Humidity and temperature OEM probe

HYGROCLIP XD OEM



XD OEM

Advantages

- OEM probe for humidty and temperature measurement
- Application range: -50...100 °C / 0...100 %rh (non-condensing)
- Wide power supply range (5...24 VDC)
- Different output stages programmable with HygroSoft software

Applications

- Designed as a mini transmitter for standalone applications
- Voltage and current output and freely scalable anlog/ digital signals
- Due to the wide supply range, easy to integrate in your OEM system
- Standalone solution for HVAC, Office rooms and building automation

Sensor HYGROMER HT-1

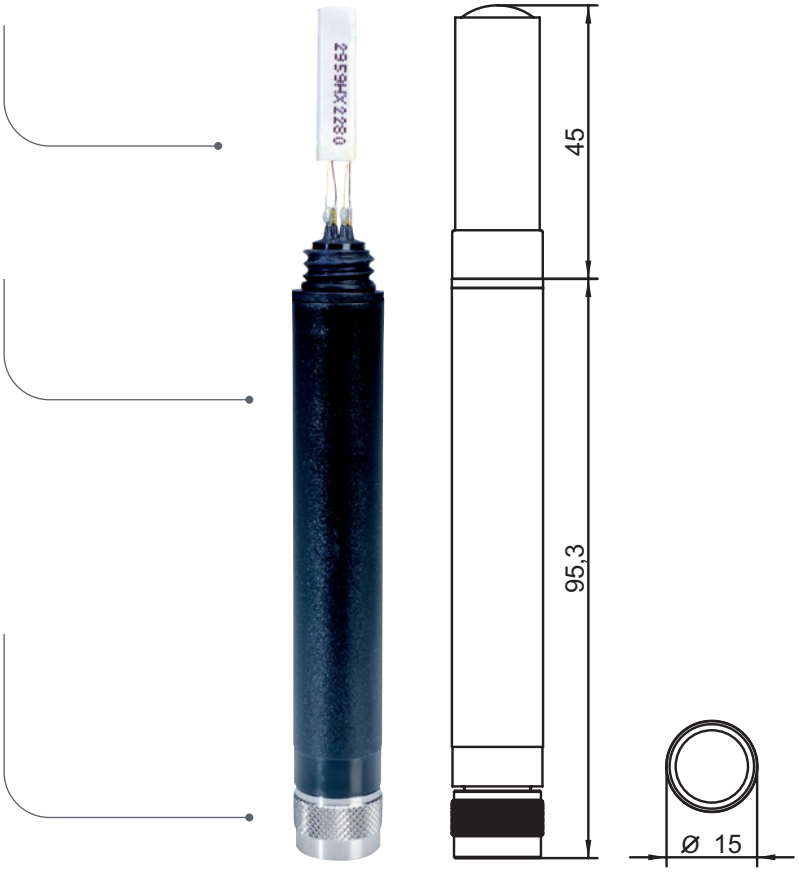
- High accuracy and repeatability (Up to ±0.8 %rh @23 °C)
- Excellent Long-term stability (<1 %rh per year with clean air)

Smart Electronic

- Based on the Rotronic's AirChip3000
- Calculates the dew / frost point
- Alarm generation
- Saves adjustment data so that probes can be interchanged without re-adjusting

Flexibility and Compatibility

- User scalable analog analog ouput signal[1] 0...1/5/10, 0/4...20 mA
- Digital interface via UART[2]
- Not compatible with with Rotnonic loggers, transmitters and handheld instruments



XD OEM

[1] *HygroSoft software software and service cable XD-AC3001 are required*
[2] *Universal Asynchronous Receiver Transmitter*

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Standard Precision

Standards Precision probes are factory-adjusted @23°C and 10, 35, 80 %rh.

Order Code	Type	Analog Output	Accuracy @23 °C	Application Range	Sensor Element	Long-term stability
XD31A	Standard black	0...20 mA	±0.8 %rh ±0.2 K	-40...85 °C 0...100 %rh	HYGROMER HT-1	<1 %rh per year with clean air
XD32A		4...20 mA				

Standard: Per default the probes come with voltage output, changing the analog signal to current may cause self-heating and less accuracy.

Computer Connection

The cable AC3001 allows direct connection to a computer via USB and, with use of the HygroSoft software to adjust the XD OEM probe's parameters such as

- Scale of Analog outputs
- Calculated parameter on analog outputs

Possible Filters

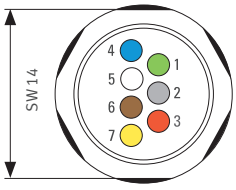
Order Code	Filter carrier	Filter Element	Pore size	Application Range
SPA-PCB-PE	Polycarbonate, black	Polyethylene, white	40-50 µm	-50...100 °C
SPA-PCB-PTFE		PTFE, white	10 µm	
SPA-PCB-WM		Wire mesh 1.4401		
SPA-PCW-PE	Polycarbonate, white	Polyethylene, white	40-50 µm	
SPA-PCW-PTFE		PTFE, white	10 µm	
SPA-PCW-WM		Wire mesh 1.4401		
SPA-PE	No filter carrier, only filter	Polyethylene	40-50 µm	
SPA-PTFE		PTFE, white	10 µm	-100...200 °C
SPA-WM		Wire mesh 1.4401		

Standard: XD33A + SPA-PCB-PE with filter (Polyethylene, white)

TECHNICAL INFORMATION

XD OEM

Connector pin-out



1 V+
2 GND (digital and supply)
3 RXD (UART)
4 TXD (UART)
5 Analog signal humidity (0...100 %rh = 0...1 V)
6 Analogsignal °C (-40...60 °C = 0...1 V)
7 AGND (analog ground)

Technical Data

Humidity sensor	HYGROMER HT-1
Temperature sensor	PT100 1/3 class B
Response time sensor	t63: <15 s without filter, (temperature and humidity)
Max. air velocity (m/s)	3.5 m/s without filter, 20 m/s with polyethylen filter
Operating humidity	0...100 %rh, non-condensing
Operating temperature	-40... 85 °C
Accuracy @23 °C	±0,8 %RH ±0,2 K @5...24 VDC
Factory adjustment	@23°C and 10, 35, 80 %rH
Long-term stability	<1 %RH / year (with clean air)
Supply voltage	5...16 VAC / 5...24 VDC (0...1 V), 12...16 VAC / 16...24 VDC (all kind of output signals)
Current consumption	Approx. 7 mA @ 24 VDC, 0...10 V, 12 mA @ 5 VDC, 0...1 V
Protection rating	IP65 (except the sensor area)
Digital communication	UART (19200 baud fixed)
Protocols	RoAscii (default), I2C, Modbus (not universal)
Analogue outputs	2x 0...1(5/10) VDC
Analogue outputs parameters	• Humidity (default) • Temperature (default) • Dew point (setting with HygroSoft) • Frost point (setting with HygroSoft)
Analog output scaling	• Humidity (0...100 %rh = 0...1 V) • Temperature (-40...60 °C = 0...1 V) • Freely settable with HygroSoft
Timing	1st measurement after 3 s Measurement interval 1 s
Accuracy analog output:	@23°C < 1 mV (1 V) / < 10 mV (10 V)/ <20uA
Air Chip 3000	Saves adjustment data so that probes can be interchanged without re-adjusting
Compatible devices	Not comaptible with other Rotronic devices
Delivery package	Probe • Short Instruction Manual • Calibration Certificate

Attention: The XD-series is not compatible with other Rotronic devices, as HF5, PF4/5 und HP32

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