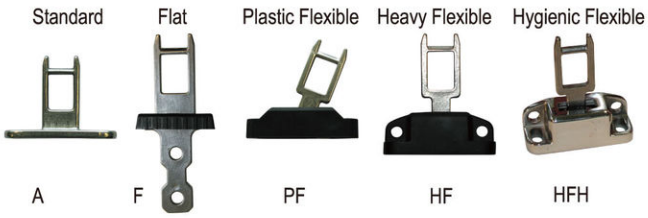
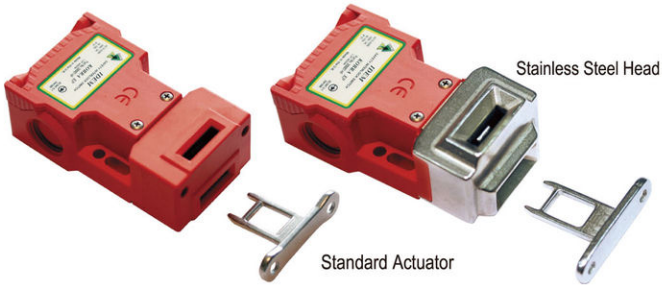
# Kobra - Tongue Switches - Type: KP & KP-SS

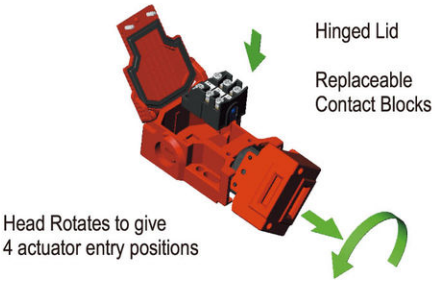
IDEM KP Interlock switches are designed to provide position interlock detection for moving guards.

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 mechanism.

Actuator options (See Page 51)




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 material specification.




**Functional Specification:**

Positive break contacts to IEC 60947-5-1

High Functional Safety to ISO 13849-1

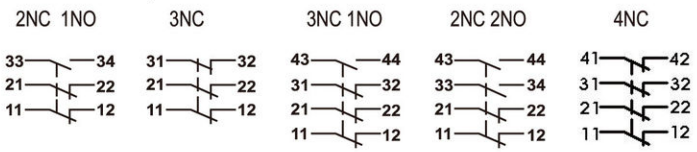
3 pole, 4 pole or Explosion Proof Contact Blocks

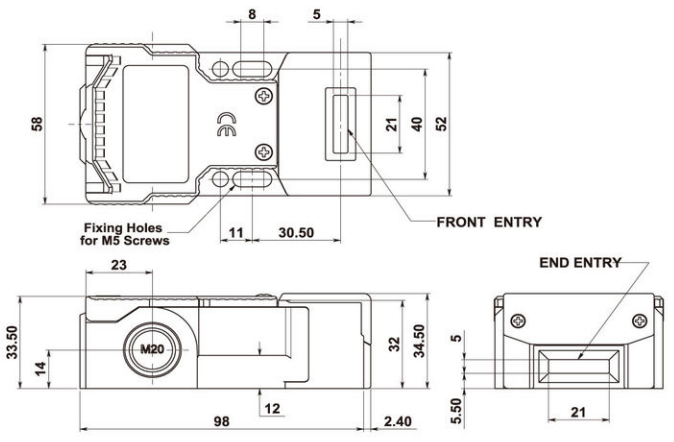
Stainless Steel Head version available

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

Industry Fitting 52mm wide 98mm long 40mm fixing

Contact Block Options:




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

Pre-Wired Explosion Proof



| | |
|---|---|
| Classification | Exd IIC T6 (-20⩽Ta⩽+60C) Gb<br>Ex tb IIIC T85C (-20⩽Ta⩽+60C) Db |
| Standards | EN1088 IEC 60947-5-1 EN 60204-1<br>ISO 13849-1 EN62061 EN 954-1 UL508 |

Safety Classification and Reliability Data:

| | |
|---|---|
| Mechanical Reliability B10d | 2.5 x $10^6$ operations at 100mA load |
| EN 954-1 | up to Category 4 with Safety Relay |
| ISO 13849-1 | up to PLe depending upon system architecture |
| EN 62061 | 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 (Ith) | 5A |
| Rated Insulation / Withstand Voltages | 500VAC / 2500 VAC |
| 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,<br>Excursion: 0.35mm, 1 octave/min |
| Conduit Entry | Various (See Sales Part Numbers) |
| Fixing | 2 x M5 |

