



# EK SERIES SAFETY DOOR SWITCH

## Description

The EK series is a tongue (or key) operated safety interlock switch designed to fit at the leading edge of sliding, hinged or lift-off guards. With its dual entry slots and rotatable head, the versatile EK series can offer up to eight different actuator entry options. Operation of the switch is achieved through the insertion of a specially profiled stainless steel key that is permanently mounted to the guard door.

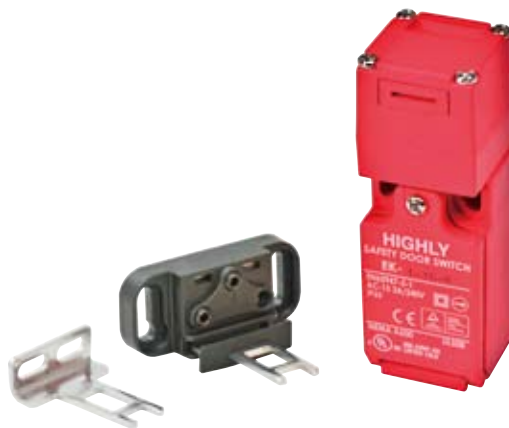
Available with one N.C. safety contact and one N.O. auxiliary contact or two N.C. contacts, the EK series is sealed to IP65 and has various conduit entries. A blanking plug is supplied for the unused key entry. Available accessories include a 90° actuator.

## Features

- Fits on 25mm tubing, ideal for small, light weight guards
- Contacts: Slow action 1N.C. /1N.O; 2N.C.; snap action 1N.C./1N.O.
- Positive opening mechanism 
- Double-insulation structure 
- Eight possible actuator entry points, easy to install
- 90° and straight key
- IP65 enclosure rating
- Robust stainless steel keys



- BAUART GEPRÜFT
- TYPE APPROVED



## Specifications

Standards	EN60947-5-1, UL508, EN50047, EN1088
Approvals	cULus, CE
Positive Opening Operation	NC Contact
Utilization Category	AC15 A600
Thermal Current	10A
Rated Insulation Voltage	600V AC
Rated Impulse Withstand Volt	2500V AC
Insulation Resistance	100M $\Omega$ min. (DC 500V)
Contact Resistance	25m $\Omega$ .nmax. (initial)
Travel For Positive Opening	Various (see Product Selection table)
Max Actuation Frequency	2 cycle/sec
Enclosure Material	UL approved glass-filled polybutylene terephthalate
Actuator Material	Stainless steel
Enclosure Protection	IP 65
Operating Temperature	Min -25°C (-18°F) Max 80°C (+176°F)
Pollution Degree	3
Protection Against Electric Shock	Class II (Double Insulation)
Mech. Life Expectancy	1 x 10 <sup>6</sup> Cycles min
Electrically Life Expectancy	150,000 Cycles min
Vibration	IEC 68-2-6, 10-55Hz $\pm$ 1 Hz, Excursion: 0.35mm, 1 octave/min
Conduit Entry	Various (see Product Selection table)
Fixing	2 x M4

# EK SERIES SAFETY DOOR SWITCH

## Structure description

### Head

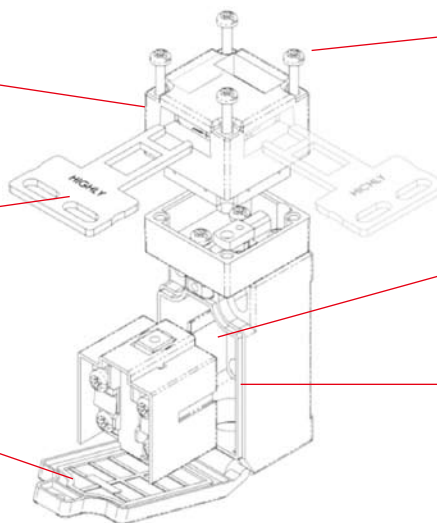
The head can be mounted in four directions. The operation Key can be inserted in five directions including the downward direction.

### Operation Key

The dedicated key prevents operational mistakes and forcibly separates the contacts.

### Cover

The cover, with a hinge on its lower part, can be opened by removing the screw of the cover, which ensures ease of maintenance and wiring.



### Oil Seal

The plunger has an O ring. The switch casing ensures IP65 (except the keyhole, which ensures IP00). Use the EK Series in places where the keyhole is free from oil and metal chips.

### Contact Block

Has a positive opening mechanism which forcibly separates the NC contacts even if they are welded. The built-in switch incorporates a pair each of NC contacts and NO contacts or two pairs of NC contacts.

