SLM13 Series

4 Contacts Safety Door Switch

Safety Protection Forced Lock

- EN 60947-5-1
- GB/T 14048.5
- EN ISO 14119
- GB/T 18831
- UL 508

Product Introduction

SLM13 series is the most common door interlock technology. It uses a inserting key to detect the movement of the protective door. As the small and light weight size, various contact configurations, and locking functions, safety door locks are usually the lowest cost solution. The SLM13 series safety door lock allows the switch head to rotate at a 90°Angle four times. The key can be inserted into the switch at five different positions. The electromagnet can be selected to work when powered on or off, providing various different options for the working mode of the switch and the installation method on the protective door. it improves the flexibility of the switch and make it suitable for use on various doors.

Product Feature

- Multiple and optional contacts constructure.
- 1300N holding force.
- IP67 protection rate.
- PA66 fire retardant material.
- Support general load and micro-load.

SLM13 Series Safety Door Switch

Technical Parameter

Electromagnetic Tube		
Rated Operating Voltage	DC 24V	
Power consumption	Approximately 4.8W*1	
Current consumption	Approximately 200mA*2	
Insulation	Class B (130°C)	
LED Indicator		
Rated Operating Voltage	DC 24V	
Rated Current	Approx. 1mA	
Luminous Color (LED)	Green	
Safety Level	**PL d (ISO 13849-1)**	
Certificates	CE, TUV Rheinland	
Standard	EN 60947-5-1、GB/T 14048.5、EN ISO 14119、GB/T 18831、UL 508	
Protection Rate	IP67	
Material	PA66 fire retardant	
Mechanical Lifespan	Over 1,000,000 times	
Electrical Lifespan	Over 150,000 times (AC240V3A resistance load)	
Using Type	**AC-15**	**DC-13**
Rated Operating Voltage (Ue)	240V	24V
Rated Operating Current (Ie)	3A	2A
Electrical Parameters		
Contact Resistance	<200mΩ	
Nominal Ddischarge Current (Ith)	10A	
Rated Insulation Voltage (Ui)	300V	
Anti-electric Shock Level	Class II (Double insulation)	
Pulse Withstand Voltage (EN60947-5-1)	2.5KV	
Insulation Resistance	100MΩ以上	
Short-circuit Protection	10A, 250V Requires a quick-break fuse	
Vibration Resistance	10-55HZ Double amplitude 1.5mm	
Impact Resistance	Durability 1000m/s^2	
Conditional Short-circuit Current	100A (EN 60947-5-1)	
Space of Contact	2×2mm above	
Action Characteristic		
Direct Opening Force	>10mm	
Direct Opening Travel	0.1 m ~ 0.5m/s	
Allowed Operating Frequency	Maximum 30 times/ minutes	
Holding Force	1300N	
Environment		
Operating Environment	3 (EN60947-5-1)	
Operating Temperature	-10°C~+55°C (no freezing)	
Operating Humidity	<95% RH	

*1 The maximum inrush power of the door switch does not exceed 15W, and the power consumption will then return to within 4.8W.
*2 The maximum inrush current of the door switch does not exceed 600mA, and the current consumption will then return to within 200mA.

Model Selection (e.g.:SLM13-APM-B)

Product Series	Switch Contact (Door Monitor + Lock Monitor)	Head Ddirection/ Material	Door Lock/ Release Method		Key Inserting Direction
SLM13	– □	□	□	–	□

