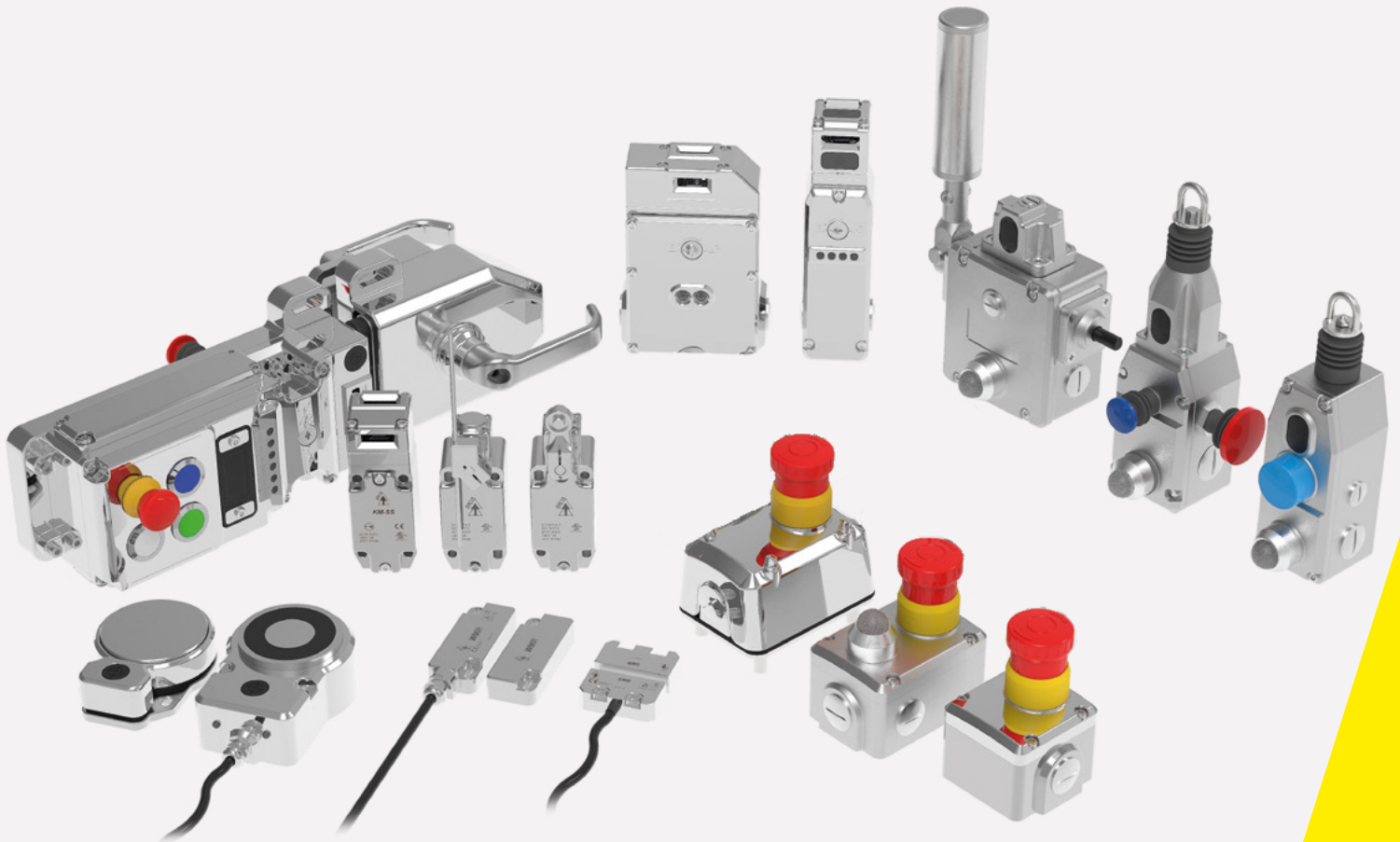# IDEM SAFETY
Making Industry Safer

ELLISCO

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Safety Products for Food and Beverage Manufacturing

Industry Overview Brochure

What We Do
IDEM Safety designs and manufactures machine safety products, that make industry safer

Our Vision
Global leader known for innovative safety products that save lives

Global leadership in the design and manufacture of machine safety products since 1985.

IDEM's global headquarters is based in the UK with offices in the USA and Europe.

Privately owned business with in house sales, R&D and technical support teams.

Renowned for world-class product quality and reliability on a global scale.

State-of-the-art manufacturing and test facilities. This includes Ingress Protection (IP) and Shock testing.

Exceptional delivery time for both small and large orders. We put the customers' needs first.

1985
The founder of IDEM, Medi Mohtasham begins his employment at EJA Engineering where he designed Trojan, Atlas, Rotacam and LRS1 under the Guardmaster brand. Rockwell Automation acquires EJA in 1996.

2003
Medi leaves his position as Technical Director of Rockwell to create IDEM Safety Switches, with the vision to develop the 'Next Generation' of Safety Switches, designed and manufactured in the UK.

2005
IDEM manufactures the GuardianLine range of safety rope switches, specialising in products for the Food Industry, Explosion Proof applications and Factory Automation.

Present
Today IDEM operates globally, providing reliable, cost-effective safety interlock solutions that save lives. IDEM continues to invest in new ways to protect your personnel and improve your productivity.

SETTING THE STANDARD IN MACHINE SAFETY SWITCHES

1 SAFETY

One-third of all fatalities in the food and drink industries relate to plant and machinery; no other single cause accounts for as many deaths. Furthermore, a significant proportion of non-fatal injuries are also due to machinery.

