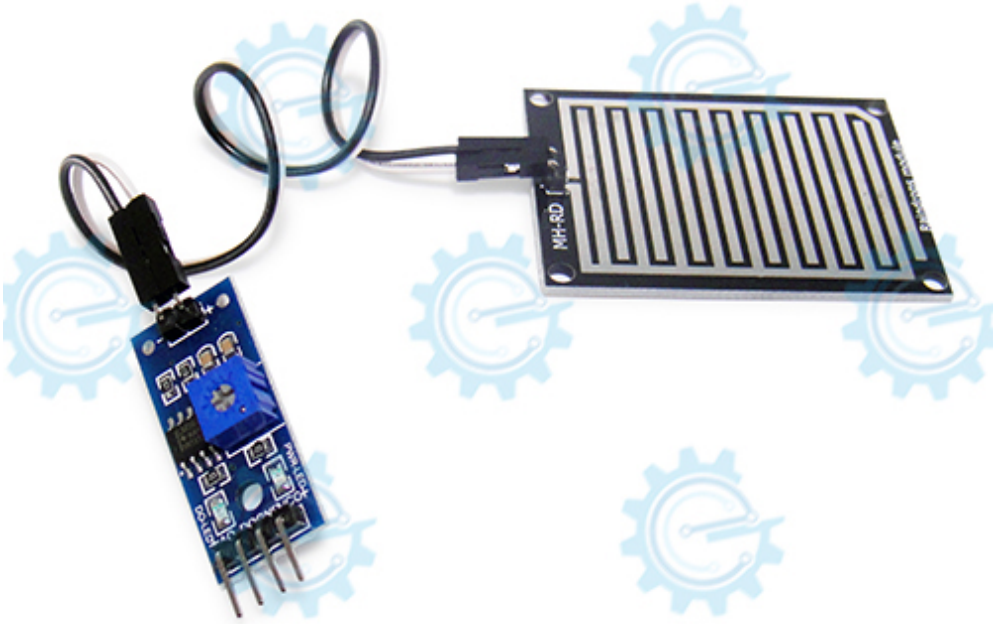
Rain Drop Sensor

Technical Manual Rev 1r0



The rain sensor module is an easy tool for rain detection. It can be used as a switch when raindrop falls through the raining board and also for measuring rainfall intensity. Potentiometer adjust the sensitivity. Compatible in all gizDuino boards.

General Specifications:

Power Input: +5V DC
Output format:
Digital Switching output (0 and 1)
Analog voltage output A0
Area: 50mm x 40mm nickel plate on side
PCB dimension: 32mm x 14mm

