



ROFU 8031-002 Shear Lock Installation Instructions

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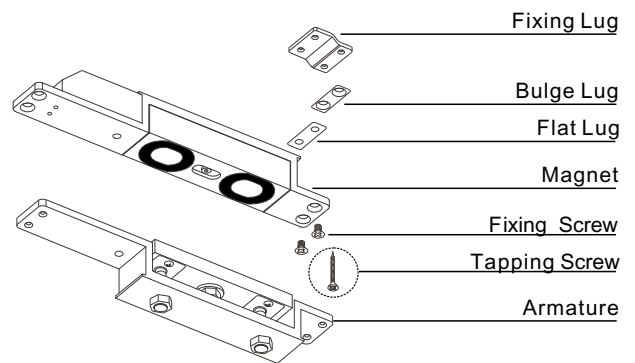
Important Notes

Install the magnet assembly into the door frame before installation of the armature assembly into the door. The magnet assembly requires space to run wires, as well as space for the recessed portion of the unit. However, make sure that the position selected for the magnet assembly leaves enough room on the door to install the armature assembly.

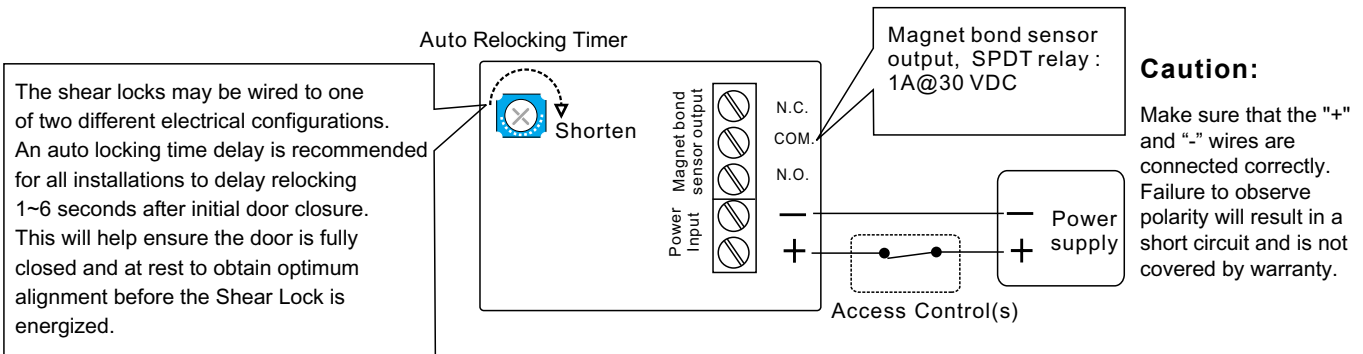
Unbalanced air conditioning (stack pressure) can hinder door alignment and must be corrected to help ensure positive locking. It is important to note that the Shear Locks need a regulated 12VDC or 24VDC at the magnet. Use only the highest quality door closer. Positive centering door closers are required for all double acting door applications to help attain consistent dead center alignment. Also the door latching problems must be corrected prior to installation.

Specifications

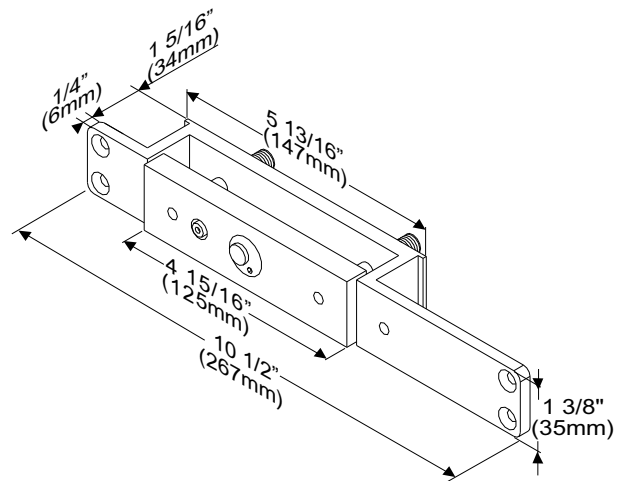
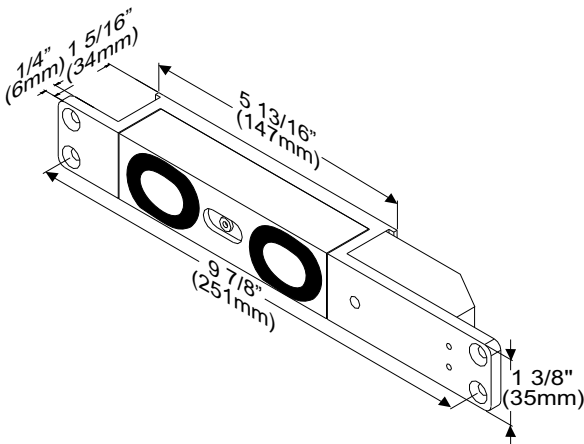
Holding Force	Up to 2200 lbs in shear
Power Input	12 to 24 VDC (self-regulating)
Current Draw	Pull in:1.85A, Holding:0.45 AMP@12VDC Pull in:1.1A, Holding:0.25 AMP@24VDC Note: The unit does not require initial voltage increase to operate.
Finish	Magnet and Armature: Zinc plated Housing: Black powder coated
Monitoring Output	Magnet bond sensor output, SPDT rating 1 AMP@30 VDC
Door Gap	1/8"(3mm) maximum
Operating Temp.	-22°F to +122°F (-30°C to +50°C)
Auto Relocking Timer	1~6 seconds adjustable (Default: 3 seconds)



