Combination Single Pole Humidity Sensor and Fan Controller with Light Switch

Cat. No. DHD05 - INDOOR USE ONLY. 120VAC, 60Hz - Single Pole Only
Fan Load (Blue Wire) = Fan: 1/4 Hp, LED/CFL: 300W, Incandescent/Halogen: 600W, ELV/MLV: 400VA
Light Load (Red Wire) = 150W LED/CFL, 250W Incandescent/Halogen, 200VA Magnetic Low-Voltage, 250VA Electronic Low-Voltage, 2A Resistive

WARNINGS:

- **TO AVOID FIRE, SHOCK, OR DEATH, TURN OFF POWER AT CIRCUIT BREAKER OR FUSE AND TEST THAT THE POWER IS OFF BEFORE WIRING!**
- **TO AVOID PERSONAL INJURY OR PROPERTY DAMAGE, DO NOT** install to control a receptacle or a load in excess of the specified rating.
- To be installed and/or used in accordance with electrical codes and regulations.
- If you are not sure about any part of these instructions, consult an electrician.

CAUTIONS:

- **DO NOT** attempt to service or repair. There are no user-serviceable components.
- Use this device with **COPPER OR COPPER-CLAD WIRE ONLY**.
- To avoid damage to the product, **DO NOT** use disinfecting products, including foggers, sprays or other types of atomized cleaning agents.
- **DO NOT** spray liquid onto the product.
- To clean use a damp cloth with mild soap.

DI-000-DHD05-02B

INSTALLATION INSTRUCTIONS **ENGLISH**

Features

Leviton's Combination Single Pole Humidity Sensor and Fan Controller with Light Switch senses the humidity of your bathroom and turns your bath fan or fan/light ON when the humidity gets too high. This reduces condensation in your bathroom and increases ventilation when used in other household spaces.

- Compatible with Incandescent, LED, CFL, and ELV/MLV loads
- Sensitivity adjustment.
- Built-in countdown timer feature for manual operation.
- Automatic ventilation/air circulate mode for continuous operation, with hourly preset time-outs.
- With Zero Cross turn-ON technology to extend the life of switching relays.
- Advanced sensing enhances detection when the room is occupied and minimizes false triggers when unoccupied.
- Color change kits available in white, light almond, ivory, black, brown, and gray.

Location

For bathroom applications, the device should be placed at a level that can detect steam. Placing the detector directly above a heater or near drafts is NOT recommended.

NOTE: DO NOT use to control a fan/light combination where the fan/light is the only means of illumination.

NOTE: The Humidity Sensor and Fan Control will not eliminate condensation and must be used with a properly sized ventilation fan in an enclosed space.

You Will Need:

- Slotted/Phillips screwdriver
- Electrical tape
- Cutters
- Pliers

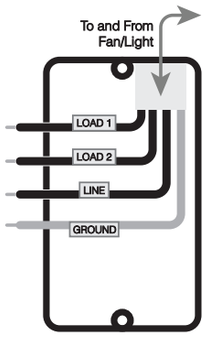
Installation

WARNING: TO AVOID FIRE, SHOCK, OR DEATH, turn off power at circuit breaker or fuse and test that the power is off before wiring!

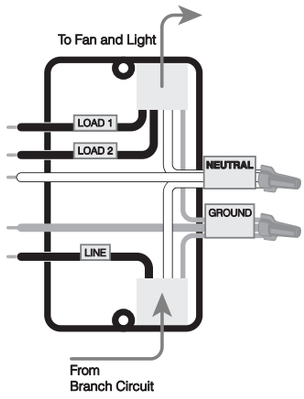
1. Identify your wires (most common):

NOTE: A Neutral wire (if present) or a Ground wire is required for operation. If the wiring in the wall box does not resemble this configuration, consult an electrician.

