

HI13302

# HALO®

Compatible with:  
iOS  
Android™  
edge®blu

**Ideal for test tube applications**

HI13302 HALO is an innovative, application specific, pH electrode with Bluetooth® Smart technology that allows the use of a compatible Apple or Android smart device to be used as a pH meter. This electrode is designed for taking pH measurements in test tubes that are used by university, pharmaceutical, biotechnology, and food laboratories customers.

- **Small diameter bulb and body**
  - 5 mm diameter bulb fits easily into test tubes.
- **Built-in temperature sensor**
  - Provides accurate temperature compensated pH measurements
- **Open junction**
  - Permits a predictable flow rate of reference electrolyte for stability
- **Gel-filled reference**
  - Maintenance free with no fill solutions required

## Small 5 mm Diameter Bulb and Body

HI13302 has a small pH-sensing bulb that is only 5 mm in diameter by 80 mm in length. The small diameter of the probe allows for pH measurements in test tubes, vials, and other small containers.

## Built-in Temperature Sensor

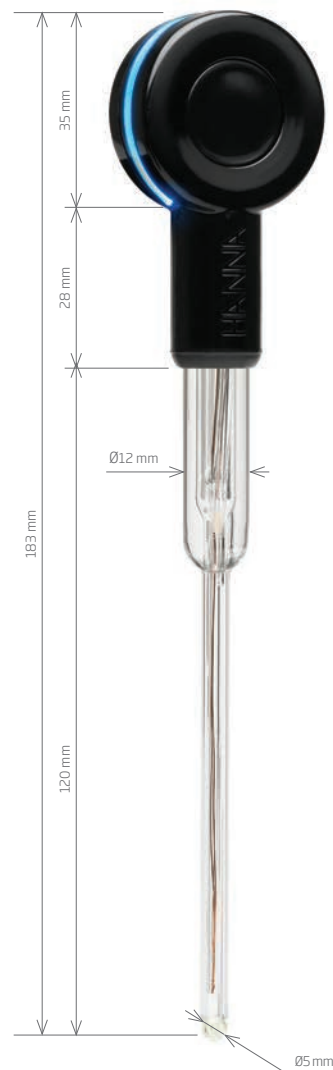
HI13302 has a thermistor temperature sensor built into the tip of the pH electrode. A thermistor based temperature sensor provides for a high accuracy temperature while being in the tip of the electrode allows for a rapid temperature compensated measurement.

## Open Junction Design

The reference half-cell has an open junction design in order to accommodate the 5 mm micro bulb and shaft. The open junction design is resistant to clogging from suspended solids and proteins found in biological samples. Any clogging that occurs will impede the measurement circuit between the indicating electrode and the internal reference resulting in slower response time and erratic readings.

## Maintenance Free Gel-filled Reference

The open junction design consists of a solid gel (Viscolene) interface between the sample and internal ceramic reference junction. Other than routine calibration and cleaning, this probe is maintenance free.



### HALO Specifications

### HI13302

Measurement Range	0.00 to 12.00 pH
Reference Cell Type	double, Ag/AgCl
Junction Type	open junction
Electrolyte	Viscolene
Body Material	glass
Tip / Shape	spheric
Temperature Operating Range	-5 to 50°C (23 to 122°F)
Body Length/Overall Length	120 mm / 183 mm
Temperature Sensor	integrated
Outer Diameter	5 mm (glass)
Connector Type	Bluetooth Smart (Bluetooth 4.0), 10 m (33') range
Battery Type/Life	CR2032 3V lithium ion / approximately 500 hours
Environment	0 to 50°C (23 to 122°F); electronic module is not waterproof

### Ordering Information

**HI13302** (HALO) is supplied with storage solution, cleaning solution, pH 7.01 buffer solution, pH 4.01 buffer solution, battery, quality certificate and instruction sheet.



# WolfLabs

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The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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