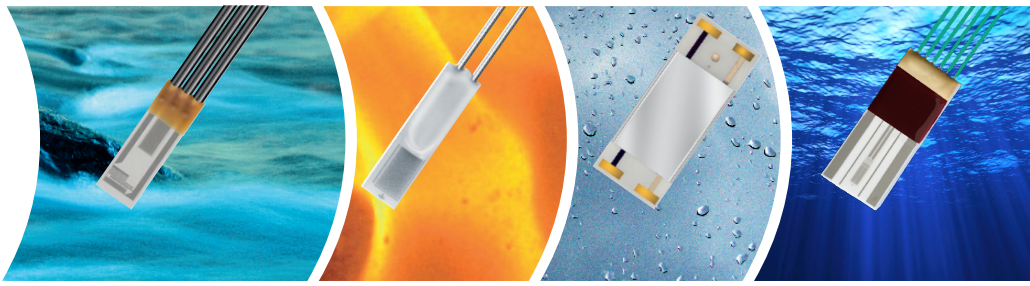
INNOVATIVE SENSOR TECHNOLOGY

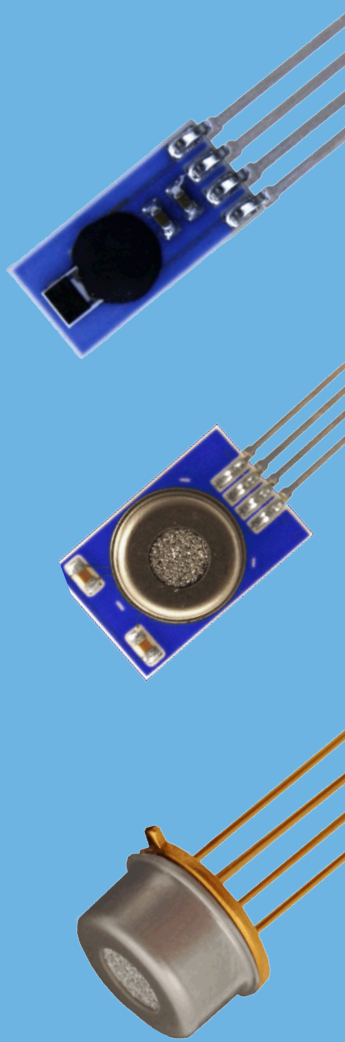


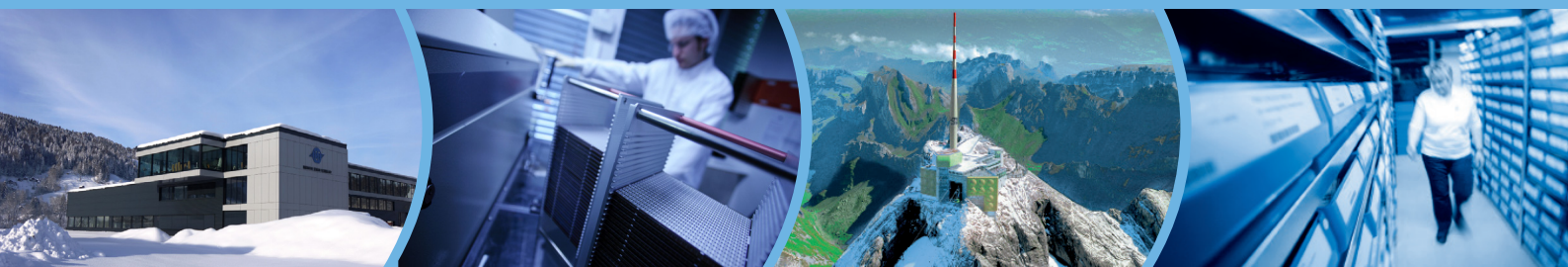
Combined digital humidity and temperature modules

HYT 271 HYT 221 HYT 939

Benefits

- Humidity range: 0% RH to 100% RH
- Low drift
  Normal conditions: < 0.5% RH at 25 °C / year
  Extreme conditions: 0.17% RH at 85% RH at 30 °C / 65 h
- Temperature range: -40 °C to +125 °C
- High accuracy: +/-1.8% RH and 0.2 °C
- Fully calibrated and compensated humidity and temperature signal
- Low power consumption: 22 µA during operation
- Digital I^2C interface (14 bit values)
- High chemical resistance to various gases: O2, CO2, SF6, NH3, CH4, etc
- Condensed water proof sensing area





