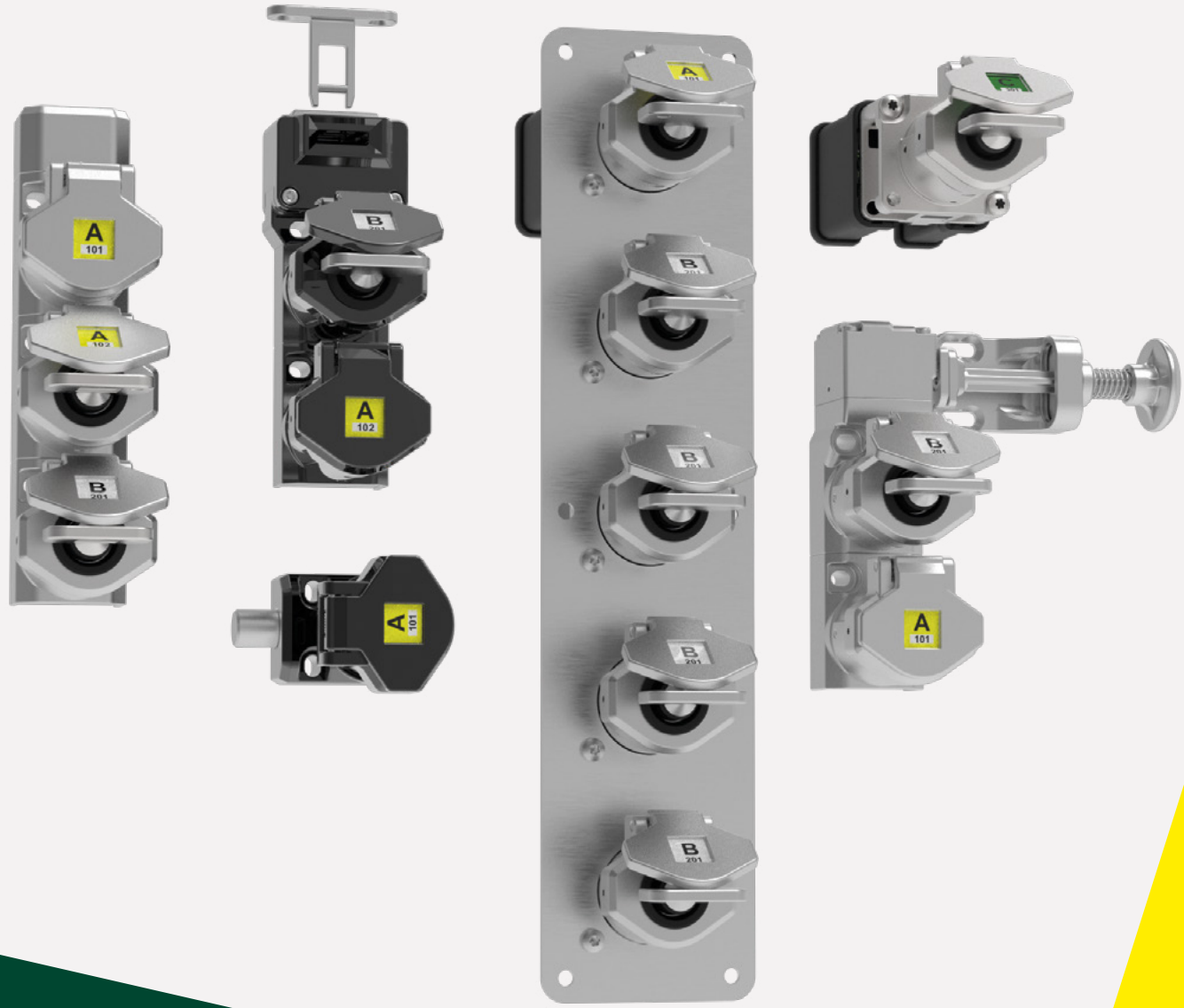
IDEM SAFETY

Making Industry Safer

THE QUEEN'S AWARDS FOR ENTERPRISE: INTERNATIONAL TRADE 2022



Mechanical Trapped Key Interlocks

Product Overview Brochure

What We Do

IDEM designs and manufactures machine safety products, that make industry safer.

Proud Winners of

The Queen's Award for Enterprise: International Trade 2022

Our History

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.

Why Choose IDEM?

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.

WHAT ARE SKORPION TRAPPED KEY INTERLOCKS?

IDEM's Trapped-key interlocks utilise locks and coded keys for sequential control of equipment and machinery to ensure safe operation. Trapped-key interlocks are widely used to ensure safe access to potentially live or dangerous plant or equipment in an industrial setting.

- Mirror Polished Die-Cast Metal
- 316 Stainless Steel (IP69K)
- Designed and Manufactured in the UK
- Comprehensive Range
- Robust with high Mechanical Integrity
- Thousands of Codes Available

CONTROL / ISOLATION

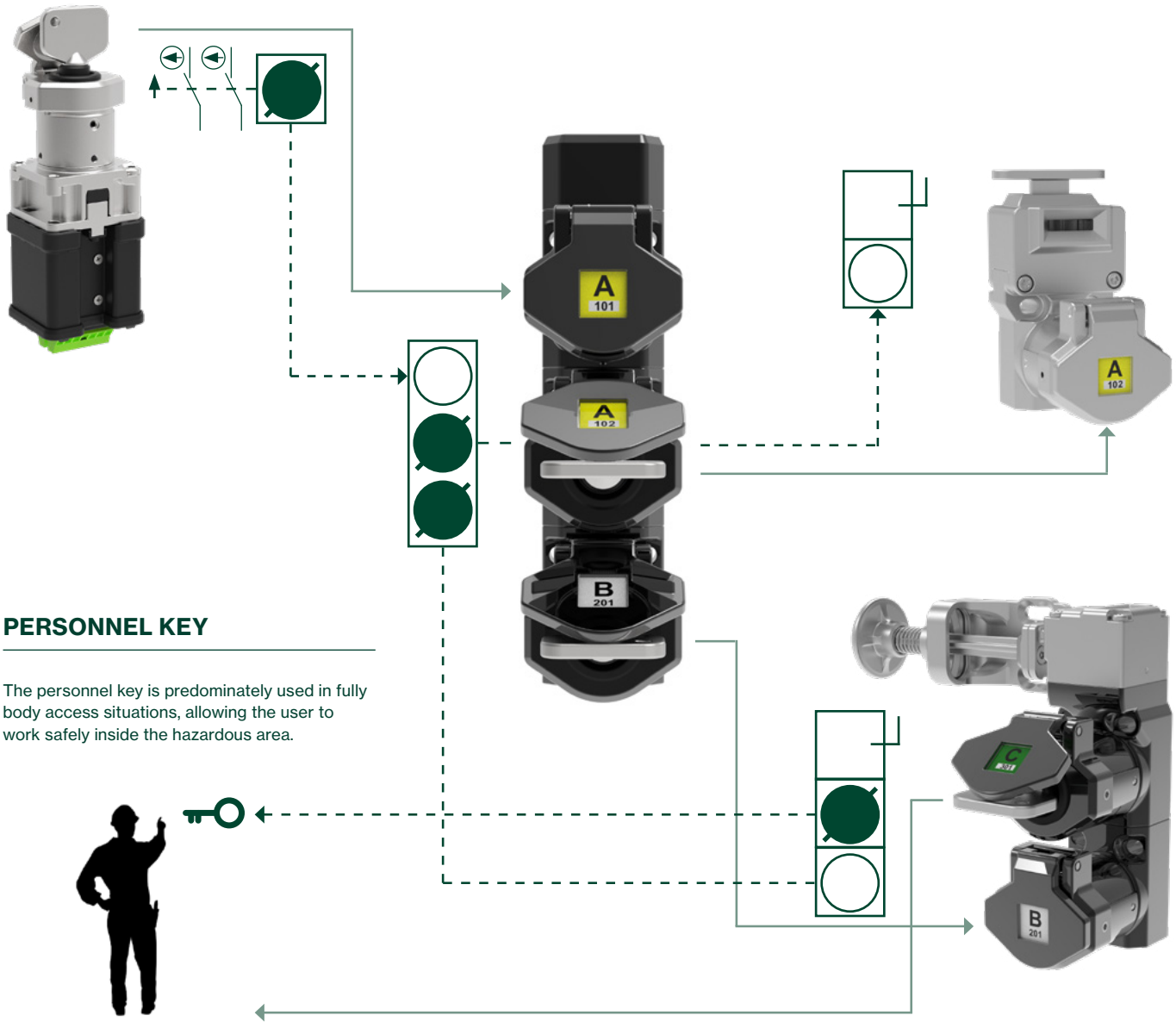
The first stage of any trapped key system is to isolate the power or control circuit. This should STOP any hazardous processes.