# Kobra - Tongue Switches - Type: KP & KP-SS

Contact operation at withdrawal of Actuator

2NC 1NO — 6.8 6.0 0 mm

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

3NC (1NO) — 6.8 6.0 0 mm

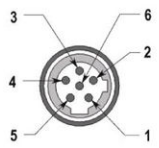
| | | |
|---|---|---|
| 11/12 | Open | |
| 21/22 | Open | |
| 31/32 | Open | |
| 43/44 | | Open |

4NC — 6.0 0 mm

| | | |
|---|---|---|
| 11/12 | Open | |
| 21/22 | Open | |
| 31/32 | Open | |
| 41/42 | Open | |

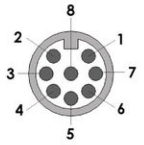
2NC 2NO — 6.8 6.0 0 mm

| | | |
|---|---|---|
| 11/12 | Open | |
| 21/22 | Open | |
| 33/34 | | Open |
| 43/44 | | Open |




QC Quick Connect Versions

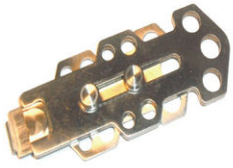
Quick Connect
Pin view from switch




| Quick Connect (QC) ½" UNF 6 Way Male (connector length 14mm) | Switch Circuit | Quick Connect (QC) M12 8 Way Male (on Flying Lead 250mm) Pin view from switch |
|---|---|---|
| 1 5 | 11 / 12 | 1 7 |
| 2 6 | 21 / 22 | 6 5 |
| 3 4 | 33 / 34 or 31 / 32 | 4 3 |
| | 41 / 42 or 43 / 44 | 8 2 |

Accessories: (See Page 50)

Maintenance Lockout Actuator



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

Actuator with chain



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

2 Colour LED Conduit Beacon
(Available voltages 24Vdc 110Vac 230Vac and M20 or ½" NPT)



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

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

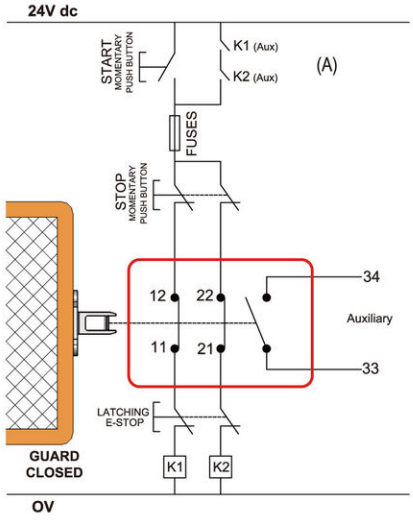
### Application Example:

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 E Stop will isolate power to the contactor coils.

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

System is shown with machine stopped, guard closed and the contactors able to be energised.




| Female QC Leads | Length | Sales Number |
|---|---|---|
| M12 8 Way | 5m. (15Ft.) | 140101 |
| M12 8 Way | 10m. (30Ft.) | 140102 |
| ½" UNF | 2m. (6Ft.) | 140141 |
| ½" UNF | 5m. (15Ft.) | 140142 |



| Sales Numbers | Contacts | M20 | ½"NPT | QC ½" UNF 6 way | QC M12 8 Way |
|---|---|---|---|---|---|
| Kobra KP Switch | 2NC 1NO | 200001 | 200002 | 200003 | 200021 |
| Kobra KP Switch | 3NC | 200004 | 200005 | 200006 | 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 versions only) | | Add 40N to Part Number | | | |

**Ordering Example: Kobra KP M20 3NC with Stainless Steel Head and Heavy Duty Flexible Actuator Part No. 200004-HF-SS**

**Gold Plated Contacts available for low power circuits (5V. 5mA). Add GC to Part Number e.g. 200001-A-GC**

# Kobra Metal - Tongue Switches - Type: KM

IDEM KM Interlock switches are designed to provide position interlock detection for medium to heavy duty moving guards.

They have robust die-cast housings and 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 mechanism.




The rotatable heads have dual actuator entry positions to give up to 8 different entry positions. For extra durability, Flexible Actuators and Stainless Steel head versions are available.

Contact blocks are replaceable with optional explosion proof versions. High holding force versions are available for applications where vibration can be a nuisance.

