AR-1207A/B-29/36 Electric Bolt Lock (Fail Safe/Fail Secure)

V251219

Content

AR-1207A/B-/29/36

Product 【Electric Bolt Lock】



Specification

- Voltage: DC12V-24V
- Current Draw: 1A(12V) / 0.5A(24V)
- Power Saving Mode: 220mA (12V)
- / 110mA (24V)
- Operating Temperature: -20℃ ~ +65℃
- Locking Mode: Type A (Fail Safe)
  Type B(Fail Secure)
- Dropbolt Length : 16 mm
- Dimension:
  AR-1207/29: 200Lx32Wx32H (mm)
  AR-1207/36: 205Lx32Wx32H (mm)
- Solenoid Test: Over 500,000 times
- Weight: 500g

Features

- Built-in door position status output to indicates door opened or closed position [Door Status]
- Built-in Bolt status output to Indicate locked or unlocked bolt status [Bolt Status]
- Built-in bolt tamper-resistant indicator and alarm output contact [Alarm]
- Support all range voltage DC12V~24V
- Time delay option 0 / 3 / 9 seconds

Product Information

❶ Lock installation parts



Strike plate x1

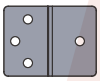


x 2

Extending Plate (small) x2

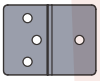


Door Plate x1



x 2

(Suitable for AR-1207-29)



x 2

(Suitable for AR-1207-36)

