

Digital Relative Humidity and Temperature Sensor AM2302



1. Feature&Application

- High precision
- Capacitive type
- Full range temperature compensated
- Relative humidity and temperature measurement
- Calibrated digital signal
- Outstanding long-term stability
- Extra components not needed
- Long transmission distance, up to 100 meters
- Low power consumption
- 4 pins packaged and fully interchangeable

2. Description

AM2302 output calibrated digital signal. It applies exclusive digital-signal-collecting-technique and humidity sensing technology, assuring its reliability and stability. Its sensing element is connected with 8-bit single-chip computer,

Every sensor of this model is temperature compensated and calibrated in accurate calibration chamber and the calibration-coefficient is saved in type of programme in OTP memory, when the sensor is detecting, it will cite coefficient from memory. Small size & low consumption & long transmission distance (100 m) enable AM2302 to be suited in all kinds of harsh application occasions.

Single-row packaged with four pins, making the connection very convenient.

3. Technical Specification

Model	AM2302
Power supply	3.3-5.5 V DC
Output signal	digital signal via 1-wire bus
Sensing element	Polymer humidity capacitor
Operating range	humidity 0-100%RH; temp -40~80 C
Accuracy	humidity \pm 2%RH (max \pm 5%RH); temp \pm 0.5 C
Resolution or sensitivity	humidity 0.1 %RH; temp 0.1 $^{\circ}$ C
Repeatability	humidity \pm 1%RH; temp \pm 0.2 C
Humidity hysteresis	\pm 0.3%RH
Long-term Stability	\pm 0.5%RH/year
Interchangeability	fully interchangeable