At IDEM, we understand there are many different applications that require different methods of interlocking. That is why we have developed the world's largest range of machine guard safety products in 316 Stainless Steel to help you achieve your safety and hygiene requirements.

2 HYGIENE

We understand the issues specific to this industry therefore, our safety switches will be safe, standards-compliant and resistant to harsh cleaning solutions.

ALL IDEM 316 grade stainless steel products are suitable for use up to IP69K. We have also developed products suitable for Zone 1 - Food Contact, reducing the likelihood of bacteria build up.

3 WHAT ARE FOOD HYGIENE ZONES?

ZONE 1: FOOD ZONE

These are areas where equipment regularly and predictably comes in contact with food as it being produced. Food conveyors, mixers, nozzles and cooking surfaces are examples of Hygienic Design environments. Bringing safety to these zones brings a unique challenge as it represents the highest probability of product contamination if a pathogen were present on the equipment.

ZONE 3: NON-FOOD CONTACT ZONE

This zone includes Non-Food Contact Surfaces. Surfaces that under normal operating procedures do not contact surfaces of the food or container.
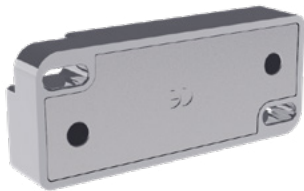
ZONE 2: SPRAY ZONE

These areas immediately surround the food production zone; dripping product or run off from equipment can cause product contamination. This zone is regularly cleaned as part of any plant Hygiene Plan. Equipment used in this area need to withstand harsh cleaning processes and be designed in a way that is consistent with good sanitary food design machine practices, eliminating areas where moisture and debris can collect.

NON-CONTACT SAFETY SWITCHES

Designed and manufactured to the highest quality, our non-contact safety switches are available in 3 technology types; magnetic and reed, coded magnetic - solid state and RFID. The surface is mirror polished and markings are laser etched for ease of cleaning.

STAINLESS STEEL BACKPLATE

All IDEM stainless steel safety switches include a back cover.

This protects the encapsulation from corrosive chemicals, reducing the likelihood of water ingress.

INTERNAL PROTECTION HOUSING

The PCB is encased in a high specification polyester before being placed into the metal housing and encapsulated.

This reduces the likelihood that the internal electronics will short out on the casting, and reduces the affects of high/low temperatures on the switch.

MMR
· Left or Right Cable Entry
· Magnet and Reed Operation
· 22mm Fixing Holes
· Suitable for Zones 2 and 3

MMC
· Left or Right Cable Entry
· Coded Magnetic, Solid State
· Guard Status Indication
· 22mm Fixing Holes
· Suitable for Zones 2 and 3

SMR
· Magnet and Reed Operation
· High Power, 1Amp Switching
· 22mm Fixing Holes
· Suitable for Zones 2 and 3

SMC
· Coded Magnetic, Solid State
· Guard Status Indication
· 22mm Fixing Holes
· Suitable for Zones 2 and 3

SMR-F
· Magnet and Reed Operation
· Underneath Fixing
· Suitable for Zones 1, 2 and 3

SMC-F
· Coded Magnetic, Solid State
· Guard Status Indication
· Underneath Fixing
· Suitable for Zones 1, 2 and 3

LMR
· Magnet and Reed Operation
· High Power, 1Amp Switching
· European Standard Fixing Holes
· Suitable for Zones 2 and 3

LMC
· Coded Magnetic, Solid State
· Guard Status Indication
· European Standard Fixing Holes
· Suitable for Zones 2 and 3

CMR
· Magnet and Reed Operation
· Industry Standard, Slim-Line
· High Power, 1 or 2 Amp Switching
· Suitable for Zones 2 and 3

CMC
· Coded Magnetic, Solid State
· Guard Status Indication
· Underneath Fixing
· Suitable for Zones 2 and 3

CMR-F
· Magnet and Reed Operation
· Underneath Fixing
· Suitable for Zones 1, 2 and 3

CMC-F
· Coded Magnetic, Solid State
· Guard Status Indication
· Underneath Fixing
· Suitable for Zones 1, 2 and 3

NON-CONTACT SAFETY SWITCHES

WMR

· Magnet and Reed Operation
· Industry Standard, Wide Body
· High Power, 1 or 2 Amp Switching
· Suitable for Zones 2 and 3

WMC

· Coded Magnetic, Solid State
· Guard Status Indication
· Industry Standard, Wide Body
· Suitable for Zones 2 and 3

RMR

· Magnet and Reed Operation
· M30 Threaded Barrell
· High Power, 1 or 2 Amp Switching
· Suitable for Zones 2 and 3

RMC

· Coded Magnetic, Solid State
· Guard Status Indication
· M30 Threaded Barrell
· Suitable for Zones 2 and 3

BMR

· Magnet and Reed Operation
· M18 Threaded Barrell
· High Power, 1 Amp Switching
· Suitable for Zones 2 and 3

RFID CODING

BMF

· RFID (High Coded EN14119)
· M18 Threaded Barrell
· Guard + Code Status LED
· Voltage Free Outputs
· Suitable for Zones 2 and 3

LMF

· RFID (High Coded EN14119)
· European Standard Fixing
· Guard + Code Status LED
· Voltage Free Outputs
· Suitable for Zones 2 and 3

RFID CODING WITH OSSD OUTPUTS

BMZ

· RFID (High Coded EN14119)
· M18 Threaded Barrell
· Advanced LED Diagnostics
· Internal Self Monitoring + OSSD
· Suitable for Zones 2 and 3

LMZ

· RFID (High Coded EN14119)
· European Standard Fixing
· Advanced LED Diagnostics
· Internal Self Monitoring + OSSD
· Suitable for Zones 2 and 3

MOUNTING ACCESSORES

GBN-1-SS

· 316 Stainless Steel Mounting Plate
· High Spec Polyester Handle
· Sliding Operation
· Left or Right Hand Versions
· Compatitble with L and S Models

GBN-3-SS

· 316 Stainless Steel Mounting Plate
· High Spec Polyester Handle
· Sliding Operation **(Non Latching)**
· Left or Right Hand Versions
· Compatitble with L and S Models

3

SOLENOID CONTROLLED SAFETY INTERLOCKS

Designed and manufactured to the highest quality, we are the only company in the world wuth solenoid controlled interlocks in 316 stainless-steel. The IP69K rating and mirror polished design means they are ideal for frequent washdown procedures.

