

Humidity Sensor Units

Element type

CHS-ESS series

Issue date: May 2010

- All specifications are subject to change without notice.
 - Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.
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Humidity Sensors

CHS Series CHS-ESS Type

Conformity to RoHS Directive

Based on TDK's unique manufacturing technology for polymeric materials and precision fabrication technology, these variable resistance humidity sensing elements are made by combining specially selected, high quality materials to deliver excellent resistance against water and various gases. This consists of a humidity sensing material, a conductive polymer film, applied on an electrode board and provides a wide range of impedance variation in response to changes in humidity.



FEATURES

- Small and responsive.
- Minimal variation for excellent detection accuracy.
- Highly resistant to water and gases.
- As assembled products, they support a wide range of applications that make full use of their features

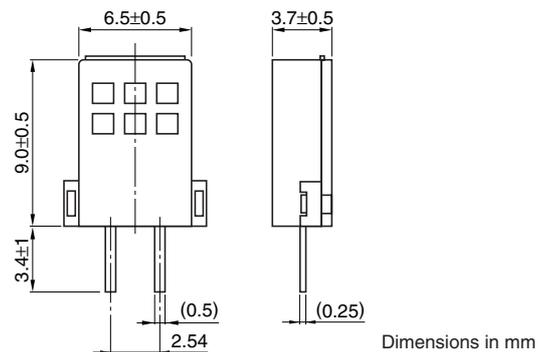
APPLICATIONS

Air conditioners, humidifiers, dehumidifiers, dryers, refrigerators, PPC, LBP, etc.

SPECIFICATIONS

Rated voltage Eac	5V max.
Rated power	0.5mW max.
Temperature ranges	Operating 0 to 60°C Storage -20 to +85°C
Humidity ranges	Operating 10 to 90(%RH) Storage 5 to 95(%RH)
Impedance characteristics	40kΩ [25°C, 50(%RH)]
Nominal accuracy	±5(%RH) [26 to 62kΩ]
Hysteresis	1(%RH) typ.
Response time	1min typ.

SHAPES AND DIMENSIONS



REMINDERS FOR USING THESE PRODUCTS

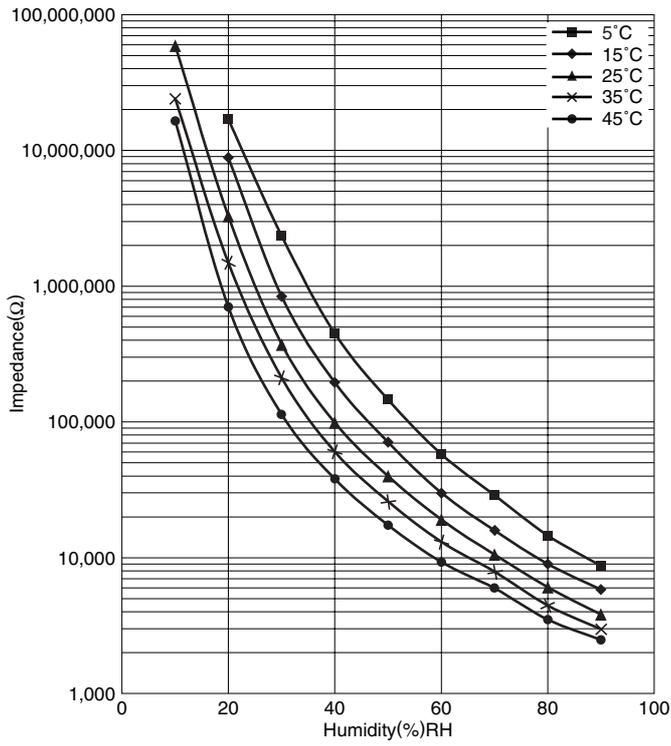
- These products were designed to be used only with AC. Never use DC because doing so can result in severe damage to the product, including the electrolysis and peeling of the humidity sensing material.
- Please note that even when AC is used, the product will sustain the same type of damage as when DC is used if residual DC components or asymmetrical waveforms are present.
- The operational lifetime of these products can be shortened dramatically depending on the operating conditions and storage conditions. If you intend to use these products in any of the types of environment listed below, please confirm and estimate their operating lifetimes ahead of time:
 - (1) Environments in which they are exposed to corrosive gases and/or large amounts of dust.
 - (2) Environments in which they are exposed to high levels of temperature and humidity and/or sudden temperature changes.
 - (3) Environments in which they are exposed to extreme condensation and/or direct exposure to water or salt water.
- Please implement measures to prevent gases from entering the sensor, such as jigs for sealing off the sensors, during processes in which gases are produced from decomposing flux, for example, during solder flow.

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ELECTRICAL CHARACTERISTICS TEMPERATURE CHARACTERISTICS

Eac 1V, 1kHz



FREQUENCY CHARACTERISTICS

Eac 1V, 25°C