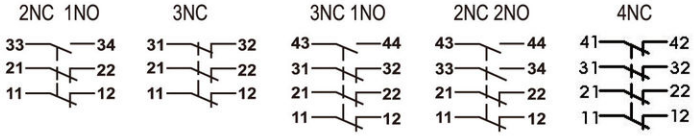
**Functional Specification:**

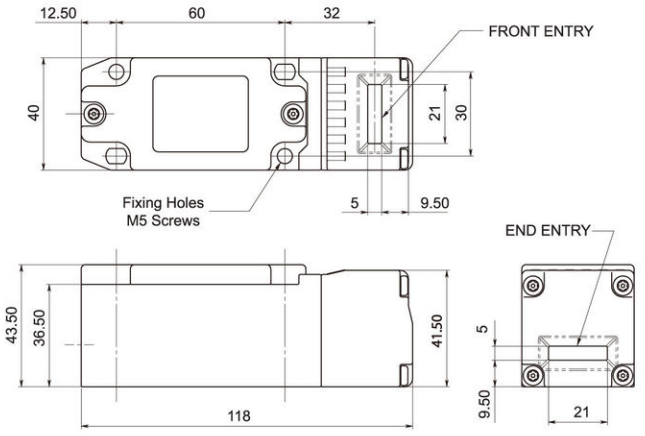
Positive break contacts to IEC 60947-5-1

High Functional Safety to ISO 13849-1

3 pole, 4 pole or Explosion Proof Contact Blocks

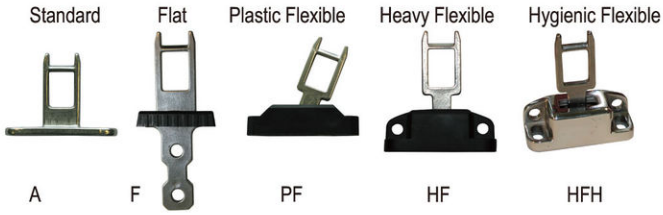
Contact Block Options:

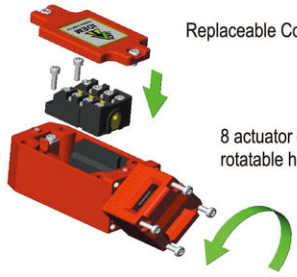



For all IDEM switches the normally closed (NC) circuits are closed when the guard is closed actuator inserted.

Actuator options (See Page 51)







Stainless Steel Head version available

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

Industry Fitting 118mm long 40mm wide 30mm fixing

Pre-Wired Explosion Proof



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

| | |
|---|---|
| Standards | EN1088 IEC 60947-5-1 EN 60204-1 ISO 13849-1 EN62061 EN 954-1 UL508 |
| Safety Classification and Reliability Data: | |
| Mechanical Reliability B10d | 2.5 x $10^6$ operations at 100mA load |
| EN 954-1 | up to Category 4 with Safety Relay |
| ISO 13849-1 | up to PLe depending upon system architecture |
| EN 62061 | 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 (Ith) | 5A |
| Rated Insulation / Withstand Voltages | 500VAC / 2500 VAC |
| Travel for Positive Opening | 8mm |
| Actuator entry minimum radius | 175mm Standard 100mm Flexible |
| Maximum Approach / Withdrawal speed | 600mm/s. |
| Body Material | Die Cast Painted Red |
| Head Material | Die Cast Painted Red 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 Part Numbers) |
| Fixing | 4 x M5 |

# Kobra Metal - Tongue Switches - Type: KM

Contact operation at withdrawal of Actuator

2NC 1NO — 6.8 6.0 0 mm

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

3NC (1NO) — 6.8 6.0 0 mm

| | | |
|---|---|---|
| 11/12 | Open | |
| 21/22 | Open | |
| 31/32 | Open | |
| 43/44 | | Open |

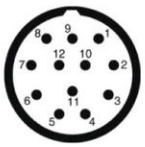
4NC — 6.0 0 mm

| | | |
|---|---|---|
| 11/12 | Open | |
| 21/22 | Open | |
| 31/32 | Open | |
| 41/42 | Open | |

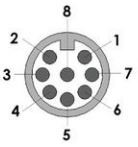
2NC 2NO — 6.8 6.0 0 mm

| | | |
|---|---|---|
| 11/12 | Open | |
| 21/22 | Open | |
| 33/34 | | Open |
| 43/44 | | Open |