MECHANICAL EXCELLENCE

Every IDEM tongue switch uses a patented cam system.

The unique design provides a level of anti-tamper and long term reliability, even during frequent use.

IDEAL FOR USE ON HEAVY GATES

Heavy guards can put pressure on the solenoid, causing issues when trying to energise and open the gate.

Our unique design will always allow the guard to open, regardless of how

KL1-SS

· 2000N Holding Force
· Rotating Head - 4 Entry Positions
· Up to 2 LED's
· M20 or 1/2" NPT
· Suitable for Zones 2 and 3

KL3-SS

· 3000N Holding Force
· Rotating Head - 8 Entry Positions
· 2 LED's Solenoid and Lock Status
· M20 or 1/2" NPT
· **Rear Release Available**
· **Power-to-Lock Available**
· Suitable for Zones 2 and 3

KL4-SS

· 3000N Holding Force
· Rotating Head - 8 Entry Positions
· 2 LED's Solenoid and Lock Status
· Optional Request Button
· M20 or 1/2" NPT
· **Rear Release Available**
· Suitable for Zones 2 and 3

KLT-SS

· 3000N Holding Force
· Rotating Head - 4 Entry Positions
· 2 LED's Solenoid and Lock Status
· M20 or 1/2" NPT
· **Rear Release Available**
· **Power-to-Lock Available**
· Suitable for Zones 2 and 3

RFID CODING

KLT-SS-RFID

· RFID (High Coded EN14119)
· 3000N Holding Force
· Rotating Head - 4 Entry Positions
· Guard + Code Status LED
· Voltage Free Outputs
· M20 or 1/2" NPT
· **Rear Release Available**
· Suitable for Zones 2 and 3

RFID CODING WITH OSSD OUTPUTS

KL3-SS-Z

· RFID (High Coded EN14119)
· 3000N Holding Force
· Rotating Head - 8 Entry Positions
· Advanced LED Diagnostics
· Internal Self Monitoring + OSSD
· M20 or 1/2" NPT
· **Rear Release Available**
· Suitable for Zones 2 and 3

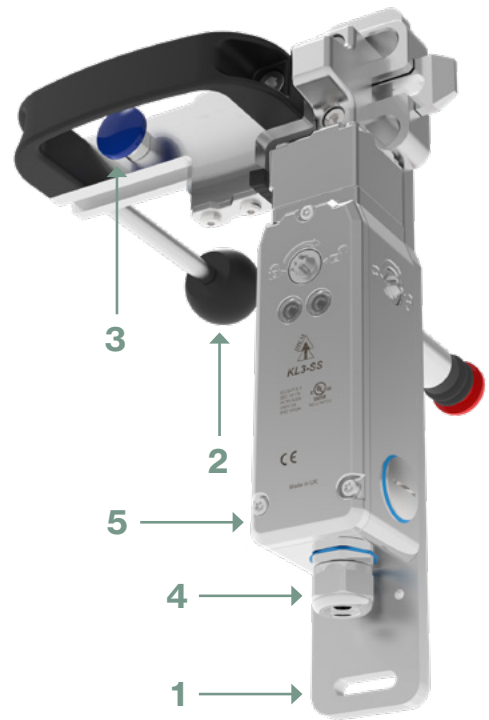**STANDARD (140107)**

FLEXIBLE (140111)

FLEXIBLE RFID (140186)
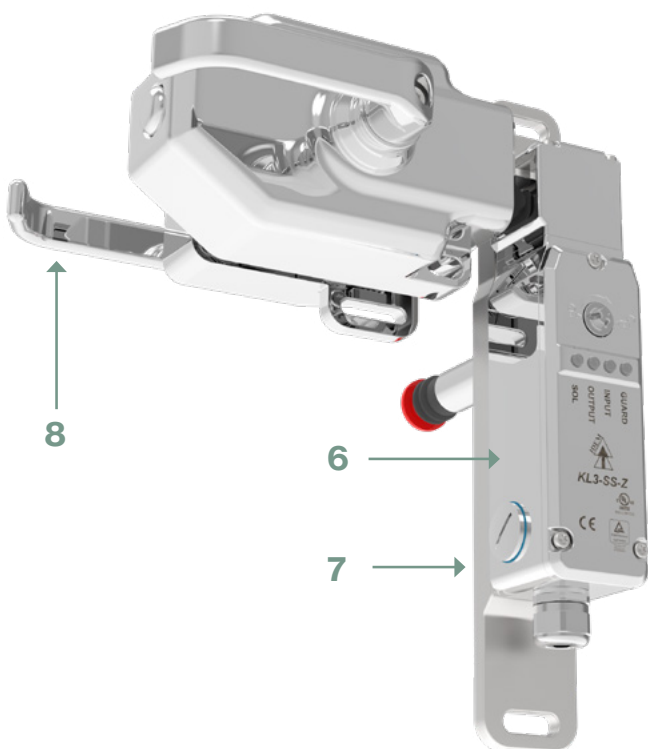
ACCESSORIES AND HOW TO USE THEM

