

EL-SL500 SHEAR LOCK



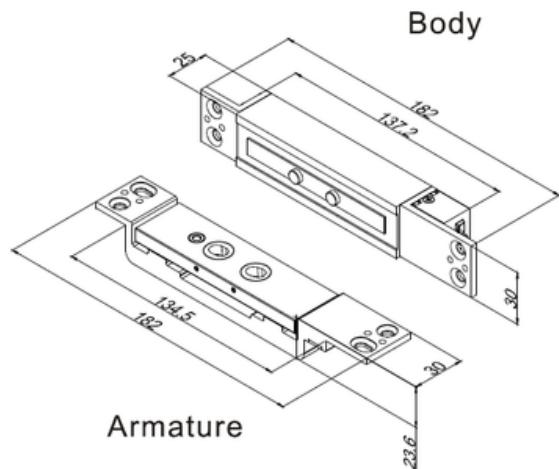
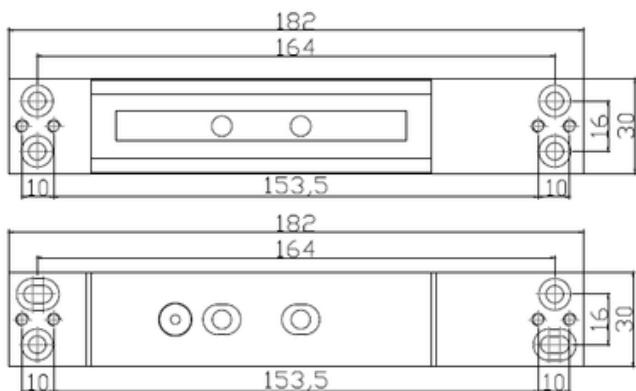
The SL-500 Shear Lock is a compact, all-in-one electromagnetic locking solution designed for high-security access control systems. Featuring a powerful shear force of up to 2600lbs (1200kg), it ensures strong holding power while supporting 12V/24V DC auto-adjusting input.

The lock operates at 900mA with a holding current of 220mA (12VDC) or 190mA (24VDC), making it both efficient and reliable.

It is suitable for all types of 90° to 180° degree doors, including wooden, aluminum, or glass installations. Built-in with a microcontroller, the SL-500 offers adjustable door open delay timing (0.5 to 25 seconds) and automatic repeated locking (up to 60 times) if misalignment occurs.

The lock includes lock status outputs (NO/NC/COM), a double-colored LED indicator, and instant demagnetization when powered off. With a slim profile, integrated bracket options (BR-500, UB-500), and maximum magnetic suction of 5mm @24V, the SL-500 is ideal for both surface and concealed mounting applications where aesthetics, reliability, and performance are essential.

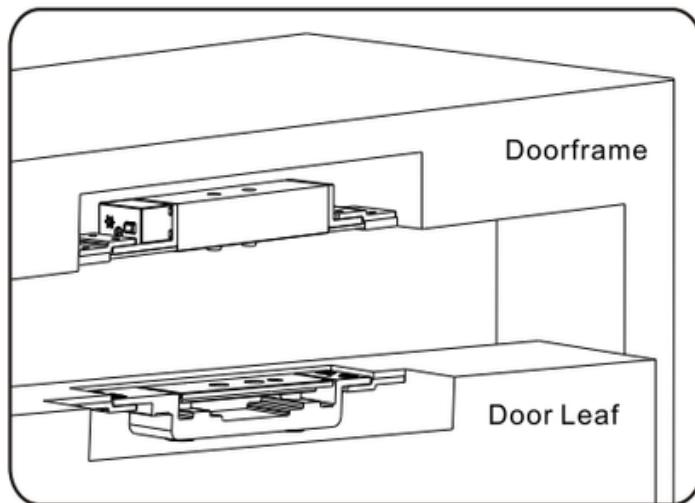
SHEAR LOCK SERIES



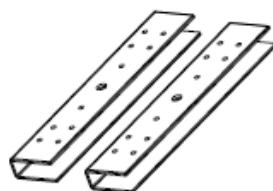
Holding Force:	2600 lbs (1200kg)
Power Supply :	DC12V / DC24V
Current Draw:	900 mA
Output:	Lock Status Output: N.O & N.C ; Door Position Output: C.O.M & N.C
Door Signal:	YES (Monitored)
Time Delay :	YES (15 secs fixed)
IP Rating:	IP 65 (Weatherproof)
Operation Delay Time:	0.5 to 25 secs
Demagnetizer Design:	Instant demagnetized when power is off
Security Type:	Power Off Unlock (Fail-Safe)
Relock Function:	Max 60 times
Application:	All types of 90° to 180° doors
Dimension:	182 (H) x 25 (D) x 30 (W) mm