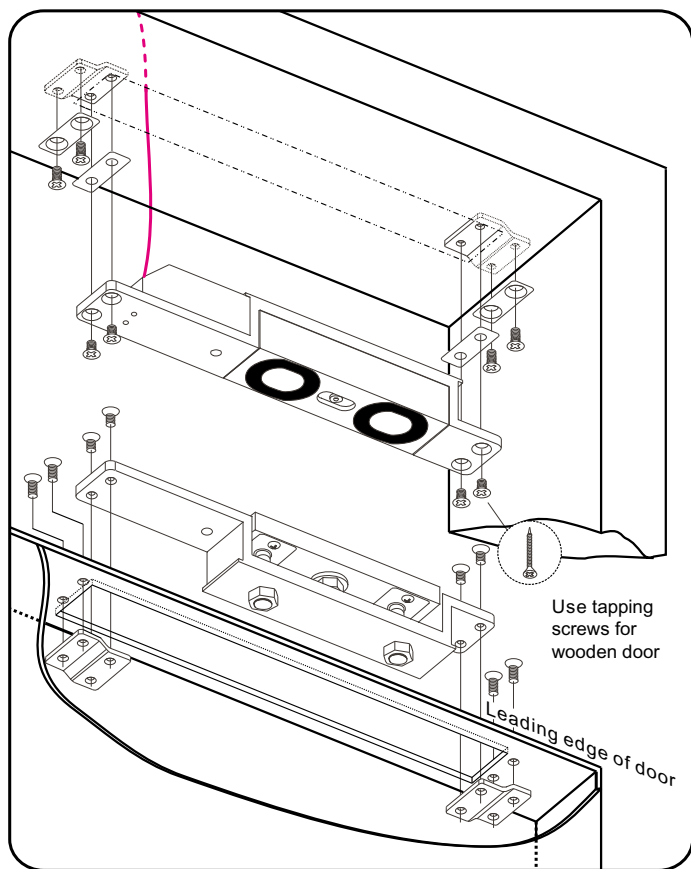
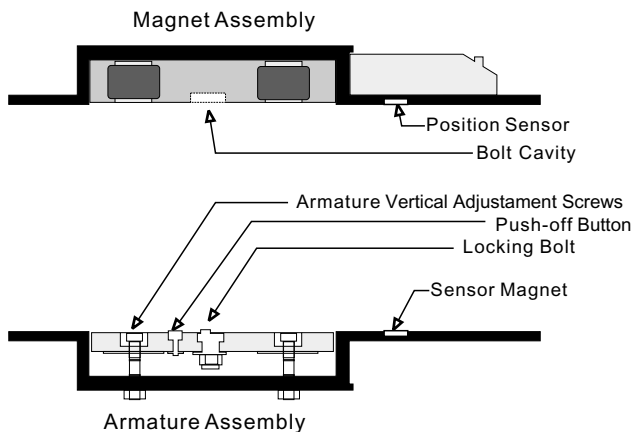
Connecting Diagram



