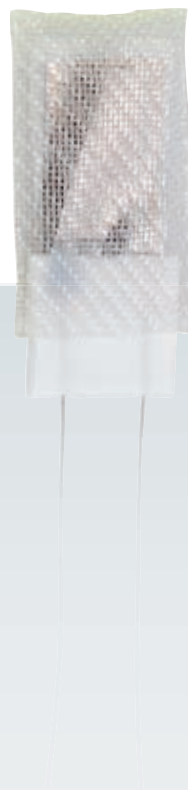


HYGROMER HH-1/SK

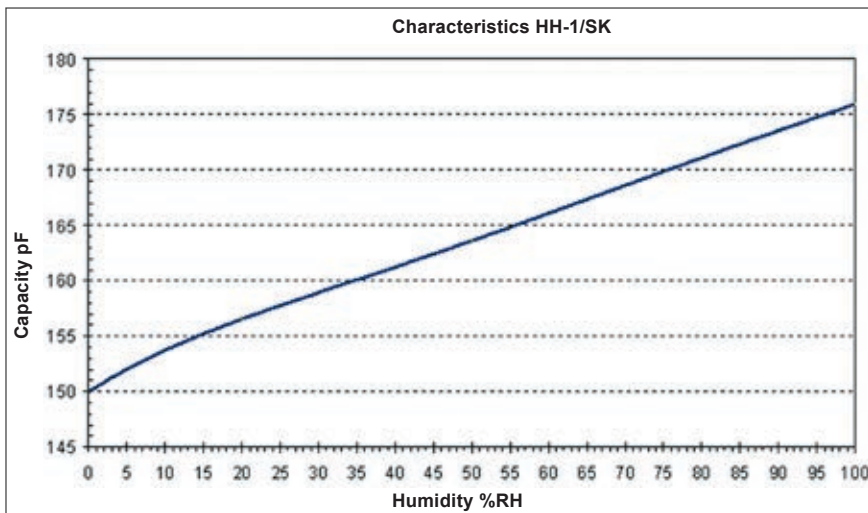
THE PERFECT SENSOR FOR ROUGH CHEMICAL ENVIRONMENTS.

INNOVATION IN HUMIDITY MEASUREMENT

- Chemical resistant sensor
- Broad application field: $-50...120\text{ °C}$ / $0...100\text{ \%RH}$
- High long term stability
- Robust mechanical construction
- Response time $<15\text{ s}$



HYGROMER HH-1/SK

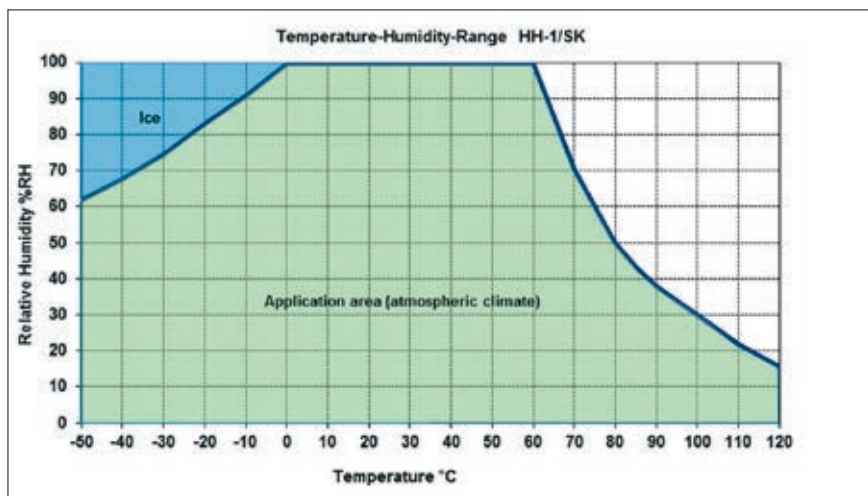


Characteristic polynomial

5th degree polynomial

$$Y = A_0 + A_1 \cdot x + A_2 \cdot x^2 + A_3 \cdot x^3 + A_4 \cdot x^4 + A_5 \cdot x^5$$

