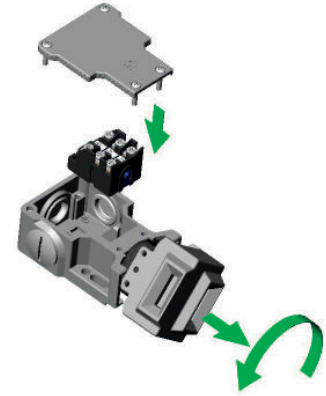
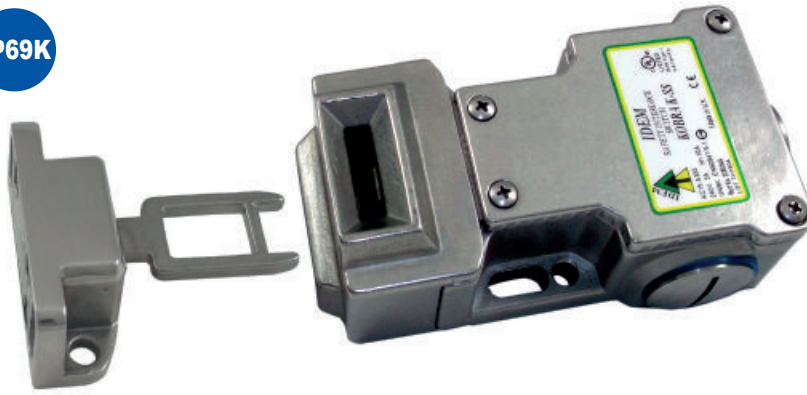


# KOBRA - Stainless Steel Switch Type: HYGIECAM K-SS

## FEATURES:

IP69K



IDEM's HYGIECAM Series of Interlock Switches have a rugged Stainless Steel 316 body and have been designed to cope with the rigorous applications of the Food Processing, Pharmaceutical, Packaging and Petro-Chemical Industries.

They have IP69K enclosure protection (maintained by a double seal lid gasket and seals) and can be high pressure hosed with detergent at high pressure and high temperature.

Designed to fit to the leading edge of sliding, hinged or lift off machine guards. They provide a forced disconnect of the safety contacts at the withdrawal of the actuator and have an anti-tamper mechanism.

The head can be rotated to give 4 actuator entry positions. For extra durability, Flexible Actuators are available.

Contact blocks are replaceable with optional explosion proof versions.

They are sealed to IP69K and survive most caustic wash down solutions.

The head can be rotated to give 4 actuator entry positions.

Designed with a removable lid to fit replaceable contact blocks.

For extra durability flexible actuators are available.

## FUNCTIONAL SPECIFICATIONS:

Positive Break Contacts to EN60947-5-1

High Functional Safety to ISO13849-1

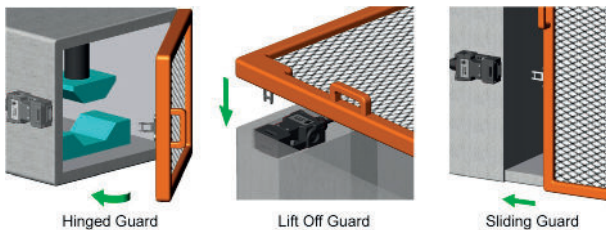
3 pole, 4 pole or Explosion Proof Contact Blocks

Stainless Steel 316 Body and External Fixings

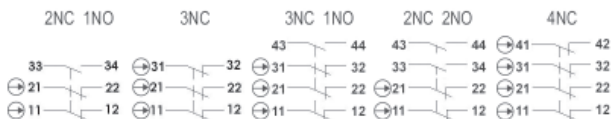
Connects to most Safety Relays to give up to PLe Cat.4