No Neutral wire

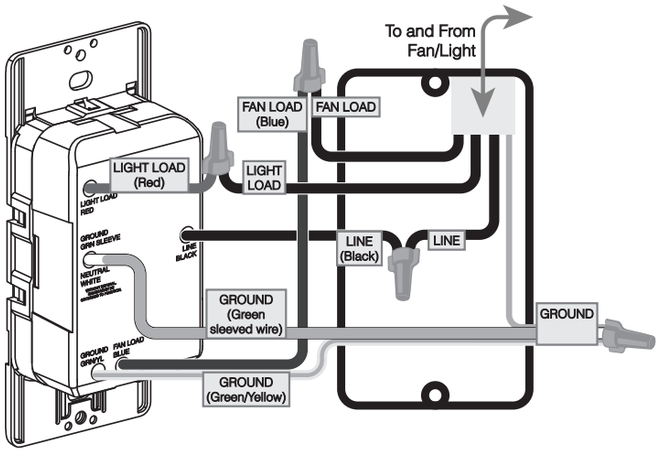


With Neutral wire



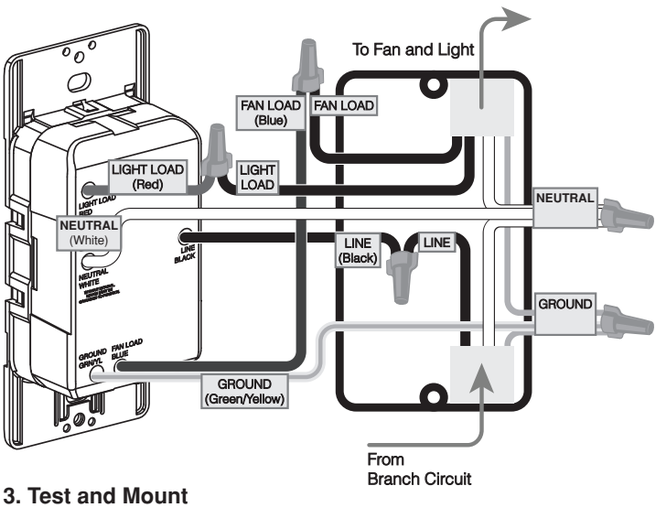
2a. Wire (when Neutral is NOT present)

Working on one connection at a time, connect wires as shown below.



2b. Wire (when Neutral is present)

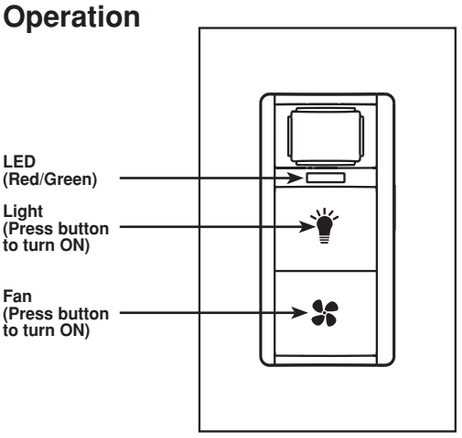
Remove the Green sleeve from the White wire. Working on one connection at a time, connect wires as shown below.



3. Test and Mount

a. Restore power. Wait 10-20 seconds for sensor to power up.
b. The GREEN light will blink once every 5 seconds during power up.
c. Push the button to test the Load.
d. Turn off power at circuit breaker before completing the installation.
e. Gently push wires into wall box. Screw light control to box.
f. Install wallplate.
g. Restore power.

Operation

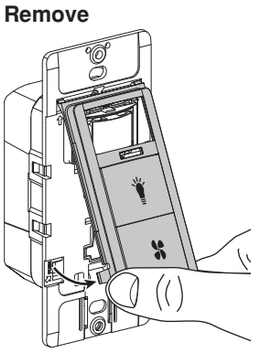


NOTE: When the RED and GREEN LEDs are on at the same time, the light will appear as an AMBER color.

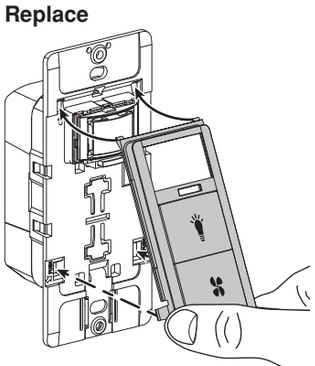
	LED Color	LED Status
Power Up	Green	Blink once every 5 seconds
Load OFF	OFF	OFF
Load ON	Green	ON
Bypass Mode	Green	Blink twice every 2 seconds
Test Mode	Red	Blink once every 2 seconds
Program Mode	Red/Green/Amber	See Programming Table

