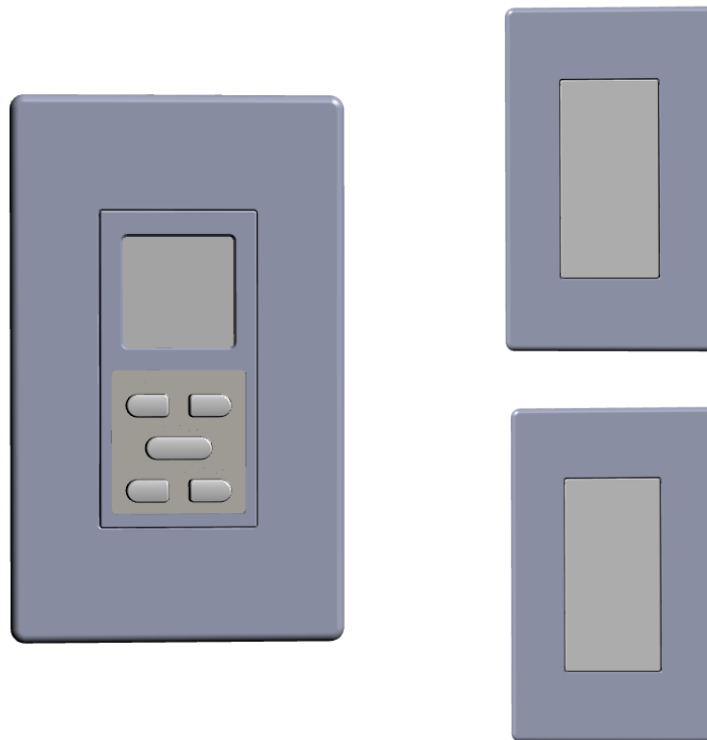




Installation Guide

AVS-EC-AUTO





IMPORTANT SAFETY INFORMATION READ AND SAVE THESE INSTRUCTIONS

WARNING – TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS: Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards.

CAUTION: The installation of a ZOO Fan controller must be in accordance with the requirements specified in this installation manual and with any additional requirements set forth by the national electric code (NEC), ANSI/NFPA 70-1999, and all local codes. If you are unfamiliar with wiring, use a qualified electrician.

WARNING: To prevent electrical shock and/or injury disconnect controller from power source before you move or service the controller.

WARNING: To reduce the risk of fire, electric shock, and injury to persons, this controller should only be installed with ZOO Fans. Not suitable for use with other motors.

CAUTION: When service or replacement of a component in the controller requires the removal or disconnection of a safety device, the safety device is to be reinstalled or remounted as previously installed.

WARNING: Risk of fire, electric shock, or injury to persons during maintenance. Disconnect the controller from the power supply before servicing.

WARNING – TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

- a) Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
- b) Before servicing or cleaning unit, switch power off at service panel and lock the service disconnect to prevent power from being switched on accidentally. When the service disconnect cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.

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ZOO FANS AVST-SERIES CONTROLLER SPECIFICATIONS

Model	Input Power	Control Input
AVS-EC-AUTO	24VDC	ZOO Fans Wall Unit

What's in the box?

- ZOO Fans Wall-mounted Control Unit
- ZOO Fans Remote Temperature Sensors (2)
- 24V Power Supply

What you'll need:

- Mounting screws
- 2.4 mm flat head screw driver
- 2x4 job box for Wall-mounted Control Unit
- 2x4 job box for each Remote Temperature Sensor (one per sensor)

STEP 1: WIRE WALL-MOUNTED CONTROLLER TO FANS:

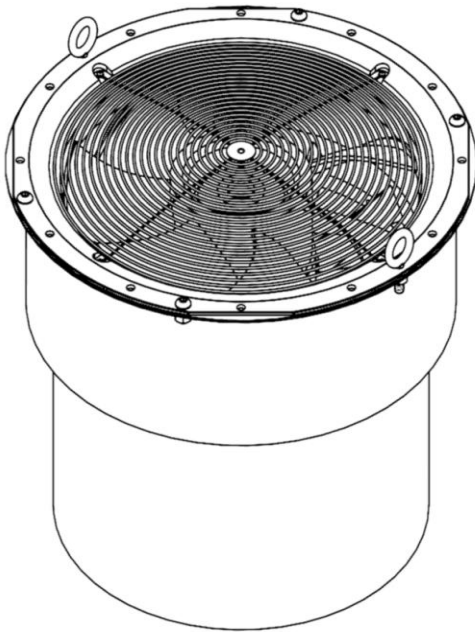
Install Wall-mounted Controller / Remote Temperature Sensor

The ZOO Fans Wall-mounted Controller installs in a standard single-gang electrical box.

