

# WQS Oxymeter



## USER GUIDE

## A OXYMETER PROBE

### 1- PRESENTATION

The Oxymeter is a luminescence technology-based tool that measures oxygen and that can be operated with a smartphone or a tablet.

The Oxymeter is used to measure **dissolved Oxygen in liquid.**



The Oxymeter has a dipping probe and a power and communication box (not submersible)

### 2- MEASUREMENT IN A TANK

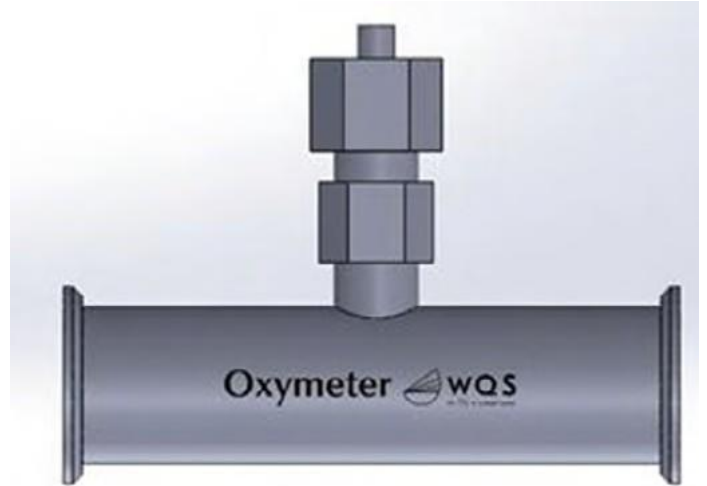
The Oxymeter can be used for dissolved Oxygen measurement in a tank by dipping the probe in the wine.



To reach the equilibrium more fastly, gentle agitation of the probe in the liquid can be performed.

### 3- IN LINE MEASUREMENT

Thanks to dedicated accessories, the Oxymeter can be used to perform in line measurements directly on the pipe during wine transfer. These accessories are available in various diameters and types of connectors.



**The nut must be tightened by hand only to avoid any damage to the probe.** The probe must be positioned so that it protrudes inside the tube of 5 to 10 mm.

## B- PERFORM AND MANAGE MEASUREMENTS

### I. INSTALL THE MOBILE APP

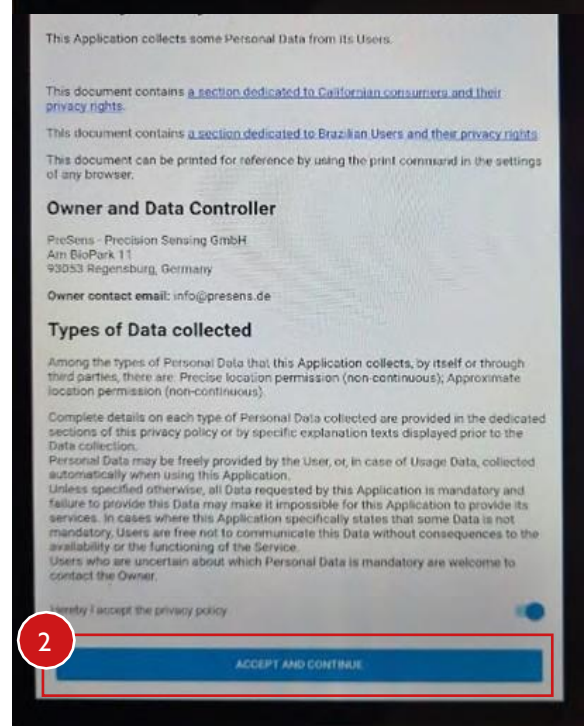
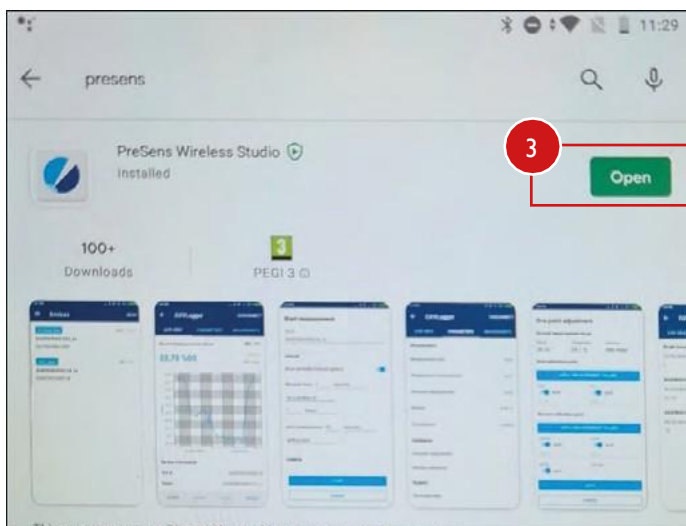
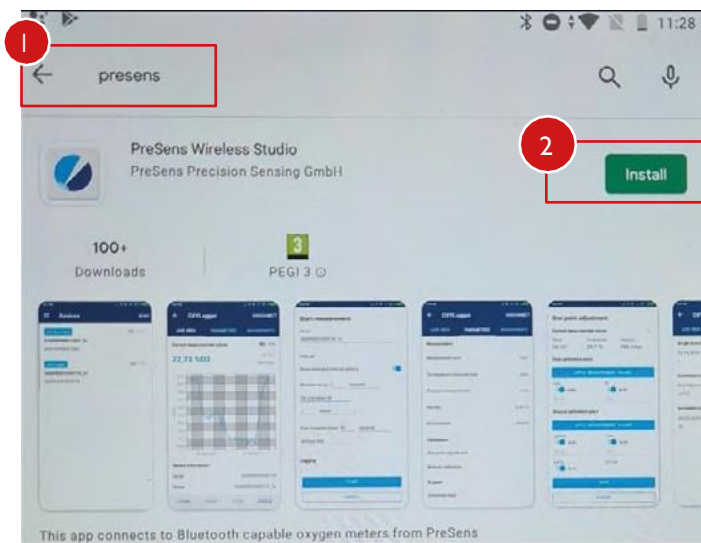
#### a. Prerequisites

