# Peristaltic Pump and Relay Module

### **Code:**

| #define RELAY\_PIN 5 // D5 on ESP32 void setup() {  pinMode(RELAY\_PIN, OUTPUT);  digitalWrite(RELAY\_PIN, HIGH); // Start with relay OFF (active LOW) } void loop() {  // Turn relay ON → pump ON  digitalWrite(RELAY\_PIN, LOW);  Serial.println("Pump ON");  delay(2000); // 2 seconds ON  // Turn relay OFF → pump OFF  digitalWrite(RELAY\_PIN, HIGH);  Serial.println("Pump OFF");  delay(2000); // 2 seconds OFF } |
| --- |

### **Connections:**

1. Press the on/off button for keysight dc power supply and turn it ON
2. Press the +20v button and turn it ON
3. Connect COM of keysight dc power supply to COM of relay module
   1. For the COM on dc power supply - Twist the knob to make it loose and insert the wire, then tighten it again
   2. For the COM on relay module, it is in the middle of the 3 connection points which have chinese characters
4. Connect + (positive) of peristaltic pump to +20V of the keysight dc power supply
   1. Positive terminal of the pump will be marked in pink/red color.
   2. For the +20V on dc power supply - Twist the knob to make it loose and insert the wire, then tighten it again
5. Connect - (negative) of peristaltic pump to NO (normally open) on relay module
   1. For the NO (normally open) on relay module, it is on right side of the 3 connection points which have chinese characters (same side as green led)
6. Don’t connect any wire to the left side of the 3 connection points which have chinese characters
7. Connect the VCC of Relay module to 3V3 of the ESP32
8. Connect the GND of Relay module to GND of the ESP32
9. Connect the IN of Relay module to D5 of the ESP32

### **Reference Videos:**

<https://www.youtube.com/watch?v=KRDgay5uSmw>

<https://www.youtube.com/watch?v=To3DKP99-1U>

<https://youtu.be/5v3hguC41Kk?si=Q_hlo42c7lQe9DTg>

### **Old versions - Now Superseded**

Relay Module Code

#define relay1 5

void setup() {

pinMode(relay1,OUTPUT);

}

void loop() {

digitalWrite(relay1,LOW);

delay(1000);

digitalWrite(relay1,HIGH);

delay(1000);

}

Relay Module Connections

Relay - ESP32

VCC - 3V3

GND - GND

IN - D5