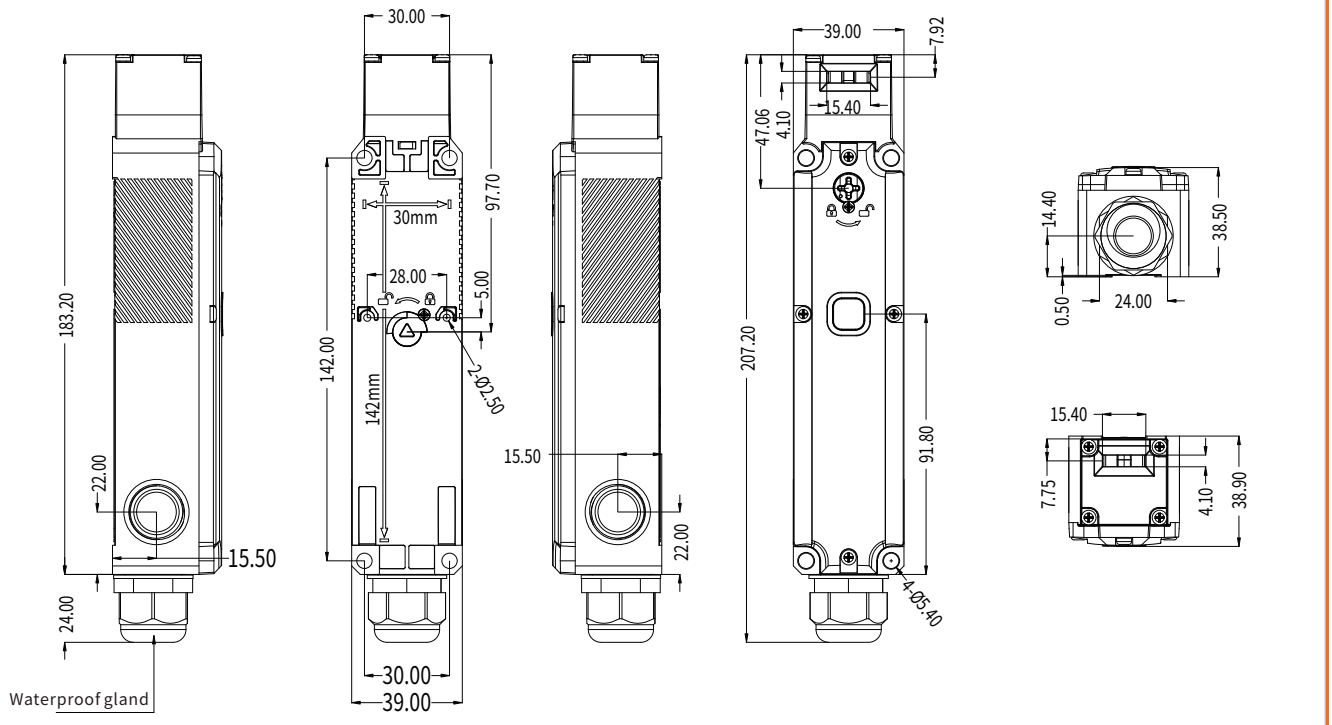
A: 1NC/1NO(Slow action)+1NC/1NO(Slow action)
B: 1NC/1NO(Slow action)+2NC(Slow action)
C: 2NC(Slow action)+1NC/1NO(Slow action)
D: 2NC(Slow action)+2NC(Slow action)
E: 1NC/2NO(Slow action)+1NC(Slow action)
F: 3NC(Slow action)+1NC(Slow action)
G: 2NC/1NO(Slow action)+1NC(Slow action)
H:1NC(Slow action)+3NC(Slow action)
I: 1NC(Slow action)+1NC/2NO(Slow action)
J:1NC(Slow action)+2NC/1NO(Slow action)
K: 1NO(Slow action)+3NC(Slow action)
L: 1NO(Slow action)+2NC/1NO(Slow action)
M: 1NC(Slow action)+1NC(Slow action)
N: 1NO(Slow action)+1NC(Slow action)

M: 4 optional directions (Default front side installation)/ metal
P:4 optional directions (Default front side installation)/ plastic

M: DC 24V power to release
E: DC 24V power to lock

No mark: front
B: Rear to release

Product Size



Note: This is a size diagram for a rear release function.

