TECHNICAL DATA SHEET

SAFETY LOCKING DEVICE
OX-W5 series

For Illustration purposes only

Contents

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Product Features

- The safety door switch with locking function can ensure that the safety protection device door and other protective covers remain in a safe state even if the dangerous state is not eliminated.

OX-W5 series

Metal head

6 sets of gold plated contacts

4 contact combinations

DC24V/AC110V

Locking force 1300N

Indicator light+emergency unlocking

Adapted to 7 types of operation keys

Suitable for monitoring safety doors and windows

High strength wear-resistant engineering plastic with built-in 304 stainless steel components

Forced mechanical interlocking self detection structure with extremely high reliability

Product application

Used for monitoring places such as safety doors and windows, in accordance with EN14119 and GB/T18831.

- **Automated production line**
- **Robot production line**
- **Hazard testing area**
- **Isolation places, etc**

Technical data

Electrical parameters			
Rated voltage	10~115VAC/DC		
rated current	1mA		
Light source color	green		
Rated working voltage	DC24V±10%		
rated current	200mA (initial value)		
rated power	4.8W		
Rated insulation voltage (Ui)	300V		
Rated impulse withstand voltage (Uimp)	2.5kV		
Rated open thermal current (Ith)	10A		
Rated limited short-circuit current	1000A		
use category	AC-15	DC-13	
Rated working voltage (Ue)	240V	30V	250V
Rated operating current (Ie)	3A	2.3A	0.27A

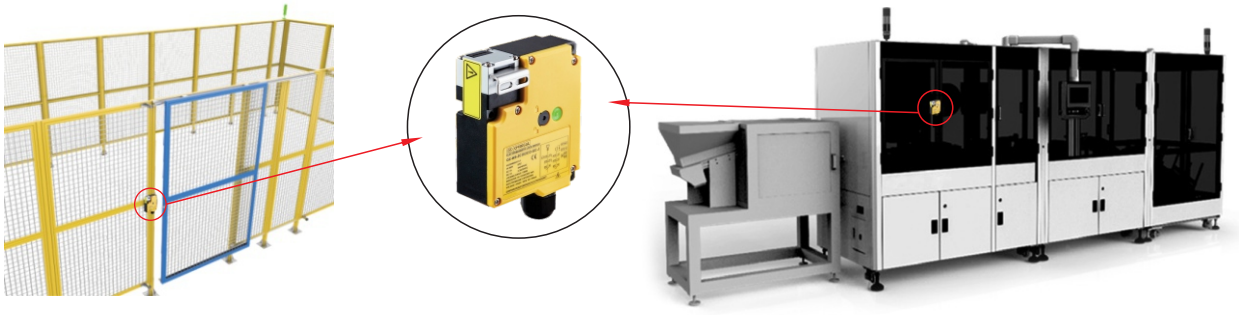
Mechanical parameters	
Dimensions (w*h*l)	39*39.4*183mm
Insulation class	Class B (130℃)
Shell material	PA66 flame retardant
Contact material	Gold Plated Silver Alloy
Protection level	IP67 (EN60947-5-1, except key operation hole)
Service life	Mechanical more than 1 million times Electric appliances more than 150,000 times
Tensile strength when locked	1300N
Forced disengagement force	≥80N
Forced breakaway distance	≥10mm
Allowable operating speed	0.05-0.5m/s
Allowable operating frequency	Up to 20 operations/min

Environmental data	
Ambient temperature	-20 ℃~60 ℃, without freezing
Environment humidity	Below 85% RH

Electrical wiring

1.Function and purpose

The use of safety door locks to monitor the status of safety doors can ensure reliable shutdown of equipment.



2.Connection example

The safety door lock can be connected to the safety relay to form a high-level safety circuit.
Used to control reliable stopping and starting f equipment.

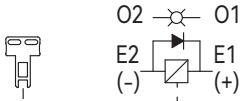
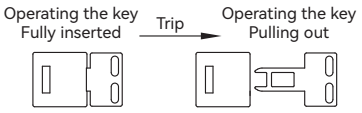
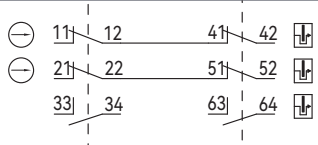
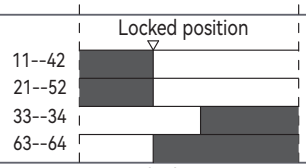
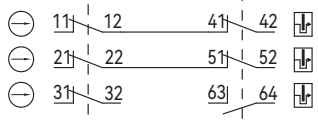
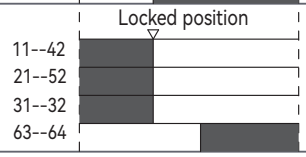
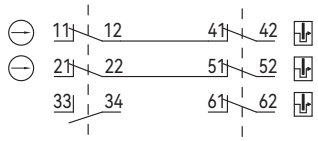
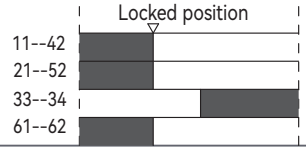
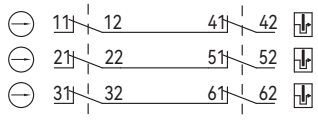
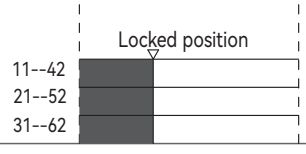
Model Selection

OX-W5 | 2CO / 2CO - G | D | J

- J: Metal head; S: Plastic head
- C: Mechanical locking and electromagnetic unlocking;
  D: Electromagnetic locking, power outage unlocking
- G: M20
  X: Comes with a connecting cable (default cable is 1.5m,
  other lengths can be customized by contacting customer service)
- Lock status monitoring output: 2CO: (2NC+1NO)
- Insert ey monitoring output: 2CO: (2NC+1NO)
- Product model: OX-W5

