

# HOBO U12 Temperature/Relative Humidity/2 External Channel Data Logger - U12-013



**Measures:**

Temperature, Relative Humidity, 4-20mA, AC Current, AC Voltage, Air Velocity, Carbon Dioxide, Compressed Air Flow, DC Current, DC Voltage, Gauge Pressure, Kilowatts (kW), Volatile Organic Compound

**Features:**

- 12-bit resolution provides high accuracy
- Large memory for long-term deployments or fast sampling
- Programmable and push button start
- Direct USB interface for fast data offload
- Compatible with Onset's™ HOBO U-Shuttle for convenient data transport
- Compatible with HOBOWare and HOBOWare Pro for logger setup, graphing and analysis

Qty	1-9	10-99	100+
\$US	\$140	\$130	\$119

Contact Onset at 1-800-564-4377

**Description:**

The HOBO U12-013 has a built in [temperature](#) and [relative humidity](#) sensor along with 2 external channels for a wide range of [energy](#) and environmental sensors. This product can store up to 43,000 measurements of 12-bit resolution readings.

**Detailed Specifications:**

**Measurement range:**

Temperature: -20°C to 70°C (-4°F to 158°F)

RH: 5% to 95% RH

Analog channels:

0 to 2.5 Vdc (w/[CABLE-2.5-STEREO](#)); 0 to 5 Vdc (w/[CABLE-ADAP5](#)); 0 to 10 Vdc (w/ [CABLE-ADAP10](#)); 4-20 mA (w/[CABLE-4-20MA](#))

**Accuracy:**

Temperature:  $\pm 0.35^\circ\text{C}$  from  $0^\circ\text{C}$  to  $50^\circ\text{C}$  ( $\pm 0.63^\circ\text{F}$  from  $32^\circ\text{F}$  to  $122^\circ\text{F}$ ), see Plot A

RH:  $\pm 2.5\%$  from 10% to 90% RH (typical), to a maximum of  $\pm 3.5\%$ , see Plot B

External input channel (see sensor manual):  $\pm 2\text{ mV}$   $\pm 2.5\%$  of absolute reading

**Resolution:**

Temperature:  $0.03^\circ\text{C}$  at  $25^\circ\text{C}$  ( $0.05^\circ\text{F}$  at  $77^\circ\text{F}$ ), see Plot A

RH: 0.03% RH

**Sample Rate:**

1 second to 18 hours, user selectable

**Drift:**

Temperature:  $0.1^\circ\text{C}/\text{year}$  ( $0.2^\circ\text{F}/\text{year}$ )

RH:  $<1\%$  per year typical; RH hysteresis 1%

**Time accuracy:**

$\pm 1$  minute per month at  $25^\circ\text{C}$  ( $77^\circ\text{F}$ ), see Plot C

Response time in airflow of 1 m/s (2.2 mph)

Temperature: 6 minutes, typical to 90%

RH: 1 minute, typical to 90%

**Operating temperature:**

Logging: -20°C to 70°C (-4°F to 158°F); 0 to 95% RH (non-condensing)

Launch/readout:  $0^\circ\text{C}$  to  $50^\circ\text{C}$  ( $32^\circ\text{F}$  to  $122^\circ\text{F}$ ), per USB specification

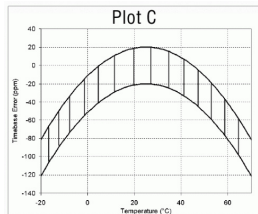
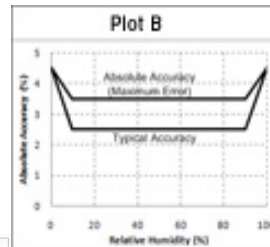
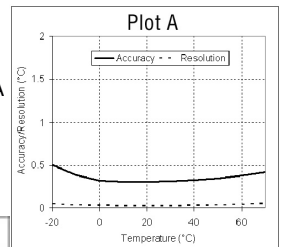
**Battery life:**

1 year typical use

**Memory:**

64K bytes (43,000 12-bit measurements)

**Weight:**



46 g (1.6 oz)

**Dimensions:**

58 x 74 x 22 mm (2.3 x 2.9 x 0.9 inches)



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

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**HOBO<sup>®</sup> Data Loggers**

**1-800-LOGGERS**