QC Quick Connect Versions



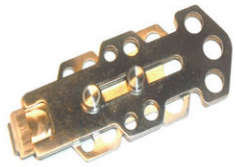

Quick Connect
Pin view from switch




| 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 |

Accessories: (See Page 50)

Maintenance Lockout Actuator



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

Actuator with chain



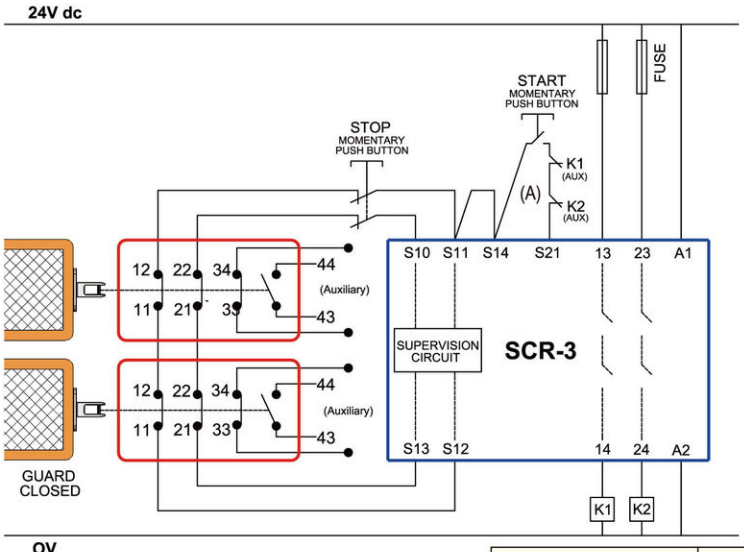
Flat Actuator supplied with 300mm (12 inch) chain. Can be used where poor alignment exists and provides manual insertion of actuator by operator.

2 Colour LED Conduit Beacon
(Available voltages 24Vdc 110Vac 230Vac and M20 or ½" NPT)



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

**Application Example:** **Multiple Guard Door Interlocks - Dual Channel (Monitored)**




The switch contacts 11-12 and 21-22 from each switch are wired in series to an SCR-3 Safety Relay to monitor for wiring short circuits.
This provides Dual Channel monitoring and a check of the contactor feedback circuits through the auxiliary contacts (A) of K1 and K2.
The SCR-3 monitors the switch and the contactors K1 and K2 and provides its own self-monitoring via force guided internal relays.

System is shown with machine stopped, guards closed and the contactors able to be energised.

| 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 |



| Sales Number | Contacts | M20 | ½"NPT | QC M23 | QC M12 8 Way |
|---|---|---|---|---|---|
| Kobra KM Switch | 2NC 1NO | 203001 | 203002 | 203003 | 203021 |
| Kobra KM Switch | 3NC | 203004 | 203005 | 203006 | 203022 |
| Kobra KM Switch | 3NC 1NO | 203007 | 203008 | 203009 | |
| Kobra KM Switch | 2NC 2NO | 203010 | 203011 | 203012 | |
| Kobra KM Switch | 4NC | 203013 | 203014 | 203015 | |
| Kobra KM Switch | 1NC 1NO Ex | 203016 | 3m. 4 core Ex | | |
| Kobra KM Switch | 2NC Ex | 203019 | 3m. 4 core Ex | | |
| Kobra KM Switch | 2NC 2NO Ex | 203026 | 3m. 8 core Ex | | |
| Kobra Actuator | Standard | Add A to Sales Part Number | | | |
| Kobra Actuator | Flat | Add F to Sales Part Number | | | |
| Kobra Actuator | Plastic Flexible | Add PF to Sales Part Number | | | |
| Kobra Actuator | Heavy Duty Flexible | Add HF to Sales Part Number | | | |
| Kobra 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 versions only) | | Add 40N to Part Number | | | |

**Ordering Example: Kobra KM M20 2NC 1NO with Heavy Flexible Actuator Part No. 203001- HF**

**Gold Plated Contacts available for low power circuits (5V. 5mA). Add GC to Part Number e.g. 203001-A-GC**

# Kobra Stainless Steel Switch Type: HYGIECAM KM-SS

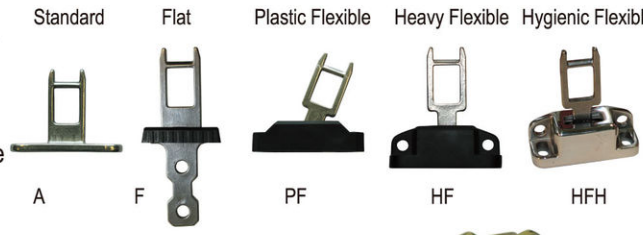
HYGIECAM Series Interlock Switches have a rugged Stainless Steel 316 body and have been designed to cope with the rigorous applications of the Food Processing and Packaging Industries. The surface finish is mirror polished to Ra10 to resist the accumulation of food debris and is suitable for high pressure hosing at high temperature.

