K5-W

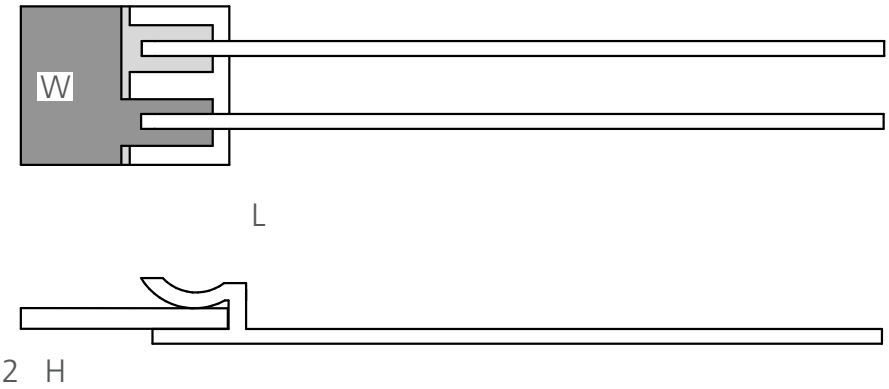
Capacitive Humidity Sensor

Optimal for low humidity measurement

Benefits & Characteristics

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

Illustration[1)]



1) For actual size, see dimensions

Technical Data

Dimensions (L x W x H / H2 in mm):	5.0 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 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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Product photo

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

	K5 (200pF ±50pF)	
Order code	~~103568~~	replaced by 150464
Former order code	~~040.00146~~	