Changing Your Device Color

Remove



Replace

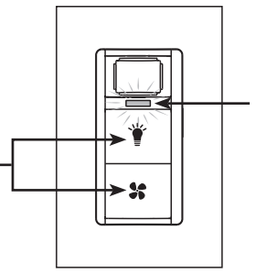


Available in White (W), Light Almond (T), Ivory (I), Brown (B), Black (E), Grey (G), (DHDKT-1Lx)

Programming

1. Using the tables in the right column, determine the appropriate Operating Mode for your application needs.

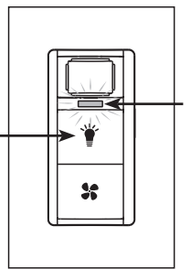
2. Enter Programming Mode. Make sure the fan is OFF.



a. Hold the LIGHT and FAN buttons down for at least 5 seconds.

b. A GREEN light will appear and stay ON for 5 seconds, indicating that you have successfully entered Programming Mode.

3. Select each setting you wish to change, one at a time, to program the option desired **(see table below)**.



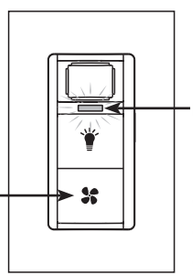
a. To advance from one setting to the next, press the LIGHT button once each time.

NOTE: The settings will cycle from 1 to 2 to 3, and then back to 1.

- **Setting 1**: **Time Period** / Time that Fan Will Stay ON (GREEN light will blink if selected)
- **Setting 2**: **Sensitivity to Humidity** (AMBER [Red and Green] light will blink if selected)
- **Setting 3**: **Device Operating Mode** (RED light will blink if selected)

NOTE: Once you enter Programming Mode, multiple settings can be changed before saving and exiting.

4. Change the option within each setting **(see the table below for the options)**.
NOTE: The default option for each setting is listed in the table in bold.



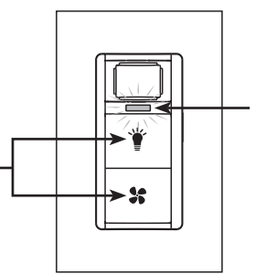
a. To advance from one option to the next, press the FAN button once each time.

NOTE: The options will cycle from 1 to 2 to 3 to 4, and then back to 1.

b. A GREEN, AMBER, or RED light (depending on which setting you selected) will blink to indicate the option you selected.

- **Option 1** = 1 blink/second
- **Option 2** = 2 blinks/second
- **Option 3** = 3 blinks/second
- **Option 4** = 4 blinks/second

5. Save your settings and exit the Programming Mode.



a. Hold either the LIGHT or FAN button down for 5 seconds.

b. A GREEN light will appear and stay ON for 5 seconds, indicating that you have successfully exited the Programming Mode and your settings have been saved.

NOTES:
- After 60 seconds of inactivity, the device will automatically exit Programming Mode and setting changes will not be saved.
- When you enter Programming Mode again, you will start at the Time Period setting, in the last saved option row (default is Option 2: 20 minutes).

Setting Types and Options (defaults are in bold)			
	Setting 1	Setting 2	Setting 3
Option Number	**Time Period / Time that Fan will Stay ON (GREEN LED will blink)**	**Sensitivity to Humidity (AMBER [Red and Green] light will blink)**	**Device Operating Mode (RED LED will blink)**
Option 1 (1 blink)	10 minutes	Auto-ON: Maximum Sensitivity Humidistat: 35% RH	**Bath Fan (Auto-ON/OFF)**
Option 2 (2 blinks)	**20 minutes**	**Auto-ON: High Sensitivity Humidistat: 50% Relative Humidity (RH)**	Air Cycle
Option 3 (3 blinks)	30 minutes	Auto-ON: Medium Sensitivity Humidistat: 65% RH	Humidistat
Option 4 (4 blinks)	45 minutes	Auto-ON: Low Sensitivity Humidistat: 80% RH	All settings to Default

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Operating Mode Descriptions

BATH FAN MODE

Operations	When/Where to Use	Your Fan Will...
AUTOMATIC (Auto-ON/ Auto-OFF)	For bathrooms and areas where significant changes in humidity can occur.	Fan will turn ON when the humidity rises above the Sensitivity setting (Low, Medium, High, or Max.). The fan will stay ON for the Time Period you set. After the fan turns OFF, if the humidity is still above the threshold, it will retrigger and turn the fan ON for half the Time Period set (up to a maximum of 2 retriggers).
MANUAL (Pressing the button)	Any time you want to turn the fan ON/OFF.	Fan will turn ON and stay ON for the Time Period you set. Fan will turn OFF for a minimum of 2 minutes and then resume Auto-ON monitoring.
BYPASS (Hold FAN button for 5 seconds)	• To temporarily disable the Auto-ON functionality of the sensor. • To exit Bypass, press the FAN button.	Fan will NOT turn ON automatically. The GREEN light will blink twice every 2 seconds.

