

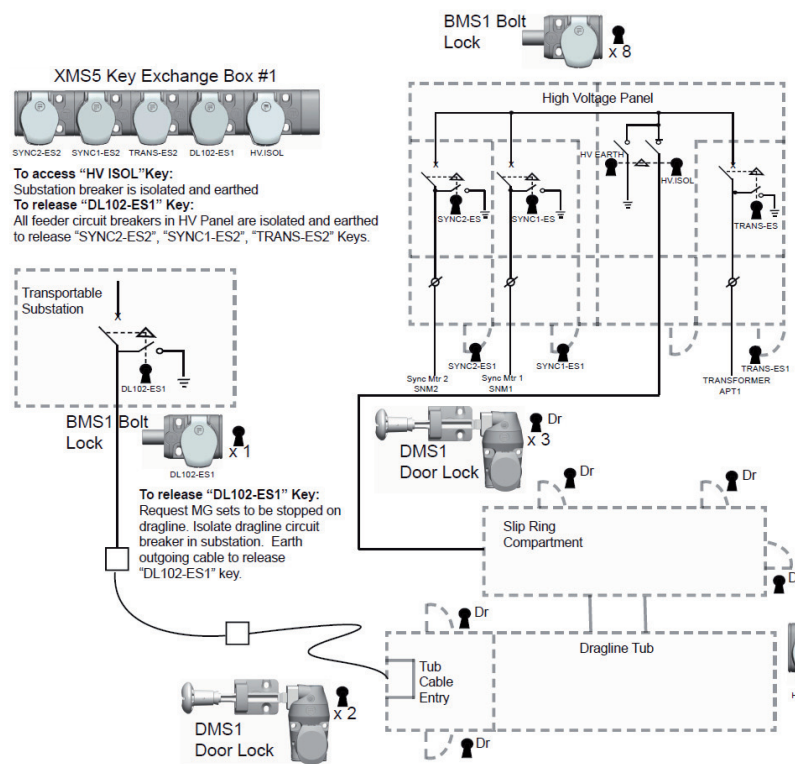
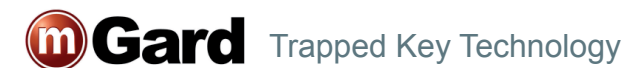


Full System Service from



Let Ikon Engineered Solutions take care of your interlocking needs offering a full system service using Fortress Interlocks.

- Application Inspection and System Design
- Installation
- Maintenance and Servicing



