



INNOVATIVE SENSOR TECHNOLOGY

SUNSTAR传感与控制 <http://www.sensor-ic.com/> TEL: 0755-83376549 FAX: 0755-83376182 E-MAIL: szss20@163.com

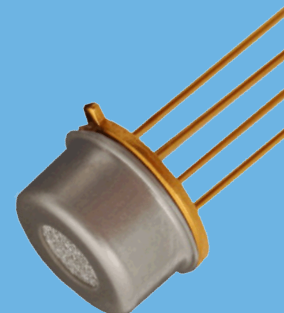
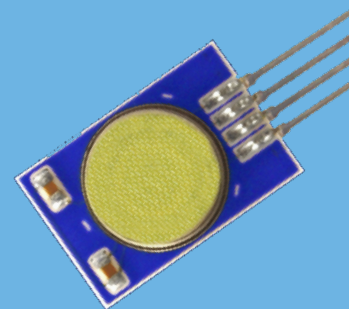


Combined digital humidity and temperature modules

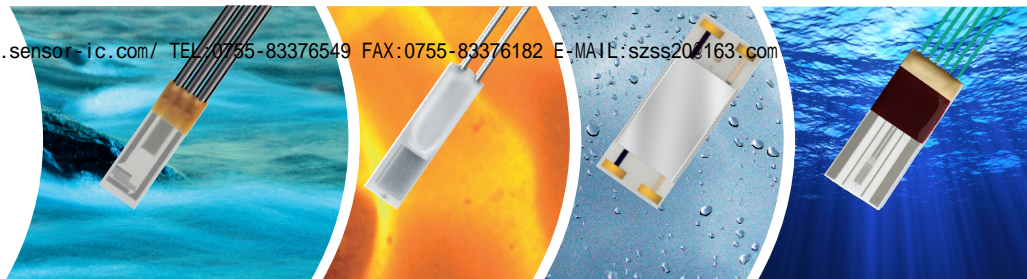
HYT 271 HYT 221 HYT 939

BENEFITS

- Humidity range: 0% RH to 100% RH
- Low drift
Normal conditions: < 0.5% RH at 25 °C / year
Extreme conditions: < 2% 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 I²C interface (14 bit values)
- High chemical resistance to various gases: O₂, CO₂, SF₆, NH₃, CH₄, etc
- Condensed water proof sensing area
- Can be recalibrated



SUNSTAR自动化 <http://www.sensor-ic.com/> TEL: 0755-83376489 FAX: 0755-83376182 E-MAIL: szss20@163.com

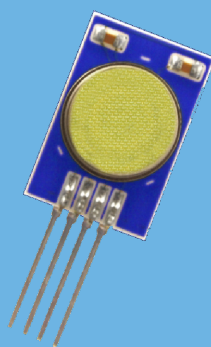


GENERAL DESCRIPTION

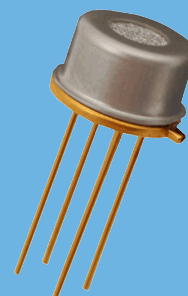
Mechanically robust, chemical and condensed water proof sensing area, the digital HYT module offers a wide application window and an optimal price performance ratio. Precisely calibrated, the HYT modules deliver an outstanding accuracy and an excellent long term stability even at high humidity - ideal for sophisticated mass applications, industrial handheld devices and precise humidity transmitters. 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 I²C compatible interface as digital values. The module is precisely calibrated and is therefore fully interchangeable without adjustment.



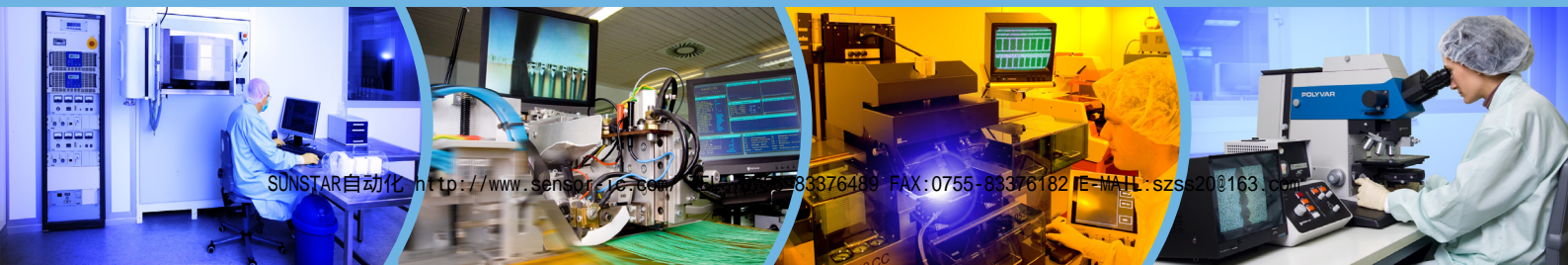
HYT 271
All-round talent for most applications



