

K5-W

Capacitive Humidity Sensor Optimal for low humidity measurement

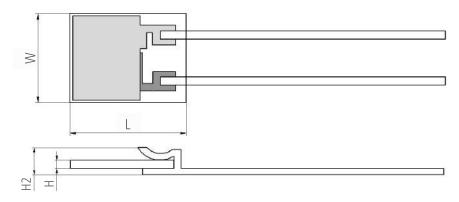






- Very stable at low humidity
- High chemical resistance
- Wide temperature range
- Condensation resistant
- Very low drift
- Customer specific sensor available upon request

Illustration¹⁾



1) For actual size, see dimensions

Technical Data

Dimensions (L x W x H / H2 in mm):	5 x 3.81 x 0.4 / 1.2	
Operating humidity range:	0 % RH to 100 % RH	
Operating temperature range:	-40 °C to +150 °C	
Capacitance (C ₃₀):*	200 pF ±50 pF (at 30 % RH and +23 °C)	
Sensitivity (at $C_{30} = 200 \text{ pF}$):	0.4 pF/% RH (15 % RH to 90 % RH)	
Loss factor:	< 0.01 (at 23 °C, at 10 kHz, at 90 % RH)	
Linearity error:	< 1.5 % RH (15 % RH to 90 % RH at +23 °C after one point calibration)	
Hysteresis:	< 1.5 % RH	
Response time t ₆₃ :	< 5 s (50 % RH to 0 % RH at +23 °C)	
Temperature dependence (nominal):	Δ % RH = (B1 x % RH + B2) x T [°C] + (B3 x % RH + B4)	
	B1 = 0.00004 [1/°C]	B2 = 0.1842 [% RH/°C]
	B3 = -0.0010	B4 = -4.2370 [% RH]
Measurement frequency range:	1 kHz to 100 kHz (recommended 10 kHz)	
Maximal supply voltage:	< 12 V _{pp} AC	
Signal form:	alternating signal without DC bias	
Connection:*	CuP-SIL wire post-plated with Sn, 10 mm	

* Customer specific alternatives available

The calibration of the sensor must be done 5 days after soldering at the earliest.



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Order Information - SIL (CuP-SIL wire post-plated with Sn, 10 mm)



K5 (200pF ±50pF)
Order code 040.00146







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