Extending Plate (big) x2

❷ 8PIN Connector Cable



CN1

❸ Screw Set



x 12

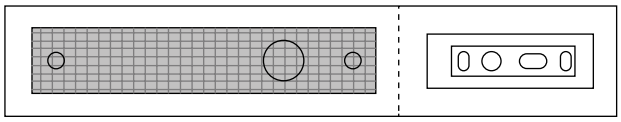
5mm*12mm Screw x12



x 4

5mm*32mm Screw x4

❹ Installation Template

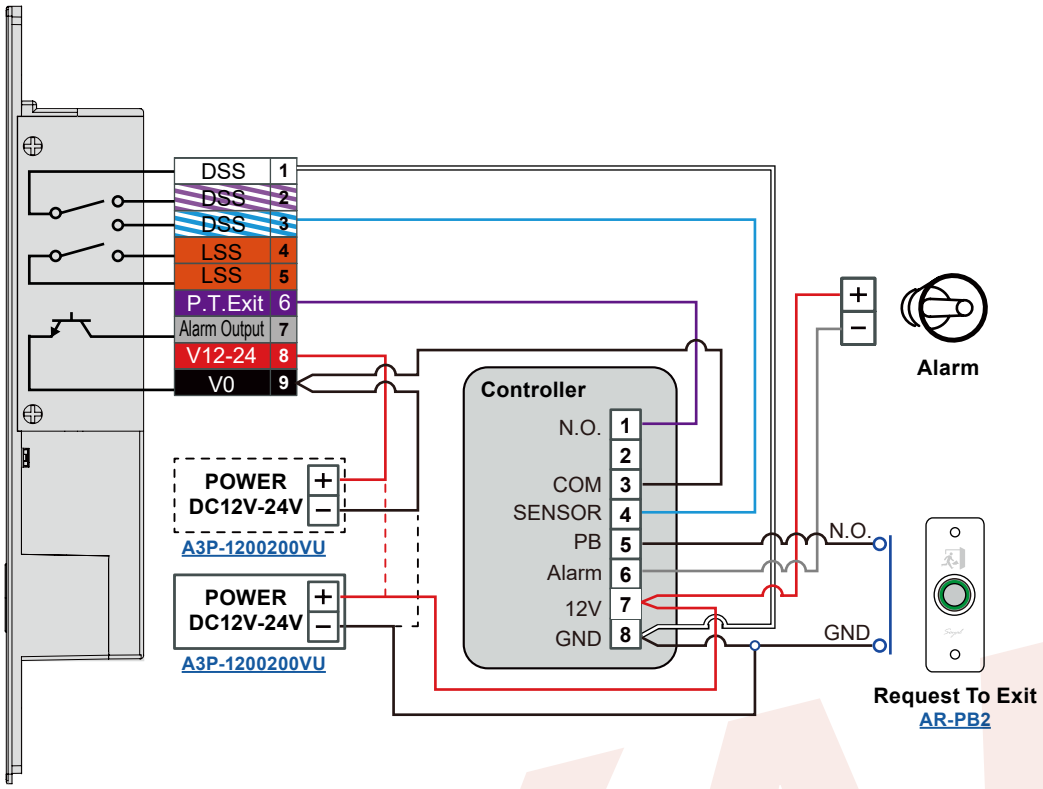


Wiring Diagram

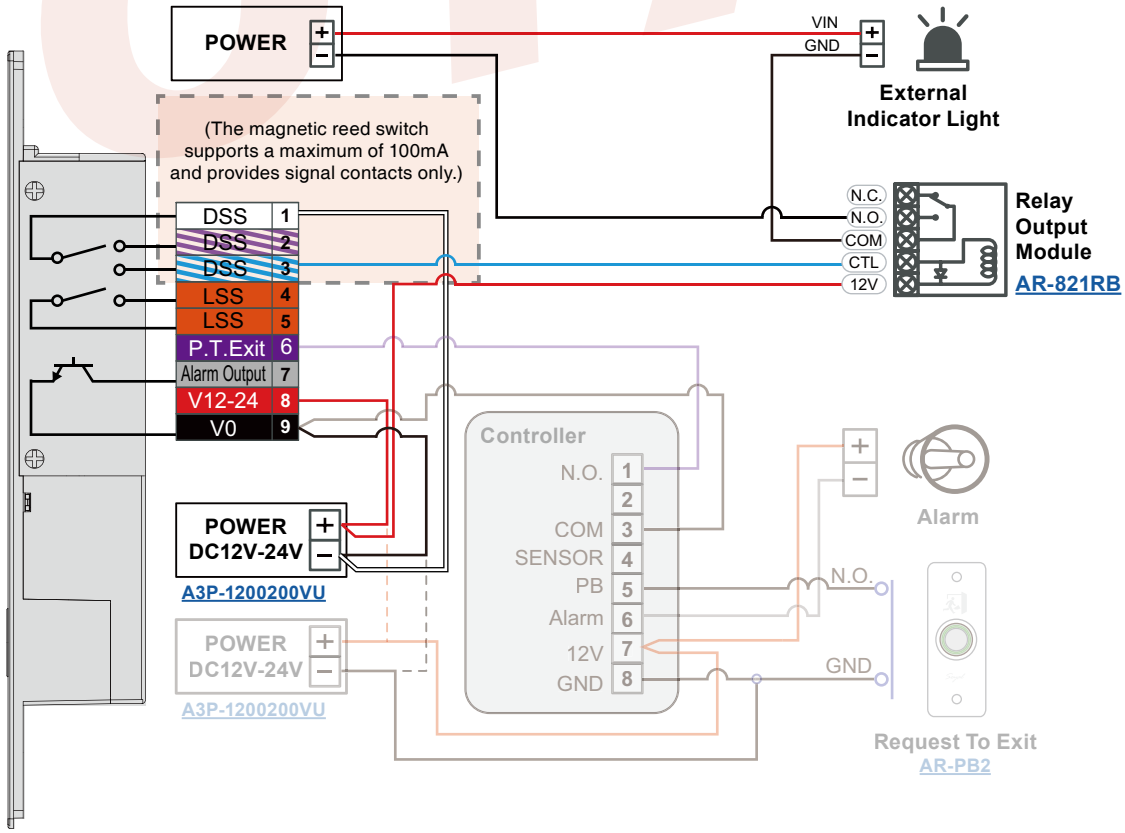
Wiring Table: CN1

Wire Application	Wire	Color	Description
DSS (Door Sensor Status)	1	White	Door Sensor Status (COM)
	2	Purple White	Door Sensor Status (N.C.)
	3	Blue White	Door Sensor Status (N.O.)
LSS (Lock Sensor Status)	4	Orange	Micro switch volt-free contact output. Door locked short circuit, door unlocked open circuit
	5		
P.T.Exit (Push to Exit)	6	Purple	Negative Trigger Input
Alarm Output	7	Gray	Transistor open-collector output, Max 24V/110mA Alarming output LOW, normal status or power fail high impedance
Power	8	Red	Power DC 12-24V
	9	Black	Power DC 0V(GND)