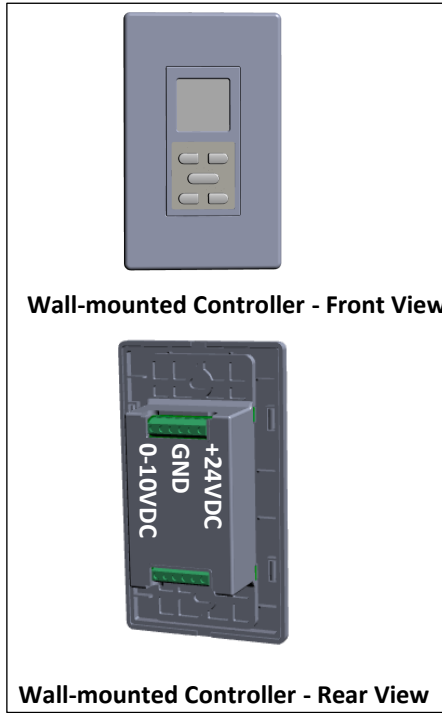
1. Install the single-gang electrical box (not provided)
2. Wire each unit with the wiring diagrams below
3. Secure the controller to the enclosure using the 2 screws provided
4. Clip on outer Bezel



H60-EC / H120-EC / H140-EC Wiring connections from Fan to Wall-Mounted Controller



