



EB-300 VGL Electric Dropbolt

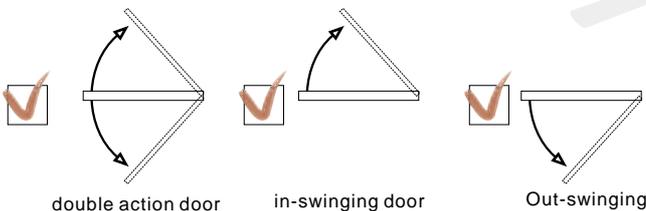
Electric Dropbolt Locks are the most common locks which compatible with virtually any access control system without additional optional brackets and they are available in failsafe and fail-security modes. Fully concealed mounting feature enhanced aesthetic appearance.

Specifications:

- Fail-Safe Version (Power to Lock)
- Power Input: 12 V DC
- Voltage Tolerance: $\pm 10\%$
- Current Draw:
Pull in: 0.9A, Holding: 0.3A@12V DC
(at temperature 20°C)
- Door Position status output (Reed rated 0.25A@30VDC)
indicates door opened or closed status.
- Operating Temperature: -10~+45°C
- Humidity: 0~95% non-condensing.
- Lock's surface Temperature (when the power is on):
 \leq current temperature +20°C
- Tested to 500000 cycles.
- Auto-relocking Time Delay : 0, 3 ,6 ,9seconds
- Weight (Approx.) :1.7 Kg

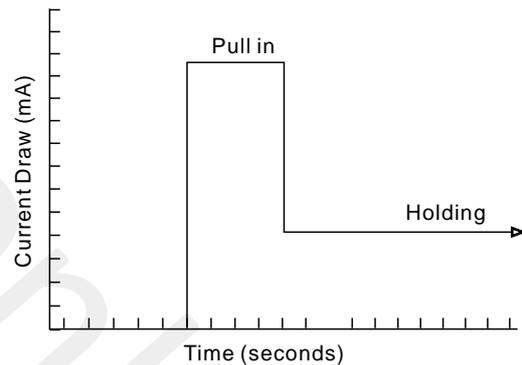
Double Acting Doors

EB-300VGL is specially designed for double acting doors. It also can be installed in in-swinging or out-swinging doors.



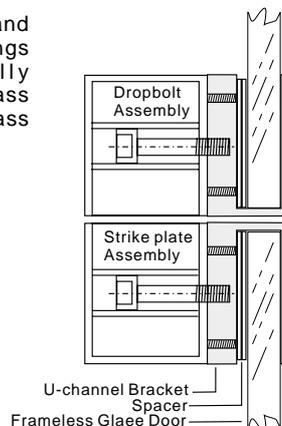
Clamp circuitry

After the bolt projected, the current will drop from 0.9A (the 'pull in' mode) to 0.3A (the holding mode). This design does not only protect the power supply but also extend the lifetime of the Electric Dropbolt Lock.



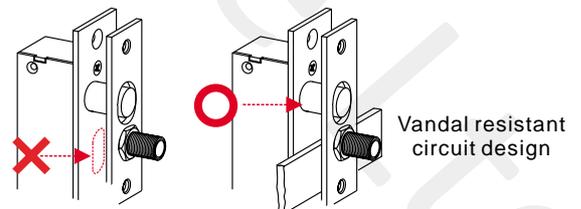
For Full Frameless Glass doors

The EB-300 VGL Dropbolt and strike plate with complete housings and u-brackets are specially designed for full frameless glass doors/wall. The thickness of glass are 14 mm maximum.



Anti-invade circuitry

The reed detecting function will automatically disconnect after the bolt projected due to the security reason. The vandal resistant circuit design will prevent the misleading action of the Electric Dropbolt Lock caused by manually break up the sense between sensor magnet and the reed.



The products are manufactured under an ISO 9001 Certified Quality Management Program environment back its product quality, performance and commitment to customer satisfaction.



EB-300 VGL Electric Dropbolt

Long life solenoids

Special designed solenoid for strength and long life operating lifetime with guaranteed 500,000 operations.

