



DATA SHEET



# SI-PRO-U-I-100-H

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

### Description

Interchangeable hygrometry probe designed for being used in environments involving constant high humidity or rapid oscillating humidity where the probe's performance and its tolerance to pollutants are key.

Measuring ranges: 0 to 100 %RH, -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.

This probe needs to work in combination with the temperature probe Si-PRO-T-150 or a Pt100 probe connected to a Si-C320 transmitter using the Si-ACC-ETP adapter.

### 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

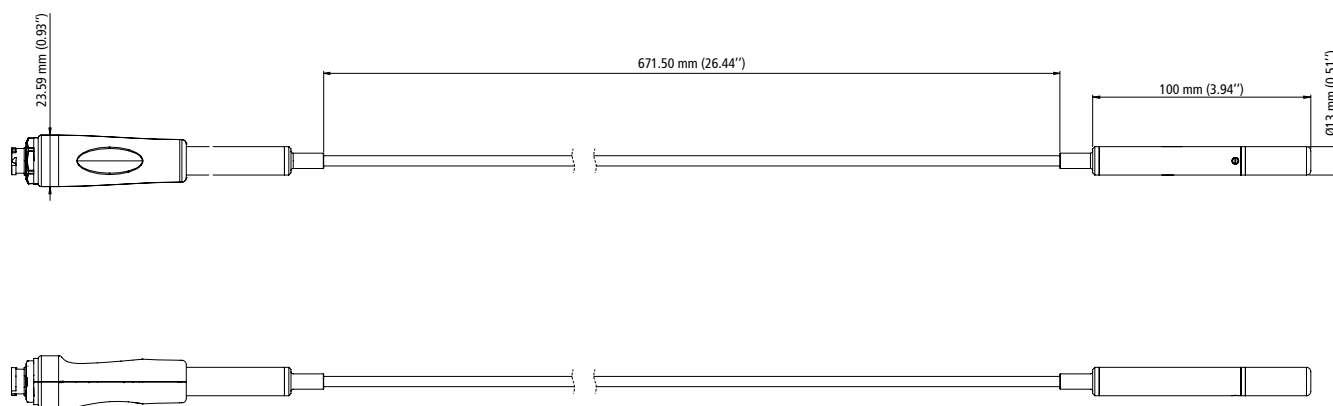
### Technical features

| Parameter  | Measuring range   | Accuracy*  | Resolution  |
|--|---|--|---|
| Pt 100 temperature (°C, °F)                              | -40 to 150°C (-40 to 302°F)                                 | -  | 0.1°C, 0.1°F  |
| Relative humidity (%RH)                                  | 0 to 100%RH   | ±1.5%RH<br>Temperature dependence:<br>±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><br>(-58 to 212°F <sub>tw</sub> ) | -  | 0.1°C <sub>tw</sub> 0.1°F <sub>tw</sub>             |
| Dewpoint** (°C <sub>td</sub> , °F <sub>td</sub> )        | -50 to 100°C <sub>td</sub><br>(-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>             |
| 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<br>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.

\*\*Calculated value

## 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: 28801**

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