

# lamaPLC project: Arduino - Vibration sensors

A vibration sensor is a device that detects mechanical oscillations and transforms them into electrical signals to measure displacement, velocity, or acceleration. They are vital for predictive maintenance, enabling teams to identify machine issues, such as misalignment or bearing wear, before failures become catastrophic.



## Common Types of Vibration Sensors

Selecting a sensor depends on the frequency range and whether your measurement target is displacement (position), velocity (speed), or acceleration.

Sensor Type	Best For	Typical Use Case	Key Benefit
<b>Piezoelectric</b>	High frequencies (>1 kHz)	Bearing monitoring, gearboxes, turbines	Extremely robust, wide frequency range
<b>MEMS (Capacitive)</b>	Low frequencies (0-1 kHz)	Imbalance, misalignment, looseness	Low cost, low power, long battery life
<b>Eddy-Current</b>	Shaft displacement	Non-contact monitoring of rotating shafts	Measures distance without physical contact
<b>Velocity (Electrodynamic)</b>	Machinery protection	Heavy industrial machines, pumps, fans	Self-powered and less prone to overload
<b>Laser Displacement</b>	Delicate/Hot surfaces	Precision measurement in clean or harsh environments	High precision, non-contact measurement

## Key Applications

- **Industrial Health Monitoring:** Used on pumps, motors, and fans to detect early signs of wear and prevent downtime.
- **Structural Safety:** Installed on bridges, dams, and buildings to monitor seismic performance and structural health.
- **Security & Alarms:** Detects forced entry on doors or windows (e.g., car alarms or smart home sensors).
- **Quality Control:** Automotive and aerospace companies test finished products against vibration tolerance benchmarks



If you'd like to support the development of the site with the price of a coffee — or a few — [please do so here](#).

Here's a handy tip: you can quickly save this page as a PDF by clicking "export to PDF" in the menu on the right side of the screen.

2026/02/14 23:38

## Comparison: GXFM0459 vs. LDTM-028K

Feature	GXFM0459 (Ceramic Module)	LDTM-028K (Film Sensor)
Physical Form	Rigid ceramic disk on a PCB	Flexible thin polymer film
Detection Type	Best for knocks, taps, or high-impact shocks	Best for continuous vibration and low-frequency motion
Wiring 3-pin	(VCC, GND, OUT)	2-pin (Raw AC output)
Signal Handling	Built-in amplifier/comparator	Requires external resistor/circuit

## LDTM-028K (Film Sensor)



The **LDTM-028K** is a piezoelectric film vibration sensor.

It specifically features a cantilever beam design with an integrated mass (*the “M” in the name*) to increase its sensitivity, especially at lower frequencies.

### LDTM 028K Key Characteristics

- **Technology:** It employs a flexible **PVDF** (*Polyvinylidene Fluoride*) polymer film that is 28  $\mu\text{m}$  thick.
- **Operating Principle:** When the film is bent or vibrates, it produces a high voltage output proportional to the amount of strain.
- **Dual Function:**
  - **Vibration Sensor:** Functions as an accelerometer when its contacts support it, and it is free to vibrate.
  - **Flexible Switch:** Functions as a switch that produces sufficient voltage to directly activate MOSFET or CMOS circuits when pressed by direct contact.
- **Key Benefit:** The additional mass decreases the resonant frequency, increasing sensitivity to low-frequency movements and strong shocks.

### LDTM 028K Technical Specifications

- **Sensitivity:** Approximately (200 mV/g at resonance).
- **Frequency Range:** Typically 0.1 Hz to 180 Hz.
- **Temperature Range:** 0°C to 85°C.

## Wiring the Standalone LDTM 028K Sensor (Raw Element)

The standalone LDTM-028K features only two crimped contacts. Since piezoelectric elements can produce very high voltage spikes (AC), they need a dedicated circuit to protect your microcontroller and ensure the signal remains stable.

**Parallel Resistor:** Attach a 1 M $\Omega$  resistor across the sensor's two pins. It functions as a pull-down resistor, helping to dissipate static charge.

### Microcontroller Connection

- Connect one pin to GND.
- Connect the other pin to an Analogue Input pin (e.g., A0).

