



Product introduction

Safety interlock switch is a safety device used to lock and monitor the movable mechanisms such as safety fence doors, and protective covers. The strong structural design of SLR11 series make it withstand higher tension. The RFID technology has higher security and confidentiality. Sensor & actuator support universal and unique coding. Small size for easy installation.

Product feature

- With locking & monitoring function.
- Optional coding modes: Universal coding & unique coding.
- Self-diagnose & cross-diagnose: Periodic double cross-diagnose improves security.
- Independent redundant dual signal: In case of hazard caused by signal loop failure.
- Small size: 29.7*29.7 section size.
- Flexible installation: Directly installed on aluminum frame less than 30mm, brackets is no need.

Product parameter

Standard		ISO 13849-1 (Category 4/Pl e) ; IEC/EN60947-5-3
Certificate		CE
Locking mode		Power to lock/ power to release
Safety output		NPN*2/PNP*2
Response time	Locking→Unlocking	<100ms(Independent working)
	Unlocking → Locking	<300ms(Independent working)
Locking	Lock holding force Fzh	≥2000N
	Lock bolt insertion deviation	≤2mm
	Mechanical endurance	>1 million times (Door operating speed1m/s)
	Operating frequency	1Hz
	Minimum radius of the revolving door	≥250mm
	Manual unlocking	Front. Rear
Cascade linking		Maximum 20 sets
Control output (OSSD output)	Output type	Transistor output x 2
	Maximum load current	≤200mA
	Residual voltage (When it' s ON)	<2.5V (Cable 5m)
	Voltage when it' s OFF	≤2V (Cable 5m)
	Leakage current	≤0.5mA
	Maximum load capacity	4uF
	Load connection resistance	≤2.5Ω
AUX output (unsafe output)	Output type	Transistor output
	Maximum load capacity	1
	Machanical endurance	50mA
	Residual voltage (when it' s ON)	≤2.5V@50mA
External input (breaking current)	Safety input	5mA*2
	Reset/EDM input	About 10mA*1
	Locking control input	About 10mA*1
Power supply	Working voltage	DC24V±15%
	Rated power	<5W (No load)
Protection		Safety circuit protection, current limit, overload protection, overvoltage protection, reverse polarity protection
Environment	Housing protection level	IP65
	Operating ambient temperature	-20°C~+55°C (No freezing)
	Storage temperature	-25°C~+70°C (No freezing)
	Operating ambient humidity	5%~95%RH
	Ambient storage humidity	5%~95%RH
	Vibration resistance	10Hz-55Hz, double amplitude 2.0mm, 5 minutes each in X, Y and Z directions
	Shock resistance	30g 6times each in X, Y and Z direction (IEC60947-5-3)
Restart time		3.5s
Material		Nylon/ Zinc alloy/ Stainless steel

SLR11 Series Safety Interlock Switch

Model selection (eg.: SLR11-□□□□□-□)

Product series	Locking mode	Configuration type	Coding mode	Output type	Wire connection	Cable length	AUX selection
SLR11	— ☐	☐	☐	☐	☐ — ☐	☐	☐
	0: Power to lock 1: Power to release	0: Standard mode 1: Advanced mode	0: Universal coding 1: Unique coding	N: NPN P: PNP	C: M12 connector No mark: leading wire	3: 3m 5: 5m 10: 10m 20: 20m	No mark: output monitored by locking A: output monitored by keys

Function of standard mode & advanced mode

	Safety output	AUX output	Safety input	Lock input	EDM	Reset
Standard mode	●	●	●	●	—	—
Advanced mode	●	●	●	●	●	●

AUX Output

No mark: AUX outputs turning ON/OFF linked with the lock state.

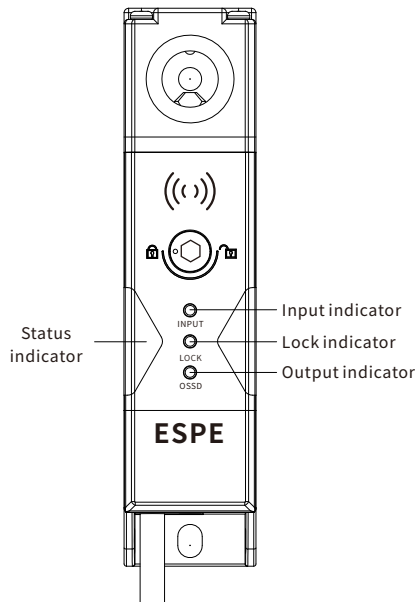
Door Status	Lock Status	OSSD Output	AUX Output
Open	Releasing	OFF	ON
Close	Releasing	OFF	ON
Close	Locking	ON	OFF

