



HUMIDITY AND TEMPERATURE COMBINATION SENSORS FOR ENERGY EFFICIENT APPLICATIONS

The demand for smaller, faster, more accurate and energy efficient sensors which provide better analysis of moisture control, is on the rise. From refrigerators to respirators, HVAC systems to cabin comfort in vehicles, there is an increasing trend for humidity sensing technology. To compete in today's ever-increasing competitive market, sensors must be more efficient and cost-effective, characterized by smaller size and precision measurement. 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 most harshest environments.

DESIGN QUESTIONS?

- What is the lag in response time or how long does it take for the sensor to return to its normal operating state?
- What is the measurement range for the humidity sensor?
- What is the measurement range for the temperature sensing?
- What is the response time?

- HVAC
- REFRIGERATORS, FREEZERS
- RESPIRATORS, VENTILATORS
- PRINTERS
- WASHING MACHINES, DRYERS

[FIND OUT MORE](#)


CHOOSE SENSORS ACCORDING TO YOUR APPLICATION



	HTU31D	HTU31V	HTU21D	HTU21DF	HTU21P	HTU20D	HTU20DF	HTU20P
Output	Digital I ² C	Analog Direct Voltage	Digital I ² C	Digital I ² C	Analog PWM	Digital I ² C	Digital I ² C	Analog PWM
Filter	No	No	No	Yes	No	No	Yes	No
RH Accuracy 20%RH to 80%RH	±2%RH Typ / ±2.5%RH Max Fully calibrated		±2.5%RH Typ / ±3%RH Max Fully calibrated			±3%RH Typ / ±5%RH Max Fully calibrated		
DFN Package Size (mm)	2.5x.25x0.9		3.0x3.0x0.9					
Power Supply (V)	3 - 5.5		1.5 - 3.6					
Operating Range	Relative Humidity: 0 -100%RH Temperature: -40°C / 125°C Maximum Humidity of 250g/Kg							
T° Accuracy 5°C - 60°C	±0.2°C Typ / ±0.3°C Max		±0.3°C Typ / ±0.4°C Max Fully calibrated					

PRECISE ENGINEERING

- Strict linear response curve through humidity (0-100%) and temperature (-40 to 125°C) respectively
- Specific polymer combined with calibration slope and offset skills

FAST RESPONSE TIME

- Industry leading response time (t63% in 5 sec)
- Even after condensation the response time is t63% in 10 sec, enabling sustained system performance
- An optional filter membrane is specially designed to support harsh environments

HIGH PERFORMANCE

- Specific die structure and IP67 rated sealing with filter options
- Even after high humidity and temperature exposure or condensation events

te.com/sensorsolutions

TE Connectivity and TE connectivity (logo) are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2020 TE Connectivity Ltd. family of companies All Rights Reserved.

SS-TS-TE701 01/2020