AIR CYCLE MODE

Operations	When/Where to Use	Your Fan Will...
AUTOMATIC	Basements, bathrooms, and rooms requiring regular ventilation (meets ASHRAE 62,2).	Run every hour, for the Time Period you set (X minutes). **Ex:** If the fan is set to be ON for 20 minutes, it will be OFF for 40 minutes (1 hour minus 20 minutes).
MANUAL (Pressing the button)	Any time you want to turn the fan ON/OFF.	If the user turns the fan ON manually, the device will act as if that was the start of a new hour-long cycle. If the user turns the fan OFF manually, the device will enter the OFF period for the remainder of the hour.
BYPASS (Hold FAN button for 5 seconds)	• To temporarily disable the air cycle. • To exit Bypass, press FAN button.	Fan will NOT cycle air periodically. The GREEN light will blink twice every 2 seconds.

HUMIDISTAT MODE

Operations	When/Where to Use	Your Fan Will...
AUTOMATIC (Air Cycle above RH set point)	Basements, laundry rooms, and damp rooms.	When the Relative Humidity (RH) is greater than or equal to the Humidistat setting (35%, 50%, 65%, or 80%), the fan will run for Time Period you set (X minutes). When the Time Period expires, the fan will turn OFF for the remainder of the hour. **NOTE:** Fan will run for X minutes every hour, until the RH is less than the humidistat setting.
MANUAL (Pressing the button)	Any time you want to turn the fan ON/OFF.	If the user turns the fan ON manually, the device will act as if that was the start of a new hour-long cycle. If the user turns the fan OFF manually, the device will enter the OFF period for the remainder of the hour.
BYPASS (Hold FAN button for 5 seconds)	• To temporarily disable the Humidistat functionality of the sensor. • To exit Bypass, press FAN button.	Fan will NOT turn ON automatically. The GREEN light will blink twice every 2 seconds.

Test Mode

1. To test that your device is working properly, hold the LIGHT button down for 5 seconds. A RED light will blink once every 2 seconds. You are now in Test Mode.

2. Blow humid air into the sensor. During Test Mode, an increase in humidity will trigger the load for 5 seconds. **NOTE:** If the device does not trigger, then the room may be too large or the device may be too far away from a source of humidity.

3. Exit Test Mode by pressing the FAN button. Test Mode will also time-out after 2 minutes.

What to do if...

- If the humidity sensor false triggers, reduce the Sensitivity to a lower level.
- If the sensor does not trigger, or it turns the fan ON late, increase the Sensitivity level.
- If the fan turns OFF too soon, increase the time in the Time Period setting.
- If the fan turns ON when the Light button is pressed, then the device was wired incorrectly. Rewire and switch the Red and Blue wires.

Patents covering this product, if any, can be found on www.leviton.com/patents.

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FCC AND INDUSTRY CANADA COMPLIANCE STATEMENT: This device complies with Part 15 of the FCC Rules and ISED License-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. To comply with FCC/ISED RF exposure limits for general population / uncontrolled exposure, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter different from that to which the receiver is connected.

FCC CAUTION: Any changes or modifications not expressly approved by Leviton Manufacturing Co., Inc., could void the user's authority to operate the equipment.

FOR CANADA ONLY
For warranty information and/or product returns, residents of Canada should contact Leviton in writing at Leviton Manufacturing of Canada Ltd to the attention of the Quality Assurance Department, 165 Hymus Blvd, Pointe-Claire (Quebec), Canada H9R 1E9 or by telephone at 1-800-405-5320.

LIMITED 5 YEAR WARRANTY
For Leviton's limited product warranty, go to www.leviton.com. For a printed copy of the warranty, call 1-800-824-3005.

For Technical Assistance Call: 1-800-824-3005 (USA Only) or 1-800-405-5320 (Canada Only) www.leviton.com