H60-EC / H120-EC / H140-



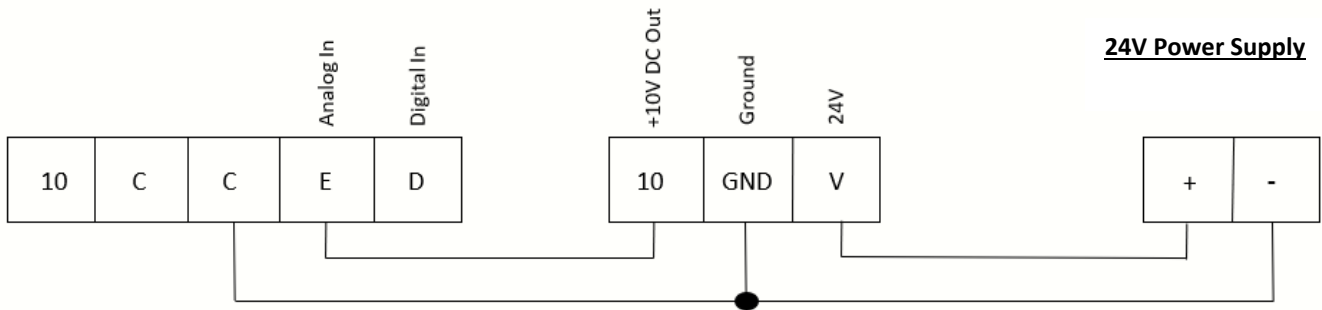
Wall-mounted Controller - Front View

Wall-mounted Controller - Rear View

Controller



24V Power Supply

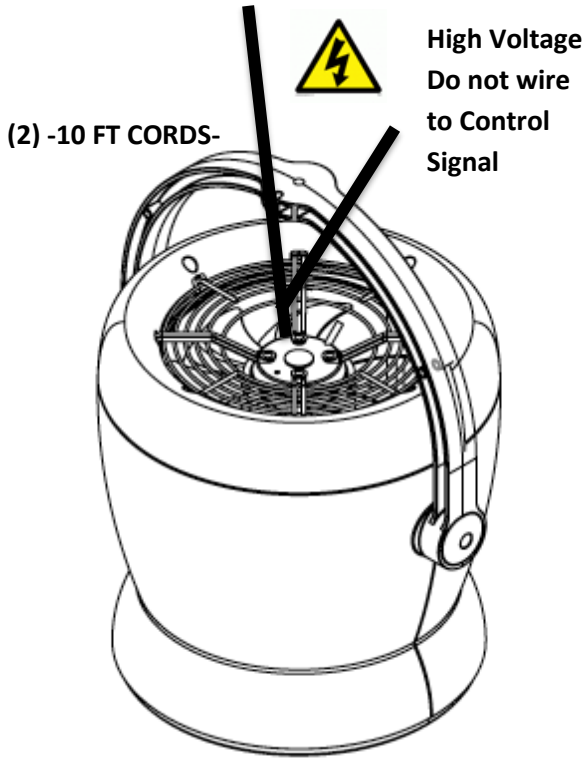
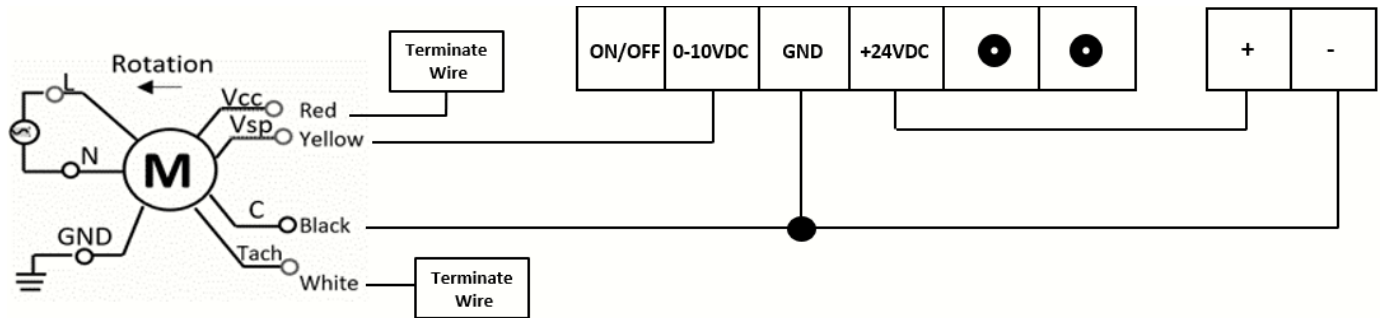


- Electrical connection should be made according to the wiring diagram
- Wires should be terminated using the horizontal terminal blocks (included).
- Shielded cable is recommended to reduce interference.
- Use Stranded wire. DO NOT use solid wire

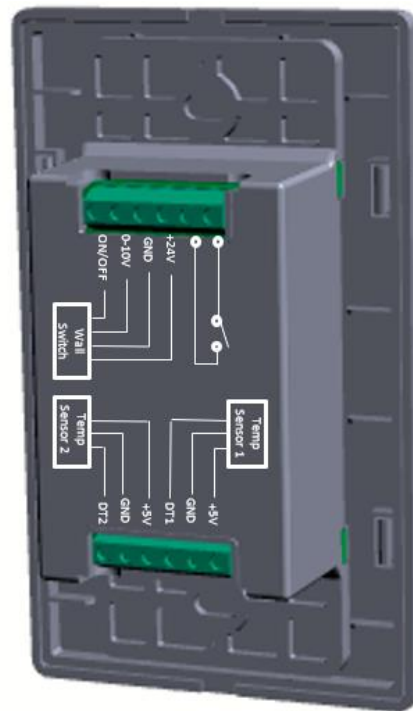
CAUTION: An incorrectly installed controller can result in component damage or reduction of the fan's life. Wiring or application errors such as under-sizing the controller, incorrect or inadequate AC supply, or excessive ambient temperatures may result in a malfunction of the fan system.

Verify correct voltage and phase before beginning installation!