### Conduit

Wide switch variations.  
Pg13.5 PG11  
1/2-14NPT  
M16 M20

## Product Selection

EK-□-□-□

1 2 3

### 1. THREAD DIMENSION OF LEAD EXIT

1: PG13.5 (s) 5: M16 (c)  
2: 1/2NPT (c) 6: M20 (o)  
4: PG11 (o) 7: CONNECTOR (c)

\*(s):standard (o):option (c): customization

### 2. CONTACT TYPES

15: 1NC/1NO SLOW ACTION (BBM) (s)  
25: 2NC SLOW ACTION (o)  
35: 1NC/1NO SNAP ACTION (c)  
45: 2NC/1NO SLOW ACTION  
55: 3NC SLOW ACTION

### 3. Key type

F: Flat (o)  
R: Right angle (s)  
A: Adjustable (c)

## Contact Block Form

TYPE	CONTACT FORM	CONNECTOR PIN ARRANGEMENT	OPERATION DIAGRAMS
EK-□-15-□	1NC/1NO(Slow action) (See Note 1)		 M12 Connector pin arrangement
EK-□-25-□	2NC (Slow action) (See Note 2)		
EK-□-35-□	1NC/1NO(Snap action) (See Note 1)		
EK-□-45-□	2NC/1NO(Slow action)		No Connector TYPE
EK-□-55- □	3NC (Slow action)		

HIGHLY

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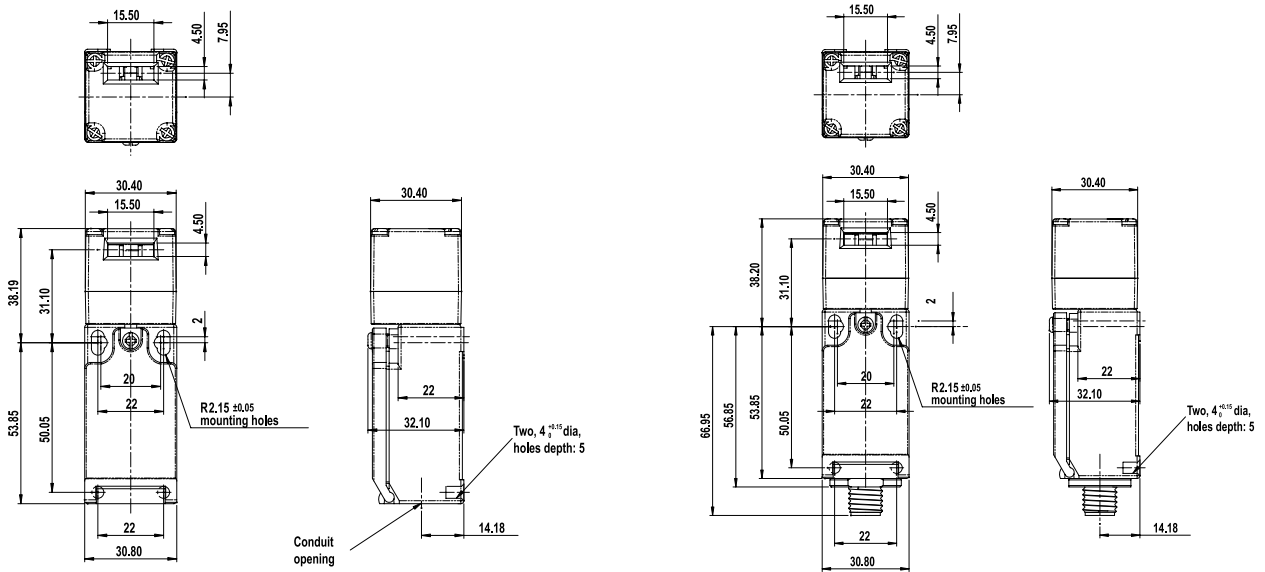
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# EK SERIES SAFETY DOOR SWITCH

## Dimensions

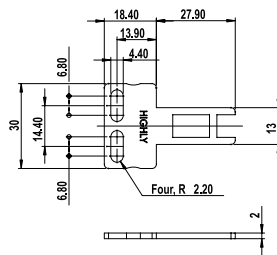
Unit: mm

### Switch

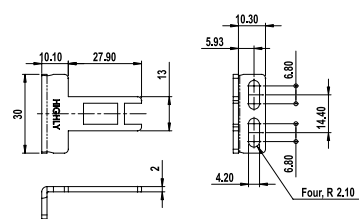


### Operation Keys

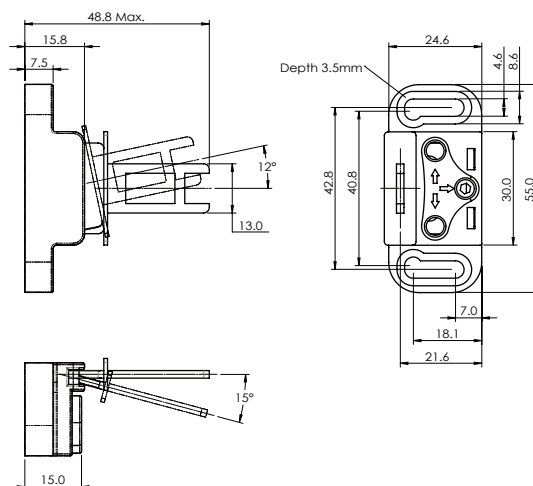
#### F: Flat



#### R: Right angle



#### A: Adjustable



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## Actuator Types

