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› HRSTAR S4D400-AP12-37 AC Axial Fan Instruction Manual

HRSTAR S4D400-AP12-37

Instruction Manual

HRSTAR S4D400-AP12-37 AC Axial Fan

1. INTRODUCTION

This manual provides detailed instructions for the safe and efficient operation, installation, and maintenance of the HRSTAR S4D400-AP12-37 AC Axial Fan. Please read this manual thoroughly before installation and operation to ensure proper use and to prevent damage or injury.



Figure 1: Front view of the HRSTAR S4D400-AP12-37 AC Axial Fan, showing the protective guard grille and fan blades.

2. SAFETY INFORMATION

Always observe the following safety precautions to reduce the risk of fire, electric shock, or injury.

- **Electrical Safety:** Ensure the power supply matches the fan's specifications (230VAC, 50/60Hz). Disconnect power before any installation, maintenance, or repair work.
- **Installation:** Installation should only be performed by qualified personnel in accordance with local electrical codes and regulations.
- **Protection:** The fan has an IP44 protection rating, meaning it is protected against solid objects larger than 1mm and splashing water from any direction. However, it is not waterproof and should not be submerged.
- **Moving Parts:** Keep hands, hair, and loose clothing away from moving parts during operation. The fan blades rotate at high speeds.
- **Temperature:** Do not operate the fan outside its specified ambient temperature range of -40°C to 40°C.

- **Damage:** Do not operate the fan if it is damaged or if any parts are missing.

3. PACKAGE CONTENTS

Upon opening the package, verify that all components are present and undamaged:

- 1 x HRSTAR S4D400-AP12-37 AC Axial Fan



Figure 2: Rear view of the fan, showing the five black sheet steel blades.

4. SETUP AND INSTALLATION

Follow these steps for proper installation of the axial fan:

1. **Mounting Location:** Choose a stable and secure mounting location that can support the fan's weight (5.7 kg) and withstand any vibrations during operation. Ensure adequate clearance for airflow.

2. **Mounting:** Secure the fan using appropriate fasteners through the mounting points on the guard grille. Ensure the fan is firmly attached to prevent movement.
3. **Electrical Connection:**
 - Ensure the main power supply is disconnected before making any electrical connections.
 - Connect the fan to a 230VAC, 3-phase power supply. Refer to the wiring diagram provided on the motor label for correct terminal connections.
 - Ensure all connections are secure and properly insulated.
 - Verify that the grounding wire is correctly connected.
4. **Pre-Operation Check:** Before restoring power, visually inspect all connections and ensure no foreign objects are obstructing the fan blades.



Figure 3: Side view of the fan, illustrating its depth and the motor housing.

5. OPERATING INSTRUCTIONS

Once installed and connected, the fan is ready for operation.

1. **Power On:** Restore power to the fan's circuit.
2. **Initial Start-up:** Observe the fan during its initial start-up. It should run smoothly without excessive noise or vibration.
3. **Continuous Operation:** The fan is designed for continuous operation within its specified parameters.
4. **Power Off:** To stop the fan, disconnect the power supply to its circuit.



Figure 4: Close-up of the motor label, showing detailed electrical specifications and model information.

6. MAINTENANCE

Regular maintenance ensures optimal performance and extends the lifespan of your fan.

- **Cleaning:**
 - Disconnect power before cleaning.

- Periodically clean the fan blades and guard grille to remove dust and debris. Use a soft cloth or brush. Do not use abrasive cleaners or solvents.

- **Inspection:**

- Regularly inspect the fan for any signs of wear, damage, or loose connections.
- Check for unusual noises or vibrations during operation, which may indicate a problem.

- **Motor Bearings:** The motor uses ball bearings, which are typically sealed and maintenance-free. Do not attempt to lubricate them unless specified by the manufacturer.

7. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
Fan does not start	No power supply; Incorrect wiring; Motor fault	Check power connection and circuit breaker; Verify wiring against diagram; Contact qualified technician
Excessive noise or vibration	Loose mounting; Damaged blades; Bearing wear; Obstruction	Tighten mounting bolts; Inspect blades for damage; Contact qualified technician; Remove any obstructions
Reduced airflow	Blocked grille/blades; Incorrect rotation direction	Clean fan blades and grille; Verify correct wiring for rotation direction

If the problem persists after attempting these solutions, contact a qualified service technician.

8. TECHNICAL SPECIFICATIONS

Detailed specifications for the HRSTAR S4D400-AP12-37 AC Axial Fan:

Parameter	Value
Model	S4D400-AP12-37
Motor	M4D074-EI
Type	Axial Fan
Phase	3
Nominal Voltage	230VAC
Frequency	50/60Hz
Speed	1450/1690 RPM
Power Consumption	135/185W
Current Draw	0.39/0.44/0.68/0.76A
Max. Back Pressure	105/120Pa
Weight	5.7 kg

Parameter	Value
Size	400mm (diameter)
Motor Size	74
Blade Material	Sheet steel, painted black
Guard Grille Material	Steel, phosphated and coated with black plastic
Type of Protection	IP44
Number of Blades	5
Insulation Class	B
Environmental Protection Class	H1
Motor Bearing	Ball bearing
Min. Ambient Temperature	-40°C
Max. Ambient Temperature	40°C

9. WARRANTY AND SUPPORT

For warranty information or technical support, please contact your point of purchase or the manufacturer directly. Keep your purchase receipt as proof of purchase.

For further assistance, please refer to the contact information provided by HRSTAR or your authorized distributor.