

## Installation, Operation and Maintenance Manual

Please read and save these instructions for future reference. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with these instructions will result in voiding of the product warranty and may result in personal injury and/or property damage.

The 4-speed analog control is a simple, cost-effective way to operate a single HVLS fan. Compact and easy to install on a standard 2x4 junction box, it features a 4-position dial for quick adjustments between preset fan speeds (25%, 40%, 75%, and 100%) and a 3-position dial for Forward / Off / Reverse operation. The clean, surface-mounted design provides a professional and user-friendly aesthetic for any application. Compatible with overhead HVLS fan models DS-3 and DS-6.

**NOTE: The 4-speed analog control can control only one fan at a time.** For additional assistance, contact your local sales representative or the manufacturer directly.



## General Information

### IMPORTANT SAFETY INSTRUCTIONS

Only qualified personnel should install this fan. Personnel should have a clear understanding of these instructions and should be aware of general safety precautions. Improper installation can result in electric shock, possible injury due to coming in contact with moving parts, as well as other potential hazards. Other considerations may be required if high winds or seismic activity are present. If more information is needed, contact a licensed professional engineer before moving forward.

1. Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the National Fire Protection Agency (ANSI/NFPA 70), where applicable. Follow the Canadian Electric Code (CEC) in Canada.
2. Verify that the power source is compatible with the equipment.

#### DANGER

Always disconnect, lock, and tag power source before installing or servicing. Failure to disconnect power source can result in fire, shock or serious injury.

#### CAUTION

When servicing the fan, motor may be hot enough to cause pain or injury. Allow motor to cool before servicing.

#### DANGER

Pour écarter les risques d'incendie, de choc électrique ou de blessure grave, veiller à toujours débrancher, verrouiller et étiqueter la source de courant avant l'installation ou l'entretien.

#### ATTENTION

Lors de toute intervention sur la soufflante, le moteur peut être suffisamment chaud pour provoquer une douleur voire une blessure. Laisser le moteur refroidir avant toute maintenance.

## Receiving

Upon receiving the product, check to ensure all items are accounted for by referencing the delivery receipt or packing list. Inspect each crate or carton for shipping damage before accepting delivery. Alert the carrier of any damage detected. The customer will make a notation of damage (or shortage of items) on the delivery receipt and all copies of the bill of lading which is countersigned by the delivering carrier. If damaged, immediately contact your local representative. Any physical damage to the unit after acceptance is not the responsibility of the manufacturer.

## Unpacking

Verify that all required parts and the correct quantity of each item have been received using the component list. If any items are missing, report shortages to your local representative to arrange for obtaining missing parts. Due to availability of transportation and truck space all items for the unit may not be shipped together. Confirmation of shipment(s) must be limited to only items on the bill of lading.

## Storage

Controls are protected against damage during shipment. If the control cannot be installed and operated immediately, precautions need to be taken to prevent deterioration of the control during storage. The user assumes responsibility of the control while in storage. The manufacturer will not be responsible for damage during storage. These suggestions are provided solely as a convenience to the user.

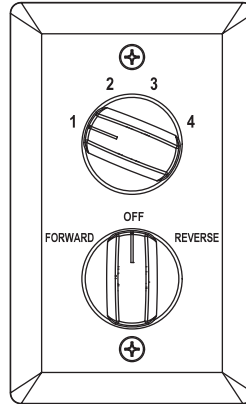
The ideal environment for the storage of controls is indoors, above grade, in a low humidity atmosphere which is sealed to prevent the entry of blowing dust, rain or snow. Care must be taken to protect control from dirt, moisture, and extreme temperature during storage.

**NOTE:** Improper storage which results in damage to the product will void the warranty.

## Control Components

Verify that all of the following parts and hardware have been received prior to beginning installation. Contact your local representative or the manufacturer if replacement parts are required.

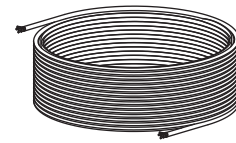
**NOTE:** Additional parts (provided by others) may be required to complete the control installation, including additional wiring and hardware for mounting the control to the building structure.