Horizontal or vertical installation

GEM's Dropbolt series models can be either installed horizontally on the header of the doorframe (Fig. A) or vertically on the side of the door or doorframe (Fig. B).

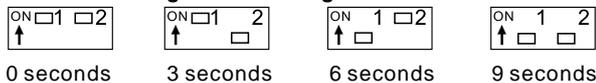
Solid bolt for superior strength

Greater security is provided by the 16mm diameter (16mm bolt throw) solid stainless steel bolt with hardened magnet core, which has resistant to metal cutting saws. The bolt also rotates freely, making attempts to tamper or cut extremely difficult.

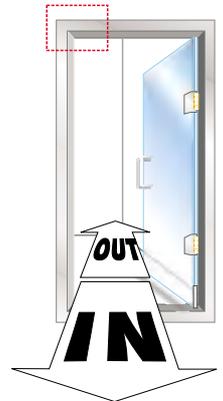
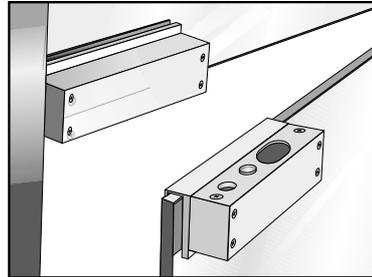
Auto Relocking Timer Setting

Use jumpers to adjust the time between 0 to 9 seconds for door locking time delay. This is the time, which takes the Dropbolt to automatically lock after the door is closed.

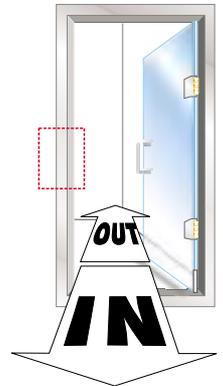
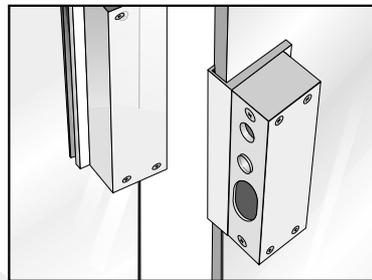
Auto Relocking Timer Setting



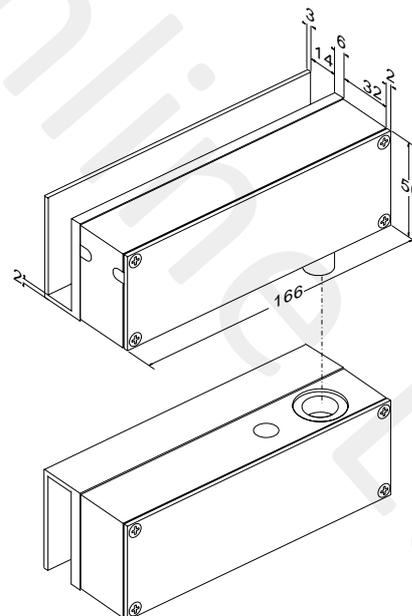
(Fig. A) Horizontal Installation



(Fig. B) Vertical Installation



Dimension:



Unit: mm

Warranty:

GEM Electric Dropbolts are warranted against defects in material and workmanship while used in normal service for a period of 3 years from the date of sale to the original customer.

Disclaimer:

The information and specifications printed in this manual are current at the time of publication. The GEM policy is one of continual development and improvement; therefore GEM reserves the right to change specifications without notice.



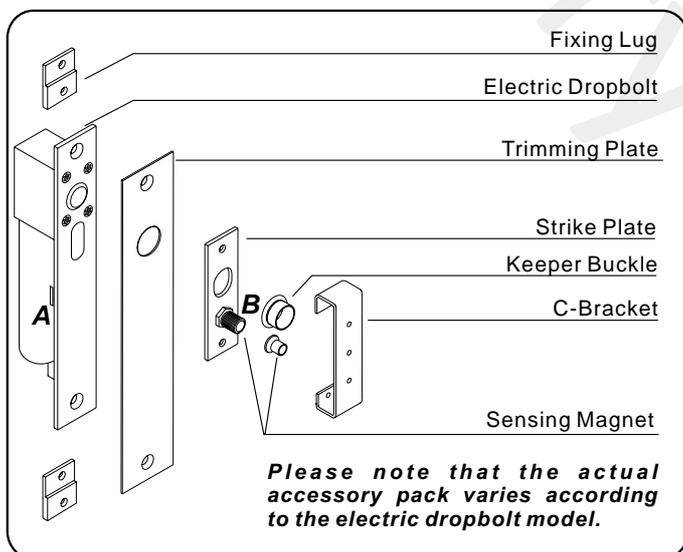
The products are manufactured under an ISO 9001 Certified Quality Management Program environment back its product quality, performance and commitment to customer satisfaction.