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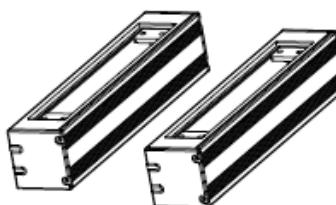
STRUCTURE DIAGRAM:



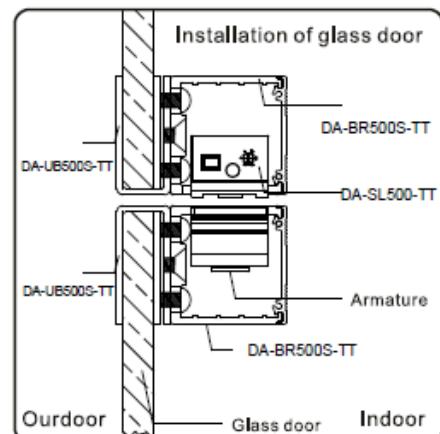
Use an optional BR-500 bracket to mount the lock if the width or the depth of the door frame or door leaf is not enough.



DA-UB500S-TT



DA-BR500S-TT



Glass door (frameless)

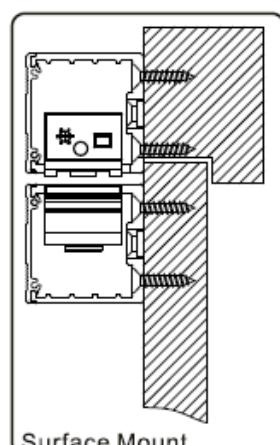
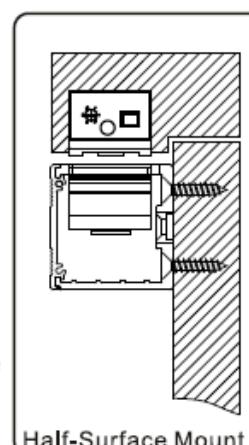
Mount the lock unit into the door frame. Use an optional DA-BR500S-TT bracket to fit the template. DA-UB500S-TT glass clip is able to fix glass door with thickness of 9~13mm.

Half-Surface Mount

The electromagnetic lock is mounted into the door frame, use of DA-BR500S-TT bracket to install the armature.

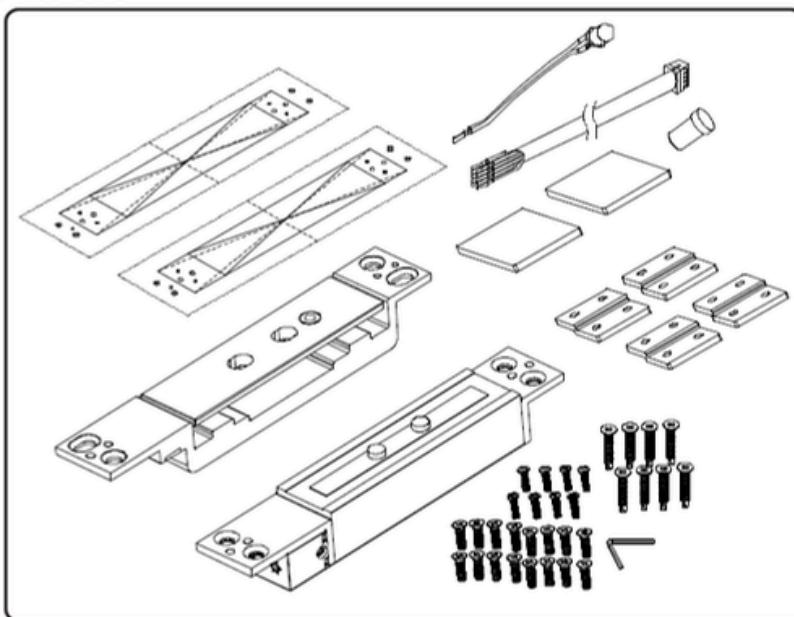
Surface Mount

Use of DA-BR500S-TT bracket to install both the electromagnetic lock and the armature.