Lock material	Emergency unlocking Twist position	Electromagnet voltage /indicator light	Lock/Unlock Method	Contact type		Model
				Door monitoring	Lock monitoring	
Metal	Side	Electromagnet: DV24V	Electromagnetic locking Mechanical unlocking	2NC+1NO	2NC+1NO	OX-W5-2CO/2CO-GD-J
				3NC	2NC+1NO	OX-W5-3C/2CO-GD-J
				2NC+1NO	3NC	OX-W5-2CO/3C-GD-J
				3NC	3NC	OX-W5-3C/3C-GD-J
		Green LED AC/DC10-115V	Mechanical locking Electromagnetic unlocking	2NC+1NO	2NC+1NO	OX-W5-2CO/2CO-GC-J
				3NC	2NC+1NO	OX-W5-3C/2CO-GC-J
				2NC+1NO	3NC	OX-W5-2CO/3C-GC-J
				3NC	3NC	OX-W5-3C/3C-GC-J

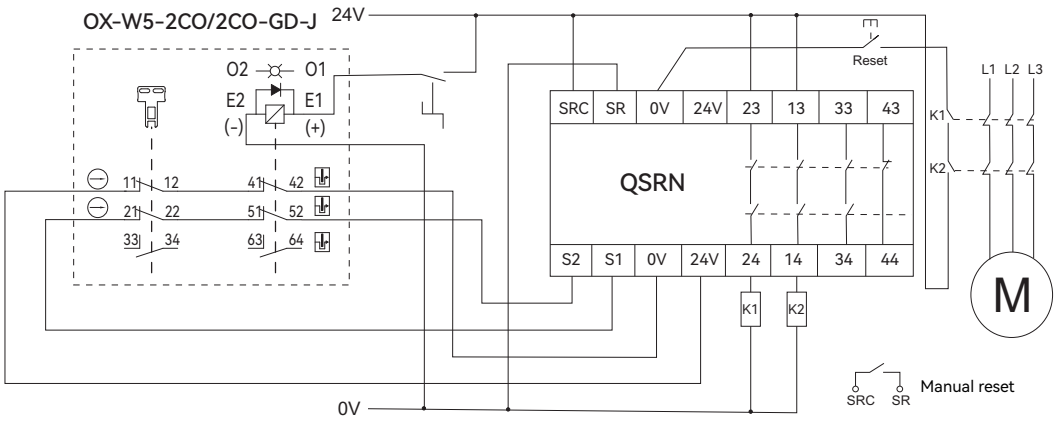
● The following wiring diagram shows inserting the operation key and being in the locked state.
(Terminals 12 and 41, 22 and 51/32 and 61 are internal connections)

Model	Contact type		Wiring diagram	Contact action
	Door monitoring	Lock monitoring	Door monitoring+lock monitoring	: ON : OFF
				
OX-W5-2CO/2CO-GD-J OX-W5-2CO/2CO-GC-J	2NC+1NO	2NC+1NO		
OX-W5-3C/2CO-GD-J OX-W5-3C/2CO-GC-J	3NC	2NC+1NO		
OX-W5-2CO/3C-GD-J OX-W5-2CO/3C-GC-J	2NC+1NO	3NC		
OX-W5-3C/3C-GD-J OX-W5-3C/3C-GC-J	3NC	3NC		

● Selection of safety locking device connected to safety relay

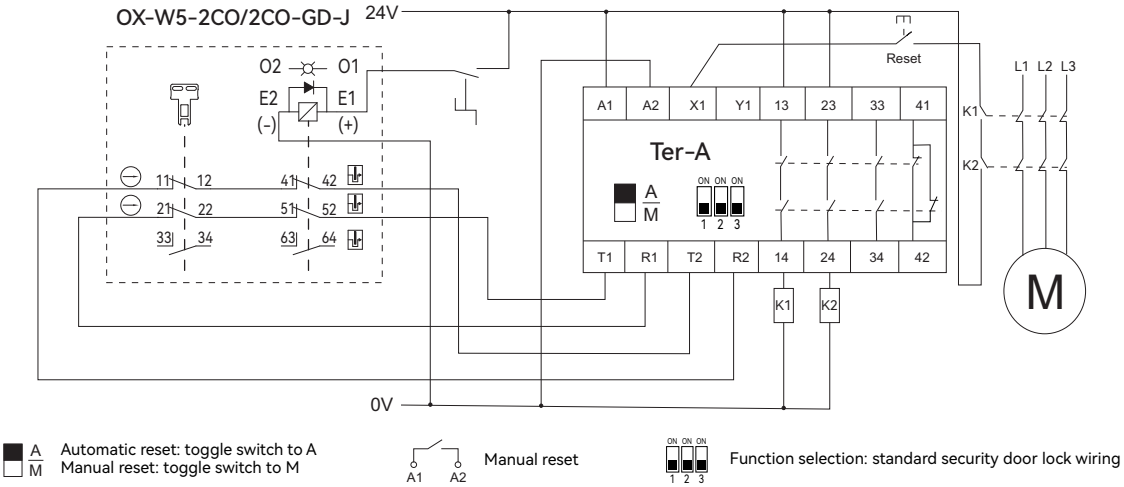
Name	Order separately	Model	Descriptions
Safety relay		QSRN	QSRN safety relays have three groups of NO and one group of NC, with strong control capabilities. They are suitable for various signal monitoring in industrial places with high safety requirements, including emergency stop signals, safety door opening and closing signals, safety light curtain signals, and two-handed button signals.
Safety relay	  Multifunctional switching switch	Ter-A	Equipped with a mode switch, it can be used for most safety components, such as light curtains, safety switches, carpet contacts, two handed switches, etc.Automatic/manual reset paddles for quick configuration.Dual channel monitoring circuit, safe and reliable.

