

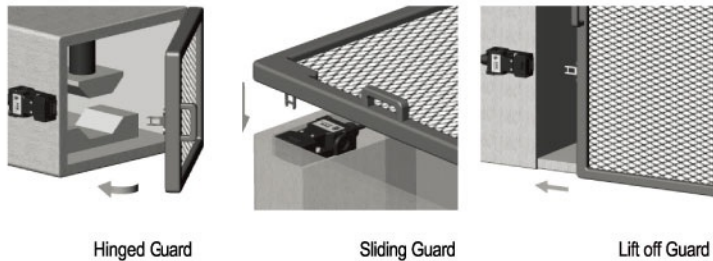
Kobra Stainless Steel Tongue Switch - Type: HYGIECAM K-SS



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.



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

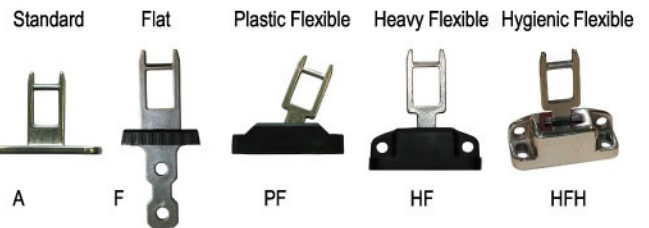
High Functional Safety to ISO 13849-1

Will fit on 40mm fixing centres –industry standard housing

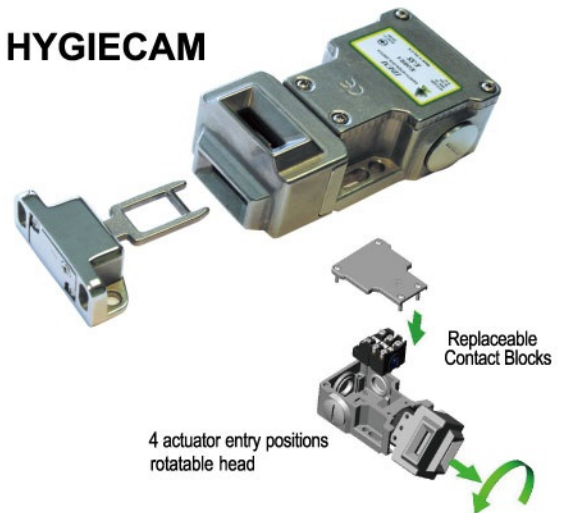
Contact Block Options:

| 2NC 1NO | 3NC | 3NC 1NO | 2NC 2NO | 4NC |
|---------|-----|---------|---------|-----|
| | | | | |

Actuator options (See Page 51)



HYGIECAM



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

Pre-Wired Explosion Proof

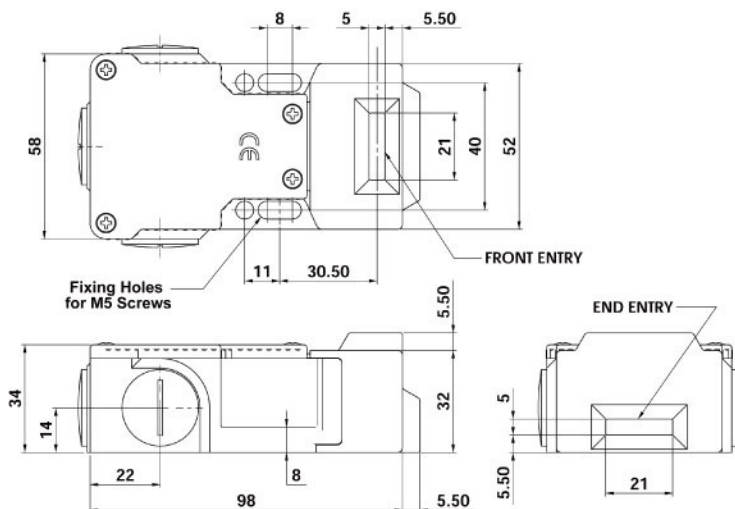


Classification Exd IIC T6 (-20 ≤ Ta ≤ +60°C) Gb
Ex tb IIIC T85C (-20 ≤ Ta ≤ +60°C) Db

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, |
| Conduit Entry | Excursion: 0.35mm, 1 octave/min |
| Fixing | Various (See Sales Part Numbers) |
| | 4 x M5 |



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Contact operation at withdrawal of Actuator

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

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

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

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

Accessories: (See Page 50)

Maintenance Lockout Actuator



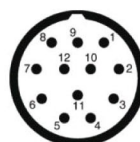
Fits to switch aperture during maintenance and provides multiple padlock holes.

Actuator with chain

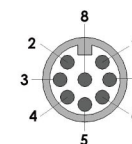


Flat Actuator supplied with 300mm (12 inch) chain. Can be used where poor alignment exists and provides manual insertion of actuator by operator.

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 |

2 Colour LED Conduit Beacon
(Available voltages 24Vdc 110Vac 230Vac and M20 or 1/2" NPT)



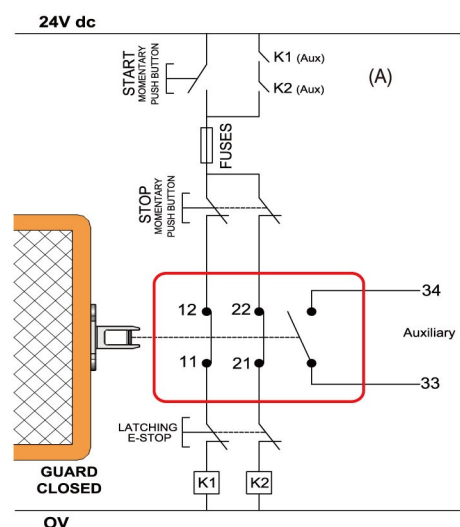
2 colour LED (3 wires) providing Steady Red and Steady Green. Fits to conduit entry and provides option for LED indication based upon switch contacts.

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 | 1/2"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