AIRGO 08-16A

AIRGO AC Soft Starter 08-16A User Manual

Brand: AIRGO | Model: 08-16A

1. Introduction

The AIRGO AC Soft Starter 08-16A is designed to reduce the in-rush current of your air conditioner's compressor during startup. This technology gently ramps up the compressor, minimizing electrical stress, extending the lifespan of your AC unit, and enabling smoother operation with alternative power sources like generators or solar inverters. This manual provides essential information for proper installation, operation, and maintenance of your AIRGO Soft Starter.

2. Safety Information

WARNING: Electrical shock hazard. Installation should only be performed by qualified personnel or a licensed electrician. Always disconnect power to the AC unit at the circuit breaker or disconnect switch before beginning any installation or maintenance procedures.

- Ensure all local and national electrical codes are followed.
- Verify the voltage and current ratings of your AC unit are compatible with the AIRGO Soft Starter model (08-16A).
- Allow at least 2 minutes for the run capacitor to discharge before disconnecting any wires.
- Do not operate the unit if any wiring appears damaged or improperly connected.

3. Product Overview

The AIRGO AC Soft Starter 08-16A is a compact device engineered for seamless integration into residential AC units. It features proprietary Reverse Motor Protection, which is crucial for systems operating with utility and/or generator power, ensuring a smooth transition and protecting the compressor.