1.An example of the wiring diagram between the safety door lock and QSRN is as follows:



This is an example wiring diagram of OX-W5-2CO/2CO-GD-J.

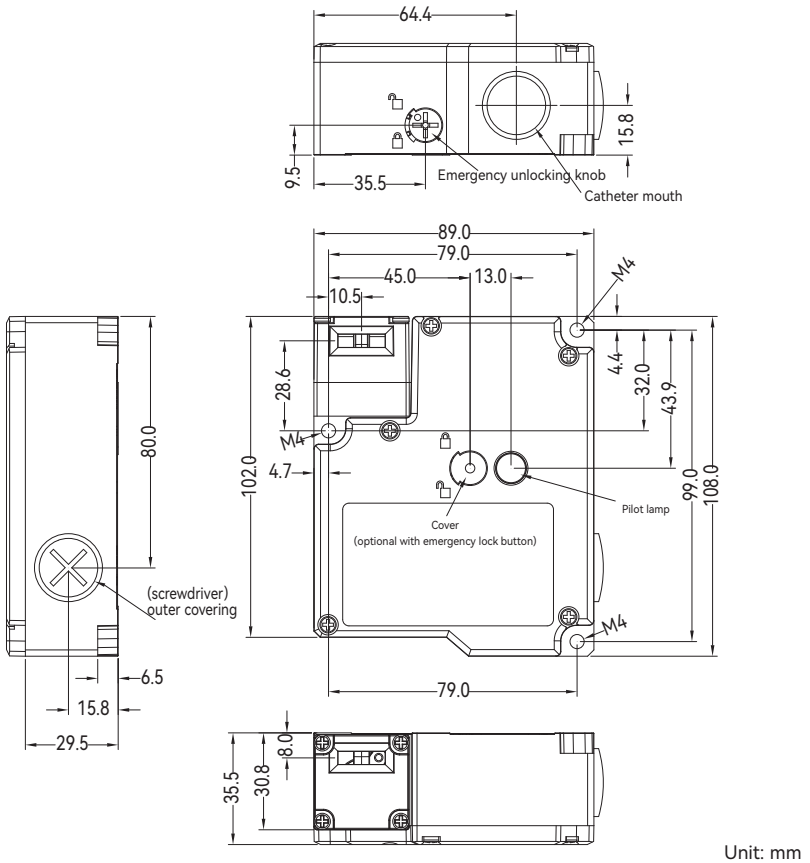
2.An example of the wiring diagram between the safety door lock and Ter-A is as follows:



This is an example wiring diagram of OX-W5-2CO/2CO-GD-J.

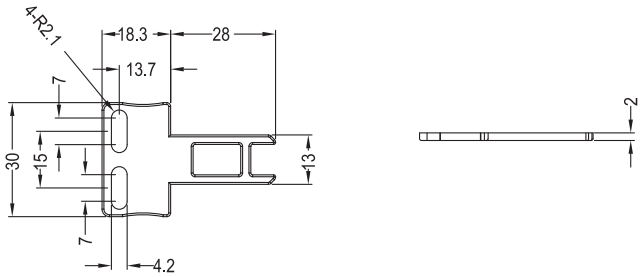
● Overall dimensions

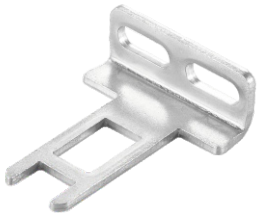
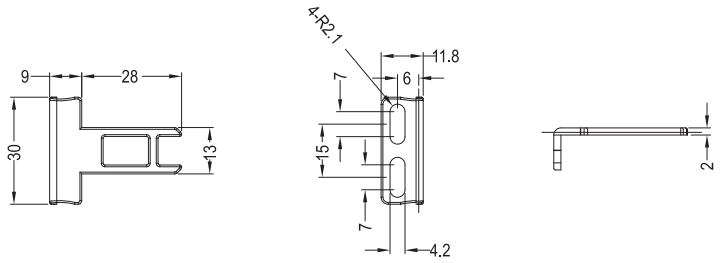
OX-W2 Series Lock Body Dimensional Drawing