Electric Dropbolt Installation Instruction (Fail-Safe Series)

Specifications

	EB-180	EB-200	EB-200N	EB-220	EB-262	EB-300	EB-300VGL
Power Input	12/24 VDC	12 VDC	12 VDC	12 VDC	12 VDC	12 VDC	12 VDC
Voltage Tolerance	±10%	±10%	±10%	±10%	±10%	±10%	±10%
Current Draw: (at temperature 20°C)	Pull in: 0.9A Holding: 0.2A @12V DC	Pull in: 0.9A Holding: 0.3A					
* Monitoring output	BSS	BSS	DPS	BSS	BSS	DPS	DPS
Operating Temperature	-10~+45°C	-10~+45°C	-10~+45°C	-10~+45°C	-10~+45°C	-10~+45°C	-10~+45°C
Humidity	0~95%	0~95%	0~95%	0~95%	0~95%	0~95%	0~95%
Lock's surface Temperature (when the power is on)	≤ current temp. +20°C	≤ current temp. +20°C	≤ current temp. +20°C	≤ current temp. +20°C	≤ current temp. +20°C	≤ current temp. +20°C	≤ current temp. +20°C
Auto Relocking Timer Setting (Default setting)	0, 3, 6, 9 s (0 second)	0, 3, 6, 9 s (0 second)	0, 3, 6, 9 s (0 second)	0, 3, 6, 9 s (0 second)	0, 3, 6, 9 s (0 second)	0, 3, 6, 9 s (0 second)	0, 3, 6, 9 s (0 second)
Dimensions: mm Lock: Strike plate	210*25*41 100*25	203*32(38)*38 100*25	203*32(38)*41 100*25	220*38*38 140*26	262*35*38 140*26	166*34*56 166*34*56	166*34*56 166*34*56
Remark	logical circuitry	logical circuitry		logical circuitry	logical circuitry		

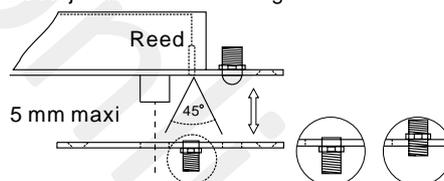
* BSS: Indicates bolt locked or unlocked status, Relay rated 3Amp@30VDC SPDT.
DPS: Indicates door position (opened or closed), Reed rated 0.25Amp@30VDC.



A. Auto Relocking Timer Setting

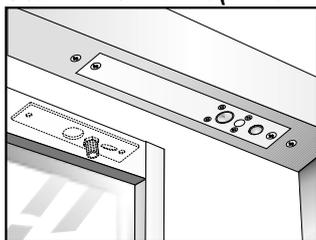
It can adjust the door lock delay time between 0 to 9 seconds. This is the time, which takes the Dropbolt to automatically lock after the door is closed. Please refer to the connecting diagram for further detail.

B. Adjustable sensor magnet



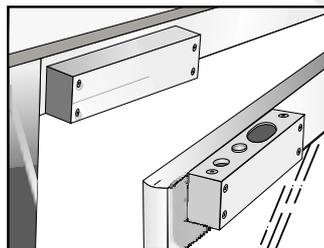
Positioning Bolt is installed to prevent the chance of negative locking problem caused by the improper door positioning and also reduce the time it normally takes for the Dropbolt to automatically lock after the door is closed.