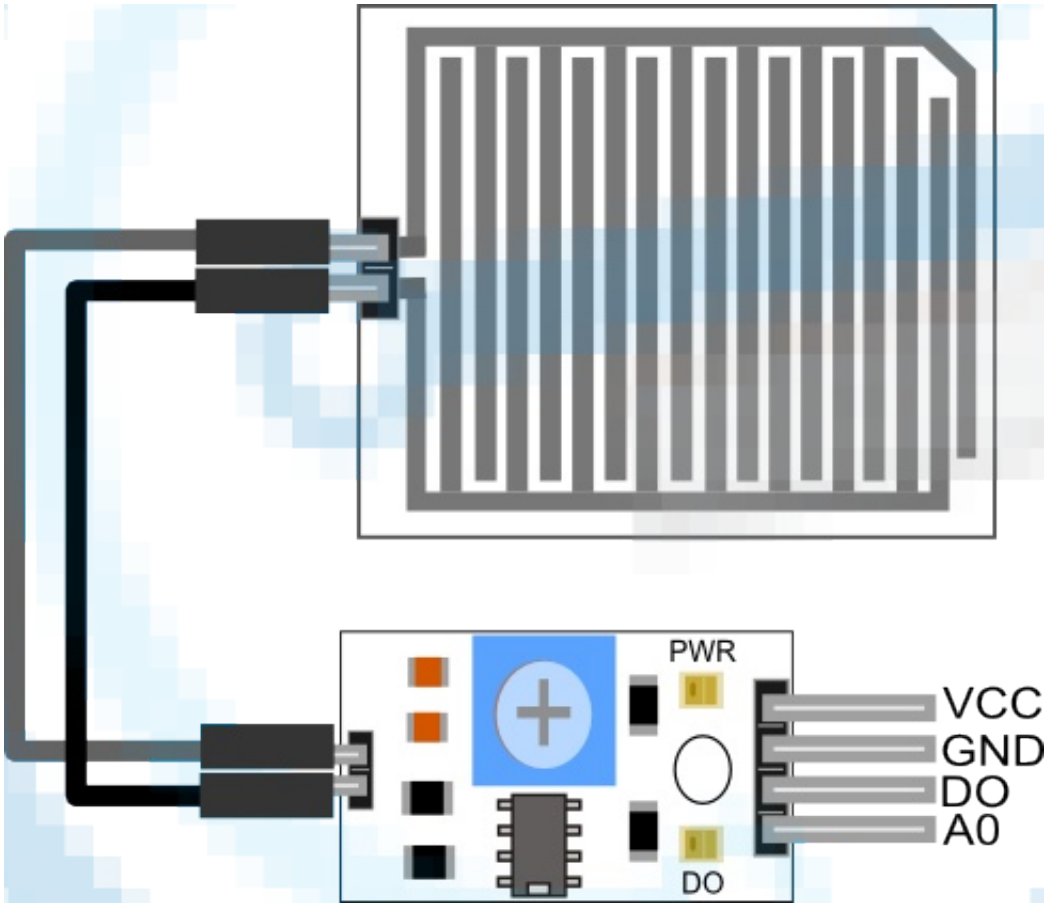


Figure 1. Rain drops sensor pinouts

Table 1. Pinout Descriptions

Pin Name	Descriptions
VCC	*Input Supply (+5VDC)*
GND	*Ground*
DO	*Digital Ouput* *(0 - rain drops detected)* *(1 - No rain drops detected)*
AO	*Analog Output (0 -1023)*