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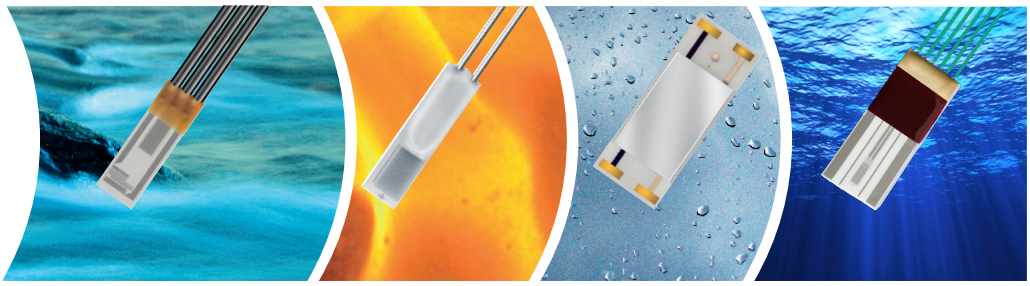
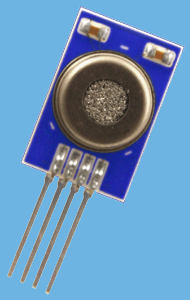


General description

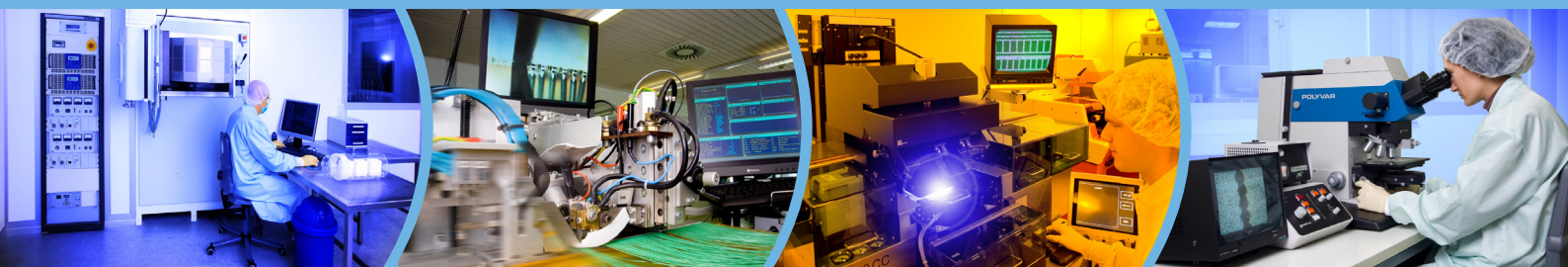
Mechanically robust, chemical and condenced water proof sensing area, the digital HYT module offers a wide application window and an optimal price performance ratio. Precisely calibrated, the HYT modules deliver an outstanding accuracy and an excellent long term stability even at high humidity - ideal for sophisticated mass applications, industrial handheld devices and precise humidity transmitters. Like all representatives of the HYT family, the module combines the advantages of a precise, capacitive polymer humidity sensor with the high integration density and functionality of an ASIC. The signal processing integrated in the HYT module completely processes the measured data and directly delivers the parameters of relative humidity and temperature over the I^2C compatible interface as digital values. The module is precisely calibrated and is therefore fully interchangeable without adjustment.

HYT 271
All-round talent for most applications

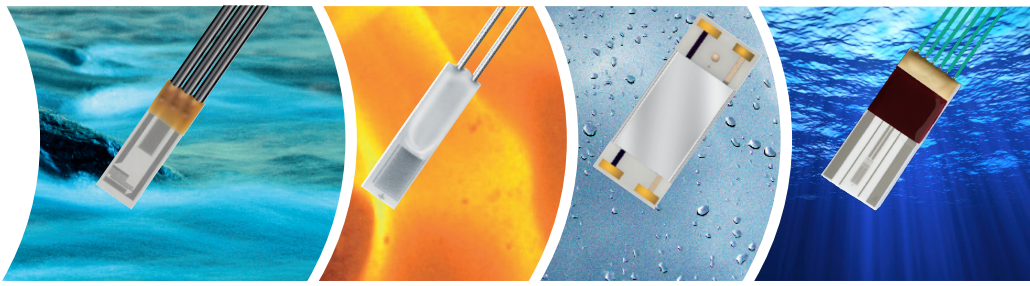


HYT 221
With protection filter for splash water applications

HYT 939
With protection filter for splash water applications (gas pressure resistant packaging upon request)