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SLM13 Model Selection Table

Rear release unit	Head Material	Magnetic Voltage/ Indicator	Lock/Release Method	Contact Type (Door Monitor + Lock Monitor)	Gland Size	Model
No	Plastic	Electromagnetic DC 24V Green LED	Electromagnetic locking, Mechanical release	1NC/1NO+1NC/1NO	M20X1.5	SLM13-APE
				1NC/1NO+2NC	M20X1.5	SLM13-BPE
				2NC+1NC/1NO	M20X1.5	SLM13-CPE
				2NC+2NC	M20X1.5	SLM13-DPE
				1NC/2NO+1NC	M20X1.5	SLM13-EPE
				3NC+1NC	M20X1.5	SLM13-FPE
				2NC/1NO+1NC	M20X1.5	SLM13-GPE
				1NC+3NC	M20X1.5	SLM13-HPE
				1NC+1NC/2NO	M20X1.5	SLM13-IPE
				1NC+2NC/1NO	M20X1.5	SLM13-JPE
				1NO+3NC	M20X1.5	SLM13-KPE
				1NO+2NC/1NO	M20X1.5	SLM13-LPE
				1NC+1NC	M20X1.5	SLM13-MPE
				1NO+1NC	M20X1.5	SLM13-NPE
			Mechanical locking, Electromagnetic release	1NC/1NO+1NC/1NO	M20X1.5	SLM13-APM
				1NC/1NO+2NC	M20X1.5	SLM13-BPM
				2NC+1NC/1NO	M20X1.5	SLM13-CPM
				2NC+2NC	M20X1.5	SLM13-DPM
				1NC/2NO+1NC	M20X1.5	SLM13-EPM
				3NC+1NC	M20X1.5	SLM13-FPM
				2NC/1NO+1NC	M20X1.5	SLM13-GPM
				1NC+3NC	M20X1.5	SLM13-HPM
				1NC+1NC/2NO	M20X1.5	SLM13-IPM
				1NC+2NC/1NO	M20X1.5	SLM13-JPM
				1NO+3NC	M20X1.5	SLM13-KPM
				1NO+2NC/1NO	M20X1.5	SLM13-LPM
				1NC+1NC	M20X1.5	SLM13-MPM
				1NO+1NC	M20X1.5	SLM13-NPM

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Rear release unit	Head Material	Magnetic Voltage/ Indicator	Lock/Release Method	Contact Type (Door Monitor + Lock Monitor)	Gland Size	Model
Yes	Plastic	Electromagnetic DC 24V Green LED	Electromagnetic locking, Mechanical release	1NC/1NO+1NC/1NO	M20X1.5	SLM13-APE-B
				1NC/1NO+2NC	M20X1.5	SLM13-BPE-B
				2NC+1NC/1NO	M20X1.5	SLM13-CPE-B
				2NC+2NC	M20X1.5	SLM13-DPE-B
				1NC/2NO+1NC	M20X1.5	SLM13-EPE-B
				3NC+1NC	M20X1.5	SLM13-FPE-B
				2NC/1NO+1NC	M20X1.5	SLM13-GPE-B
				1NC+3NC	M20X1.5	SLM13-HPE-B
				1NC+1NC/2NO	M20X1.5	SLM13-IPE-B
				1NC+2NC/1NO	M20X1.5	SLM13-JPE-B
				1NO+3NC	M20X1.5	SLM13-KPE-B
				1NO+2NC/1NO	M20X1.5	SLM13-LPE-B
				1NC+1NC	M20X1.5	SLM13-MPE-B
				1NO+1NC	M20X1.5	SLM13-NPE-B
			Mechanical locking, Electromagnetic release	1NC/1NO+1NC/1NO	M20X1.5	SLM13-APM-B
				1NC/1NO+2NC	M20X1.5	SLM13-BPM-B
				2NC+1NC/1NO	M20X1.5	SLM13-CPM-B
				2NC+2NC	M20X1.5	SLM13-DPM-B
				1NC/2NO+1NC	M20X1.5	SLM13-EPM-B
				3NC+1NC	M20X1.5	SLM13-FPM-B
				2NC/1NO+1NC	M20X1.5	SLM13-GPM-B
				1NC+3NC	M20X1.5	SLM13-HPM-B
				1NC+1NC/2NO	M20X1.5	SLM13-IPM-B
				1NC+2NC/1NO	M20X1.5	SLM13-JPM-B
				1NO+3NC	M20X1.5	SLM13-KPM-B
				1NO+2NC/1NO	M20X1.5	SLM13-LPM-B
				1NC+1NC	M20X1.5	SLM13-MPM-B
				1NO+1NC	M20X1.5	SLM13-NPM-B