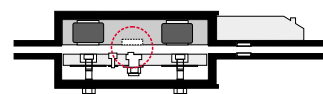
Dimensions



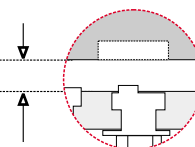
Flush Installation



1. Make sure the gap between the door top rail and frame header is 1/8" (3mm). Make adjustments to the door as required.
2. Adjust single acting door and door closer to ensure the door settles immediately and is fully closed. (Adjust double acting door and POSITIVE CENTERING DOOR CLOSER to ensure the door settles immediately and is fully closed and at rest in the dead center of the frame.)
3. Determine the horizontal centerline of the door top rail thickness. The armature centerline will be the same. Mark the door per the template.
4. Before determining the header centerline, a single acting door must be fully closed. Double acting doors must be fully closed and at rest in the dead center of the frame. Mark the frame header per the template. Prepare the door and frame per the template.
5. When installing 8031-002, set the timer adjustment as required and test the locking time delay prior to mounting in the frame. The locking time delay is field adjustable for 1-6 seconds and is factory set at approximately 3 seconds.
6. Install the magnet and armature with the auto relock switch assembly towards the leading edge of the door. For proper operation, the armature must be adjusted upward as close as possible and parallel to the magnet without interfering with opening and closing of the door. Proper operation cannot be expected with more than 1/8"(3 mm) gap between the armature and the magnet. Use the key wrench provided to adjust the armature vertical adjustment screws.
7. With the door closed, turn the lock power on. Check the lateral alignment. The armature locking bolt should be centered to the locking bolt cavity. Adjust the locking time delay to avoid early activation and help ensure positive locking on door closure. Adjust inward to delay shear lock activation. Don't adjust higher than the armature rest position.
8. Repeat steps 6 and 7 as necessary following shear lock replacement. Cycle the door and shear lock several times after the completion of installation.



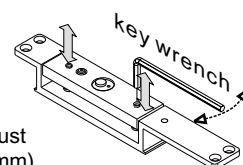
The gap between the magnet and armature is 1/8" (3mm) maximum.



Bulge Lug is used when the magnet cannot be attached to the shallow door frame with fixing lugs and Phillips flat head screws. When the situation happens, use the bulge lug to increase the frame thickness.



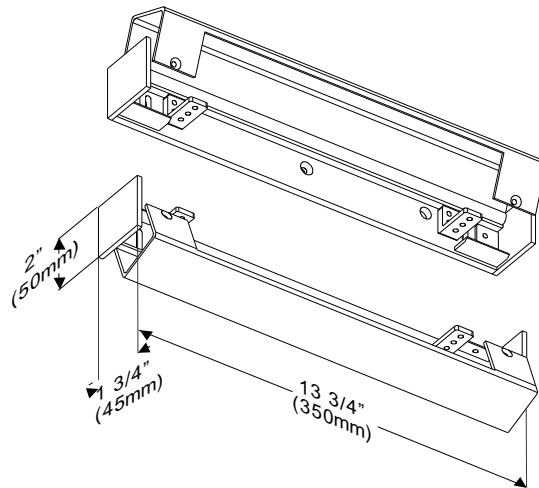
Flat Lug is used when the door frame is too thick, and to prevent the magnet or armature plate from caving in. Add flat lugs so that the magnet or armature plate is aligned to the door frame on the same level plane.



Using supplied key wrench to adjust armature plate to approx. 1/8" (3mm) of gap between magnet and armature.

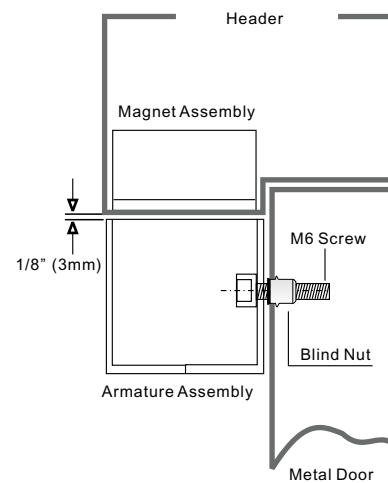
#21059 Bracket for Surface / Semi-Flush Installation

Identify the thickness of the door leaf or frame header and inspect to determine if 21059 bracket is required.