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Parts:



Accessories:

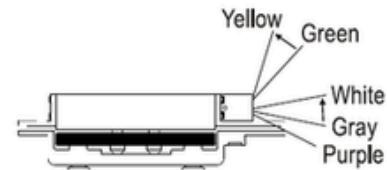
Type	Quantity
Screw M5X8	16
Screw M5X25	8
Screw M4X12	8
M3 Allenkey	1
Shims	4
Plastic Board	2
Indicator Light Cap	1
LED Connector	1
10-PIN Connector	1

Connections:

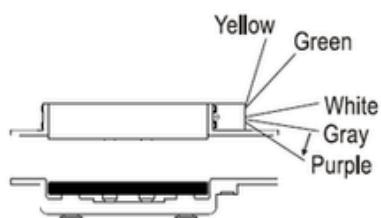
10 PIN Connection			
Black	GND	Red	VCC (DC 12~24V)
Brown	Connect status indicator light(black)	Orange	Connect status indicator light(blue)
White	Lock Status Sensor N.O.	Blue	Reserved
Purple	Lock Status Sensor N.C.	Green	Door Positions Sensor COM.
Gray	Lock Status Sensor COM.	Yellow	Door Positions Sensor N.C.

※ Please refer to P1 for maximum load of monitor output
Please connect with RELAY if exceeding its maximum load to prevent damage to the unit.

【Monitor Output】

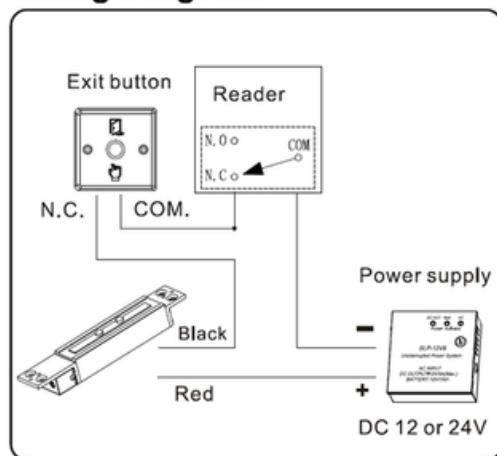


※ Lock :
Lock status output is COM.&N.C.
Door position output is COM.&N.C.

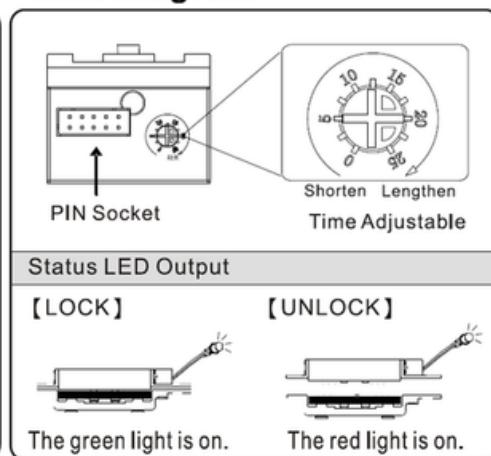


※ Unlock :
Lock status output is COM.&N.O.
Door position output as open circuit.

Wiring Diagram

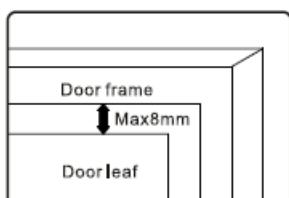


Panel Diagram

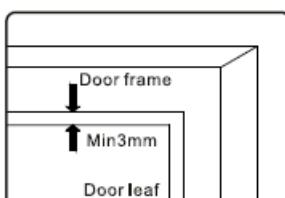


Please check before installation:

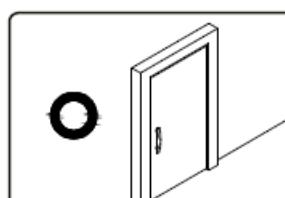
1. Please make sure the inner width and depth of door frame and door leaf (hollow metal door) are wide and deep enough to install the lock. Make sure the closing position of the door leaf is at the accurate place to enable the shear lock to lock accurately. Door closer is able to place the door leaf's closing position back to the accurate place to avoid other factor such as wind.
2. Minimum 900mA@DC12V/24V of current is required to activate shear lock. When it is locked, current will drop to 220mA@DC12V or 190mA@DCV24V. Therefore, current has to meet the standard of 1A and above to supply to the shear lock.



