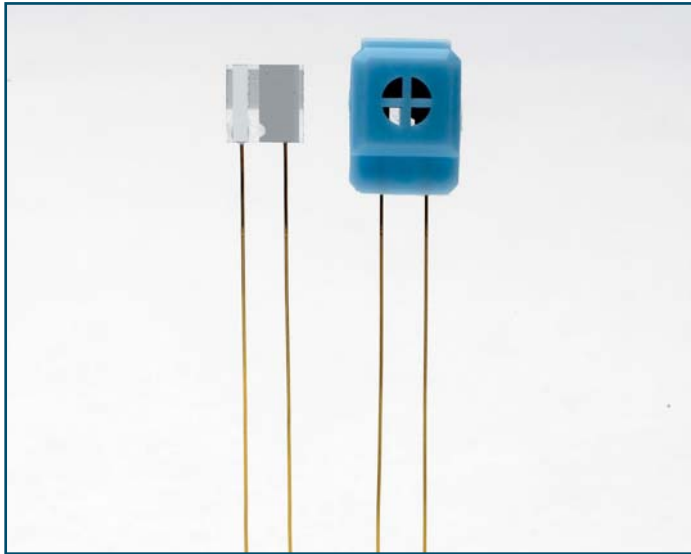


# H6000 & 6100

## Capacitive Relative Humidity Sensor



The operating principle of 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

- Suitable for corrosive atmosphere
- Teflon coated
- Capacitive thin film sensor
- Measuring range: 0–100% RH, Temp: -30 to +200°C (-22 to +365°F)
- Mixing ratio: 250g (8.82oz) water/kg of dry air
- Low hysteresis
- Response time: 20 seconds

### Technical Specifications

|                                                                          | H6000                                         | H6100                                         |
|--------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| <b>Response time</b><br>90% of scale for a step change from 11 to 75% RH | 20 sec                                        | 20 sec                                        |
| <b>Operating range</b><br>Humidity<br>Temperature                        | 0–100% RH<br>-30 to +200°C<br>(-22 to +392°F) | 0–100% RH<br>-30 to +100°C<br>(-22 to +212°F) |
| Pressure                                                                 | 0.04–30 bar<br>(0.6–400 psi)                  | 0.04–30 bar<br>(0.6–400 psi)                  |
| <b>Mixing ratio</b>                                                      | 250g (8.82oz) water/Kg dry air                |                                               |
| <b>Nominal capacity</b><br>75% RH @ 23°C (73°F)                          | 500 pF ± 10%                                  |                                               |
| <b>Sensitivity</b><br>11–75% RH @ 23°C (73°F)                            | 0.86 pF / % RH                                |                                               |
| <b>Linearity</b><br>11–90% RH @ 23°C (73°F)                              | ± 2.5% RH                                     |                                               |
| <b>Long term stability</b><br>(12 months) control @ 11% RH               | < 1% at 23°C (73°F)                           |                                               |
| <b>Max. air speed</b><br>(without protection)                            | < 20m/sec                                     |                                               |
| <b>Hysteresis</b>                                                        | Typical value = 0.5% RH                       |                                               |
| <b>D Factor loss tangent @10 KHz</b><br>75% RH @ 23°C (73°F)             | Typical value = 0.007                         |                                               |
| <b>Supply voltage</b><br>Peak-to-peak                                    | 2.5 V AC<br>DC component < 0.2 V              |                                               |
| <b>Operating frequency range</b>                                         | 5/300 KHz                                     |                                               |
| <b>Protection cap</b>                                                    | No                                            | Yes                                           |
| <b>Weight</b>                                                            | 0.1g (0.0004oz)                               | 1g (0.035oz)                                  |

### Order Codes

|                                   |                                |
|-----------------------------------|--------------------------------|
| H6-000 without protective housing | <b>Minimum order 50 pieces</b> |
| H6-100 with protective housing    | <b>Minimum order 50 pieces</b> |

### Dimensions