- A0 = 150
- A1 = 0.45064
- A2 = -8.8894E-03
- A3 = 1.64369E-04
- A4 = -1.3683E-06
- A5 = 4.2252E-09



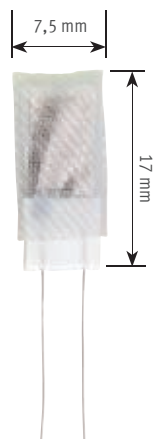
Specifications

- Capacity: 150 pF ±50 pF
- Humidity operating range: 0...100 %RH
- Temperature operating range: -50...120 °C
- Accuracy at 23 °C at optimal characteristic curve: ±1.5 %RH
- Hysteresis (4 hours each at 10 %RH - 90 %RH - 10 %RH): <1.0 %RH
- Response time τ63: <15 s (at 23 °C and 1 m/s)
- Long-term stability: <1 %RH / year
- Uncompensated temperature deviation: -0.15 %RH/°C (30...90 %RH)
- Frequency range (without DC components): 10...100 kHz
- Max. Voltage: ±35 VDC

The shown data are guide values. The resistance of the sensor strongly depends on the temperature and humidity conditions as well as on exposure duration to the pollutant. Allowed fault caused from the pollutant: ±2 %RH (10...90 %RH).

Pollutant	Formula	Max.Workplace Concentration		Allowed Concentration Continuous Operation	
		(ppm)	(mg/m³)	(ppm)	(mg/m³)
Acetic acid	CH ₃ COOH	10	25	1000	2500
Acetone	CH ₃ COCH ₃	1000	2400	3700	9000
Ammonia	NH ₃	25	18	5500	4000
2-Butanone (MEK)	C ₂ H ₅ COCH ₃	200	590	3300	8000
Chlorine	Cl ₂	0.5	1.5	1.5	4.5
Ethanol	C ₂ H ₅ OH	1000	1900	5800	10000
Ethyl acetate	CH ₃ COOC ₂ H ₅	400	1400	4000	15000
Ethylene glycol	HOCH ₂ CH ₂ OH	100	260	1200	3000
Formaldehyde	HCHO	1	1.2	2400	3000
Hydrochloric acid	HCl	5	7	300	500
Hydrogen sulfide	H ₂ S	10	15	350	500
Hydrogen peroxide	H ₂ O ₂	1	1.4	880	1200
Isopropanol	(CH ₃) ₂ CHOH	400	980	6000	15000
Methanol	CH ₃ OH	200	260	6000	8000
Nitrogen oxides	NO _x	5	9	5	9
Ozone	O ₃	0.1	0.2	1.5	3
Sulfur dioxide	SO ₂	5	13	5	13
Toluene / Xylene	C ₆ H ₅ CH ₃	100	380	1800	7000
Fuel		300	1200		150'000

Dimensions



The data in this documentation result from experience and testing. Depending upon site conditions (temperature, dampness, pollutants etc.) the values can differ. A warranty claim cannot be derived from it.

rotronic
MEASUREMENT SOLUTIONS

ROTRONIC AG, Grindelstrasse 6, CH-8303 Bassersdorf, Tel. +41 44 838 11 44, www.rotronic.ch
 ROTRONIC Instruments (UK) Ltd, Crompton Fields, Crompton Way, Crawley, West Sussex, RH10 9EE, UK, Phone +44 (0)1293 571000, www.rotronic.co.uk
 ROTRONIC Instrument Corp, 135 Engineers Road, Hauppauge, NY 11788, USA, Phone, +1 631 427-3898, www.rotronic-usa.com
 ROTRONIC Canada Inc., 236 Pritchard Rd, Unit 204, Hamilton, ON, Canada, L8W 3P7, Phone +1 416-848-7524, www.rotronic.ca
 ROTRONIC Instruments Pte. Ltd., 1003 Bukit Merah Central, #06-31 Inno Centre, Singapore 159836, Phone +65 6376 2107, www.rotronic.sg