

SKORPION Trapped Key Interlocking with Key Exchange

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THE SKORPION RANGE - AVAILABLE IN STAINLESS STEEL 316 OR DIE CAST:

ISOLATION



ISB1

KEY EXCHANGE



KE-S4

INTERLOCKING



TS

PRODUCT OVERVIEW:

The SKORPION Trapped Key System has been developed to provide extremely robust mechanical coded key safeguarding and interlocking for hazardous machinery.

The system works on the principle of releasing factory coded mechanical keys in a pre-determined sequence to ensure machine power is isolated before any access can be gained to hazardous or dangerous machinery.

After the machine control has been isolated (first key turned in the system) the key from the isolator can then be used to release other trapped keys to enable access to the guarded areas.

After release of the first key (power isolation) safeguarding can be achieved without the need for electrical wiring, this makes the system ideal for use in harsh environments.

When used in conjunction with interlock sensing they can be used to achieve up to PLe/Cat4 to ISO13849-1.

Milton Keynes
MK8 0ER



HS

APPLICATION:

A trapped-key guarding system relies upon the transfer of keys between a power isolation switch (or control switch) and a locking mechanism fixed on a guard.

The essential feature of the system is that a removable key is trapped either in the guard lock, or in the power isolation switch. The lock on the guard is arranged so that the key can be released only when the guard has been closed and locked. This allows transfer of the key from the guard to the power isolation switch.

Closing the switch traps the key, so that it cannot be removed while the switch is in the ON position.

If there is more than one source of power, and therefore more than one circuit breaking element to be actuated, then a key-exchange box is necessary, to which all keys have to be transferred and locked in before the access key, which is of a different coding, can be released for transfer to the guard lock.

Where there is more than one guard, the exchange box will accommodate an equivalent number of access keys.

Where a number of operations have to be carried out in a pre-determined definite sequence, then the transferable key is locked in and exchanged for a different one at each stage.



BS

ADVANTAGES:

- No reduction of integrity due to the distance between movable guard and control system.
- High mechanical integrity, robust fixings and holdings suitable for all types of guards.
- Eliminates the need for electrical wiring to each movable guard.
- Fully Stainless Steel 316, suitable when the movable guard is placed in harsh or hostile environments.
- Suitable for CIP and SIP cleaning processes and can be high pressure hosed with detergents at high temperatures.
- Can be used where the movable guard requires to be removed completely.
- All keys are coded in the factory and it is virtually impossible to override the system.
- A trapped key system provides a quick yet safe and reliable access to machinery.
- Use of a trapped key system can also prevent shortcuts and enforce a logical set of procedures that need to be satisfied.
- Until the isolator key is returned to its original position within the lock, there is no way to enable the machinery to be re-started.

SKORPION Trapped Key Interlocking with Key Exchange

ISOLATION SWITCH BOX 1 - ISB1:

ISB1



STAINLESS STEEL 316 BARREL HOUSING AND DUST CAP				
Sales Number	ISOLATION SWITCH BOX 1 RATING			
ISB1-25	25A	690V	4 pole	
ISB1-40	40A	690V	4 pole	

DIE-CAST (Mirror Polished) BARREL HOUSING AND DUST CAP				
Sales Number	ISOLATION SWITCH BOX 1 RATING			
M-ISB1-25	25A	690V	4 pole	
M-ISB1-40	40A	690V	4 pole	

ISOLATION SWITCH BOX 2 - ISB2:

ISB2



STAINLESS STEEL 316 BARREL HOUSING AND DUST CAP				
Sales Number	ISOLATION SWITCH BOX 2 RATING			
ISB2-63	63A	690V	4 pole	

DIE-CAST (Mirror Polished) BARREL HOUSING AND DUST CAP				
Sales Number	ISOLATION SWITCH BOX 2 RATING			
M-ISB2-63	63A	690V	4 pole	

ISOLATION SWITCH PANEL MOUNT - ISP:

ISP



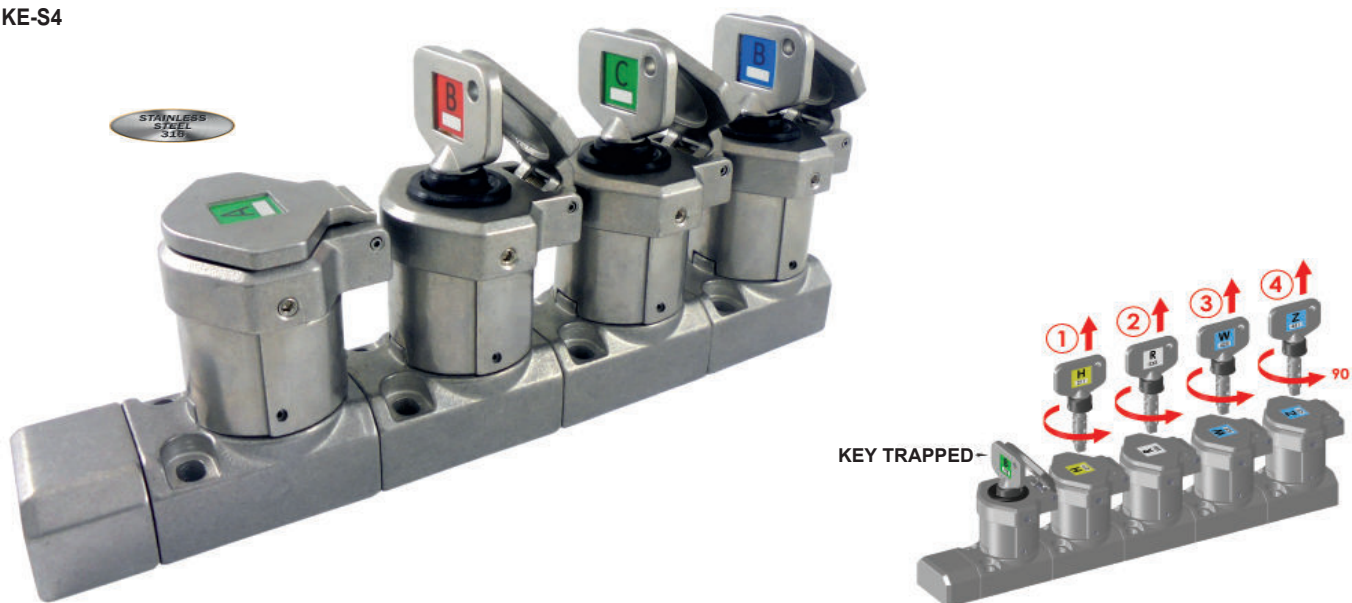
STAINLESS STEEL 316 BARREL HOUSING AND DUST CAP				
Sales Number	ISOLATION SWITCH BOX 1 RATING			
ISP-25	25A	690V	4 pole	
ISP-40	40A	690V	4 pole	
ISP-63	63A	690V	4 pole	

DIE CAST (Mirror Polished) BARREL HOUSING AND DUST CAP				
Sales Number	ISOLATION SWITCH BOX 1 RATING			
M-ISP-25	25A	690V	4 pole	
M-ISP-40	40A	690V	4 pole	
M-ISP-63	63A	690V	4 pole	

SKORPION Trapped Key Interlocking with Key Exchange

KEY EXCHANGE STAINLESS STEEL 316 ORDERING:

KE-S4



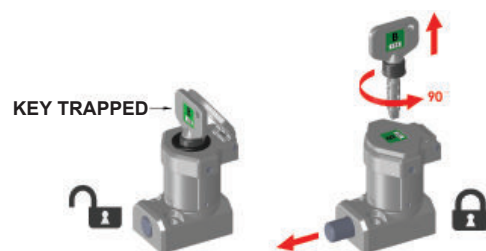
Sales Number	KEY EXCHANGE- STAINLESS STEEL 316		
KE-S2	Sequential	2 Key	(First key trapped - 1 released in sequence)
KE-S3	Sequential	3 Key	(First key trapped - 2 released in sequence)
KE-S4	Sequential	4 Key	(First key trapped - 3 released in sequence)
KE-S5	Sequential	5 Key	(First key trapped - 4 released in sequence)

BOLT INTERLOCKS (not suitable for guard access) STAINLESS STEEL 316 ORDERING:

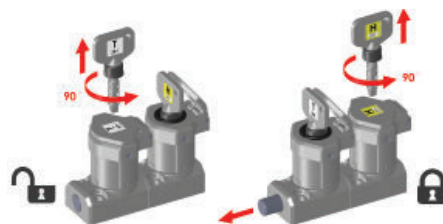
BS



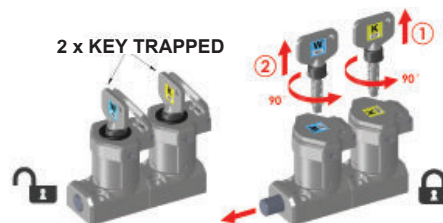
Sales Number	BOLT INTERLOCK SINGLE KEY STAINLESS STEEL 316
BS	Key trapped - bolt retracted



BD-11



2 x KEY TRAPPED



Sales Number	BOLT INTERLOCK DUAL KEY STAINLESS STEEL 316
BD-11	2 sequential keys - 1 key trapped 1 key free - bolt retracted

Sales Number	BOLT INTERLOCK DUAL KEY STAINLESS STEEL 316
BD-20	2 sequential keys trapped - bolt retracted

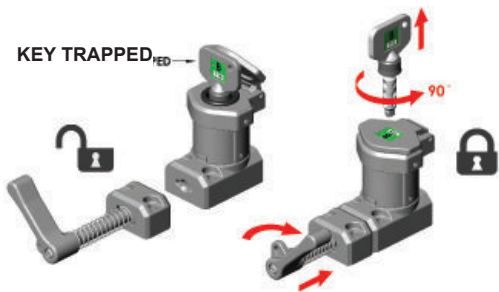
SKORPION Trapped Key Interlocking with Key Exchange

HANDLE INTERLOCKS (Single Key) STAINLESS STEEL 316 ORDERING:

HS



Sales Number	SINGLE KEY INTERLOCK	STAINLESS STEEL 316
HS	Key trapped - actuator unlocked (spring action handle)	
HS-C	Key trapped - actuator unlocked (chain fixed to handle)	

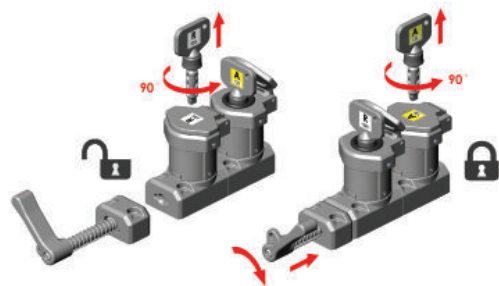


HS-C



HANDLE INTERLOCKS (Double Key) STAINLESS STEEL 316 ORDERING:

Sales Number	DOUBLE KEY INTERLOCK	STAINLESS STEEL 316
HD-C-11	2 sequential keys - one key trapped	one key free - actuator unlocked (chain fixed to handle)
HD-11	2 sequential keys - one key trapped	one key free - actuator unlocked (spring action handle)



HD-11



HD-C-11



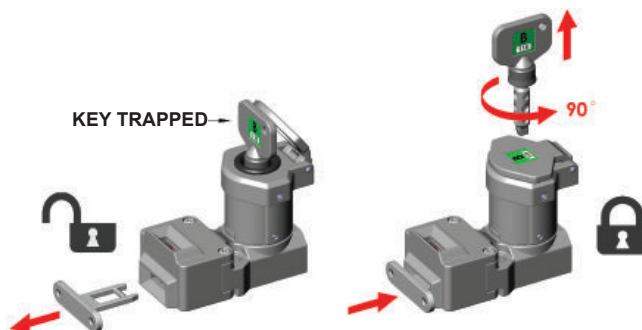
SKORPION Trapped Key Interlocking with Key Exchange

TONGUE INTERLOCKS (Single Key) STAINLESS STEEL 316 ORDERING:

TS



*See below for Actuator options.