They offer a compact slimline housing which will fit to areas where there are space resitrictions and are sealed to IP69K enclosure protection.They can be high pressure hosed with most detergents at high temperature.

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 mechanism.

The rotatable heads have dual actuator entry positions to give up to 8 different entry positions. High holding force versions are available for applications where vibration can be a nuisance.

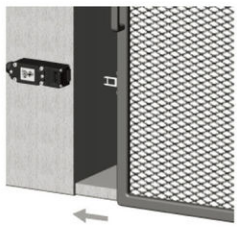
Actuator options (See Page 51)

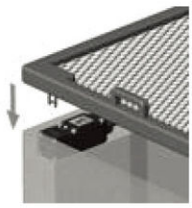







Hinged Guard


Sliding Guard


Lift off Guard

They offer up to 4 pole contacts to suit modern control circuits and are available with Explosion Proof contact blocks.

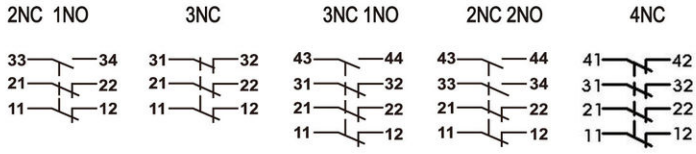
**Functional Specification:**

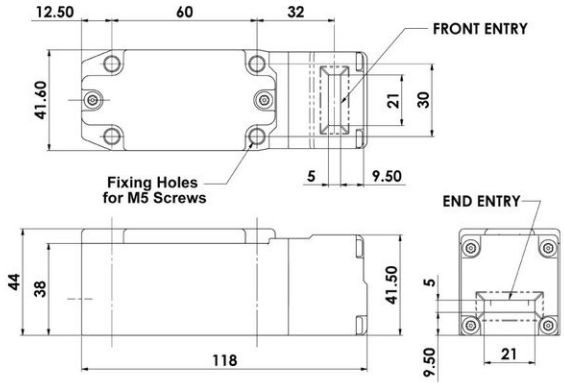
Positive break contacts to IEC 60947-5-1

High Functional Safety to ISO 13849-1

Will fit on 30mm fixing centres –DIN standard body mounting

Contact Block Options:




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

Mirror Finish Stainless Steel 316 Body

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

IP69K Suitable for SIP and CIP processes

Pre-Wired Explosion Proof



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

Standards EN1088 IEC 60947-5-1 EN 60204-1
ISO 13849-1 EN62061 EN 954-1 UL508

Classification and Reliability Data:

| | |
|---|---|
| Mechanical Reliability B10d | 2.5 x $10^6$ operations at 100mA load |
| EN 954-1 | up to Category 4 with Safety Relay |
| ISO 13849-1 | up to PLe depending upon system architecture |
| EN 62061 | 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 (Ith) | 5A |
| Rated Insulation / Withstand Voltages | 500VAC / 2500 VAC |
| 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 |
| Operating Temperature | -25C. +80C. |
| Vibration | IEC 68-2-6, 10-55Hz+1Hz, Excursion: 0.35mm, 1 octave/min |
| Conduit Entry | Various (See Sales Part Numbers) |
| Fixing | 4 x M5 |

# Kobra Stainless Steel Switch Type: HYGIECAM KM-SS

Contact operation at withdrawal of Actuator

2NC 1NO — 6.8 6.0 0 mm

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

3NC (1NO) — 6.8 6.0 0 mm

| | | |
|---|---|---|
| 11/12 | Open | |
| 21/22 | Open | |
| 31/32 | Open | |
| 43/44 | | Open |

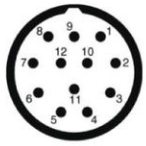
4NC — 6.0 0 mm

| | | |
|---|---|---|
| 11/12 | Open | |
| 21/22 | Open | |
| 31/32 | Open | |
| 41/42 | Open | |

