The HTU31 humidity & temperature sensor is one of the smallest and most accurate humidity sensors on the market. Available in digital and analog versions, the HTU31 provides fast response time, precision measurement, low hysteresis and sustained performance, even in the harshest environments.

**Product Type:** RHT  
**Supply Voltage (Peak):** 6 V  
**Current Consumption:** 0.76 mA  
**Humidity Operating Range:** 0 - 100 %RH  
**Operating Temperature Range:** -40 - 125 °C, -40 - 125 °C  

**HTU31 is one of the smallest and most accurate humidity sensors on the market.**  
Our precision engineering and 20+ years of experience in humidity and temperature combination sensors, enables us to provide fast response time, precision measurement, low hysteresis and sustained performance even when exposed to extreme temperature (-40° to 125°C) and humidity environments (0%-100%).  
The HTU31 humidity sensor includes both digital (D) and analog (V) versions, and combines multiple functions and various interfaces (I2C, analog, voltage output) with an application-friendly operating voltage range (3.3-5.5V with 5V typical) and a small footprint of 2.5 x 2.5 x 0.9mm. The HTU31 humidity and temperature sensor is available in small and large volumes to meet the ever-changing demands of our customers.
WHITE PAPERS

Sensors in Sleep Apnea and Sleep Study Equipment
Sleep monitoring and sleep therapy is the fastest growing segment of the IoMT healthcare market. Learn how sensing technologies are being used to diagnose and treat sleep disorders.

The Importance of Controlling Humidity in Residential and Commercial Environments
Learn about the importance of controlling humidity in commercial and residential environments, and the role sensor products play.

HTU31 Humidity & Temperature Sensor Product Overview (English)
TE Connectivity’s HTU31 Humidity & Temperature Sensor is one of the smallest and most accurate humidity sensors on the market. The HTU31 provides fast response time, precision measurement, low hysteresis and sustained performance, even in the harshest of environments. Watch this video to learn more.

Benefits
- High reliability and environmental robustness
- Full interchangeability with no calibration required in standard conditions
- Quick recovery after long periods in saturation phase
- Compatible with automatic assembly processes
- Reflow solderable
- Individual marking for compliance to stringent traceability requirements
- Lead free sensor
- Low power consumption

Applications
- Home Appliance
- Medical
- Printers
- HVAC
- Automotive
- Meteorology
- Environmental Monitoring
FEATURES

**Product Type Features**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
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<tr>
<td>Product Type</td>
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<td>Sensor Type</td>
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**Electrical Characteristics**

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**Usage Conditions**

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<tr>
<td>Humidity Operating Range (%RH)</td>
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<tr>
<td>Operating Temperature Range (°C)</td>
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<td>Operating Temperature Range (°F)</td>
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## Products (1 of 2)

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<tr>
<th>TE Model / Part #</th>
<th>Sensor Type</th>
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<td>MEAS HTU</td>
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<td>10142048-00</td>
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<td>MEAS</td>
<td>MEAS HTU</td>
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*EU RoHS Directive 2011/65/EU*

These products comply with the substance restrictions of the Restriction on Hazardous Substances Directive 2011/65/EU (RoHS2). The RoHS2 Directive requires that certain electrical and electronic equipment products do not contain mercury, cadmium, hexavalent chromium, PBB, PBDE, lead, DEHP, BBP, DBP and DIBP above defined thresholds. Products indicated as ‘Compliant’ do not contain any of these substances above the prohibition thresholds. Finished electrical and electronic equipment products will be CE marked as required by the Directive. Components may not be CE marked.

**EU ELV Directive 2000/53/EC**

These products comply with the substance restrictions of the End of Life Vehicles Directive 2000/53/EC (ELV). The ELV Directive requires that materials and components of vehicles do not contain mercury, cadmium, hexavalent chromium, and lead above defined thresholds. Products indicated as ‘Compliant’ do not contain any of these substances above the prohibition thresholds.
HTU31 High Accuracy RH/T Sensor

TE Model #: HTU31
TE Internal #: CAT-HSC0007

Products (2 of 2)

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HTU31 High Accuracy RH/T Sensor
TE Model #: HTU31
TE Internal #: CAT-HSC0007

Related Materials

Data Sheet
HTU31V RHT SENSOR IC ANALOG
English

Data Sheet
HTU31D RHT SENSOR IC DIGITAL
English

Also in the Series

Humidity Sensor Assemblies(2)
Humidity Sensor Components(2)