Connecting the AR-1207 Electric Bolt to the Controller



Controlling an External Indicator Light via Door Position Signal (AR-1207)

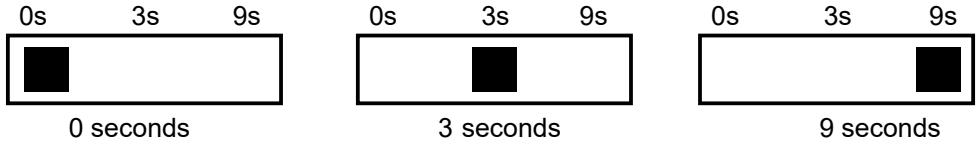


Manual

Time Delay

Time Delay option: 0, 3, or 9 seconds

Time Delay adjustment



0 seconds　　3 seconds　　9 seconds

Functions Mode

1.Standby Mode: If you close the door under the standby mode, the system will receive an induction and the time delay (0/3/6/9 sec.) will start to count, and then the auto-detective function will execute the following movements:

1) If door is opened within the time delay countdown, the bolt will automatically retract and the systems will return to standby mode.
2) If door is closed after the time delay countdown, the bolt will automatically extend into the “Detecting lock” and may execute the following steps.
3) After “Detecting lock” is done (system will received an induction of “Locked well”) , and will stay locked.
4) When “Detecting lock” is done but the bolt can ‘t proceed to lock, it will enter “Fail to lock” mode, users can see light indicator or listen to the warning buzzer, then push the door into the right position to lock.
When entering “Keep locking” mode, it will automatically relock for every 2 seconds, and when indicating “Locked well” mode, it will enter power saving mode.

2.Unlock Mode: In Lock mode, when pushing the exit switch, The bolt will automatically retract, after 3 seconds, if the door is closed, the time delay (0/3/9 sec.) will reset and count and execute the following functions.

3.Forced Entry (alarm): when system is detecting error status or forced entry signal, alarm will be activated.

Status Indicators

Bolt and LED identification as following chart

Indicators	LED Indicator	Door Status	Bolt Status
Standby (waiting for locking)	LED lights up RED	Open	Open
Door Locking Time Delay	RED and GREEN LED flash alternately, flash continuously every 0.5 second	Close	Open
Locked Well	LED lights up GREEN	Close	Close
Fail to Lock	RED and GREEN LED flash once every 0.2 second	Close	Open
Keep Locking	Locked once every 2 seconds	Close	Open
Abnormal Door Status or Bolt Status	Flashing RED LED	Trigger	Trigger

Troubleshooting

1) After “Fail to lock”, the bolt will enter into “Keep locking” mode and relock once every 2 seconds. It will keep flashing red LED until the door is in correct position and completely locked, it will turned into green LED and will enter power saving mode. If the door status signal is turned off, it will flash red LED and enter standby mode.
2) When forced entry is occurring and break open the lock tongue, it will send alarm signal and will quick flash red LED, until a personnel come back and review it.
3) Please check V(+) and V(-) wiring when LED doesn’t light up.
4) It is suggested to use 12V 1000mA or more for power supply. If the power supply is insufficient, the drop bolt possibly keep projecting and retracting.

Installation

Ordering Model Name Description

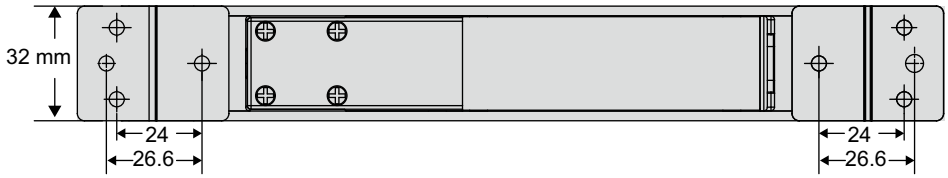
AR-1207-X-XX-X

- **F or N/A** with/without Euro-Profile Cylinder ------- **F**: with Euro-Profile Cylinder / **N/A**: without Euro-Profile Cylinder
- **29/36** Distance between Bolt centerpoint and mounting screw hole centerpoint---------- **29:** 29mm / **36:** 36mm
- **A/B** Fail-Safe / Fail-Secure -------- **A:** Fail-Safe / **B:** Fail-Secure