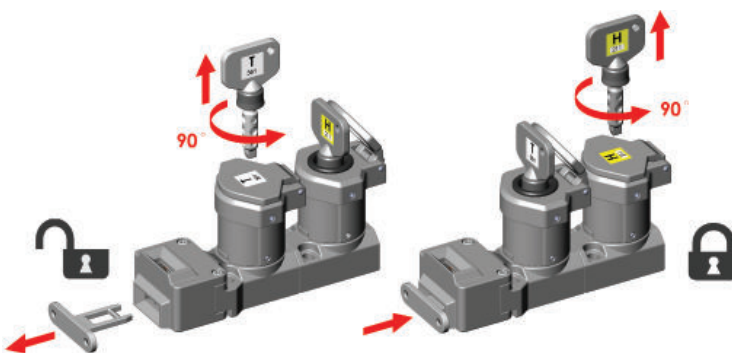
Sales Number	SINGLE KEY INTERLOCK STAINLESS STEEL 316
TS	Key trapped - actuator unlocked

TONGUE INTERLOCKS (Double Key) STAINLESS STEEL 316 ORDERING:

TD-11



*See below for Actuator options.



Sales Number	DUAL KEY INTERLOCK STAINLESS STEEL 316
TD-11	2 sequential keys - one key trapped one key free - actuator unlocked

ACTUATORS FOR INTERLOCK SELECTION CHART:



Please see section on Order Form for tongue actuator/key ordering.

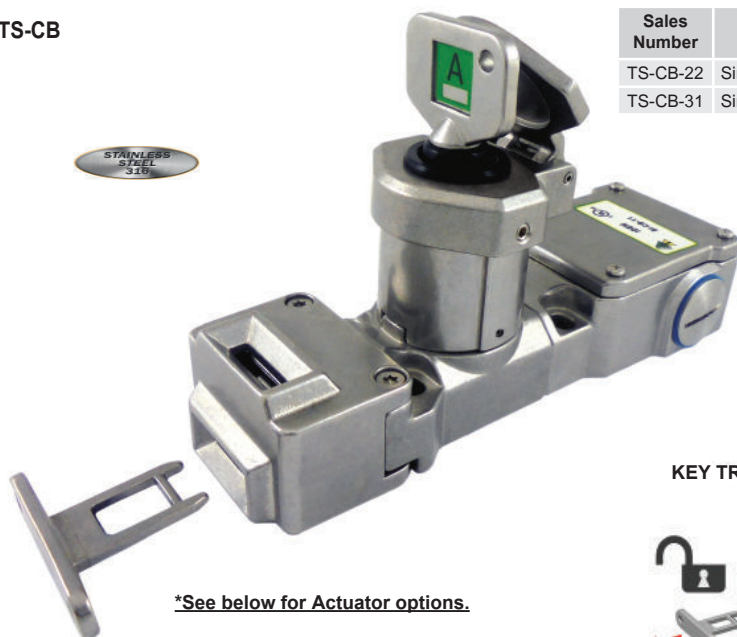
- A = Standard Actuator Stainless Steel 316
- F = Flat Actuator Stainless Steel 316 with Plastic cover
- HF = Heavy Duty Flexible Actuator Stainless Steel 316 and Die Cast
- HFH = Heavy Duty Flexible fully Stainless Steel 316

SKORPION Trapped Key Interlocking with Key Exchange

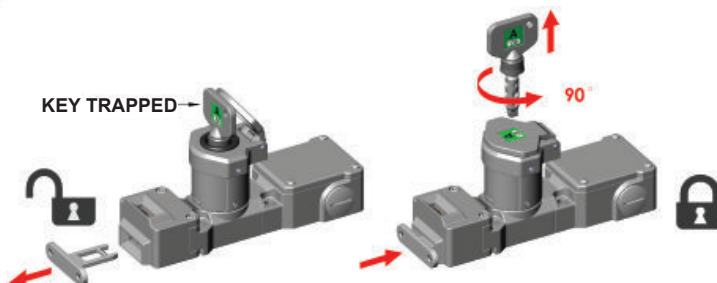
INTERLOCKING WITH CONTROL ISOLATION STAINLESS STEEL 316 ORDERING:

TS-CB

Sales Number	SINGLE KEY INTERLOCK WITH CONTACT BLOCK STAINLESS STEEL 316
TS-CB-22	Single Tongue Interlock with 2NC 2NO Contact Block
TS-CB-31	Single Tongue Interlock with 3NC 1NO Contact Block



*See below for Actuator options.



EXPLOSION PROOF INTERLOCKING WITH CONTROL ISOLATION S/STEEL 316 ORDERING:

TS-CB EX



Trapped Key with ATEX EExd IIC T6 certified explosion proof contact blocks.