Maximum gap of 8mm



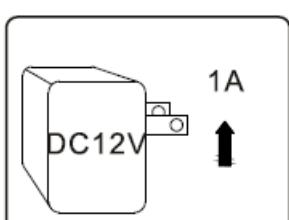
Minimum gap of 3mm



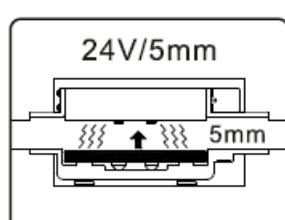
Fixed position of door leaf



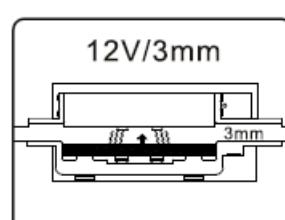
Door leaf's position is not fixed.



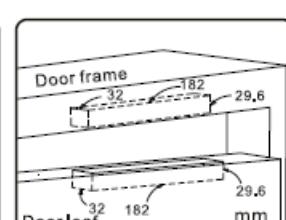
Minimum current of 1A@DC12V



Maximum Magnetic distance



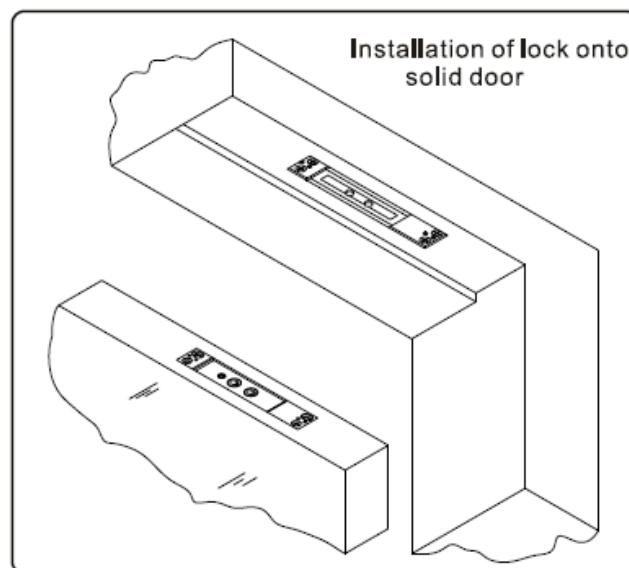
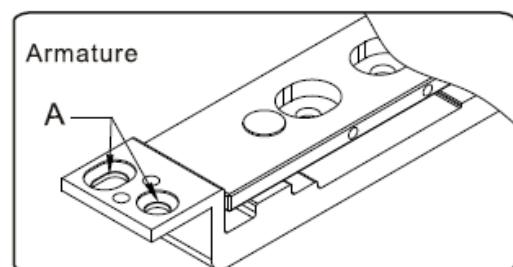
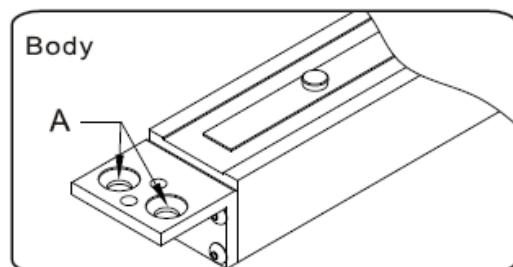
Maximum magnetic distance



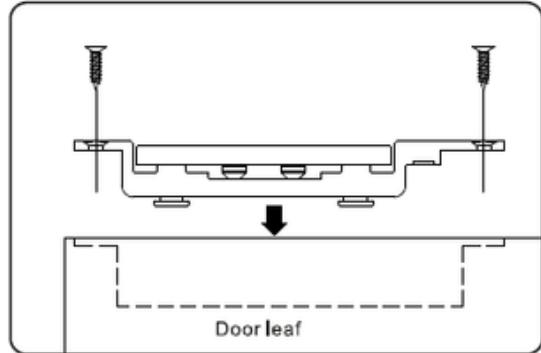
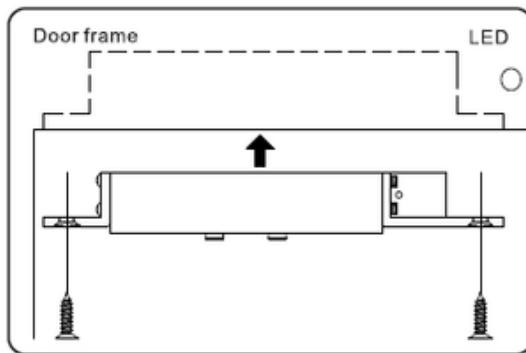
Minimum installation space

