

physical. chemical. biological.











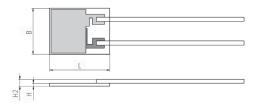
MK33-W Mini **Capacitive Humidity Sensor Optimal for oil measurement applications**

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

Illustration¹⁾



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 ₃₀):*	200 pF ±40 pF	
Typical 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 ₆₃ :	< 6 s (50 % RH to 0 % RH at +23 °C)	
Temperature dependence (typical):	Δ % 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 _{pp} 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.

DHMK33-W_Mini_E2.3.1 1/2



physical. chemical. biological.









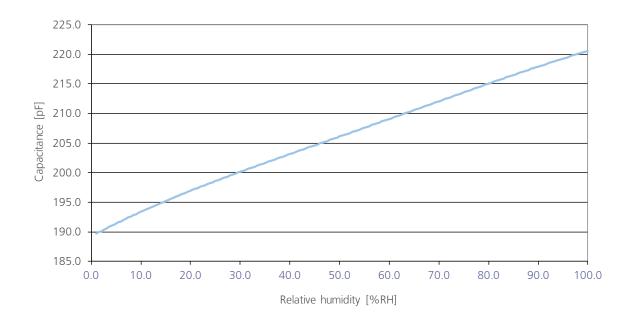


Product Image



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



Innovative Sensor Technology IST AG, Stegrütistrasse 14, 9642 Ebnat-Kappel, Switzerland Phone: +41 71 992 01 00 | Fax: +41 71 992 01 99 | Email: info@ist-ag.com | www.ist-ag.com

All mechanical dimensions are valid at 25 °C ambient temperature, if not differently indicated • All data except the mechanical dimensions only have information purposes and are not to be understood as assured characteristics • Technical changes without previous announcement as well as mistakes reserved • The information on this data sheet was examined carefully and will be accepted as correct; No liability in case of mistakes • Load with extreme values during a longer period can affect the reliability • The material contained herein may not be reproduced, adapted, merged, translated, stored, or used without the prior written consent of the copyright owner • Typing errors and mistakes reserved • Product specifications are subject to change without notice • All rights reserved

DHMK33-W_Mini_E2.3.1 2/2