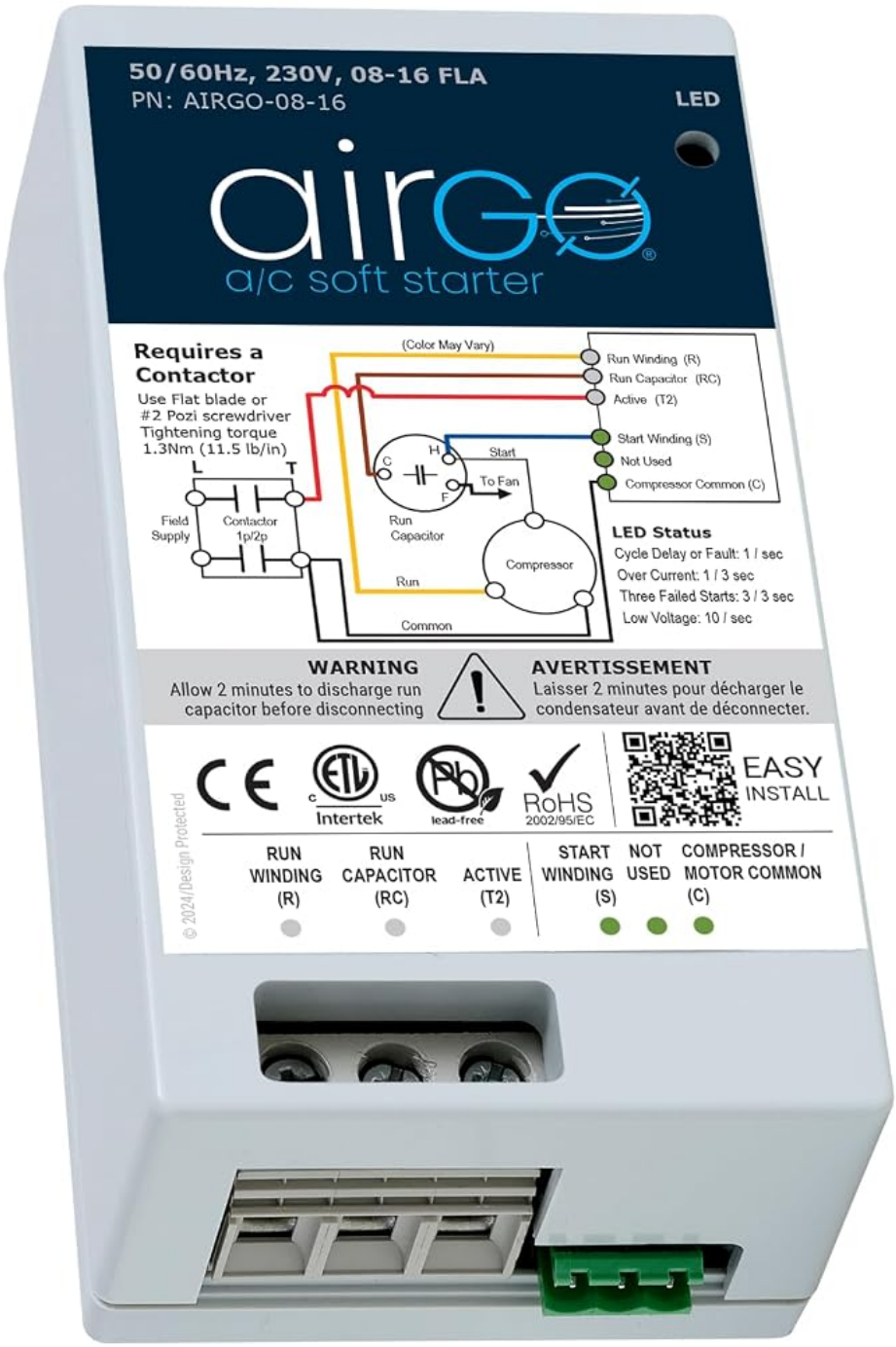

50/60Hz, 230V, 08-16 FLA
PN: AIRGO-08-16
LED
airgo
a/c soft starter
Requires a Contactor
Use Flat blade or #2 Pozi screwdriver
Tightening torque 1.3Nm (11.5 lb/in)
L
T
Field Supply
Contactor 1p/2p
(Color May Vary)
Run Winding (R)
Run Capacitor (RC)
Active (T2)
Start Winding (S)
Not Used
Compressor Common (C)
H
C
F
Start
To Fan
Run Capacitor
Compressor
Run
Common
LED Status
Cycle Delay or Fault: 1 / sec
Over Current: 1 / 3 sec
Three Failed Starts: 3 / 3 sec
Low Voltage: 10 / sec
WARNING
Allow 2 minutes to discharge run capacitor before disconnecting
AVERTISSEMENT
Laisser 2 minutes pour décharger le condensateur avant de déconnecter.
Intertek
lead-free
RoHS 2002/95/EC
EASY INSTALL
© 2024/Design Protected
RUN WINDING (R)
RUN CAPACITOR (RC)
ACTIVE (T2)
START WINDING (S)
NOT USED
COMPRESSOR / MOTOR COMMON (C)

Figure 3.1: AIRGO AC Soft Starter 08-16A unit, showing its compact design and integrated wiring diagram.

Key Features:

- **Soft Start Technology:** Reduces compressor startup current.
- **Reverse Motor Protection:** Safeguards the compressor during power transitions.
- **Compact Footprint:** Designed for easy installation inside AC units.
- **Wide Compatibility:** Suitable for 1.75-3.5 ton AC units.
- **Robust Operating Range:** Functions reliably from -4°F to 140°F.



Figure 3.2: Icon representing the Reverse Motor Protection feature, a key safety mechanism.

4. Installation

4.1 Pre-Installation Checklist

- Ensure you have the correct AIRGO Soft Starter model (08-16A) for your AC unit.
- Gather necessary tools: screwdriver, wire strippers, multimeter.
- Locate the AC unit's data tag to identify compressor RLA (Rated Load Amps) and LRA (Locked Rotor Amps).



Figure 4.1: Example of an AC unit data tag. Identify RLA (Rated Load Amps) and LRA (Locked Rotor Amps) for compatibility.

4.2 Determining the Correct AIRGO Model

Use the following flowchart to confirm you have the appropriate AIRGO Soft Starter for your AC unit. If your unit falls outside the 08-16A range or if you have a non-scroll compressor with an FLA/RLA greater than 20A, contact technical support.



Figure 4.2: Flowchart for selecting the correct AIRGO Soft Starter model based on compressor specifications.

4.3 Step-by-Step Installation Guide

Follow these steps carefully for a successful installation. Refer to the detailed wiring diagram and images provided.



Figure 4.3: Visual step-by-step installation instructions for the AIRGO Soft Starter.

1. **Receive Product:** Confirm you have received your AIRGO Soft Starter and included wire kit.
2. **Unpack:** Remove all components from the packaging.
3. **Prepare Wires:** Organize the included wires for easy access.
4. **Disconnect Power:** **CRITICAL: Turn off power to the HVAC unit at the circuit breaker or disconnect switch.** Verify power is off with a multimeter.
5. **Open AC Unit:** Open the electrical access panel of your outdoor AC unit.
6. **Locate Wiring Diagram:** Find the existing wiring diagram, typically on the inside of the access panel cover.
7. **Mount Bracket:** Install the mounting bracket for the AIRGO unit in a suitable location inside the AC unit, ensuring at

least 3 inches (76 mm) clearance from hot lines or discharge piping.