KEY EXCHANGE

The second stage is exchange. The isolator key can be used to open 1 access lock at a time or, if there are multiple access locks, a key exchange can be used.

ACCESS CONTROL

Access locks prevent entry to the hazardous areas. Only when the correct coded key is presented, will entry be permitted.



PERSONNEL KEY

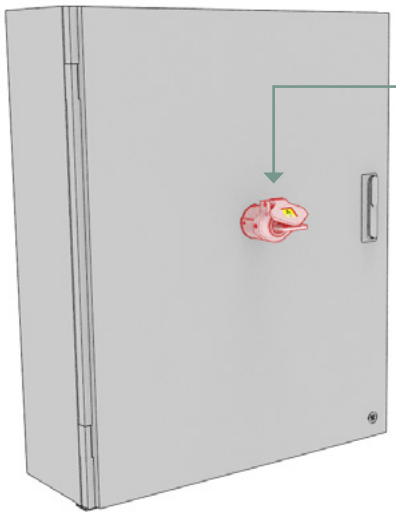
The personnel key is predominately used in fully body access situations, allowing the user to work safely inside the hazardous area.

CONTROL / ISOLATION

WHAT IS ISOLATION?

Isolation is the method used to remove power or stop the control signal to the hazardous area. This comes in various forms as explained below:

WHAT IS A PANEL MOUNTED ISOLATION SWITCH



Panel mounted isolation switches are designed to be installed directly onto the door of control cabinets. This is the most popular method when isolating the control circuit or power as it can wire directly to the relevant safety circuit / power supply.

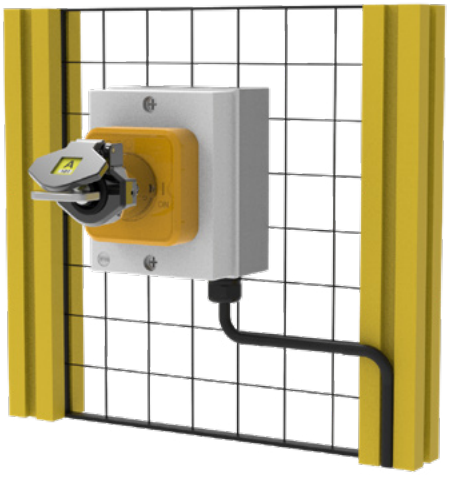
SS-ISP-WR
Solenoid controlled isolation switch with special IP65 rating. The LED indication displays when the the key can be released.

Additional Auxiliary Signal Contact Block can be added if required (PN: AUX-SP)

WHAT IS A BOX MOUNTED ISOLATION SWITCH

Our box mounted isolation switches are traditionally used when there is no space at the control panel OR you require the isolation switch to be closer to the application. The box enclosures are robust and allow for easy connectivity to the power/control circuit.

ISB3-SKR
Larger box mounts are available to incorporate the solenoid controlled isolation switches.



WHAT IS AN EXTERNAL MOUNTED CONTROL ISOLATION SWITCH

Externally mounted control switches work on the same principle as the box mounted versions however, they are enclosed in a robust metal body. These versions are monitored control switches only and are not suitable for switching large power supplies.

- Mirror polished die-cast (IP67)
- 316 stainless steel (IP69K)
- 2nc 2no, 3nc 1no or 4nc contacts
- 240V 3A max contact rating
- M20 or ½" NPT conduit entry

ISB4-SKR
The ISB4 incorporates a solenoid controlled key release that can be released via the pushbutton on the lid.

CONTROL / ISOLATION

MONITORED CONTROL / ISOLATION SWITCH

PANEL MOUNTED

ISP - ISOLATOR

- 690V contact block available in 25/40/63/100A.
- Die-Cast or 316 Stainless Steel

CS / CS-SKR - CONTROL SWITCH

- Monitored Control Switch
- Solenoid Controlled Versions
- Die-Cast or 316 Stainless Steel
- 2nc 2no, 3nc 1no or 4nc Contacts
- 240V 3A Max
- See pages 8-9.

BOX MOUNTED

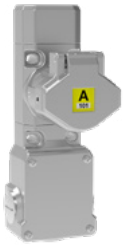
ISB1 - ISOLATOR

- 690V Contact Block available in 25A or 40A.
- Die-Cast or 316 Stainless Steel Barrel

ISB2 - ISOLATOR

- 690V Contact Block rated at 63A.
- Die-Cast or 316 Stainless Steel Barrel

EXTERNAL MOUNTED



ISB-CB - CONTROL SWITCH

- Monitored Control Switch.
- 2nc 2no, 3nc 1no or 4nc Contacts
- 240V 3A Max
- Die-Cast (IP67)
- 316 Stainless Steel (IP69K)

TS-CB - CONTROL SWITCH

- Key trapped, actuator unlccked.
- 2nc 2no, 3nc 1no or 4nc Contacts
- 240V 3A Max
- Available with either 1/2” NPT or M20 conduit entry.

MONITORED CONTROL / ISOLATION SWITCH WITH SOLENOID RELEASE

PANEL MOUNTED

ISP - SKR - ISOLATOR

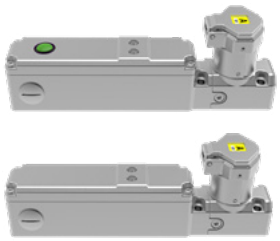
- 690V contact block available in 25/40/63A 24V ac/dc solenoid voltage.
- IP65 model available; ISP-SKR-WR
- Guard Status LED

BOX MOUNTED

ISB3 - SKR - ISOLATOR

- 690V contact block available in 25/40/63A, 24V ac/dc
- IP65 model available; ISB3-SKR-WR
- Guard Status LED
- Die-Cast or 316 Stainless Steel

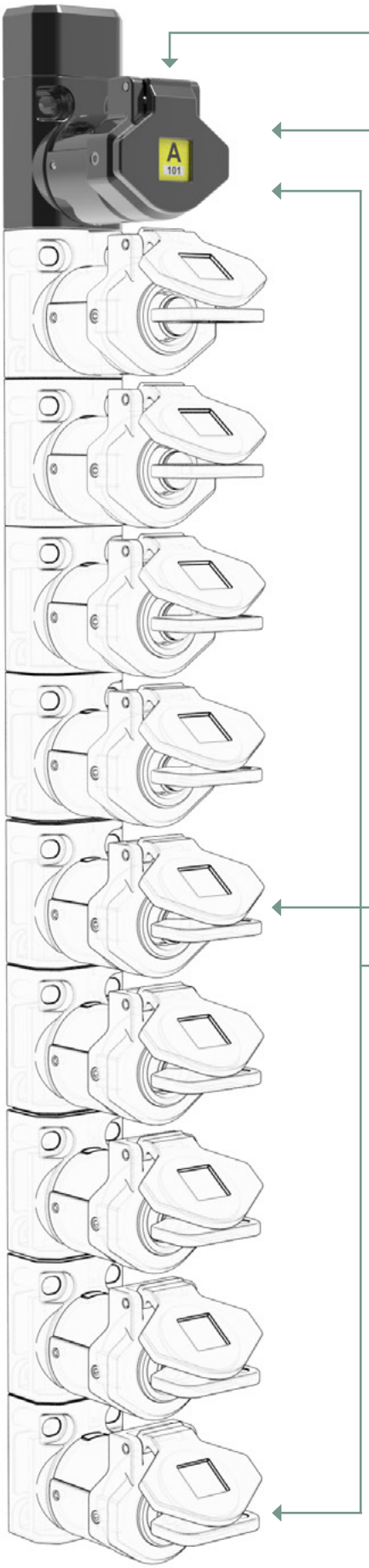
EXTERNAL MOUNTED



ISB4 - SKR - CONTROL SWITCH

- 2nc 2no, 3nc 1no or 4nc Contacts
- 240V 3A Max
- 24V ac/dc solenoid voltage
- Guard Status LED
- Available with integral request button

KEY EXCHANGE



VERTICAL KEY EXCHANGE SYSTEM

The vertical key exchange system can be mounted directly onto 40mm extrusion. It is available in both die-cast metal or 316 stainless steel, suitable for use in extreme environments. The dust cap covers protect against ingress, and features a coloured key code label for easy identification.

