 1       | 50M SL4 installation Kit (164ft)  |
|               | SL4-E-31-75M     | 3      | 1       | 75M SL4 installation Kit (246ft)  |

#### **About Mechan Controls**

Mechan Controls designs and manufactures non-contact safety switches, solenoid locking switches, safety relays and type 4 light curtains, grab wires, control stations and key exchange systems for machine guarding applications.

Based in the UK, Mechan Controls produced its first electronic RFID safety switch in 1972, and subsequently, it has developed an enviable reputation as the industry leader. Today, tens of thousands of applications worldwide attest to the outstanding reliability of Mechan safety switches and safety interlock systems.





# MECHAN CONTROLS



# **Product Brochure**

SafeLine 4 Grab Wire

Rope pull switch





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## **Features and Benefits**



#### Introduction

The SafeLine4 grabwire is a cable/E|Stop button operated system that can be installed where no physical guarding is present on conveyors, providing constant emergency stop access. This SafeLine 4 is made from 316 stainless steel and is suitable for external use, applications where there are hygiene requirements and other situations where a level of corrosion proof is required.

#### **Positive Mode Mechanism**

The positive mode mechanism helps ensure that the contacts are immediately latched open on actuation and can only be reset by the intentional action of turning the blue reset switch. The design also protects against nuisance tripping and the effects of thermal expansion.

## **Technical Specifications**







#### In compliance with standards: IEC 60947-5-5, ISO 13850, IEC

60947-5-1, ISO 12100:2010

Emergency Stop Device In Accordance With ISO 13850

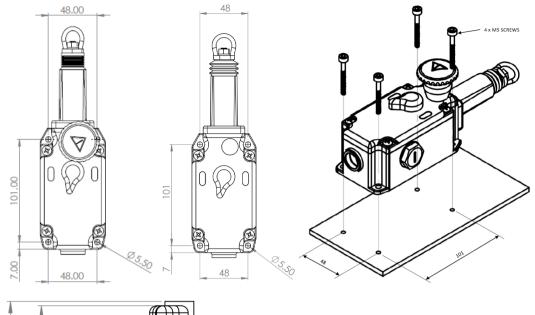
IEC 13849-1

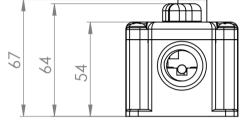
#### Meets the requirements of:

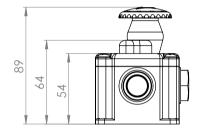
Machinery Directive 2006/42/EC, EMC Directive 2014/30/EU, Low Voltage Directive 2014/35/EU, RoHS Directive 2011/65/EC