Standard frame(1.75" frame) flush installation



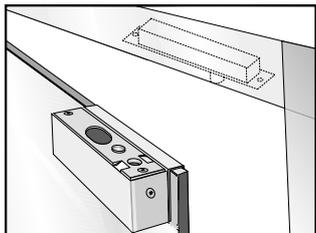
EB-180
EB-200
EB-200N
EB-220
EB-262

Surface Installation



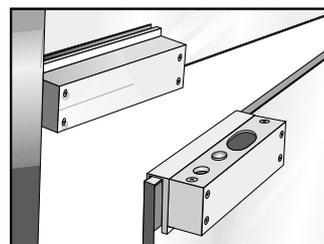
EB-300

With UBK-262 for Frameless Glass door



EB-220
EB-262

Installation on Full Frameless Glass Door

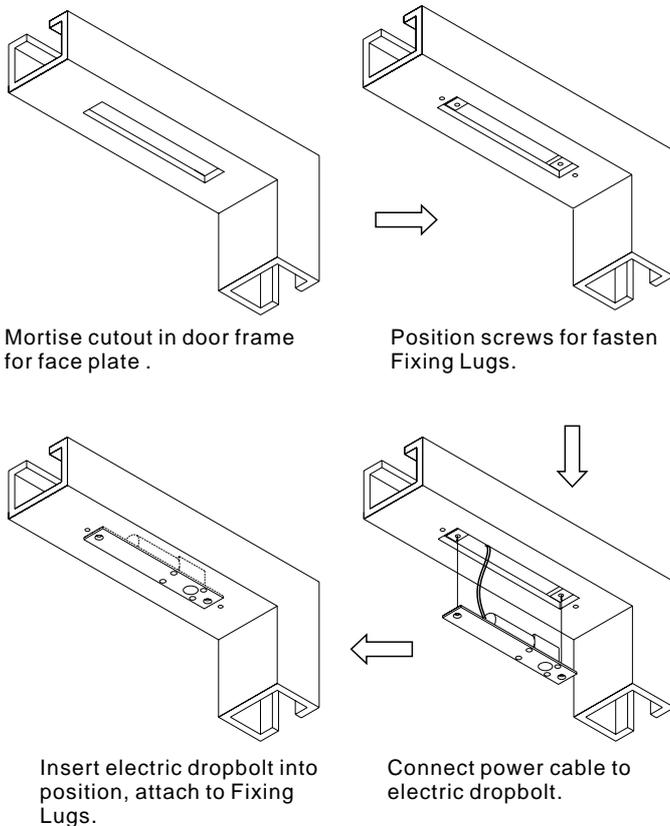
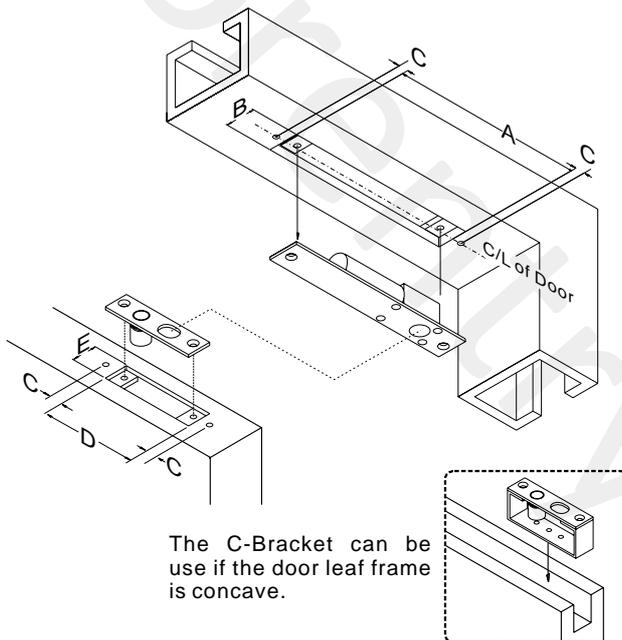


EB-300 VGL

Flush Installation
Hollow Metal Door Frame

Please refer to each Electric Dropbolt model's template for each specific cutting size and the location to drill the screw holes. (Fits flush with surface of frame)

	A	B	C	D	E
EB-180	211	26	12	101	26
EB-200	204	33(or 39)	40	101	26
EB-200N	204	33(or 39)	40	101	26
EB-220	221	39	40	141	26
EB-262	263	36	40	141	26

