Electromagnetic lock PML-300

User manual

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Content

1. Product overview

Fig.1. Electromagnetic lock PML-300

The PML-300 is a fail-safe electromagnetic lock designed for surface mounting on metal, wooden, fireproof, and glass doors. When energized, the electromagnet generates a powerful holding force of 280 kg (600 lbs) that keeps the door securely locked. When power is cut, the lock releases immediately.

2. Installation methods

The PML-300 supports four mounting configurations. Select the method that best suits your door type and frame geometry.

2.1. Standard installation

The lock body mounts directly to the top of the door frame, and the armature plate mounts to the door leaf. This is the simplest configuration requiring no additional brackets.

- Attach the lock body to the top of the door frame using the supplied screws.
- Align the armature plate on the door leaf so it contacts the lock face squarely when the door is closed.
- Adjust the armature bracket until the surfaces are flush and parallel, then tighten.
- Connect DC 12V wiring to the lock terminals.

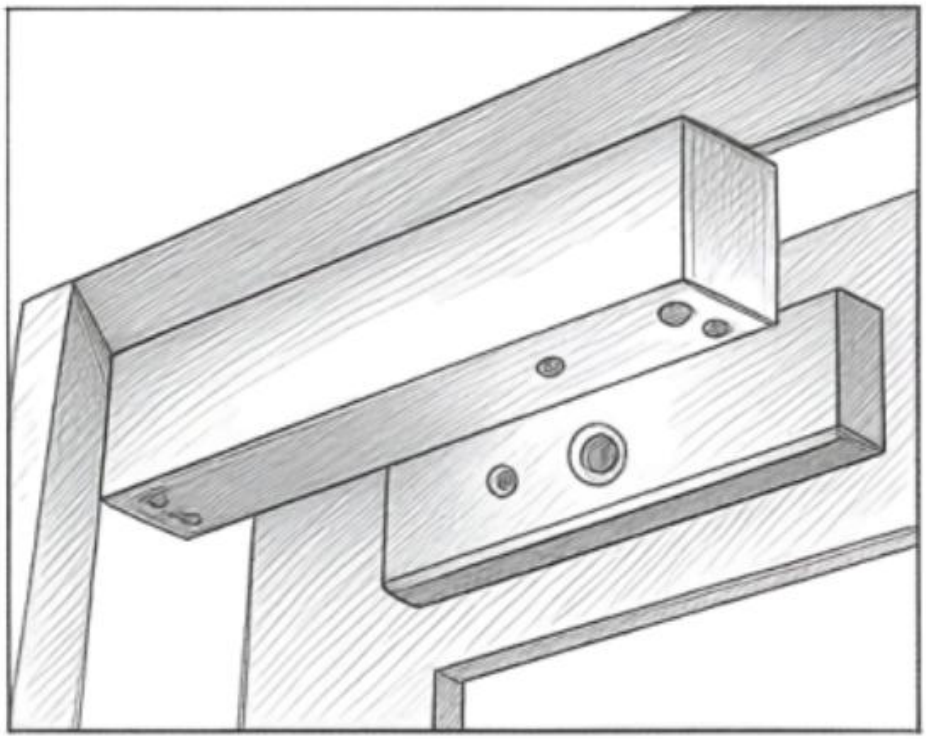

Fig.2. Standard installation

2.2. LS bracket installation

An L-shaped bracket is used when the lock must be mounted on the side face of the frame rather than the top surface. The armature is fitted to the door edge.

- Fix the L-bracket to the side face of the door frame with the supplied fasteners.
- Attach the lock body to the horizontal arm of the L-bracket.
- Mount the armature plate to the edge (hinge-side face) of the door leaf.
- Close the door and verify full contact between lock and armature, then tighten all fixings.