HYT 221
With protection filter for splash water applications



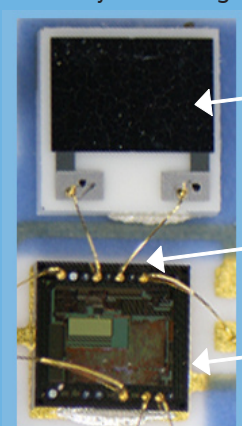
HYT 939
With protection filter for splash water applications
(gas pressure resistant packaging on request)





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



IST sensor element

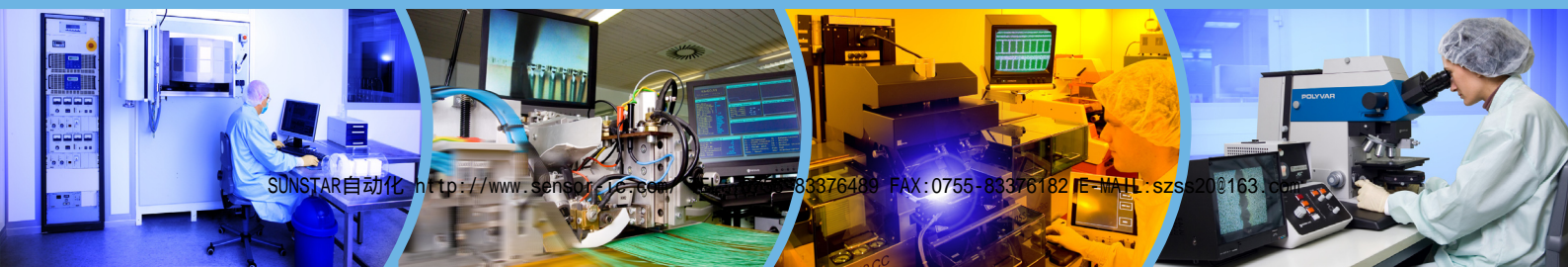
Bonding

ASIC (with integrated temperature sensor)

Packaging of ASIC and sensor element

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	I ² C, address 0x28 or alternative address	

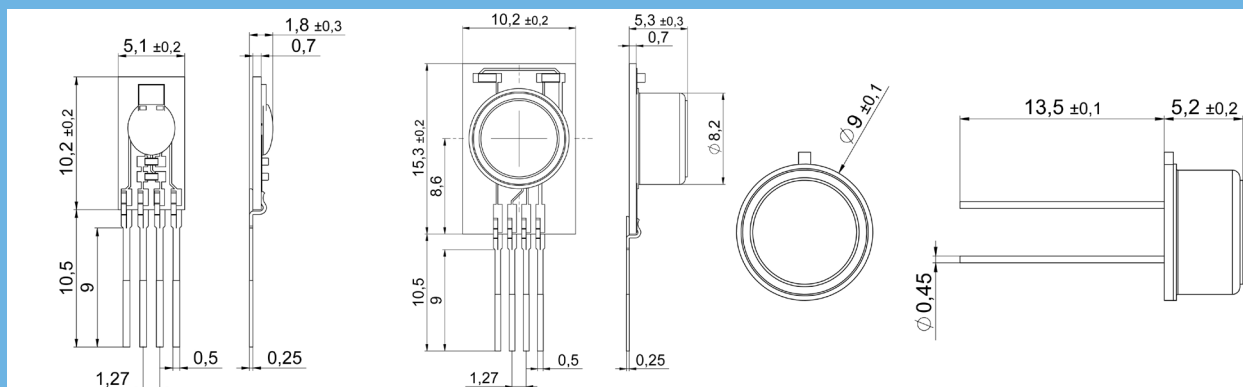
*See datasheet for more information





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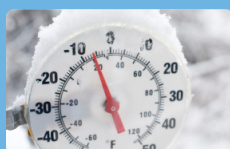
INDUSTRIES



HVAC



Process Control



Test & Measurement



Medical



Appliance

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