

HYGROMet4



THE HEATED METEOROLOGY PROBE

WITH INTEGRATED AIRCHIP3000 TECHNOLOGY

- Allows simultaneous measurement and heating
- Measures relative humidity and temperature
- Calculation of all psychrometric parameters
- Freely programmable RoHumiHeat sensor heating
- Adjustable RoHumiClean sensor cleaning
- SMD Thermo sensor element
- Outstanding accuracy and repeatability
- Integrated real-time clock
- Freely scalable analog output signals
- RS-485 interface



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TECHNICAL INFORMATION

Field of application

The HygroMet4 is suitable for use wherever high humidity prevails for short or long periods. In such environments condensation could occur on conventional probes, thereby delivering incorrect values. This is particularly the case in meteorology, in cheese cellars, tunnels and caves.

Heating function

The HygroMet4 is equipped with an automatic sensor heater. It heats the sensor above ambient temperature by 0.1...10 °C depending on the settings. Heating of the sensor prevents the formation of condensation.

The following heating cycles can be selected and are freely programmable:

- Permanent heating

The sensor is constantly heated.

- Interval

The heater can be switched on hourly, daily, weekly or monthly at a definable point in time. The heating period can be set at will.

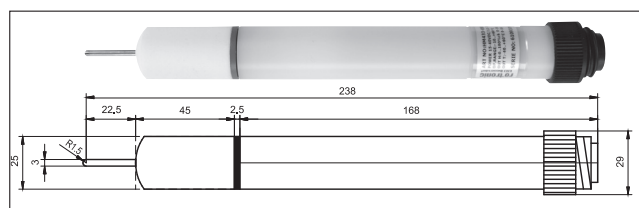
- Depending on current measured values

The sensor heater can be programmed such that it is only switched on if a certain humidity or temperature value is not reached or is exceeded.

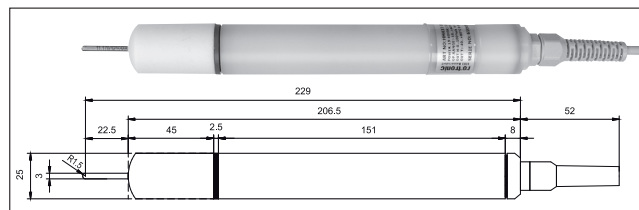
Sensor cleaning

The programmable cleaning function heats the sensor to up to 150 °C. The cleaning function can be switched on daily, weekly or monthly at a definable point in time. The cleaning period can also be set.

HygroMet4 Tuchel



HygroMet4 Cable (with Tuchel or open ends)



General specifications	
Device type	Humidity and temperature probe
Range of application of probe	-40...85 °C / 0...100 %RH
Accuracy at 23 °C	Heated: ±1.5 %RH / ±0.1 °C @ 10...35 °C
Power supply	15...24 VDC / 5...24 VDC (only 0...1 V)
Overall accuracy	±2.5 %RH @ >80 °C / ±2.5 %RH @ 60...80 °C ±2.0 %RH @ 35...60 °C / ±2.0 %RH @ -10...+10 °C ±3.0 %RH @ -30...-10 °C / ±4.0 %RH @ -40...-30 °C
IP protection	IP65
Current consumption	With heater: <55 mA @ VDD = 5 VDC / <30 mA @ VDD = 24 VDC Without heater: <35 mA @ VDD = 5 VDC / <20 mA @ VDD = 24 VDC
Clock	Real time clock (RTC)
Compatible	AC3010-T (for devices with Tuchel connector) AC3010 (for devices with open ends)
Sensor heater	
Heating capacity	0.1...10 °C above normal temperature
Heating modes	Permanent heating / Interval / Depending on currently measured value
Heating element	SMD Thermo
Sensor cleaning	
Heating capacity	Max. 150 °C
Cleaning mode	Adjustable intervals
Heating period	1...255 min.
Probe	
Filter	Polyethylene, 20 µm
Maximum wind velocity	20 m/s with filter
Maintenance / Calibration	Annual calibration (recommended)
Humidity sensor	SMD Thermo
Long-term stability, humidity sensor	<1 %RH / year
Humidity sensor response time	Typically 25 s with filter (1 m/s air flow at sensor)
Temperature sensor	Pt100
Long-term stability, temperature sensor	<0.1 °C/year
Outputs / Interfaces	
Analog outputs	0...1 V (±1.5 mV) / 0...5 V (±15 mV) / 0...10 V (±15 mV) 0...20 mA (±30 µA) / 4...20 mA (±30 µA)
Interfaces	RS-485
Conformity with standards	
CE / EMC immunity	EMC Directive 2004/108/EC
FDA / GAMP directives	Compatible
Housing material	POM, white

You need more information (special applications, order codes, etc.)? You can find a complete, up-to-date overview of our HygroMet4 series on the internet at www.rotronic.com.

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