Fixed holes: (Installation of the lock and screws are different for solid doors and hollow doors.)

A: Solid door (A represents solid door's fixed screw holes)

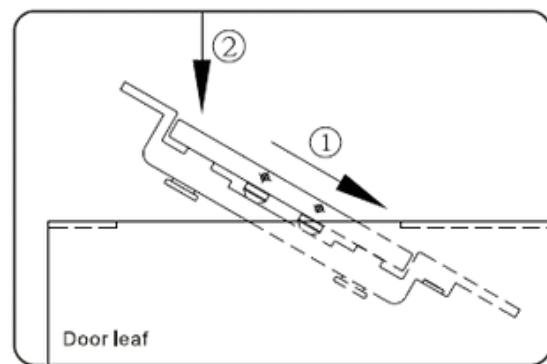
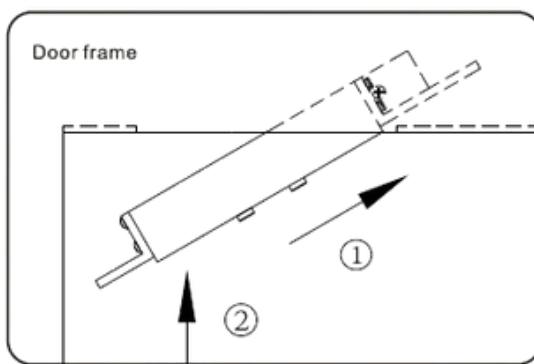
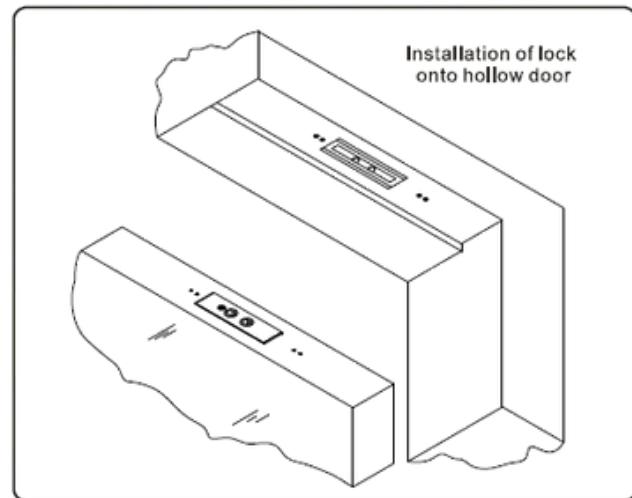
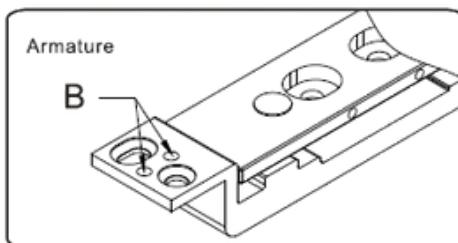
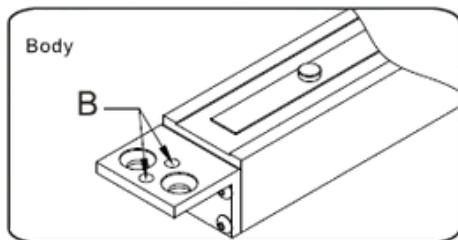


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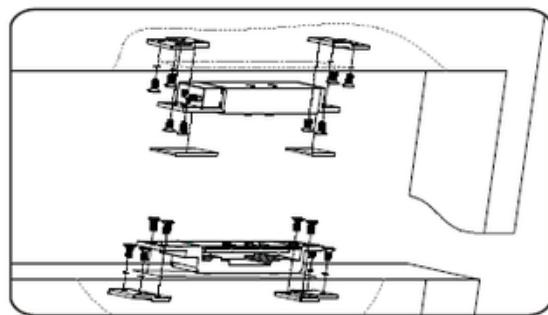


B:Hollow door (B represents hollow door's fixed screw holes).

