

5X485

Dayton 5X485 SCR DC Speed Control User Manual

Model: 5X485

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the Dayton 5X485 SCR DC Speed Control. This device is designed to regulate the speed of compatible DC motors within industrial applications. Please read this manual thoroughly before attempting to install or operate the unit.

2. SAFETY INFORMATION

WARNING: Electrical shock hazard. Always disconnect AC supply power before working on the control, motor, or connections. Ensure the control enclosure is properly grounded to prevent electrical hazards.

Observe all local and national electrical codes during installation. Only qualified personnel should perform installation and maintenance procedures. Do not operate the control if it appears damaged or if any wiring is exposed.

3. PRODUCT OVERVIEW

The Dayton 5X485 SCR DC Speed Control is a robust unit designed for precise motor speed regulation. It features a durable enclosure and clearly labeled controls.



Figure 3.1: Front panel of the Dayton 5X485 SCR DC Speed Control. The panel features a large central knob for speed adjustment, an ON/OFF toggle switch, and clearly marked terminals for 'LINE' and 'MOTOR' connections. A red indicator light is also visible.



Figure 3.2: Side view of the Dayton 5X485 SCR DC Speed Control. This image highlights the overall dimensions and the metal mounting flanges on the sides of the black enclosure, indicating its design for secure installation.

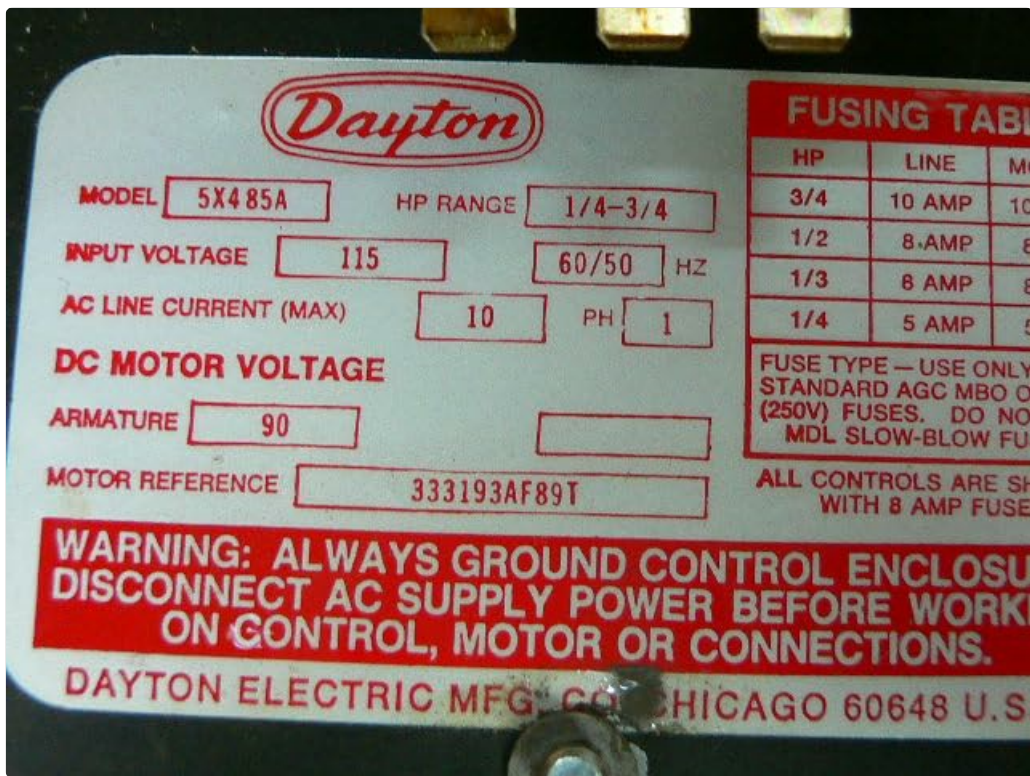


Figure 3.3: Detailed view of the product nameplate. This label provides critical electrical specifications such as model number (5X485A), HP range (1/4-3/4), input voltage (115V), frequency (60/50 Hz), AC line current (10A max), phase (1 PH), and DC motor voltage (90V armature). It also includes important fusing information and a safety warning regarding grounding and power disconnection.

