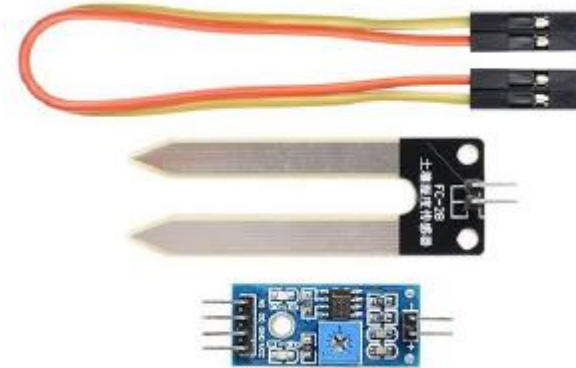


Soil moisture monitoring system

Overview



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

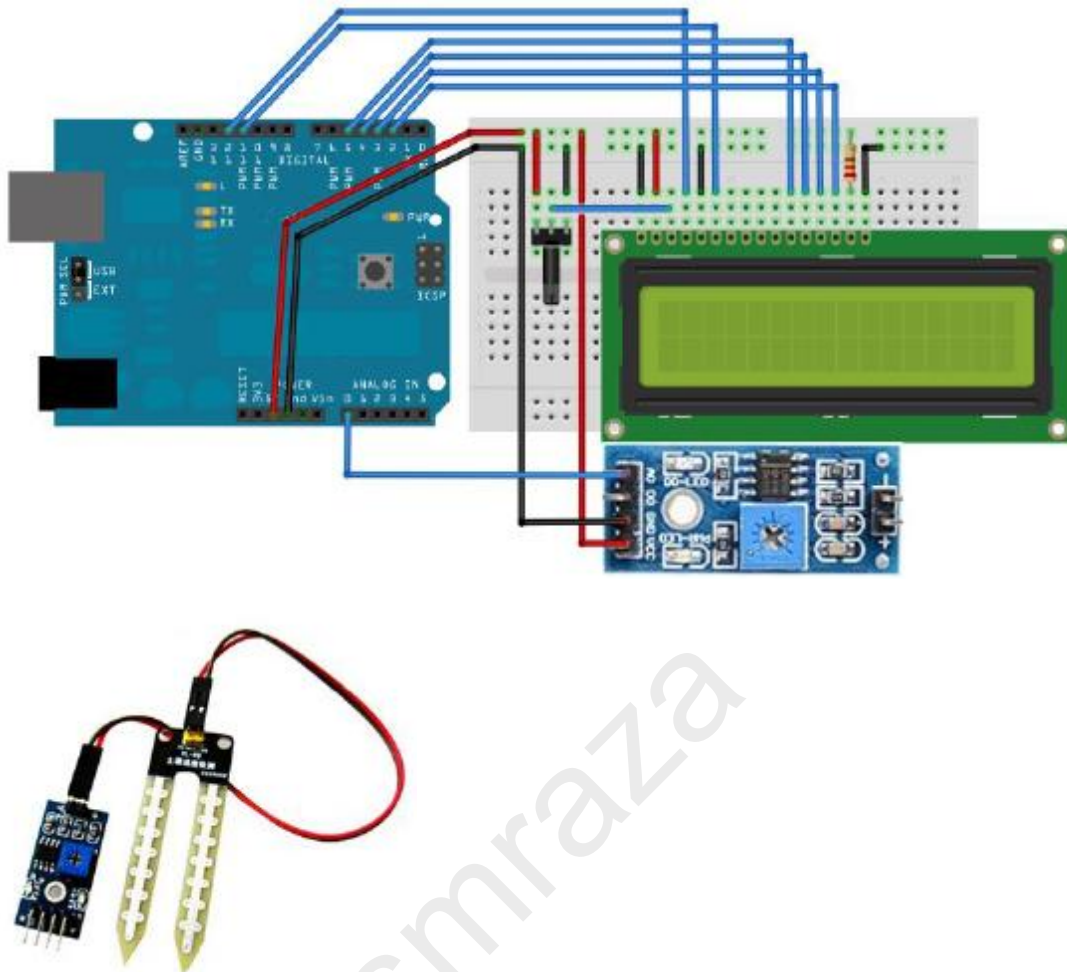
Pin definition

Garden soil moisture	Arduino
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	Arduino
VSS	GND
VDD	+5V
VO	10K Ω Potentiometer
RE	D12
RW	GND
E	D11
D0	Null
D1	Null
D2	Null
D3	Null
D4	D5
D5	D4
D6	D3
D7	D2
A	220/330 Ω resistor
K	GND

Garden soil moisture

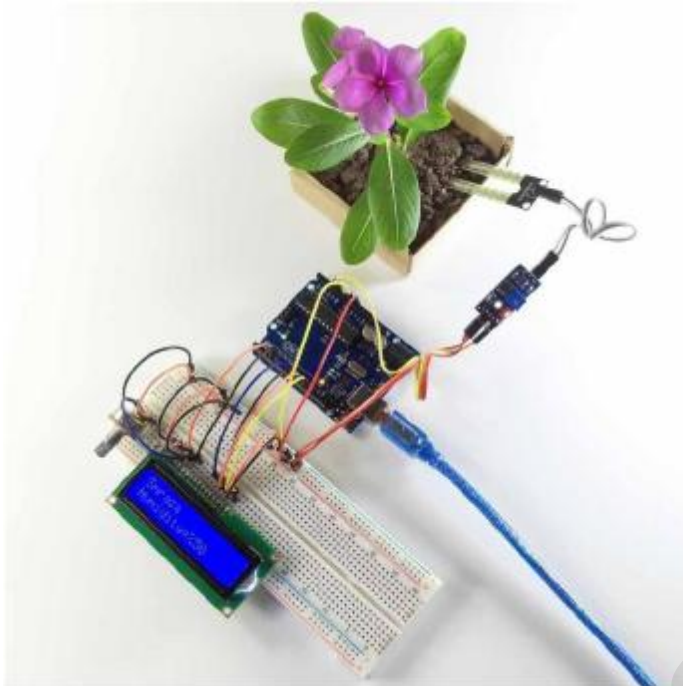
A0	A0
D0	Null
GND	GND
VCC	+5V

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);
}
```

Example picture



Application effect

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

* About Smraza:

* We are a leading manufacturer of electronic components for Arduino and Raspberry Pi.

* Official website: <http://www.smraza.com/>

* We have a professional engineering team dedicated to providing tutorials and support to help you get started.

* If you have any technical questions, please feel free to contact our support staff via email at support@smraza.com

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