SLM13 Model Selection Table

Rear release unit	Head Material	Magnetic Voltage/ Indicator	Lock/Release Method	Contact Type (Door Monitor + Lock Monitor)	Gland Size	Model
No	Metal	Electromagnetic DC 24V Green LED	Electromagnetic locking, Mechanical release	1NC/1NO+1NC/1NO	M20X1.5	SLM13-AME
				1NC/1NO+2NC	M20X1.5	SLM13-BME
				2NC+1NC/1NO	M20X1.5	SLM13-CME
				2NC+2NC	M20X1.5	SLM13-DME
				1NC/2NO+1NC	M20X1.5	SLM13-EME
				3NC+1NC	M20X1.5	SLM13-FME
				2NC/1NO+1NC	M20X1.5	SLM13-GME
				1NC+3NC	M20X1.5	SLM13-HME
				1NC+1NC/2NO	M20X1.5	SLM13-IME
				1NC+2NC/1NO	M20X1.5	SLM13-JME
				1NO+3NC	M20X1.5	SLM13-KME
				1NO+2NC/1NO	M20X1.5	SLM13-LME
				1NC+1NC	M20X1.5	SLM13-MME
				1NO+1NC	M20X1.5	SLM13-NME
			Mechanical locking, Electromagnetic release	1NC/1NO+1NC/1NO	M20X1.5	SLM13-AMM
				1NC/1NO+2NC	M20X1.5	SLM13-BMM
				2NC+1NC/1NO	M20X1.5	SLM13-CMM
				2NC+2NC	M20X1.5	SLM13-DMM
				1NC/2NO+1NC	M20X1.5	SLM13-EMM
				3NC+1NC	M20X1.5	SLM13-FMM
				2NC/1NO+1NC	M20X1.5	SLM13-GMM
				1NC+3NC	M20X1.5	SLM13-HMM
				1NC+1NC/2NO	M20X1.5	SLM13-IMM
				1NC+2NC/1NO	M20X1.5	SLM13-JMM
				1NO+3NC	M20X1.5	SLM13-KMM
				1NO+2NC/1NO	M20X1.5	SLM13-LMM
				1NC+1NC	M20X1.5	SLM13-MMM
				1NO+1NC	M20X1.5	SLM13-NMM

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Rear release unit	Head Material	Magnetic Voltage/ Indicator	Lock/Release Method	Contact Type (Door Monitor + Lock Monitor)	Gland Size	Model
Yes	Metal	Electromagnetic DC 24V Green LED	Electromagnetic locking, Mechanical release	1NC/1NO+1NC/1NO	M20X1.5	SLM13-AME-B
				1NC/1NO+2NC	M20X1.5	SLM13-BME-B
				2NC+1NC/1NO	M20X1.5	SLM13-CME-B
				2NC+2NC	M20X1.5	SLM13-DME-B
				1NC/2NO+1NC	M20X1.5	SLM13-EME-B
				3NC+1NC	M20X1.5	SLM13-FME-B
				2NC/1NO+1NC	M20X1.5	SLM13-GME-B
				1NC+3NC	M20X1.5	SLM13-HME-B
				1NC+1NC/2NO	M20X1.5	SLM13-IME-B
				1NC+2NC/1NO	M20X1.5	SLM13-JME-B
				1NO+3NC	M20X1.5	SLM13-KME-B
				1NO+2NC/1NO	M20X1.5	SLM13-LME-B
				1NC+1NC	M20X1.5	SLM13-MME-B
				1NO+1NC	M20X1.5	SLM13-NME-B
			Mechanical locking, Electromagnetic release	1NC/1NO+1NC/1NO	M20X1.5	SLM13-AMM-B
				1NC/1NO+2NC	M20X1.5	SLM13-BMM-B
				2NC+1NC/1NO	M20X1.5	SLM13-CMM-B
				2NC+2NC	M20X1.5	SLM13-DMM-B
				1NC/2NO+1NC	M20X1.5	SLM13-EMM-B
				3NC+1NC	M20X1.5	SLM13-FMM-B
				2NC/1NO+1NC	M20X1.5	SLM13-GMM-B
				1NC+3NC	M20X1.5	SLM13-HMM-B
				1NC+1NC/2NO	M20X1.5	SLM13-IMM-B
				1NC+2NC/1NO	M20X1.5	SLM13-JMM-B
				1NO+3NC	M20X1.5	SLM13-KMM-B
				1NO+2NC/1NO	M20X1.5	SLM13-LMM-B
				1NC+1NC	M20X1.5	SLM13-MMM-B
				1NO+1NC	M20X1.5	SLM13-NMM-B

