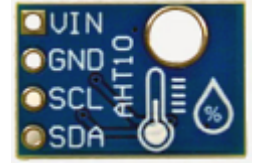


LamaPLC: AHT10 Modul

The AHT10 is an affordable, high-precision digital sensor module that measures both temperature and humidity. It uses a standard I²C interface for communication and is commonly used with microcontrollers such as Arduino and ESP32.



Key Specifications

- **Operating Voltage:** 1.8V to **6.0V**.
- **Temperature Range:** -40°C to +85°C with ±0.3°C typical accuracy.
- **Humidity Range:** 0% to 100% RH with ±2% typical accuracy.
- **Resolution:** 0.01°C for temperature and 0.024% for humidity.
- **Communication:** I²C (Default Address: 0x38).

Notable Features

- **Fully Calibrated:** It provides a calibrated digital signal directly, eliminating the need for complex external calibration.
- **Internal Components:** Equipped with a dedicated ASIC-specific chip and an improved MEMS semiconductor capacitive humidity sensor.
- **Energy Efficiency:** Extremely low power consumption (under 100 nA in sleep mode), making it ideal for battery-powered IoT devices.

Pinout Configuration

Pin	Name	Function	Typical Connection
1	VIN / VCC	Power Supply (1.8V to 6.0V)	3.3V or 5V pin
2	GND	Ground	GND pin
3	SCL	I ² C Serial Clock	SCL / A5 (Arduino Uno)
4	SDA	I ² C Serial Data	SDA / A4 (Arduino Uno)

Wiring & Integration Details

- **Voltage Levels:** While the raw AHT10 chip operates at 1.8V–3.6V, most modules include an onboard voltage regulator (like the XC6206) and level shifters, making them safe for use with 5V systems like the Arduino Uno.
- **Pull-up Resistors:** Stable I²C communication requires pull-up resistors (typically 4.7kΩ or 10kΩ) on the SDA and SCL lines. Most pre-assembled modules already have these built-in.
- **I²C Address:** The default hardware address is 0x38.



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

Arduino example code

To use the AHT10 sensor with an Arduino, the most common and reliable method is using the **Adafruit AHTX0** library.

This script initializes the sensor and prints temperature and humidity data to the Serial Monitor every 2 seconds.

```
#include <Wire.h>
#include <Adafruit_AHTX0.h>

Adafruit_AHTX0 aht;

void setup() {
  Serial.begin(115200);
  Serial.println("AHT10 Sensor Test");

  // Initialize I2C and the sensor
  if (!aht.begin()) {
    Serial.println("Could not find AHT10. Check wiring!");
    while (1) delay(10);
  }
  Serial.println("AHT10 found and initialized.");
}

void loop() {
  sensors_event_t humidity, temp;

  // Get new sensor events with the latest data
  aht.getEvent(&humidity, &temp);

  // Print results to Serial Monitor
  Serial.print("Temperature: ");
  Serial.print(temp.temperature);
  Serial.println(" °C");

  Serial.print("Humidity: ");
  Serial.print(humidity.relative_humidity);
  Serial.println(" % rH");

  delay(2000); // Wait 2 seconds between readings
}
```

Implementation Notes

- **Baud Rate:** Ensure your Serial Monitor is set to 115200 to match the `Serial.begin(115200)` command.

- **Polling Frequency:** While this code polls every 2 seconds, the manufacturer recommends a polling frequency of 8 to 30 seconds for long-term stability and to avoid sensor self-heating.
- **Wiring:** Connect SDA to A4 and SCL to A5 on an Arduino Uno (or the dedicated SDA/SCL pins on other boards).