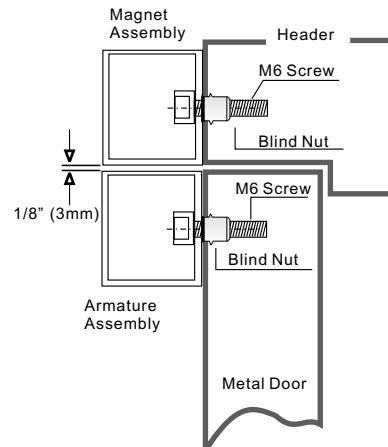
Semi-Flush Installation

The ROFU 8031-002 may also be fitted semi-flush with the use of the 21059 Bracket. The magnet should be fitted to the door transom and the housing holding the armature on to the door. It is vital that a minimum gap of 1/8" (3mm) exists between the magnet and the armature, to allow correct operation.



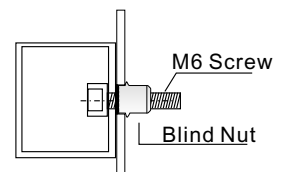
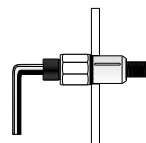
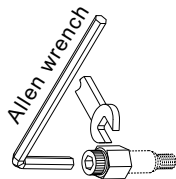
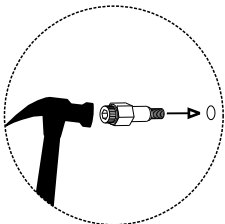
Surface Installation

The ROFU 8031-002 may also be fitted surface mounted using 2pcs of the 21059 Bracket. The housing holding the magnet should be fitted above the door and the housing holding the armature on to the door. It is vital that a minimum gap of 1/8" (3mm) exists between the magnet and the armature, to allow correct operation.



Blind Nut Installation

Drill 9.4mm holes for M6 Blind Nuts.



Insert two blind nuts into separate holes, one for each fixing screw.

Use the Allen wrench to slowly tighten the blind nut.

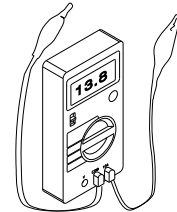
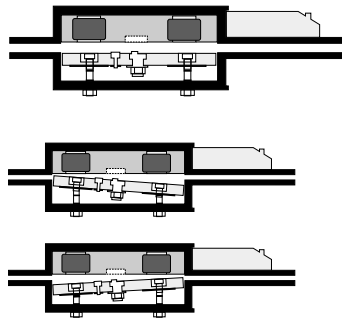
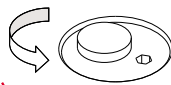
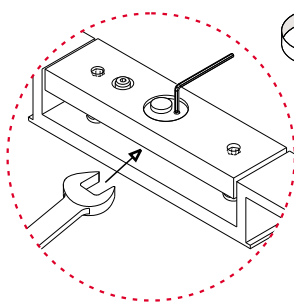
This compresses the blind nut so that it remains permanently fixed in the frame.

Remove the tool.

Use M6 screws to install the 21059 bracket.

Trouble Shooting

Problems	Possible Cause	Solution
Door does not lock	The gap between the armature and the magnet is too large.	Adjust the armature plate and arrange the gap between the armature and the magnet within 1/8" (3mm).
	No power.	Check power supply if the unit is powered with the correct input voltage and draws the specified current.
	The door leaf does not return back at the correct position.	Positive centering door closers are required for all double acting door applicators to help attain consistent dead center alignment.
The armature plate keeps projecting the bolt into the cavity.	The gap between the armature and magnet is too large.	Adjust the armature plate and arrange the gap between the armature and the magnet within 1/8"(3mm).
	Voltage too low.	Check power supply if the unit is powered with the correct input voltage and draws the specified current.
	The magnet is not parallel to the armature plate.	Adjust the armature plate and make sure the magnet is parallel to the armature plate.
	The locking bolt does not correctly seat inside the cavity of the magnet.	Adjust the locking bolt of the armature plate and make sure it correctly seats inside the cavity of the magnet.
The armature plate is not in the right position and the locking bolt cannot seat correctly into the cavity of the magnet.	The position of the locking bolt is not correct.	Adjust the locking bolt of the armature plate and make sure it correctly seats inside the cavity of the magnet.
	The magnet is not parallel to the armature plate.	Adjust the armature and make sure the magnet is parallel to the armature plate.
	The time setting for auto relocking time delay is too short.	Adjust auto relocking timer.



Use spanner and allen wrench to release the locking bolt on the armature plate. Rotate the position of the locking bolt in order to correctly seat inside the cavity of the magnet.

Make sure the magnet is parallel to the armature plate.

The current draw is large (1.8A @12VDC; 1A@24VDC), so make sure the wire is capable to handle long runs. It is also necessary to make sure the output current is sufficient for the required power.

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	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						