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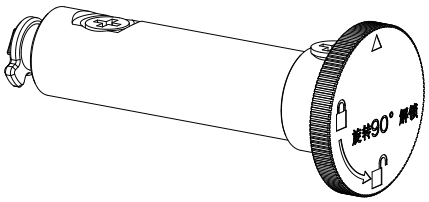
Contacts Action

Model	Contact(Door Monitor+ Lock Monitor)	Wire Diagram		Contact Action
		Door Monitor	Lock Monitor	Contact ON / Contact OFF
	door monitor / lock monitor NC / NC NO / NO The contact status of key insertion and locking		02 — 01 E2 E1 (–) (+)	Operation key complete insertion — Travel — Operation key extraction
SLM13-AP□□ SLM13-AM□□	1NC/1NO+1NC/1NO	11 12 / 33 34 / 21 22 / 43 44		11--12 21--22 33--34 43--44
SLM13-BP□□ SLM13-BM□□	1NC/1NO+2NC	11 12 / 33 34 / 21 22 / 41 42		11--12 21--22 33--34 41--42
SLM13-CP□□ SLM13-CM□□	2NC+1NC/1NO	11 12 / 31 32 / 21 22 / 43 44		11--12 21--22 31--32 43--44
SLM13-DP□□ SLM13-DM□□	2NC+2NC	11 12 / 31 32 / 21 22 / 41 42		11--12 21--22 31--32 41--42
SLM13-EP□□ SLM13-EM□□	1NC/2NO+1NC	11 12 / 33 34 / 43 44 / 21 22		11--12 21--22 33--34 43--44
SLM13-FP□□ SLM13-FM□□	3NC+1NC	11 12 / 31 32 / 41 42 / 21 22		11--12 21--22 31--32 41--42
SLM13-GP□□ SLM13-GM□□	2NC/1NO+1NC	11 12 / 33 34 / 41 42 / 21 22		11--12 21--22 33--34 41--42
SLM13-HP□□ SLM13-HM□□	1NC+3NC	11 12 / 21 22 / 31 32 / 41 42		11--12 21--22 31--32 41--42
SLM13-IP□□ SLM13-IM□□	1NC+1NC/2NO	11 12 / 21 22 / 33 34 / 43 44		11--12 21--22 33--34 43--44
SLM13-JP□□ SLM13-JM□□	1NC+2NC/1NO	11 12 / 21 22 / 33 34 / 41 42		11--12 21--22 33--34 41--42
SLM13-KP□□ SLM13-KM□□	1NO+3NC	33 34 / 11 12 / 21 22 / 41 42		11--12 21--22 33--34 41--42
SLM13-LP□□ SLM13-LM□□	1NO+2NC/1NO	33 34 / 11 12 / 21 22 / 43 44		11--12 21--22 33--34 43--44
SLM13-MP□□ SLM13-MM□□	1NC+1NC	11 12 / 21 22		11--12 21--22
SLM13-NP□□ SLM13-NM□□	1NO+1NC	33 34 / 41 42		33--34 41--42