A: AUX output turn ON/OFF linked with the door opening/closing

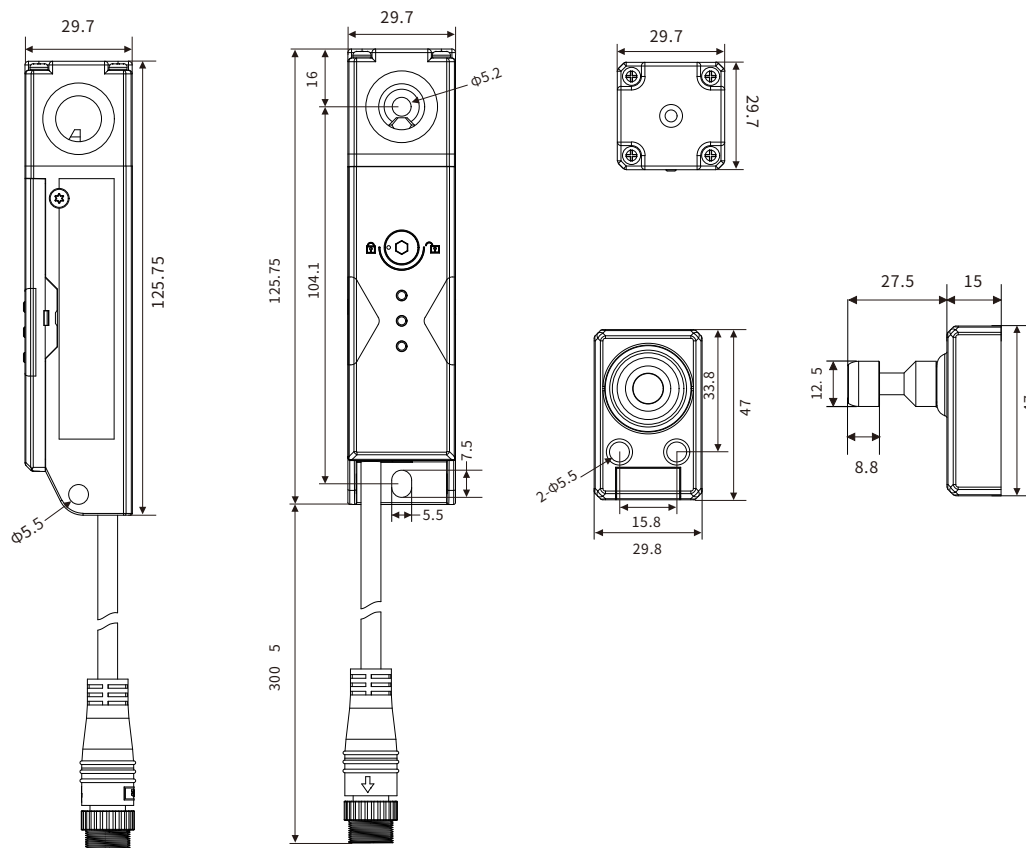
Door Status	Lock Status	OSSD Output	AUX Output
Open	Releasing	OFF	ON
Close	Releasing	OFF	OFF
Close	Locking	ON	OFF

Model selection table

Locking mode	Configuration	Output	Coding mode	Model
Power to lock	Standard mode	NPN	Universal coding	SLR11-000N
		NPN	Unique coding	SLR11-001N
		PNP	Universal coding	SLR11-000P
		PNP	Unique coding	SLR11-001P
	Advanced mode	NPN	Universal coding	SLR11-010N
		NPN	Unique coding	SLR11-011N
		PNP	Universal coding	SLR11-010P
		PNP	Unique coding	SLR11-011P
Power to release	Standard mode	NPN	Universal coding	SLR11-100N
		NPN	Unique coding	SLR11-101N
		PNP	Universal coding	SLR11-100P
		PNP	Unique coding	SLR11-101P
	Advanced mode	NPN	Universal coding	SLR11-110N
		NPN	Unique coding	SLR11-111N
		PNP	Universal coding	SLR11-110P
		PNP	Unique coding	SLR11-111P