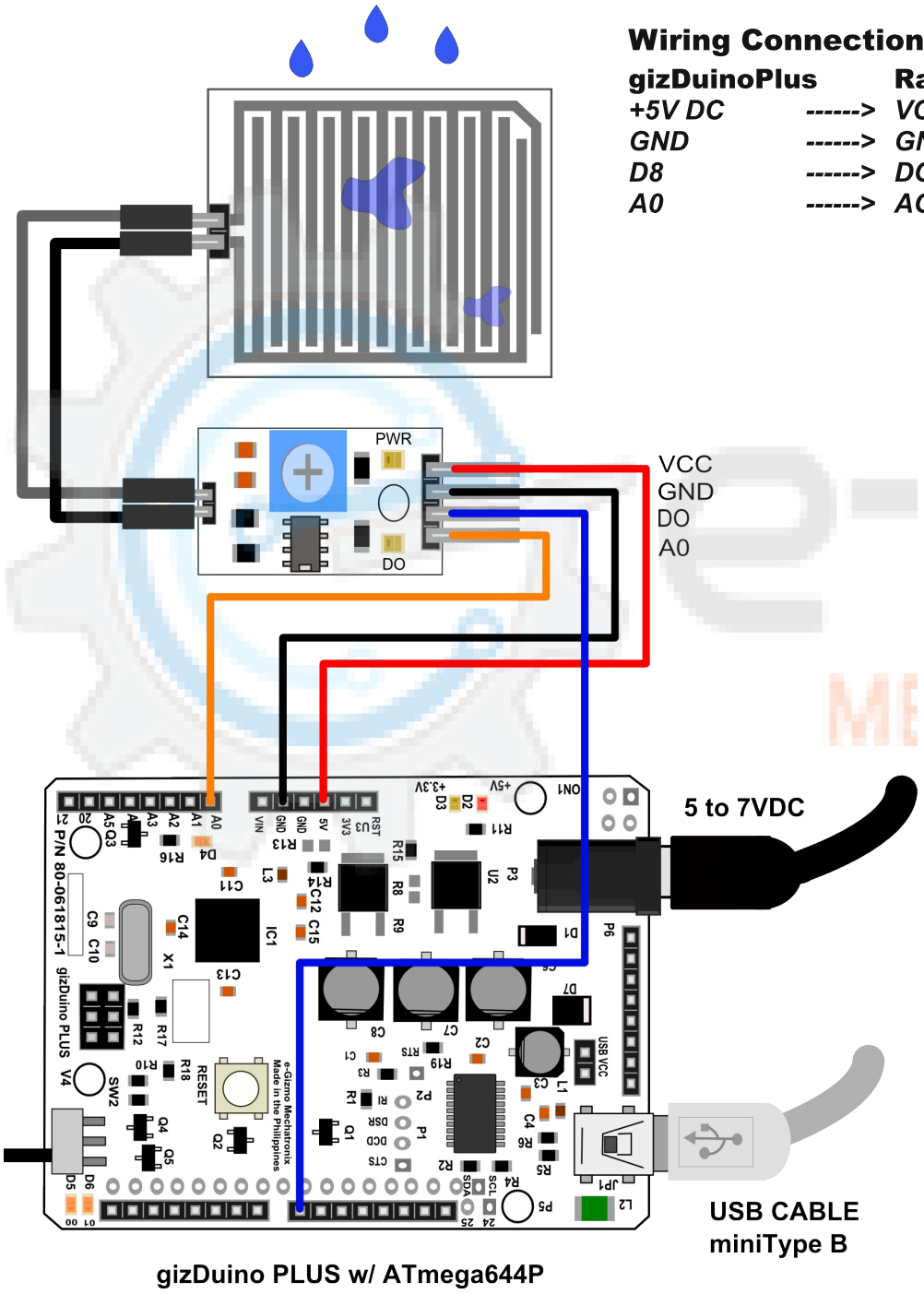


Figure 2. Sample connections

Upload this code to the gizDuino PLUS Microcontroller.
then Open the Serial Monitor to see the output value.

```
//*************************************************************************//
//                    Rain Drops Detector                                  //
//                                                                         //
//   A simple sketch for rain drops sensor. It has analog and              //
// digital output value. Analog Value (0 ~ 1023) while Digital             //
// value is 0 - water/drops detected, 1 - No water/drops                   //
// detected. The rain sensor is easy tool for rain detection.              //
// Compatible in all gizDuino boards.                                      //
//    Sample value: (w/o adjusting the value in max. and minimum.          //
//    For Analog Value:    Digital Value:                                  //
//       188 - 198            0        more drops detected                //
//       245 - 300            0        drops detected                     //
//       400 - 500            1        less drops detected                //
//       600 - 1023           1         no drops detected                 //
//     Note: The value will change depends on the sensitivity              //
//          of module.                                                     //
//                                                                         //
//              by e-Gizmo Mechatronix Central                             //
//                  http://www.e-gizmo.com                                 //
//                                                                         //
//*************************************************************************//


// THE SETUP ROUTINE RUNS ONCE WHEN YOU PRESS RESET
void setup() {
  // INITIALIZE SERIAL COMMUNICATIONS AT 9600 BITS PER SECOND:
  Serial.begin(9600);
  pinMode(A0, INPUT);
  pinMode(8, INPUT);
}

// THE LOOP ROUTIINE RUNS OVER AND OVER AGAIN FOREVER
void loop() {
  // READ THE ANALOG INPUT ON PIN A0
  int ANALOG_VALUE = analogRead(A0);
  // READ THE DIGITAL INPUT ON PIN 8
  int OUTPUT_VALUE = digitalRead(8);

  //PRINT OUT THE VALUE READING
  Serial.print("ANALOG VALUE = ");
  Serial.print(ANALOG_VALUE);
  Serial.print("   ");
  Serial.print("OUTPUT = ");
  Serial.println(OUTPUT_VALUE);

  delay(100);       // DELAY IN BETWEEN READS FOR STABILITY
}
```

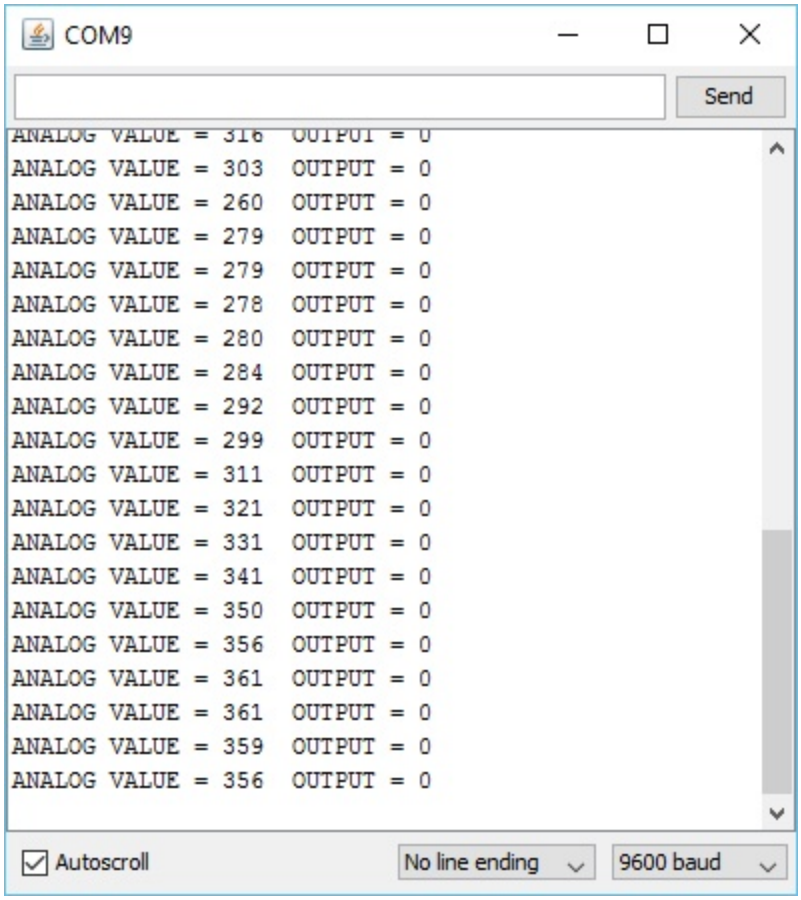


Figure 3. Serial Monitor

Output: 1 = rain drops detected,
0 = no rain drops detected.