

SKORPION Trapped Key Interlocking with Key Exchange

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

ISOLATION



ISB1

KEY EXCHANGE



SS-KE-NS5 shown above
Available with up to 10 Keys

INTERLOCKING



SS-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.



SS-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.



SS-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 version is 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



Power "ON" = Key TRAPPED. Power "OFF" = Key can be RELEASED

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

DIE-CAST (Mirror Finish) 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



Power "ON" = Key TRAPPED. Power "OFF" = Key can be RELEASED

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

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

IP69K CONTROL SWITCH - ISB-CB-M with IP69K Rating:

ISB-CB-M



Power "ON" = Key TRAPPED. Power "OFF" = Key can be RELEASED

STAINLESS STEEL 316 BARREL HOUSING AND DUST CAP	
Sales Number	ISOLATION SWITCH BOX WITH IP69K RATING
SS-ISB-CB-22-M	2NC 2NO Contact Block 240V 3A max. M20
SS-ISB-CB-31-M	3NC 1NO Contact Block 240V 3A max. M20
SS-ISB-CB-40-M	4NC Contact Block 240V 3A max. M20

DIE CAST (Mirror Finish) BARREL HOUSING AND DUST CAP	
Sales Number	ISOLATION SWITCH BOX WITH IP69K RATING
M-ISB-CB-22-M	2NC 2NO Contact Block 240V 3A max. M20
M-ISB-CB-31-M	3NC 1NO Contact Block 240V 3A max. M20
M-ISB-CB-40-M	4NC Contact Block 240V 3A max. M20

EXPLOSION PROOF CONTROL SWITCH - ISB-CB-EX (IECEx/ATEX Internal Switch):

ISB-CB-EX

- Exd IIC T6 (-20 ≤ Ta ≤ +60C)
- Ex tb IIIC T85C (-20 ≤ Ta ≤ +60C) Db



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).

Power "ON" = Key TRAPPED. Power "OFF" = Key can be RELEASED

STAINLESS STEEL 316 BARREL HOUSING AND DUST CAP	
Sales Number	ISOLATION SWITCH BOX WITH EXPLOSION PROOF CONTACT BLOCK
SS-ISB-CB-22-EX	2NC 2NO (pre-wired 3m cable) 250V 2.5A max.
SS-ISB-CB-11-EX	1NC 1NO (pre-wired 3m cable) 250V 4.0A max.
SS-ISB-CB-20-EX	2NC (pre-wired 3m cable) 250V 4.0A max.

DIE CAST (Mirror Finish) BARREL HOUSING AND DUST CAP	
Sales Number	ISOLATION SWITCH BOX WITH EXPLOSION PROOF CONTACT BLOCK
M-ISB-CB-22-EX	2NC 2NO (pre-wired 3m cable) 250V 2.5A max.
M-ISB-CB-11-EX	1NC 1NO (pre-wired 3m cable) 250V 4.0A max.
M-ISB-CB-20-EX	2NC (pre-wired 3m cable) 250V 4.0A max.



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ISOLATION SWITCH PANEL MOUNT - ISP:

ISP



Power "ON" = Key TRAPPED. Power "OFF" = Key can be RELEASED

STAINLESS STEEL 316 BARREL HOUSING AND DUST CAP

Sales Number	ISOLATION SWITCH PANEL MOUNT RATING		
SS-ISP-25	25A	690V	4 pole
SS-ISP-40	40A	690V	4 pole
SS-ISP-63	63A	690V	4 pole

DIE CAST (Mirror Finish) BARREL HOUSING AND DUST CAP

Sales Number	ISOLATION SWITCH PANEL MOUNT RATING		
M-ISP-25	25A	690V	4 pole
M-ISP-40	40A	690V	4 pole
M-ISP-63	63A	690V	4 pole

AUXILIARY SIGNAL CONTACT BLOCK

Sales Number	AUXILIARY SIGNAL CONTACT BLOCK		
AUX-ISP	1NC+1NO	AC-15	6A 230V/4A 415V)

ISOLATION SWITCH WITH SOLENOID CONTROL (PANEL MOUNT) - ISP-SKR:

ISP-SKR



Fitted with RED/GREEN status lamps.

In addition to the 4 pole main Isolator Contacts, all models of the isolation switch ISP-SKR are supplied with:

RED lamp wired to indicate Solenoid energized.

GREEN lamp for end user designation.

2NC 1NO monitoring contact block.

Solenoid energised to release key.

Power "ON" = Key TRAPPED. Power "OFF" = Key can be RELEASED

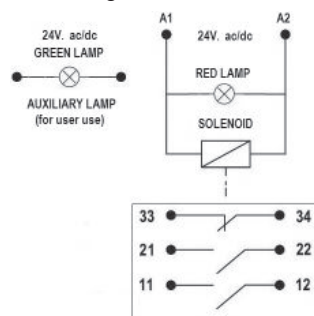
STAINLESS STEEL 316 BARREL HOUSING AND DUST CAP

Sales Number	ISOLATION SWITCH PANEL MOUNT SOLENOID KEY RELEASE RATING		
SS-ISP-SKR-25	25A	690V	4 pole
SS-ISP-SKR-40	40A	690V	4 pole
SS-ISP-SKR-63	63A	690V	4 pole

DIE CAST (Mirror Finish) BARREL HOUSING AND DUST CAP

Sales Number	ISOLATION SWITCH PANEL MOUNT SOLENOID KEY RELEASE RATING		
M-ISP-SKR-25	25A	690V	4 pole
M-ISP-SKR-40	40A	690V	4 pole
M-ISP-SKR-63	63A	690V	4 pole

Monitoring Contacts:



MONITORING CONNECTION TERMINALS

Terminals	Description	RATING
A1 A2	Solenoid voltage 24V ac/dc	-
11 12	Closed when key is trapped and solenoid de-energized. Open when solenoid is energized – trapped open if key removed.	230V 3A
21 22	Closed when key is trapped and solenoid de-energized. Open when solenoid is energized – trapped open if key removed.	230V 3A
33 34	Open when solenoid is key is trapped. Closed when solenoid is energized – trapped open if key removed.	230V 3A
24V Auxiliary Lamp	3mm spade terminal - GREEN (not connected).	-

ACCESSORY: AUXILIARY SIGNAL CONTACT BLOCK: AUX-SP



Optional Auxiliary Signal Contact Block to indicate isolator status.

Fits to all ISP-SKR and ISP isolation switch panel mount.

AUXILIARY CONTACT BLOCK

Sales Number	AUXILIARY CONTACT BLOCK		
AUX-ISP	1NC+1NO	AC-15	6A 230V/4A 415V)