The system works by inserting the first key, which is released from the isolation part of the system. This releases up to 9 keys which are then used to open the access locks.

Part Number	Key Exchange - 316 Stainless Steel	
SS-KE-NS2	2 Keys	First Key Trapped All remaining keys can be released non-sequentially
SS-KE-NS3	3 Keys	
SS-KE-NS4	4 Keys	
SS-KE-NS5	5 Keys	
SS-KE-NS6	6 Keys	

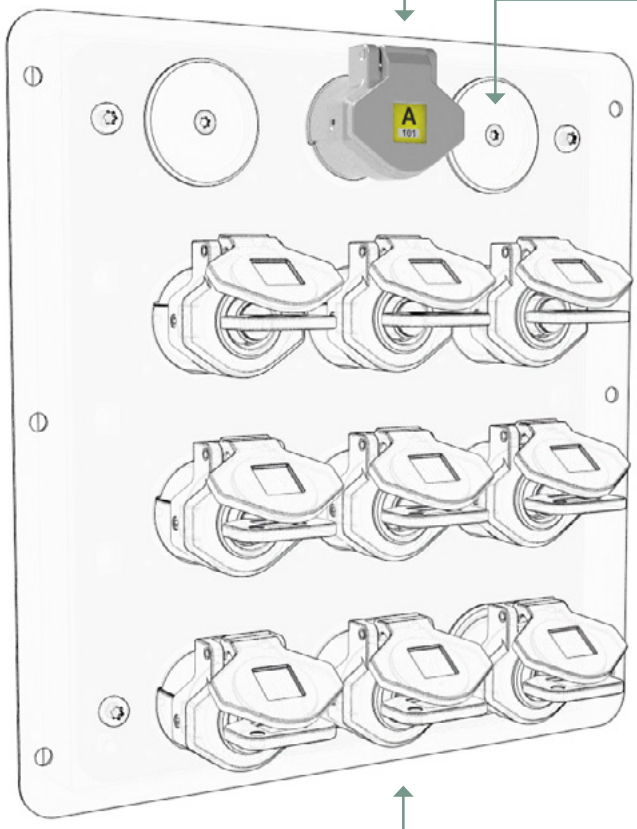
Part Number	Key Exchange - Mirror Polished Die-Cast	
M-KE-NS2	2 Keys	First Key Trapped All remaining keys can be released non-sequentially
M-KE-NS3	3 Keys	
M-KE-NS4	4 Keys	
M-KE-NS5	5 Keys	
M-KE-S6	6 Key	First Key Trapped All remaining keys can be released sequentially
M-KE-S7	7 Key	
M-KE-S8	8 Key	
M-KE-S9	9 Key	
M-KE-S10	10 Key	

HOW TO ORDER A KEY EXCHANGE SYSTEM

□ – KE – □ – □

□	□	□
(Die Cast)	(Non - Sequential)	Number of keys released
M (Stainless Steel)	**NS** (Sequential)	
SS	**S**	

KEY EXCHANGE



MULTI KEY EXCHANGE SYSTEM

The multi-key exchange system is available as panel or box mounted. The barrels come in die-cast metal or 316 stainless steel, suitable for use in extreme environments. The dust cap covers protect against ingress, and features a coloured key code label for easy identification.

The system works by inserting 1-5 keys (depending on your system) which releases up to 15 keys that are used to open access locks.

The 1-5 keys IN, can come from isolation switches or in some cases, be used as authority keys, meaning all key holders need to be present to release the access lock keys.

Blanking cap for unused barrel slots

Keys are released non-sequentially both vertically and horizontally.

MULTI-KEY SYSTEM PART NUMBERS

MX-P-8-2X6 PANEL MOUNTED
MX-B-8-2X6 BOX MOUNTED

MX-P-12-3X9 PANEL MOUNTED
MX-B-12-3X9 BOX MOUNTED

MX-P-20-5X15 PANEL MOUNTED
MX-B-20-5X15 BOX MOUNTED

HOW TO ORDER AN MULTI-KEY SYSTEM

□ – MX – □ – □ – □ X □

(Die Cast) **M** (Stainless Steel) **SS**	(Panel Mount) **P** (Box Mount) **B**	(Type) **20** **12** **8**	Number of trapped keys	Number of released keys

CONTROL / ISOLATION - KEY EXCHANGE

NEW PANEL MOUNT CONTROL ISOLATION SWITCH

The new CS control isolation switch is available in 4 versions; monitored, monitored with solenoid controlled key, monitored with solenoid controlled key reversed and mechanical release only. All 4 variations can be used in conjunction with each other, combining control isolation and key exchange.

M-CS / SS-CS

- Stainless Steel Control Switch
- Available in stainless steel (ss) (pictured) or die-cast metal (m)
- 2nc 2no, 3nc 1no or 4nc Contacts
- 240V 3A Max

M-CS-SKR / SS-CS-SKR

- Control Switch with Solenoid Key Release
- Available in stainless steel (ss) (pictured) or die-cast metal (m)
- 2nc 2no, 3nc 1no or 4nc Contacts
- 240V 3A Max - 24VDC Solenoid

M-KR / SS-KR

- Stainless Steel Mechanical Key Release
- Available in stainless steel (ss) (pictured) or die-cast metal (m)

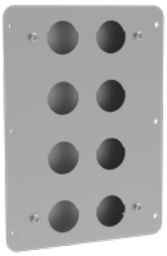
ENCLOSURE OPTIONS

PANEL MOUNT KIT

- Stainless steel panel
- Vertical design
- Available up to 10 barrel positions
- Robust laser cut mounting holes

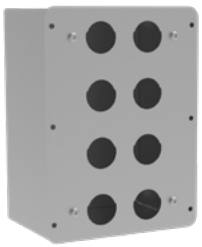
BOX MOUNT KIT

- Stainless steel panel with with box enclosure for external mounting
- Available up to 5 barrel positions
- Robust laser cut mounting holes
- larger available on request



MX PANEL MOUNT KIT

- Stainless steel panel
- 2, 3 and 5-row design
- Available up to 20 barrel positions
- Robust laser cut mounting holes



MX BOX MOUNT KIT

- Stainless steel panel with with box enclosure for external mounting
- Available up to 20 barrel positions
- Pre-drilled mounting holes

Part Number	Enclosures (Panel Mount)
P-2WAY	Panel Mount Enclosure Kit 2-Way
P-3WAY	Panel Mount Enclosure Kit 3-Way
P-4WAY	Panel Mount Enclosure Kit 4-Way
P-5WAY	Panel Mount Enclosure Kit 5-Way
P-6WAY	Panel Mount Enclosure Kit 6-Way
P-7WAY	Panel Mount Enclosure Kit 7-Way
P-8WAY	Panel Mount Enclosure Kit 8-Way
P-9WAY	Panel Mount Enclosure Kit 9-Way
P-10WAY	Panel Mount Enclosure Kit 10-Way
For larger panel mount kits, please contact IDEM Safety Switches	
Enclosures (Box Mount)	
B-2WAY	Box Mount Enclosure Kit 2-Way
B-3WAY	Box Mount Enclosure Kit 3-Way
B-4WAY	Box Mount Enclosure Kit 4-Way
B-5WAY	Box Mount Enclosure Kit 5-Way
For larger box mount kits, please contact IDEM Safety Switches	

Part Number	Enclosures (Panel Mount)
MX-P-8WAY	MX Panel Mount 8-Way
MX-P-12WAY	MX Panel Mount 12-Way
MX-P-20WAY	MX Panel Mount 20-Way
MX-B-8WAY	MX Box Mount 8-Way
MX-B-12WAY	MX Box Mount 12-Way
MX-B-20WAY	MX Box Mount 20-Way
816003	Blanking Cap for unused barrel slots

IMPORTANT INFOROMATION

All multi-key systems are factory built to your specification. The parts are not supplied separately.