H25-EC and H50-EC Wiring connections from Fan to Wall-Mounted Controller



H25EC/H50EC



Wall-mounted Controller - Rear View



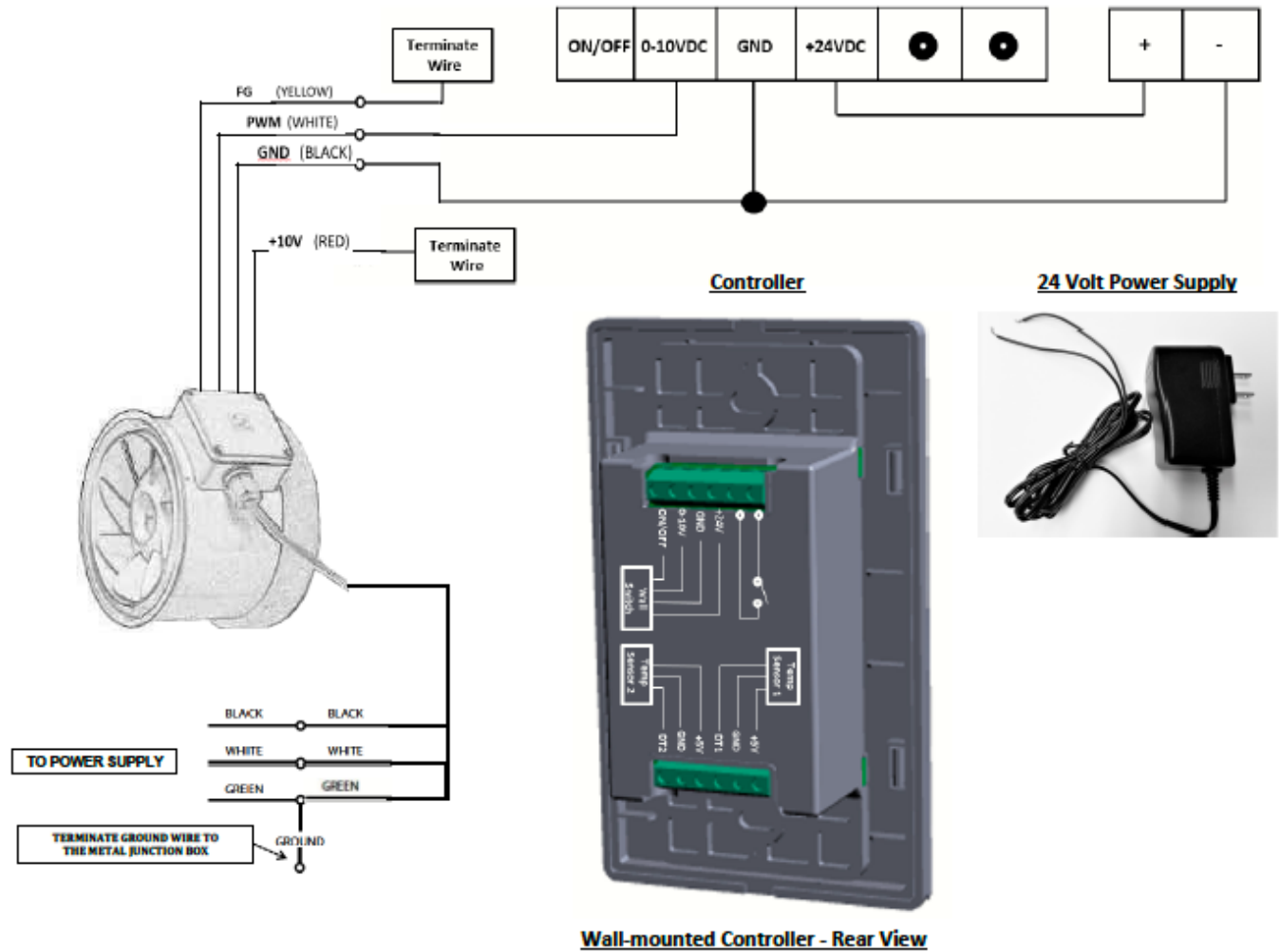
24 Volt Power Supply

- Electrical connection should be made according to the wiring diagram.
- Wires should be terminated using the horizontal terminal blocks (included).
- Shielded cable is recommended to reduce interference.
- Use Stranded Wire. DO NOT use solid wire

CAUTION: An incorrectly installed controller can result in component damage or reduction of the fan's life. Wiring or application errors such as under-sizing the controller, incorrect or inadequate AC supply, or excessive ambient temperatures may result in a malfunction of the fan system.