4. SETUP AND INSTALLATION

Proper installation is crucial for the safe and efficient operation of your Dayton 5X485 SCR DC Speed Control.

4.1 Mounting

1. Select a suitable mounting location that is dry, well-ventilated, and free from excessive vibration, dust, or corrosive elements.
2. Ensure adequate clearance around the unit for ventilation and access to controls and wiring.
3. Securely mount the control using appropriate fasteners through the provided mounting holes on the enclosure.

4.2 Wiring

Before making any electrical connections, ensure that the main power supply is disconnected and locked out.

1. **Grounding:** Connect the control enclosure to a reliable earth ground. This is a critical safety step.
2. **AC Line Input:** Connect the 115V AC power supply to the terminals marked 'LINE'. Ensure correct polarity if specified.
3. **DC Motor Output:** Connect the DC motor leads to the terminals marked 'MOTOR'. Observe motor polarity for desired direction of rotation. If the motor rotates in the wrong direction, reverse the motor leads.
4. **Fusing:** The control is shipped with an 8 AMP fuse. If replacement is necessary, use only standard AGC MBO or (250V) fuses. Do not use MDL slow-blow fuses.
5. Double-check all connections for tightness and correct wiring before restoring power.

5. OPERATING INSTRUCTIONS

Once properly installed, operating the Dayton 5X485 SCR DC Speed Control is straightforward.

- Power On:** Ensure the speed control knob is set to its minimum position (fully counter-clockwise). Flip the ON/OFF toggle switch to the 'ON' position. The indicator light should illuminate.
- Speed Adjustment:** Slowly rotate the main control knob clockwise to increase the motor speed. Rotate counter-clockwise to decrease the motor speed.
- Power Off:** To stop the motor, either rotate the speed control knob to its minimum position or flip the ON/OFF toggle switch to the 'OFF' position.

Note: Avoid rapid changes in speed, especially with heavy loads, to prevent undue stress on the motor and control unit.

6. MAINTENANCE

The Dayton 5X485 SCR DC Speed Control is designed for reliable operation with minimal maintenance. However, periodic checks can extend its lifespan and ensure optimal performance.

- Cleaning:** Periodically clean the exterior of the control unit with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure the unit is powered off before cleaning.
- Connections:** Annually, or as needed, inspect all electrical connections for tightness. Loose connections can lead to overheating and poor performance.
- Ventilation:** Ensure that ventilation openings (if any) are clear of dust and debris to prevent overheating.
- Fuse Replacement:** If the unit fails to power on, check the fuse. Always replace with the correct type and rating (AGC MBO, 250V, 8 AMP).

Always disconnect power before performing any maintenance or inspection.

7. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your speed control.

Problem	Possible Cause	Solution
Control unit does not power on.	No AC input power. Blown fuse.	Check power supply and circuit breaker. Replace fuse with correct type and rating (AGC MBO, 250V, 8 AMP).
Motor does not run or runs intermittently.	Loose wiring connections. Motor fault. Control unit fault.	Check and tighten all wiring connections. Test motor independently. If motor is functional, control unit may require professional service.
Motor runs at full speed regardless of knob position.	Internal control unit fault.	Disconnect power immediately. The unit requires professional inspection or replacement.
Motor runs in the wrong direction.	Incorrect motor lead polarity.	Disconnect power. Reverse the two motor leads connected to the control unit.

If troubleshooting steps do not resolve the issue, contact a qualified technician for assistance.

8. SPECIFICATIONS

- **Model:** 5X485A
- **HP Range:** 1/4 - 3/4 HP
- **Input Voltage:** 115V AC
- **Frequency:** 60/50 Hz
- **AC Line Current (Max):** 10A
- **Phase:** 1 PH
- **DC Motor Voltage (Armature):** 90V DC
- **Motor Reference:** 333193AF89T
- **Fuse Type:** AGC MBO or (250V) fuses (8 AMP)
- **Product Dimensions:** 7.09 x 6.3 x 12.99 inches
- **Product Weight:** 6.39 Pounds

9. WARRANTY AND SUPPORT

Specific warranty information for the Generic Dayton 5X485 SCR DC Speed Control is not provided in this manual. Please refer to your purchase documentation or contact the seller/manufacturer directly for details regarding warranty coverage and technical support.

For technical assistance or inquiries, please reach out to the authorized distributor or service center.