Industry Standard Housing - will fit on 40mm fixing centres

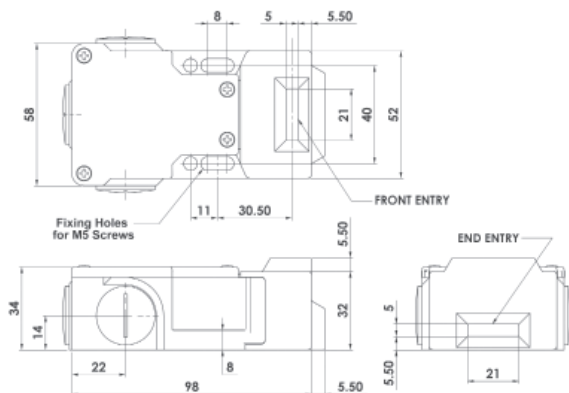
IP69K - suitable for SIP and CIP Processes



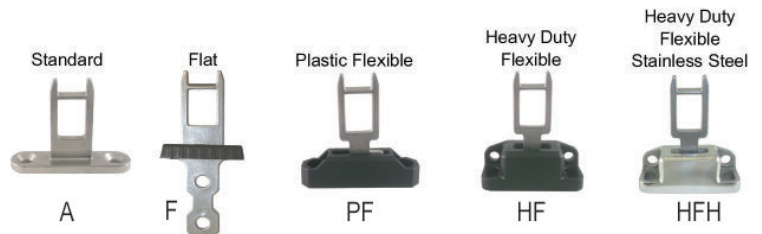
## CONTACT BLOCK OPTIONS:



## DIMENSIONS:



## ACTUATOR OPTIONS (see p76)



## PRE-WIRED EXPLOSION PROOF:



### CLASSIFICATION:

Exd IIC T6 (-20 ≤ Ta ≤ +60C) Gb

Ex tb IIIC T85C (-20 ≤ Ta ≤ +60C) Db

**Standards:** ISO14119 EN60947-5-1 EN60204-1  
ISO13849-1 EN62061 UL508

### Safety Classification and Reliability Data:

Mechanical Reliability B10d	2.5 x 10 <sup>6</sup> operations at 100mA load
ISO13849-1	Up to PLe depending upon system architecture
EN62061	Up to SIL3 depending upon system architecture
Safety Data – Annual Usage	8 cycles per hour/24 hours per day/365 days
PFFhd	3.44 x 10 <sup>8</sup>
Proof Test Interval (Life)	35 years
MTTFd	356 years
Utilization Category	AC15 A300 3A
Thermal Current (Ith)	5A
Rated Insulation/Withstand Voltages	500Vac/2500Vac
Travel for Positive Opening	8mm
Actuator Entry Minimum Radius	175mm Standard 100mm Flexible
Maximum Approach/Withdrawal Speed	600mm/s
Body Material	Stainless Steel 316
Head Material	Stainless Steel 316
Enclosure Protection	IP67 IP69K
Operating Temperature	-25C +80C
Vibration	IEC 68-2-6 10-55Hz + 1Hz Excursion 0.35mm 1 octave/min
Conduit Entry	Various (See Sales Number)
Fixing	4 x M5

# KOBRA - Stainless Steel Switch Type: HYGIECAM K-SS

## CONTACT OPERATION AT WITHDRAWAL OF ACTUATOR



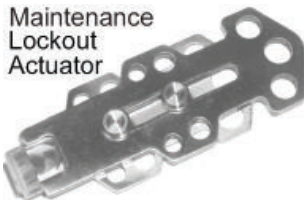
2NC	1NO	6.8	6.0	0mm
11/12	Open			
21/22	Open			
33/34			Open	

3NC	1NO	6.8	6.0	0mm
11/12	Open			
21/22	Open			
31/32	Open			
43/44			Open	

4NC	6.0	0mm
11/12	Open	
21/22	Open	
31/32	Open	
41/42	Open	

2NC	2NO	6.8	6.0	0mm
11/12	Open			
21/22	Open			
33/34			Open	
43/44			Open	

## ACCESSORIES (see p70-75)



Fits to switch aperture during maintenance and provides multiple padlock holes.

