

Mounting and connecting the N₂O wastewater Sensor and Controller

1

- Find the correct location for the Sensor and Controller and mount the Controller safely, e.g. by using the Pipe Mounting Kit and Weather Protection Canopy or in a suitable cabinet.
- The sensor must fully submerged under water and placed in such a manner that it will not hit the tank wall or any other hard objects, ideally with a distance holder. Possible changes in flow direction as well as the possibility of taking the sensor out of the water for calibration should be considered.
- It is recommended to place the sensor in the wastewater using the Chain Mount to avoid strain on the cable. See pictures below and **Section 7.1**.



Solutions for mounting the sensor in wastewater.

2

- For real time display of data and logging together with other sensor data, connect to SCADA. See **Appendix 6: Connection Chart**. To implement the emission calculation, see formula collection in **Appendix 8**.

3

- Remove the protective sticker from the controller screen.



4

- Connect the controller to a power supply. The sensor measurements will be recorded in the controller as soon as the sensors are connected to a powered controller.

This guide is supplementary to the full system manual and does not replace it. The relevant manual sections are given here. When in doubt about the setting up of your system, reach out to sales@unisense.com for support.

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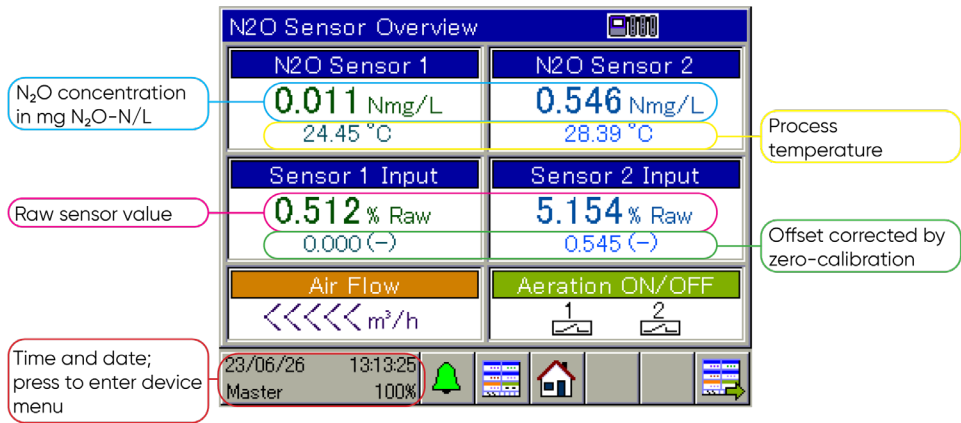
- Connect 1 or 2 N₂O Wastewater Sensor bodies to the controller and install sensor heads. See **Appendix 7: Installing the N₂O Wastewater Sensor Head**. You can also scan this QR for a step-by-step video guide.



6

- Let the sensors stabilize (in a bucket of tap water, or if freezing temperatures are expected, in the wastewater tank) for 12 hours, until the signal is stable and the Raw Sensor Value is below 2% in tap water.

IMPORTANT:
 Never leave the Sensor Body out in the open without a Sensor Head or black closure cap that it is shipped with. Alternatively cover well with e.g. a plastic bag. Water intrusion will damage electrical connections!



7

- Continue with calibration of the sensor. The sensor is calibrated using Unisense Environment's N₂O calibration kit or similar equipment. See **Section 7.4** for a detailed description and **Appendix 2** / the QR code for a step-by-step guide of the calibration procedure. The following Items are recommended to carry out the calibration:

- 2 x isolated bucket 5L
- Measuring beaker for min 4L
- Thermometer
- Ice pack (winter)
- Bucket & brush/ sponge for cleaning (not shown)

Scan the QR code for a step-by-step video guide of the calibration procedure.



IMPORTANT:
 Whenever a sensor head or sensor cable is disconnected, or the controller is powered off/on, the polarization procedure will be triggered. This will cause the raw value to rise steeply and then fall again to be under 2%. Wait for at least 30 min for the signal to stabilize and check it in tap water.

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