SLIDING HANDLE WITH REAR ESCAPE

1

GBL-1-SS SLIDING GATE BOLT

· 316 Stainless Steel Mounting Plate
· High Spec Polyester Handle
· Sliding Operation
· Left or Right Hand Versions
· For use with KL3-SS

2

REAR SLIDING HANDLE (211005)

· 316 Stainless Steel Rod
· High Spec Polyester Handle
· For use with GBL-1-SS

3

SPRING CATCH (211006)

· 316 Stainless Steel Shaft
· High Spec Polyester Catch
· Stops GBL-1-SS Re-Latching

4

CABLE GLAND

· 316 Stainless Steel Construction
· M20 or 1/2" NPT
· Highly Recommedned to Ensure IP69K Seal

HIGHEST LEVEL OF FUNCTIONAL SAFETY
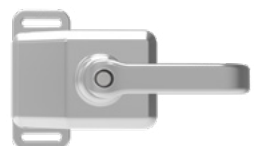
This solution provides CAT4, SIL4, PLe in accordance with the latest internation standards. It is the only 316 stainless steel RFID safety switch on the market.

7

GBZ-SS ROTARY HANDLE

· 100% 316 Stainless Steel
· Rotary Operation
· Left or Right Hand Versions
· For use with KL3-SS-Z

8

REAR ROTARY HANDLE

· 100% 316 Stainless Steel
· Left or Right Hand Versions
· For use with GBZ-SS

EMERGENCY STOPS

The world's largest rangeof emergency stop devices in 316 stainless steel. The double seal gasket on the lids ensures the IP69K seal.

ES-SS

· Mirror Polished Finish
· 2 x M20 or 1/2" NPT Conduit
· Replaceable 3-Pole Contact Block
· Suitable for Zones 2 and 3

ES-SS(P)

· Mirror Polished Finish
· 2 x M20 or 1/2" NPT Conduit
· Replaceable 3-Pole Contact Block
· Button Shroud
· Suitable for Zones 2 and 3

ESL-SS

· Larger Bodied Design
· 3 x M20 or 1/2" NPT Conduit
· Replaceable 4-Pole Contact Block
· Suitable for Zones 2 and 3

ESL-SS(P)

· Larger Bodied Design
· 3 x M20 or 1/2" NPT Conduit
· Replaceable 4-Pole Contact Block
· Button Shroud
· Suitable for Zones 2 and 3

ESL-SS(L)

· LED Indication
· 3 x M20 or 1/2" NPT Conduit
· Replaceable 4-Pole Contact Block
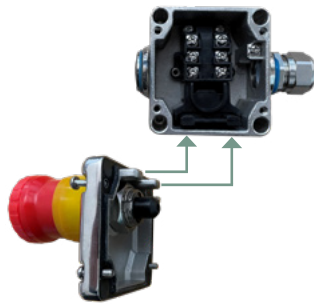· Suitable for Zones 2 and 3

ESL-SS(LP)

· LED Indication
· 3 x M20 or 1/2" NPT Conduit
· Replaceable 4-Pole Contact Block
· Button Shroud
· Suitable for Zones 2 and 3

INTERNAL SAFETY LATCH

A special lid safety trip mechanism means that the safety contacts will open if the lid is removed.
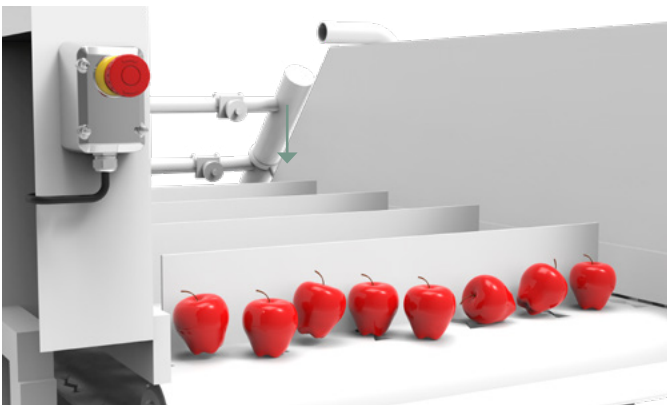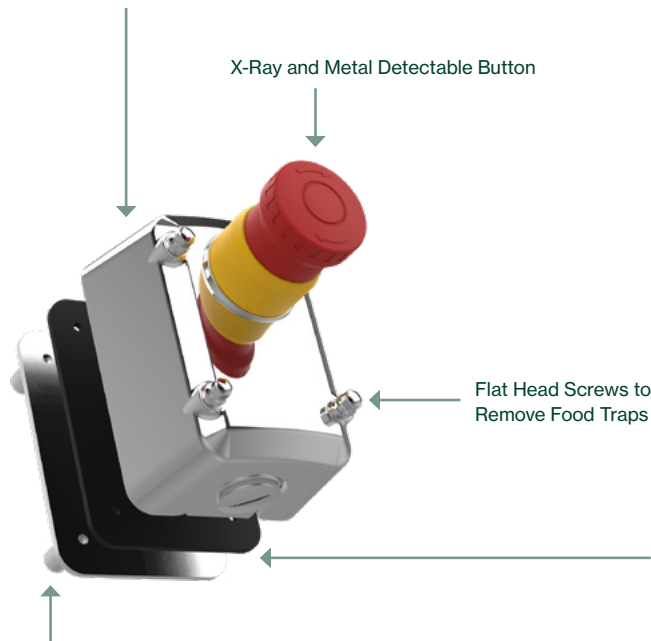
This provides an extra degree of anti-tamper.