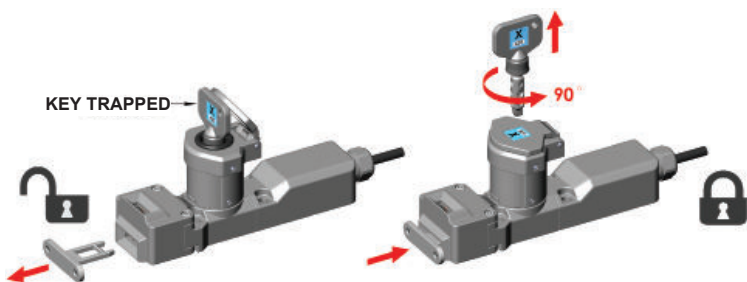
The explosion proof contact blocks conform to European harmonized standard EN60079-0 and EN60079-1 and can be used in European Zone 1, 2, 21, 22 environments. (Gas and Dust). Adheres to the latest standard ISO13850, Designed for use in oil, petro-chemical, pharmaceutical, food processing and packaging applications where the potential for explosive atmospheres are present.

Exd IIC T6 (-20 ≤ Ta ≤ +60C)

Ex tb IIIC T85C (-20 ≤ Ta ≤ +60C) Db



*See below for Actuator options.



Sales Number	SINGLE KEY INTERLOCK WITH CONTACT BLOCK STAINLESS STEEL 316
TS-CB-22-EX	Single Tongue Interlock with 2NC 2NO Pre-wired EX Block
TS-CB-11-EX	Single Tongue Interlock with 1NC 1NO Pre-wired EX Block

ACTUATORS FOR INTERLOCK SELECTION CHART:



Please see section on Order Form for tongue actuator/key ordering.

A = Standard Actuator Stainless Steel 316

F = Flat Actuator Stainless Steel 316 with Plastic cover

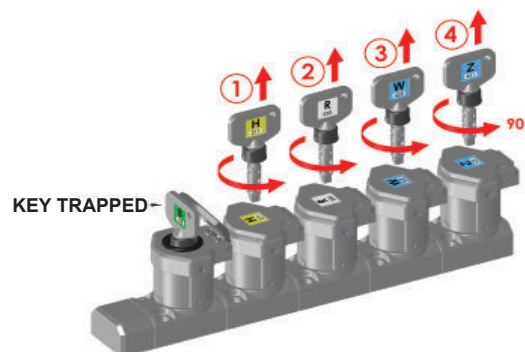
HF = Heavy Duty Flexible Actuator Stainless Steel 316 and Die Cast

HFH = Heavy Duty Flexible fully Stainless Steel 316

SKORPION Trapped Key Interlocking with Key Exchange

KEY EXCHANGE DIE CAST METAL ORDERING:

M-KE-S4



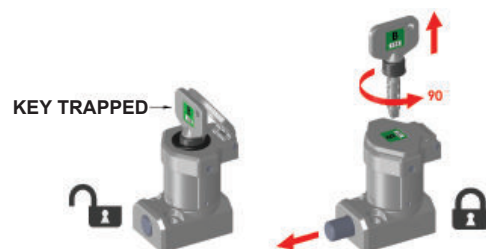
Sales Number	KEY EXCHANGE - DIE CAST METAL (Mirror Polished)		
M-KE-S2	Sequential	2 Key	(First key trapped - 1 released in sequence)
M-KE-S3	Sequential	3 Key	(First key trapped - 2 released in sequence)
M-KE-S4	Sequential	4 Key	(First key trapped - 3 released in sequence)
M-KE-S5	Sequential	5 Key	(First key trapped - 4 released in sequence)

BOLT INTERLOCKS (not suitable for guard access) DIE CAST METAL ORDERING:

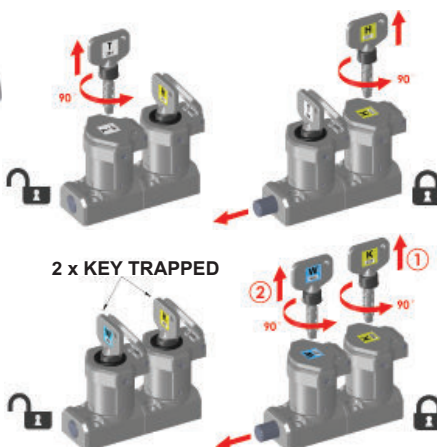
M-BS



Sales Number	BOLT INTERLOCK SINGLE KEY DIE CAST METAL (Mirror Polished)
M-BS	Key trapped - bolt retracted