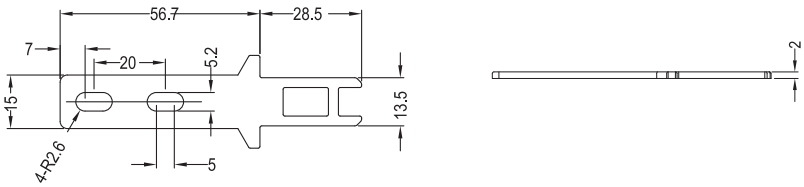


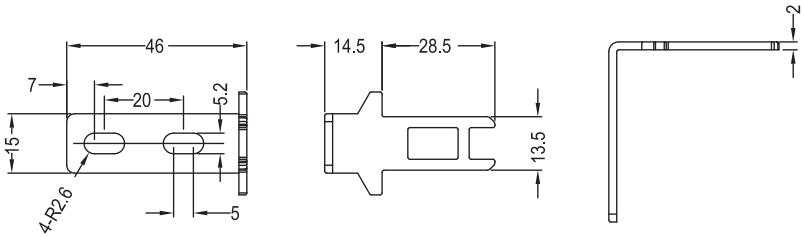
Unit: mm

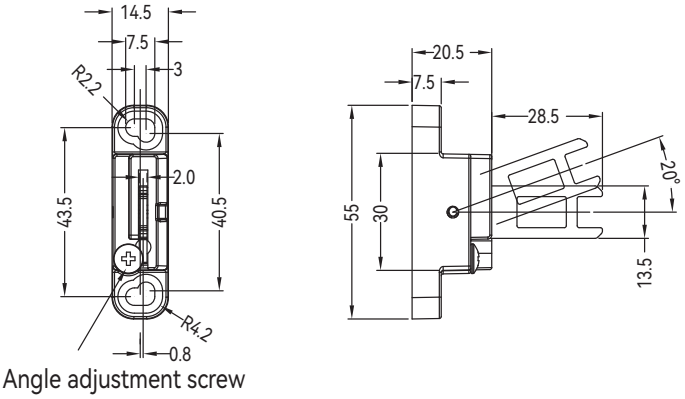
Accessories

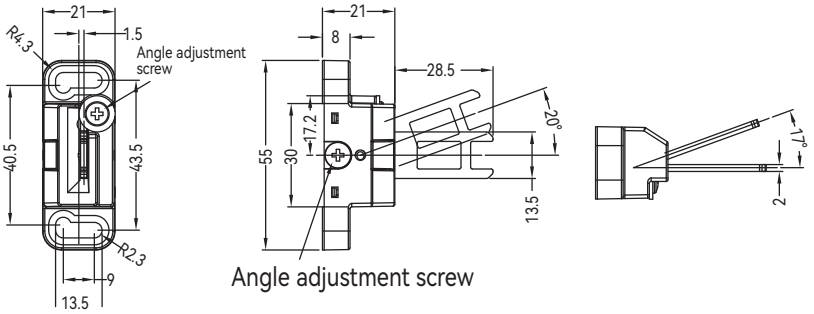
T-shaped operation key	OX-K1 operating key size diagram
 (Original accessories)	 Unit: mm

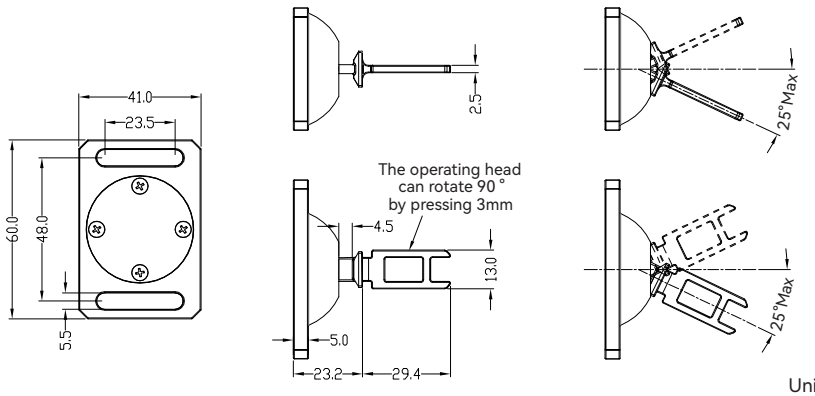
L-shaped operation key	OX-K2 operating key size diagram
 (Original accessories)	 Unit: mm

Long T-shaped operating key	OX-K3 operating key size diagram
 (Optional accessories)	 Unit: mm

Long L-shaped operating key	OX-K4 operating key size diagram
 (Optional accessories)	 Unit: mm

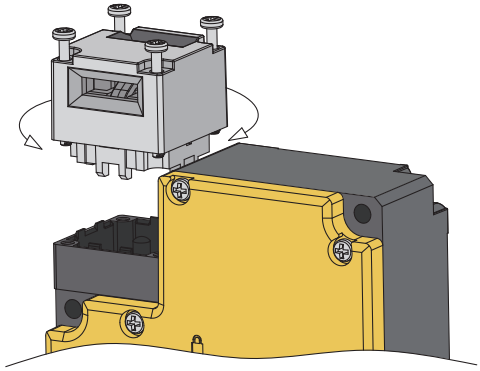
Horizontal adjustable operating key	OX-K5 operating key size diagram
 (Optional accessories)	 Unit: mm

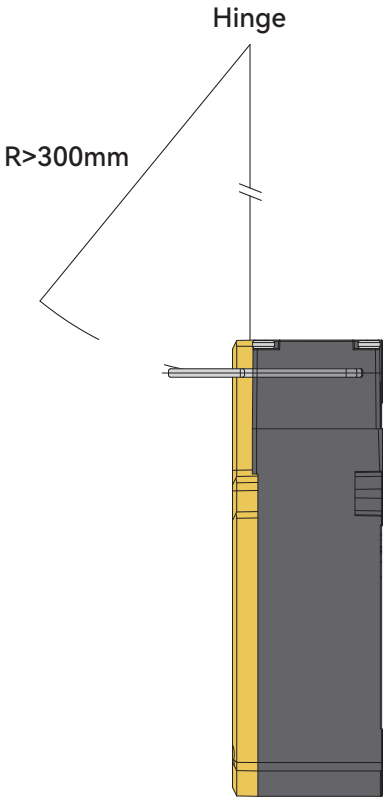
Horizontal/vertical adjustable opeation key	OX-K6 operating key size diagram
 (Optional accessories)	 Unit: mm

Horizontal/vertical adjustable opeation key	OX-K7 operating key size diagram
 (Optional accessories)	 Unit: mm

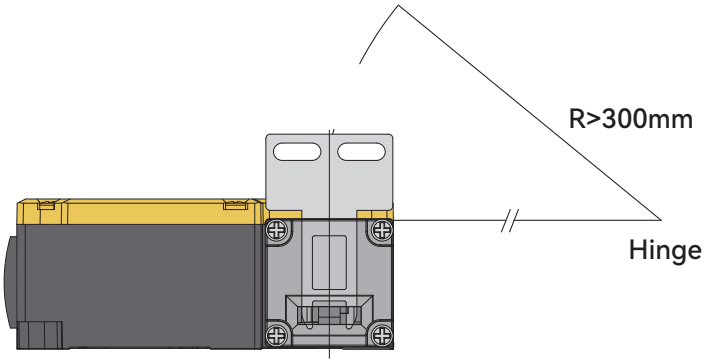
Installation diagram of OX-W5 operation key

- Loosen the four screws at the top of the head, rotate the head direction to select the appropriate operating keyhole position, and then proceed with installation.