CONTROL / ISOLATION - KEY EXCHANGE

MONITORED CONTROL SWITCH WITH VERTICAL PANEL MOUNT KIT

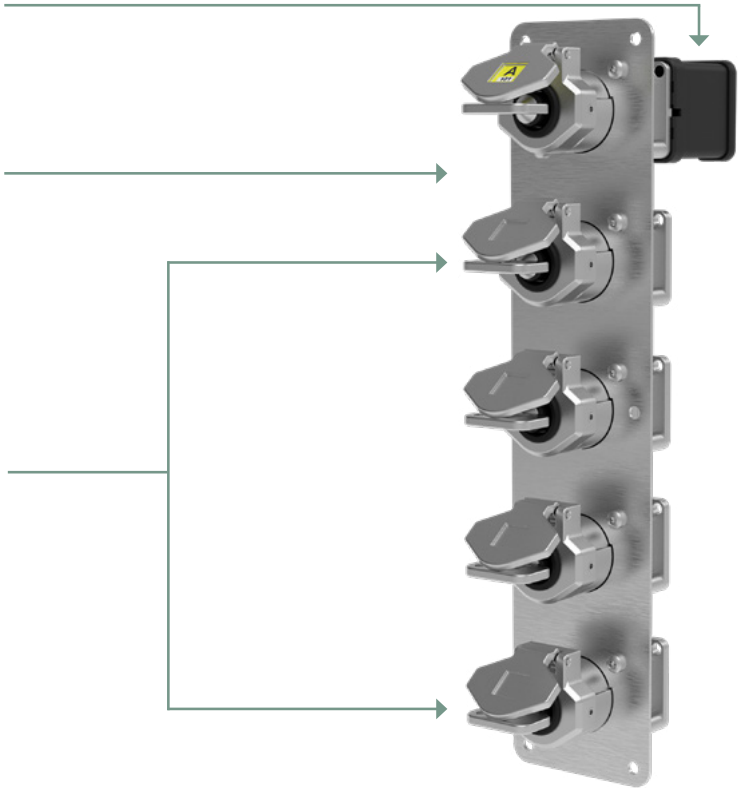
The new control isolation and solenoid released key switch can be purchased with pre-built, factory assembled mounting kit. These are available with up to 10 keys released.

SS-CS-SKR x 1: Requires the solenoid to be energised to mechanically turn the key and release the 5 access keys below.

P-5WAY x 1: Vertical panel arrangement with 5 barrel positions.

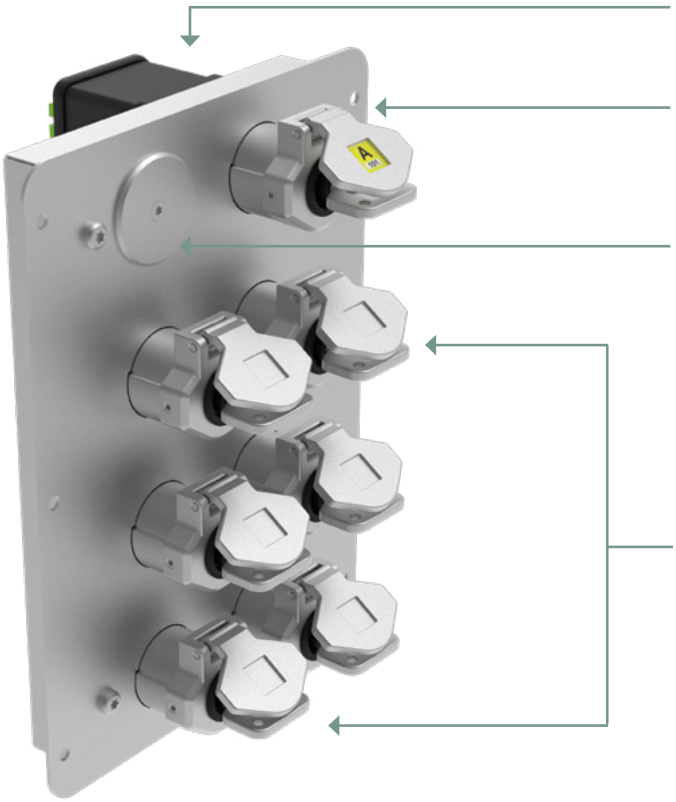
SS-KR x 4: Mechanically released keys when the first key is energised and turned to the OFF position.

SK-** x 5**: Mechanically coded keys. See page 16 for coding options.



MONITORED CONTROL SWITCH WITH MX-PANEL MOUNT

The new control isolation and solenoid release key switch is compatitble with IDEM's MX-Panel mount system. See below part number example.



SS-CS-SKR x 1: Requires the solenoid to be energised and the authority key to be present to mechanically release 6 access lock keys below.

MX-P-8WAY x 1: MX Panel mounted plate with 8 barrel positions.

Blanking CAP x 1

SS-KR x 6: keys mechanically released when the top 2 keys are present and turned to the off position. Available with up to 15 keys released.

SK-** x 7**: Mechanically coded keys. See page 16 for coding options.

ACCESS CONTROL

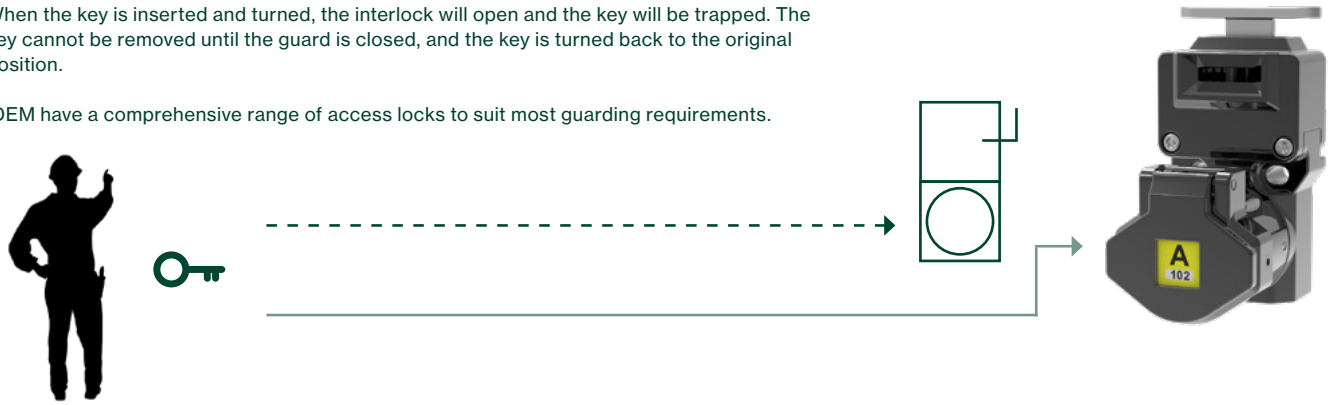
WHAT IS ACCESS CONTROL?

Access control is the final stage of the Trapped Key process. It grants the user the ability to gain access to the hazardous area, either full body or part body. Accesss control interlocks are used to ensure that a guard or door is locked closed under normal operating conditions and can only be operated when a coded key is inserted and turned, enabling access to the machine.

SINGLE KEY ACCESS CONTROL

When the key is inserted and turned, the interlock will open and the key will be trapped. The key cannot be removed until the guard is closed, and the key is turned back to the original position.

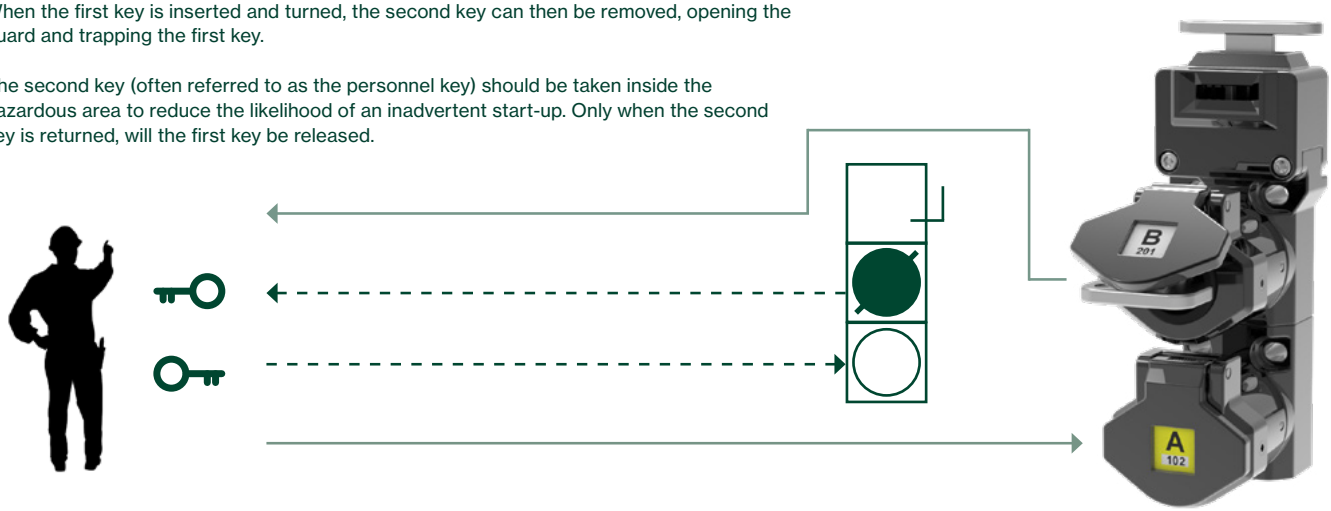
IDEM have a comprehensive range of access locks to suit most guarding requirements.

