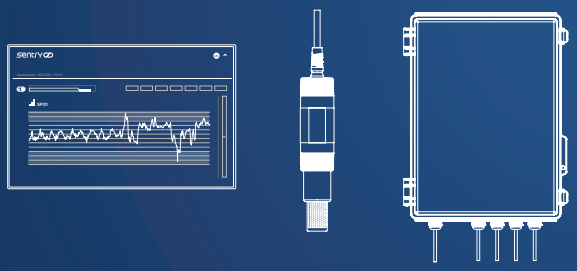
SENTRY™ Standard



Real-time Wastewater Quality Monitoring

Monitor consumable BOD (mg/L), biological health, optimize performance and provide early warning of wastewater treatment imbalance

Applications

Conventional Wastewater
Industrial Wastewater
Pulp and Paper
Digesters
Clean Water

Reduced risk of process failure by preventing toxic events and system imbalance.

Detailed monitoring to identify patterns in system performance (daily, weekly, monthly)

Increased efficiency by maximizing reactor performance.

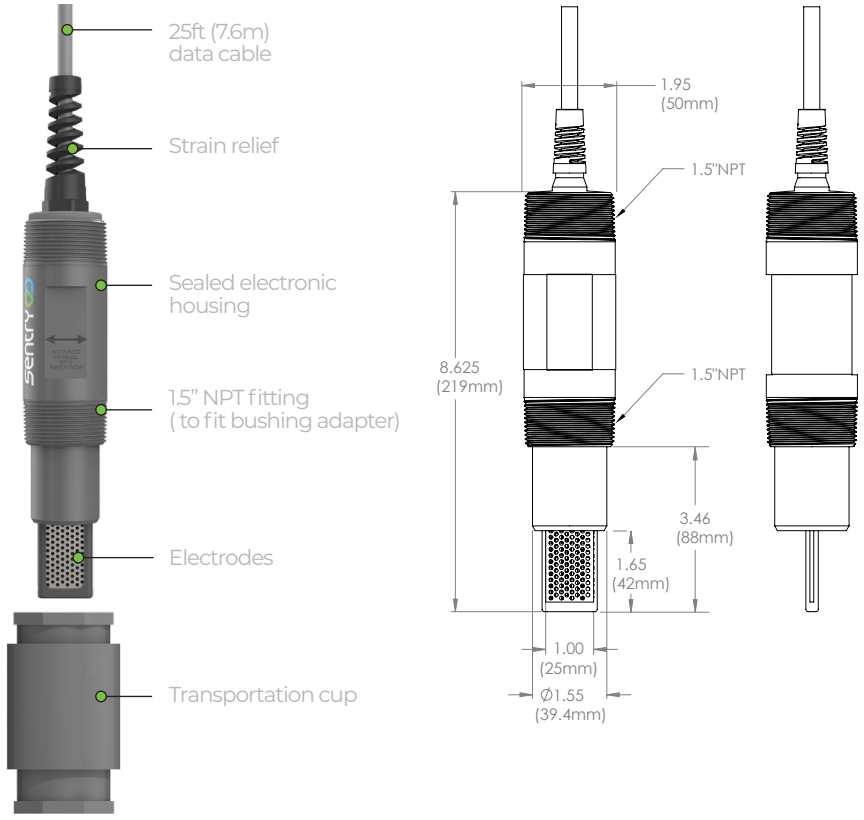
Clearly monitor real-time performance of resident microbiology from any device.

Receive early warning alarms for system imbalance and toxic events.

Accurately diagnose poorly performing systems and match to operational events.