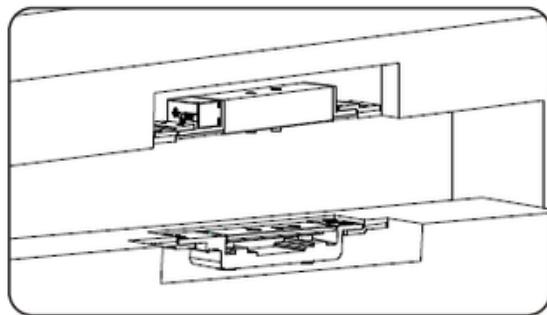
Example 1:When the distance between the door frame and the door leaf is too small.



2:Use of shims



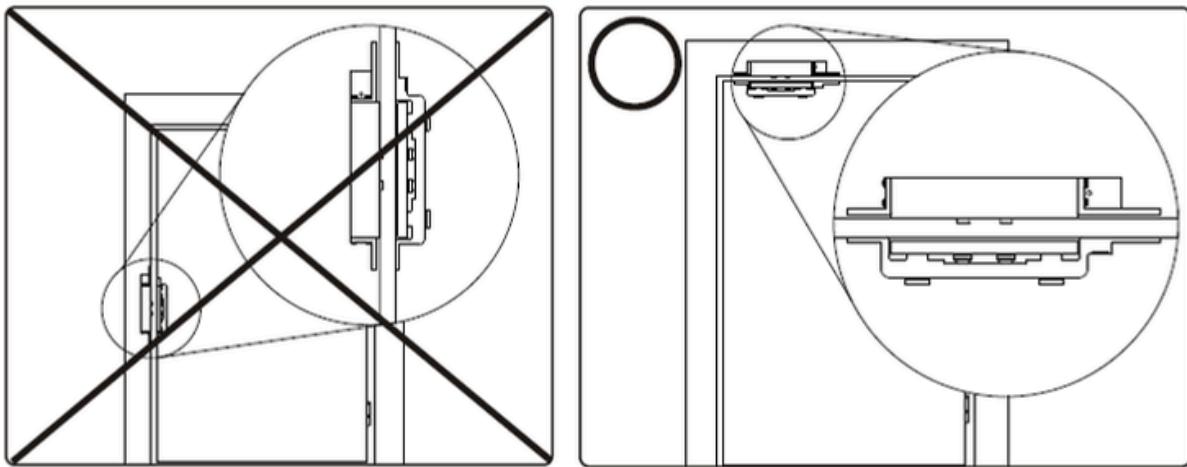
Installation of lock with template.



Installations:

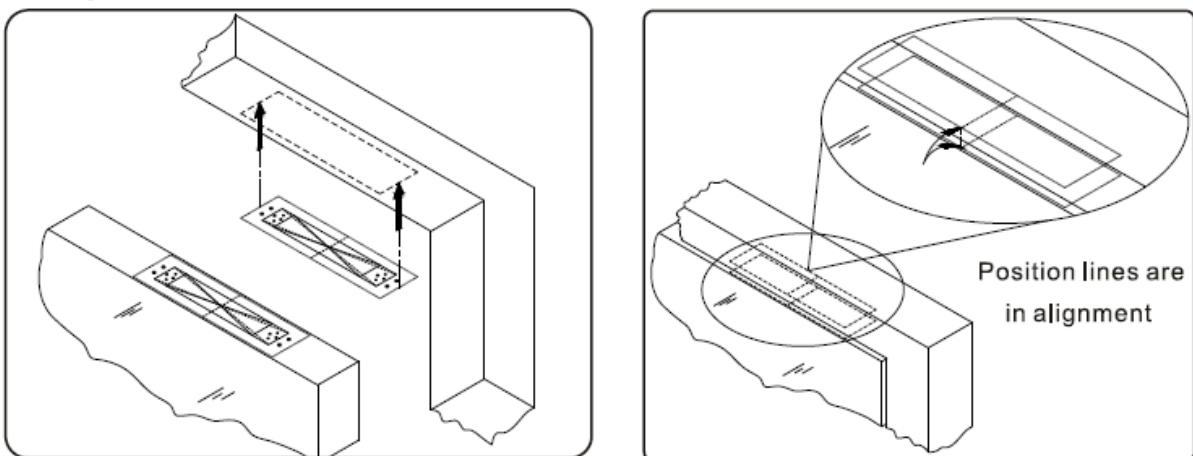
 **Step1: Make sure its installation position.**

It can only be installed on the top.