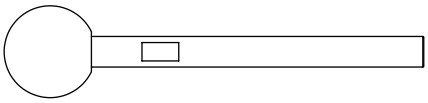
Rear Release Unit

Rear Release Unit



Model :SU-50 (Sold Separately)

Back Handle



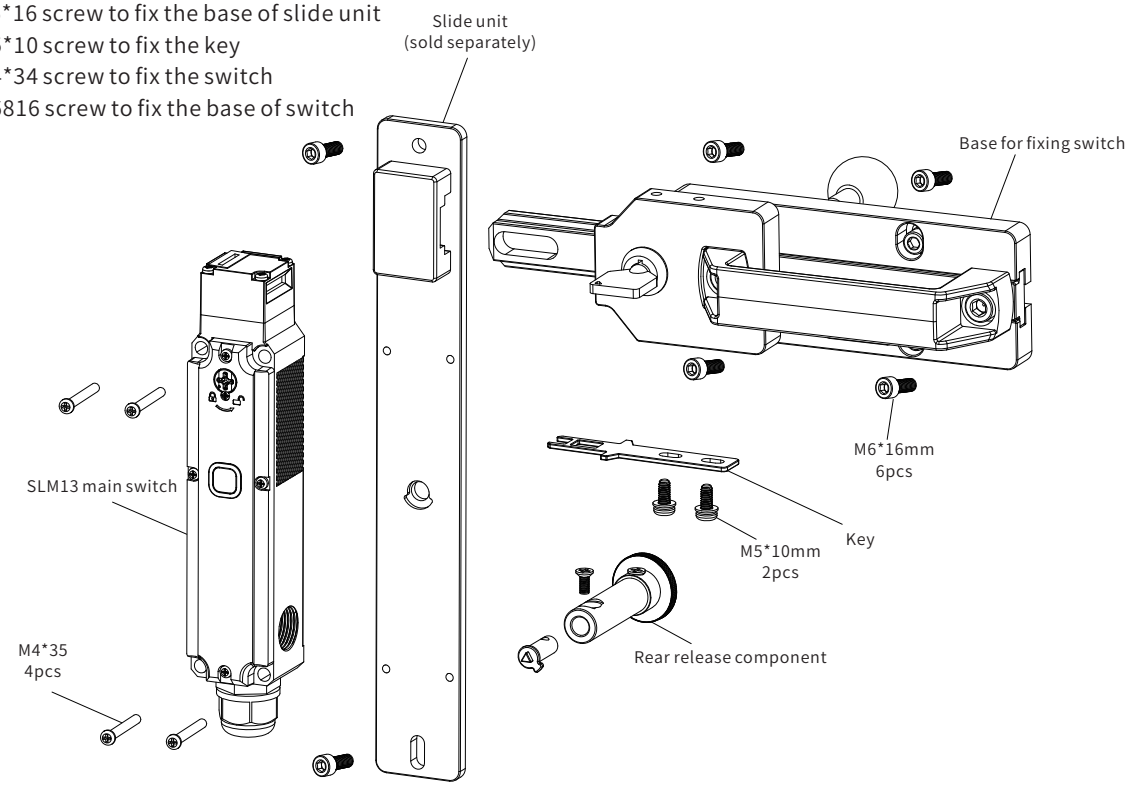
Model :SH-1 (Sold Separately)

Note: For more types of rear release unit, please refer to the rear release unit selection guide.

Installation and Matching Instruction

- Diagram of EMB-M04 safety bolt with a rotating rear release unit.