8. **Install Soft Starter:** Securely mount the AIRGO Soft Starter to the bracket.
9. **Remove Compressor Run Wire:** Disconnect the compressor's existing Run wire (often yellow, but color may vary) from the run capacitor or compressor terminal.
10. **Strip Run Wire:** Strip the end of the compressor's original Run wire.
11. **Connect Brown Wire:** Terminate the brown wire from the AIRGO unit to the 'C' terminal on the run capacitor.
12. **Connect Black Wire:** Connect the black wire from the AIRGO unit to the load-side contactor terminal labeled '2' or 'T2' in a typical application.
13. **Connect Blue Wire:** Connect the blue wire from the AIRGO unit to the 'H' terminal on the capacitor.
14. **Connect Red Wire:** Connect the red wire from the AIRGO unit to the load-side contactor terminal labeled '1' or 'T1' in a typical application.
15. **Verify Wiring:** Double-check all connections against the wiring diagram.

4.4 Wiring Diagram Reference

The following diagram illustrates the typical wiring connections for the AIRGO Soft Starter. Note that wire colors from your AC unit may vary.



Figure 4.4: Comprehensive wiring diagram for the AIRGO Soft Starter. Consult this diagram for precise connections.



Figure 4.5: Terminal connections on the AIRGO unit. The yellow wire's color may vary in your specific AC unit.

4.5 Mounting Considerations

The AIRGO Soft Starter features a small footprint, allowing for convenient installation directly inside most AC units. Ensure adequate clearance for ventilation and maintenance.



Figure 4.6: The compact size of the AIRGO Soft Starter facilitates installation within the AC unit's existing enclosure.

For additional installation resources and guides, visit InstallCentral.com/soft-starters.

5. Operation

Once correctly installed, the AIRGO AC Soft Starter operates automatically. When your AC unit receives a call for cooling, the soft starter will manage the compressor's startup, gradually increasing power to reduce the initial current surge. This process is typically completed within a few seconds and is designed to be seamless and unnoticed by the user, except for the quieter and smoother startup of the AC unit.

6. Maintenance

The AIRGO AC Soft Starter is designed for maintenance-free operation. However, periodic visual inspection of the unit and its wiring connections is recommended during routine AC system maintenance. Ensure all connections remain secure and free from corrosion or damage. If any issues are observed, disconnect power immediately and consult a qualified technician.

7. Troubleshooting

The AIRGO Soft Starter includes an LED indicator to assist with troubleshooting. Refer to the LED status on the product label (Figure 3.1) for diagnostic information:

LED Status	Indication	Possible Cause / Action
Solid Green	Normal Operation	Unit is functioning correctly.
Flashing (1 sec)	Cycle Delay or Fault	Temporary delay or minor fault. Unit may reset automatically.
Flashing (3 sec)	Over Current	Compressor drawing excessive current. Check compressor, wiring, or contact support.
Flashing (5 sec)	Start Failed	Compressor failed to start. Check compressor, run capacitor, or wiring.
Flashing (10 sec)	Low Voltage	Input voltage is too low. Check power supply, especially during generator operation.

If troubleshooting steps do not resolve the issue, please contact AIRGO customer support.

8. Specifications

Specification	Value
Product Dimensions (L x W x H)	5.3 x 2.96 x 1.96 inches
Item Weight	1.08 Pounds
Model Number	08-16A
Operation Mode	ON-OFF
Current Rating	16 Amps
Operating Voltage	240 Volts
Contact Type	Normally Open
Connector Type	Clamp
Terminal Type	Screw
Circuit Type	1-way
Actuator Type	Push Button
Operating Temperature Range	-4°F to 140°F
Storage Temperature Range	-40°F to 185°F
Compliance	A2L Compliant

9. Warranty Information

Specific warranty details are not provided in the product information. Please refer to the product packaging or contact the seller directly for warranty terms and conditions.

10. Support

For any installation questions, technical assistance, or support, please contact the seller directly. Their contact information can typically be found on your purchase receipt or the product packaging.

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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.

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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