

KOBRA - Stainless Steel Switch Type: HYGIECAM MK1-SS

FEATURES:

IDEM's new MK1-SS Compact Safety Interlock switches are designed to provide position interlock detection for small moving guards.

They are designed to fit to the leading edge of sliding, hinged or lift off machine guards.

Mirror polished surface finish to RA10 makes the MK1-SS ideally suited to the food processing and packaging environments.

The rugged Stainless Steel actuator profile is designed to match a cam mechanism to provide a positively operated not easily defeatable interlock mechanism.

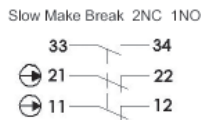
The compact body, 30mm wide with 22mm fixing centres and rotatable head make them easy to install where space is restricted.

The rotatable heads have dual actuator entry positions to give up to 8 different entry positions.

A Plastic Flexible Actuator is available for tight radius guards.

Contact blocks are replaceable.

CONTACT BLOCK OPTIONS:



FUNCTIONAL SPECIFICATIONS:

Positive Break Contacts to EN60947-5-1

High Functional Safety to ISO13849-1

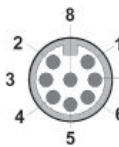
3 pole

Stainless Steel Head version available

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

Industry Standard Fitting:

98mm long 30mm wide 22mm fixing



Switch Circuit	Quick Connect (QC) M12 8 Way Male (on Flying Lead 250mm) Pin View from Switch
11/12	1 7
21/22	6 5
33/34	4 3



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



IP69K



ACTUATOR OPTIONS:

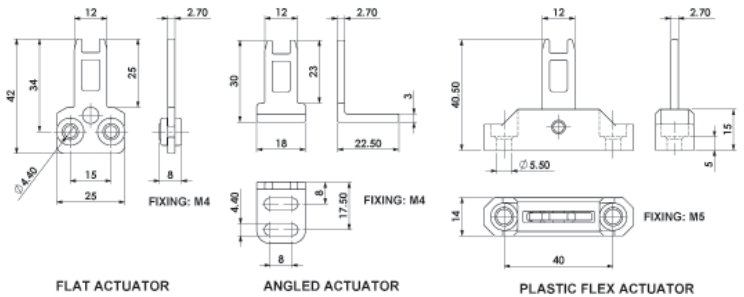
Angled

Flat

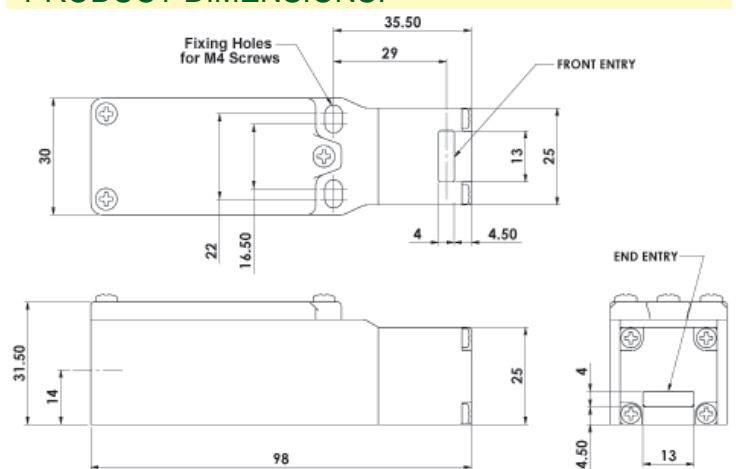
Plastic Flexible



ACTUATOR DIMENSIONS:



PRODUCT DIMENSIONS:



PRODUCT	CONTACTS	SALES NUMBER		
		M20	1/2" NPT	QC M12 8 WAY
MK1-SS Switch	2NC 1NO	224001	224002	224003
Actuator	Flat	Add F to Sales Number		
Actuator	Angled	Add A to Sales Number		
Actuator	Plastic Flexible	Add PF to Sales Number		

Gold Plated Contacts available for low power circuits (5V 5mA).
Add GC to Sales Number e.g. 224001-GC

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CONTACT OPERATION AT WITHDRAWAL OF ACTUATOR:



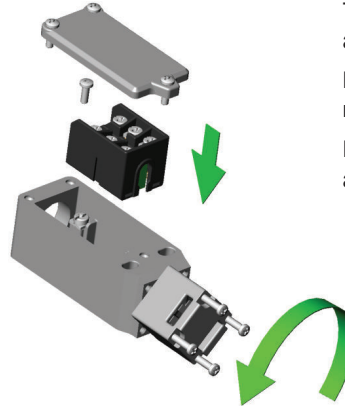
2NC 1NO 4.5 4.0 0mm

11/12	Open	
21/22	Open	
33/34		Open



Stainless Steel Guide:
To assist with guard alignment IDEM recommend that you use the Stainless Steel Guide accessory.

See p153 for Sales Number.

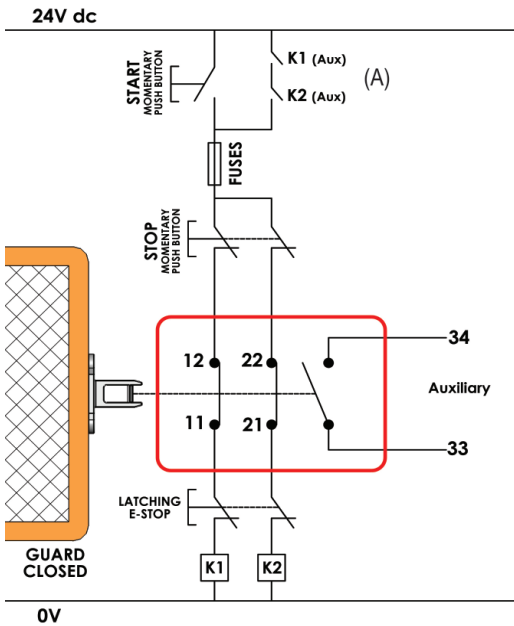


The head can be rotated to give 8 actuator entry positions.

Designed with a removable lid to fit replaceable contact blocks.

For extra durability flexible actuators are available.

APPLICATION EXAMPLE



Guard Door Interlocked - Dual Channel (Non Monitored)

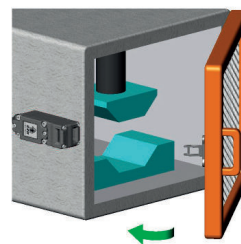
This system shows interlock switch circuits 11-12 and 21-22 configured to allow direct feed to contactor coils K1 and K2.

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

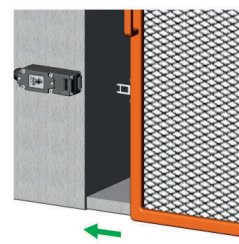
Opening the interlock switch or depressing the Emergency Stop will isolate power to the contactor coils.

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

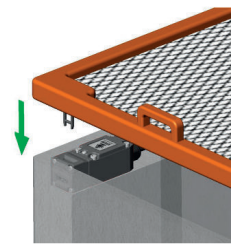
The system is shown with the Machine Stopped, the Guard Closed and the contactors able to be energised.



Hinged Guard



Sliding Guard



Lift Off Guard

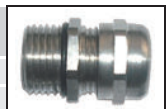
Standards: EN1088 EN60947-5-1 EN60204-1
ISO13849-1 EN62061 EN954-1 UL508

Safety Classification and Reliability Data:

Mechanical Reliability B10d	2.5 x 10 ⁶ operations at 100mA load
EN954-1	Up to Category 4 with Safety Relay
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
PFHd	3.44 x 10 ⁻⁸
Proof Test Interval (Life)	35 years
MTTFd	356 years
Utilization Category	AC15 A300 3A
Thermal Current	5A
Rated Insulation/Withstand Voltages	600Vac/2500Vac
Travel for Positive Opening	6mm
Actuator Entry Minimum Radius	150mm Standard 100mm Flexible
Maximum Approach/Withdrawal Speed	600mm/s
Body Material	Stainless Steel 316 (mirror polished finish)
Enclosure Protection	IP69K
Vibration	IEC 68-2-6 10-55Hz + 1Hz
Conduit Entry	Excursion 0.35mm 1 octave/min
Fixing	Various (See Sales Number)
Mounting Position	2 x M4
	Any

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

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



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