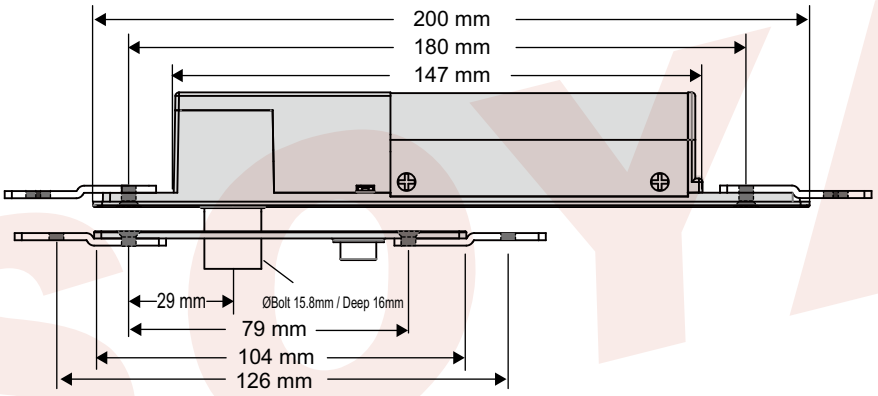
Dimension and Diagram

Lock Size (mm)	AR-1207A/B-29	200(L) x 32(W) x 32(H)	Bolt size (mm)	Adjustable up to 16mm
	AR-1207A/B-36	205(L) x 32(W) x 32(H)	Bolt diameter	16mm diameter (stainless steel lock bolt)
Strike plate (mm)	AR-1207A/B-29 AR-1207A/B-36	104(L) x 25.5(W) x 5(H)	U-shaped Plate (mm)	(With additional purchase)