**Protection (optional but recommended):** To prevent voltage spikes from damaging the pins, some designers install a Schottky diode or a Zener diode across the terminals to clamp the voltage to the supply level.

## Arduino example code for the LDTM 028K Standalone Sensor

Connect a 1 M $\Omega$  resistor in parallel with the sensor's two pins to prevent the analogue input from "floating" and to dissipate static charges, reducing the risk of false readings or excessive voltage.

- Move the signal wire from A0 to Digital Pin 2 (Interrupt 0).
- Keep the 1 M $\Omega$  resistor in parallel between Pin 2 and GND.

This sketch uses a "hardware interrupt" to promptly detect vibrations, even when the main program is busy with other tasks.

```
/*
 * LDTM-028K Interrupt-Driven Detection
 * Connect sensor to Digital Pin 2 with a 1M Ohm resistor to GND.
 */

const byte PIEZO_PIN = 2;      // Interrupt-capable pin (Uno/Nano: Pin 2 or
                                // 3)
const byte LED_PIN = 13;      // Built-in LED

// 'volatile' is required for variables shared between main loop and
// interrupt
volatile bool vibrationDetected = false;

void setup() {
  Serial.begin(115200);        // Higher baud rate for fast events
  pinMode(LED_PIN, OUTPUT);
  pinMode(PIEZO_PIN, INPUT);  // Sensor acts as a digital pulse generator

  // Trigger the 'vibrationISR' function when Pin 2 goes from LOW to HIGH
  // (RISING)
  attachInterrupt(digitalPinToInterrupt(PIEZO_PIN), vibrationISR, RISING);

  Serial.println("System Armed. Waiting for vibration...");
}

void loop() {
  if (vibrationDetected) {
    Serial.println("!!! IMPACT DETECTED !!!");

    // Visual feedback
    digitalWrite(LED_PIN, HIGH);
  }
}
```

```
delay(500); // Short pause to show the LED lit
digitalWrite(LED_PIN, LOW);

// Reset the flag so we can catch the next one
vibrationDetected = false;
}

// Your main code can do other things here without missing the sensor
trigger
}

// The Interrupt Service Routine (ISR) - Must be fast and short
void vibrationISR() {
  vibrationDetected = true;
}
```

### Why use this method?

- **Zero Lag:** The *vibrationISR* function executes immediately when the piezo film detects a voltage spike.
- **Multitasking:** You can insert resource-intensive code in the *loop()* (such as driving a display or processing data) without risking missing a quick knock or vibration.
- **Power Saving:** This approach lets you put the Arduino into “*Sleep Mode*” and have the vibration sensor wake it.

## GXFM0459 (Ceramic Module)

The GXFM0459 is a standard alphanumeric SKU for an Analog Piezoelectric Ceramic Vibration Module. It is designed to detect mechanical stress (taps, knocks, or vibrations) and convert it into an electrical signal proportional to the impact strength.

### GXFM0459 Technical Specifications

The module typically integrates a ceramic piezo disk with a basic buffering circuit on a small PCB.

Parameter	Value
Operating Voltage	3.3V to 5V DC
Working Current	< 1mA
Output Type	Analog voltage (and sometimes TTL Digital)
Operating Temperature	-10 .. 70 °C

### GXFM0459 Pinout and Connectivity

Most modules use a 3-pin or 4-pin header for easy integration with microcontrollers like Arduino.

- **S / A0 (Signal):** Analog output. Connect to an Analog Input pin (e.g., A0).
- **+ / VCC:** Power supply (3.3V or 5V).
- **- / GND:** Ground connection.
- **DO (Optional):** Digital TTL output. High signal when vibration exceeds the threshold set by the

onboard potentiometer.

## GXFM0459 Key Features

- **Proportional Output:** Unlike simple digital switches such as the SW-420, the GXFM0459 provides an analog signal, enabling you to gauge the strength of a strike, which is useful for electronic drum applications.
- **Adjustable Sensitivity:** If your version features a potentiometer (the small blue screw), you can turn it to set the threshold that triggers the digital output (D0).
- **Durability:** The ceramic element is sturdy and highly responsive to quick, high-frequency impacts, such as tapping on a table.