I²C topics on lamaPLC

Page	Date	Tags
• lamaPLC Communication: 1-Wire	2026/04/23 21:51	1-wire , communication , bus , microlan , i2c , uart , usart , ds18b20
• lamaPLC Communication: I²C	2025/09/23 21:25	i2c , i c , smbus , philips , bus , communication , arduino
• lamaPLC project: Sension SCD CO² measurement module	2026/04/15 19:34	scd30 , scd40 , scd41 , iaq , ndir , sensor , i2c , arduino code
• LamaPLC: AHT10 Modul	2026/03/22 03:14	communication , i2c , temperature , humidity , sensor , aht , aht 10 , modul
• LamaPLC: AHT20 / BMP280 Modul	2026/04/23 21:52	bmp280 , aht20 , adafruit , temperature , humidity , pressure , sensor , arduino , code , i2c
• LamaPLC: APDS - Avago ALS and proximity detection sensors with I²C communication	2026/04/23 21:52	avago , apds-9900 , apds-9930 , apds-9960 , als , proximity , detection , gesture recognition , gesture , i2c , communication , sensor , arduino , code
• lamaPLC: Arduino Modul: BME680	2026/05/12 18:40	code , c , 2026 , arduino , bme680 , sensor , i2c , comunication
• lamaPLC: AS5600 Magnetic Induction Angle Measurement Sensor Module	2026/05/13 00:06	communication , i2c , as5600 , as-5600 , magnetic , induction , angle , sensor
• lamaPLC: Bi-Directional Logic Level Converter 3.3V ↔ 5V	2026/04/12 00:34	bi-directional , logic level converter , i2c , uart , spi
• LamaPLC: BMP/BME Bosch Temperature/Humidity/Pressure sensors with I²C communication	2026/04/23 21:52	bme280 , bme680 , bme688 , bmp180 , bmp280 , hw-611 , hw611 , bosch , temperature , humidity , pressure , sensor , arduino , i2c , communication , ai , cjmcu , volatile organic compounds , vocs , volatile sulfur compounds , vscs , iaq
• LamaPLC: CJMCU-219/INA-219 breakout board/IC with I²C communication	2026/04/23 21:52	cjmcu-219 , ina-219 , ina219 , breakout board , i2c , communication , sensor , voltage , current , arduino , code , cjmcu
• LamaPLC: CJMCU-3216 / AP-3216 integrated digital ambient light and proximity sensor module/IC with I²C communication	2026/04/23 21:52	cjmcu-3216 , cjmcu , ap-3216 , ap3216 , ambient light , proximity , sensor , arduino , code , i2c , communication
• lamaPLC: CJMCU-811 CCS811 Gas Sensor (VOCs TVOC CO₂)	2026/04/23 21:52	cjmcu-811 , ccs811 , gas , sensor , vocs , tvoc , eco2 , co2 , arduino , air quality , metal oxide , mox , i2c , micropython , rp2040-eth
• LamaPLC: D6T Omron Non-Contact Thermal Sensors with I²C communication	2026/04/23 21:52	d6t , d6t-32l , d6t-44l , d6t-8l , d6t-1a , omron , non-contact , thermal , sensor , i2c , arduino , code

- [LamaPLC: DPS Infineon Temperature/Pressure sensors with I2C communication](#) 2026/04/23 21:52 [dps310, infineon, temperature, pressure, sensor, arduino, i2c, communication, code](#)
- [lamaPLC: Energy, power, current, and voltage](#) 2025/05/31 23:32 [i2c, i c, communication, arduino, energy, power, current, sensor, ina226 ens160, sciosense, gas-quality, i2c, communication, sensor, arduino, code, eco2, tvoc, aqi, indoor air quality, iaq, co2, voc](#)
- [LamaPLC: ENS ScioSense Multi-gas sensors with I²C communication](#) 2026/04/23 21:52 [esp8266, esp32, esp32-c2, esp32-c3, esp32-c5, esp32-c6, esp32-c61, esp32-h2, esp32-s2, esp32-s3, esp32-p4, espressif systems, communication, ethernet, ip, wi-fi, thread, zigbee, matter, homekit, bluetooth, mqtt, adc, spi, uart, i2c, i2s, rmt, pwm, usb, usb otg, twai](#)
- [lamaPLC: ESP32 / ESP8266](#) 2025/11/22 00:07 [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, ch4, natural gas, smoke, lng, co, co2, lpg, h2, iso-butane, nox, nh3, benzene, town gas, formaldehyde, propane, humidity, temperature, voc, grv gas sens v2](#)
- [LamaPLC: Gas sensors](#) 2023/07/01 17:29 [stmicroelectronics, lsm303dlhc, i2c, lsm303, sensor, gy-511, 6dof, pololu, module, arduino](#)
- [lamaPLC: GY-511 6DOF sensor module](#) 2026/04/23 21:52 [ak8963, gy-9250, mpu-9250, 9-axis, motion detection, magnetometer, communication, i c, i2c, spi](#)
- [LamaPLC: GY-9250 MPU-9250/6500 9-axis Attitude Sensor Board](#) 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: HDC Texas Instruments Temperature/humidity sensors with I²C communication](#) 2026/04/23 21:52 [i2c, 7-segment display, display, ht16k33, arduino](#)
- [lamaPLC: HT16K33 display controller](#) 2026/04/23 21:51 [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: HTU TE Connectivity temperature/humidity sensors with I²C communication](#) 2026/04/23 21:52 [i2c, i c, communication, arduino, energy, power, current, monitor, sensor, ina219, gy-219, ina226, gy-216, ina228, gy-228, ina237, ina238, ina260, ina3221, ina](#)
- [lamaPLC: INA modules with Arduino libraries](#) 2026/04/23 21:52 [i2c, i c, communication, arduino, energy, power, current, monitor, sensor, ina226, ina219, ina](#)
- [lamaPLC: INA226 - current/voltage/power monitor with I²C communication](#) 2026/04/23 21:52 [i2c, i c, communication, arduino, energy, power, current, monitor, sensor, ina226, ina219, ina](#)