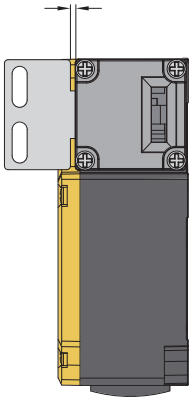


- When installed on a side hung door, it must be greater than the minimum radius.

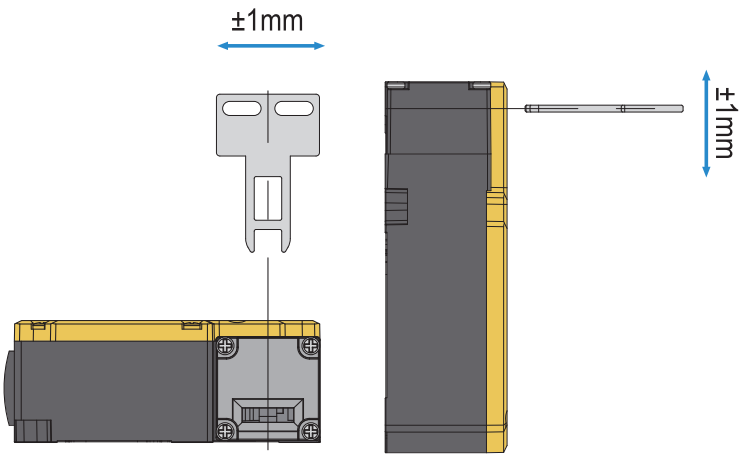


- Please install switches and operating keys within the prepared position range (1-3.5mm).

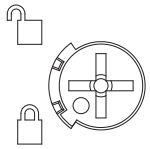
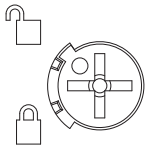
Ready position: 1.0~3.5mm



- The allowable installation error of the operationkey is within ± 1mm of the inser ion center of the operation key as the reference.



Emergency unlocking key

Unlock screw type	Normal	Manual unlocking
Cross shaped screwdriver		

- When dealing with power outages or emergencies, the emergency unlocking button can be manually operated.
- When rotating the emergency unlocking button, it is necessary o rotate it to the bottom, otherwise there is a risk of damaging the switch or not being able to operate normally.
- Please control the torque of the emergency unlocking key below 0.2N.m, otherwise there is a risk of damage.
- After each use of the emergency unlocking button to unlock and handle an emergency situation, reset the emergency unlocking button, otherwise it will afect
- The normal locking function of the switch may pose a risk of personal injury or saety accidents.
- Only device administrators can operate the emergency unlock button. (Refer to safety precautions 02)

Usage environment

1.Do not immerse the switch in oil or water, or use the switch in a position where it is continuously splashed with oil or water.

2.Otherwise, it may cause oil or water to enter the interior of the switch.

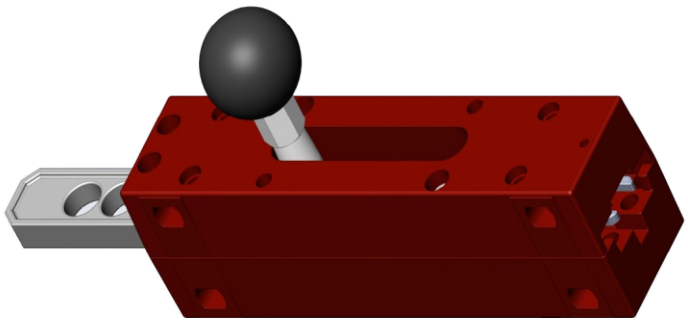
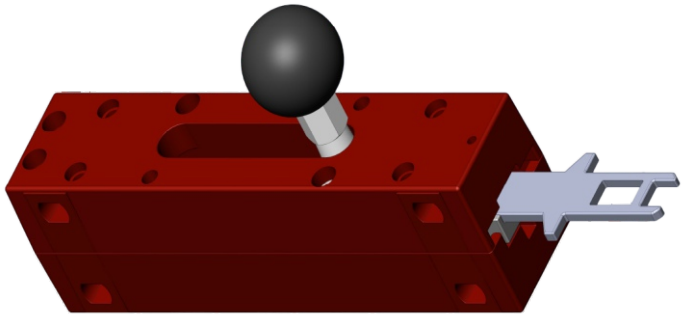
3.The IP67 protection level of the switch specifes the water innow after the switch is immersed in water for a cer ain period of time.