The App Presens Wireless Studio (PWS) is compatible with all smartphones with at least Android 6.0 or iOS 9.0 that support Bluetooth Low Energy.

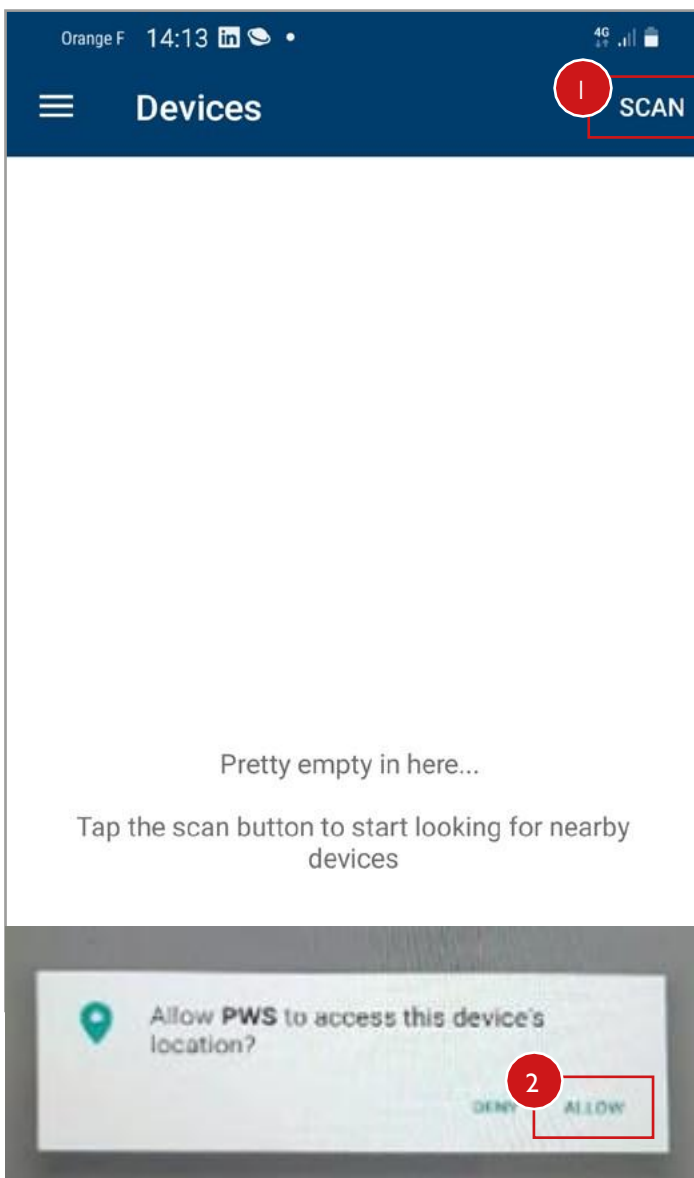
#### b. Installation

In google Play or Itunes store, download PWS typing PreSens Wireless Studio.