M-BD-11



Sales Number	BOLT INTERLOCK DUAL KEY DIE CAST METAL (Mirror Polished)
M-BD-11	2 sequential keys - 1 key trapped 1 key free - bolt retracted

Sales Number	BOLT INTERLOCK DUAL KEY DIE CAST METAL (Mirror Polished)
M-BD-20	2 sequential keys trapped - bolt retracted

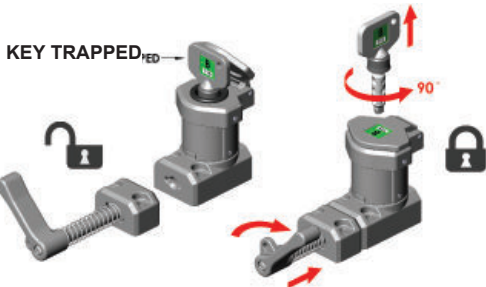
SKORPION Trapped Key Interlocking with Key Exchange

HANDLE INTERLOCKS DIE CAST METAL ORDERING:

M-HS



Sales Number	SINGLE KEY INTERLOCK DIE CAST METAL (Mirror Polished)
M-HS	Key trapped - actuator unlocked (spring action handle)
M-HS-C	Key trapped - actuator unlocked (chain fixed to handle)



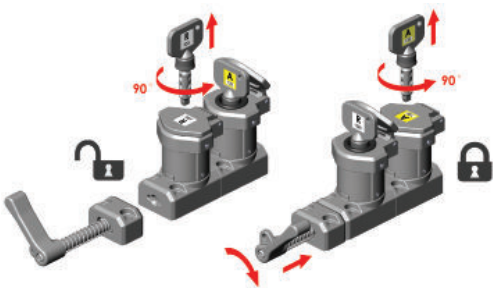
M-HS-C



HANDLE INTERLOCKS (Double Key) DIE CAST METAL ORDERING:

Sales Number	DOUBLE KEY INTERLOCK DIE CAST METAL (Mirror Polished)
M-HD-C-11	2 sequential keys - one key trapped one key free - actuator unlocked (chain fixed to handle)
M-HD-11	2 sequential keys - one key trapped one key free - actuator unlocked (spring action handle)

M-HD-11



M-HD-C-11

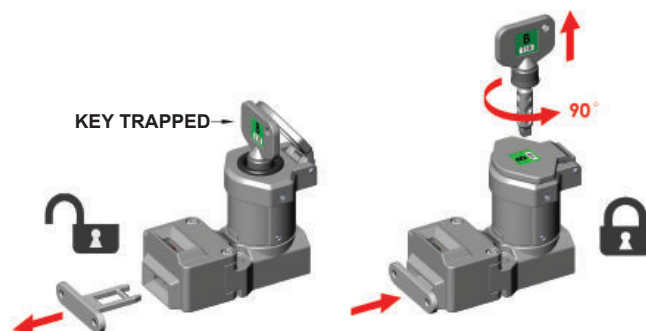
SKORPION Trapped Key Interlocking with Key Exchange

TONGUE INTERLOCKS (Single Key) DIE CAST METAL ORDERING:

M-TS



*See below for Actuator options.



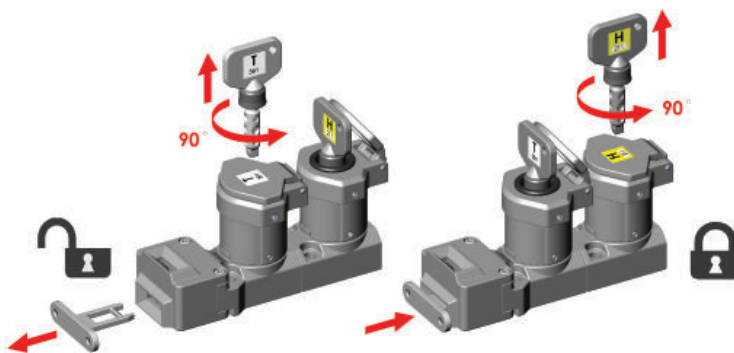
Sales Number	SINGLE KEY INTERLOCK DIE CAST METAL (Mirror Polished)
M-TS	Key trapped - actuator unlocked

TONGUE INTERLOCKS (Double Key) DIE CAST METAL ORDERING:

M-TD-11



*See below for Actuator options.