## Arduino - GXFM0459 Module Wiring Diagram

If your module has 4 pins, follow this standard setup:

Module Pin	Arduino Pin	Description
VCC / +	5V	Power supply for the module.
GND / -	GND	Ground connection.
A0 / S	Analog A0	Raw signal for measuring vibration intensity.
D0 / L	Digital D2	(Optional) Threshold-based high/low trigger.

## Arduino - GXFM0459 Example Code

This sketch monitors the analog value to detect the “strength” of a knock while also using the digital pin to trigger an alert instantly.

```
/*
 * GXFM0459 Ceramic Vibration Sensor Example
 * Reads analog intensity and digital hit detection.
 */

const int ANALOG_PIN = A0; // Connect to A0 for intensity
const int DIGITAL_PIN = 2; // Connect to D2 for quick trigger
const int LED_PIN = 13;    // Built-in LED for feedback

void setup() {
  Serial.begin(115200); // High baud rate for fast vibration data
  pinMode(DIGITAL_PIN, INPUT);
  pinMode(LED_PIN, OUTPUT);

  Serial.println("GXFM0459 Ready. Tap the sensor!");
}

void loop() {
  // 1. Read Analog Intensity (0-1023)
  int intensity = analogRead(ANALOG_PIN);
```

```
// 2. Read Digital Trigger (0 or 1)
bool hitDetected = digitalRead(DIGITAL_PIN);

// Only print if there is actual movement to avoid flooding the monitor
if (intensity > 5 || hitDetected == HIGH) {
  Serial.print("Intensity: ");
  Serial.print(intensity);

  if (hitDetected == HIGH) {
    Serial.println(" | *** DIGITAL TRIGGERED ***");
    digitalWrite(LED_PIN, HIGH); // Light up on hit
    delay(50); // Brief flash
    digitalWrite(LED_PIN, LOW);
  } else {
    Serial.println();
  }
}

delay(10); // Small delay for stability
}
```

## Sensor topics on lamaPLC

Page	Date	Tags
• <a href="#">lamaPLC project: Arduino - OLED SH1106 with AHT20/BMP280 Sensor</a>	2026/04/23 21:51	<a href="#">bmp280</a> , <a href="#">aht20</a> , <a href="#">temperature</a> , <a href="#">humidity</a> , <a href="#">pressure</a> , <a href="#">sensor</a> , <a href="#">arduino</a> , <a href="#">oled</a> , <a href="#">sh1106</a> , <a href="#">arduino code</a>
• <a href="#">lamaPLC project: Arduino - Vibration sensors</a>	2026/04/15 17:21	<a href="#">vibration</a> , <a href="#">sensor</a> , <a href="#">piezoelectric</a> , <a href="#">mems</a> , <a href="#">eddy-current</a> , <a href="#">electrodynamic</a> , <a href="#">gxfm0459</a> , <a href="#">ldtm-028k</a> , <a href="#">arduino</a> , <a href="#">arduino code</a>
• <a href="#">lamaPLC project: Digitales Potentiometer Board Modul</a>	2026/04/11 18:29	<a href="#">sensor</a> , <a href="#">module</a> , <a href="#">arduino code</a> , <a href="#">renesas</a> , <a href="#">x9c series</a> , <a href="#">x9c102</a> , <a href="#">x9c103</a> , <a href="#">x9c104</a> , <a href="#">x9c503</a> , <a href="#">xdcp</a> , <a href="#">digitally controlled potentiometer</a>
• <a href="#">lamaPLC project: Sension SCD CO<sup>2</sup> measurement module</a>	2026/04/15 19:34	<a href="#">bmp280</a> , <a href="#">aht20</a> , <a href="#">temperature</a> , <a href="#">humidity</a> , <a href="#">pressure</a> , <a href="#">sensor</a> , <a href="#">arduino</a> , <a href="#">oled</a> , <a href="#">sh1106</a> , <a href="#">arduino code</a>
• <a href="#">lamaPLC: A0221AU / A02YYUW Waterproof Ultrasonic Distance Sensor with UART communication</a>	2026/04/23 21:52	<a href="#">a0221au</a> , <a href="#">a02yyuw</a> , <a href="#">waterproof</a> , <a href="#">ultrasonic</a> , <a href="#">distance</a> , <a href="#">sensor</a> , <a href="#">uart</a> , <a href="#">ip67</a> , <a href="#">serial</a> , <a href="#">sen0311</a> , <a href="#">dfrobot</a>
• <a href="#">LamaPLC: AHT10 Modul</a>	2026/03/22 03:14	<a href="#">communication</a> , <a href="#">i2c</a> , <a href="#">temperature</a> , <a href="#">humidity</a> , <a href="#">sensor</a> , <a href="#">aht</a> , <a href="#">aht 10</a> , <a href="#">modul</a>
• <a href="#">LamaPLC: AHT20 / BMP280 Modul</a>	2026/04/23 21:52	<a href="#">bmp280</a> , <a href="#">aht20</a> , <a href="#">adafruit</a> , <a href="#">temperature</a> , <a href="#">humidity</a> , <a href="#">pressure</a> , <a href="#">sensor</a> , <a href="#">arduino</a> , <a href="#">code</a> , <a href="#">i2c</a>

