Innovative Sensor Technology

physical. chemical. biological.

Heated HYT 223

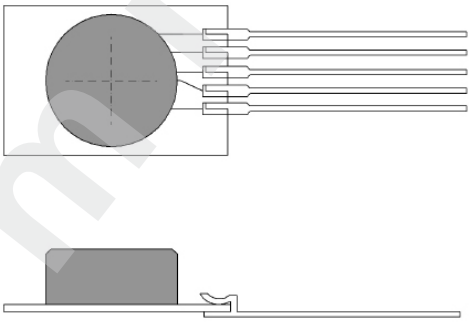
Digital Humidity and Temperature Module

Optimal for critical application areas

Benefits & Characteristics

- Heatable digital humidity sensor
- With PTFE membrane filter for long term stability
- Calibrated and temperature compensated
- High chemical resistance
- Wide humidity and temperature range
- Excellent humidity/temperature accuracy and stability
- I²C protocol (address 0x28 or alternative address)
- Very low drift
- Interchangeable without adjustments
- Very stable at high humidity

Illustration[1)]



1) For actual size, see mechanical dimensions

Technical Data

Operating temperature range:	-20 °C to +120 °C	
Operating humidity range:	0 % RH to 100 % RH	
Hysteresis:	< ±1 % RH	
Linearity error:	< ±1 % RH	
Temperature error:	0.05 % RH/K (0 °C to +60 °C)	
Digital interface:	I²C, address 0x28	
Humidity output signal:	% RH	
Measuring principle:	Capacitive polymer humidity sensor	
	Humidity Sensor	**Heater**
Operating voltage:	2.7 V to 5.5 V	7 V - 9 V
Operating voltage limit:	-0.3 V to 6 V	
Current consumption:	< 22 µA at 1 Hz measuring rate	
Current consumption (sleep):	< 1 µA	
Power consumption:		< 720 mW

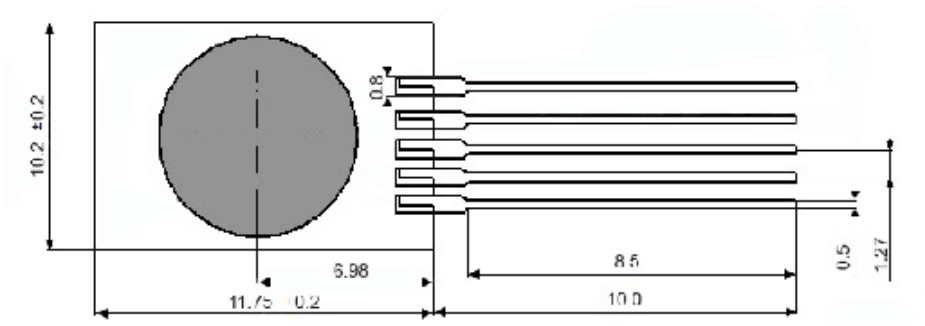
	Humidity	Temperature	Heater
Accuracy:	0 °C to 50 °C: ± 1.8 % RH at 0 - 90 % RH ± 3.0 % RH at 90-100 % RH	0 to 60 °C: ± 0.2 °C	± -3 °C for T < 150 °C
Reproducibility:	±0.2 % RH	±0.1 K	
Resolution:	0.03 % RH	+0.015 °C	
Response time t_{63}:	< 10 s	< 10 s	
Long-term drift:	< 0.5 % RH/a	< 0.05 K/a	

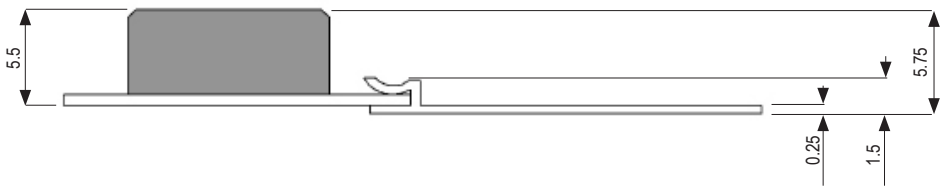
Thermal reconditioning

HYT223 contains a microheating structure which allows for thermal reconditioning. A reconditioning cycle is recommended in challenging atmospheres and conditions. Length and interval required depend on the application environment. A possible reconditioning setting is heating the module with 7 to 9 V and 700mW power for 10 minutes every 24 hours.

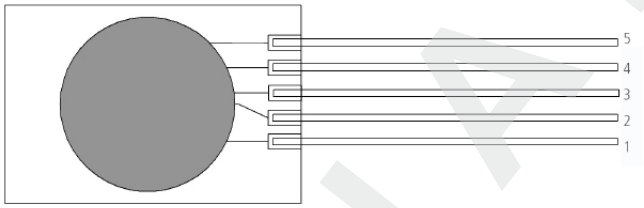
During reconditioning, the read-out values are not calibrated measurement data.

Mechanical Dimensions





Pin Assignment



1	2	3	4	5
SDA	Ground	VDD	SCL	Heater

Order Information

	Heated HYT 223
Order code	151331

Additional Documents

	Document name:
Application Note:	AHHYTM_E

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