Dragline Application Schematic

Door Key Exchange Boxes, Feeder Circuit Breakers

XMS3 Key Exchange Box Sync #2
 SYNC2-ES2 SYNC2-ES1 SYNC2-ES2

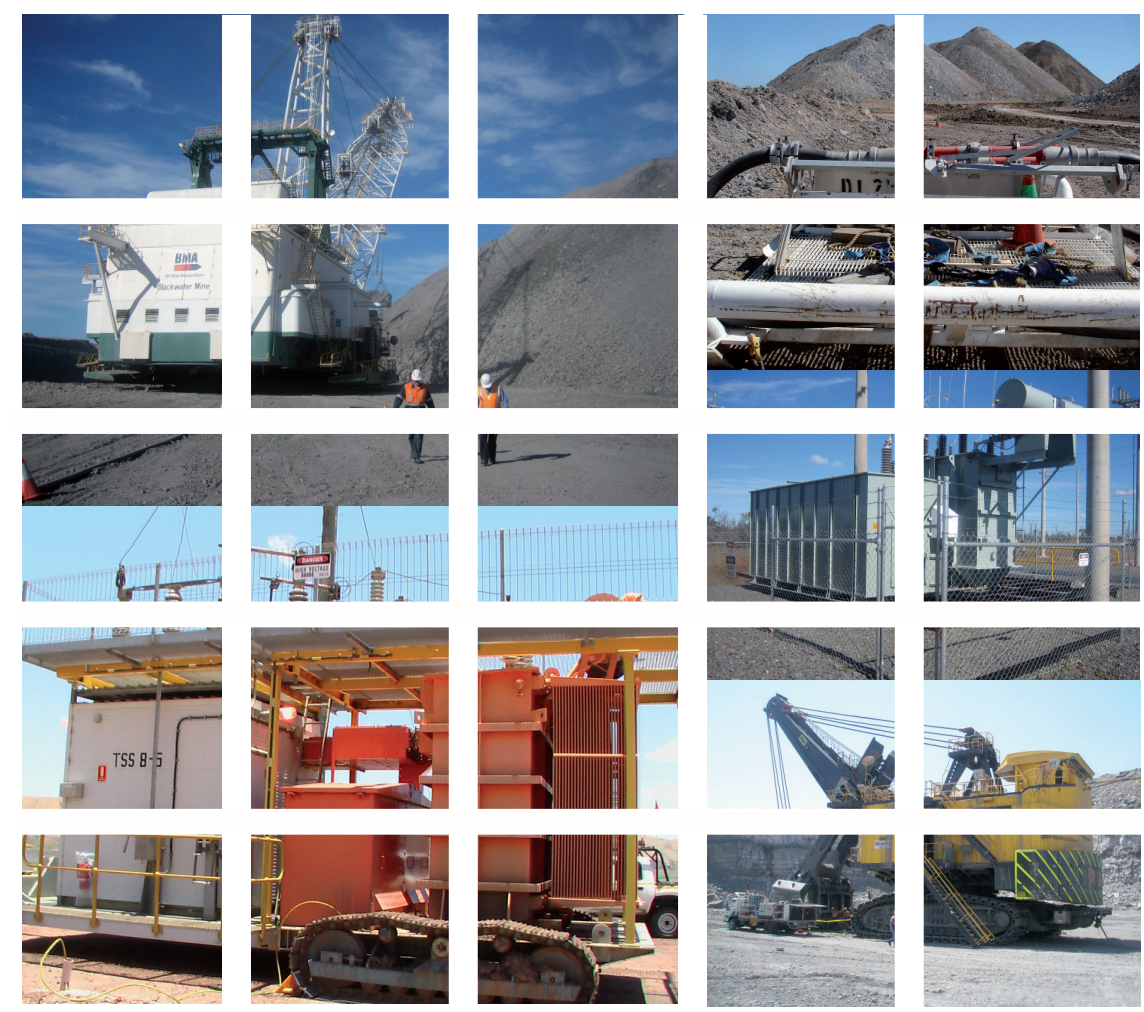
XMS3 Key Exchange Box Sync #1
 SYNC1-ES SYNC1-ES1 SYNC1-ES2

XMS3 Key Exchange Box AUX.T DR
 TRANS-ES TRANS-ES1 TRANS-ES2

To access keys "ES1" and "ES2"
 Feeder circuit breaker is in isolated position and earth switch applied to release "ES" key. This "ES" key can then be inserted in the appropriate exchange box to release the two trapped keys. These keys "ES1" to open the associated cable access door and "ES2" to go to key exchange box No.1 to give access key "HV-ISOL".

XMS6 Key Exchange Box #2
 HV EARTH Dr Dr Dr Dr Dr

To access High Voltage compartments on Dragline:
 Key "HV.EARTH" needs to be inserted to allow the five "Dr" keys for access to the various covers.



mGard Range Overview
Total Access & Control



Ikon Engineered Solutions working in partnership with Fortress Interlocks, protecting plant and personnel in heavy industry and switchgear.

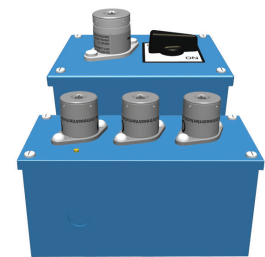
Ikon Engineered Solutions
P.O. Box 856
Caloundra
QLD 4551
Mobile: 0407 154 434
Tel: 07 5492 2713
info@ikonengineered.com.au

mGard is the premier range of modular robust trapped key interlocks for heavy duty applications. Trapped key interlocking is a tried and tested method of mechanically safeguarding dangerous machines and hazardous processes.

Power/Control Isolation

Identify the energy sources to be isolated and/or any hazard that cannot immediately be isolated such as; heat, pressure, radiation or machine rundown time.