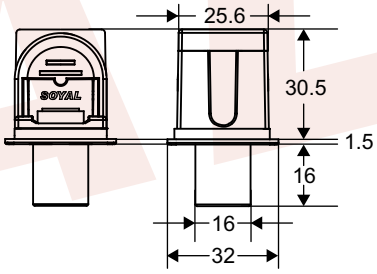
AR-1207A/B-29 Dimension



- Electric Bolt Lock Vertical View

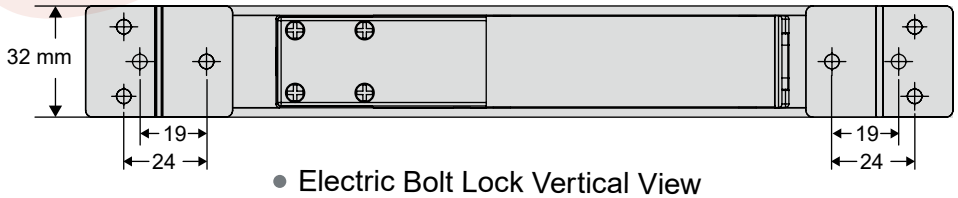


- Electric Bolt Lock/Strike Plate Front View

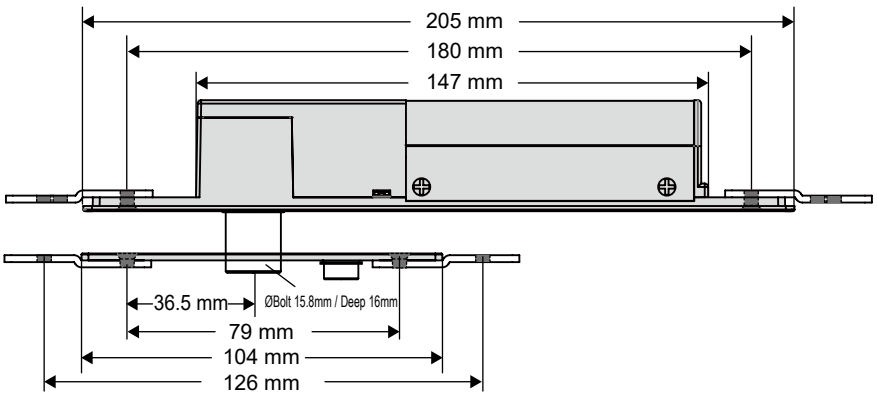


- Electric Bolt Lock Side View

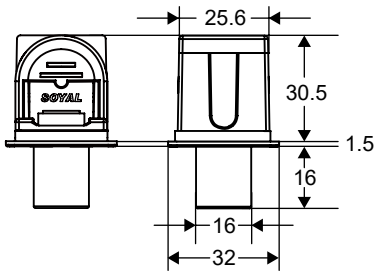
AR-1207A/B-36 Dimension



- Electric Bolt Lock Vertical View



- Electric Bolt Lock/Strike Plate Front View

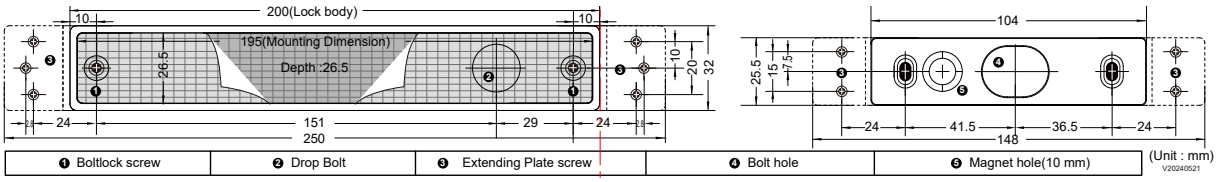


- Electric Bolt Lock Side View

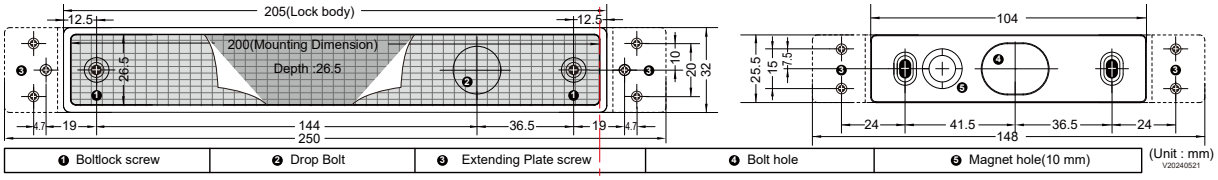
Installation Template

According to the purchased lock model, attach the supplied installation template on the installation position.