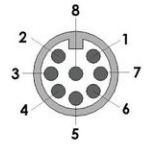
2NC 2NO — 6.8 6.0 0 mm

| | | |
|---|---|---|
| 11/12 | Open | |
| 21/22 | Open | |
| 33/34 | | Open |
| 43/44 | | Open |

QC Quick Connect Versions



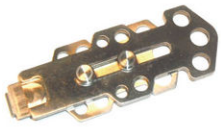
Quick Connect
Pin view from switch




| 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 |

Accessories: (See Page 50)

Maintenance Lockout Actuator



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

Actuator with chain



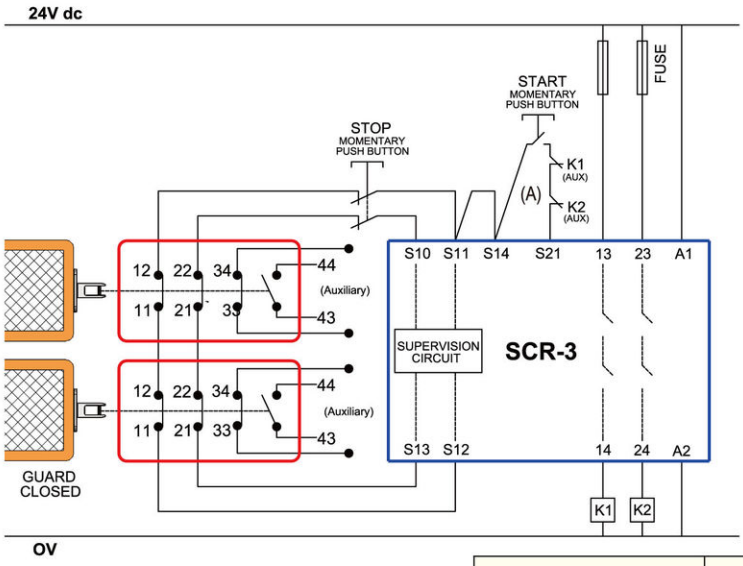
Flat Actuator supplied with 300mm (12 inch) chain. Can be used where poor alignment exists and provides manual insertion of actuator by operator.

2 Colour LED Conduit Beacon
(Available voltages 24Vdc 110Vac 230Vac and M20 or ½" NPT)



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

**Application Example:** **Multiple Guard Door Interlocks - Dual Channel (Monitored)**




The switch contacts 11-12 and 21-22 from each switch and wired in series to an SCR-3 Safety Relay to monitor for wiring short circuits.
This provides Dual Channel monitoring and a check of the contactor feedback circuits through the auxiliary contacts (A) of K1 and K2.
The SCR-3 monitors the switch and the contactors K1 and K2 and provides its own self-monitoring via force guide internal relays.

System is shown with machine stopped, guards closed and the contactors able to energised.

| 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 |



| Gland | | stainless steel 316 |
|---|---|---|
| M20 | 140120 |  |
| 1/2"NPT | 140121 | |

**It is recommended to use our stainless steel gland with this switch**

| Sales Number | Contacts | M20 | ½"NPT | QC M23 | QC M12 8 Way |
|---|---|---|---|---|---|
| Kobra KM-SS Switch | 2NC 1NO | 204001 | 204002 | 204003 | 204021 |
| Kobra KM-SS Switch | 3NC | 204004 | 204005 | 204006 | 204022 |
| Kobra KM-SS Switch | 3NC 1NO | 204007 | 204008 | 204009 | |
| Kobra KM-SS Switch | 2NC 2NO | 204010 | 204011 | 204012 | |
| Kobra KM-SS Switch | 4NC | 204013 | 204014 | 204015 | |
| Kobra KM-SS Switch | 1NC 1NO Ex | 204016 | 3m. 4 core Ex | | |
| Kobra KM-SS Switch | 2NC Ex | 204019 | 3m. 4 core Ex | | |
| Kobra KM-SS Switch | 2NC 2NO Ex | 204026 | 3m. 8 core Ex | | |
| Kobra Actuator | Standard | Add A to Sales Part Number | | | |
| Kobra Actuator | Flat | Add F to Sales Part Number | | | |
| Kobra Actuator | Plastic Flexible | Add PF to Sales Part Number | | | |
| Kobra Actuator | Heavy Duty Flexible | Add HF to Sales Part Number | | | |
| Kobra Actuator | Heavy Duty S/Steel | Add HFH to Sales Part Number | | | |
| Actuator Holding - 40N (3 pole versions only) | | Add 40N to Part Number | | | |