ESL-SS-WR ZONE 1 SUITABLE EMERGENCY STOP

Unique to IDEM, the ESL-SS-WR is the only emergency stop on the market suitable for zone 1 applications.

Sloped sides to reduce liquid build-up on the surface

X-Ray and Metal Detectable Button

Flat Head Screws to Remove Food Traps

RUBBER SEAL (239300)

SPACER KIT (239301)

SAFETY ROPE PULL SWITCHES

Reliable safety rope switches housed in 316 stainless steel and tested to IP69K. All IDEM rope switches are available with LED indication.

GLM-SS

· Protection up to 50M
· Optional LED Indication
· Optional Emergency Stop
· 2 x M20 or 1/2" NPT Conduit
· Suitable for Zones 2 and 3

GLHD-SS

· Protection up to 125M Each Side
· Optional LED Indication
· Optional Emergency Stop
· 4 x M20 or 1/2" NPT Conduit
· Suitable for Zones 2 and 3

GLHL-SS

· Protection up to 125M (Left)
· Optional LED Indication
· Optional Emergency Stop
· 4 x M20 or 1/2" NPT Conduit
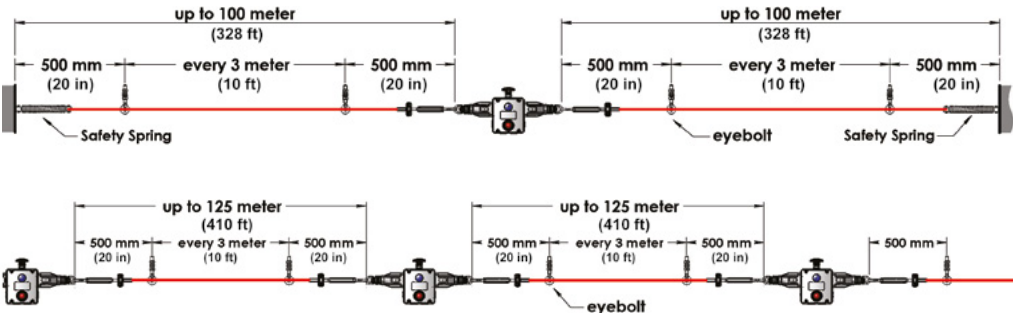· Suitable for Zones 2 and 3

GLHR-SS

· Protection up to 125M (Right)
· Optional LED Indication
· Optional Emergency Stop
· 4 x M20 or 1/2" NPT Conduit
· Suitable for Zones 2 and 3

GLS-SS

· Protection up to 100M
· Optional LED Indication
· Optional Emergency Stop
· 3 x M20 or 1/2" NPT Conduit
· Suitable for Zones 2 and 3

STAINLESS STEEL ROPE ACCESSORIES

TENSIONER (140019)

PULLEY (140021)

SAFETY SPRING (140043)

EYEBOLTS

· 3-Pack (140096)
· 8-Pack (140045)

KITS (ROPE + ACCESSORIES)