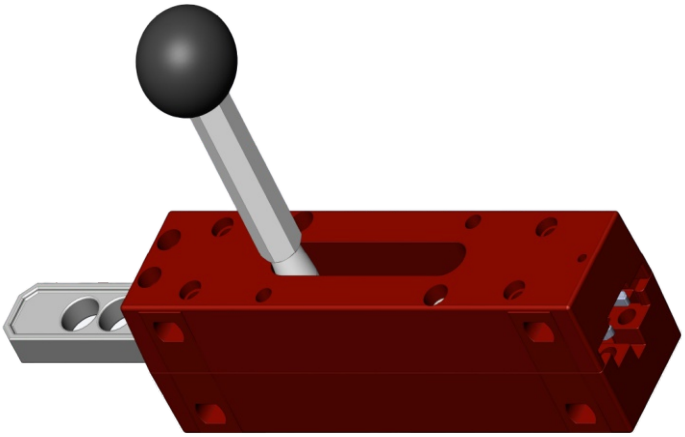
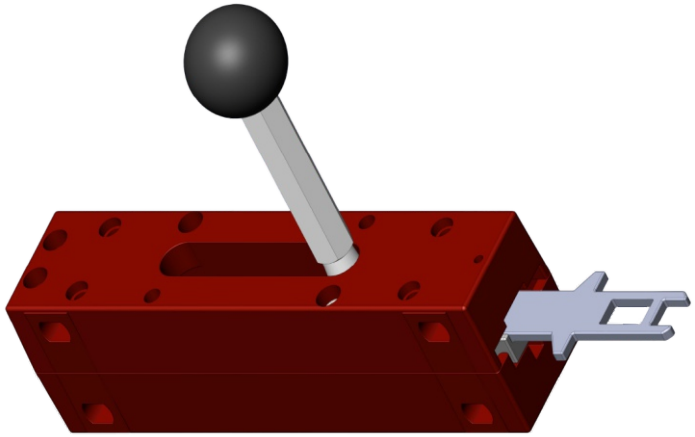
Safety door handles

Performance data

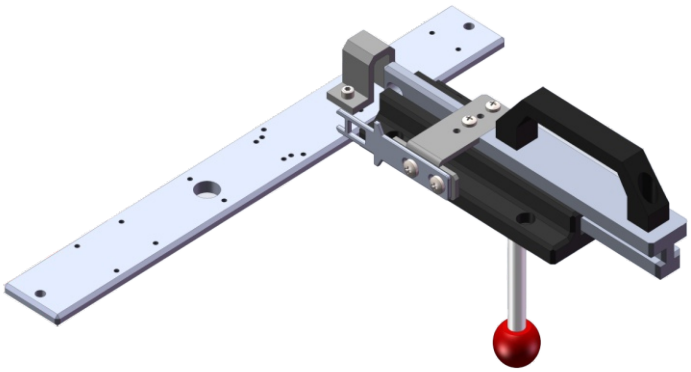
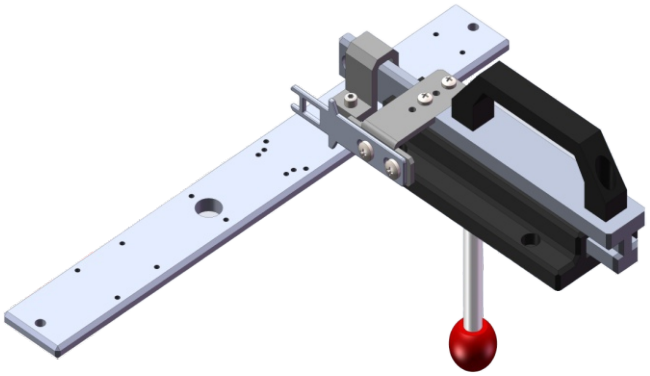
Model	OXSL-A-1	OXSL-A-2	OXSL-B-1	OXSL-B-2
Mechanical life	1 x 106 times		1 x 106 times	
Installation location	Doors or fences		Doors or fences	
Installation mode	Left or right		Left or right	
Base material	Zinc alloy		Aluminium alloy	
Slider material	Zinc alloy		Aluminium alloy	
Handle material	Stainless steel		Stainless steel	
Ball head material	Plastic		Plastic	
Weight	0.6kg		0.95kg	1.05kg

- **Appearance diagram**

OXSL-A-1	
	
(Order separately)	(Order separately)

OXSL-A-2	
	
(Order separately)	(Order separately)

- Appearance diagram

OXSL-B-1	
 (Order separately)	 (Order separately)