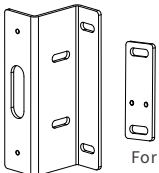
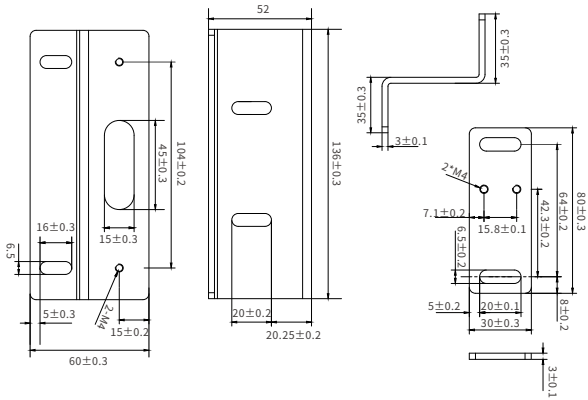
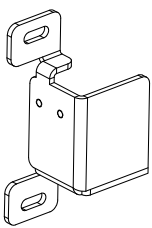
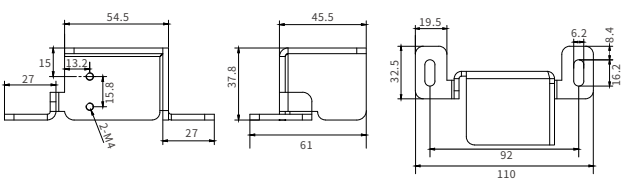
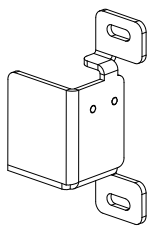
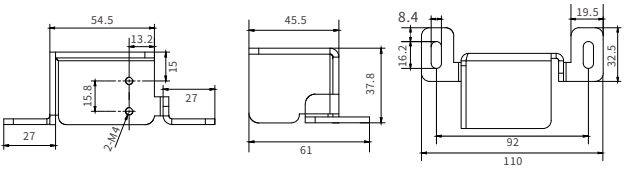
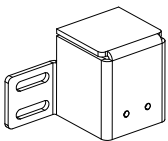
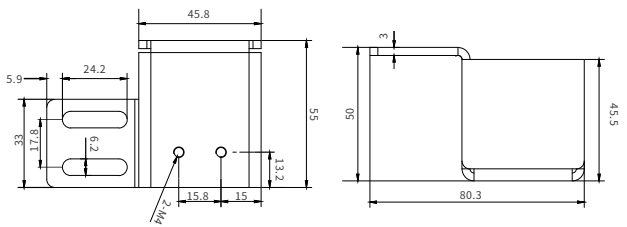
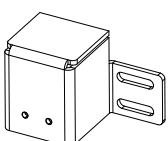
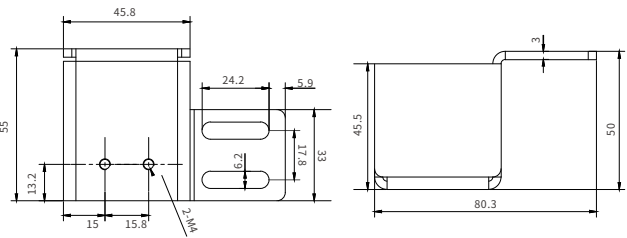


Indicator	Color	Details
Output indicator	Red, green	OSSD output: green. OSSD close: red. OSSD error: red 2Hz blink. EDM error: red 1Hz blink.
Locking indicator	Green	Locking: steady ON. Lock error: 2Hz blink. NO RFID: 1Hz blink. Attempt to lock: ON after double blinking. Attempt to: OFF after double blinking. Releasing: OFF.
Input indicator	Orange	Normal input: light on. Wait for input: OFF. Wait for reset: 1Hz blink. Safety input error: 2Hz blink.
Working status indicator	Green, red, orange	Lock and with output: Green ON. Output & system error: Red ON. Voltage error: orange 1Hz blink. Internal communication self-diagnose error: red 2Hz blink. Internal signal self-diagnose error: red 1Hz blink. Internal data calibration error: green 1Hz blink.

 Product size

SLR11 Series Safety Interlock Switch

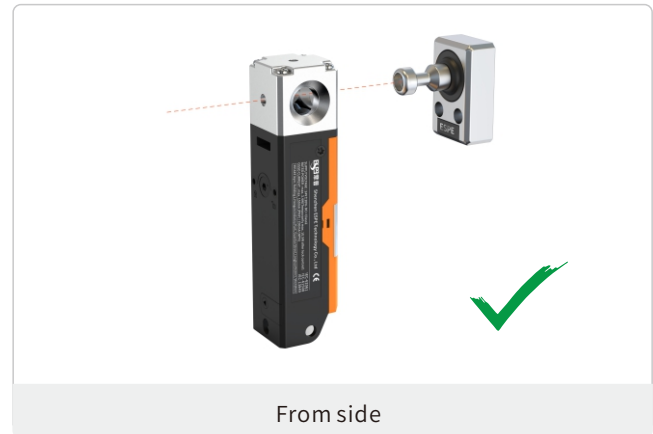
Brackets

Picture	Bracket	Model	Size
 For main unit For actuator	Inside mounting brackets	SR11-B01	
	Slide mounting bracket (left opening)	SR11-BL01	
	Slide mounting bracket (right opening)	SR11-BR01	
	Hinge mounting bracket (left opening)	SR11-BL02	
	Hinge mounting bracket (right opening)	SR11-BR02	

Installation

Direction of main unit and actuator

Correction installation



Incorrect installation direction



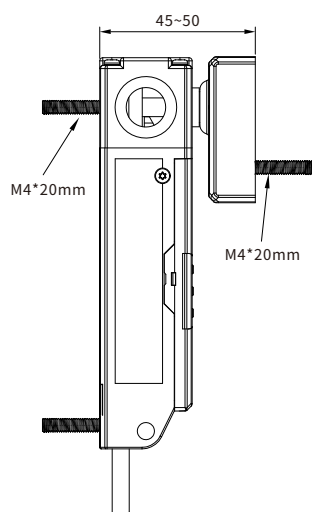
Mutual interference

When multiple SLR11 used closely, they may malfunction due to mutual interference. In order to avoid mutual interference, please install interlock as below.