• <a href="#">LamaPLC: Allegro ACS758 Hall-effect linear current sensors</a>	2026/04/23 21:52	<a href="#">cjmcu</a> , <a href="#">cjmcu-758</a> , <a href="#">acs758</a> , <a href="#">acs758lcb-050b</a> , <a href="#">acs758lcb-100b</a> , <a href="#">acs758kcb-150b</a> , <a href="#">acs758ecb-200b</a> , <a href="#">hall-effect</a> , <a href="#">current</a> , <a href="#">sensor</a> , <a href="#">analog</a> , <a href="#">arduino</a> , <a href="#">code</a>
• <a href="#">LamaPLC: APDS - Avago ALS and proximity detection sensors with I<sup>2</sup>C communication</a>	2026/04/23 21:52	<a href="#">avago</a> , <a href="#">apds-9900</a> , <a href="#">apds-9930</a> , <a href="#">apds-9960</a> , <a href="#">als</a> , <a href="#">proximity</a> , <a href="#">detection</a> , <a href="#">gesture recognition</a> , <a href="#">gesture</a> , <a href="#">i2c</a> , <a href="#">communication</a> , <a href="#">sensor</a> , <a href="#">arduino</a> , <a href="#">code</a>
• <a href="#">lamaPLC: AS5600 Magnetic Induction Angle Measurement Sensor Module</a>	2026/03/28 23:50	<a href="#">communication</a> , <a href="#">i2c</a> , <a href="#">as5600</a> , <a href="#">as-5600</a> , <a href="#">magnetic</a> , <a href="#">induction</a> , <a href="#">angle</a> , <a href="#">sensor</a>
• <a href="#">LamaPLC: BMP/BME Bosch Temperature/Humidity/Pressure sensors with I<sup>2</sup>C communication</a>	2026/04/23 21:52	<a href="#">bme280</a> , <a href="#">bme680</a> , <a href="#">bmp180</a> , <a href="#">bmp280</a> , <a href="#">hw-611</a> , <a href="#">hw611</a> , <a href="#">bosch</a> , <a href="#">temperature</a> , <a href="#">humidity</a> , <a href="#">pressure</a> , <a href="#">sensor</a> , <a href="#">arduino</a> , <a href="#">i2c</a> , <a href="#">communication</a> , <a href="#">cjmcu</a>
• <a href="#">LamaPLC: BQ25570 / CJMCU-2557 - Texas Instruments nano-power management IC and module</a>	2026/04/23 21:52	<a href="#">bq25570</a> , <a href="#">sensor</a> , <a href="#">texas instruments</a> , <a href="#">nano-power management</a> , <a href="#">dc-dc boost charger</a> , <a href="#">mppt</a> , <a href="#">solar</a> , <a href="#">thermoelectric</a> , <a href="#">piezoelectric</a>
• <a href="#">LamaPLC: CJMCU-219/INA-219 breakout board/IC with I<sup>2</sup>C communication</a>	2026/04/23 21:52	<a href="#">cjmcu-219</a> , <a href="#">ina-219</a> , <a href="#">ina219</a> , <a href="#">breakout board</a> , <a href="#">i2c</a> , <a href="#">communication</a> , <a href="#">sensor</a> , <a href="#">voltage</a> , <a href="#">current</a> , <a href="#">arduino</a> , <a href="#">code</a> , <a href="#">cjmcu</a>
• <a href="#">LamaPLC: CJMCU-3216 / AP-3216 integrated digital ambient light and proximity sensor module/IC with I<sup>2</sup>C communication</a>	2026/04/23 21:52	<a href="#">cjmcu-3216</a> , <a href="#">cjmcu</a> , <a href="#">ap-3216</a> , <a href="#">ap3216</a> , <a href="#">ambient light</a> , <a href="#">proximity</a> , <a href="#">sensor</a> , <a href="#">arduino</a> , <a href="#">code</a> , <a href="#">i2c</a> , <a href="#">communication</a>
