HUMIDITY

FLOW

TEMPERATURE

P-14
Capacitive Humidity Sensor

Product

The P-14 humidity sensor was specially developed to satisfy the wide range of applications in the heating-ventilation and airconditioning sector. By the consistent use of state of the art production technologies and our extensive know-how in the field of high performance polymers, we have succeeded in producing a high quality sensor with an almost linear characteristic. The possibility for selecting the electrical connections provides users with ideal opportunities for implementing their own sensor design without limitation.

Advantages

- Applicable in white goods, tests and measurement, HVAC technology, industrial
- Excellent long term stability
- Dewing resistant – fast recovering time after dewing, also at very high dewpoint temperatures
- High resistance to various chemicals
- Wide temperature operating range
- Various wired solutions available
- RoHs conform

Technical Data

	Wired	SMD
		
Humidity Operating Range:	0 ... 100% relative humidity	0 ... 100% relative humidity
Operating Temperature Range:	-50 ... +150 deg C	-50 ... +150 deg C
Capacitance (at 23 deg C and 30% RH):	150 pF ± 50 pF	180 pF ± 50 pF
Sensitivity (15 ... 90% RH):	0,25 pF / % RH	0,30 pF / % RH
Loss Factor (at 23 deg C, at 10kHz, at 90% r.H.):	< 0.01	< 0.01
Accuracy (15 ... 90% RH at 23 deg C, after one point calibration):	< 1,5% RH	< 1,5% RH
Hysteresis:	< 1,5% RH	< 1,5% RH
Response Time T_{63}:	< 5 s (50% RH → 0% RH)	< 5 s (50% RH → 0% RH)
Frequency Range:	1 ... 100 kHz (recommend 10 KHz)	1 ... 100 kHz (recommend 10 KHz)
Maximum Operating Voltage:	< 12 Vpp AC	< 12 Vpp AC
Signal Form:	alternating signal without DC bias	alternating signal without DC bias
Connectors:	Wires or customer specific	SMD

IST
INNOVATIVE SENSOR TECHNOLOGY

IST AG, Industriestrasse 2, CH-9630 Wattwil, Switzerland, Phone (+)41 71 987 73 73, Fax (+)41 71 987 73 77
e-mail info@ist-ag.com, www.ist-ag.com

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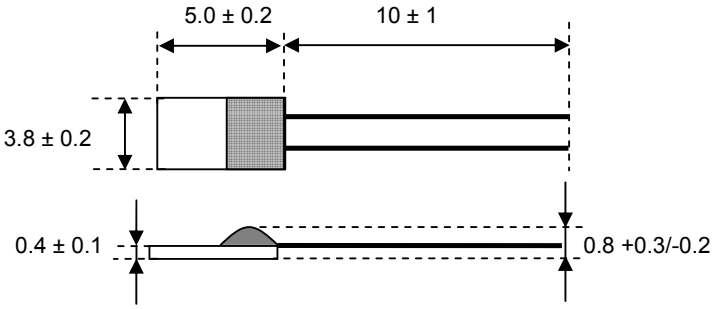
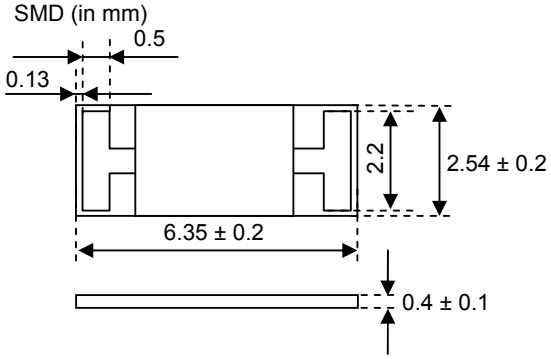
Construction Sizes

Wired (in mm)

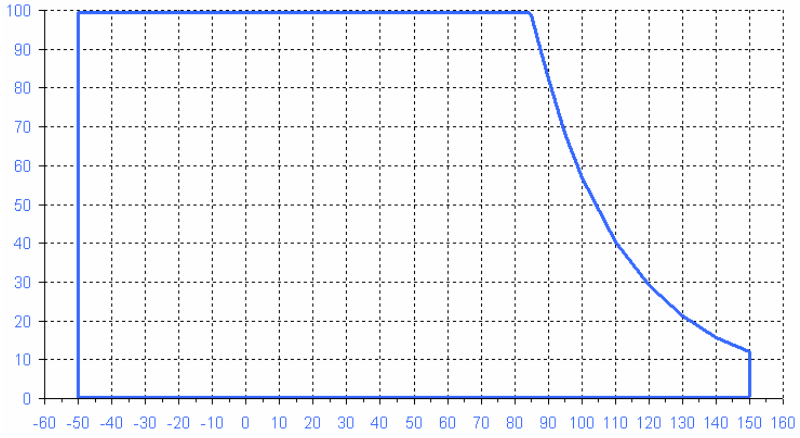


SMD (in mm)



Humidity-Temperature-Range

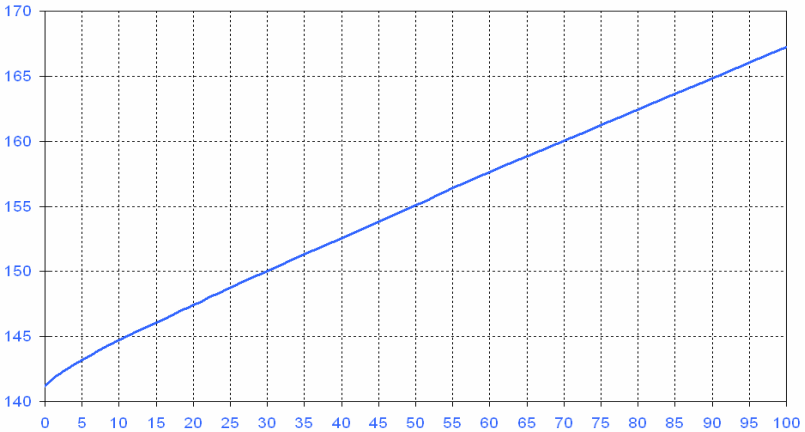
Relative Humidity (%)



Temperature (deg C)

Sensor Characteristic

Capacitance (pF)



Relative Humidity (%)

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INNOVATIVE SENSOR TECHNOLOGY

ISO 9001

IST AG, Industriestrasse 2, CH-9630 Wattwil, Switzerland, Phone (+)41 71 987 73 73, Fax (+)41 71 987 73 77
e-mail info@ist-ag.com, www.ist-ag.com