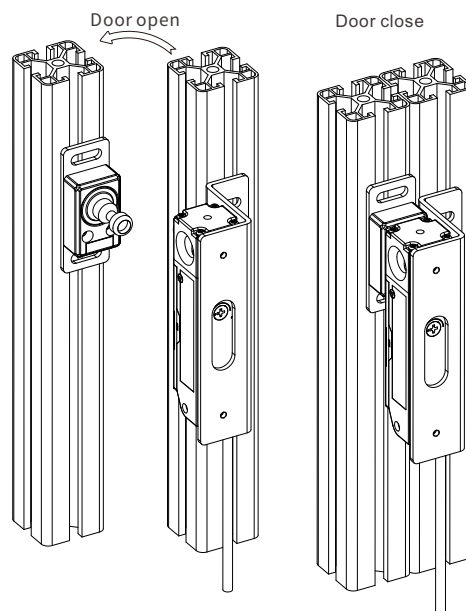


SLR11 Series Safety Interlock Switch

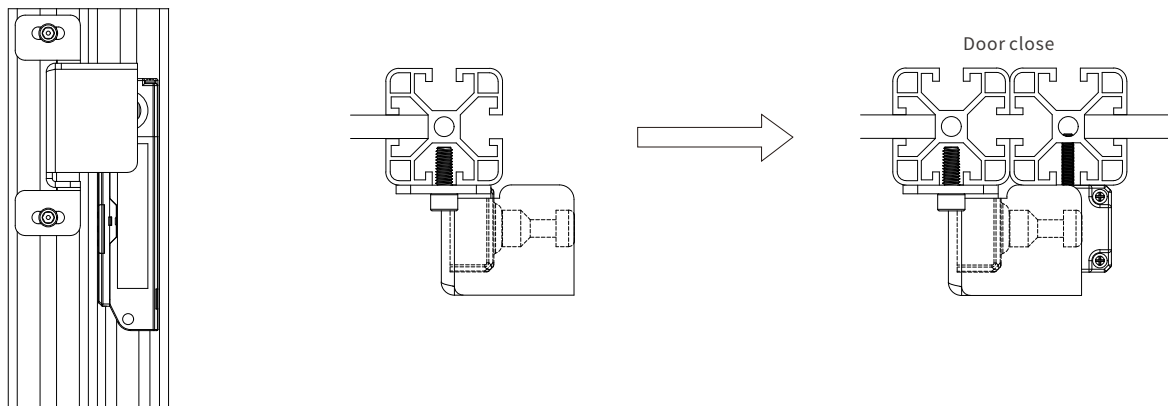
Installation without bracket



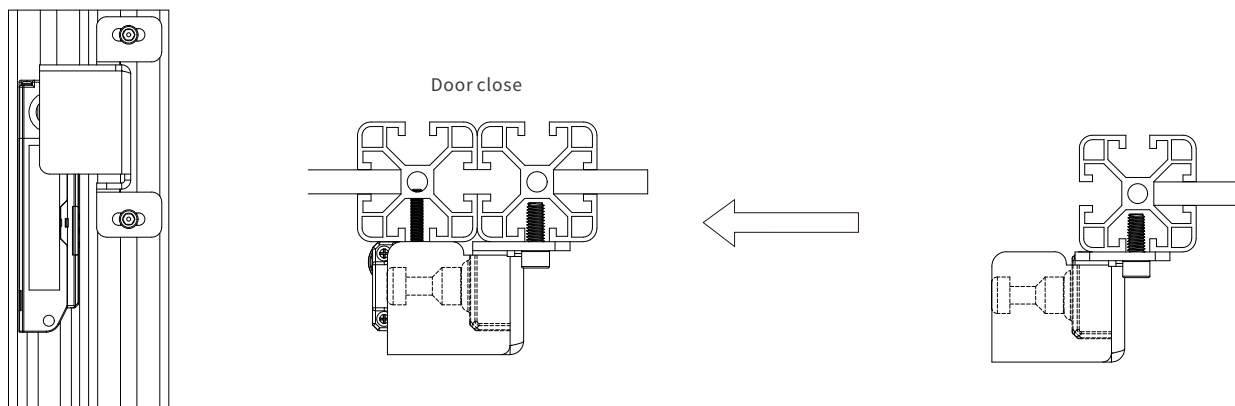
Installation with inside bracket



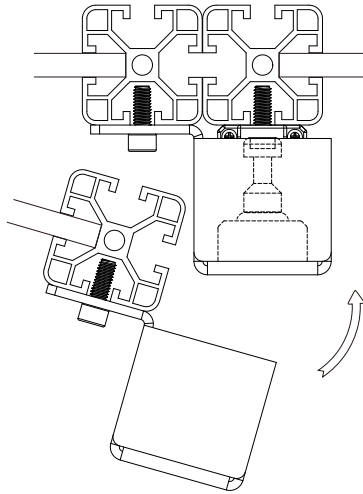
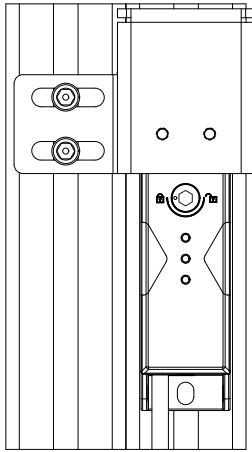
Installation with left-opening slide bracket