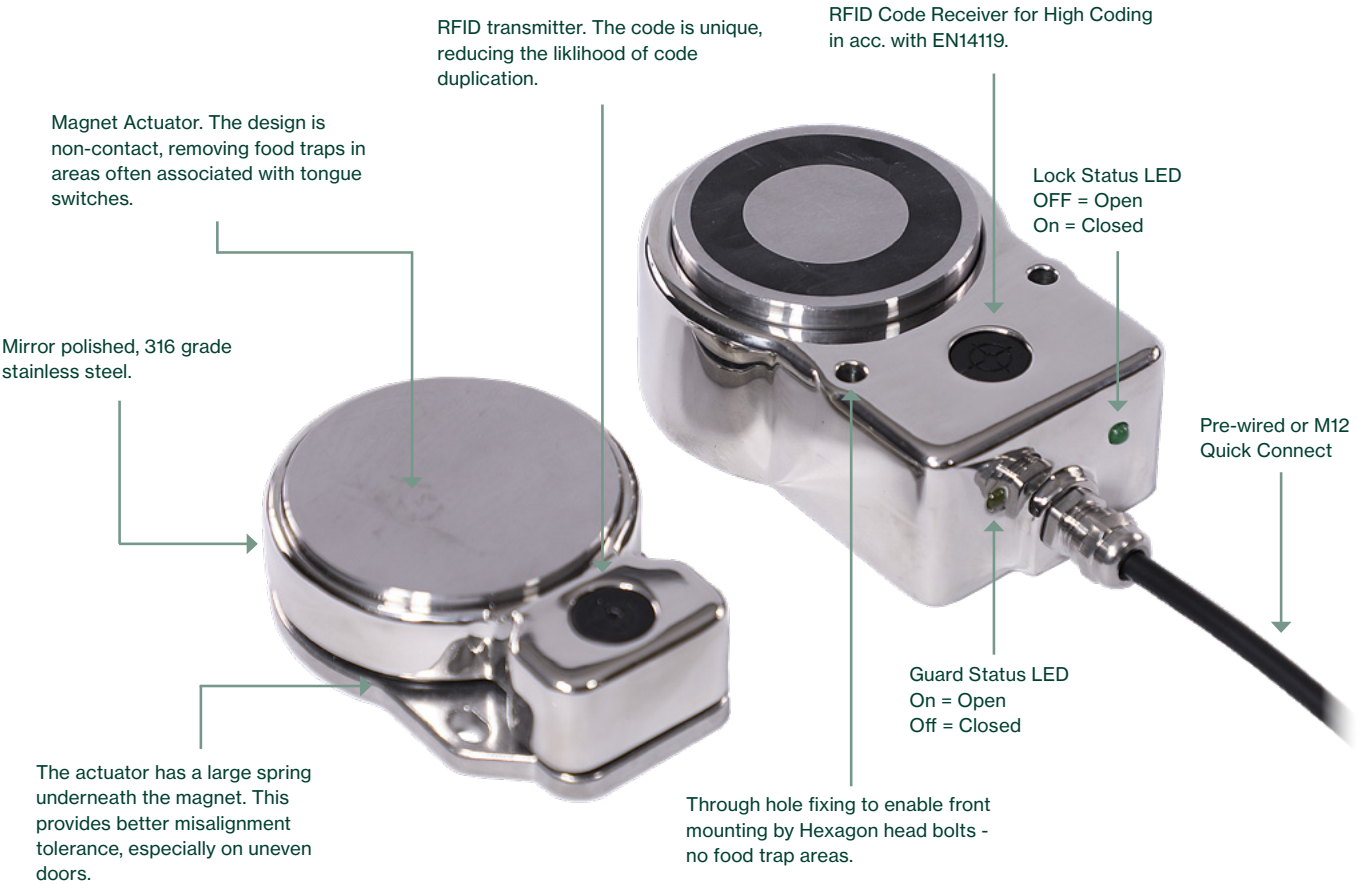5, 10, 15, 20, 30, 50, 60, 80, 100, 125

FLEXIBLE EYEBOLT

PIGTAIL EYEBOLTS

QUICK LINK (140079)

ELECTROMAGNETIC RFID SAFETY SWITCHES

The tongue entry point on solenoid controlled interlocks can act as a food trap for potential contamination. The MGL has a smooth mirror polished surface and a non-contact style operation.
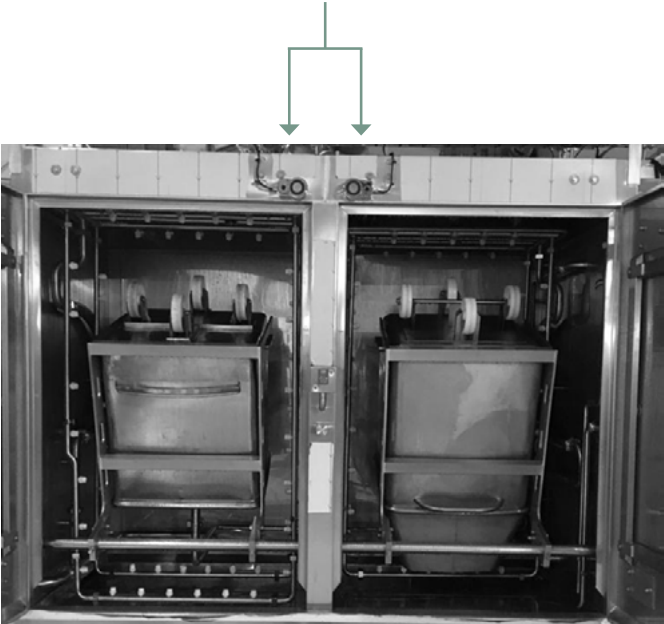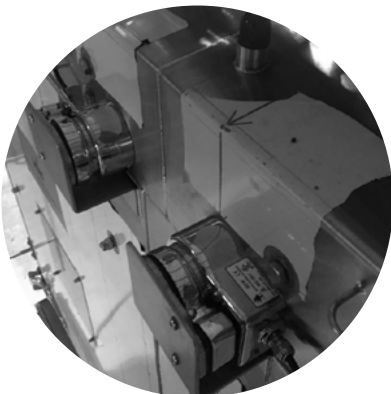
RFID transmitter. The code is unique, reducing the liklihood of code duplication.

RFID Code Receiver for High Coding in acc. with EN14119.

Magnet Actuator. The design is non-contact, removing food traps in areas often associated with tongue switches.

Lock Status LED
OFF = Open
On = Closed

Mirror polished, 316 grade stainless steel.

Pre-wired or M12 Quick Connect

The actuator has a large spring underneath the magnet. This provides better misalignment tolerance, especially on uneven doors.

Guard Status LED
On = Open
Off = Closed

Through hole fixing to enable front mounting by Hexagon head bolts - no food trap areas.

MGL-2SS

· Mirror Polished Finish
· 600N Holding Force
· RFID Coding
· 24Vdc Power-to-Lock
· Suitable for Zones 2 and 3

MGL-1SS

· Mirror Polished Finish
· 1100N Holding Force
· RFID Coding
· 24Vdc Power-to-Lock
· Suitable for Zones 2 and 3

APPLICATION

Industrial washing machine.

MGL-1SS x 2 are used to hold two doors closed during the wash cycle. The doors are large and prone to heavy use and misalignment.

SAFETY LIMIT SWITCHES

The world's most comprehensive range of safety limit switches in 316 stainless steel. The precise construction and double seal gaskets means they are suitable for IP69K applications.