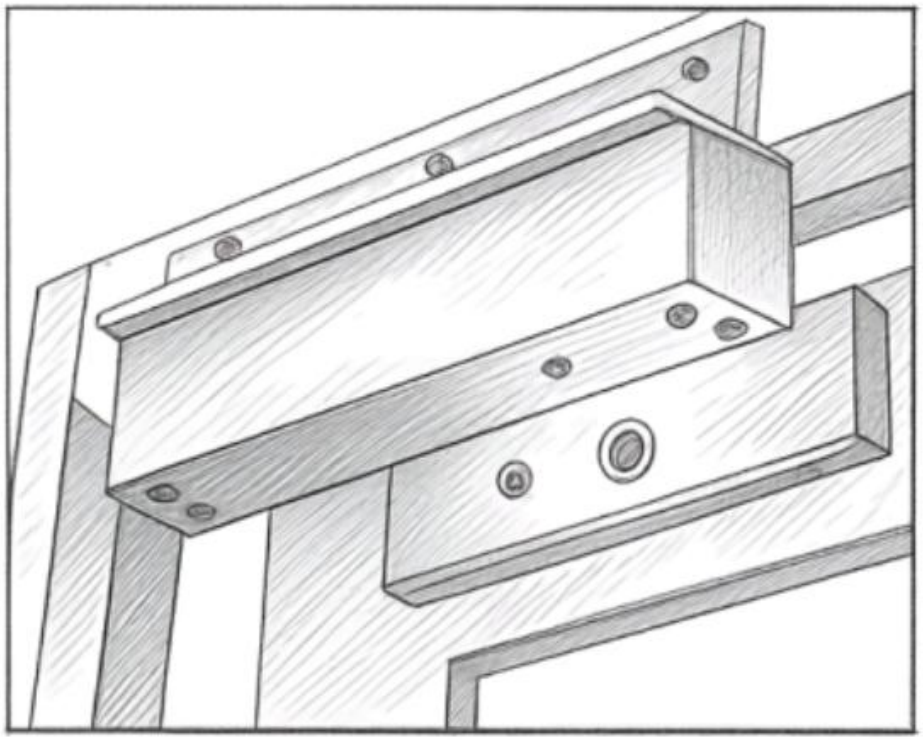

Fig.3. LS bracket installation

2.3. ZL Bracket Installation

The ZL (Z-shaped) bracket compensates for a horizontal offset between the lock mounted on the frame and an armature that sits on a recessed or offset door leaf. Commonly used for non-standard door reveals.

- Mount the lock body to the top of the door frame.
- Attach the ZL bracket to the armature plate to bridge the gap between the lock face and the door surface.
- Adjust the Z offset so the armature aligns flush with the lock face when the door is closed.
- Tighten all fasteners and test for full contact.

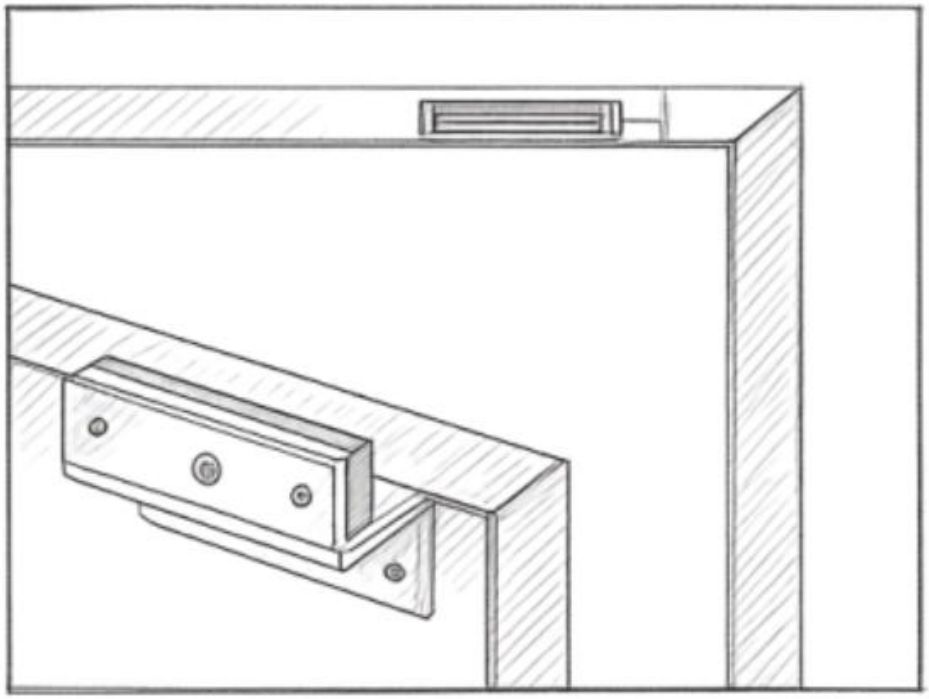

Fig.4. LS bracket installation

2.4. U Bracket Installation

The U-bracket clamps onto the top edge of a frameless glass door leaf and holds the armature plate in position without drilling through the glass.