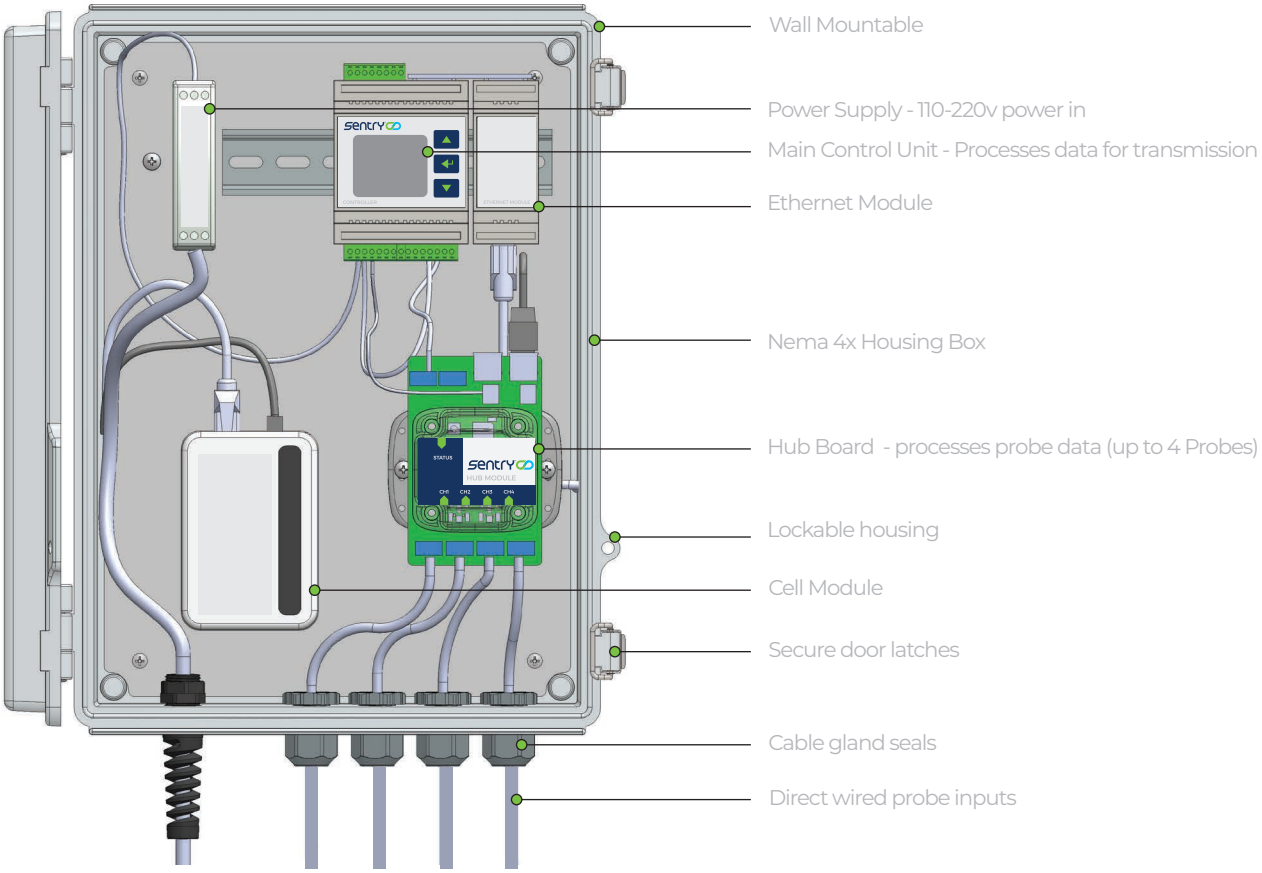
Version 1.0.2 July 2025

Sensor Features



Cable Lengths	Standard 50, 100, 150ft (15.2, 30.5, 45.7m)
Cable Install	Open channel or in-pipe. Secured by 1.5" NPT threading in sensor body.

Panel Features



SENTRY™ Sensor

Model	SENTRY™ Sensor
Sensor type	Bioelectrochemical
Measuring type	Electron generation rate (current) from biological oxidation of organic matter in solution.
Parameter	SENTRY™ Signal – SenS (as Consumable cBOD / VFA)
Reading range	0 – 10,000 mg/L as cBOD equivalent or 0 – 5,000 mg/L as VFA equivalent
Lower detection limit	2 mg/L as cBOD equivalent, 2 mg/L as VFA equivalent
Reading time	Every minute
Resolution	0.00
Storage Temperature	1 - 4 °C (33.8 – 39.2 °F)
Operating temperature*	4 – 60 °C (39.2 – 140 °F)
Immersion pressure*	75 kPa bar (10.8 psi) maximum
Water velocity*	0.5-5 m/s (1.6 – 16.4 ft/s)
pH Range*	6-8 pH
Incompatibility (within proximity to dosing point)	Metal salts - based coagulants, polymers, disinfectants, prolonged exposure to air
Mounting options	Open channel or in-pipe. Secured by 1.5" NPT threading in sensor body.
Mounting requirements	Sensor electrode must be completely and constantly submerged in water during operation.
Dimensions	L: 219 mm; Diam: 49.5 mm (L: 8.63 in; Diam: 1.95 in)
Weight	3.1 lb (1.4 Kg)
Material	CPVC, 316 Stainless Steel
Sensor cable connection type	Standard circular connector (male), bayonet lock
Sensor cable length	7.6 m (25 ft) integrated in sensor
Overall cable lengths (with extension)**	15.2, 30.5 or 45.7 m (50, 100 or 150 ft) including cable extensions from panel.
Warranty	1 Year

* Optimal operational ranges, application depending. Can effectively perform outside of optimal range at the discretion of a SENTRY Client Manager or SENTRY Representative based on a review of local conditions.
** Custom cable lengths (up to 400') are available for a fee.

SENTRY™ Panel

Rating	NEMA 4x/ IP67 wall mounted
Inputs	X4 SENTRY™ Sensors
Certification	UL/CSA 61010-1
Warranty	2 years
Internet connectivity	Ethernet, WiFi, or cellular (international SIM card)
Communication	4-20 mA analog output (for Profibus/S-CADA) or API
Material	Fiberglass reinforced polycarbonate base and cover, stainless steel latches
Dimensions	0.31 x 0.40 x 0.13 m (W, L, D) 12.1 x 15.9 x 5.2 in (W, L, D)
Weight	3.3 Kg (7.3 Lb)
Power requirement(s)	85-264 VAC, 120-370 VDC, 47-63 Hz, 0.55 A/115 VAC, 0.35 A/230 VAC
Internal power supply	24 VDC, 1.1 amp max
Power plug type	Type B
Mounting	Indoor/outdoor (vertical surface)
Storage temperature	-40°C to 60°C (-40 °F to 140 °F)
Operating temperature	-20°C to 55°C (-4 °F to 131 °F)
Humidity range	5 – 90%
Cable extensions	7.6, 23 or 38 m (25, 75, 125 ft)

SENTRY™ Dashboard

Communication platform	Azure
Access	Unlimited users with individual credentials
Data export	.CSV file or API

Security

Intellectual property	U.S. Patent 11,352,272 U.S. Patent 11,845,680
Dashboard security	Microsoft Azure IoT hub with end-to-end encryption via HTTPS and SSL protocols
Data security	MySQL Database, firewall, and IP restriction

Accessories:
Transportation cup, SD card back-up storage in panel, four mounting feet and screws (M5), international SIM card.

Upon request only and subject to additional cost:

- Intrinsically safe module with AEx [ia] IIA T6 certification.

- Temperature-correction package.