



UNISENSE

ENVIRONMENT

Nitrous Oxide process sensor for online wastewater treatment optimization, low-cost greenhouse gas reduction, and reliable sustainability accounting

Measure N₂O directly in your process

The N₂O Wastewater Sensor delivers stable measurements across aerobic, anoxic, and anaerobic zones, so you can see where N₂O is produced and how your actions affect emissions.

The sensor is built to handle the harsh wastewater conditions where foam, condensation and fouling are part of normal operation.

The fully digital sensor stores calibration and sensor-specific data, so you can move it or replace the sensor head without losing configuration or history.

The sensor continuously monitors its own status and alerts you when calibration or sensor head replacement is needed.

You only need to calibrate the sensor every 2nd month. You can calibrate directly at the sensor with LED guidance from the Connector Unit. Or you can take the sensor to the Operator Console and do a calibration on screen.

Your measurement data is collected and handled through the Operator Console, giving you direct N₂O emission results without additional programming or calculations.

Smart sensor, simple system

- **Calibrate directly at the sensor**
No need for console access
- **Fully digital sensor**
Calibration, sensor data, and lifetime stored on the sensor
- **Smart sensor alerts**
Get notified when you need to calibrate or replace the sensor head
- **Direct N₂O results**
Built-in and dynamic emission calculations based on airflow input
- **Simple system setup & full flexibility**
Connect up to 16 sensors for improved operation



N₂O Wastewater System

N₂O Wastewater Digital Sensor Body

- Calculates your emissions data
- Measures the temperature
- Signals when its time to calibrate or change the sensor head
- Stores sensor data with E²PROM

N₂O Wastewater Sensor Head

- Measures N₂O concentrations
- Detection limit:
Standard Range: 0.005 N₂O-N mg/L
Medium Range: 0.03 N₂O-N mg/L
High Range: 0.4 N₂O-N mg/L
- Measuring range:
Standard Range: 0–1.5 N₂O-N mg/L
Medium Range: 0–9 N₂O-N mg/L
High Range: 0–110 N₂O-N mg/L
- Exchange every 6 months

N₂O Wastewater Operator Console

- Manages the N₂O measurements
- Supports up to 16 sensors
- Connect directly to your control system with Modbus TCP/IP

N₂O Wastewater Connector Unit

- Connects up to 2 sensors
- Screenless calibration with LED guidance
- Read and write values with 4–20mA input and output



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