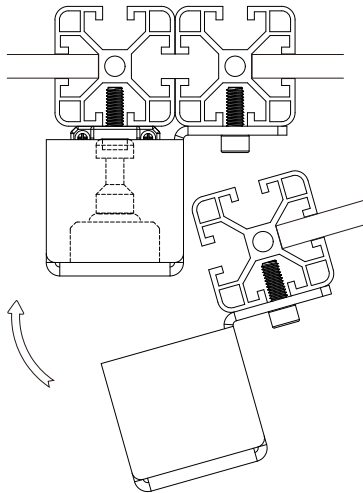
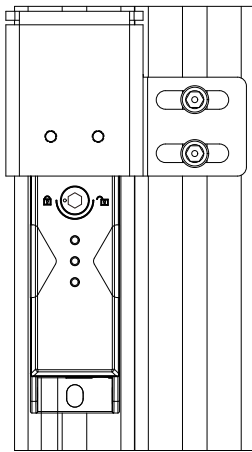
Installation with right-opening slide bracket



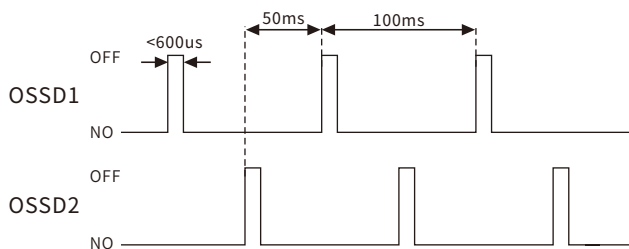
Installation with left opening hinge bracket



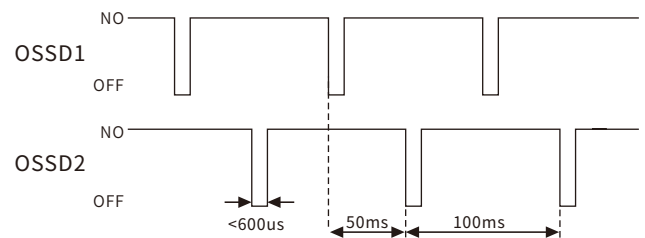
Installation with right opening hinge bracket



