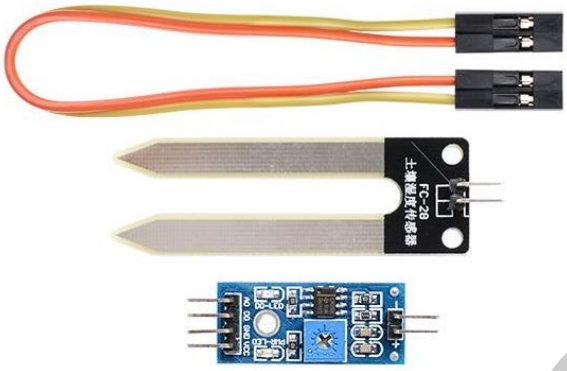
Soil moisture monitoring system

Overview



This lesson will teach you how to use Garden soil moisture sensor, which is simple and easy to use.

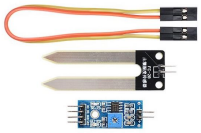
Specification

Null

Pin definition

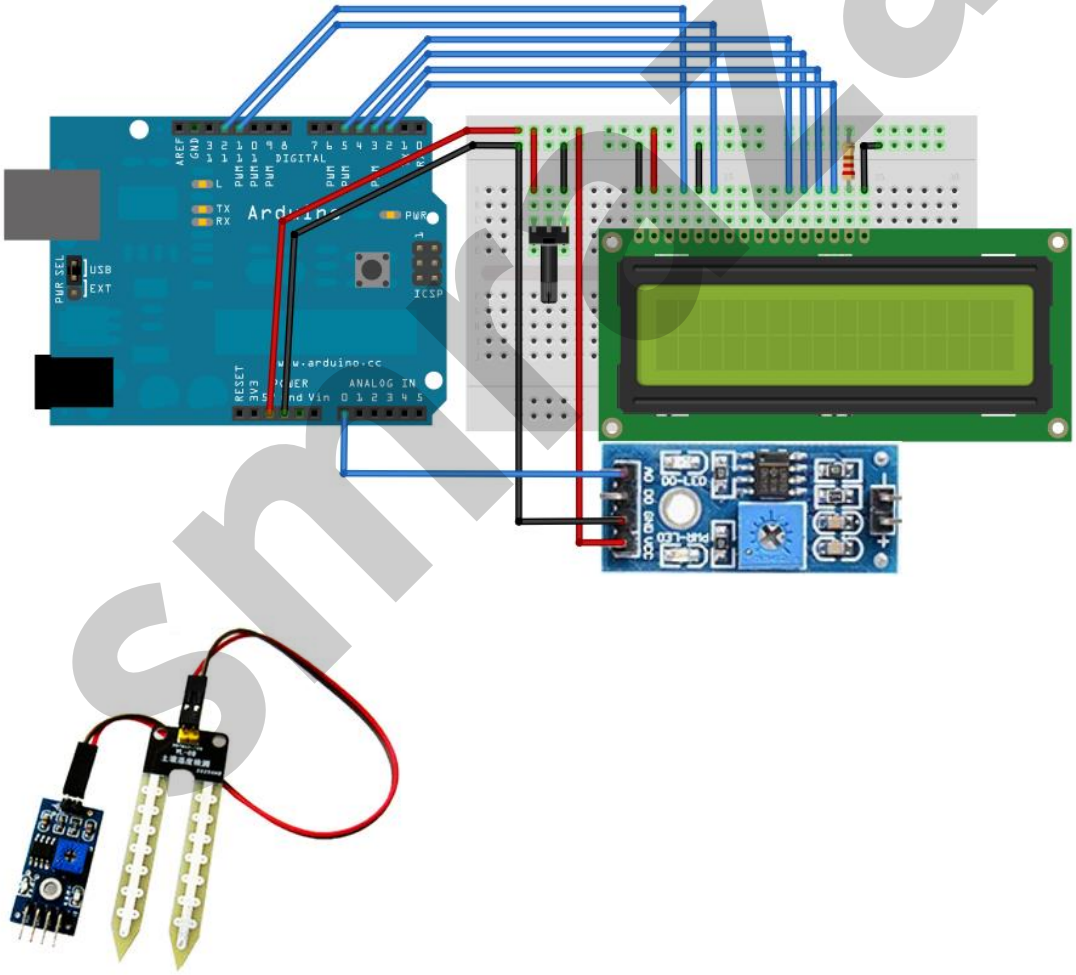
Garden soil moisture		UNO R3
A0	->	A0
D0	->	Null
GND	->	GND
VCC	->	+5V

Hardware required

Material diagram	Material name	Number
	LCD1602	1
	Garden soil moisture	1
	220/330Ω resistor	1
	10KΩ Potentiometer	1

	USB Cable	1
	UNO R3	1
	Breadboard	1
	Jumper wires	Several

Connection diagram



Connection

LCD1602		UNO R3
VSS	->	GND
VDD	->	+5v
VO	->10K Potentiometer	
RS	->	D12

---Designed by Smraza Keen

RW	->	GND
E	->	D11
D0	->	null
D1	->	null
D2	->	null
D3	->	null
D4	->	D5
D5	->	D4
D6	->	D3
D7	->	D2
A	->	+220/330Ω
K	->	GND
Garden soil moisture		
A0	->	A0
D0	->	Null
GND	->	GND
VCC	->	+5V

Sample code

Note: sample code under the **Sample code** folder

```
#include <LiquidCrystal.h>
LiquidCrystal lcd(12, 11, 5, 4, 3, 2);
int hum = A0;
int val=0;
int count=0;
void setup()
{
   lcd.begin(16,2);
   lcd.print("    Welcome to ");
   lcd.setCursor(0,1);
   lcd.print("        Smraza");
   delay(2000);
   lcd.clear();
   Serial.begin(9600);
}
void loop()
{
   val=analogRead(hum);
   count=100-(val-435)/5.9;
   lcd.clear();                    //clear display
   lcd.print("Smraza");
   lcd.setCursor(0, 1) ;
   lcd.print("Humidity=%");
   lcd.print(count);
```

```
    delay(150);
}
```

Language reference

Null

Application effect

Insert the Garden Soil Moisture one end into the soil, the LCD will display soil moisture value.