

# KOBRA - Tongue Operated Switch Type: KP

## FEATURES:



IDEM KP Interlock switches are designed to provide position interlock detection for moving guards.

They are 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 not easily defeatable mechanism.

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

Contact blocks are replaceable with optional explosion proof versions. They are sealed to IP67 and survive most wash down solutions due to the high specification materials.

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

Designed with a hinged lid to fit replaceable contact blocks.

Flexible actuators are available and the KP is available with a Stainless Steel head.

## FUNCTIONAL SPECIFICATIONS:

Positive Break Contacts to EN60947-5-1

High Functional Safety to ISO13849-1

3 pole, 4 pole or Explosion Proof Contact Blocks

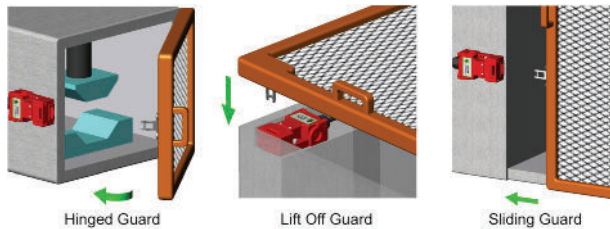
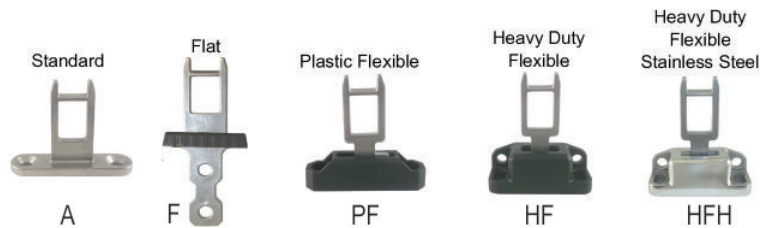
Stainless Steel Head version available

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

Industry Standard Fitting:

52mm wide 98mm long 40mm fixing

## ACTUATOR OPTIONS (see p100)



## PRE-WIRED EXPLOSION PROOF:

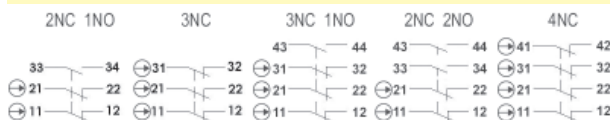


CLASSIFICATION:

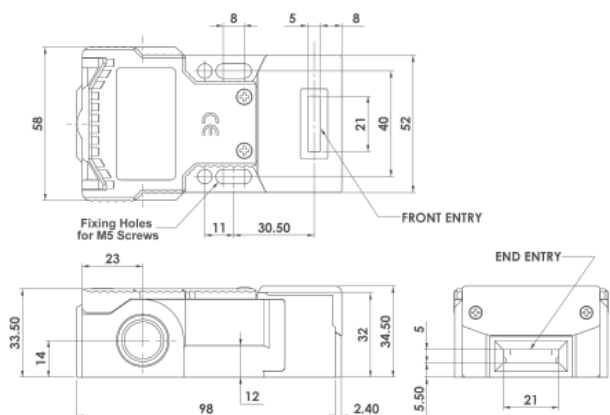
Exd IIC T6 (-20 ≤ Ta ≤ +60C) Gb

Ex tb IIIC T85C (-20 ≤ Ta ≤ +60C) Db

## CONTACT BLOCK OPTIONS:



## DIMENSIONS:



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
	MTTFd 356 years
Utilization Category	AC15 A300 3A
Thermal Current (Ith)	10A
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	Polyester
Head Material	Polyester or Stainless Steel 316
Enclosure Protection	IP67
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	2 x M5

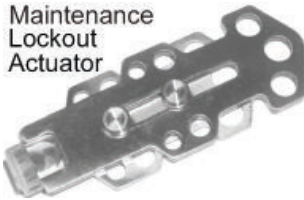
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## CONTACT OPERATION AT WITHDRAWAL OF ACTUATOR



2NC 1NO 6.8 6.0 0mm			3NC 1NO 6.8 6.0 0mm			4NC 6.0 0mm			2NC 2NO 6.8 6.0 0mm		
11/12	Open		11/12	Open		11/12	Open		11/12	Open	
21/22	Open		21/22	Open		21/22	Open		21/22	Open	
33/34		Open	31/32	Open		31/32	Open		33/34		Open
			43/44		Open	41/42	Open		43/44		Open

## ACCESSORIES (see p100-101)



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

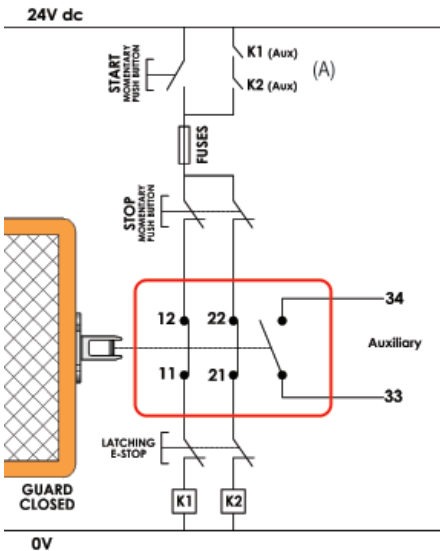


Flat Actuator supplied with 300mm (12") chain. Can be used where poor alignment exists and provides manual insertion of actuator by operator.



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)

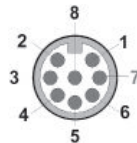
This system shows interlock switch circuits 11-12 and 21-22 configured to allow direct feed to contactor coils K1 and K2.

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.



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 or 31/32	4 3
41/42 or 43/44	8 2

SALES NUMBER	CONTACTS	M20	1/2" NPT	QC M12 8 WAY
Kobra KP Switch	2NC 1NO	200001	200002	200021
Kobra KP Switch	3NC	200004	200005	200022
Kobra KP Switch	3NC 1NO	200007	200008	200023
Kobra KP Switch	2NC 2NO	200010	200011	200024
Kobra KP Switch	4NC	200013	200014	200025
Kobra KP Switch	1NC 1NO Ex	200016	3m 4 Core Ex	
Kobra KP Switch	2NC Ex	200019	3m 4 Core Ex	
Kobra KP Switch	2NC 2NO Ex	200026	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	
	Stainless Steel Head Version	Add SS	to Sales Part Number	
	Actuator Holding 40N (3 pole version only)	Add 40N	to Sales Part Number	

Ordering example: Kobra KP M20 2NC 1NO with Stainless Steel Head and Heavy Duty Flexible Actuator Sales Number: 200001-HF-SS  
Gold Plated Contacts available for low power circuits (5V 5mA).  
Add GC to Sales Number e.g. 200001-A-GC

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

SALES NUMBER	CONTACTS	M20
Kobra KP Switch	3NO	200030



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

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