HLM-SS-AL LEVER ARM

· Lever Arm
· Mirror Polished Finish
· 1 x M20 or 1/2" NPT Conduit
· Positive opening NC safety contact to IEC60947-5-1
· Replaceable Contact Block
· Industry standard mounting to EN50041
· Suitable for Zones 2 and 3

HLM-SS-ARL

· Adjustable Roller Lever
· Mirror Polished Finish
· 1 x M20 or 1/2" NPT Conduit
· Positive opening NC safety contact to IEC60947-5-1
· Replaceable Contact Block
· Industry standard mounting to EN50041
· Suitable for Zones 2 and 3

HLM-SS-PP

· Pin Plunger
· Mirror Polished Finish
· 1 x M20 or 1/2" NPT Conduit
· Positive opening NC safety contact to IEC60947-5-1
· Replaceable Contact Block
· Industry standard mounting to EN50041
· Suitable for Zones 2 and 3

HLM-SS-RP

· Roller Plunger
· Mirror Polished Finish
· 1 x M20 or 1/2" NPT Conduit
· Positive opening NC safety contact to IEC60947-5-1
· Replaceable Contact Block
· Industry standard mounting to EN50041
· Suitable for Zones 2 and 3

HLM-SS-SRL

· Short Roller Lever
· Mirror Polished Finish
· 1 x M20 or 1/2" NPT Conduit
· Positive opening NC safety contact to IEC60947-5-1
· Replaceable Contact Block
· Industry standard mounting to EN50041
· Suitable for Zones 2 and 3

HLM-SS-SL

· Spring Lever
· Mirror Polished Finish
· 1 x M20 or 1/2" NPT Conduit
· Positive opening NC safety contact to IEC60947-5-1
· Replaceable Contact Block
· Industry standard mounting to EN50041
· Suitable for Zones 2 and 3

HLM-SS-TSL

· Telescopic Spring Lever
· Mirror Polished Finish
· 1 x M20 or 1/2" NPT Conduit
· Positive opening NC safety contact to IEC60947-5-1
· Replaceable Contact Block
· Industry standard mounting to EN50041
· Suitable for Zones 2 and 3

FOOD PROCESSING APPLICATION

Bakery machine application that utilises all IDEM stainless steel safety products, in particular the pin plunger limit switch. The IP69K seal and tolerance to heat make IDEM the number one choice for machinery within food and beverage manufacturing.

ATEX certified versions are available.

HINGE SAFETY SWITCHES

IDEM's Hinge Switches are housed in a hygienic, 316 grade stainless steel with a mirror polish finish. They fit directly to the hinged axis of machine guard doors, and provide a very high level of anti-tamper.

HC-SS · IP69K

· Mirror Polished Finish
· 22mm Fixing Profile
· Rotation on 90 Degree Increments
· Solid and Hollow Shafts Available
· Suitable for Zones 1 and 2

HS-SS · IP69K

· Mirror Polished Finish
· 800N Axial Holding Force
· 6-12 Degrees Adjustment
· 3NC + 1NO or 2NC + 2NO
· Suitable for Zones 1 and 2

HS-SS-Z · IP69K

· Mirror Polished Finish
· 800N Axial Holding Force
· 6-12 Degrees Adjustment
· OSSD Outputs
· Advanced LED Indication
· Suitable for Zones 1 and 2

BLANK HINGE · IP69K

· Mirror Polished Finish
· 800N Axial Holding Force

MOUNTING BRACKETS · IP69K

· For front mounting when rear mounting is not accessible.

SAFETY TONGUE INTERLOCKS

IDEM's range of tongue switches in 316 stainless steel feature industry standard mounting, so upgrading from plastic versions is simple.

MK1-SS · IP69K

· Mirror Polished Finish
· 1 x M20 or 1/2" NPT Conduit
· Replaceable 3-Pole Contact Block
· Rotating Head
· Suitable for Zones 2 and 3