Timing chart



NPN timing chart

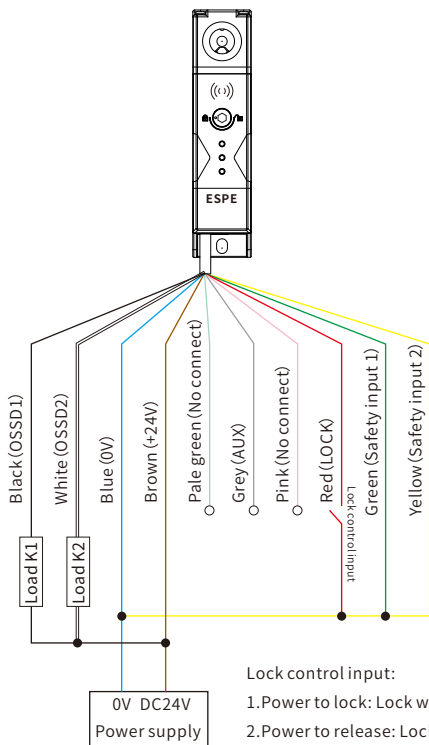


PNP timing chart

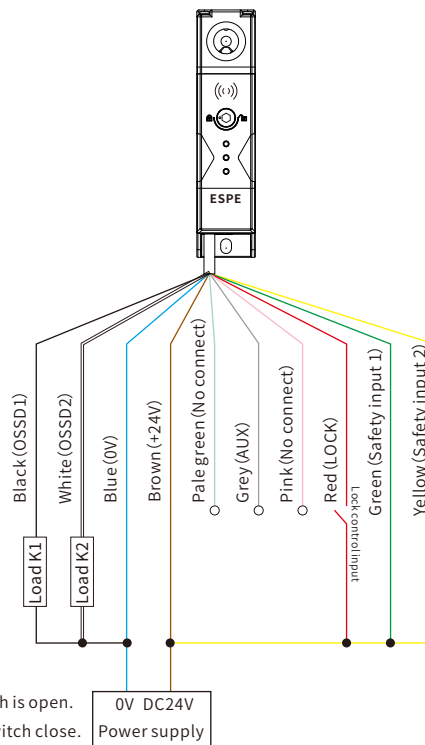
SLR11 Series Safety Interlock Switch

Wire diagram

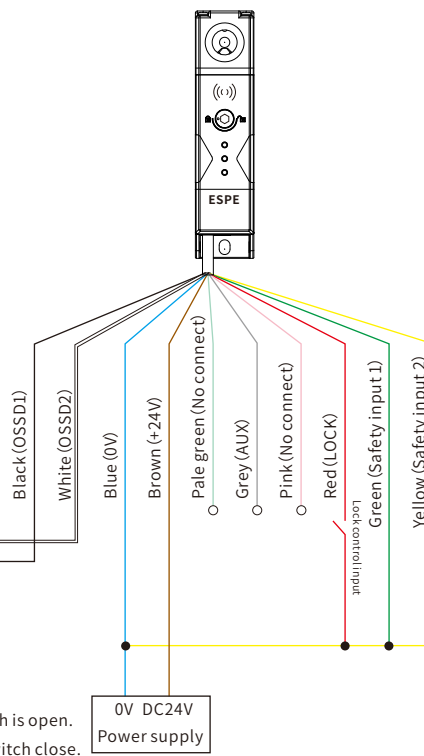
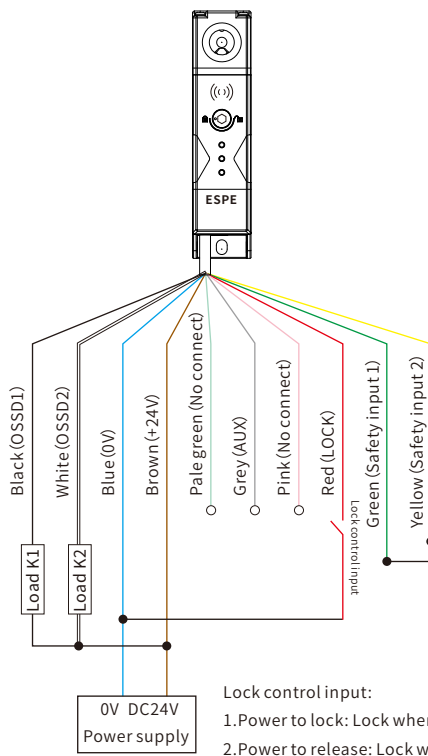
SLR11 Standard mode (NPN, No cascade)



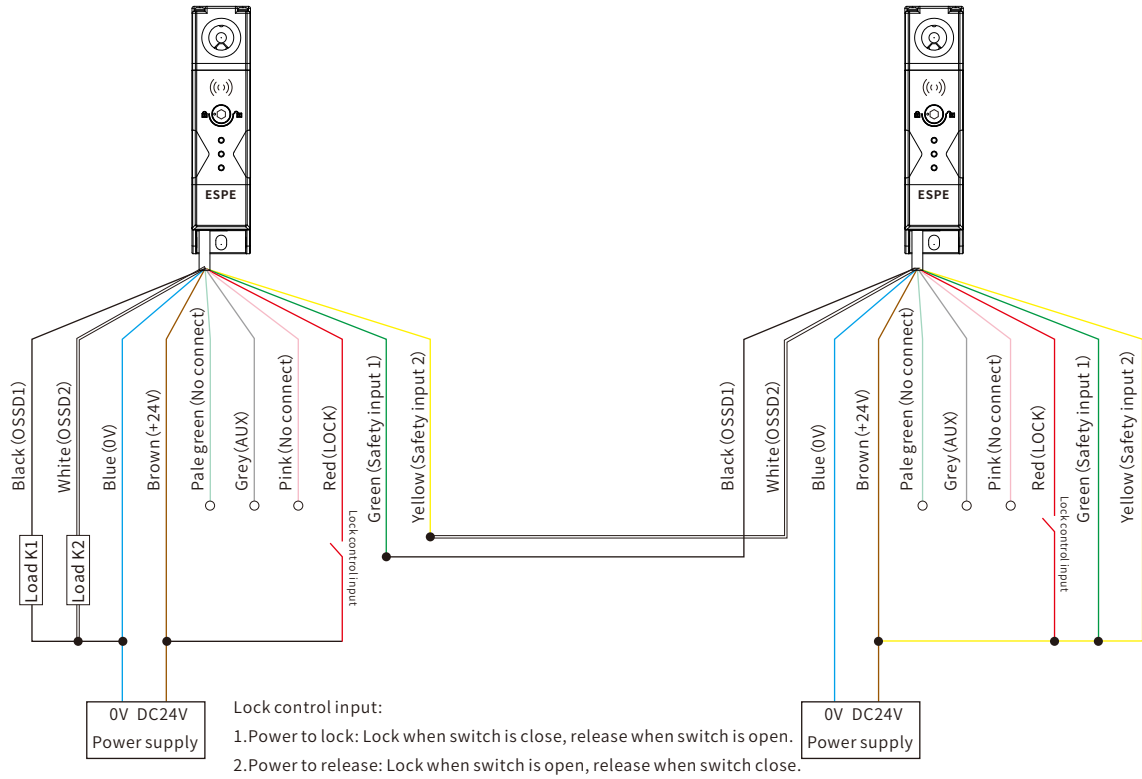
SLR11 Standard mode (PNP, No cascade)