| Technology                          | Mechanio                             | cal      |              |           |                        |  |  |  |
|-------------------------------------|--------------------------------------|----------|--------------|-----------|------------------------|--|--|--|
| Electrical                          |                                      |          |              |           |                        |  |  |  |
| Safety Contacts                     | 2 NC + 2 NO or 3 NC + 1 NO           |          |              |           |                        |  |  |  |
| Rated Insulation Voltage (Ui)       | 500V                                 |          |              |           |                        |  |  |  |
| Withstand Voltage                   | 2500V                                |          |              |           |                        |  |  |  |
| Switching Current @ Voltage, Min    | 5mA @ 5V DC                          |          |              |           |                        |  |  |  |
| Rating                              | Utilisation Category: AC15           |          |              |           |                        |  |  |  |
| Operational Rating                  | AC15 A3                              | 00 24    | 10V. 3A / 12 | 20V 6A ac | 24V. 2.5A dc inductive |  |  |  |
| Thermal Current                     | 10A                                  |          |              |           |                        |  |  |  |
| Operating Life @100mA load          | 1 x 10 <sup>6</sup>                  |          |              |           |                        |  |  |  |
| Operating Characteristics           |                                      |          |              |           |                        |  |  |  |
| Cable Span Between Switches,<br>Max | 75m (246 ft)                         |          |              |           |                        |  |  |  |
| Tension Force To Run Position       | 103N                                 |          |              |           |                        |  |  |  |
| Tensioning For To Lockout           | 188N                                 |          |              |           |                        |  |  |  |
| Operating Force, Min                | <125N @ 300mm Deflection             |          |              |           |                        |  |  |  |
| Actuation Frequency, Max            | 1 Cycle/s                            |          |              |           |                        |  |  |  |
| Gernal Information                  |                                      |          |              |           |                        |  |  |  |
| Construction                        | 316 Stainless Steel                  |          |              |           |                        |  |  |  |
| IP Rating                           | IP67 / IP69K                         |          |              |           |                        |  |  |  |
| Operating Temperature               | -25°C to +80°C                       |          |              |           |                        |  |  |  |
| Fixing                              | 4 X M5 Security Screws               |          |              |           |                        |  |  |  |
| Connection                          | Contact Block                        |          |              |           |                        |  |  |  |
| Indication Material                 | Acetal                               |          |              |           |                        |  |  |  |
| Weight                              | 1.55kg                               |          |              |           |                        |  |  |  |
| Colour                              | 316 Stair                            | nless St | eel          |           |                        |  |  |  |
| Mechanical Data                     |                                      |          |              |           |                        |  |  |  |
| Conduit entries                     | onduit entries 3 x M20               |          |              |           |                        |  |  |  |
| Torque settings                     | Mounting M5 4.0 Nm, Terminals 1.0 Nm |          |              |           |                        |  |  |  |
| Vibration resistance                | 10-500Hz 0.35mm                      |          |              |           |                        |  |  |  |
| Shock resistance 15g 11ms           |                                      |          |              |           |                        |  |  |  |
| Utilization Category                |                                      |          |              |           |                        |  |  |  |
| A600/AC-15<br>(Ue)                  | 600V                                 | 500V     | 240V         | 120V      |                        |  |  |  |
| (le)                                | 1.2A                                 | 1.4A     | 3A           | 6A        |                        |  |  |  |
| DC-13<br>(Ue)                       | 24V                                  |          |              |           |                        |  |  |  |
| (le)                                | 2A                                   |          |              | İ         |                        |  |  |  |

#### **Dimensions**







\*All dimensions are in MM

## **Accessories Kit**

#### **Tension Turn Buckle**

The Tensioner Turn Buckle is a very simple device that is ideally situated within the middle or the Begining of the Rope span, it is then turned to tension the SafeLine 4 grab wire to the correct tension to operate.



#### **Grip Hook**

Moulded in Acetal, the grip hook has replaced bolt clamps that standard tension kits use. The grip hook is a simple yet very effective device that allows the safety cable to stay in position when tensioned, without the fear of slipping.

#### **Evebolt**

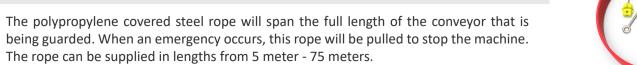


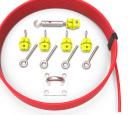
The eyebolt cast in 316 stainless steel and an M8 thread is a simple way of holding the safety cable in position over long lengths of conveyor.

#### **Anchor Plate**

The anchor plate is used to secure the end grip hook to a position at the end of the conveyor belt. This is manufactured in 316 stainless steel and is robust to endure its day to day usage.

#### **Steel Rope**





#### **Emergency Stop Button**

**Tensioning Screen** 

There are 2 tensioning screens to allow the user

to see if the SafeLine 4 is

corrrectly tensioned from

multiple angles.

The SafeLine4 comes with an optional emergency stop button for applications that require an E|stop.

MECHAN CONTROLS SAFELINE SL4 IEC 60947-5-1 IP69 IP69K

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## **Emergency Stop Button**

What is the SafeLine4 Grab Wire?

The SafeLine4 grabwire is a cable/E|Stop

button operated system that can be installed where no physical guarding is present on

conveyors, providing constant emergency

stop access.

MECHAN CONTROLS SAFELINE

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For situations where an E|Stop would cause nusance tripping, the SafeLine4 has an option without an

### **Reset Switch**

Once the SafeLine4 is tensioned correctly, the reset switch must be turned into the "RUN" position to allow the machine to be started.

**IP Rated** 

Tested and approved to IP67, IP69K suitable for strict wash down environments.

Designed for the ease of installation, the SafeLine4 has 3 cable entry points.

**3 Cable Entry Points** 

The SafeLine lid is fixed with M5 security screws.

Security