**Ordering Example:**
**Kobra KM - SS 1/2"NPT 2NC 2NO with Heavy Flexible Actuator Part No.204011 - HF**

**Gold Plated Contacts available for low power circuits (5V. 5mA).**
**Add GC to Part Number e.g. 204001-A-GC**

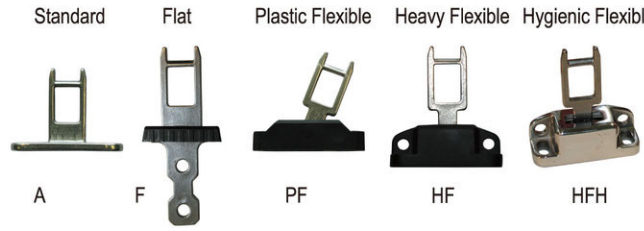
# Kobra Stainless Steel Tongue Switch - Type: HYGIECAM K-SS

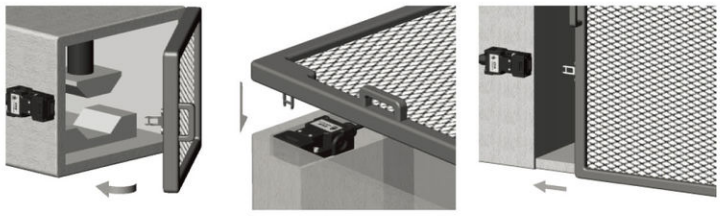
HYGIECAM Series Interlock Switches have a rugged Stainless Steel 316 body and have been designed to cope with the rigorous applications of the Food Processing and Chemical Industries.

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

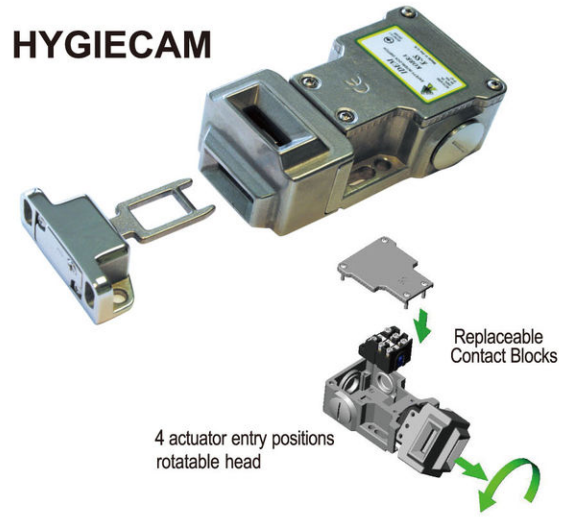
They are designed to fit to the leading edge of sliding, hinged or lift off machine guards. They provide a forced disconnect of the safety contacts at the withdrawal of the actuator and have an anti-tamper mechanism.

Actuator options (See Page 51)



Hinged Guard  Sliding Guard  Lift off Guard




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.

**Functional Specification:**

Positive break contacts to IEC 60947-5-1

High Functional Safety to ISO 13849-1

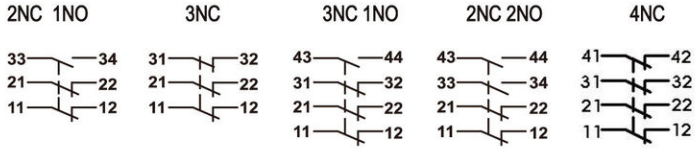
Will fit on 40mm fixing centres –industry standard housing