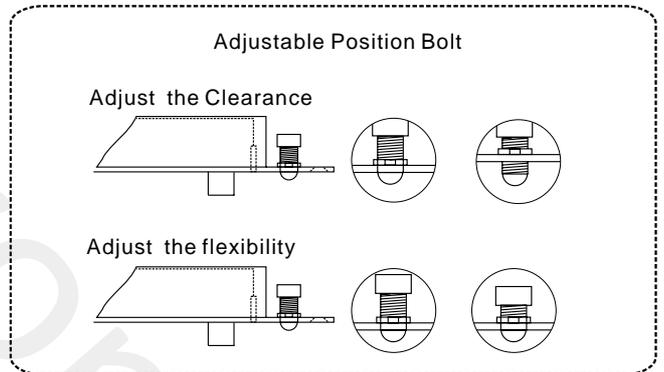


General Installation Instructions:

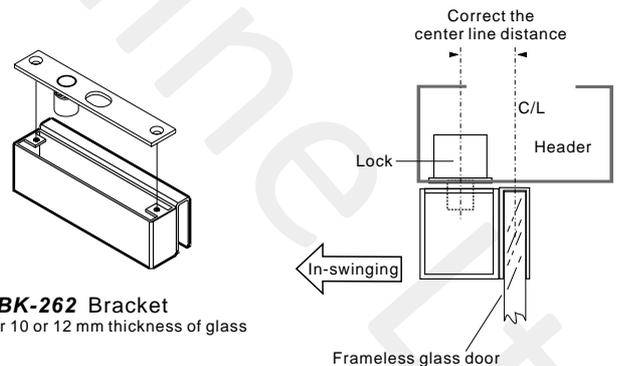
- Ensure you have the following:
 *Electric Dropbolt
 *Strike plate
- All rebate strips and/or frame stops be fitted before starting.
- Check with a suitable meter that the regulated power supply or controller being used can provide 1 amp@12V DC (voltage tolerance $\pm 10\%$) and that the voltage can be maintained during operation under all circumstances.

Warning: The connection of an incorrect voltage may result in damage not covered by the product warranty.

- The selection of appropriate power supply cable is very important to ensure lock receives sufficient power to operate.
- This product has been designed for use in weather protected areas and under normal circumstances does not require any maintenance. **DO NOT OIL OR LUBRICATE.**
- This product must be used in conjunction with a quality floor spring or door closer to ensure positive realignment on closing.

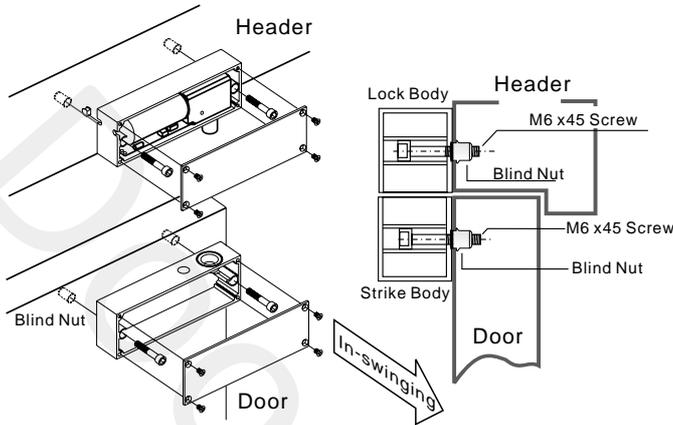


Optional Bracket

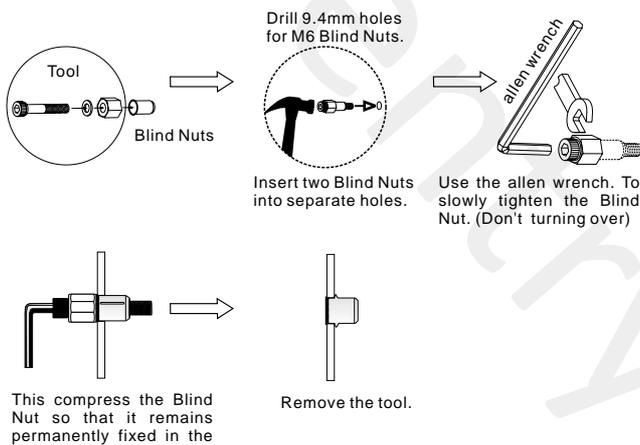


The UBK Bracket can be use on a frameless glass door. With optional 10mm or 12mm depending on the glass thickness. It is suitable for models EB-220 and EB-262. Installations: Fix the strike plate on the UBK-262 Bracket, add silicone for a firm grip on the glass door.