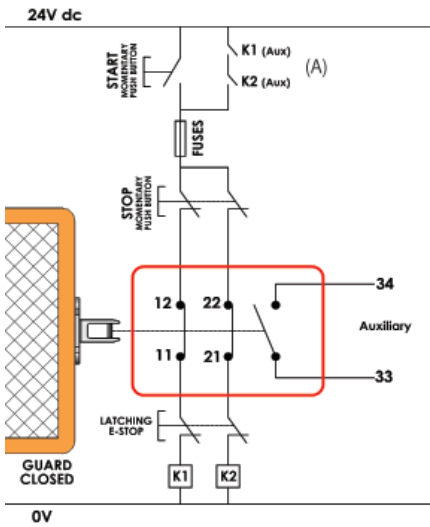


Flat Actuator supplied with 300mm (12") chain. Can be used where poor alignment exists and provides manual insertion of actuator by operator.



2 colour LED (3 wires) Steady Red and Steady Green. Fits to conduit entry and provides option for LED indication based upon switch contacts.

## APPLICATION EXAMPLE



### Guard Door Interlocked - Dual Channel (Non Monitored)

This system shows interlock switch circuits 11-12 and 21-22 configured to allow direct feed to contactor coils K1 and K2.

This provides Dual Channel wiring and a check of the contactor feedback circuits through the auxiliary contacts (A) of K1 and K2.

Opening the interlock switch or depressing the Emergency Stop will isolate power to the contactor coils.

Re-start can only occur providing the Guard is closed, and the Emergency Stop is reset.

The system is shown with the Machine Stopped, the Guard Closed and the contactors able to be energised.

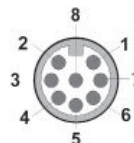
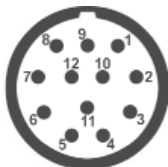
STAINLESS STEEL 316 GLAND	SALES NUMBER
M20	140120
1/2" NPT	140121



IDEM recommend using our Stainless Steel 316 Gland with this switch.



FEMALE QC LEADS	LENGTH	SALES NUMBER
M12 8 Way	5m (15ft)	140101
M12 8 Way	10m (30ft)	140102
M23 12 Way	5m (15ft)	140143
M23 12 Way	10m (30ft)	140144



Quick Connect (QC) M23 12 Way Male (connector length 26mm) Pin View from Switch	Switch Circuit	Quick Connect (QC) M12 8 Way Male (on Flying Lead 250mm) Pin View from Switch
1 3	11/12	1 7
4 6	21/22	6 5
7 8	33/34 or 31/32	4 3
9 10	41/42 or 43/44	
12	Earth	8

SALES NUMBER	CONTACTS	M20	1/2" NPT	QC M23 12 WAY	QC M12 8 WAY
Kobra K-SS Switch	2NC 1NO	208001	208002	208003	208021
Kobra K-SS Switch	3NC	208004	208005	208006	208022
Kobra K-SS Switch	3NC 1NO	208007	208008	208009	
Kobra K-SS Switch	2NC 2NO	208010	208011	208012	
Kobra K-SS Switch	4NC	208013	208014	208015	
Kobra K-SS Switch	1NC 1NO Ex	208016		3m 4 Core Ex	
Kobra K-SS Switch	2NC Ex	208019		3m 4 Core Ex	
Kobra K-SS Switch	2NC 2NO Ex	208026		3m 8 Core Ex	
Actuator	Standard	Add A	to Sales Part Number		
Actuator	Flat	Add F	to Sales Part Number		
Actuator	Plastic Flexible	Add PF	to Sales Part Number		
Actuator	Heavy Duty Flexible	Add HF	to Sales Part Number		
Actuator	Heavy Duty S/Steel	Add HFH	to Sales Part Number		
Actuator Holding 40N (3 pole versions only)		Add 40N to Sales Part Number			

Ordering example: Kobra K-SS M20 3NC 1NO with Standard Actuator:

Sales Number: 208007-A

Gold Plated Contacts available for low power circuits (5V 5mA).

Add GC to Sales Number e.g. 208001-A-GC

For all IDEM switches the normally closed (NC) circuits are closed when the guard is closed actuator inserted.

Also available with 3NO Contacts for use as indication purposes only. Please contact us for further information.