Verify correct voltage and phase before beginning installation!

IC20-EC and IC30-EC Wiring connections from Fan to Wall-Mounted Controller

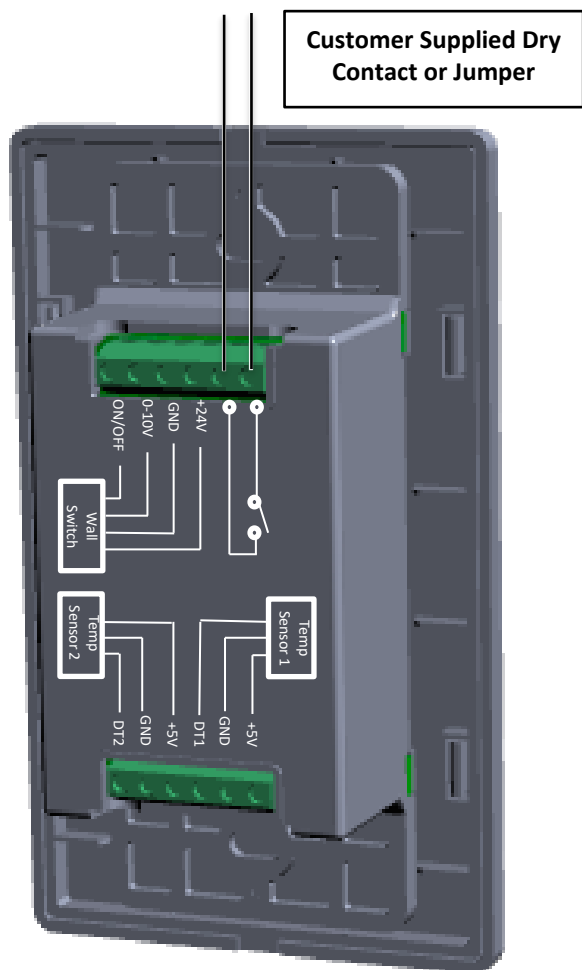


- Electrical connection should be made according to the wiring diagram.
- Wires should be terminated using the horizontal terminal blocks (included).
- Shielded cable is recommended to reduce interference.
- Use Stranded Wire. DO NOT use solid wire

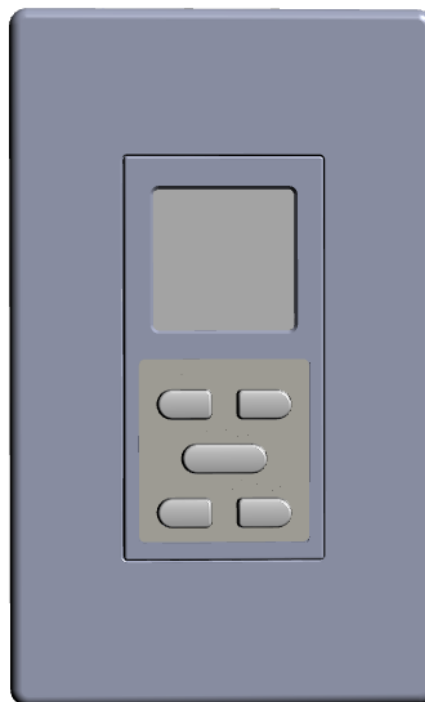
CAUTION: An incorrectly installed controller can result in component damage or reduction of the fan's life. Wiring or application errors such as under-sizing the controller, incorrect or inadequate AC supply, or excessive ambient temperatures may result in a malfunction of the fan system.

Verify correct voltage and phase before beginning installation!

