The **BME280** sensor module we’re using communicates via I2C communication protocol, so you need to connect it to the ESP32 or ESP8266 I2C pins.

So, assemble your circuit as shown in the next schematic diagram ([read complete Guide for ESP32 with BME280](https://randomnerdtutorials.com/esp32-bme280-arduino-ide-pressure-temperature-humidity/)).

|  |  |
| --- | --- |
| ESP8266  LOS PINES I2C   * **GPIO 5**(D1): SCL (SCK) * **GPIO 4**(D2): SDA (SDI) | ESP32  LOS PINES I2C   * **GPIO 22:** SCL (SCK) * **GPIO 21:** SDA (SDI) |
| BME280 I2C wiring to ESP8266 - circuit schematic diagram SDA SCL | BME280 I2C wiring to ESP32 - circuit schematic diagram SDA SCL |

**Recommended reading:** [ESP32 Pinout Reference Guide](https://randomnerdtutorials.com/esp32-pinout-reference-gpios/)

**BME280 wiring to ESP8266**

The ESP8266 I2C pins are:

* **GPIO 5**(D1): SCL (SCK)
* **GPIO 4**(D2): SDA (SDI)

Assemble your circuit as in the next schematic diagram if you’re using an ESP8266 board ([read complete Guide for ESP8266 with BME280](https://randomnerdtutorials.com/esp8266-bme280-arduino-ide/)).

**Recommended reading:** [ESP8266 Pinout Reference Guide](https://randomnerdtutorials.com/esp8266-pinout-reference-gpios/)

**ESP32/ESP8266 Code**

* [install the BME280 Library and Adafruit\_Sensor library](https://randomnerdtutorials.com/esp32-bme280-arduino-ide-pressure-temperature-humidity/)
* [Install the ESP8266 Board in Arduino IDE](https://randomnerdtutorials.com/how-to-install-esp8266-board-arduino-ide/) –

Import all the libraries to make it work (it will import either the ESP32 or ESP8266 libraries based on the selected board in your Arduino IDE)

|  |  |
| --- | --- |
| ESP8266 | ESP32 |
| #include <ESP8266WiFi.h>  #include <ESP8266HTTPClient.h>  #include <WiFiClient.h> | #include <WiFi.h>  #include <HTTPClient.h> |

#ifdef ESP32

#include <WiFi.h>

#include <HTTPClient.h>

#else

#include <ESP8266WiFi.h>

#include <ESP8266HTTPClient.h>

#include <WiFiClient.h>

#endif

#include <Wire.h>

#include <Adafruit\_Sensor.h>

#include <Adafruit\_BME280.h>

const char\* ssid = "\*\*\*\*";

const char\* password = "\*\*\*\*";

const char\* serverName = "http://example.com/post-data.php";

String apiKeyValue = "Seguridad";

Adafruit\_BME280 bme;

void setup() {

Serial.begin(115200);

WiFi.begin(ssid, password);

while(WiFi.status() != WL\_CONNECTED) {

delay(500);

Serial.print(".");

}

Serial.println(WiFi.localIP());

// (you can also pass in a Wire library object like &Wire2)

bool status = bme.begin(0x76);

if (!status) {

Serial.println("Could not find BME280 sensor, check wiring or change I2C address!");

while (1);

}

}

void loop() {

if(WiFi.status()== WL\_CONNECTED){

{

Serial.println("WiFi Disconnected");

return;

}

String temp = String(bme.readTemperature());

String humid = String(bme.readHumidity());

String presion = String(bme.readPressure()/100.0F) + "";

HTTPClient http;

// URL o IP con el nombre del archive PHP

http.begin(serverName);

http.addHeader("Content-Type", "application/x-www-form-urlencoded");

//String httpData = "api\_key=Seguridad&value1=24.75&value2=49.54&value3=105.14";

String httpData = "api\_key=" + apiKeyValue +

"&value1=" + temp +

"&value2=" + humid +

"&value3=" + presion;

int httpResponseCode = http.POST(httpData);

if (httpResponseCode>0) {

Serial.print("HTTP Response code: ");

Serial.println(httpResponseCode);

}

else {

Serial.print("Error code: ");

Serial.println(httpResponseCode);

}

// Free resources

http.end();

}

//Send an HTTP POST request every 30 seconds

delay(30000);

}