4-Speed Control (1)



#6 - 32 x 7/16 in.  
Phillips Head Screw (2)



Shielded 18/6  
Control Cable (1)

# Installation

Required Loose Components (Not Included):

- 2x4 in. Single Gang Junction Box (1)
- 1-to-1 Inline Splice Lever Connector 24-12AWG (5)

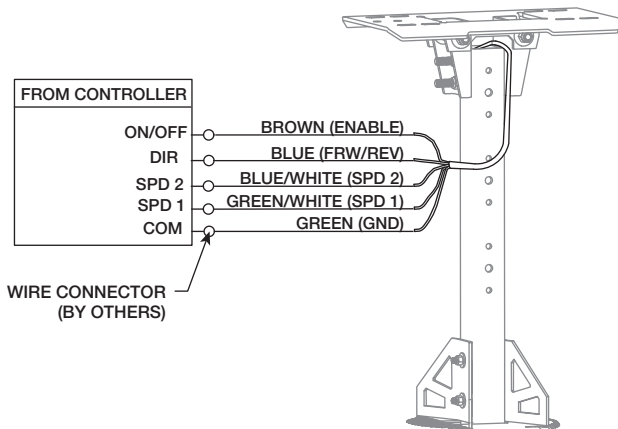
Hardware/Tools Needed (Not Included):

- # 2 Phillips Head Screwdriver
- 1/8 in. Phillips Head Screwdriver
- 2.0 mm Flathead Screwdriver
- Wire Strippers

**IMPORTANT:** Do not apply power until the mechanical installation, fire-alarm relay installation, communication wiring, and fan control installation are complete.

**NOTE:** Before installing the 4-speed control, confirm commissioning mode has been run successfully to verify the fan components are in working order. Refer to the fan's Installation, Operation, and Maintenance (IOM) manual for the commissioning sequence.

1. Identify mounting location for the control junction box (by others) per the building plans.
2. Route the shielded 18/6 cable from the junction box at the floor level to the loose pigtailed at the top of the fan.
3. Connect the shielded 18/6 wiring to the fan pigtailed as shown in the image below. All wiring shall be installed in accordance with appropriate local electrical codes and industry standards pertaining to the installation environment.

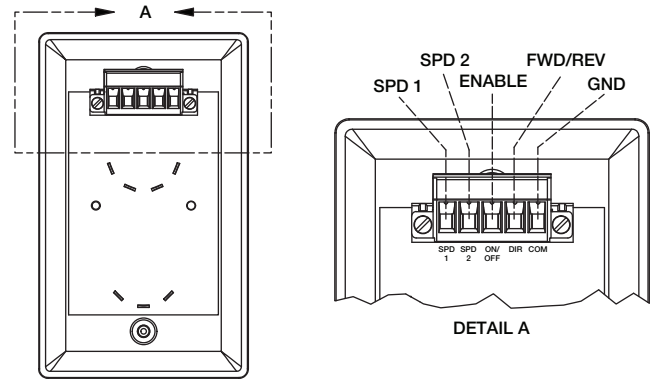


4. Confirm factory installed drive terminations are landed in accordance with the 4-speed control in the Fan Networking and Pre-Startup section of the fan's Installation, Operation, and Maintenance (IOM) manual.

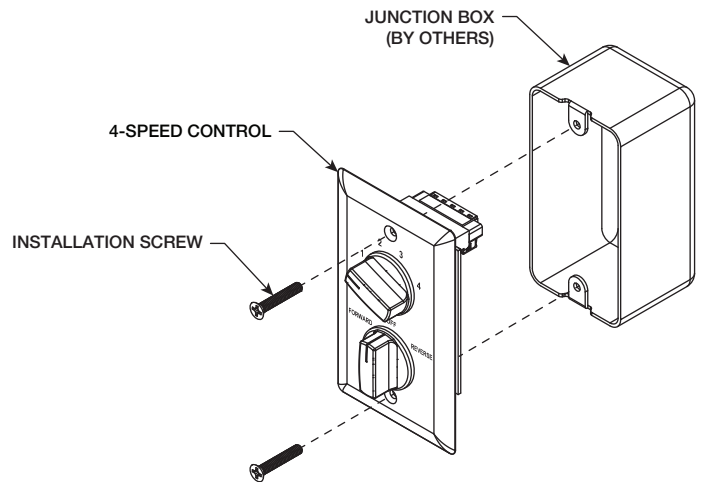
**IMPORTANT:** Make sure the drive is set to the appropriate control mode, blade count, and fan size on the rotary dials. Incorrect drive settings could result in inoperable or unsafe operation.