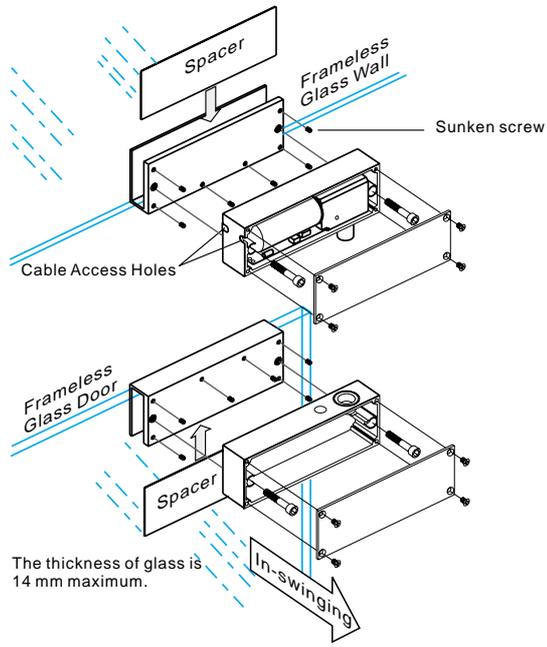
Surface Mount Installation-EB-300



The Installation of Blind Nuts



For Frameless Glass Door-EB-300VGL



Installation:

- Clean the glass before installing, stick the face plate on the glass(indoor).
- Stick the spacer in accordance to the glass thickness for inseparable result.
- Put silicone for the glass to hold firmly.
- Lock the Sunken screw.
- Use allen wrench to install the outer cover.

Caution:

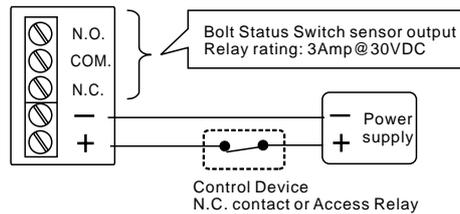
- Spacers are installed indoor.
- Sunken screws cannot into contact with the glass, it will break the glass.
- Sunken screw contact with spacer is metal, other side is plastic, to hold firmly.

Connecting Diagram

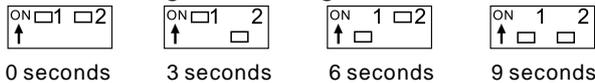
Caution:

Make sure that the "+" and "-" wire are connected correctly. Failure to observe polarity will result in a short circuit and is not covered by products warrant.

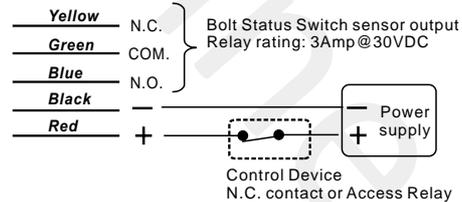
EB-180, EB-220, EB-262



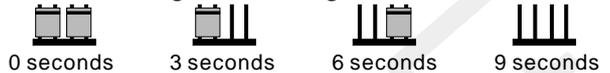
Auto Relocking Timer Setting



EB-200

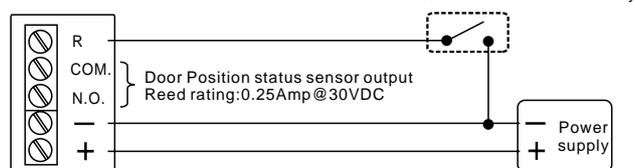


Auto Relocking Timer Setting

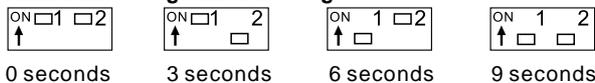


EB-200N

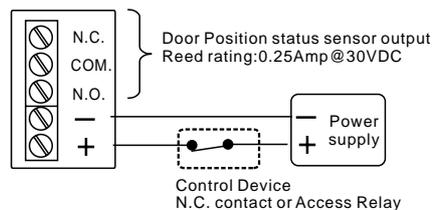
The lock will automatic unlock internally after the "R" triggering to GROUND. The time for the door to relock back is depending on the "Auto Relocking Timer Setting".