STEP 2: Wiring connections to enable Wall-Mounted Control

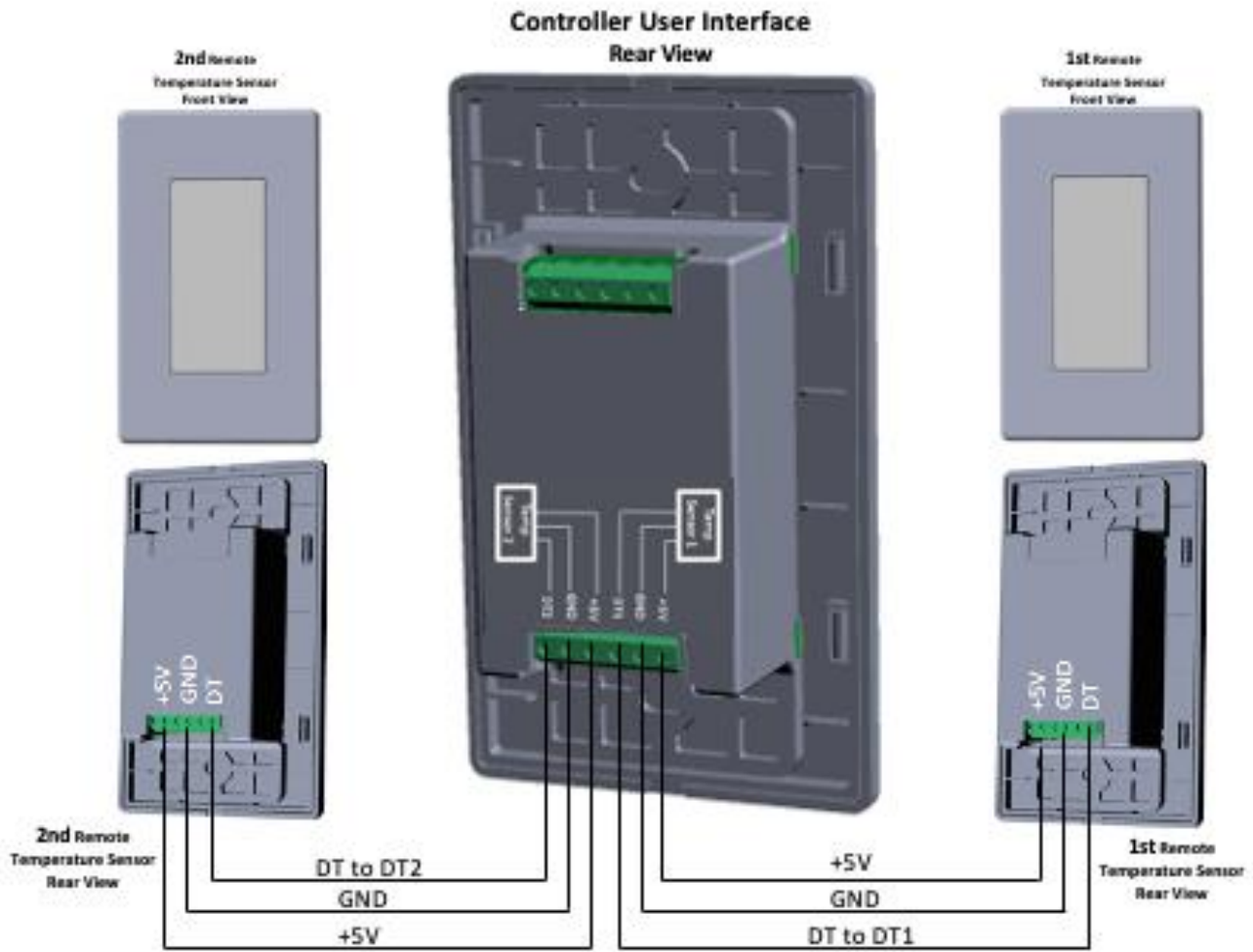


Wall-mounted Controller - Rear View



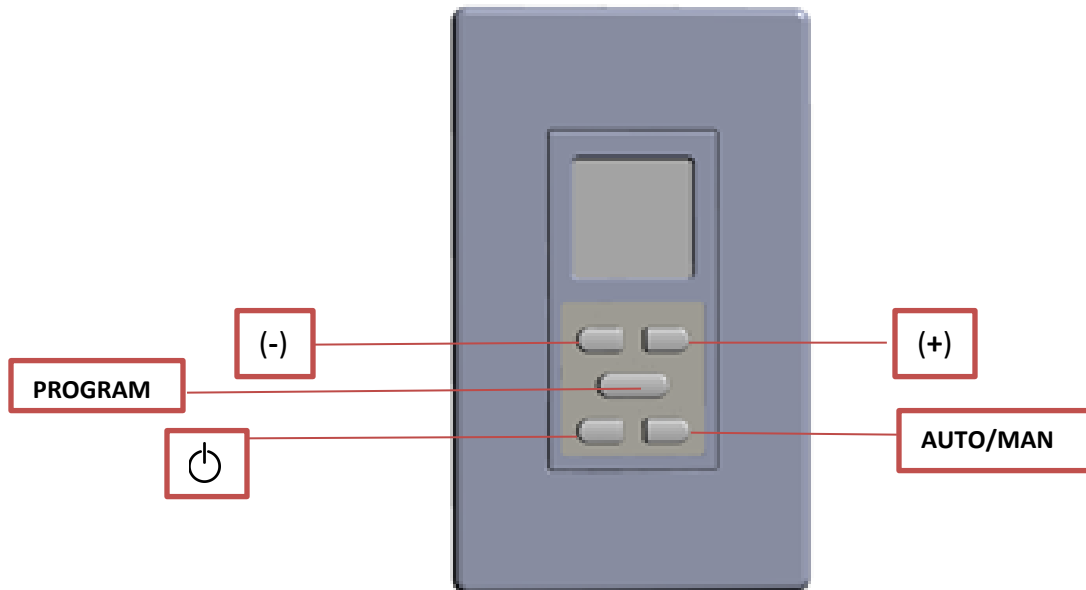
Wall-mounted Controller - Front View

STEP 3: Wiring Wall-mounted Controller to Remote Temperature Sensor



For vertical destratification, install one temperature sensor near the ceiling approximately 18" from roof deck and another near the floor (within 12" if possible). To equalize temperatures horizontally, install one temperature sensor in each area. The controller will constantly calculate the difference in temperature between the two sensors and adjust the fan speed higher and lower as required to maintain equalization of temperatures.

OPERATION OF THE USER INTERFACE



Button Descriptions/Functions

 : Power On/Off

PROGRAM: Pressing this button allows the user to monitor the different ambient temperature readings from each temperature sensor, and at the User Interface directly. The “1” displayed on the screen represents the temperature near the User Interface and the “2” and “3” represent the readings of the two temperature sensors—which sensor is which will be determined by how these sensors were wired to the User Interface.

NOTE: An “EE” will display if there is not a temperature sensor connected.