5. At the floor level, terminate the shielded 18/6 wire strands into the appropriate terminals.

All wiring connections are from the fan to the back side of the control.



- Connect "Enable" to "ON/OFF".
  - Connect "FWD/REV" to "DIR".
  - Connect "SPD 2" to "SPD 2".
  - Connect "SPD 1" to "SPD 1".
  - Connect "GND" to "COM".
6. Secure the 4-speed control to the junction box using the provided #6 – 32 x 7/16 in. Phillips head screws.



**IMPORTANT:** Controls and HVLS fans must be installed using the supplied 18/6 communication cable or an equivalent 18AWG, 6-conductor, bare copper, shielded plenum (CMP) cable with an integral drain wire. Control wiring should not exceed 28 ohms. The maximum allowable cable length should not exceed 200 ft.

**IMPORTANT:** All wiring should be done in accordance with the latest edition of the National Electrical Code (ANSI/NFPA70) and any local codes that may apply. In Canada, wiring should be done in accordance with the Canadian Electrical Code.

# Start-Up and Operation

## Control Start-Up

1. Before applying power to the fan, confirm the control's bottom dial is set to the Off position.
2. For direction control, apply power to the fan and turn the bottom directional dial counterclockwise to the "Forward" position. After a few seconds, the fan will begin to spin forward.

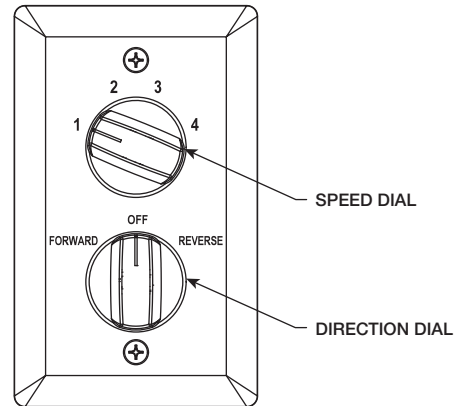
**NOTE:** During operation, the small LED light on the drive illuminates purple when the fan is receiving a command from the 4-speed control.

3. For speed control, turn the speed dial between positions 1, 2, 3, and 4 to adjust the fan speed. Wait 20 to 30 seconds for the fan to ramp to the newly selected speed.

**NOTE:** If the fan does not rotate when a "Forward" or "Reverse" command is given on the control, refer to the Installation section and check the communication-wiring connections.

**NOTE:** Refer to the fan's Installation, Operation, and Maintenance (IOM) manual for LED status colors during normal operation and flashing LED error-code references.

## Control Functionality



### Directional Dial

- Commands the fan to spin forward.
- Commands the fan to spin reverse.
- Commands the fan to turn off.

### Speed Control Dial

- Position 1 sets the fan speed to 25% of the maximum catalog speed.
- Position 2 sets the fan speed to 40% of the maximum catalog speed.
- Position 3 sets the fan speed to 75% of the maximum catalog speed.
- Position 4 sets the fan speed to 100% of the maximum catalog speed.

## Our Commitment

*As a result of our commitment to continuous improvement, Greenheck reserves the right to change specifications without notice.*

Product warranties can be found online at [Greenheck.com](http://Greenheck.com), either on the specific product page or in the literature section of the website at [Greenheck.com/Resources/Library/Literature](http://Greenheck.com/Resources/Library/Literature).

AMCA Publication 410-96, Safety Practices for Users and Installers of Industrial and Commercial Fans, provides additional safety information. This publication can be obtained from AMCA International, Inc. at [www.amca.org](http://www.amca.org).