Sales Number	DUAL KEY INTERLOCK DIE CAST METAL (Mirror Polished)
M-TD-11	2 sequential keys - one key trapped one key free - actuator unlocked

ACTUATORS FOR INTERLOCK SELECTION CHART:



Please see section on Order Form for tongue actuator/key ordering.

- A = Standard Actuator Stainless Steel 316
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 HFH = Heavy Duty Flexible fully Stainless Steel 316

SKORPION Trapped Key Interlocking with Key Exchange

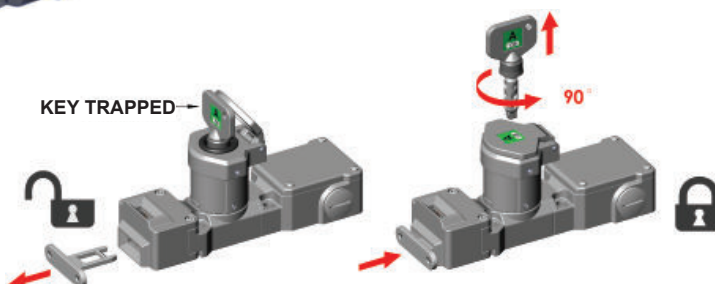
INTERLOCKING WITH CONTROL ISOLATION DIE CAST METAL ORDERING:

M-TS-CB



*See below for Actuator options.

Sales Number	SINGLE KEY INTERLOCK WITH CONTACT BLOCK DIE CAST METAL (Mirror Polished)
M-TS-CB-22	Single Tongue Interlock with 2NC 2NO Contact Block
M-TS-CB-31	Single Tongue Interlock with 3NC 1NO Contact Block



EXPLOSION PROOF INTERLOCKING WITH CONTROL ISOLATION DIE CAST METAL ORDERING:

M-TS-CB EX



*See below for Actuator options.

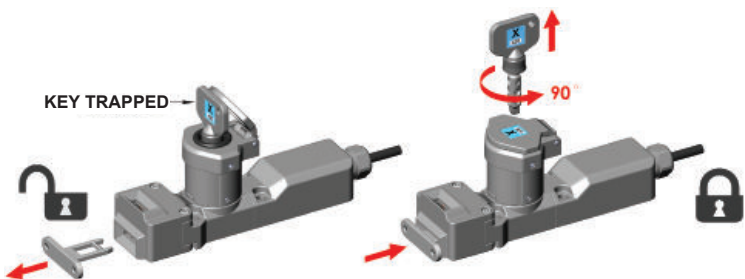


Trapped Key with ATEX EExd IIC T6 certified explosion proof contact blocks.

The explosion proof contact blocks conform to European harmonized standard EN60079-0 and EN60079-1 and can be used in European Zone 1, 2, 21, 22 environments. (Gas and Dust). Adheres to the latest standard ISO13850, Designed for use in oil, petro-chemical, pharmaceutical, food processing and packaging applications where the potential for explosive atmospheres are present.

Exd IIC T6 (-20 ≤ Ta ≤ +60C)

Ex tb IIIC T85C (-20 ≤ Ta ≤ +60C) Db



Sales Number	SINGLE KEY INTERLOCK WITH CONTACT BLOCK DIE CAST METAL (Mirror Polished)
M-TS-CB-22-EX	Single Tongue Interlock with 2NC 2NO Pre-wired EX Block
M-TS-CB-11-EX	Single Tongue Interlock with 1NC 1NO Pre-wired EX Block

ACTUATORS FOR INTERLOCK SELECTION CHART:



Please see section on Order Form for tongue actuator/key ordering.

- A = Standard Actuator Stainless Steel 316
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- HF = Heavy Duty Flexible Actuator Stainless Steel 316 and Die Cast
- HFH = Heavy Duty Flexible fully Stainless Steel 316