AUTO/MAN: This button allows the user to switch from Automatic mode to Manual Mode. Automatic mode only functions if there is at least one other temperature sensor connected. Auto mode increases/decreases fan airflow based on temperature difference between two temperature sensors. Manual mode overrides Auto mode permitting any desired fan speed by using the “+” and “-” buttons to increase/decrease fan speed, respectively.

Special Features/Functions

Ceiling Height: In Auto Mode, the User Interface is preprogrammed to adjust speeds at different increments based on three different ceiling height options: Low, Medium, and High. To change the ceiling height program, hold the “PROGRAM” button down while pressing the “+” to cycle through the three different settings.

Fahrenheit/Celsius: Hold “PROGRAM” down and press “-” to adjust Fahrenheit to Celsius.

Automatic mode will automatically change the speed of the fans based on the Delta T in the space. The Automatic Mode can be configured to 3 ceiling heights – High, Medium or Low.

Use the chart below as a guideline to select the recommended setting for your space:

Automatic Mode Settings

MODEL	LOW	MEDIUM	HIGH
H25	<15'	14' - 20'	>18'
H30	<16'	14' - 22'	>20'
H50	<20'	18' - 28'	>26'
H60	<20'	18' - 28'	>26'
H120	<40'	40' - 70'	>70'
H140	<50'	50' - 80'	>80'
IC20	<12'	10' - 18'	>16'
IC15	<12'	10' - 14'	>18'
IC30	<6'	14' - 22'	>20'



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