Installation Template Dimension

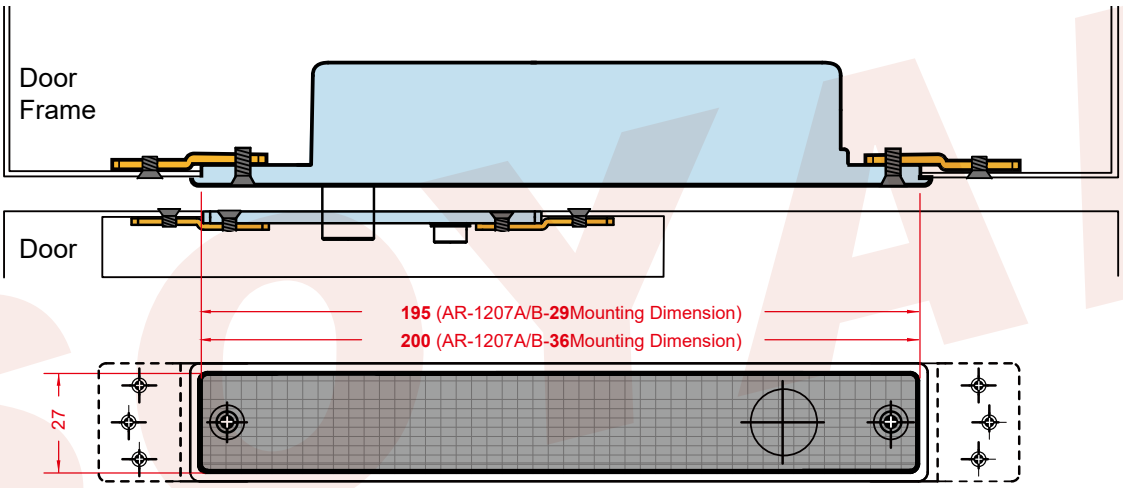


AR-1207A/B-29

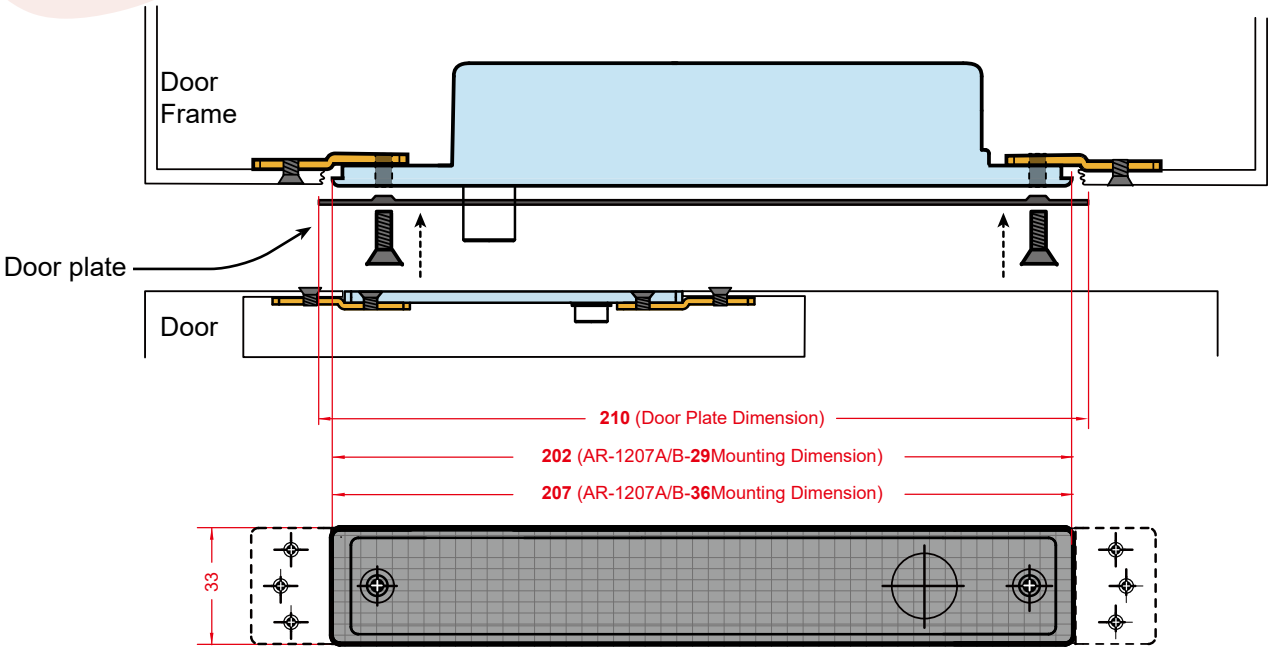


AR-1207A/B-36

Non-Door plate installation method (precision cutout)



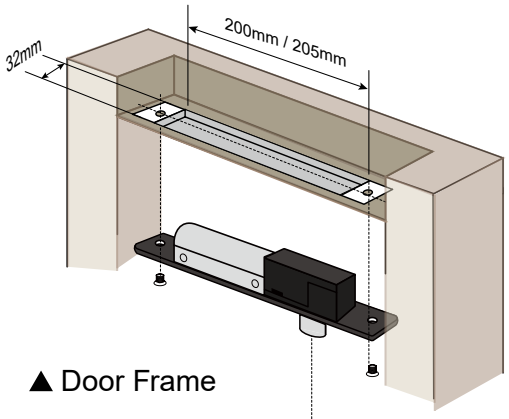
Door plate installation method (allowing larger cutout tolerances)