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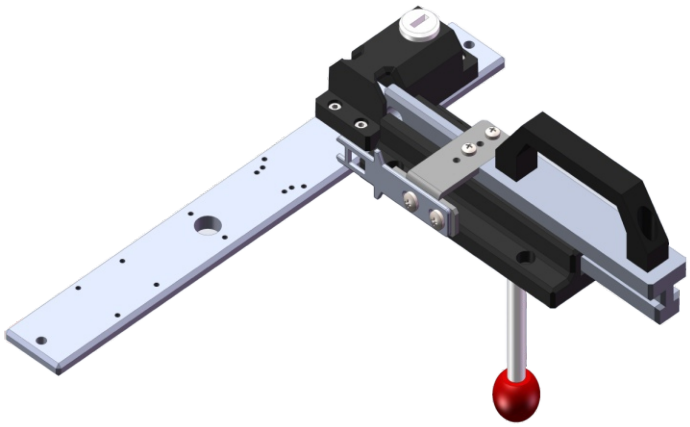
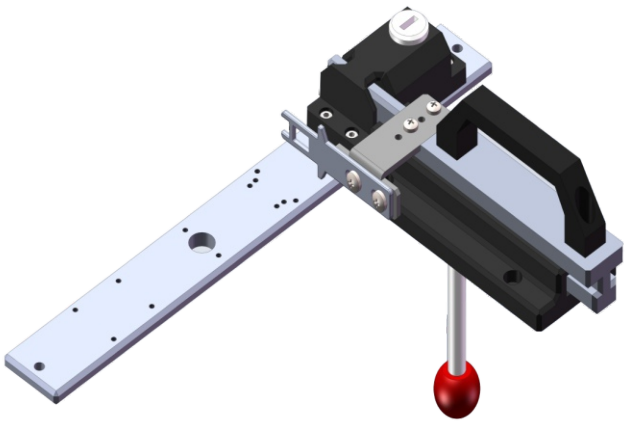
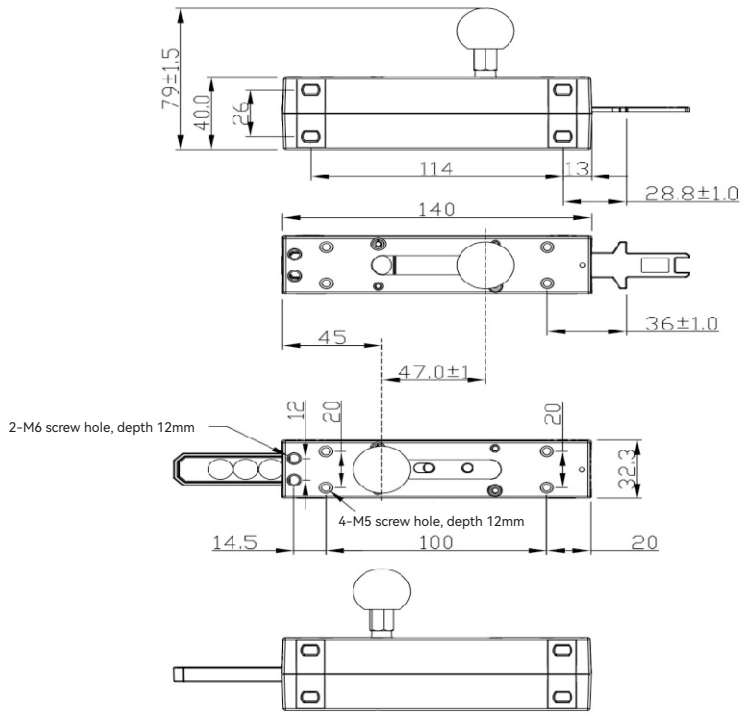
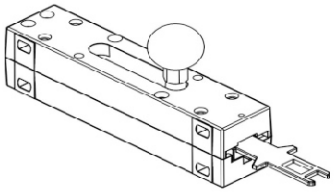
 (Order separately)	 (Order separately)

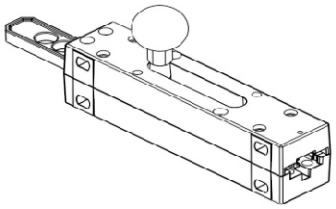
- Installation dimensions of safety door bolts

