



HOBO® U14-001 Data Logger

LCD - Temperature/Relative Humidity (RH) Data Logger

HOBO U14 data loggers display, record, and provide alarm notifications of temperature and humidity conditions. Receive out-of-range alarms notifications with the optional Auto Dialer or Remote Audible Alarm. These loggers are well-suited for use in manufacturing, processing, and storage environments where reliable monitoring and documentation of temperature and relative humidity conditions is critical.

Supported Measurements:

Relative Humidity and Temperature

Key Advantages:

- Faster USB data download time
- Improved Temperature/Relative Humidity sensor resolution
- Real-time display of Temperature and Relative Humidity
- Alarm display and output ensure timely notification of out-of-range conditions
- Two models to choose from - internal Temperature/Relative Humidity external Temperature or Temperature/Relative Humidity
- Optional Remote Alarm and Autodialer
- Optional protective case for wet or condensing environments
- Compatible with HOBOWare and HOBOWare Pro software for logger setup, graphing and analysis



HOBO U14-001 Data Logger Specifications

Environmental

- Operating temperature range -20°C to +50°C, (-4°F to +122°F) , 0 to 100% RH non-condensing
- Operating relative humidity range 0 to 95%, non-condensing, noncorrosive environment

Logger Capabilities

- Capacity:
Temp and RH: 21,500 measurements
Temp Only: 43,000 measurements
- Software-selectable sampling intervals: 1 second up to 18 hours, recording times up to 1 year
- Programmable start time/date
- Recording modes: Stop when full
- Launch Modes: Immediate, Delayed
- Nonvolatile EEPROM memory retains data even if batteries fail

LCD

- Size: 33 x 50.8 mm (1.3 x 2 inches)
- Displays temperature and relative humidity simultaneously
- Displays °C or °F (selectable within host software)
- Displays memory remaining and battery level
- Displays flashing ALERT for out-of-limits conditions (selectable within host software) and stops flashing on offload or return to normal range.

Alarms

- High and low set points for both temperature and relative humidity
- Selectable delays for each set point
- Alert conditions reset on offload or return to normal range.
- Selectable Contact Relay: Normally Closed or Normally Open
- Contact rating: 48VDC, 1A max
- Contact resistance: less than 1 Ohm
- Wire size range is 22AWG to 14AWG
- 0% Low Battery Range Communications
- Offloads data to PC or U-Shuttle via USB cable
- Readout full logger (64K) in less than 30 seconds

Timekeeping

- Time accuracy: ±1 minute per month at 20°C (68°F).

Power

- 3 AAA Alkaline batteries, user-replaceable

Size/Weight

- 125 x 92 x 31 mm (4.9 x 3.6 x 1.2 inches)
- 170 g (6.0 oz) with batteries

Internal 12-Bit Temperature Sensor

- Measurement range: -20°C to 50°C (-4°F to 122°F)

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- Response time: 15 minutes (to 90% in airflow of 1 m/sec)
- Temperature Accuracy Drift: Negligible

Internal 12-Bit Relative Humidity Sensor

- User replaceable
- Measurement range: 0-100% RH, -20 to 50°C (-4 to 122°F)
- Accuracy: $\pm 2.5\%$ 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: 0.05% RH
- Response time to 90%: 2 minutes (to 90% in airflow of 1 m/sec)
- Accuracy Drift: $<1\%$ per year typical
- Hysteresis: 1% typical

External Sensors

- For External Sensor Specifications, see the sensor's user manual.

Battery Life

- The batteries will last one year in typical conditions (logging intervals of ≥ 1 minute with weekly offloads and average temperatures greater than 10°C or 50°F). Frequent offloads and/or extreme temperatures will reduce battery life.
- At temperatures below freezing (0°C or 32°F), batteries will typically require replacement every six months. In these conditions the battery level bar graph should be checked regularly.