

# Humidity and Temperature Sensor



KELSIUS

with SHT75 Sensirion Technology

The Kelsius Humidity and Temperature sensor is a wireless sensor and can measure ambient temperatures from **-40°C to +123.8°C** and humidity from **0% RH to 100% RH (relative humidity)**.

Maintaining both temperature and RH at the ideal recommended specifications (specific for each storage condition or product type) during transport and storage is vitally important to maintain products in maximum condition and increase shelf life.

When the RH of the atmosphere reaches saturation (100%), water vapour will condense on the surface of the produce. The temperature at which condensation forms is called the dew point, and it is the most useful humidity parameter when dealing with condensation problems. Psychrometric charts are often used to determine the relationship between temperature, RH, and dew point.

Unwanted condensation on products may encourage disease or mould development, resulting in decay and loss of product. Condensation can also damage infrastructure, product, product labels or packaging materials.



Temperature



Radio Transmission



Humidity



### Applications:

- ✓ Healthcare & life science
- ✓ Pharmaceutical, Biomedical Engineering
- ✓ Server rooms and data centres
- ✓ Food transport, storage and distribution
- ✓ Museum & historical applications

Specification			
<b>Product Code:</b>	K101SH	<b>Temperature Range:</b>	±0.4°C from -10°C to +123.8°C (±0.9°F from +14°F to +190.84°F) ±1.0°C from -40°C to -10°C (±1.8°F from 49°F to +14°F)
<b>Battery Lifetime:</b>	Greater than 5 years	<b>Temperature Resolution:</b>	0.1°C/F over full temperature measurement range
<b>Battery Type:</b>	LithiumTiCl 3.6V 2Ahr. AA size	<b>RH Operating Range:</b>	0% RH - 100% RH, non-condensing Humidity Accuracy Range ±3.0% RH from 10% RH - 90% RH
<b>Range:</b>	100 meters. (the use of Kelsius Repeaters can allow greater distances)	<b>Relative Humidity Resolution:</b>	0.1% RH
<b>Operating Range:</b>	Humidity 0 to 100% RH Temperature -35°C to +50°C	<b>Dimensions:</b>	65mm W x 50mm H x 36mm D
<b>Typical Accuracy:</b>	+/- 0.2°C (1°F)	<b>Weight:</b>	Approximately 80 g (2.1 oz)
<b>Accuracy drift:</b>	0.05°C within five years	<b>Quality Assurance Certifications:</b>	CE, RTCA - D016ØG compliant, RoHS compliant
<b>Radio Freq Band:</b>	915MHz (USA) 868MHz (Europe)	<b>Data Sampling Intervals:</b>	Programmable from 30 seconds up to a maximum of 120 minutes in 30 second increments
<b>Multi Use Temperature Measurement Range:</b>	-40°C to +123.8°C (40°F to +190.84°F)	<b>Programmable Alarms:</b>	High and Low Temperature alarms, High and Low Humidity alarms