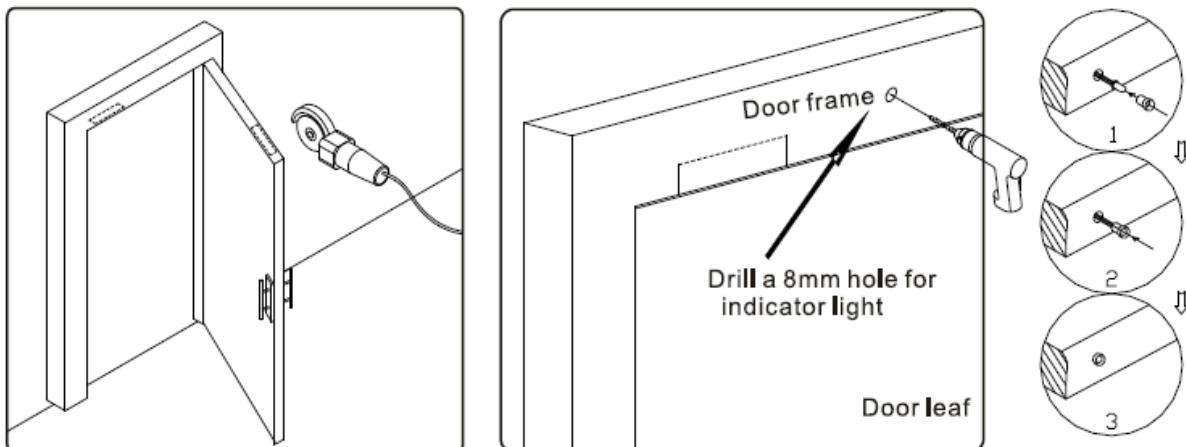
 **Step2: Glue sticker**

Please make sure both top and bottom sticker's position lines are placed in alignment.



 **Step3: Cut or Knockout**

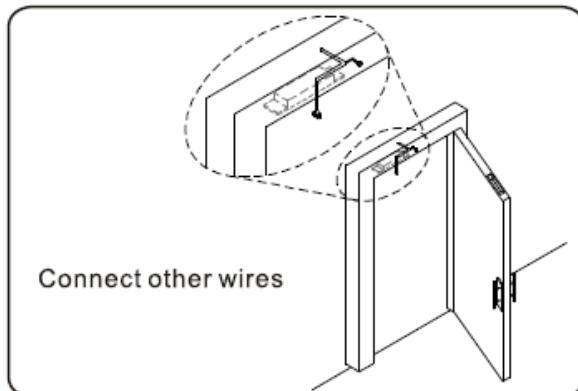
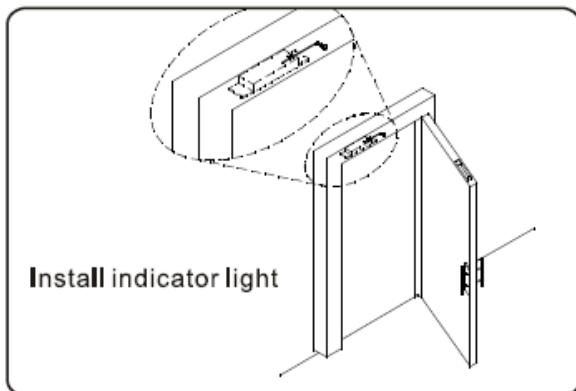
Cut(metal frame) or knockout(wooden frame) and drill a hole on the door frame for the indicator light next to the lock.



