

| Actuator | Pi Pin (Physical) | Pi Pin (BCM) | Function | Notes | | | | | |
|-----------------|-------------------|--------------|-----------------------------|---|--|--|--|--|--|
| FAN (Relay 1) | Pin 11 | GPIO 17 | Digital Output | Control pin for the fan relay. | | | | | |
| MIST (Relay 2) | Pin 13 | GPIO 27 | Digital Output | Control pin for the humidifier/mister relay. | | | | | |
| LIGHT (Relay 3) | Pin 15 | GPIO 22 | Digital Output | Control pin for the light relay. | | | | | |
| HEATER (Relay) | Pin 16 | GPIO 23 | Digital Output | Control pin for the optional heater relay. | | | | | |
| Relay VCC | | 5V | Power | Most relays require 5V power (JD-VCC/VCC). | | | | | |
| Relay GND | | GND | Ground | Connect to the relay board's GND. | | | | | |
| Relay Logic | | 3.3V | Logic Power | If your relay board uses separate logic power, connect the low-voltage VCC pin to the Pi's 3.3V pin. | | | | | |
| DHT22 Pin | Pi Pin (Physical) | Pi Pin (BCM) | Function | Notes | | | | | |
| VCC | | 3.3V | Power | | | | | | |
| Data | Pin 7 | GPIO 4 | Data Line | Requires a 10 kΩ pull-up resistor between this pin and VCC. | | | | | |
| GND | | GND | Ground | Connect to a common ground pin. | | | | | |
| Sensor Pin | Pi Pin (Physical) | Pi Pin (BCM) | Function | Notes | | | | | |
| SDA | Pin 3 | GPIO 2 | I ² C Data Line | Connect to SDA on both sensors/boards. | | | | | |
| SCL | Pin 5 | GPIO 3 | I ² C Clock Line | Connect to SCL on both sensors/boards. | | | | | |
| VCC/VDD | | 3.3V | Power | Check sensor's required voltage (most modern I ² C boards are 3.3V-compatible or include a regulator). | | | | | |
| GND | | GND | Ground | Connect to a common ground pin. | | | | | |