Accept Privacy Policy of PreSens Wireless Studio



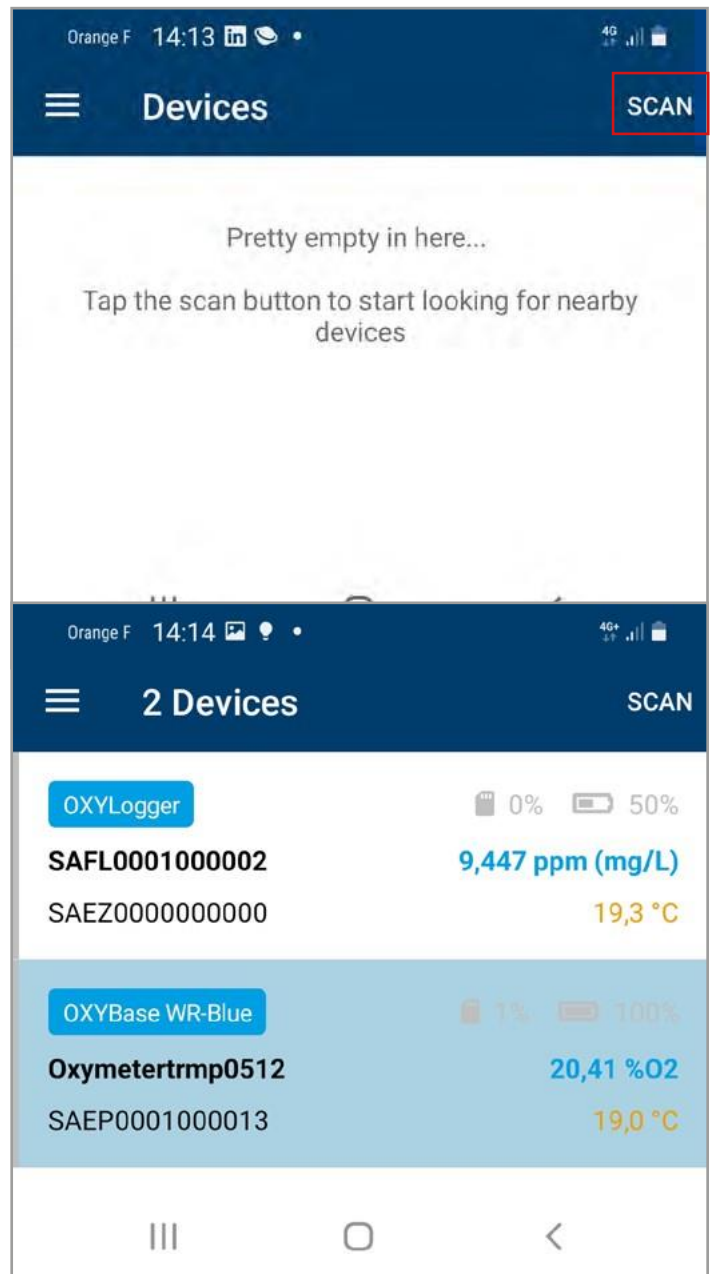
Press SCAN and allows PWS to access location



All nearby compatible devices should appear on the screen.

If no device appears, please check :

- Bluetooth is activated on your smartphone
- A compatible device is nearby (10m)
- the device to connect **still has battery power.**
- the device to connect is **not connected to another smartphone** (in this case the device is no longer visible for others smartphone)
- Make sure that the App has permission access to your location. (see at the end of document annex I)



## I- USE OF OXYMETER

### a. Modify the calibration

This step, **must be done** only in the event of replacement of the CAP.

From the PARAMETERS menu, select **Manual Calibration**, entering the calibration's parameters shown on the Final Inspection Protocol which comes with the replacement CAP. It is also possible to select **Barcode Calibration** to read the barcode provided with the new CAP.

