

# HC2 FOR H<sub>2</sub>O<sub>2</sub> APPLICATIONS



THORNE &  
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## THE PROBE FOR HYDROGEN PEROXIDE ENVIRONMENTS.

WITH AIRCHIP TECHNOLOGY.

### INNOVATION IN HUMIDITY AND TEMPERATURE MEASUREMENT

- Measures relative humidity, temperature and dew point
- With HYGROMER® HH-1 sensor for hydrogen peroxide environments
- Highest possible measuring accuracy
- Conforms to FDA CFR21 Part 11/GAMP



**rotronic**  
MEASUREMENT SOLUTIONS

## TECHNICAL INFORMATION

### Hydrogen Peroxide Sterilization

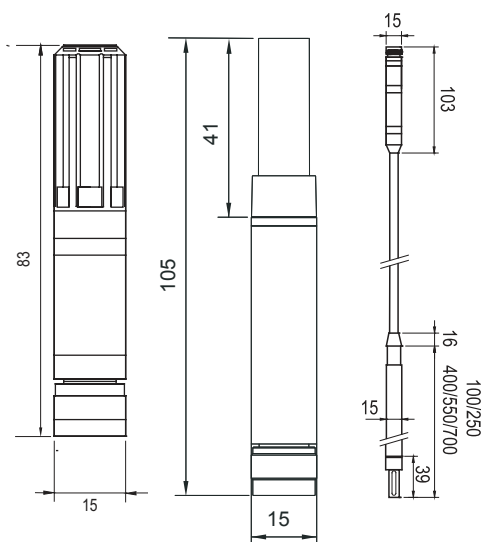
Hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) is used to sterilize cleanrooms, incubators and other equipment. In this process the air is saturated by gassing or spraying, resulting in the formation of a microfilm on all surfaces. The hydrogen peroxide kills off all microorganisms. The H<sub>2</sub>O<sub>2</sub> is then either recovered mechanically or allowed to decompose naturally over a period of 48 hours to harmless H<sub>2</sub>O or O<sub>2</sub>. The humidity level during the application is crucial for the effectiveness of the process.



Enzler Hygiene AG

Standard humidity sensors have difficulty measuring accurately in high concentration H<sub>2</sub>O<sub>2</sub> environments. The Hydrogen Peroxide inhibits the measurement of water vapour by occupying the pores on the surface of the sensor. This is why ROTRONIC has developed a special sensor, the HYGROMER® HH-1. The life of the sensor is greatly extended compared with that of the standard sensor for these applications. Please see the sensor data sheet for exact technical data on the sensor.

Device type	Humidity and temperature probe for hydrogen peroxide applications (H <sub>2</sub> O <sub>2</sub> )
Humidity sensor	HYGROMER® HH-1
Continuous H <sub>2</sub> O <sub>2</sub> load	880 ppm / 1200 mg/m <sup>3</sup>
Temperature sensor	Pt100 1/3 Class B
Accuracy	HC2-S-HH / HC2-SM-HH: ±0.8 %RH, ±0.1 K, at 10...30 °C HC2-ICxxx-HH: ±1.2 %RH, ±0.1 K, at 10...30 °C
Measurement range	HC2-S-HH / HC2-SM-HH: -50...100 °C / 0...100 %RH HC2-ICxxx-HH: -50...120 °C / 0...100 %RH
Response time τ <sub>63</sub>	<15 s
Storage conditions	-50...100 °C
Analog output signals (default setting, freely scalable via HW4 software and AC3001 cable)	0...1 V = 0...100 %RH 0...1 V = -40...60 °C
Calculations	Dew / Frost point
Interface	UART
Accuracy analog output	±1 mV
Audit trail / Electronic records	Conforms to FDA CFR21 Part 11/GAMP
Power supply	3.3...5 VDC
Power consumption	4.5 mA @ 3.3 VDC
IP protection	IP65
Housing material	HC2-S-HH: Polycarbonate HC2-SM-HH: Stainless steel, 1.4301 HC2-ICxxx-HH: Polycarbonate, PEEK
Filters	No filter
CE / EMC compatibility	EMC Directive 2007/108/EC



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