

# FLUSH MOUNT PROBES

**MINIMUM SIZE,  
MAXIMUM PERFORMANCE.**

WITH INTEGRATED AIRCHIP3000 TECHNOLOGY.

**COMPACT, DISCRETE HUMIDITY MEASUREMENT.**

- Measures relative humidity and temperature
- Calculates dew/frost point
- Perfectly suited for discrete wall mounting  
in clean rooms, museums and libraries (up to 9 mm wall thickness)
- High precision and repeatability
- Unmatched long-term stability <1 %RH / year
- Digital interface for measurement processing  
and for HW4 calibration



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# TECHNICAL INFORMATION

## Versions

The flush-mount probe is available with three different filters.

- HC2-IS25: Steel-sinter filter
- HC2-IT25: Teflon filter
- HC2-IP25: Polyethylene filter

The filters differ in material, response time and pore size, and are selected on the basis of the environmental conditions.

### Steel-sinter filter (25 µm) \*

Used for low humidity; not suitable for high-humidity applications; quick response, good protection from abrasive particles.

### Teflon filter (5 µm) \*

Good protection from fine dust particles and salt (maritime environment); slight delay in measurement.

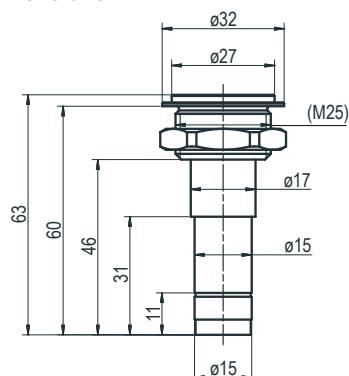
### Polyethylene filter (25 µm) \*

Good response time and good protection from fine dust particles; no absorption of water.

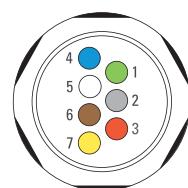
## Typical accessories

- AC3001 PC connection cable
- E2-02A Extension cable, 2 m, black
- HW4-E-Vx HW4 software

## Physical dimensions



## Electrical connections



- 1: V+: 3.2...5 VDC
- 2: GND (power supply, UART)
- 3: RXD (UART)
- 4: TXD (UART)
- 5: Output signal, humidity
- 6: Output signal, temperature
- 7: AGND (GND for measurement signal)

HC2-IS25 / HC2-IT25 / HC2-IP25	
Humidity sensor	ROTRONIC HYGROMER® WA-1
Temperature sensor	Pt100 1/3 Class B
Accuracy at 23 °C ± 5 K	1.5 %RH / 0.2 K, adjusted at 23 °C and 10, 35, 80 %RH
Measurement resolution AirChip3000	<0.02 %RH / 0.01 K
Long-term stability, humidity sensor	<1 %RH / year
Response time τ <sub>63</sub>	HC2-IS25: <20 s HC2-IT25: <25 s HC2-IP25: <20 s
Initialization time	<3 s (typical)
Measurement range	-40...85 °C / 0...99 %RH
Range of application, electronics	-40...85 °C / 0...99 %RH
Analog output signal	0...1 V = 0...100 %RH (factory setting) 0...1 V = -40...60 °C (factory setting)
Power supply	3.2...5 VDC
Current consumption	<4 mA @ 3.3 VDC (typical) <7.5 mA @ 5 VDC (typical)
Firmware update	Via HW4 software
Filter element	HC2-IS25: Steel-sinter, 25 µm * HC2-IT25: Teflon, 5 µm * HC2-IP25: Polyethylene, 25 µm *
Permitted wind-speed	40 m/s (with filter)
Adjustment via software	1 point, multipoint, dew point (%RH / °C), with service cable
Psychrometric calculations	Dew point / Frost point
Interface	UART
Data processing via HW4	Graphics, statistics, analysis, etc.
Housing material / weight	Polycarbonate, stainless steel DIN 1.4301 / 50 g
Dimensions	32 x 63 mm (without protective cap)
Maximum wall thickness	9 mm
Thread	M25 x 1.5
CE / EMC compatibility	CE conformant 2007/108/EC
FDA- / GAMP conformity	21 CFR Part 11 / GAMP 5

\* Size of pores