• <a href="#">LamaPLC: CJMCU-3901/PMW-3901 compact optical flow sensor module/IC by PixArt with SPI communication</a>	2026/04/23 21:52	<a href="#">cjmcu-3901</a> , <a href="#">cjmcu</a> , <a href="#">pmw3901</a> , <a href="#">pmw-3901</a> , <a href="#">optical flow</a> , <a href="#">sensor</a> , <a href="#">pixart</a> , <a href="#">spi</a> , <a href="#">communication</a> , <a href="#">arduino</a> , <a href="#">code</a> , <a href="#">pmw3901mb-txqt</a>
• <a href="#">LamaPLC: CJMCU-6701: Biosensor for measuring Galvanic Skin Response (GSR) with SPI communication</a>	2026/04/23 21:52	<a href="#">cjmcu</a> , <a href="#">cjmcu-6701</a> , <a href="#">acs758</a> , <a href="#">acs-758</a> , <a href="#">galvanic skin response</a> , <a href="#">gsr</a> , <a href="#">electrodermal activity</a> , <a href="#">eda</a> , <a href="#">spi</a> , <a href="#">communication</a> , <a href="#">arduino</a> , <a href="#">code</a> , <a href="#">sensor</a> , <a href="#">healthcare</a>
• <a href="#">LamaPLC: CJMCU-6814 combined gas sensor module for CO, NO<sub>2</sub>, NH<sub>3</sub></a>	2026/04/23 21:52	<a href="#">analog</a> , <a href="#">cjmcu</a> , <a href="#">cjmcu-6814</a> , <a href="#">mics6814</a> , <a href="#">mics-6814</a> , <a href="#">sensor</a> , <a href="#">arduino</a> , <a href="#">code</a> , <a href="#">carbon monoxide</a> , <a href="#">co</a> , <a href="#">ammonia</a> , <a href="#">nh<sub>3</sub></a> , <a href="#">nitrogen dioxide</a> , <a href="#">no<sub>2</sub></a>
• <a href="#">lamaPLC: CJMCU-811 CCS811 Gas Sensor (VOCs TVOC CO<sub>2</sub>)</a>	2026/03/22 00:08	<a href="#">cjmcu-811</a> , <a href="#">ccs811</a> , <a href="#">gas</a> , <a href="#">sensor</a> , <a href="#">vocs</a> , <a href="#">tvoc</a> , <a href="#">eco2</a> , <a href="#">co2</a> , <a href="#">arduino</a> , <a href="#">air quality</a> , <a href="#">metal oxide</a> , <a href="#">mox</a> , <a href="#">i2c</a>
• <a href="#">LamaPLC: CJMCU-8221 Analog Devices Precision instrumentation amplifier module</a>	2026/04/23 21:52	<a href="#">cjmcu-8221</a> , <a href="#">ad8221ar</a> , <a href="#">analog devices</a> , <a href="#">amplifier</a> , <a href="#">sensor</a> , <a href="#">cjmcu</a>
• <a href="#">LamaPLC: D6T Omron Non-Contact Thermal Sensors with I<sup>2</sup>C communication</a>	2026/04/23 21:52	<a href="#">d6t</a> , <a href="#">d6t-32l</a> , <a href="#">d6t-44l</a> , <a href="#">d6t-8l</a> , <a href="#">d6t-1a</a> , <a href="#">omron</a> , <a href="#">non-contact</a> , <a href="#">thermal</a> , <a href="#">sensor</a> , <a href="#">i2c</a> , <a href="#">arduino</a> , <a href="#">code</a>
• <a href="#">LamaPLC: DHT Temperature /Humidity sensors with 1-wire / I<sup>2</sup>C communication</a>	2026/04/23 21:52	<a href="#">dht11</a> , <a href="#">dht20</a> , <a href="#">dht22</a> , <a href="#">temperature</a> , <a href="#">humidity</a> , <a href="#">pressure</a> , <a href="#">sensor</a> , <a href="#">1-wire</a> , <a href="#">arduino</a> , <a href="#">code</a>