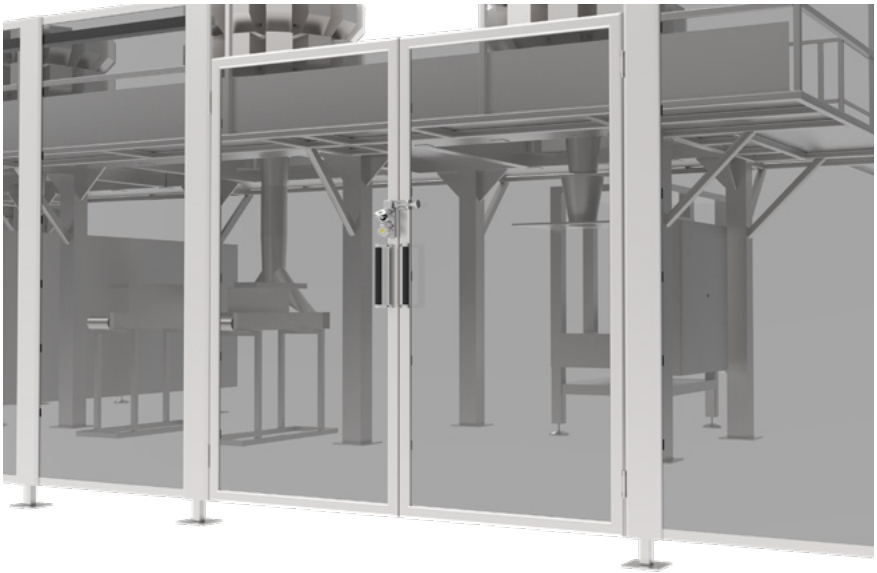


DUAL KEY ACCESS CONTROL

When the first key is inserted and turned, the second key can then be removed, opening the guard and trapping the first key.

The second key (often referred to as the personnel key) should be taken inside the hazardous area to reduce the likelihood of an inadvertent start-up. Only when the second key is returned, will the first key be released.





NO WIRING

Trapped Key interlocks are 100% mechanically operated, ideal for use on double doors. No tricky wiring for ease of installation and long term reliability.

ACCESS CONTROL

BOLT INTERLOCKS

The BS Trapped Key Bolt Interlock with Single Key works on the principle that when the key is “free” the bolt is extended and the bolt is locked in position. The BD-11 Trapped Key Bolt Interlock with Dual Key works on the principle that when the first key is “trapped” the bolt is extended and is in the locked position. There is no key in the second lock.

BS

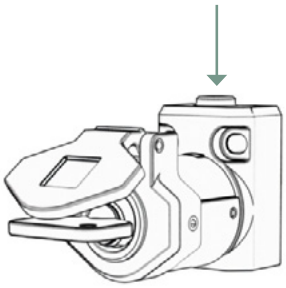
- 1 Key Trapped, Bolt Retracted
- Available as either Stainless Steel 316 or Die-Cast Metal

BD-11

- 1 Key Trapped, 1 Key Free, Bolt Retratcted or, 2 Keys Trapped, Bolt Retracted.
- Available as either Stainless Steel 316 or Die-Cast Metal

IMPORTANT

When the key is inserted and the bolt retracted, you must block the bolt so that it cannot extend until the door is in the closed position.



TONGUE INTERLOCKS

Skoprion Tongue Interlock is available as either single key or dual key. In complience with ISO14119, provides measures to minimize defeat of interlocking devices in a reasonably foreseeable manner. Available as either Key Trapped, Actuator Unlocked, or One Key Trapped, One Key Free, Actuator Unlocked. In either Stainless Steel 316 or Die Cast Metal.

TS

- Key Trapped, Actuator Unlocked
- Available as either Stainless Steel 316 or Die-Cast Metal

TD-11

- One Key Trapped, One Key Free, Actuator Unlocked
- Available as either Stainless Steel 316 or Die-Cast Metal

TONGUE ACTUATOR SELECTION

STANDARD
140107

FLAT
140108

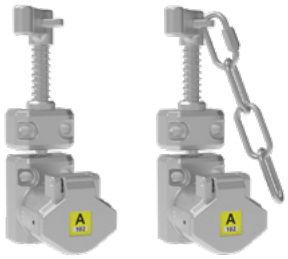
HEAVY DUTY FLEXIBLE (HF)
140101

HEAVY DUTY FLEXIBLE
140111

ACCESS CONTROL

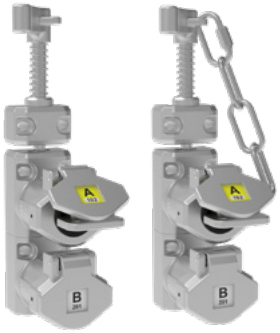
HANDLE INTERLOCKS

Skorpion Handle Interlock is available as either single or dual key. Available as either Key Trapped, Actuator Unlocked, or One Key Trapped, One Key Free, Actuator Unlocked. In either Stainless Steel 316 or Die Cast Metal.



HS / HS-C

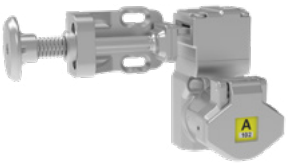
- Spring loaded Handle
- 1 key trapped when unlocked
- Die-Cast or 316 Stainless Steel
- Available with chain



HD-11 / HD-C-11

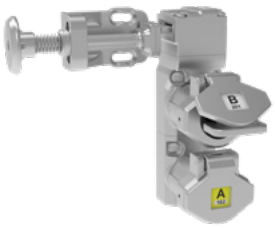
- Spring loaded Handle
- 1 key trapped, 1 key released
- Die-Cast or 316 Stainless Steel
- Available with chain

LATEST VERSION



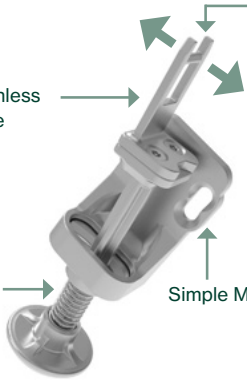
HT-S-L *(LEFT)*/HT-S-R *(RIGHT)*

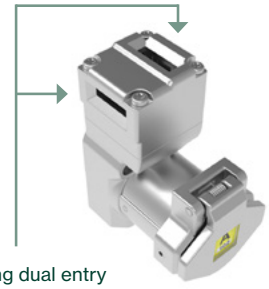
- 1 key trapped when unlocked
- Die-Cast or 316 Stainless Steel



HT-D-R-11 *(RIGHT)*/HT-D-R-11 *(LEFT)*

- 1 key trapped, 1 released
- Die-Cast or 316 Stainless Steel





360 degrees rotating dual entry head with Anti-Tamper cam system.

TS-SR TRAPPED KEY GATE ACCESS INTERLOCK

The TS-SR is a solenoid controlled tongue interlock with trapped key, designed to hold machine guards closed whilst the hazard persists.

- Mirror Polished Die-Cast or 316 Stainless Steel
- 1 key released when unlocked
- Rear release functionality
- 3000N Holding force
- LED indication on the lid
- Sliding handle and mounting plate available

HOW TO ORDER A TONGUE INTERLOCK SYSTEM

– TS – SR – ☐ - ☐ - ☐

☐		☐	☐	☐
(Die-Cast)		(Rear Release)	(Push Button)	(Emergency stop)
M		**RR**	**PB**	**ES**
(Stainless Steel)				
SS				

The lid can incorporate 1 x illuminated e-stop and 1 x 22mm pushbutton.

