



Tongue Operated Safety Interlock Switches

140106 standard actuator, sold separately.



140111 heavy-duty flexible stainless steel actuator, sold separately.



KP-200002 plastic head switch, shown smaller than actual size.



K-SS-208002 stainless steel switch, shown smaller than actual size.



KP and K-SS Series



- ✓ 4 Actuator Entry Positions—Designed with a Rotatable Head
- ✓ Plastic or 316 SS Head Options
- ✓ 3 Pole Contact Blocks
- ✓ 3 Conduit Entries
- ✓ Industry Standard Fitting: 52 W x 98 L x 40 mm Fixing (2.05 x 3.86 x 1.57")

KP and K-SS Series tongue operated safety interlock switches are designed to fit to the leading edge of sliding, hinged or lift off machine guards to provide positively operated switching contacts and provide a tamper resistant, not easily defeatable key mechanism. They will provide a robust position interlock detection for moving guards.

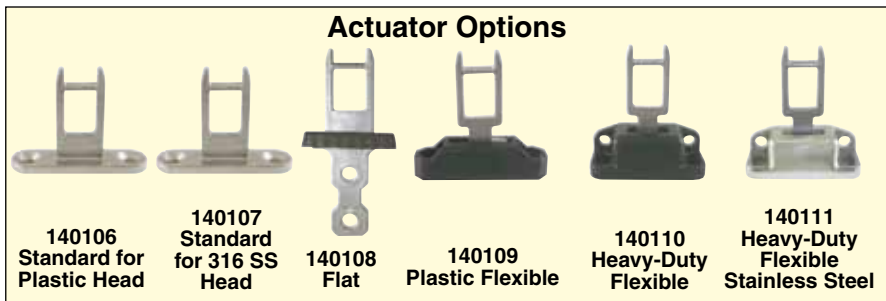
Depending upon the risk assessment for the application, they can be used independently to provide positively operated

contacts to EN60947-5-1 or they can be used in combination with any dual channel safety monitoring relays to provide up to Category 4 PLe ISO13849-1 or SIL3 EN62061. They offer a choice of various actuators to aid installation and maintain durability.

The switch is rigidly mounted to the frame of the guard or machine. The actuator is fitted to the moving part (frame) of the guard and is aligned to the switch entry aperture. The actuator profile is designed to match a cam mechanism within the switch head and provides a positively operated, not easily defeatable interlock switch. When the actuator is inserted into the switch the

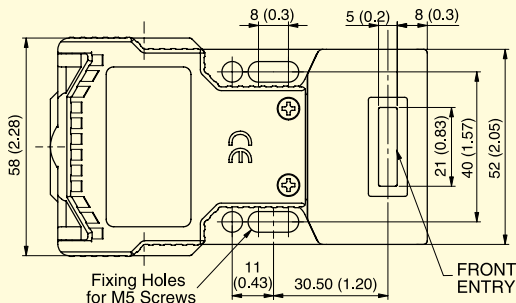
safety contacts close and allow the machine start circuit to be enabled. When the actuator is withdrawn from the switch the safety contacts are positively opened and the machine circuit is broken. KP Series switches use high specification plastic housings and are sealed to NEMA 6 (IP67) and provide long term protection against moisture ingress.

K-SS Series switches have a rugged 316 stainless steel body and have been designed to cope with the rigorous applications of the food processing, pharmaceutical, packaging and petrochemical industries. They have IP69K enclosure protection and can be pressure hosed with detergent at high pressure and temperature.