The screenshot shows the 'Manual calibration' screen with the following data:

**Calibration data**

Cal0	59,64
T0	19,5
Cal2nd	26,41
T2nd	19,5
pATM	977
O2-2nd	100,000
Unit	%a.s.
Environment	Humid

**Calibration constants**

f1	0,807
----	-------

Buttons: SAVE, CANCEL

**Data**

Atmospheric pressure: 960 hPa  
Calibration Mode: Humid

	Phase signal	Valid range	Temperature	Valid range	Amplitude	QC-passed?
	[°]	[°]	[°C]	[°C]	[µV]	(ok / failed)
cal 0	60.13	58.00 - 62.00	18.2	18.0 - 22.0	303797	OK
0 % air-sat.						
cal 2nd	26.97	25.00 - 29.00	19.2	18.0 - 22.0	128440.7	OK
100 % air-sat.						

Response time [90]: < 60 s      Valid range: < 60 s

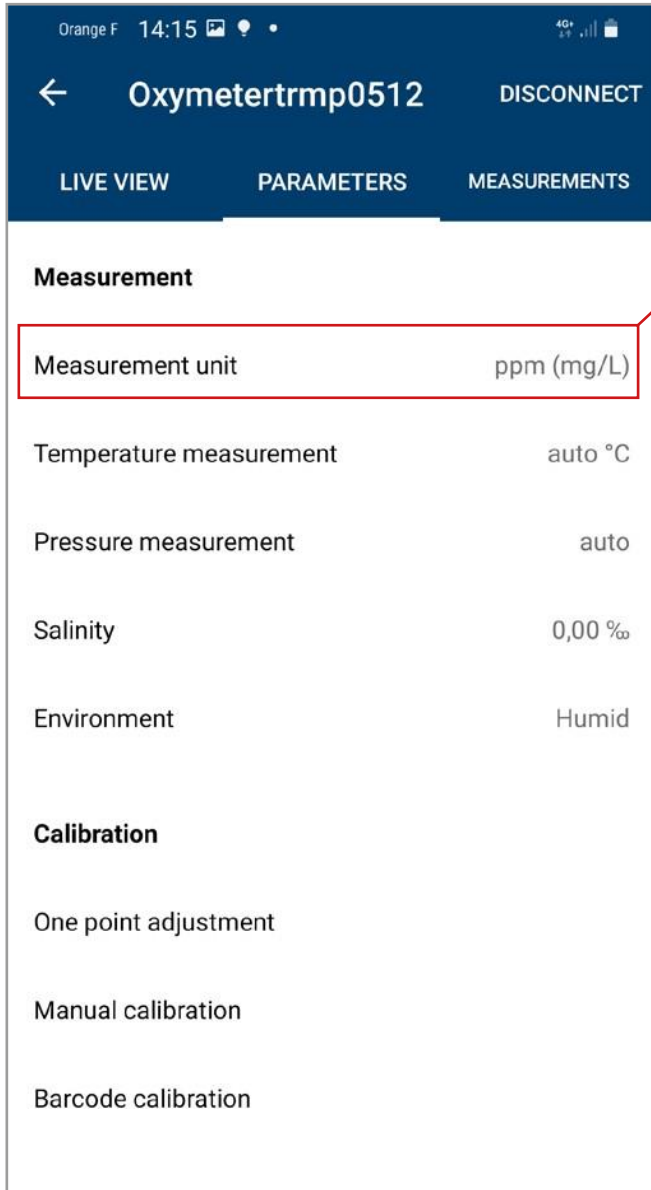
Please type in these values into the software for 'manual calibration'

**Sensor Constants**

f1 = 0.807	dPhi1 = -0.06977	dKSV1 = 0.000320
m = 24.82	dPhi2 = -0.00032	dKSV2 = 0.000000

Sensor is within the accepted tolerance window  
Sensor is visually inspected.

