# HOBO® U24-002-C Data Logger

## Salt Water Conductivity/Salinity

The HOBO U24-002-C is a cost-effective data logger for measuring salinity, conductivity and temperature in saltwater environments with relatively small changes in salinity (±5,000  S/cm) such as saltwater bays, or to detect salinity events such as upwelling, rainstorm, and discharge events. Data from the logger can be used with data from the HOBO U26 Dissolved Oxygen Logger for monitoring percent dissolved oxygen saturation.


Note: When monitoring salinity in waters with more than ±5,000 uS/cm variation, refer to the accuracy shown in Plot C in the product specifications to determine if the accuracy is acceptable for your needs. Monthly field calibration readings are typically required to achieve the best accuracy.

### Key Advantages:

- Non-contact sensor provides long life
- Provides easy access to sensor for cleaning and shedding air bubbles
- Two user-selectable ranges provide measurements from 100 to 55,000 uS/cm.
- The Delrin housing will not corrode in saltwater
- HOBOware Pro software enables start/end-point calibration to compensate for any fouling and provides easy conversion to specific conductance and salinity using the Practical Salinity Scale 1978 (PSS-78)
- USB optical interface provides high-speed, reliable salinity data offload in wet environments
- Compatible with the HOBO Waterproof Shuttle for easy and reliable data retrieval and transport

The HOBO U24 Conductivity/Salinity data logger features a non-contact sensor with a Titanium Pentoxide coating. This coating prevents the sensor from coming in contact with the water, which in turn prevents tarnishing or corrosion associated with traditional electrode sensors. This sensor coating is also inert, enabling fouling to be easily wiped off the sensor.

## HOBO U24-002-C Data Logger Specifications

**Measurements:** Actual Conductivity, Temperature, Specific Conductance at 25C (calculated), Salinity (calculated using PSS-78, the Practical Salinity Scale 1978)

Conductivity Measurement Range (Calibrated Range)
**High range:** 5000 to 55,000 uS/cm
**Low range:** 100 to 10,000 uS/cm
Over the range of 5 to 35C (41 to 95F)

**Temperature Measurement Range:** 5 to 35C (41 to 95F)

Specific Conductance Accuracy (in Calibrated Range using Conductivity Assistant and Calibration Measurements)
**Low range:** 3% of reading or 50 µS/cm, whichever is greater
High range: 5% of reading, in waters within a range of ±3,000 µS/cm; waters with greater variation can have substantially greater error (see Plot C)
Conductivity Resolution: 2 uS/cm
Temperature Accuracy: 0.1°C (0.2°F) at 25°C (77°F)
Temperature Resolution: 0.01°C (0.02°F)
**Conductivity drift:** Up to 12% sensor drift per month, exclusive of drift from fouling. Monthly start- and end-point calibration should be used with the HOBOware Conductivity Assistant to achieve the specified Specific Conductance accuracy.
**Response time:** 1 second to 90% of change (in water)
**Operating range:** -2 to 36C (28 to 97F) – non-freezing
**Memory:** 18,500 temperature and conductivity measurements when using one conductivity range; 11,500 sets of measurements when using both conductivity ranges (64 KB total memory)
**Sample rate:** 1 second to 18 hrs, fixed or multiple-rate sampling with up to 8 user-defined sampling intervals
**Clock accuracy:** +/- 1 minute per month
**Battery life:** 3 years (@ 1 min logging)
**Maximum depth:** 70 m (225')
**Weight:** 193 gm (6.82 ounces), buoyancy in freshwater: -59.8 gm (-2.11 ounces)
**Size:** 3.18 cm diameter x 16.5 cm, with 6.3 mm mounting hole (1.25" diameter x 6.5",  " hole)
**Wetted housing materials:** Delrin housing, epoxy, stainless steel retaining ring, polypropylene, Buna rubber O-ring, titanium pentoxide (inert coating over sensor) – all materials are suitable for long-term use in saltwater.

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

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