

physical. chemical. biological.











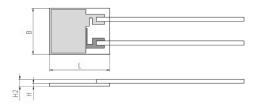
# MK33-W Mini **Capacitive Humidity Sensor Optimal for oil measurement applications**

# Benefits & Characteristics

- High chemical resistance
- Wide temperature range (up to +190 °C)
- Resistance to condensation
- Fast recovery time

- Smaller dimensions than MK33-W
- Very low drift
- High humidity stability
- Suitable for extreme environments
- Customer-specific sensor available upon request

## Illustration<sup>1)</sup>



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 (maximal dew point +95 °C)	
Operating temperature range:	-40 °C to +190 °C	
Capacitance at 30 % RH and +23 °C (C <sub>30</sub> ):*	200 pF ±40 pF	
Sensitivity at $C_{30} = 200 \text{ pF}$ :	0.3 pF/% RH (20 % RH to 95 % RH)	
Loss factor:	< 0.01 (at +23 °C, at 10 kHz, at 90 % RH)	
Linearity error:	< 2 % RH (15 % RH to 95 % RH at +23 °C after one point calibration)	
Hysteresis:	< 2 % RH	
Response time t <sub>63</sub> :	< 6 s (50 % RH to 0 % RH at +23 °C)	
Temperature dependence (typical):	$\Delta$ % RH = (B1 x % RH + B2) x T [ °C] + (B3 x % RH + B4) B1 = 0.0011 [1/ °C] B2 = 0.0892 [% RH/ °C]	
	B3 = -0.0268	B4 = -2.079 [% RH]
Measurement frequency:	1 kHz to 100 kHz (recommended 10 kHz)	
Maximal supply voltage:	< 12 V <sub>pp</sub> AC	
Signal form:	alternating signal without DC bias	
Connections:*	CuP-SIL-wire post-plated with Sn	

#### \* Customer-specific alternatives available

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

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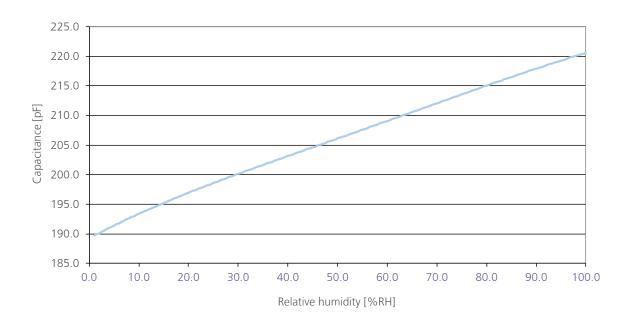


# **Product Image**



#### Characteristic Curve

#### Characteristic curve - MK33 -W Mini



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

MK33 Mini (200pF +/-40pF) Order code 103566 replaced by 150138



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