



# EATON HDFS3P1 Humidity Sensor and Fan Control Instruction Manual

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**EATON HDFS3P1 Humidity Sensor and Fan**

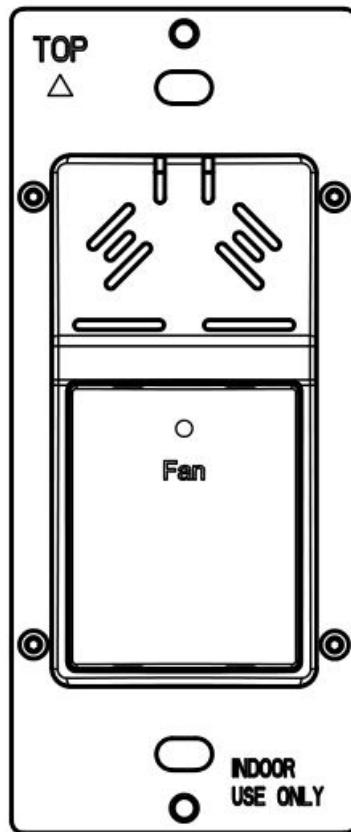
**Control Instruction Manual**



## **HDFS3P1 – INSTALLATION INFORMATION FOR HUMIDITY SENSOR AND FAN CONTROL**

### **HDFS3P1**

Humidity Sensor and Fan Control



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## SPECIFICATIONS

Power.....	120VAC, 60Hz
Maximum fan load.....	3 Amps
Fan Time Delay.....	20 mins
Humidity range.....	45%-80% RH

## DIRECTIONS

The HDFS3P1 is a 3 Amp, single pole Humidity Sensor and Fan Control Switch. This sensor helps conserve energy and automates the fan in which it is connected, which provides energy savings and reduces the possibility of mold and mildew. When the humidity sensor detects excess humidity in a room, it automatically turns on the ventilation fan. The sensor continues to monitor the air and automatically turns the fan off when the humidity level drops below its preset level.

## WARNING

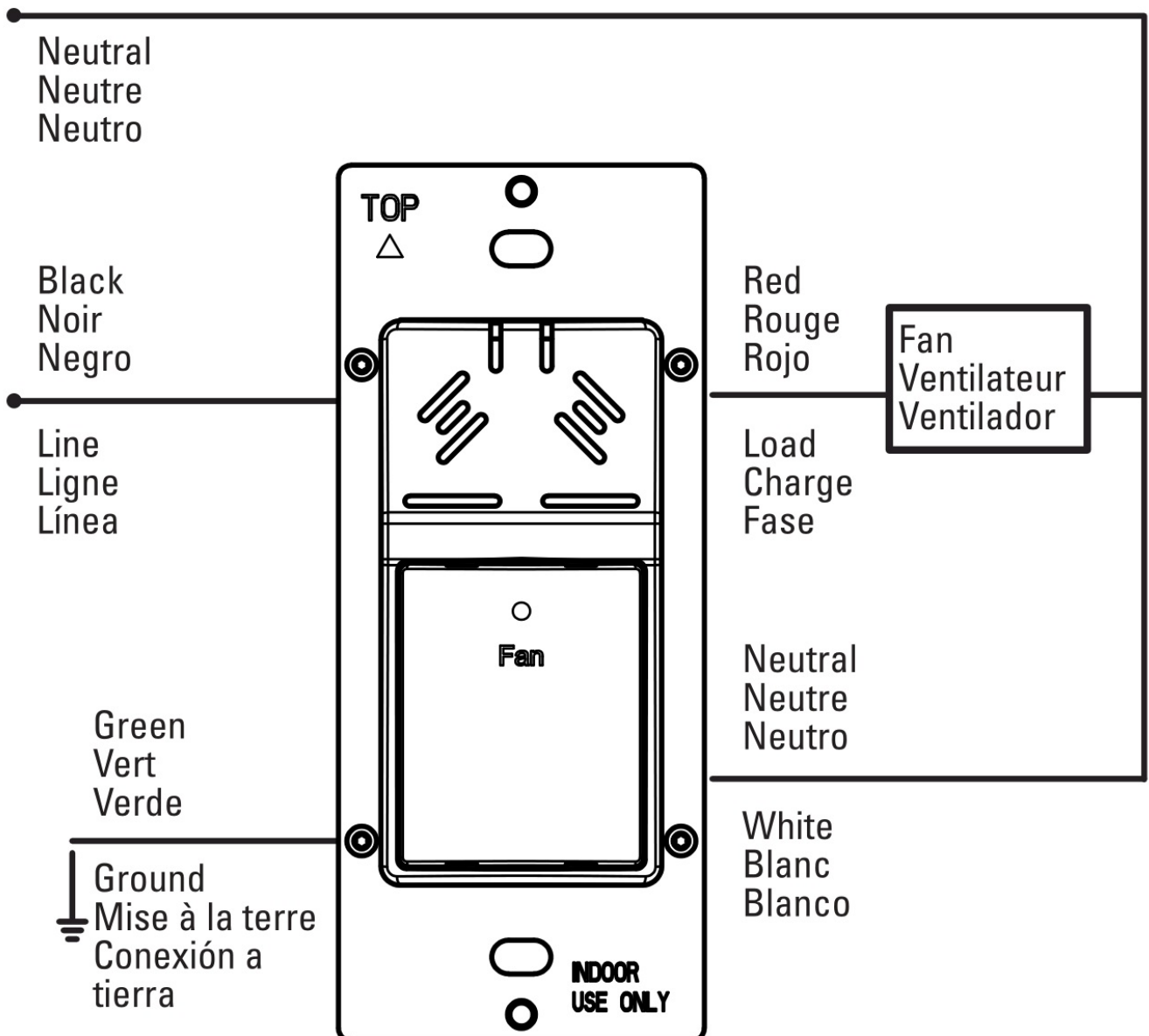
**Turn the POWER OFF at the circuit breaker before installing the sensor**