- [LamaPLC: DPS Infineon Temperature/Pressure sensors with I2C communication](#)

2026/04/23 21:52

dps310, infineon, temperature, pressure, sensor, arduino, i2c, communication, code
- [lamaPLC: DS18B20 1-Wire Digital Thermometer](#)

2026/04/23 21:52

ds18b20, sensor, 1-wire, communication, arduino, thermometer, parasitic mode
- [lamaPLC: Energy, power, current, and voltage](#)

2025/05/31 23:32

i2c, i c, communication, arduino, energy, power, current, sensor, ina226
- [LamaPLC: ENS ScioSense Multi-gas sensors with I<sup>2</sup>C communication](#)

2026/04/23 21:52

ens160, sciosense, gas-quality, i2c, communication, sensor, arduino, code, eco<sub>2</sub>, tvoc, aqi, indoor air quality, iaq, co<sub>2</sub>, voc
- [lamaPLC: ENS160 + AHT21 Air Quality Sensor - CO, ECO, TVOC, Temp & Humidity Module](#)

2026/04/23 21:52

arduino, ens160, aht21, air quality, sensor, co, eco, tvoc, module, aqi
- [LamaPLC: Gas sensors](#)

2023/07/01 17:29

gas, sensor, i2c, onewire, communication, mq-3, mq-4, mq-5, mq-6, mq-7, mq-8, mq-9, mq-135, gm-102b, gm-302b, gm-502b, gm-702b, alcohol, ch<sub>4</sub>, natural gas, smoke, lng, co, co<sub>2</sub>, lpg, h<sub>2</sub>, iso-butane, nox, nh<sub>3</sub>, benzene, town gas, formaldehyde, propane, humidity, temperature, voc, grv gas sens v2
- [LamaPLC: GM MEMS Gas-sensors](#)

2026/04/23 21:52

gm-102b, gm-302b, gm-502b, gm-702b, mems, gas-quality, sensor, arduino, code, nitrogen dioxide, no<sub>2</sub>, volatile organic compounds, voc, carbon monoxide, co, ethyl alcohol, c<sub>2</sub>h<sub>5</sub>sch, formaldehyde, ch<sub>2</sub>o, alcohol, c<sub>2</sub>h<sub>5</sub>oh
- [lamaPLC: GY-511 6DOF sensor module](#)

2026/03/22 01:44

stmicroelectronics, lsm303dlhc, i2c, lsm303, sensor, gy-511, 6dof, pololu, module, arduino
- [LamaPLC: HC-SR04 Ultrasonic Sensor Module](#)

2026/04/23 21:52

hc-sr04, ultrasonic, sensor, arduino, code
- [LamaPLC: HDC Texas Instruments Temperature/humidity sensors with I<sup>2</sup>C communication](#)

2026/04/23 21:52

sht21, htu21, si7021, gy-21, gy-213v, hdc1080, gy-213v-hdc1080, cjmcu, cjmcu-1080, texas instruments, temperature, humidity, sensor, i2c, communication, arduino, code
- [LamaPLC: HTU TE Connectivity temperature/humidity sensors with I<sup>2</sup>C communication](#)

2026/04/23 21:52

htu, htu31d, htu21d, htu20d, sht20, htu20, sht21, htu21, si7021, gy-21, gy-213v, hdc1080, si702, gy-20, sht31, htu31, si7031, gy-31, te connectivity, temperature, humidity, i2c, communication, sensor, arduino, code
- [LamaPLC: HX711 24-bit analog-to-digital converter \(ADC\)](#)