Stainless Steel 316 Body and External Fixings

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

IP69K Suitable for SIP and CIP processes

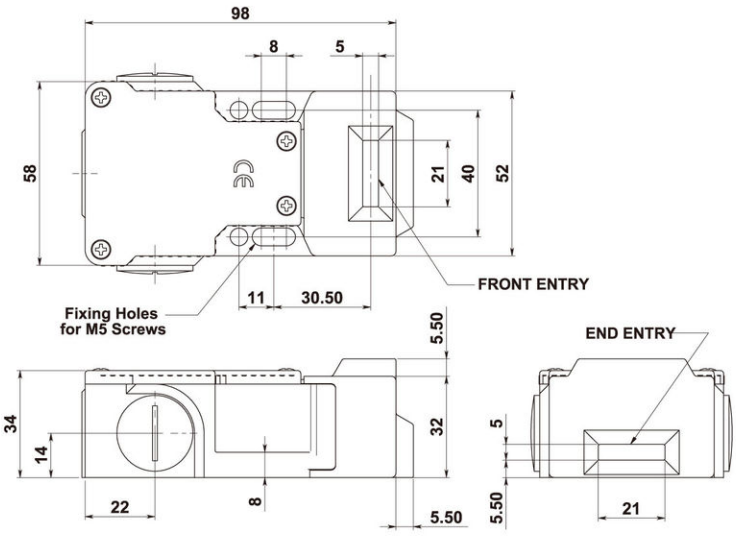
Contact Block Options:




Pre-Wired Explosion Proof



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




| | |
|---|---|
| Standards | EN1088 IEC 60947-5-1 EN 60204-1 ISO 13849-1 EN62061 EN 954-1 UL508 |
| Safety Classification and Reliability Data: | |
| Mechanical Reliability B10d | 2.5 x $10^6$ operations at 100mA load |
| EN 954-1 | up to Category 4 with Safety Relay |
| ISO 13849-1 | up to PLe depending upon system architecture |
| EN 62061 | 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 (Ith) | 5A |
| Rated Insulation / Withstand Voltages | 500VAC / 2500 VAC |
| 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 Part Numbers) |
| Fixing | 4 x M5 |

# Kobra Stainless Steel Tongue Switch - Type: HYGIECAM K-SS

Contact operation at withdrawal of Actuator

2NC 1NO — 6.8 6.0 0 mm

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

3NC (1NO) — 6.8 6.0 0 mm

| | | |
|---|---|---|
| 11/12 | Open | |
| 21/22 | Open | |
| 31/32 | Open | |
| 43/44 | | Open |

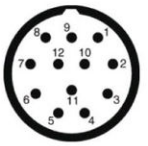
4NC — 6.0 0 mm

| | | |
|---|---|---|
| 11/12 | Open | |
| 21/22 | Open | |
| 31/32 | Open | |
| 41/42 | Open | |

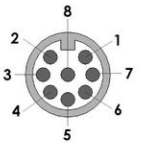
2NC 2NO — 6.8 6.0 0 mm

| | | |
|---|---|---|
| 11/12 | Open | |
| 21/22 | Open | |
| 33/34 | | Open |
| 43/44 | | Open |

QC Quick Connect Versions



Quick Connect
Pin view from switch




| 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 |

Accessories: (See Page 50)

Maintenance Lockout Actuator



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

Actuator with chain



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

2 Colour LED Conduit Beacon
(Available voltages 24Vdc 110Vac 230Vac and M20 or ½" NPT)



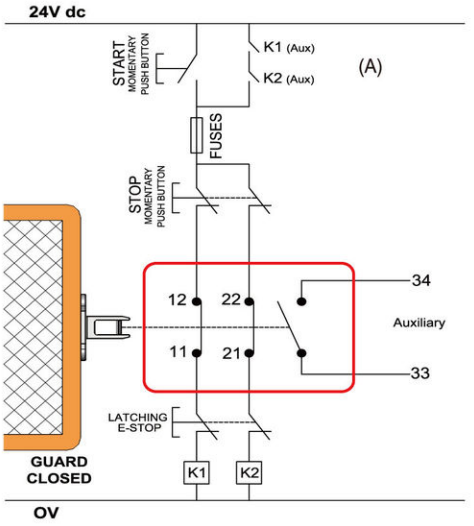
2 colour LED (3 wires) providing Steady Red and Steady Green. Fits to conduit entry and provides option for LED indication based upon switch contacts.

**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 E stop will isolate power to the contactor coils. Restart can only occur providing the Guard is closed, and the E-stop is reset.

System is shown with machine stopped, guard closed and the contactors able to be energised.




| 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 |



| Gland | | stainless steel 316 |
|---|---|---|
| M20 | 140120 |  |
| 1/2"NPT | 140121 | |

**It is recommended to use our stainless steel gland with this switch**

| Sales Numbers | Contacts | M20 | ½"NPT | QC M23 | 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 Part Number | | | |

**Ordering Example:**
**Kobra K - SS M20 3NC 1NO with Standard Actuator Part No. 208007 - A**

**Gold Plated Contacts available for low power circuits (5V. 5mA).**
**Add GC to Part Number e.g. 208001-A-GC**