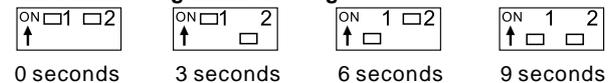
Auto Relocking Timer Setting



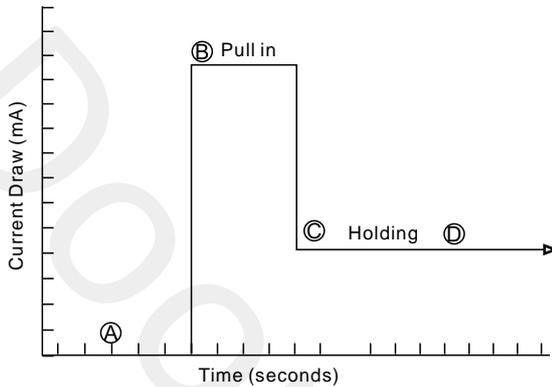
EB-300, EB-300VGL



Auto Relocking Timer Setting



Clamp & Logical Circuitry



All Electric Dropbolt Locks in fail-safe series have clamp circuitry design. EB-180, EB-200, EB-220, EB-262 have logical circuitry.

- Ⓐ When the sensor magnet in the Strike Plate detects the reed in the lock body, the Dropbolt projects immediately.
- Ⓑ After locking delay time for the Electric Dropbolt Lock to activate the pull in motion, the continuing projecting motion will not stop until the Dropbolt locked the door properly. The models with logical circuitry design are EB-180, EB-200, EB-220, EB-262.
- Ⓒ Under the clamp circuitry design, after the Dropbolt completely locked, the current draw will drop from high 'pull in current' to low continuing 'holding current'.
- Ⓓ The reed in the lock body will automatically switch off at the same time when the Dropbolt locked.

Trouble Shooting

Problems	Possible Cause	Solution
Dropbolt does not activate when the door closes.	The gap between the Strike Plate and the Electric Dropbolt Lock is far.	Adjust the distance between the reed in the lock body and the sensor magnet in the strike plate within 5mm.
	No voltage or low in voltage.	Make sure the output voltage and the current are large enough to pull in 0.9A current draw.
The Dropbolt keep repeating the projecting motion.	Low in voltage.	Make sure the output voltage and the current are large enough to pull in 0.9A current draw.
	The dropbolt is not locked correctly .	Adjust the positive centering door closer or door closer in order for the door frame to close in the correct position. It is recommended to change the double acting door to the single acting door.
The Dropbolt will not retract.	Strike Plate misaligned.	Release or sway the door frame a bit when opening the door.
		It is recommended to change the double acting door to the single acting door.

Distance in feet from power source to farthest locking device

	AMPS	25f	50f	75f	100f	150f	200f	250f	300f	400f	500f	1000f
Minimum Wire Gauge for 12 VDC	0.25	18	18	18	18	18	16	16	14	14	12	
	0.50	18	18	18	16	16	14	12				
	0.75	18	18	16	14	12						
	1.00	18	16	14	14	12						
	1.50	18	14	12	12							
	2.00	16	14	12								
	AMPS	25f	50f	75f	100f	150f	200f	250f	300f	400f	500f	1000f
Minimum Wire Gauge for 24 VDC	0.25	18	18	18	18	18	18	18	18	16	16	16
	0.50	18	18	18	18	18	16	16	14	14	12	
	0.75	18	18	18	18	16	14	14	12	12		
	1.00	18	18	16	16	14	14	12	12			
	1.50	18	18	16	14	14	12					
	2.00	16	16	14	14	12						