- Mount the lock body to the door frame overhead.
- Slide the U-bracket clamp over the top edge of the glass door leaf.
- Position the armature plate on the U-bracket face that will contact the lock.
- Tighten the bracket clamp screws evenly to secure the glass without cracking it.
- Verify that the armature aligns with the lock face when the door is closed.

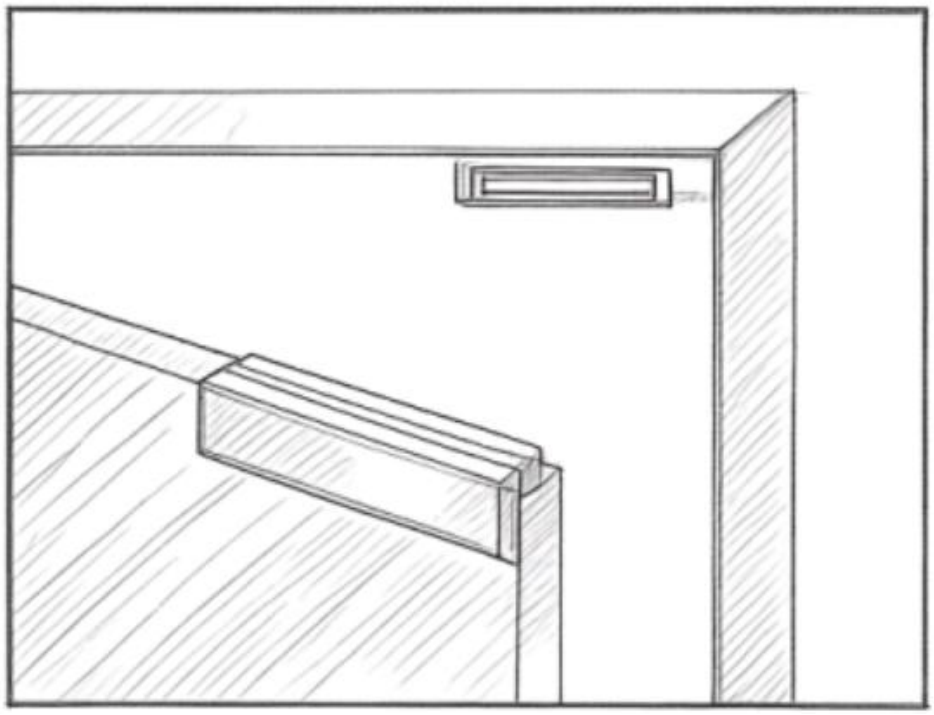

Fig.5. U Bracket installation

3. Wiring and armature alignment

PML-300 operates at DC 12V. Connect the two-wire cable from the lock to a suitable 12V power supply via an access control panel or relay.

Wire / Terminal	Function
Red (+)	DC +12V positive
Black (–)	GND / negative
COM / NO / NC (S & T)	Status signal output

Correct alignment between the lock face and the armature plate is critical for achieving the rated holding force. Misalignment can reduce holding force by up to 50%.

- The armature surface must be parallel to the lock face with a gap of 0–1 mm when the door is fully closed.
- Use the slotted mounting holes to adjust the armature position before tightening.
- The LED indicator (all models) should show solid green when locked and aligned correctly.
- Re-check alignment after 30 days of use as fixings may settle.

Maintenance

Interval	Task
Monthly	Clean the lock face and armature with a dry cloth. Check mounting screws for tightness.
Every 6 months	Inspect wiring for wear or corrosion. Verify holding force with a pull-force gauge.
Annually	Test the full access control cycle (lock, unlock, signal output). Check LED function.

4. Troubleshooting

Symptom	Possible Cause & Remedy
Lock does not engage	Check power supply voltage (must be 12V ±5%). Verify wiring polarity. Confirm relay/controller is switching correctly.
Weak holding force	Armature not flush with lock face — realign. Dirt or debris on contact surfaces — clean. Voltage below spec — check supply.
Lock does not release	Anti-residual magnetism feature may need reset. Cut power completely for 2 seconds and restore.
LED not lit	Check power supply and wiring. On PML-300-S/T, verify signal output wiring is not short-circuited.
Noise on lock/unlock	Loose armature or bracket — re-tighten all fasteners.

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