



A temperature/relative humidity sensor designed to work with all HOBO data loggers that accept Smart Sensors. All sensor parameters are stored inside the Smart Sensor, which automatically communicates configuration data information to the logger without any programming, calibration, or extensive user setup.

Features:

- Smart Sensor
- Works with all loggers that accept Smart Sensor inputs
- Automatically communicates configuration data to the logger

Technical Specifications:**Measurement Range**

Temp: -40°C to 75°C (-40°F to 167°F)

RH: 0-100%* RH at -40° to 75°C (-40° to 167°F); exposure to conditions below -20°C (-4°F) or above 95% RH may temporarily increase the maximum RH sensor error by an additional 1%

Accuracy:

Temp: $\pm 0.25^{\circ}\text{C}$ from -40° to 0°C ($\pm 0.45^{\circ}\text{F}$ from -40° to 32°F); $\pm 0.20^{\circ}\text{C}$ from 0° to 70°C ($\pm 0.36^{\circ}\text{F}$ from 32° to 158°F); $\pm 0.25^{\circ}\text{C}$ from 70° to 75°C ($\pm 0.45^{\circ}\text{F}$ from 158° to 167°F)

RH: $\pm 2.5\%$ from 10% to 90% RH (typical), to a maximum of $\pm 3.5\%$ including hysteresis at 25°C (77°F); below 10% and above 90% $\pm 5\%$ typical

Resolution:

Temp: 0.02°C

RH: 0.01% RH

Bits Per Sample:

Temp: 16

RH: 16

Drift:

Temp: $< 0.01^{\circ}\text{C}$ (0.18°F) per year

RH: $< 1\%$ per year typical

Response Time (typical, to 90% of change):

Temp: Without solar radiation shield: 3 minutes, 45 seconds in air moving 1 m/s; With RS3-B solar radiation shield: 6 minutes, 30 seconds in air moving 1 m/s

RH: Without solar radiation shield: 15 seconds in air moving 1 m/s; With RS3-B solar radiation shield: 30 seconds in air moving 1 m/s

Operating temperature range: -40°C to 75°C (-40°F to 167°F)

Environmental rating: Weatherproof: 0 to 100% RH intermittent condensing environments. For best results, protect the Temp/RH sensor from sunlight and direct splashing by mounting it inside a protective enclosure, such as a solar radiation shield.

Housing: PVC cable jacket with ASA styrene polymer RH sensor cap; modified hydrophobic polyethersulfone membrane

Sensor dimensions: 45.97 x 11.43 x 10.16 mm (1.81 x 0.45 x 0.40 inches)

Weight: 110 g (3.88 oz)

Number of data channels:** 2

Measurement averaging option: No

Cable lengths available: 2.5 m (8.2 ft)

Length of Smart Sensor network cable: 0.5 m (1.6 ft)

The CE Marking identifies this product as complying with all relevant directives in the European Union (EU).

The UKCA Mark identifies this product as complying with all relevant directives in the UK Declaration of Conformity.

* Maximum 100% RH readings are only logged with RX3000 stations. The maximum readings for this sensor with U30 and H21 stations are approximately 99.99%.

** A single HOBO station can accommodate 15 data channels and up to 100 m (328 ft) of smart sensor cable (the digital communications portion of the sensor cables).