

Sensors for superior process control



Single-use and reusable sensors

Thermo Fisher Scientific offers single-use and reusable sensors for the measurement of pH, DO, biomass, and headspace pressure—designed for higher reliability and superior performance for cell culture and fermentation process monitoring that meet all of your process analytical technology (PAT) needs.

To further enhance your processes, digital integration is possible with the use of our bioprocess controllers paired with the TruBio Bioprocess Control Software.

We offer a range of intuitive process sensors—whether you're incorporating them into a single-use bioprocess container or autoclavable vessel process—to help you monitor processes, reduce failures, and gain efficiencies.



TruSens transmitter blade

The Thermo Scientific™ TruSens™ transmitter blade is a combined technology designed to monitor all conventional pH and DO sensors. It allows the connection of a resistance temperature detector (RTD) or a thermistor inputs to suit the user's preferred sensor technology in upstream processes.

This transmitter blade with TruBio software allows for temperature compensation and is compatible with electrochemical sensors and digital sensors that output nAmp or mV signals.

Features

- Compatible with most single-use or reusable sensors
- Designed to easily integrate with TruBio Bioprocess Control software
- Easily incorporated into the HyPerforma Bioprocess Controllers
- Minimal maintenance

TruSens transmitter blade specifications

Physical

Case material	Aluminum bracket
Rating	NEMA 1 (when mounted, same rating as enclosure)
Dimensions (H x W x D)	130 x 35 x 128 mm (5.1 x 1.4 x 5.0 in.)
Weight/shipping weight	0.1/0.3 kg (0.2/0.6 lb.)
Mounting	Enclosure mounted within utility tower
Display	TruBio Bioprocess Control Software (GAMP5)
RFI/EMI	EN 61326-1
Operating temperature	5°C to 45°C (41°F to 113°F) ambient
Storage temperature	0°C to 65°C (32°F to 149°F)
Relative humidity	10% to 90% (noncondensing)

Electrical

Power supply	24 VDC at 150 mA
Signal outputs*	6 analog 4–20 mA (1 electrochemical pH, 1 electrochemical dissolved oxygen, 2 PT100 RTD, 2 thermistor)
Signal inputs	pH (–520–520 mV), DO (0–500 nA) , PT100 RTD (0–100 °C), thermistor (0–100 °C for 10KΩ, 15–130 °C for 22kΩ)
Output accuracy	Analog: ±0.1 mA Digital: NA
Transmitter diagnostics	Internal diagnostics for sensor and loop*

* If a sensor loop is activated but no sensors are attached, the following errors will be seen: The DO current will drop and produce a low "%SAT" reading, the pH will be unstable and indeterminate, RTD channels will read "maximum temperature", and the thermistor channels will read "minimum temperature".

Find out more at thermofisher.com/sensors