1.4pcs M6*16 screw to fix the base of slide unit
2.2pcs M5*10 screw to fix the key
3.4pcs M4*34 screw to fix the switch
4.2pcs M6816 screw to fix the base of switch

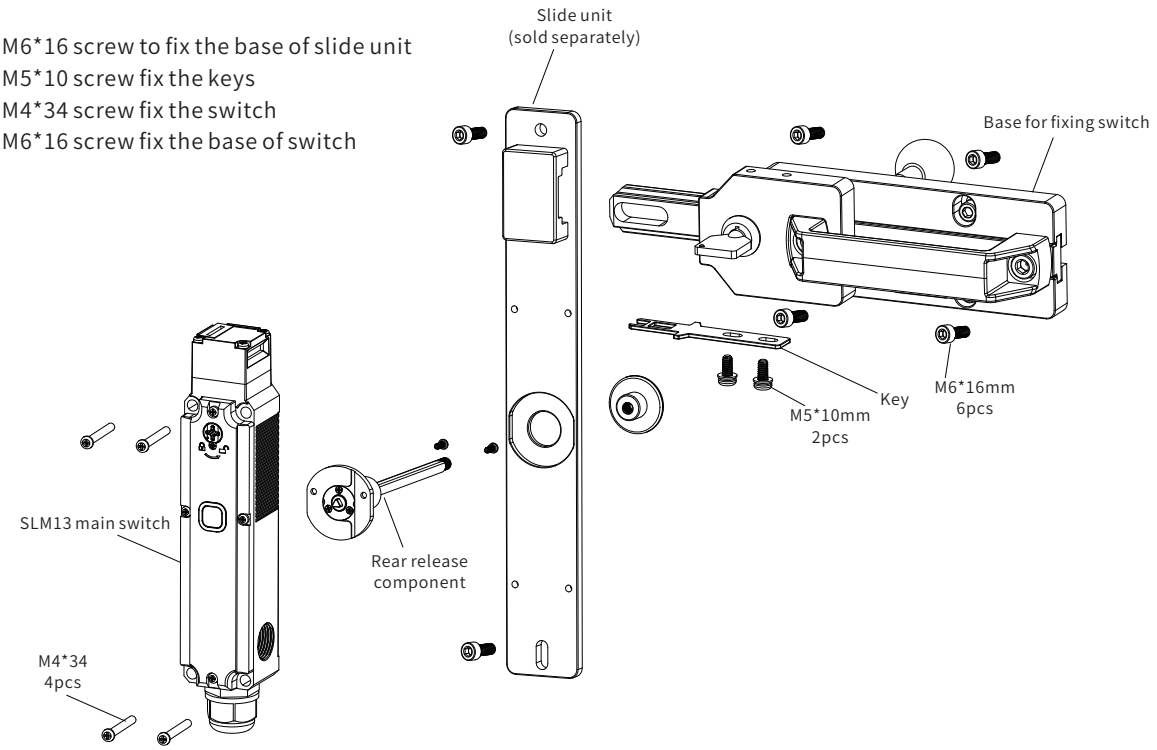


SLM13 Series Safety Door Switch

Installation and Matching Instruction

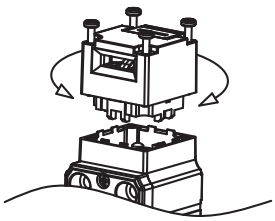
- Diagram of EMB-M05 safety bolt with a rotating rear release unit.

1.4pcs M6*16 screw to fix the base of slide unit
2.2pcs M5*10 screw fix the keys
3.4pcs M4*34 screw fix the switch
4.2pcs M6*16 screw fix the base of switch

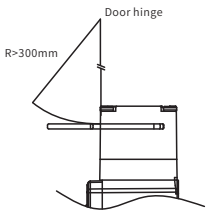


Product Installation

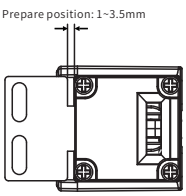
★ Loosen 4 screws on top of head, rotate the head to the right key inserting position and then install it.



★ When install on slide hung door, it should be over than semidiameter.



★ Please install the safety switch and insertion key under range 1-3.5mm.



★ The installation of operation key allows ±1mm deviation within the key insertion center of the hole.