OXSL-A-1 installation dimensions





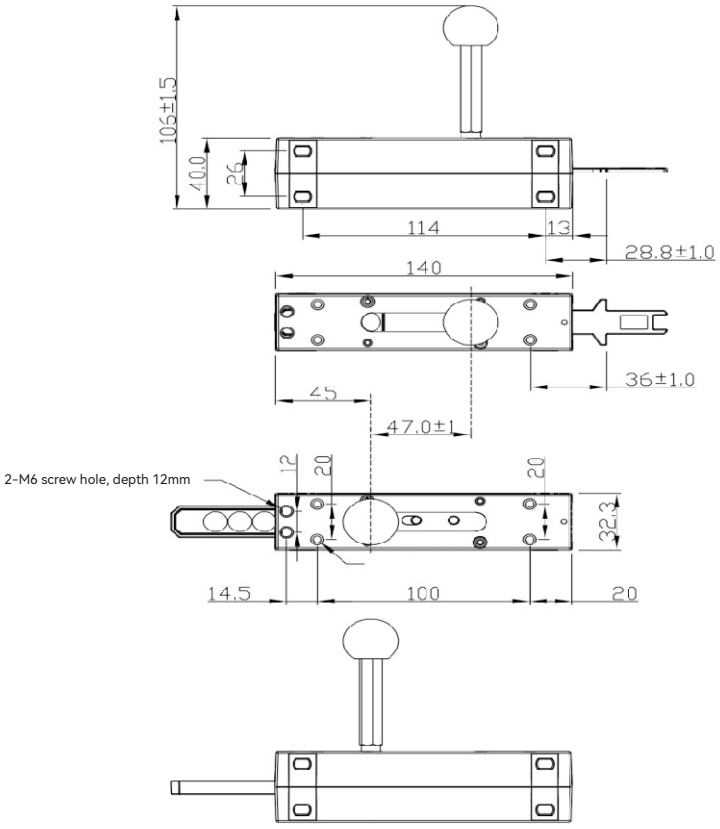
Pushing out the key

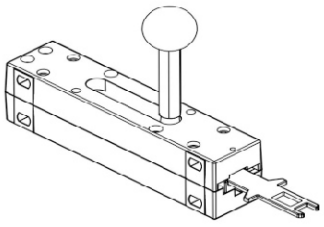


Retract key

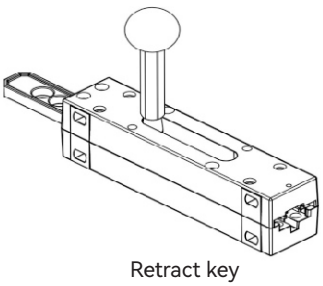
Unit: mm

OXSL-A-2 installation dimensions





Pushing out the key

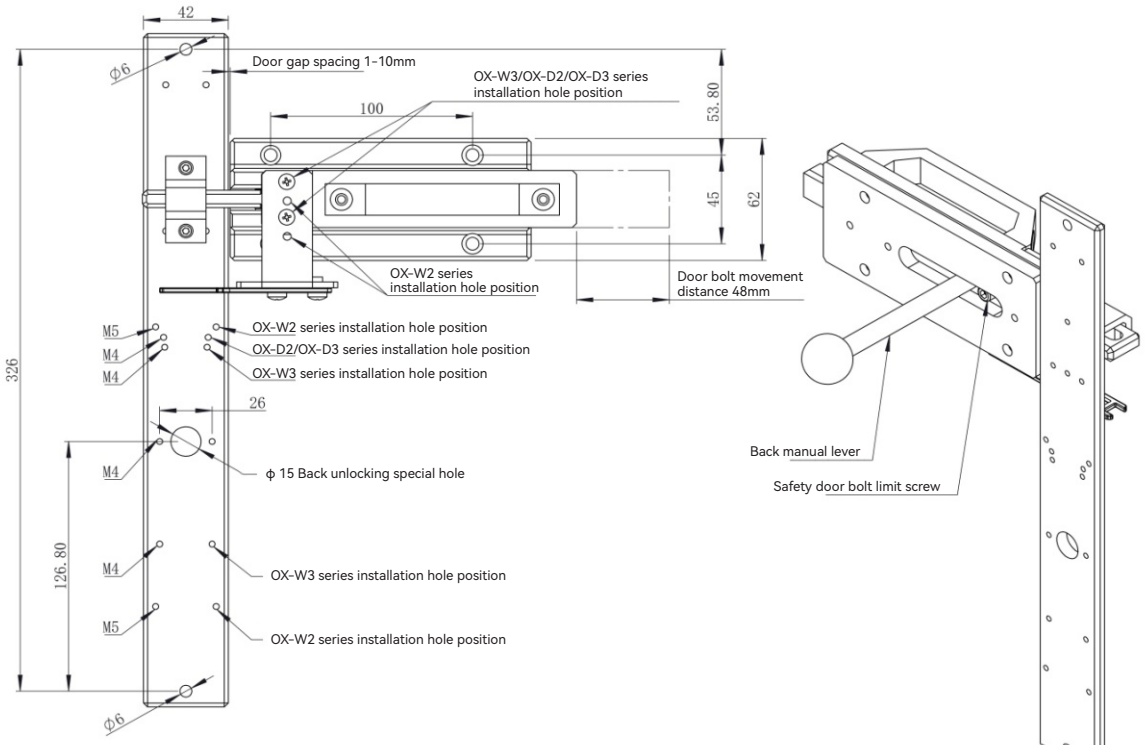


Retract key

Unit: mm

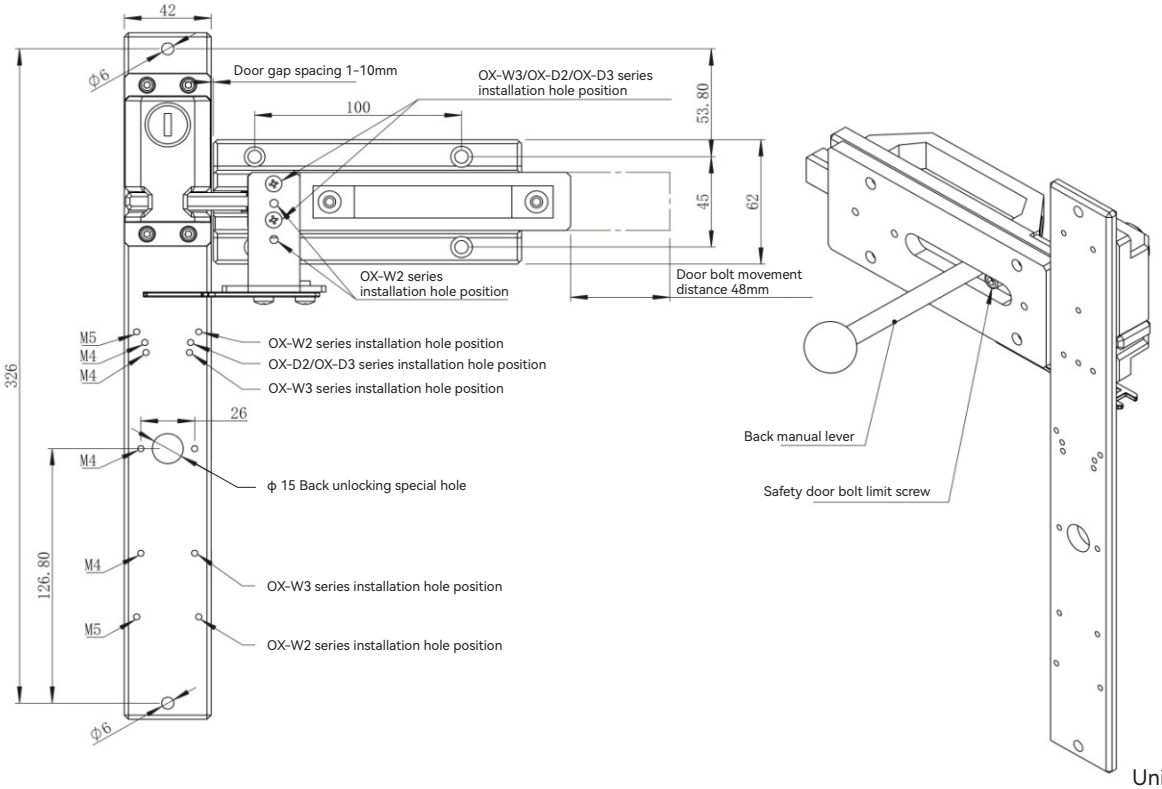
- Installation dimensions of safety door bolts

OXSL-B-1 installation dimensions



Unit: mm

OXSL-B-2 installation dimensions



Unit: mm