

```

1  #include <LiquidCrystal_I2C.h>
2
3  LiquidCrystal_I2C lcd(0x27,16,2); // set the LCD address to 0x3F for a 16 chars and
   2 line display
4
5  #define WS_POWER_PIN 3
6  #define WS_SIGNAL_PIN A0
7
8  double flow=0; //Liters of passing water volume
9  unsigned long pulse_freq;
10
11  const int RELAY_PIN = 13; // the Arduino pin, which connects to the IN pin of relay
12
13  void setup() {
14      lcd.init();
15      lcd.clear();
16      lcd.backlight(); // Make sure backlight is on
17
18
19      pinMode(2, INPUT);
20      attachInterrupt(0, pulse, RISING); // Setup Interrupt
21
22      pinMode(WS_POWER_PIN, OUTPUT); // configure D7 pin as an OUTPUT
23      digitalWrite(WS_POWER_PIN, LOW); // turn the sensor OFF
24      pinMode(RELAY_PIN, OUTPUT); // configure D7 pin as an OUTPUT
25
26
27  }
28
29  void loop()
30  {
31
32      flow = .0225 * pulse_freq;
33      pulse_freq = 0;
34      lcd.setCursor(2,0); //Set cursor to character 2 on line 0
35      lcd.print(" ");
36      lcd.setCursor(2,0); //Set cursor to character 2 on line 0
37      lcd.print("Water Flow: ");
38      lcd.print(flow);
39      delay(500);
40
41      digitalWrite(WS_POWER_PIN, HIGH); // turn the sensor ON
42      delay(10); // wait 10 milliseconds
43      int value = analogRead(WS_SIGNAL_PIN); // read the analog value from sensor
44      digitalWrite(WS_POWER_PIN, LOW); // turn the sensor OFF
45
46      lcd.setCursor(2,1); //Set cursor to character 2 on line 1
47      lcd.print(" ");
48      lcd.print(" ");
49      lcd.setCursor(2,1); //Set cursor to character 2 on line 1
50      lcd.print("Water Level: ");
51      lcd.print(value);
52      if (value> 150)
53      {
54          digitalWrite(RELAY_PIN, HIGH);
55          delay(2500);
56          digitalWrite(RELAY_PIN, LOW);
57          delay(2500);
58      }
59
60  void pulse () // Interrupt function
61
62  {
63      pulse_freq++;
64  }

```