Read and understand these instructions before installing. This device is intended for installation in accordance with the National Electrical Code as well as local regulations. It is recommended that a qualified electrician performs this installation. Make sure to turn off the circuit breaker or fuse(s) and make sure power is off before wiring the device.

**Use copper wires only. NEUTRAL WIRE IS REQUIRED.**

## WIRING DIRECTIONS

1. Connect RED wire from sensor to the FAN wire.
2. Connect BLACK wire from sensor to the HOT wire.
3. Connect WHITE wire from sensor to the NEUTRAL wire.
4. Connect GREEN wire from sensor to the GROUND wire.



## OPERATING INSTRUCTIONS

The HDFS3P1 features three adjustable humidity levels for customizable control to suit the specific ventilation needs of the room. These humidity levels are as follows:

1. High Humidity (80% RH)
2. Medium Humidity (65% RH) \*(default)
3. Low Humidity (45% RH)

#### **Fan Mode: Manual ON, Auto OFF**

- a. The manual button is used to turn the fan off after a 20 minute time delay.
- b. If the fan is in the ON state, the manual button is used to turn off the fan before the time delay expires, the fan will immediately turn off and the humidity sensor will stop working.
- c. Turn ON the manual button and the humidity sensor will be operational after 20 minutes.

#### **Humidity Mode: Auto ON, Auto OFF**

- a. The Fan will turn ON automatically when preset humidity level is reached and automatically turn OFF when the humidity level drops below the preset.
- b. If the humidity level is higher than preset for 3 minutes, then the fan will continue to run for 5 minutes.
- c. When the manual button is used to turn OFF the fan before the 20 minutes is reached, the fan will turn OFF immediately and the humidity sensor will stop detecting. Only when the manual button is set to ON then the humidity sensor will resume operation after 20 minutes. Expect a 3 minute delay for the automatic sensor to turn on the fan.

### **PROGRAMMING**

- **Function: Humidity Level**

1. High Humidity
2. Medium Humidity \*default
3. Low Humidity

#### **STEP 1 : Enter Programming Mode**

- Press and hold the fan button for eight seconds until the bi-color LED light comes on. The sensor is now in programming mode.

#### **STEP 2 : Choose the Setting**

- Press the fan button the same number of times for that function

( For example: Press the fan button (1) time for High Humidity; (2) times for Medium Humidity; (3) time for Low Humidity).