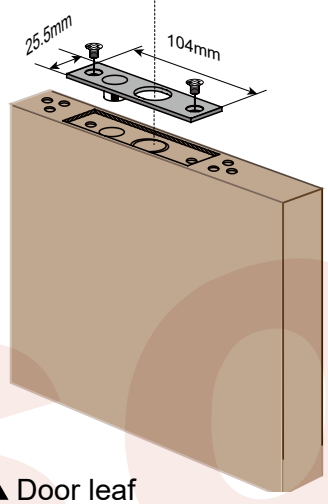
Installation Instruction

Electric dropbolt Lock body Installation Reference

- Mortise Mount Installation – Suitable for hollow metal door

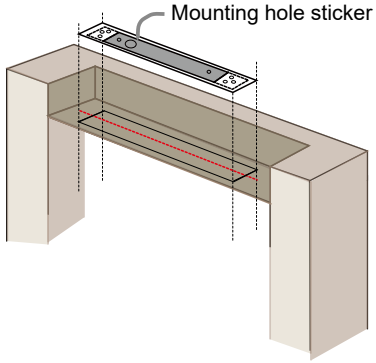


▲ Door Frame



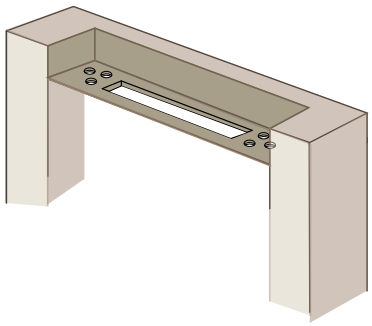
▲ Door leaf
(Detail installation steps shown as below)

❶



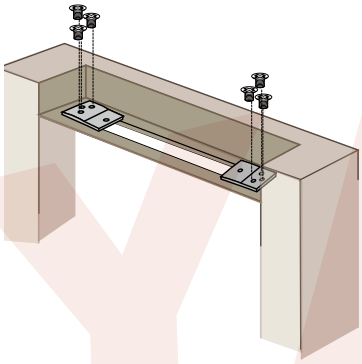
STEP 1 : Mark the Ceterline position on door frame, mark cutting size，attach the supplied Lock Body installation template on the installation position

❷



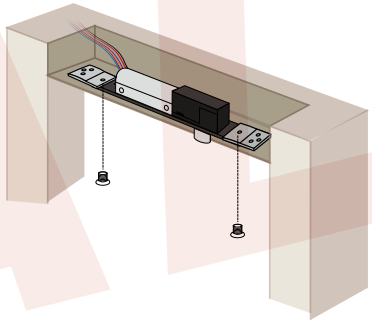
STEP 2 :Cut screw hole according to the mark position

❸



STEP 3 : Install two big extending plates (please notice the position and direction of mounting)

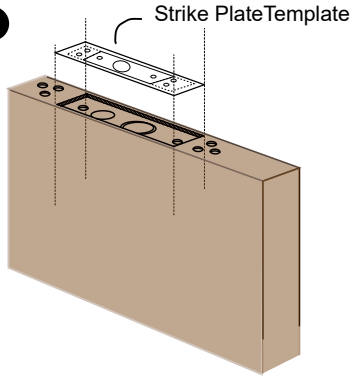
❹



STEP 4 :Play the cables from the accessory kit into the cable socket and wire with the related devices according to the required functions; after pushing the cables into the inside of door frame, power on the lock and test.

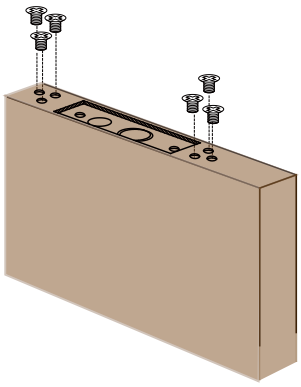
Strike Plate Installation Reference

❶



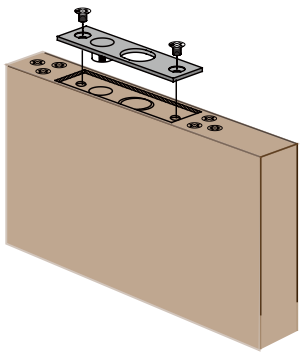
STEP 1 :Attach the mounting strike plate templateon the installation position，cut by the template instruction and drill screw holes.