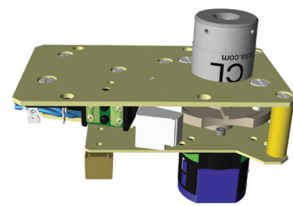
- | | |
|---|--|
| <p>Power isolation</p> <ul style="list-style-type: none"> • Mechanical Bolt Interlock • Bolt Interlock with Limit Switch • Bolt Interlock with Switch • Breaker Lock | <p>Control isolation</p> <ul style="list-style-type: none"> • Key Switches • Solenoid Controlled Key Switch • ATEX Key Switch • ATEX Solenoid Controlled Key Switch • Solenoid Controlled Key Switch Unit • Electronic Time Delay Unit • Knob and Key Operated Switch Control Unit |
|---|--|



ODS Knob/Key Operated Switch Control Unit
ODL



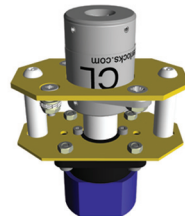
TD Electronic Time Delay Unit



SS Solenoid Controlled Key Switch



BM Mechanical Bolt Interlock



S Key Switch

Door Locks and Actuators

Identify the type of access point; part body or full body access doors with or without the use of personal safety keys (to prevent accidental lock in).

- Single Door Interlocks
- Multiple Door Interlocks
- Fixed Actuator
- Handle Operated Actuator
- Spring Loaded Handle Operated Actuator
- Self Aligning Actuator
- Compressible Actuator

DM-F Fixed Actuator



DM-H Handle Operated Actuator



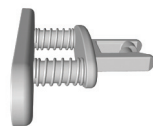
DM-A Spring Loaded Handle Operated Actuator



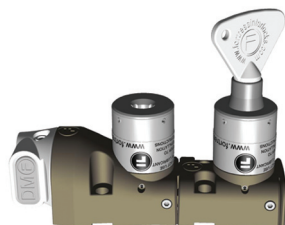
DM-S Self Aligning Actuator



DM2 DM-C Multiple Door Interlock



DM1 Single Door Interlock



Key Exchange

Identify the type and number of access points.

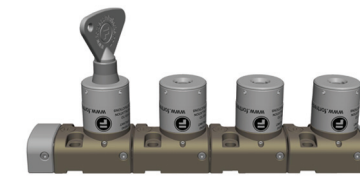
- Key Exchange Units
- Key Exchange Units with Switch

Because of the modular arrangement of **mGard** both key exchange and door lock units can easily be extended with an extension module (XMA), for instance when doors are added to the safeguarded area or machine.

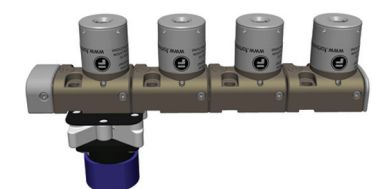
The Fortress Trapped Key System allows the safeguarding of potentially hazardous areas without the need for wiring.

All Fortress Interlocks rotary switches have European, Canadian, Chinese and North American approvals.

XM Key Exchange Unit



XMR Key Exchange Unit c/w Switch



Lock and Key Specifications

Fortress locks have over 200,000 different lock combinations. Besides the standard basic (CL) it is possible to have a master series (ML) lock. The ML lock which can be operated by a special cut master key (MLK-SUGS) that fits any mastered lock in a specific mastered lock series. For ease of use, all Fortress locks provide key insertion in two orientations.

Lock and key engravings

Each different key combination is allocated with an engraved code onto the lock and key, of up to maximum 30 characters (3 lines of 10 characters). This engraving code is used to identify locks and keys and is recorded in a database for continuous cross reference. Required engraving details are therefore to be provided with each other.

Standard	CLIN Lock Standard CL lock no dustcover	CLIS Lock Standard CL lock with stainless steel dustcover	CLSS Lock Full Standard CL lock with stainless steel dustcover	CLK-SUS Standard key for use on all CL lock types CLK-LP Standard low profile key for use on all CL lock types
	MLIN Lock Masterable ML lock no dustcover	MLIS Lock Masterable ML lock with stainless steel dustcover	MLSS Lock Full Stainless Steel masterable ML lock with stainless steel dustcover	MLK-SUGS Standard cut key for use on all ML type locks MLK-SUCM Master cut key for use on all ML lock types
Dustcover Options	CLDC Stainless Steel Dustcover	PLDC Stainless Steel Padlockable Dustcover	LOS3 Lock-Out Scissor Hasp LOS3C Lock-Out Scissor Hasp c/w Cable	Maximum 30 characters (3 lines of 10 characters) key and lock engravings
				Maximum 30 characters (3 lines of 10 characters)