iJiNUS
CLAIRE GROUP

Sensors ⋮ **Dataloggers** ⋮ **Web services**

Overflow detector quick start guide

Available on Google Play

Overflow detector quick start guide

Sensor

Mounting

Smartphone and Mobile App

Available on the Play store, soon on the App Store

Accessories for testing

App OverFlow

Available on Google Play
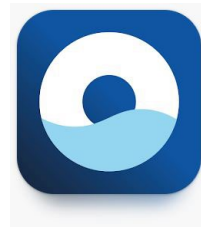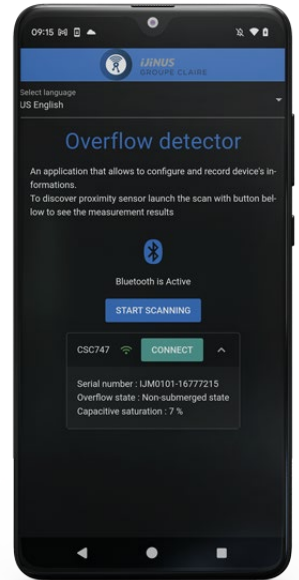
Here are a few essential points to read and bear in mind for overflow detectors :

The product is designed to activate if the detection zone **is fully immersed in water**.
**Consequently, the application of a wet cloth will only vary the saturation slightly but will not be sufficient to activate the overflow condition.**

1) The overflow detector can be set to trigger the overflow state after a certain number of measurements exceeding a predefined threshold (time delay), so for a measurement every 4 seconds and a time delay of 4 the detector will trigger after 4x4=16 seconds. By default, the time delay is set to 1 measurement.

2) During trials, tests or on-site verification of the detector's correct operation, it must be immersed and "surrounded" **by 3 cm of water around the walls**. This water must have a conductivity greater than **500µS/cm** . The ideal solution is to use raw sewage water, and if not, slightly salted water (for information, a dose of approximately 0,5 g of salt in 1 litre of water should be enough).

In addition, to avoid difficulties with the trigger threshold, we recommend displaying the capacitive saturation value (in %) via the mobile app.

The V4 detector contains a battery that allows the product to measure and record data when not connected to a power supply, and to be paired via BLE with a smartphone running the dedicated App.
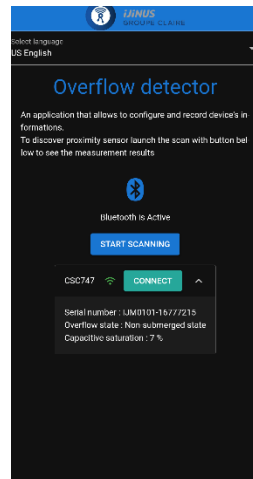
Enable Bluetooth and localisation:

for connectivity between the phone and the detector to be usable, the distance between the 2 products in open field (i.e. without obstacles) must be less than 10 m and the detector must be submerged below a maximum level of 10 cm.
**If the localisation option is not enabled on the phone, the detectors will not be visible.**
By clicking on the green CONNECT button, the App connects to the product and provides a "**history**" view.
Password: **ijinus29**

This default "History" view offers :
A Status: Not immersed or Immersed AND the default output (see Configuration slide)

- A display showing the current saturation (here 7%) in three colours: green (not immersed), orange (maintenance), red (immersed). The capacitive threshold signifying immersion is about 90% in this example but can be modified.
- Current temperature (°C top left),
- Battery status (top right, in V for a new 3.6V battery)
- History of product status changes
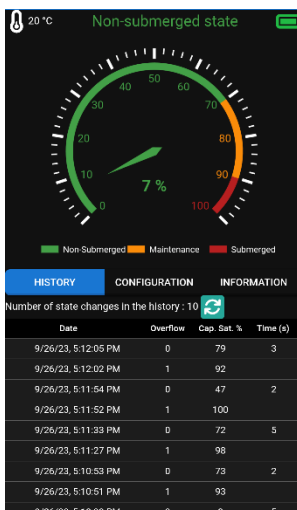
Finally, you can email a csv file containing the historical data or download the file (if the Delete, Export and Download menu is not visible, scroll down the screen.
The configuration is :

- Name or rename the detector,
- Check or modify the capacitive saturation threshold used to switch the product to the immersed state (here 90% for the example on the app and 80% on the graph below),
- Enter the measurement period (in s) and the number of values used to smooth the result,
- And finally define the digital output (NO, NC, ...), here NO.
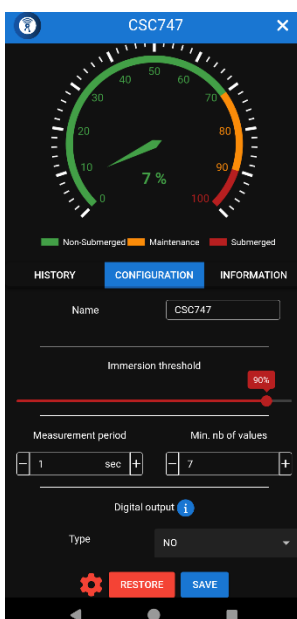
For more details, such as calibration information (concepts, procedure, ...), autonomy, etc., please refer to the Operating Instructions document.

Connecting the digital output (open drain)

3 types of digital output control are possible:
NO (Normally Open),
NC (Normally Closed)
and **pulse**.

The output control mode is configured using the "**Overflow**" mobile application available from the PlayStore. A password may be requested when connecting to the overflow detector. The password is: **ijinus29**

On a PLC, it is necessary to connect the pink wire (Open-Drain) and the brown wire (V- / Common). Depending on the type of PLC, it may be necessary to polarise the input - refer to the PLC documentation.

It is recommended that the overflow detector be powered from a voltage source between 9 and 26 V.

Power is supplied via the green wire (V+) and the brown wire (V- / Common).
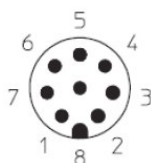
Connecteur :
 V- : Negative power supply, Common
 V+ : Positive power supply (+9 to +26V
 Modbus High : Modbus RTU RS485 A
 Modbus Low : Modbus RTU RS485 B
 OD: Open drain logic output (30V, 2A) - NO, NC or Pulse depending on configuration

Unmentioned wires and pins are not connected in the product.

Bare wires version		M8 – Male connector version	

Wire colour	Assignment
Green	V+
Brown	V- : Common
Pink	OD
Yellow	Modbus high
Grey	Modbus Low

Wire N°	Assignment
3	V+
2	V- / Common
6	OD
4	Modbus high
5	Modbus Low