° After the last button is pressed the bi-color LED will flash back the current setting for that function 10 times at two-second intervals. If no selection had been made, the device will exit programming mode.

#### **STEP 3 : Enter Programming Mode**

- Press and hold the fan button for eight seconds. The bi-color LED light will flash 3 times and turn to white indicating that the settings are saved and the load will turn OFF.

## EXAMPLE

**Programming Example:** To change the humidity level of the switch from high to medium, follow the steps shown below:

1. **Press and hold** the fan button for eight seconds. The bi-color LED light will come on.
2. The bi-color LED light will now flash once every 2 seconds indicating the current setting, which is at High Humidity.
3. Press the fan button two times to choose "Medium Humidity" the bi-color LED light will now flash two times every 2 seconds indicating the new setting at "Medium Humidity"
4. **Press and hold** the fan button for eight seconds. The bi-color LED light will flash 3 times and turn to white indicating that the setting is saved and the load will turn OFF.

## TROUBLESHOOTING

### The switch button is not functional:

Check if the device is wired properly. This device requires a NEUTRAL wire for operation. Often the WHITE wire is used as a LOAD wire. Be sure to test ALL wires. Also make sure that the HOT and LOAD wires are not reversed.

### Press the Fan Button:

- **If the load does not work and the indicator light is not on.**

TURN OFF the power at the circuit breaker then check wire connections.

Confirm that the NEUTRAL wire is connected.

- **If the Humidity Sensor does not turn on the fan.**

Change the humidity level to match the appropriate condition or manually turn ON the fan, after 20 minutes the humidity sensor will be operational.

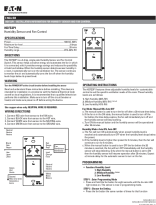
## WARRANTY INFORMATION

EATON WIRING DEVICES LIMITED 2 YEAR WARRANTY Eaton Wiring Devices warrants its Humidity Sensor and Fan Control to be free of defects in materials and workmanship in normal use and service for a period of two years from date of original purchase. THIS TWO (2) YEAR LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, OBLIGATIONS, OR LIABILITIES, EXPRESSED OR IMPLIED (INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE THAT IS IN DURATION IN EXCESS OF TWO YEARS FROM THE DATE OF ORIGINAL CONSUMER PURCHASE). NO AGENT, REPRESENTATIVE, OR EMPLOYEE OF EATON HAS AUTHORITY TO INCREASE OR ALTER THE OBLIGATIONS OF EATON UNDER THIS WARRANTY. To obtain warranty service for any properly installed Eaton Humidity Sensor and Fan Control that proves defective in normal use send the defective Humidity Sensor and Fan Control prepaid and insured to Quality Control Dept., Eaton Wiring Devices, 203 Cooper Circle, Peachtree City, GA 30269; in Canada: Eaton Wiring Devices, 5925 McLaughlin Road, Mississauga, Ontario L5R 1B8. Eaton will repair or replace the defective unit, at its option. Eaton will not be responsible under this warranty if examination shows that the defective condition of the unit was caused by misuse, abuse, improper installation, alteration, improper maintenance or repair of damage in shipment to Eaton. EATON SHALL HAVE NO RESPONSIBILITY FOR INSTALLATION OF THE HUMIDITY SENSOR AND FAN CONTROL OR FOR ANY PERSONAL INJURY, PROPERTY DAMAGE, OR ANY SPECIAL, INCIDENTAL, CONTINGENT, OR CONSEQUENTIAL DAMAGES OF ANY KIND, RESULTING FROM DEFECTS IN THE HUMIDITY SENSOR AND FAN CONTROL OR FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT. THE EXCLUSIVE REMEDY FOR BREACH

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Folding and Printing InstructionsDocument Dimensions: 8.5" W x 11" H  
2-sided printing, Accordion fold in fourths  
logo at top, fold in fourths again.  
Final Size: 2.25" W x 2.75" H

## Documents / Resources

	<a href="#">EATON HDFS3P1 Humidity Sensor and Fan Control</a> [pdf] Instruction Manual HDFS3P1, Humidity Sensor and Fan Control, Humidity Sensor
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## References

- [ETM Electrical and Industrial | Power management solutions | Eaton](#)