SOLENOID CONTROLLED INTERLOCKS - TRAPPED KEY

KLM-Z-SKR RFID CODED INTERLOCK WITH OSSD OUTPUTS

KLM-Z-SKR is a solenoid controlled, RFID coded tongue interlock with OSSD outputs. The mechanical coded key is trapped until the solenoid is energised; turning the key and removing it permits access to the hazardous area. The interlock cannot be restarted until the key has been returned.

Robust die-cast rotary handle and mounting plate accessories. Stainless Steel internal mechanism. **Sliding handle also available.**

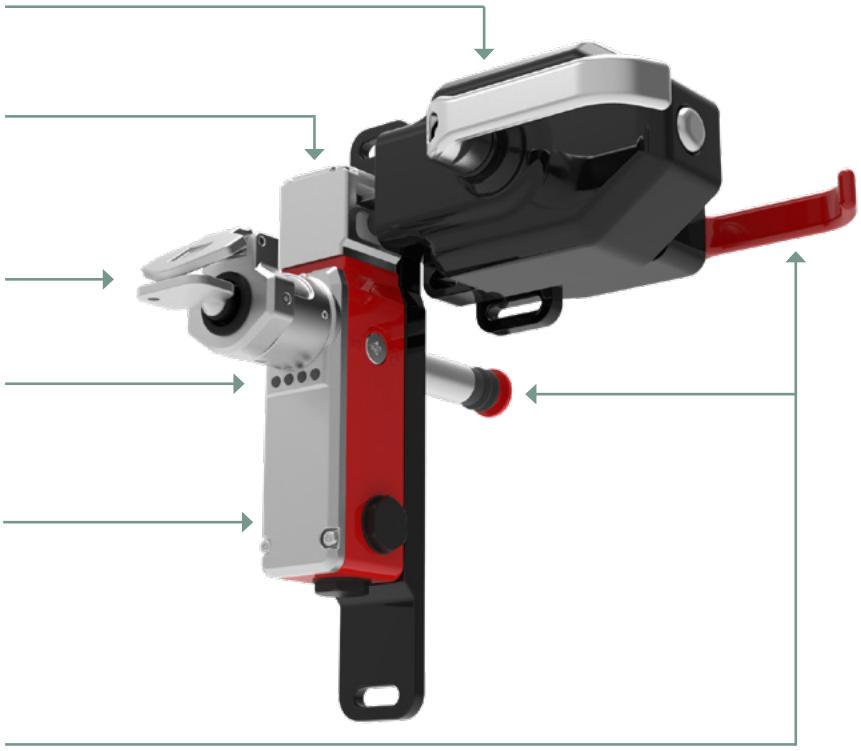
316 Stainless Steel head
Dual RFID actuator entry (top and side)
360 Degree rotation (8 actuator entry positions)
Anti-Tamper cam system

Solenoid controlled release key

LED Diagnotics for input, output, solenoid status and RFID Status.

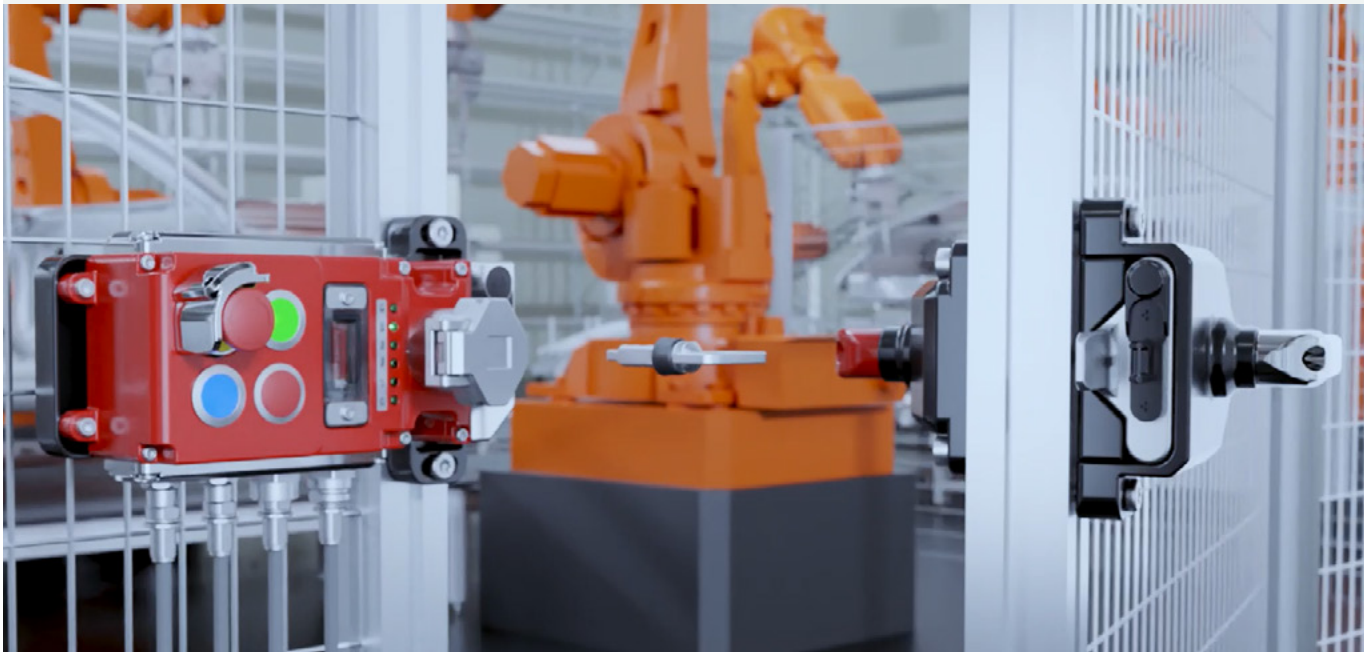
OSSD Outputs and Internal Self Monitoring Suitable for **CAT4, SIL3, PLe** in accordance with EN ISO 13849-1 and EN62061.

Internal release mechanism consiting of internal release handle and releasefunction with optional manual override.



UGB-NET WITH INDUSTRIAL ETHERNET

The UGB-NET is a universal gate interlock with industrial ethernet protocols. It is available with a coded mechanical key that is trapped when the guard is closed, and the machine is running. Requesting entry then energises the solenoid, allowing the key to be turned and removed, unlocking the gate and permitting access. The operator can then take the personnel key inside the hazardous area, ensuring no inadvertent startups may occur.



MINIATURE VALVE INTERLOCKS

IDEM's mini valve locks can be used standalone or easily integrated as part of a SKORPION Trapped Key solution. The key can then be removed and can be moved to safe storage (to avoid tampering) or can be integrated with trapped key guard interlocks to protect operators from machine, gas or air hazards that may be present.

Available as (FOP) Key Free Valve Open, Passing state or as (FCL) Key Free, Valve Closed, Non Passing state.

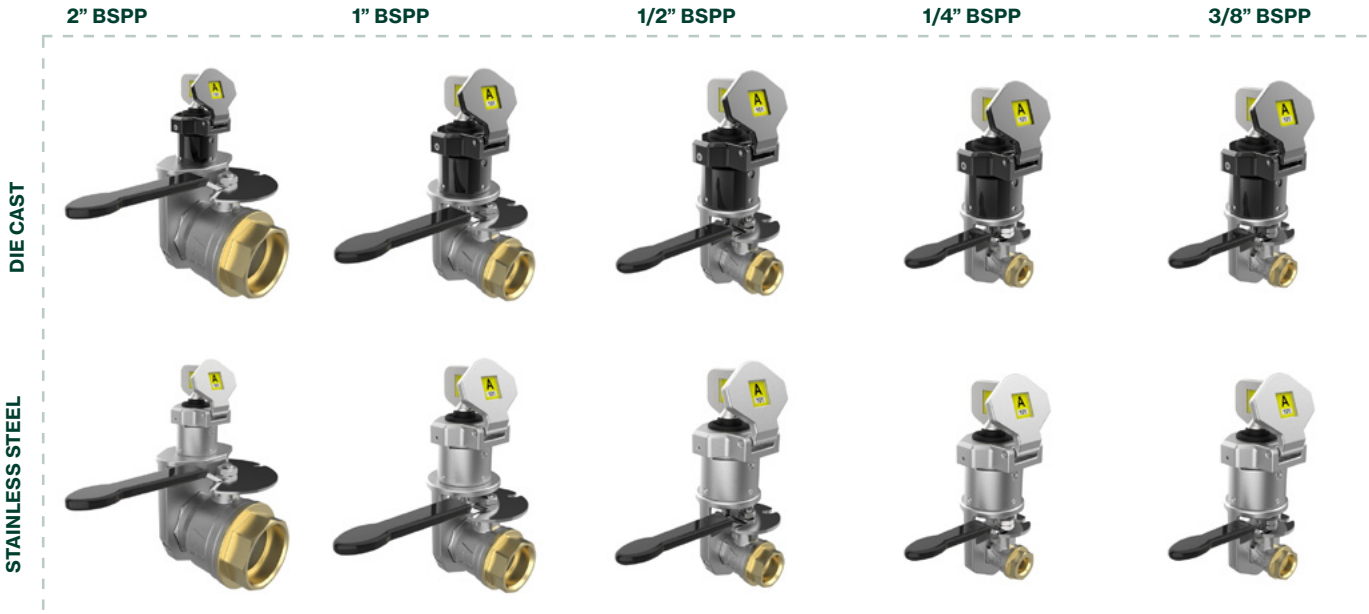
Features and Benefits.