❷



STEP 2 :Install two small extending plates (please note the position and direction of mounting)

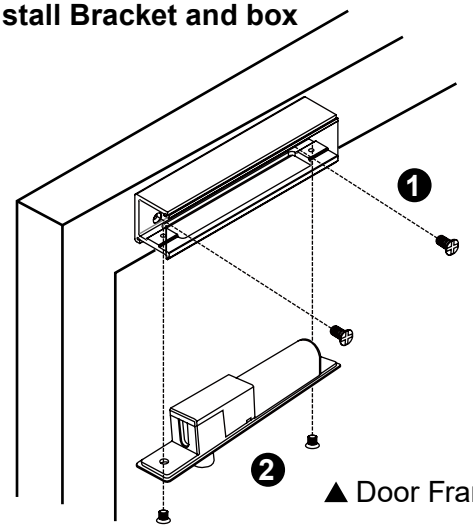
❸



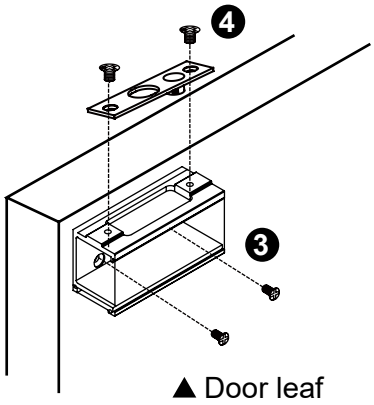
STEP 3 :Align Strike plate with screw holes, screw Strike plate to finish the installation.

Installation Instruction

- **Install Bracket and box**



▲ Door Frame



▲ Door leaf

Install Lock body with external Bracket box

STEP 1 : Install the external bracket box , mark the screw hole position on door frame , drill screw hole and fix bracket box with screw.

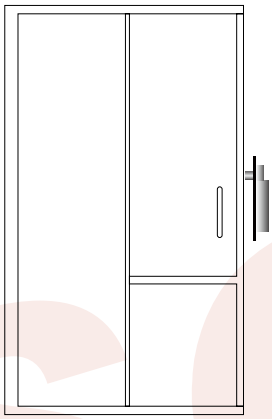
STEP 2 : Place electric dropbolt body from bottom into the external bracket box ;screw and finish.

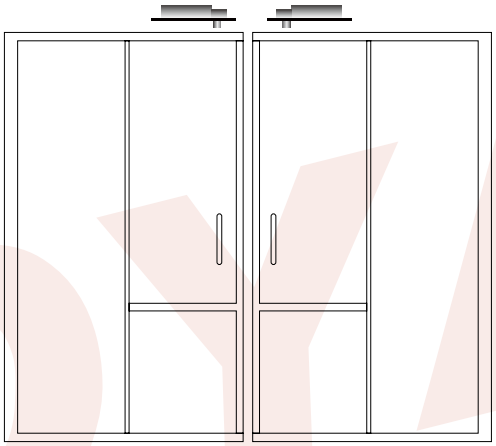
Install Strike plate with external bracket box

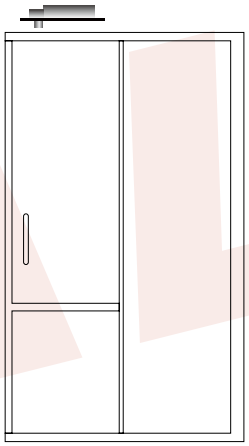
STEP 3 : Install strike plate, mark screw hole on door frame; drill screw hole and fix bracket box with screw.

STEP 4 : Place strike plate from top into the external bracket box; screw and finish .

Installation Position Description


Install lock on the side of single swing door (Bolt upwards)


Install lock on the top of double swing door


Install lock on the top of single swing door

Troubleshooting

Problem	Possible Cause	Solution
Dropbolt is not activated when the door is closed.	The gap between the strike plate andthe dropbolt lock is large .	Adjust the distance between the magnet strike plate and the reed sensor range in the lock body is within 10mm.
	No or Low voltage /current	Check whether the output power (voltage and the current) is enough Pull in power: 12W
Dropbolt repeats projecting action	Low voltage /current	Check whether the output power (voltage and the current) is enough Pull in power: 12W
	Dropbolt is not locked in the hole properly	Adjust the door closer and floor hinge to ensure that the door panel aligns properly with the latch and locks securely when closed.
		If proper alignment cannot be achieved during the installation of a double-swing door by adjusting the floor hinge, it is recommended to switch to a single-swing door design.
Bolt cannot retract	Strike plate is misaligned	Sway the door to release the bolt to open the door.
		If a double-swing door cannot be properly aligned and locked even after adjusting the floor hinge, switching to a single-swing door is recommended to ensure stable locking.