

Aoleaby HS1L-DQ4

Aoleaby HS1L-DQ4 Safety Door Switch Electromagnetic Lock User Manual

Model: HS1L-DQ4

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the Aoleaby HS1L-DQ4 Safety Door Switch Electromagnetic Lock. Please read this manual thoroughly before using the product and retain it for future reference.

2. SAFETY INFORMATION

WARNING: Failure to follow these safety instructions may result in injury, damage to the product, or improper operation.

- This device is designed for **Indoor Use Only**. Do not expose to outdoor elements unless specifically rated for such conditions.
- Installation and wiring must be performed by qualified personnel in accordance with all local and national electrical codes.
- Ensure power is disconnected before performing any installation, wiring, or maintenance procedures.
- Use copper wire only. The recommended wire gauge for terminal connections is **20-16 AWG**.
- Tighten terminal screws to a torque of **0.6-0.8 N·m (5.4-7.1 lb-in)** to ensure secure electrical connections.
- Do not attempt to modify or disassemble the unit. Refer all servicing to qualified personnel.

3. PRODUCT OVERVIEW

The Aoleaby HS1L-DQ4 is a robust safety door switch with an electromagnetic locking mechanism, designed for industrial and commercial access control applications. It ensures secure door closure and provides safety interlock functionality.



Figure 1: Aoleaby HS1L-DQ4 Safety Door Switch Electromagnetic Lock. The image displays the device in its packaging, showing the main unit with its black and red housing, visible specifications label, and the key-operated unlock mechanism.

Key Features:

- **Model:** HS1L-DQ4
- **Locking Force:** Fzh=3000N
- **Instant Release Circuit:** No residual magnetism, ensuring quick and reliable unlocking.
- **Fully Sealed Electronics:** Tamper-proof and waterproof design for enhanced durability and reliability.
- **Robust Construction:** Mounted using steel machine screws, featuring an architectural brushed stainless steel finish.
- **High Protection Rating:** IP67 Type 4, 4X, 12, and 13, suitable for demanding indoor environments.
- **Indicator:** 24VDC/0.3W for status indication.
- **Solenoid Rated Voltage:** 24VDC.

4. SETUP AND INSTALLATION

Proper installation is crucial for the safety and performance of the HS1L-DQ4. Consult a qualified electrician or technician for installation.

1. **Preparation:** Ensure all power to the installation area is disconnected. Gather necessary tools, including screwdrivers, wire strippers, and a torque wrench.
2. **Mounting:** Securely mount the lock unit and its corresponding actuator (if separate) to the door frame and door using appropriate steel machine screws. Ensure correct alignment for proper engagement.
3. **Wiring:**
 - Identify the power input terminals for the solenoid (24VDC).
 - Connect the safety contacts (AC-15 3A/250V, DC-13 4A/30V) to the control circuit as required by the safety system design.
 - Connect the indicator (24VDC/0.3W) if status feedback is desired.
 - Use **20-16 AWG copper wire** for all connections.
 - Tighten terminal screws to **0.6-0.8 N·m (5.4-7.1 lb-in)**.
4. **Testing:** After wiring, restore power and perform functional tests to ensure the lock engages and disengages correctly, and all safety circuits operate as intended. Verify the indicator light functions.

5. OPERATING INSTRUCTIONS

The HS1L-DQ4 operates as a safety interlock, preventing access when a hazardous condition exists or ensuring a door remains closed during operation.

- **Locking:** When the door is closed and the safety conditions are met (e.g., machine running, power applied to solenoid), the electromagnetic lock will engage, securing the door with a 3000N locking force.
- **Unlocking:** To unlock, the safety conditions must be cleared (e.g., machine stopped, power removed from solenoid). The instant release circuit ensures immediate disengagement.
- **Manual Override:** The unit features a manual unlock mechanism (visible as a keyhole on the device) for emergency or maintenance access. Use the provided key to operate this feature.
- **Status Indicator:** The integrated indicator light provides visual feedback on the lock's status (e.g., locked, unlocked, fault). Refer to your system's documentation for specific indicator meanings.

6. MAINTENANCE

Regular maintenance ensures the longevity and reliable operation of your HS1L-DQ4 safety lock.

- **Cleaning:** Periodically clean the exterior of the unit with a soft, dry cloth. Avoid abrasive cleaners or solvents.
- **Inspection:** Regularly inspect the unit for any signs of physical damage, loose connections, or wear. Check the integrity of the mounting screws.
- **Functionality Check:** Periodically test the locking and unlocking mechanism to ensure smooth operation. Verify the indicator light functions correctly.
- **Wiring:** Ensure all wiring connections remain secure and free from corrosion. Re-tighten terminal screws if necessary, adhering to the specified torque.

7. TROUBLESHOOTING

If you encounter issues with your HS1L-DQ4, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Lock does not engage.	No power to solenoid; faulty wiring; door not fully closed; actuator misalignment.	Check power supply; inspect wiring connections; ensure door is fully closed and aligned with actuator.
Lock does not disengage.	Solenoid power not removed; mechanical obstruction; faulty solenoid.	Verify power removal from solenoid; check for obstructions; if problem persists, contact support.
Indicator light not working.	No power to indicator; faulty wiring; damaged indicator.	Check indicator power supply (24VDC); inspect wiring; replace unit if indicator is damaged.
Excessive noise during operation.	Misalignment of lock and actuator; loose mounting.	Re-align components; tighten mounting screws.

If troubleshooting steps do not resolve the issue, contact Aoleaby customer support for assistance.

8. SPECIFICATIONS

Model	HS1L-DQ4
Brand	Aoleaby
Locking Force	Fzh=3000N
AC-15 Rating	3A/250V
DC-13 Rating	4A/30V
Rated Insulation Voltage (Ui)	300V
Indicator	24VDC/0.3W
Solenoid Rated Voltage	24VDC
IP Rating	IP67 Type 4, 4X, 12 and 13
Operating Environment	Indoor Use Only
Terminal Screw Torque	0.6-0.8 N·m (5.4-7.1 lb-in)
Recommended Wire Gauge	20-16 AWG Copper Wire
Item Weight	1.32 pounds (approx. 600 grams)
Package Dimensions	1.18 x 0.79 x 0.39 inches
Finish Type	Brushed

9. WARRANTY AND SUPPORT

Aoleaby products are manufactured to high-quality standards. For specific warranty details, please refer to the purchase documentation or contact your vendor. For technical support, product inquiries, or warranty claims, please contact Aoleaby customer service through the retailer where the product was purchased or visit the official Aoleaby website.

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ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question