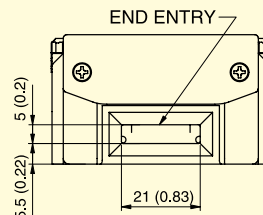
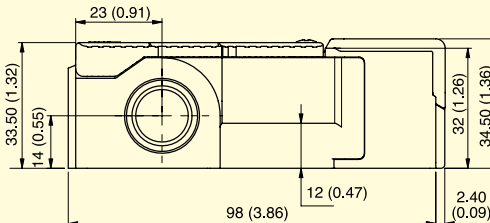




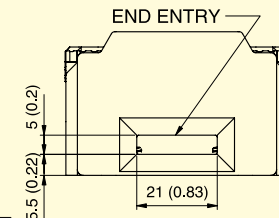
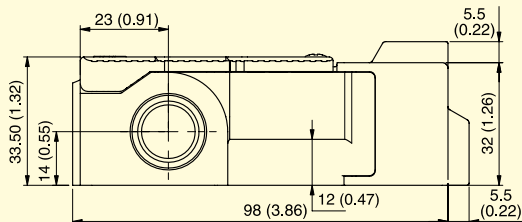
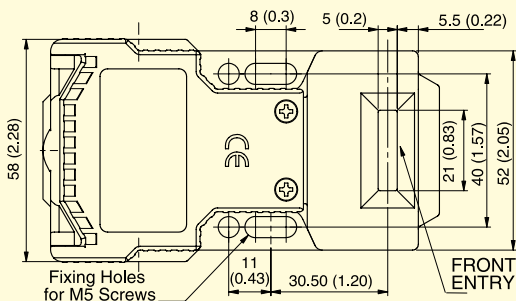
Dimensions: mm (inches)



KP (plastic head)



KP (stainless steel head) and K-SS



Specifications

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

SAFETY CLASSIFICATION AND RELIABILITY DATA

Mechanical Reliability B10d: 2.5 x 10⁶ operations at 100 mA 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

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: 500 Vac/2500 Vac

Travel for Positive Opening: 8 mm (0.31")

Actuator Entry Minimum Radius:

Standard: 175 mm (6.89")

Flexible: 100 mm (3.93")

Maximum Approach/Withdrawal

Speed: 600 mm/s

Body Material:

KP Series: Polyester

K-SS Series: 316 SS

Head Material:

KP Series: Polyester or 316 SS

K-SS Series: 316 SS

Enclosure Protection:

KP Series: NEMA 6 (IP67)

K-SS Series: NEMA 6 (IP67), NEMA PW12 (IP69K)

Operating Temperature: -25 to 80°C (-13 to 176°F)

Vibration: IEC 68-2-6, 10 to 55 Hz + 1 Hz; excursion: 0.35 mm, 1 octave/min

Conduit Entry: ½ NPT or M12 8-way (see To Order table below)

Fixing: 2 x M5

Weight (of Switch):

KP Series: 160 g (0.35 lb)

K-SS Series: 635 g (1.40 lb)

To Order

*Model No.	Description	Body Material	Head Material	Contacts	Conduit Entry
KP-200002	Safety interlock switch	Plastic	Plastic	2NC 1NO	½ NPT
KP-200002-SS	Safety interlock switch	Plastic	316 SS	2NC 1NO	½ NPT
KP-200021	Safety interlock switch	Plastic	Plastic	2NC 1NO	M12 8-way
KP-200021-SS	Safety interlock switch	Plastic	316 SS	2NC 1NO	M12 8-way
K-SS-208002	Safety interlock switch	316 SS	316 SS	2NC 1NO	½ NPT
K-SS-208021	Safety interlock switch	316 SS	316 SS	2NC 1NO	M12 8-way

*KP and K-SS Series tongue operated safety interlock switches (switch only, actuator sold separately).

Accessories

Model No.	Description
140106	Standard actuator for plastic head
140107	Standard actuator for 316 SS head
140108	Flat actuator
140109	Plastic flexible actuator
140110	Heavy-duty flexible actuator
140111	Heavy-duty flexible stainless steel actuator
140101	Female quick connect cable, M12 8-way, 5 m (16.4') length
140102	Female quick connect cable, M12 8-way, 10 m (32.8') length

Ordering Example: KP-200021-SS safety interlock switch with 316 stainless steel head, 140107 standard actuator and 140101 female quick connect cable, M12 8-way, 5 m (16.4') length.