2026/04/11 18:28

hx711, hx-711, analog-to-digital, adc, converter, load cell, wheatstone bridge, weight, sensor, communication, arduino, code

• <a href="#">lamaPLC: INA modules with Arduino libraries</a>	2026/04/11 19:54	i2c, i c, communication, arduino, energy, power, current, monitor, sensor, ina219, gy-219, ina226, gy-216, ina228, gy-228, ina237, ina238, ina260, ina3221, ina
• <a href="#">lamaPLC: INA226 - current/voltage/power monitor with I<sup>2</sup>C communication</a>	2026/04/23 21:52	i2c, i c, communication, arduino, energy, power, current, monitor, sensor, ina226, ina219, ina
• <a href="#">lamaPLC: LTC3588 - Nanopower energy harvesting power supply IC</a>	2026/04/23 21:52	communication, arduino, sensor, energy harvesting, energy, ambient power
• <a href="#">LamaPLC: M01 - V0.4 Laser ranging sensor with UART communication</a>	2026/04/23 21:52	distance measurement, laser, distance, sensor, m01
• <a href="#">LamaPLC: MAX30100/MAX30102 Heart Rate Click Sensor Module</a>	2026/04/23 21:52	max30102, max30100, heart rate click, sensor, communication, i2c, arduino, code
• <a href="#">lamaPLC: Max31865 RTD to Digital Converter - PT100/PT1000 Platine</a>	2026/04/23 21:52	max31865, rtd, pt 100, pt 1000, temperature, spi, platinum, arduino, code, sensor, adafruit
• <a href="#">LamaPLC: MAX4466/MAX9814: Low-noise Microphone Preamplifiers</a>	2026/04/23 21:52	audio, microphone, analogue audio, max4466, max9814, max 4466, max 9814, agc, preamplifiers, sensor, arduino, code
• <a href="#">LamaPLC: MH-Z19 series of NDIR CO<sub>2</sub> sensors</a>	2026/04/23 21:52	mh-z19, mh-z19d, mh-z19c, mh-z19b, mh-z19e, ndir, co <sub>2</sub> , sensor, winsen, uart, pwm, communication, non-dispersive infrared, infrared, ir, temperature, arduino, code, tasmota
• <a href="#">lamaPLC: MPU-6050 (HW-123, GY-521) 6-axis MotionTracking device</a>	2026/03/22 03:13	mpu-6050, hw-123, gy-521, 6-axis motiontracking, dmp, temperature, sensor, mems, arduino code, arduino, accelerometer, gyroscope, tilt
• <a href="#">LamaPLC: MQ Winsen Gas-sensors</a>	2026/04/23 21:52	mq, mq-2, mq-3, mq-4, mq-5, mq-6, mq-7, mq-8, mq-9, mq-131, mq-135, mq-137, winsen, gas-sensor, sensor, arduino, code, alcohol, c <sub>2</sub> h <sub>5</sub> oh, benzine gas, smoke, lpg, propane, c <sub>3</sub> h <sub>8</sub> , hydrogen, h <sub>2</sub> , methane, ch <sub>4</sub> , iso-butane, town gas, ammonia, nh <sub>3</sub>
• <a href="#">LamaPLC: PIR sensors</a>	2026/04/23 21:52	hc-sr501, hc-sr505, am-312, ekmb ekmc, pir, motion, sensor, arduino, code
• <a href="#">LamaPLC: Pixart PAJ7620U2 Gesture recognition sensors/module with I<sup>2</sup>C communication</a>	2026/04/23 21:52	paj7620u2, gy-paj7620, pixart, gesture recognition, i2c, communication, sensor, arduino, code
• <a href="#">lamaPLC: PT100 / PT1000</a>	2025/09/23 18:59	pt100, pt1000, temperature, sensor, platine, rtd
• <a href="#">lamaPLC: PTA8C04 4-channel PT100 Modbus Modul</a>	2026/02/14 18:42	pta8c04, sensor, modbus, rtu, rs-485, communication, platine, um72
• <a href="#">LamaPLC: RCWL - Microwave radar sensor</a>	2026/04/23 21:52	rcwl-0516, rcwl, microwave, radar, sensor, arduino, code