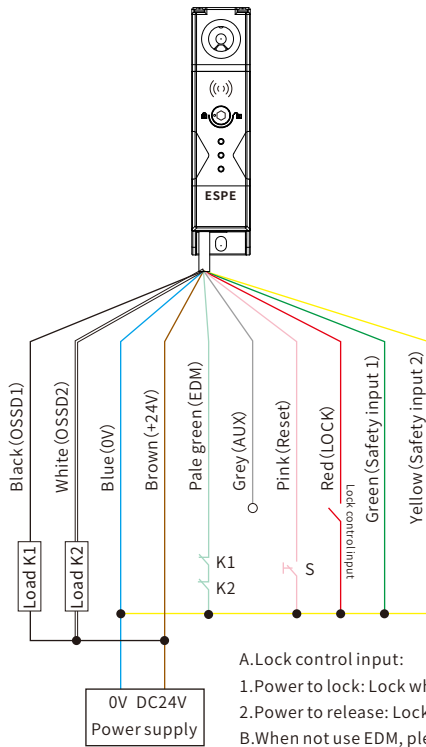
SLR11 Standard mode (NPN, cascade)



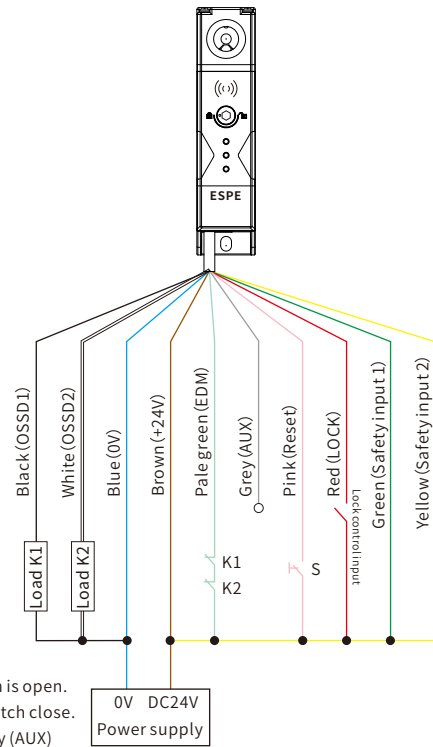
SLR11 Standard mode (PNP, cascade)



SLR11 Advanced (NPN, No cascade)



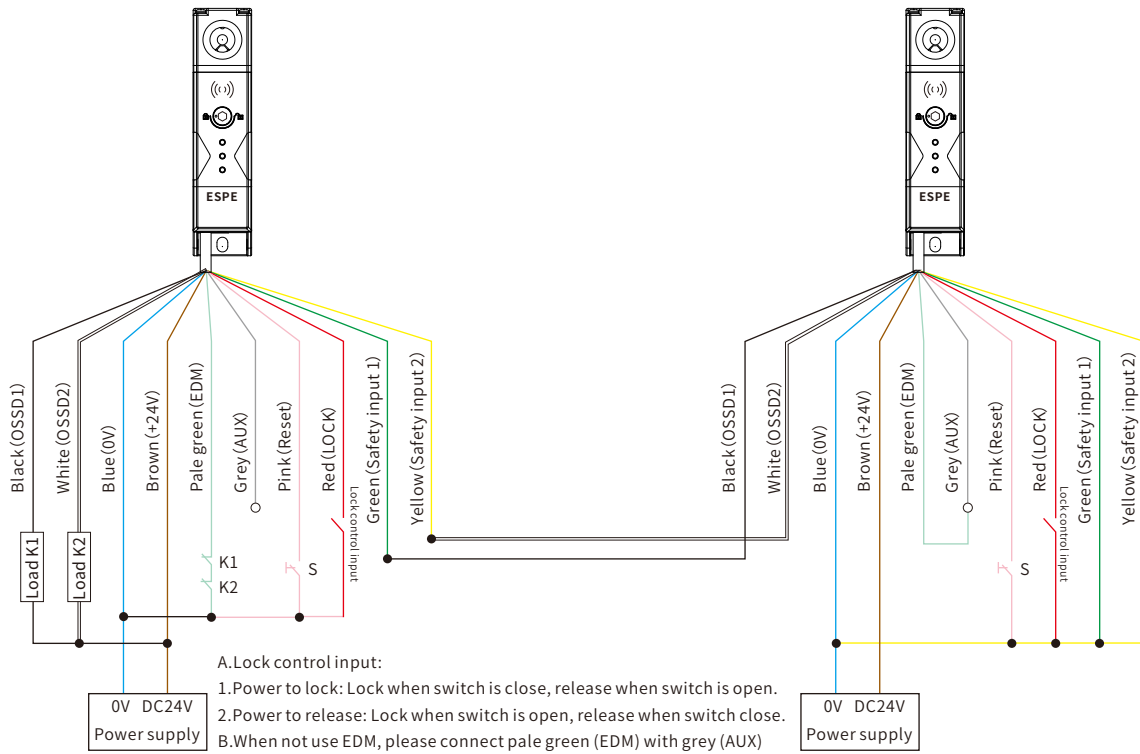
SLR11 Advanced (PNP, No cascade)