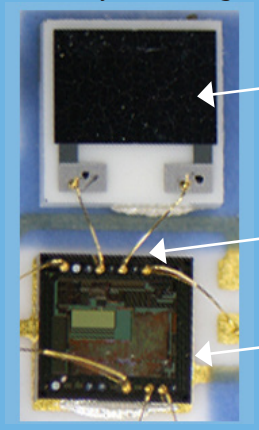


INNOVATIVE SENSOR TECHNOLOGY



Combination of humidity element and ASIC

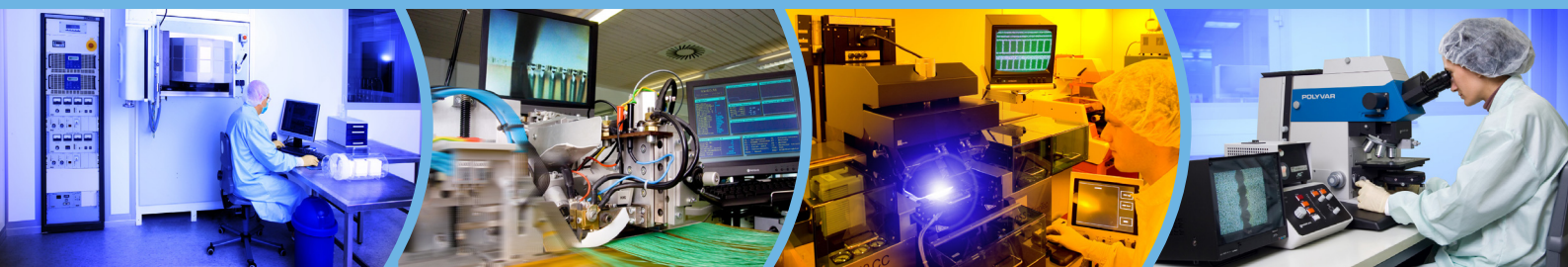
The separated ASIC and sensor assembly strongly reduces the self-heating impact and the influence of humidity absorbing materials on the sensor element



Packaging of integrated circuit

Technical Data*	Humidity	Temperature
Range	0% RH to 100% RH	-40 °C to +125 °C
Accuracy	+/-1.8% RH (0% RH to 80% RH)	+/-0.2 K (0 °C to 60 °C)
Measuring principle	Capacitive polymer humidity sensor	PTAT bandgap sensor
Response time t_{63}%	5 s to 12 s (based on module type)	
Stability		
Reproducibility	+/- 0.2% RH	+/-0.1 K
Hysteresis	< +/-1% RH	
Long term drift	< 0.5% RH/a	< 0.05 K/a
Operating data		
Operating voltage	2.7 V to 5.5 V	
Current consumption (nominal)	< 22 µA at 1 Hz measuring rate	
Current consumption (sleep)	< 1 µA	
Digital interface	I²C, address 0x28 or alternative address	

*See datasheet for more information



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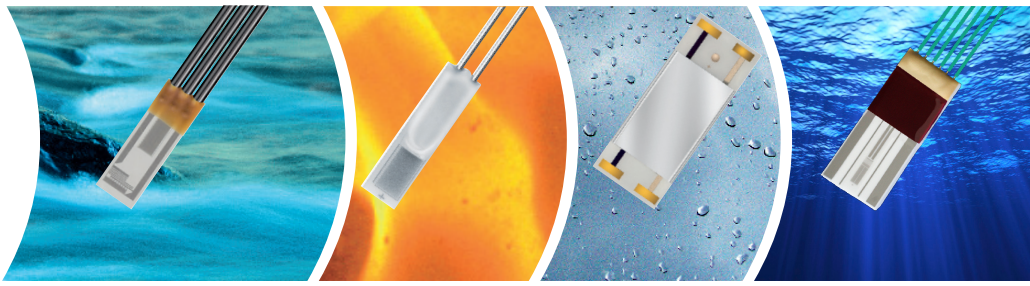

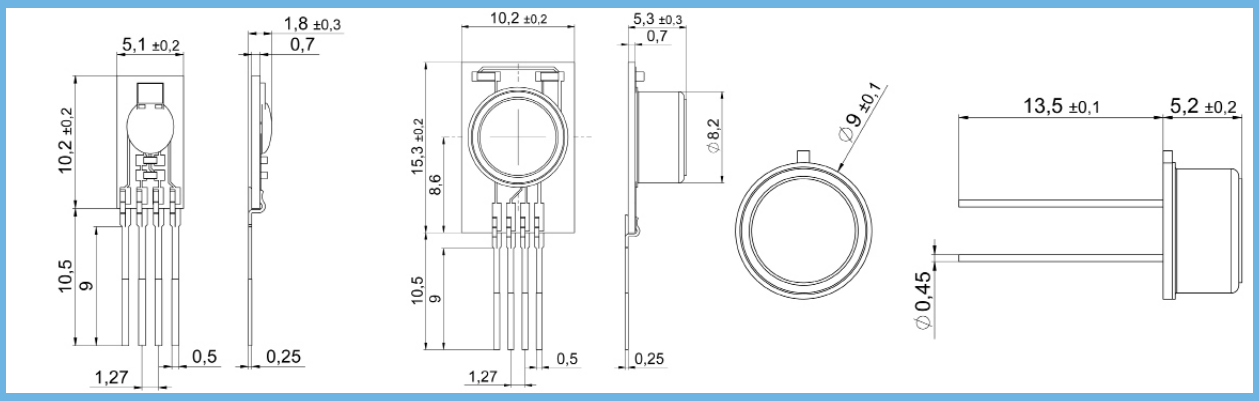

HYT 271 HYT 221 HYT 939

Industries

HVAC

Process Control

Test & Measurement

Medical

Appliance

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