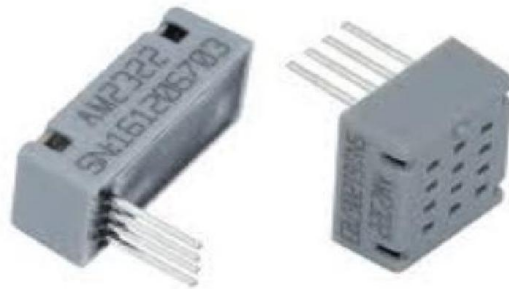


AM2322



Introduction

AM2322 digital temperature and humidity sensor is a calibrated digital signal output already contains temperature and humidity sensor complex. Using special temperature and humidity acquisition technology to ensure that products with high reliability and excellent long-term stability. Sensor comprises a capacitive humidity sensing element and a high-precision integrated temperature measurement devices, and connected with a high-performance microprocessor. The product has excellent quality, fast response, anti-interference ability, high cost and other advantages.

AM2322 communication method using a single bus, standard I 2 C two means of communication. Standard single bus interface, system integration becomes easy and quick. Ultra-small size, low power consumption, signal transmission distance up to 20 meters, making it the best choice for all kinds of applications and even the most demanding applications. I 2 C communication using standard communication sequence, the user can directly linked to the I 2 C communication bus, no additional wiring, simple to use. Two means of communication are used as humidity, temperature and check CRC and other digital information directly output temperature-compensated, users do not need to calculate the digital output for the second, and no need for humidity, temperature compensation, you can get an accurate temperature and humidity information.

Two means of communication are free to switch, the user can freely choose, easy to use, it should be broad areas. Products for the 4-wire, easy connection, special packages can be provided according to user needs.

Application

HVAC, dehumidifiers, testing and detection equipment, consumer goods, automobiles, automatic control, data loggers, weather stations, home appliances, humidity regulator, medical, and other related humidity measurement and control.

Features

Completely interchangeable, low cost, long-term stability, relative humidity and temperature measurement, long distance signal transmission, the digital signal output, precise calibration, low power consumption, standard single-bus digital interface standard I²C-bus digital interface, communication mode can be selected freely.

Interface

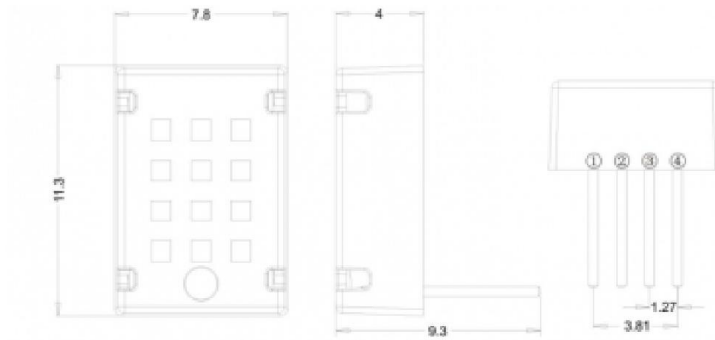


图1 AM2322 外形尺寸

interface 外部接口: 1:VDD 2:SDA 3:GND 4:SCL

Performance

Humidity

- Resolution 0.1% RH
- Range 0 99.9% RH
- Accuracy 1 25 °C ± 2% RH
- Repeatability ± 0.1% RH
- Interchangeability fully interchangeable
- Response time $2.1 / e$ (63%) < 5 S
- Hysteresis ± 0.3% RH
- Drift 3 Typical values < 0.5% RH / yr

Temperature

- Resolution 0.1 °C 16 bit
- Accuracy ± 0.3 °C
- Range -40 80 °C
- Repeatability ± 0.2 °C
- Interchangeability fully interchangeable
- Response time $1 / e$ (63%) < 5 S
- Drift ± 0.1 °C / yr

Electric Features

- 3.1 5 5.5 V supply voltage
- Power

Sleep 8 10 μA
Measuring 500 μA
Average 200 250 μA

- Low-level output voltage $V_{OL} = 0.3 V_{DD}$
- High-level output voltage $V_{OH} > 0.9 V_{DD}$
- Low-level input voltage drops $V_{IL} = 0.3 V_{DD}$
- High-level input voltage rises $V_{IH} = 0.7 V_{DD}$
- $R_{pu} = 6 k\Omega$ $V_{DD} = 5V$ $V_{IN} = V_{SS}$:

30 45 60 $k\Omega$

- Output current:

Open 8 mA

Tri-state (OFF) 10 20 μA

- Sampling period 2 S

Documents

- [datasheet in Chinese](#)
- [Arduino library at here](#)
- More aosong products see here [Aosong](#).