- [lamaPLC: RD-xx - Ai-Thinker Radar Module with UART communication](#) 2026/04/23 21:52 [radar, s3km1110, fmcw, rd-01, rd-03, rd-03d, ai-thinker, k-band, 24 ghz, sensor, distance, micro-movements](#)
- [LamaPLC: SGP Sensirion TVOC/VOC sensors with I<sup>2</sup>C communication](#) 2026/04/15 19:41 [sgp30, sgp40, sgp41, sensirion, gas-sensor, i2c, communication, sensor, arduino, code, eco2, voc, tvoc, indoor air quality, iaq, nox, hydrogen](#)
- [LamaPLC: SHT Sensirion Temperature/humidity sensor with I<sup>2</sup>C communication](#) 2026/04/23 21:52 [sht20, sht21, sht25, sht30, sht31, sht35, sht40, gy21, temperature, humidity, i2c, communication, sensor, arduino, code](#)
- [LamaPLC: Texas Instruments ADCs: Delta-sigma multi-channel Analog Converters with SPI communication](#) 2026/04/23 21:52 [ads111x, ads12xx, delta-sigma, converter, texas instruments, adc, spi, communication, sensor, arduino, code, ads1110, ads1112, ads1113, ads1114, ads1115, ads1118, ads1119, ads1220, ads1232, ads1234, ads1256, ads1261, ads1263, multi channel](#)
- [LamaPLC: TOFnnnC STMicroelectronics Time-of-Flight \(ToF\) sensors with I<sup>2</sup>C communication](#) 2026/04/23 21:52 [tof050c, vl6180, tof200c, vl53l0x, tof400c, vl53l1x, stmicroelectronics, time-of-flight, tof, i2c, communication, sensor, arduino, code](#)
- [LamaPLC: UICPAL Temp.humi.sensor](#) 2023/06/25 00:43 [simatic, s7, modbus, communication, temperature, humidity, sensor](#)
- [LamaPLC: VL53Lnn STMicroelectronics time-of-flight \(ToF\) laser-ranging sensors with I<sup>2</sup>C communication](#) 2026/04/23 21:52 [vl53l0x, vl53l1x, vl53l0 1xv2, gy-530, time-of-flight, tof, laser-ranging, i2c, communication, sensor, arduino, code](#)
- [LamaPLC: VL6180X STMicroelectronics Time-of-Flight \(ToF\) sensor with I<sup>2</sup>C communication](#) 2026/04/23 21:52 [vl6180x, stmicroelectronics, time-of-flight, tof, i2c, communication, sensor, arduino, code](#)
- [LamaPLC: Waveshare TOF Laser Range Sensor with UART / I<sup>2</sup>C communication](#) 2026/04/23 21:52 [distance measurement, laser, range, sensor, tof, waveshare](#)
- [lamaPLC: YR-3180 - Weight sensor module with UART or Modbus communication](#) 2026/02/15 00:00 [communication, modbus, rtu, sensor, weight, yr-3180, hx710b, arduino, ttl, rs-485](#)
- [Magnetic angle sensors](#) 2026/03/05 21:19 [magnetic angle sensor, magnetic flux, sensor, spi, i2c, pwm, communication, modul, as5047p, as5600, mt6701, mt6816, mt6835, tle5012b, amr, gmr, tmr, anisotropic magnetoresistive](#)
- [NT18B07: 7 Kanal RS485 Temperatur Sensor with Modbus RTU](#) 2026/02/14 18:49 [nt18b07, sensor, modbus, rtu, rs-485, communication, platine](#)
- [PT100 / PT1000 sensors](#) 2026/04/23 21:52 [rtd, pt100, pt1000, sensor, temperature](#)
- [Radar Module RD-xx](#) 2026/04/23 21:52 [radar, s3km1110, fmcw, rd-03, k-band, 24 ghz, sensor, distance, micro-movements](#)

Vibration, Sensor, Piezoelectric, MEMS, Eddy-Current, Electrodynamic, GXFM0459, LDTM-028K, Arduino, Arduino code

This page has been accessed for: Today: 5, Until now: 6

From:

<https://lamaplc.com/> - **lamaPLC**

Permanent link:

<https://lamaplc.com/doku.php?id=sensor:vibration>

Last update: **2026/04/21 20:47**

