Humidity & Temperature Sensor SHT71

The SHT71 humidity and temperature sensor is designed for demanding applications. Every sensor is individually calibrated in a precision humidity chamber and supplies a fully calibrated, digital signal for relative humidity and temperature. Innovative CMOSens® technology guarantees 100% interchangeability without recalibration and provides for attractive system cost and a very user-friendly system.

- Relative humidity & temperature
- Dew point
- Fully calibrated
- Interchangeable without recalibration
- Digital 2-wire interface
- Excellent long-term stability
- Cost-effective

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Humidity & Temperature
Sensor SHT71

Features
- Combined relative humidity and temperature measurement
- Precise dew point measurement
- Fully calibrated, interchangeable without recalibration
- Ultra fast response time
- Digital 2-wire interface (no external components required)
- Ultra small size (20.0 x 3.7 x 3.1 mm)
- High reliability
- Optimized for long-term stability
- Fully immersible
- Low power due to measurement on demand
- Self test capability of sensor elements
- Heatable sensor elements for excellent precision and stability

Specifications

Relative Humidity (RH)
- Range: 0 to 100 % RH
- Accuracy: ± 3.5 % RH (20 to 80 % RH)
- Response time: ≤ 3 sec.
- Reproducibility: ± 0.1 % RH
- Resolution: 0.03 % RH
- Operating temperature: –40°C to 120°C

Temperature (T)
- Range: –40°C to 120°C
- Accuracy: ± 0.5°C @ 25°C, ± 0.9°C (0°C – 40°C)
- Response time: ≤ 15 sec.
- Reproducibility: ± 0.1°C
- Resolution: 0.01°C

Electrical Data
- Power consumption:
  - typ. 30 μW (@ 5 V, 12-bit, measure every 2 sec.)
  - typ. 1 μW (@ 2.4 V, 8-bit, measure every 2 min.)
- Supply voltage range: 2.4 to 5.5 V
- Input current during measurement: 0.5 mA
- Input current standby: 0.3 μA

Packaging Information
- Pluggable pin-type packaging for 1.27 mm sockets
- The whole system, including packaging, is qualified

powered by

CMOSens®
technology

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