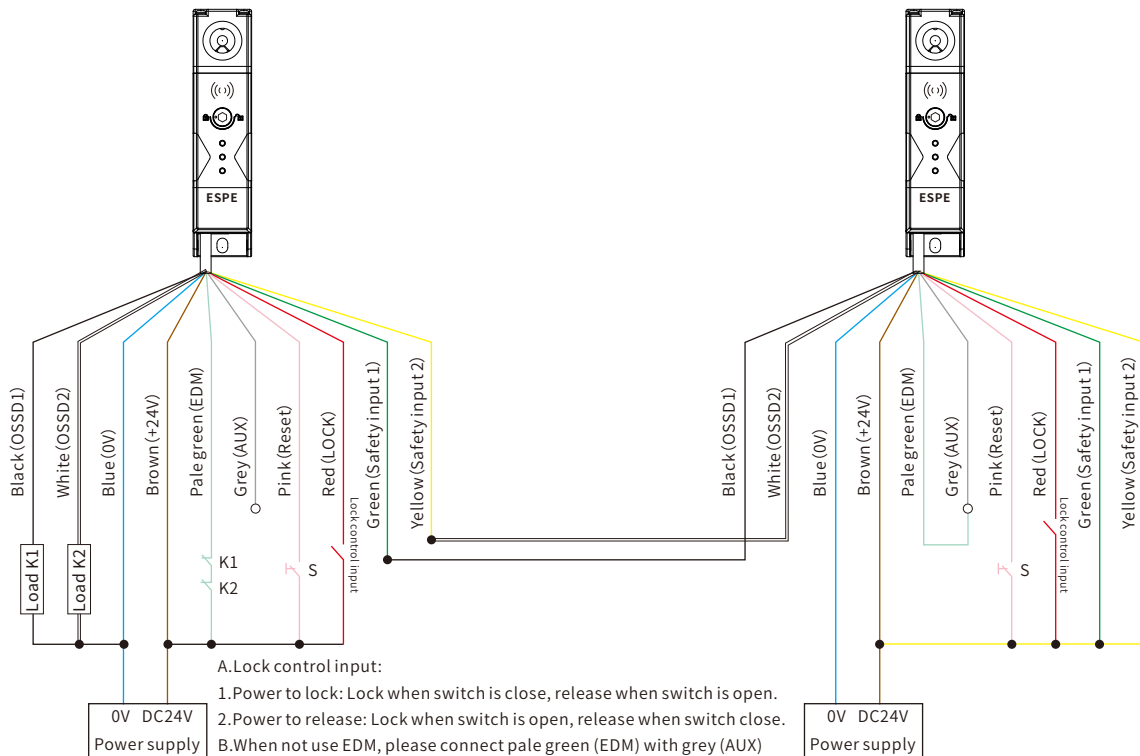
SLR11 Series Safety Interlock Switch

Wire diagram

SLR11 Advanced mode (NPN, cascade)



SLR11 Advanced mode (PNP, cascade)



✈ Cable option

Product series

SLR11 — M12P

Wire NO.

10:10 wire

Cable type

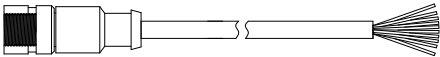
S: one side for wire, one side with straight female aviation connector
SS: one side for straight aviation connection, one side straight male connector

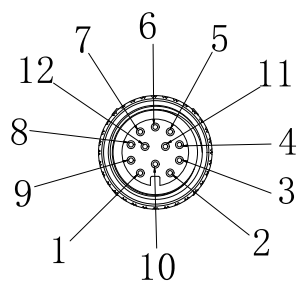
Length

3: 3m
5: 5m
10: 10m
20: 20m

Remark: With leading wire type, no need to refer about this.

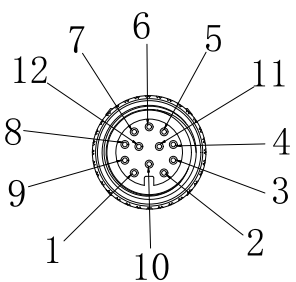
📄 Selection table (with cable)

Standard cable	Type	Length	Model
	Common use for standard & advanced type	3m	SLR11-M12P10S3
		5m	SLR11-M12P10S5
		10m	SLR11-M12P10S10
		20m	SLR11-M12P10S20



M12 waterproof aviation female connector

- 1、Brown-VCC;
- 2、Blue-GND;
- 3、Grey-AUX;
- 4、Black-OSSD1;
- 5、White-OSSD2;
- 6、Green-Safety input 1;
- 7、Yellow-Safety input 2;
- 8、Red-LOCK;
- 9、Pale green-No connect;
- 10、Pink-No connect;
- 11、No mark;
- 12、No mark;



M12 waterproof aerial female connector Advanced series

- 1、Brown-VCC;
- 2、Blue-GND;
- 3、Grey-AUX;
- 4、Black-OSSD1;
- 5、White-OSSD2;
- 6、Green-Safety input 1;
- 7、Yellow-Safety input 2;
- 8、Red-LOCK;
- 9、Pale green-EDM;
- 10、Pink-Reset;
- 11、No mark;
- 12、No mark;