KM-SS · IP69K

· Mirror Polished Finish
· 1 x M20 or 1/2" NPT Conduit
· Replaceable 4-Pole Contact Block
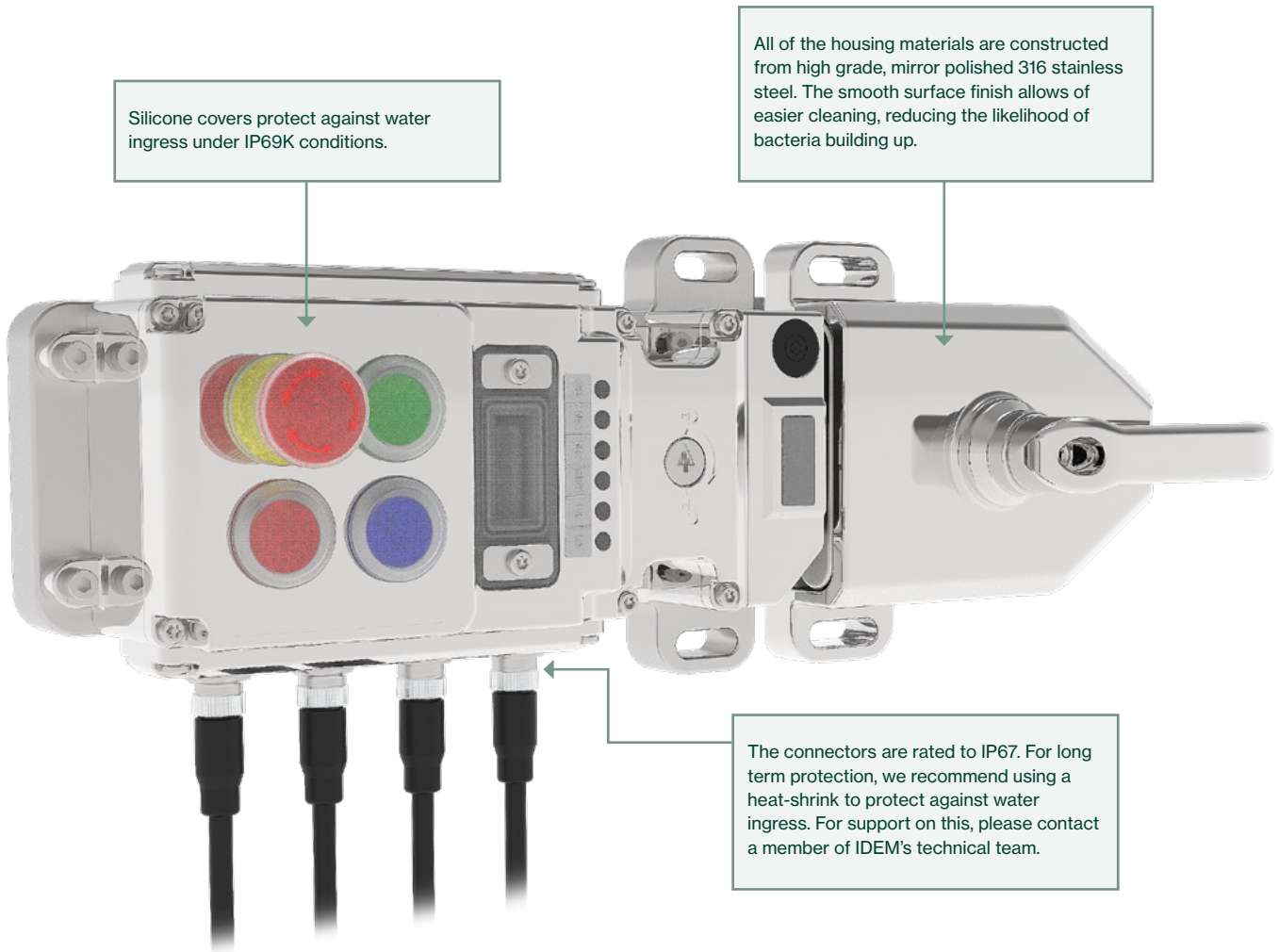· Rotating Head
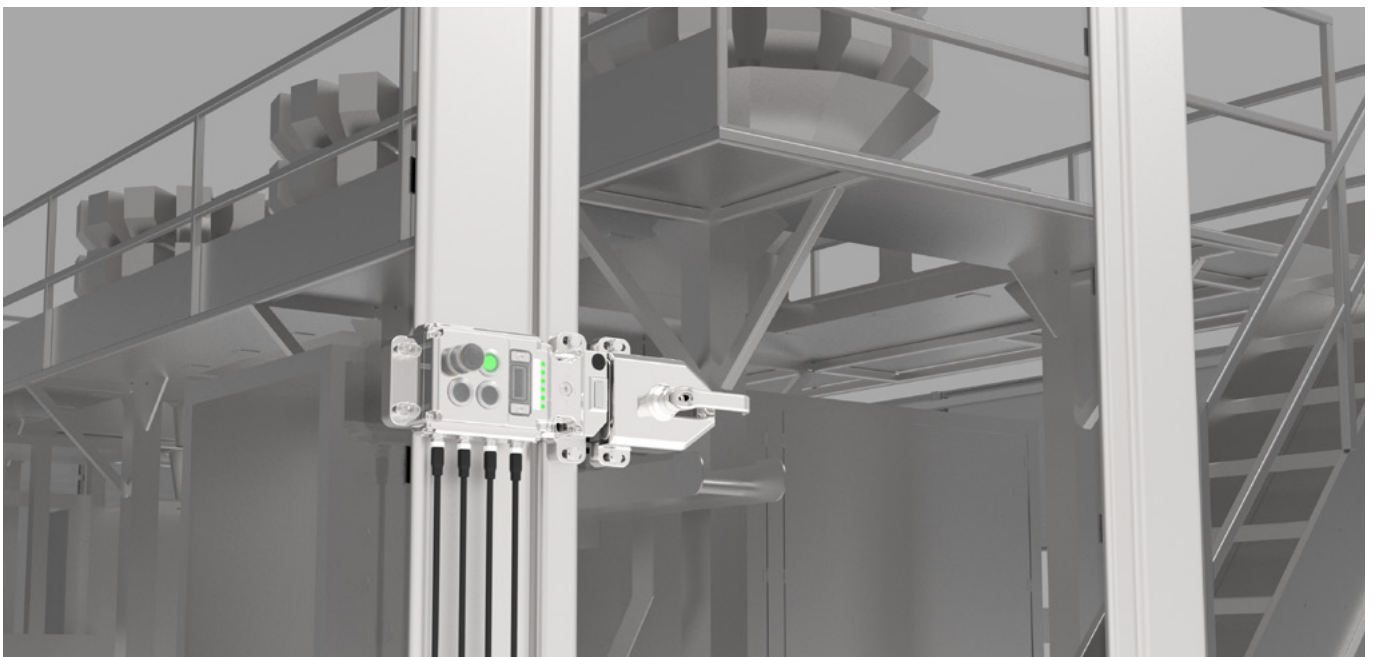· Suitable for Zones 2 and 3

K-SS · IP69K

· Rugged Design
· 3 x M20 or 1/2" NPT Conduit
· Replaceable 4-Pole Contact Block
· Rotating Head
· Suitable for Zones 2 and 3

UGB-NET WITH INDUSTRIAL ETHERNET AND IP69K

The UGB-NET-SS-WR is the only networked enabled safety device on the market with IP69K rating. The housing is manufactured using mirror polished 316 stainless steel, closed with double-seal gaskets and the buttons are protected using special silicone covers.

Silicone covers protect against water ingress under IP69K conditions.

All of the housing materials are constructed from high grade, mirror polished 316 stainless steel. The smooth surface finish allows of easier cleaning, reducing the likelihood of bacteria building up.

The connectors are rated to IP67. For long term protection, we recommend using a heat-shrink to protect against water ingress. For support on this, please contact a member of IDEM's technical team.

To order the UGB-NET-SS-WR, please contact IDEM Safety Switches directly. The special silicone covers are factory fitted and tested.