



## DATA SHEET

# Si-PRO-U-I-100-H

## Heated humidity probe for demanding processes and climate control applications



### Description

The Si-PRO-U-I-100-H is an interchangeable, heated hygrometry probe for Si-C320 transmitters and it has been designed for being used in environments where there is constant high humidity or rapid oscillating humidity where the probe's performance and its tolerance to pollutants are key. It delivers dewpoint and frost point as a measurement. The relative humidity value, as well as the rest of psychrometric values can be calculated when the Si-PRO-T150 temperature probe or an additional external temperature probe is connected to the Si-C320 transmitter using the Si-ACC-ETP adapter. Measuring ranges: 0 to 100 %RH. Operating temperature: -40 to 150 °C (-40 to 302 °F). Stainless steel body and sintered filter. Length 100 mm (3.94"), Ø 13 mm (0.51"). Supplied with adjustment certificate.

### Advantage:

- Heated probe, minimizing the condensation on the sensor
- High accuracy and long-term stability
- Resistant against pollution
- Detachable probe cable for an easy installation

### Main applications:

- Industrial processes
- Air handling units
- Drying processes
- Pharma production

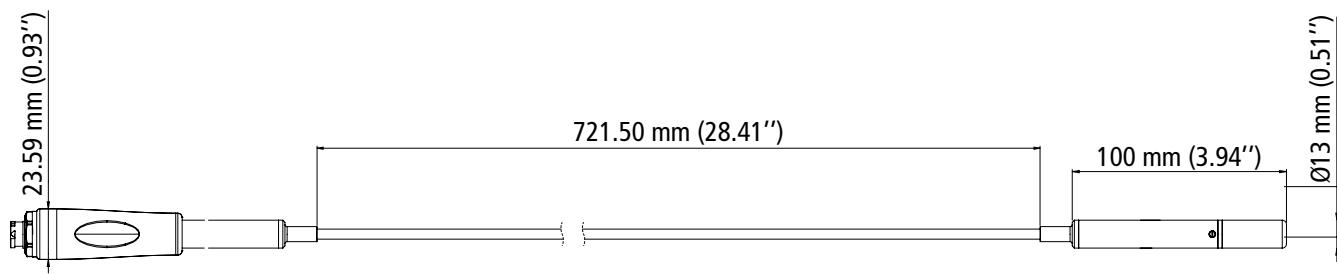
**Designation: Si-PRO-U-I-100-H / Sales reference: 27986**

### Technical features

Parameter	Measuring range	Accuracy*	Resolution
<b>Measured parameter</b>			
Dewpoint (°C <sub>td</sub> , °F <sub>td</sub> )	-50 to 100 °C <sub>td</sub> (-58 to 212 °F <sub>td</sub> )	-	0.1 °C <sub>td</sub> , 0.1 °F <sub>td</sub>
Frost point (°C <sub>tf</sub> , °F <sub>tf</sub> )	-50 to 100 °C <sub>tf</sub> (-58 to 212 °F <sub>tf</sub> )		0.1 °C <sub>tf</sub> , 0.1 °F <sub>tf</sub>
<b>Calculated parameter (Si-PRO-U-I-100-H probe with external temperature probe)</b>			
Relative humidity (%RH)	0 to 100%RH	±1.5%RH Temperature dependence: ±0.04 x (T-20) %RH (if T<15 °C or T>25 °C)	0.1%RH
Wet temperature (°C <sub>tw</sub> , °F <sub>tw</sub> )	-50 to 100 °C <sub>tw</sub> (-58 to 212 °F <sub>tw</sub> )	-	0.1 °C <sub>tw</sub> , 0.1 °F <sub>tw</sub>
Absolute humidity (g/m <sup>3</sup> )	0 to 1000 g/m <sup>3</sup>	-	0.1 g/m <sup>3</sup>
Enthalpy (kJ/kg)	0 to 15,000 kJ/kg	-	0 to 9999.9: 0.1 kJ/kg 10,000 to 15,000: 1 kJ/kg
Mixing ratio (g/kg)	0 to 1000 g/kg	-	0.1 g/kg

\*All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

## Probe dimensions



## Probe cable connection

A probe cable is mandatory to connect the probe to a Si-C320 transmitter:

- **Désignation : Si-ACC-R2; Sales reference: 27999**

2 extension cables are also available:

- 5 m length: **Si-ACC-R5; Sales reference: 28000**
- 10 m length: **Si-ACC-R10; Sales reference: 28001**

It is possible to combine probe cables, up to a maximum total length of 12 m.

## Accessories (see the specific data sheet)

- Cable extensions
- Stainless steel clamp
- Mounting supports

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