• lamaPLC: LCD 1602/2004 with I ² C communication	2026/02/14 18:27	communication, i2c, display, lcd, 1602, 2004, hd44780, pcf8574, pcf8574t, pcf8574at, arduino
• LamaPLC: MAX30100/MAX30102 Heart Rate Click Sensor Module	2026/04/23 21:52	max30102, max30100, heart rate click, sensor, communication, i2c, arduino, code
• lamaPLC: MCP23017 / MCP23S17 16-Bit I/O Expander with Serial Interface I ² C / SPI	2026/04/23 21:52	communication, i2c, mcp23017, mcp23s17, spi, i o expander, serial, cjmcu-2317, cjmcu
• lamaPLC: MLX90614 (GY-906) infrared non-contact thermometer	2026/05/08 00:03	communication, i2c, temperature, mlx90614, gy-906, modul, infrared, non-contact thermometer, dsp, pwm, smbus, hailege
• lamaPLC: PCF857x I/O Expander chip/modul with I ² C communication	2026/05/15 01:03	communication, i2c, pcf857x, pcf8574, pcf8574a, pcf8575, i o expander, i o extension, nxp, texas instruments
• LamaPLC: Pixart PAJ7620U2 Gesture recognition sensors/module with I ² C communication	2026/04/23 21:52	paj7620u2, gy-paj7620, pixart, gesture recognition, i2c, communication, sensor, arduino, code
• lamaPLC: RP2040_ETH_Modul: I ² C scanner	2026/05/12 16:20	code, micropython, 2026, rp2040 eth, i2c, comunication
• lamaPLC: RP2040_ETH_Modul: MLX90614 simple	2026/05/12 17:06	code, micropython, 2026, rp2040 eth, i2c, communication, mlx90614
• lamaPLC: RP2040_ETH_Modul: Read BME 680/688 sensor data	2026/05/12 21:06	code, micropython, 2026, rp2040 eth, bme680, i2c, sensor, communication
• lamaPLC: RP2040_ETH_Modul: Read BME 680/688 sensor data and store in Modbus input registers	2026/05/12 18:58	code, micropython, 2026, rp2040 eth, bme680, i2c, sensor, communication
• LamaPLC: SC16IS750 / SC16IS752: One or two serial (UART) ports from microcontroller via I ² C or SPI communication	2026/04/23 21:52	cjmcu-750, cjmcu-752, cjmcu, nxp, sc16is750, sc16is752, uart, serial, i2c, spi, modul, converter, arduino, code
• LamaPLC: SGP Sensirion TVOC/VOC sensors with I ² 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 ² C communication	2026/04/23 21:52	sht20, sht21, sht25, sht30, sht31, sht35, sht40, gy21, temperature, humidity, i2c, communication, sensor, arduino, code
• lamaPLC: Signal level converters	2026/02/14 23:47	pca9306, i2c, voltage, level, converter
• lamaPLC: st756x display drivers	2026/05/20 16:17	display, driver, i2c, spi, lcd, cog, oled, st7565, st7567, gm12864, gm12864-59n, gm12864-03a, gm12864-01a, gme12864-41
• lamaPLC: TCA9548A (HW617); Low-Voltage 8-Channel I ² C Switch Module	2026/02/14 23:51	tca9548a, hw617, i2c, switch, communication, expansion board, arduino
• lamaPLC: TM1637 7-segment display	2026/02/14 18:26	i2c, 7-segment display, display, tm1637, arduino

- [LamaPLC: TOFnnnC STMicroelectronics Time-of-Flight \(ToF\) sensors with I²C communication](#) 2026/04/23 21:52 [tof050c, vl6180, tof200c, vl5310x, tof400c, vl5311x, stmicroelectronics, time-of-flight, tof, i2c, communication, sensor, arduino, code](#)
- [LamaPLC: VL53Lnn STMicroelectronics time-of-flight \(ToF\) laser-ranging sensors with I²C 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 I²C communication](#) 2026/04/23 21:52 [vl6180x, stmicroelectronics, time-of-flight, tof, i2c, communication, sensor, arduino, code](#)
- [lamaPLC: XGZP68xx: Silicon Pressure Sensors/Module](#) 2026/05/15 15:17 [communication, i2c, sensor, modul, pressure, cfsensor, xgzp68xx, xgzp6810d, xgzp6857d, xgzp6859d, xgzp6887d, xgzp6897d, xgzp6899a, piezoresistive, capacitive](#)
- [Magnetic angle sensors](#) 2026/04/23 21:52 [magnetic angle sensor, magnetic flux, sensor, spi, i2c, pwm, communication, modul, as5047p, as5600, mt6701, mt6816, mt6835, tle5012b, amr, gmr, tmr, anisotropic magnetoresistive](#)
- [SSH1106/SSD1306 OLED Display with I²C communication](#) 2026/02/14 18:27 [i2c, oled, display, ssd1306, sh1106, ssh1106, arduino, cmos](#)

[communication, i2c, temperature, humidity, sensor, aht, AHT 10, modul](#)

This page has been accessed for: Today: 1, Until now: 203

From: <https://lamaplc.de/> - **lamaPLC**

Permanent link: <https://lamaplc.de/doku.php?id=sensor:aht10>

Last update: **2026/05/13 00:01**