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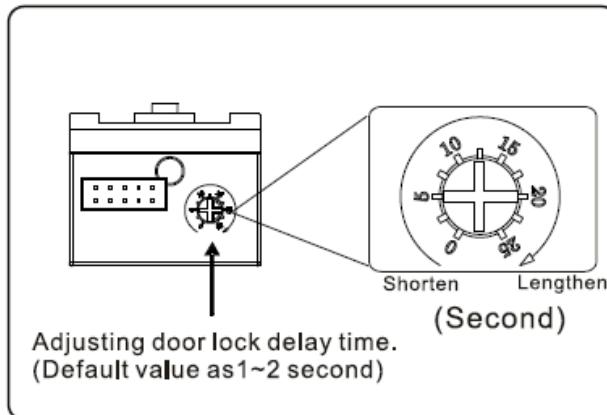
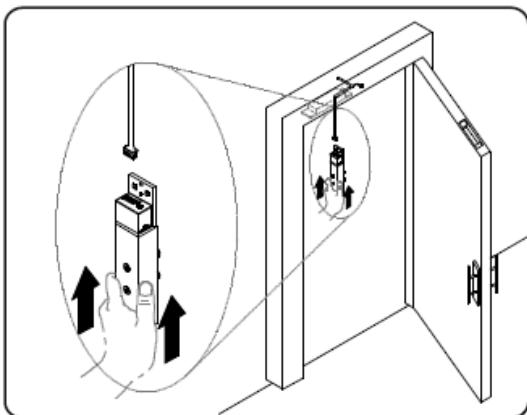
Step4:Wiring

Install the indicator light at the door frame and connect 5PIN connector with other wires. (Please refer to P2 for connector points)



Step5:Fixing the lock and the armature

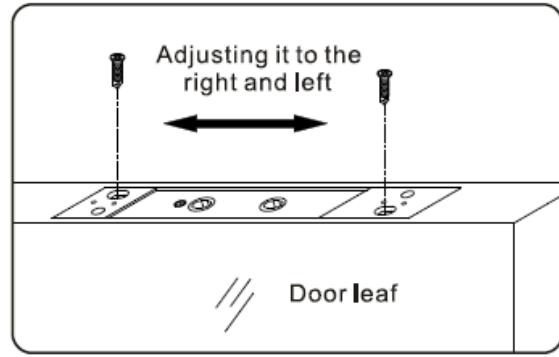
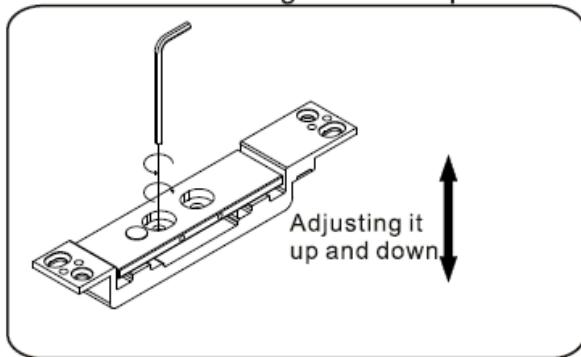
Connecting all wires to shear lock body. Adjusting required door open delay time and finally fixing both lock and armature.



Step6:Current and fine-adjusting

Turn on the power and close the door to check if the lock is functioning properly.

Please fine-adjust the armature if it is unable to lock properly. Please refer to Troubleshootings for other problems.



Notice

Maximum magnetic distance between the armature and the lock body is 3mm @12V or 5mm @24V. Use an Allenkey to adjust the armature. Please make sure the distance between the armature and the lock is even and not tilted or uneven.

Trouble Shootings

Unable to lock

Check the power supply. Check the magnetic range(3mm @12V or 5mm@24V) between the armature and the lock body. Use an Allenkey to adjust the armature's screws if it is exceeded the maximum distance. Please make sure the distance between the armature and the lock body is even and not tilted or uneven.

Lock and release repeatedly

1. Please check if both positions are matched when the door is closed according to the requirement of step 2.
2. Please check the power supply.
3. Please check if the distance between the armature and the lock is even and not tilted or uneven.
4. Please check if it is exceeded the maximum magnetic distance.

Lock and release repeatedly before the door leaf is back to the closing position

Adjust lock delay time or adjust door closer.

Maintecance of the lock

1. Please keep both lock body and armature out of dirt or dust to avoid poor magnetic force.
2. Some environmental problems (such as at the seaside) may cause the rust of metal. Apply some lubricant oil such as WD-40 in the lock body to prevent from rust.