Compact designs allows for ease of installation and eliminates the need for electrical wiring. Skorpion Valve Interlocks are virtuallly maintenance free, apart from scheduled inspection checks.

Robust build quality: Available in Stainless Steel 316 or Die Cast metal housing. Operates within temperatures between -40C to +170C at 40Bar (600PSI)

Freezing the fluid in the installation may severley damage the valve.

Ease of clean: Suitable for CIP and SIP cleaning processes and can be high pressure hosed with detergents at high temperatures.



Part Number	A (mm)	B (mm)	C (mm)	Valve Size BSP
MV-FCL 1/4	96	125	39	0.25 Inch
MV-FOP 1/4	96	125	39	0.25 Inch
MV-FCL 3/8	96	125	39	0.375 Inch
MV-FOP 3/8	96	125	39	0.375 Inch
MV-FCL 1/2	118	129	50	0.5 Inch
MV-FOP 1/2	118	129	50	0.5 Inch
MV-FCL 1	146	137	67	1 Inch
MV-FOP 1	146	137	67	1 Inch
MV-FCL 2	202	161	106	2 Inch
MV-FOP 2	202	161	106	2 Inch

CONTROL SWITCH FOR EXPLOSIVE ENVIRONMENTS

IDEM's product portfolio includes safety switches that are safe to use in potentially explosive atmospheres. A mixture of air gases, vapours, mists or dusts can combine in a way that can ignite under certain operating conditions.

ATEX products sold with 3m pre-wired cable, longer cable lengths are available upon request. Please note, this cannot be changed after the product has been manufactured.

ISB-CB-Ex

- Monitored Control Switch.
- Available with 1NC 1NO, 2NC or 2NC 2NO
- Die-Cast (IP67)
- 316 Stainless Steel (IP69K)

TS-CB-Ex

- Key trapped, actuator unlccked.
- Available with 1NC 1NO, 2NC or 2NC 2NO
- Die-Cast (IP67)
- 316 Stainless Steel (IP69K)
- 3000N Holding Force

THIRD PARTY APPROVAL

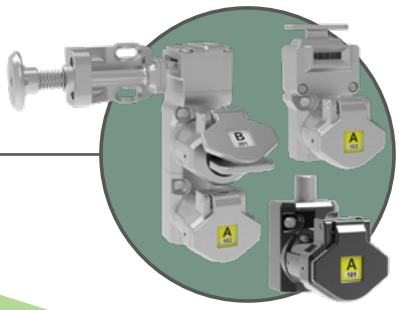
The internal contact block has been tested and approved to the above standards.

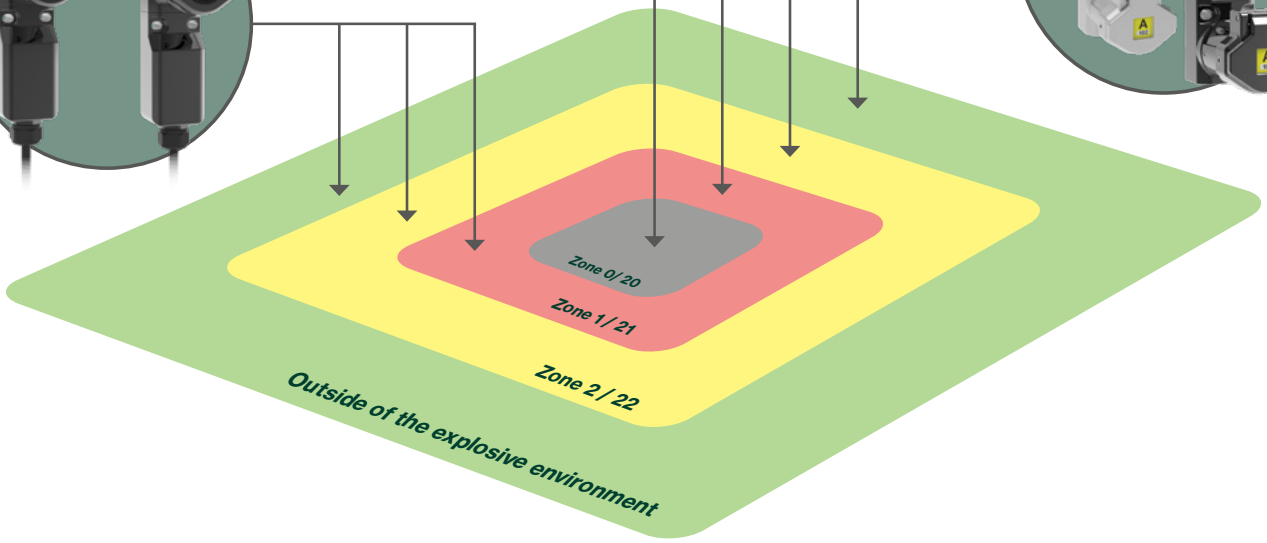
Exd IIC T6 (-20 ≤ Ta ≤ + 60C) Gb **Ex tb IIIC T85C (-20 ≤Ta ≤ +60C) Db** ZONES **1 / 2 / 21 / 22**

CONTROL ISOLATION

IDEM Trapped Key products are suitable for use in explosive environments. The pure mechanical nature of the access locks means they are suitable for use in Zones up to 0 / 20.

EXCHANGE AND ACCESS



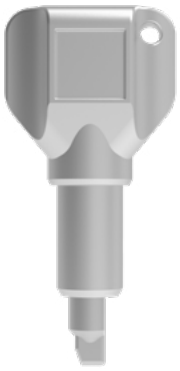


STOCK KEY CODE SELECTION

STANDARD KEY (SK)

SK keys can be used throughout the system and all Sales Numbers start with SK- followed by a letter and then three digits e.g. SK-C306

EJECTOR KEY (EK)



EK ejector keys can be used where a secondary function requires an operator to enter and carry the key into a hazardous area.

Different key fob colours are available dependent upon the code chosen. This is a customer option to provide the end-user with an easily seen visual aid e.g. The First Key (Primary Key) could be chosen in a different colour to the colour chosen for the Released Keys - therefore easily distinguishing the Primary Key from the other keys in the system.

- **Thousands of key codes available**
- **Custom key labels available on request**

Yellow		White		Green		Blue	
A101	A111	B201	B211	C301	C311	D401	D411
A102	A112	B202	B212	C302	C312	D402	D412
A103	A113	B203	B213	C303	C313	D403	D413
A104	A114	B204	B214	C304	C314	D404	D414
A105	A115	B205	B215	C305	C315	D405	D415
A106	A116	B206	B216	C306	C316	D406	D416
A107	A117	B207	B217	C307	C317	D407	D417
A108	A118	B208	B218	C308	C318	D408	D418
A109	A119	B209	B219	C309	C319	D409	D419
A110		B210		C310		D410	

If you require more key codes than shown above, increase the number by 1 (example: A119 > A120 > A121 and so on)

CUSTOM KEY (CK)

CHOOSE YOUR COLOUR

5 colours are available to choose from.

LABEL

Fully customisable label. Any character configuration can be used as long as it fits within 33x12mm.

