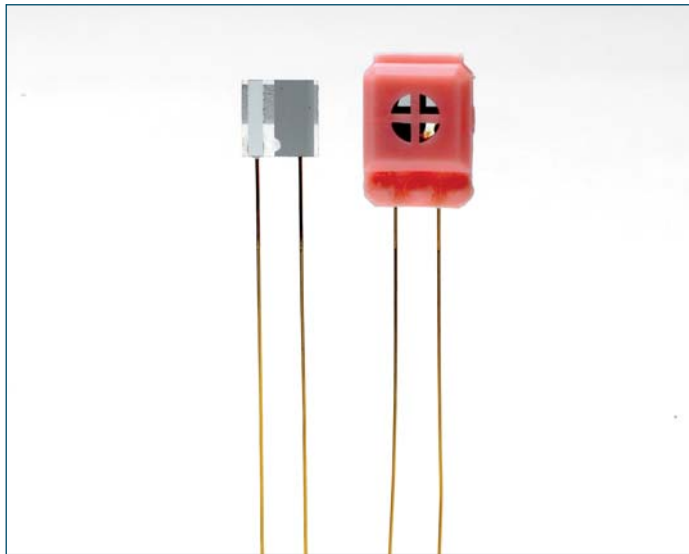


H5000 & 5100

Capacitive Relative Humidity Sensor

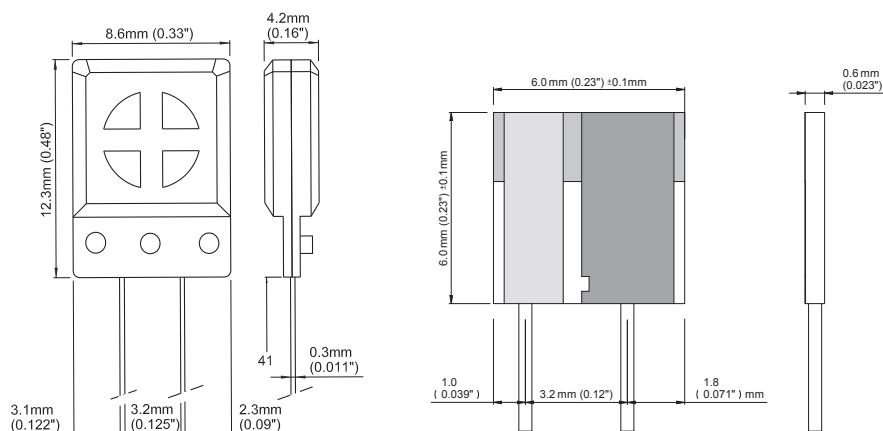


The operating principle of these capacitive relative humidity sensors are based on the hygroscopic properties of their polymer, which is used like a dielectric in a capacitor. The polymer gets in equilibrium with its humid environment quickly, and reversibly, and changes its capacity value depending on the humidity level.

Highlights

- Capacitive thin film sensor
- Measuring range: RH 0–100%, Temp: -30 to +200°C (-22 to +365°F)
- Mixing ratio: 250g (8.82oz) water/kg of dry air
- Low hysteresis
- Response time: 4 seconds

Dimensions



Technical Specifications

	H5000	H5100
Response time 90% of scale for a step change from 11% to 75% RH	4 sec	4 sec
Operating range Humidity Temperature	0–100% RH -30 to +200°C (-22 to +392°F)	0–100% RH -30 to +100°C (-22 to +212°F)
Pressure	0.04–30 bar (0.6–400 psi)	0.04–30 bar (0.6–400 psi)
Mixing ratio	250g (8.82oz) water/Kg dry air	
Nominal capacity 75% RH @ 23°C (73°F)	500 pF ± 10%	
Sensitivity 11–75% RH @ 23°C (73°F)	0.86 pF / % RH	
Linearity 11–90% RH @ 23°C (73°F)	± 2.5% RH	
Long term stability (12 months) control @ 11% RH	< 1% at 23°C (73°F)	
Maximum air speed (without protection)	< 20m/sec	
Hysteresis	Typical value = 0.5% RH	
D Factor loss tangent @10 KHz 75% RH @ 23°C (73°F)	Typical value = 0.007	
Supply voltage Peak-to-peak	2.5 V AC DC component < 0.2 V	
Operating frequency range	5–300 KHz	
Protection cap	No	Yes
Weight	0.1g (0.0004oz)	1g (0.035oz)

Order Codes

H5-000 without protective housing	Minimum order 50 pieces
H5-100 with protective housing	Minimum order 50 pieces