HOW TO ORDER

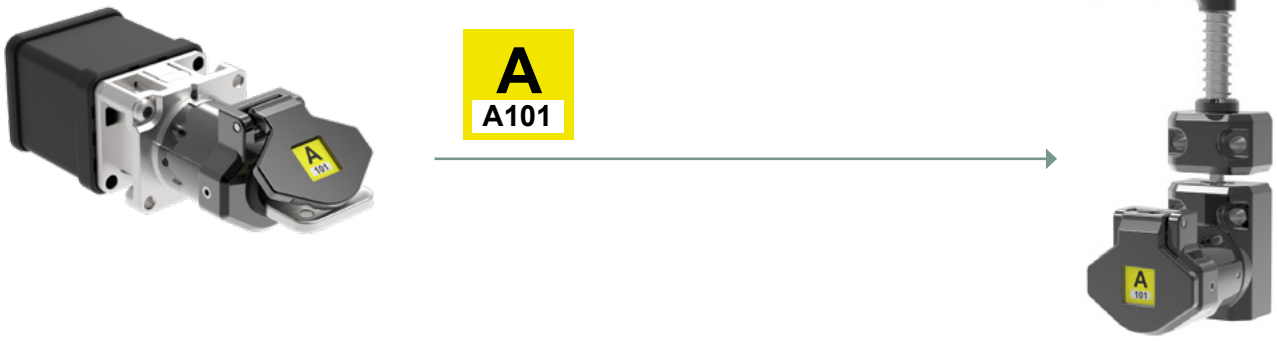
Using the key codes above, add CK to the front of the description. For example: CK-A101 will have a yellow label and A101 coding.

The customised description needs to be added to the order against each key.

SYSTEM EXAMPLES

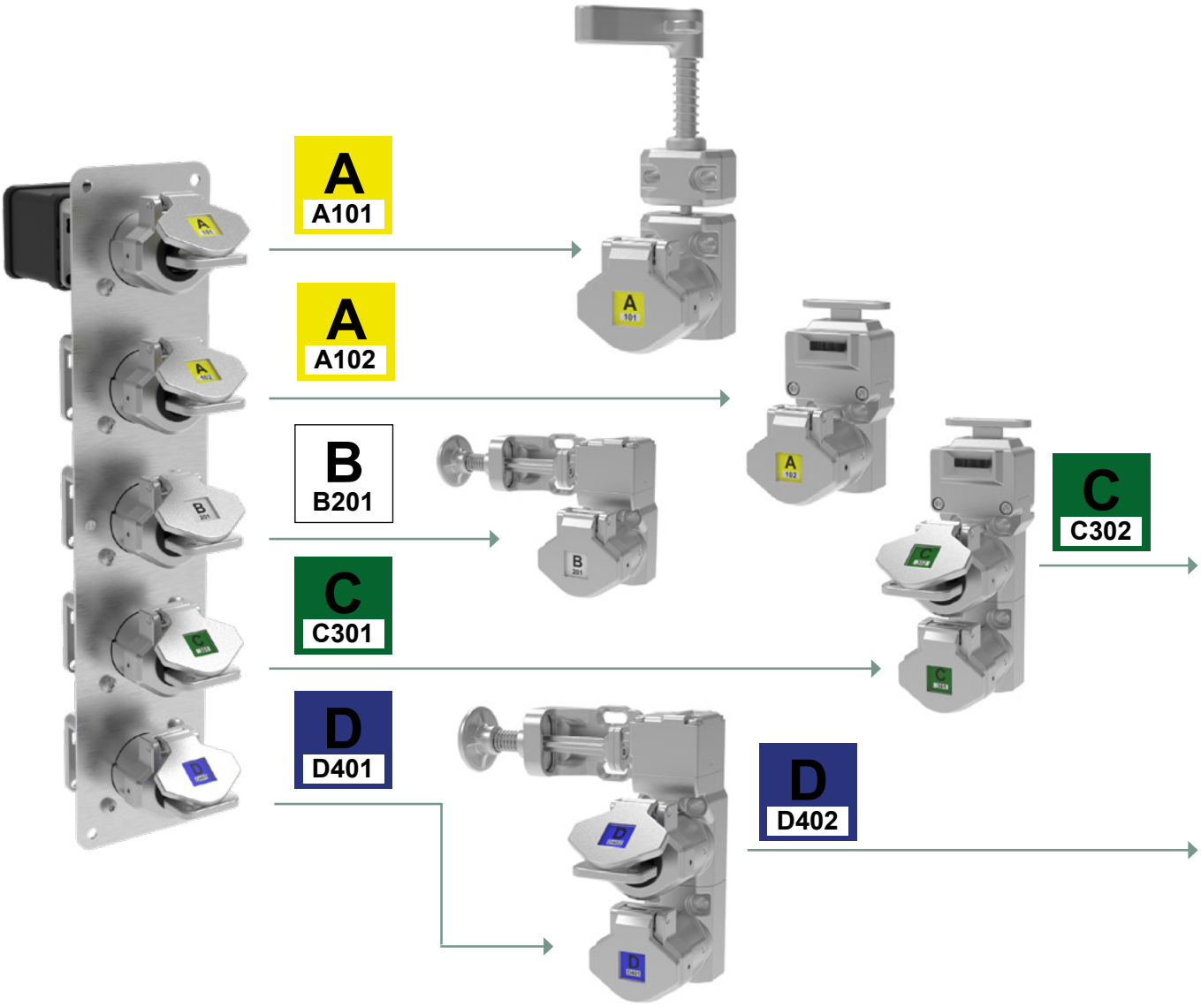
SIMPLE SYSTEM

Single gate system with control isolation. Turning and removing key A101 stops the machine, allowing access to the hazardous area.



COMPLEX SYSTEM

Utilising the new panel mount system, a total of 5 keys can be released at any time. The first key is monitored with solenoid controlled release which in turn, mechanically releases 4 keys. A101, A102 and B201 open single key access locks whereas C301 and D401 are used on dual key access locks with C302 and D402 used as personnel keys.



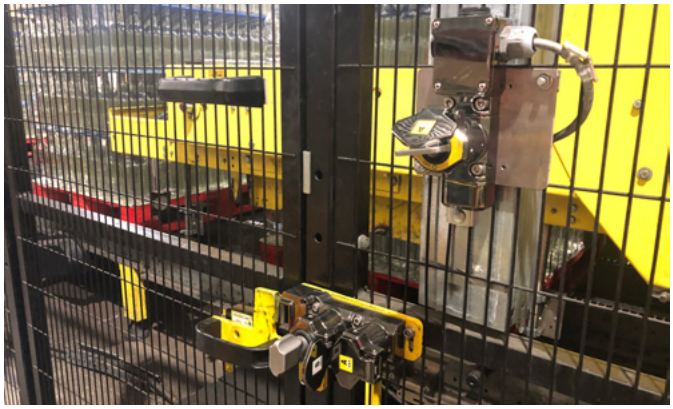
APPLICATION EXAMPLES

METAL PROCESSING

The metal processing industry boasts many challenges when it comes to safeguarding machinery. Large machinery is required to process the heavy materials, with a mixture of part and fully body access requirements.

This application features the use of a control isolation switch mounted to the panel due to space limitations. The application has multiple access points with secondary keys for taking inside the hazardous area.

PALLETISER



Palletisers automate the stacking process that can otherwise be labour intensive and expensive, putting undue stress on workers. However, this process can be fatal, requiring the guards be locked during operation.

Frequent access is often required if the operator/s spot any issues with the process (i.e. a product has fallen off the pallet). The use of a secondary key safeguards the user whilst inside the hazardous area. The ejector key springs into the operators hand prompting it's use.

CORRUGATED CARDBOARD MIXER

The corrugated cardboard manufacturing process can present challenging conditions for interlocking. Rigorous cleaning and refining of wood pulp into mixers and paper making machines result in high temperatures and heavy shock/vibrations.

IDEM's Trapped Key Interlocks are purely mechanical, meaning they are easy to install, resistant to low and high temperatures and provide robust guard locking.

The mixer requires a run down period, so the use of a solenoid controlled isolator holds the key in place until it is safe to access.

APPLICATION EXAMPLES

AUTOMATED PRESS

This automated press application processes large amounts of materials 24 hours a day. The loading of material is a manual process that requires hourly access to the press. Whilst this process is taking place, the extracted personnel key prevents the press from being restarted.

The use of a secondary key safeguards the user whilst inside the hazardous area. The ejector key springs into the operators hand prompting it's use.

FOOD PROCESSING

Food processing machinery often undergoes strict washdown procedures. This involves the use of corrosive chemicals at high temperatures using a high pressure hose. IDEM's stainless steel trapped key products use 316 grade material for both the external and internal components.

The solenoid controlled panel switch pictured on the left uses the special IP65 version, offering additional protection from water ingress.

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