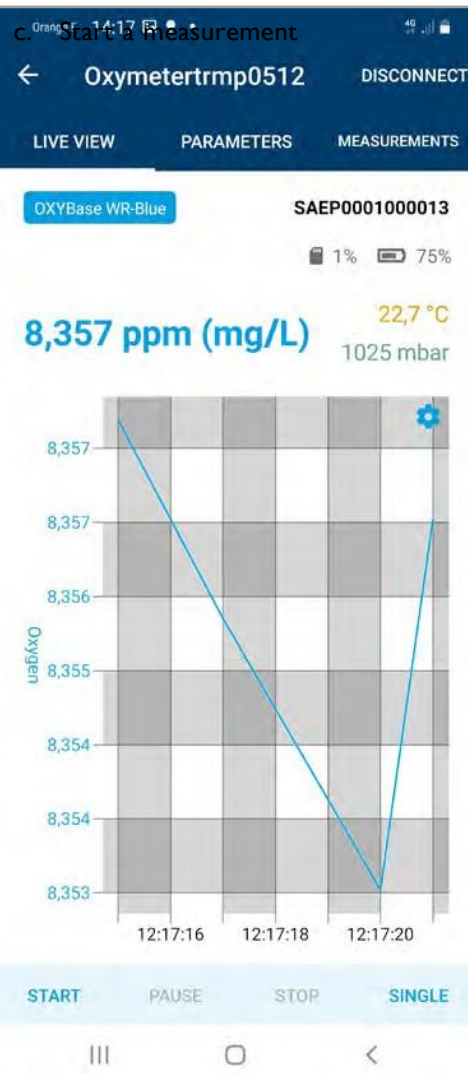
## b. Settings



Change O<sub>2</sub> unit Android



IOS



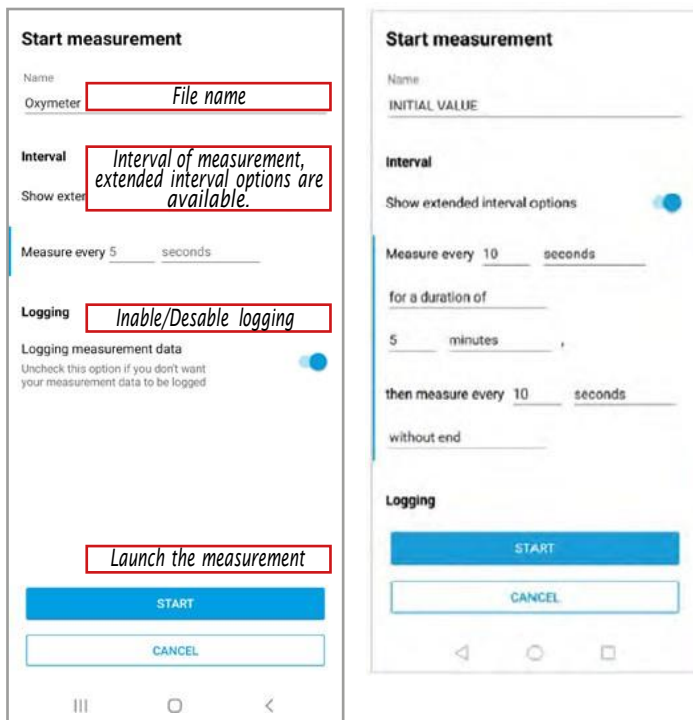
## Measurement

- Parameters can be modified by pressing the value (exple Humid)
- Only the parameter **Unit** and sometimes **Temperature measurement** must be modified.
- The change must be validated “save” or canceled “cancel”

From Live View menu, there are two ways to launch a measurement

- Press **START** : a continuous measurement is launched , the device will perform measurements with a predefined interval of measurement. The measurement will continue until **PAUSE** or **STOP** is pressed . The measurement results will be displayed on a chart. **WARNING** : the measurement will continue even if Bluetooth is disconnected.
- Press **SINGLE** : a single measurement is performed. In this mode, the data cannot be recorded. **STOP** and **PAUSE** buttons are disabled.

In case of measurement started by pressing **START**



**WARNING** : once the measurement is started by pressing **START** you can disconnect your smartphone or tablet, the measurement will continue and the data will be saved. **Only an action on STOP or PAUSE can interrupt the measurement.**

d. Export data

From **MEASUREMENTS** menu, you can access all the data recorded by the Oxymeter. The data are sorted by timestamp. By selecting a file name, you can download the data on your smartphone or tablet in order to :

- Display data on a chart (**SHOW DATA**)
- Export (**EXPORT**) format CSV, XLSX, PDF
- Delete (**DELETE**)



## 2- BATTERY

a. Management

In order to avoid a rapid battery discharge, it is necessary to stop the measurement by pressing **STOP** (in Live View menu) and to disconnect the Bluetooth connection from your smartphone or tablet when the measurements are finished.

b. Battery replacement and reload

Your Oxymeter comes with two battery packs, be sure to keep the second one charged.

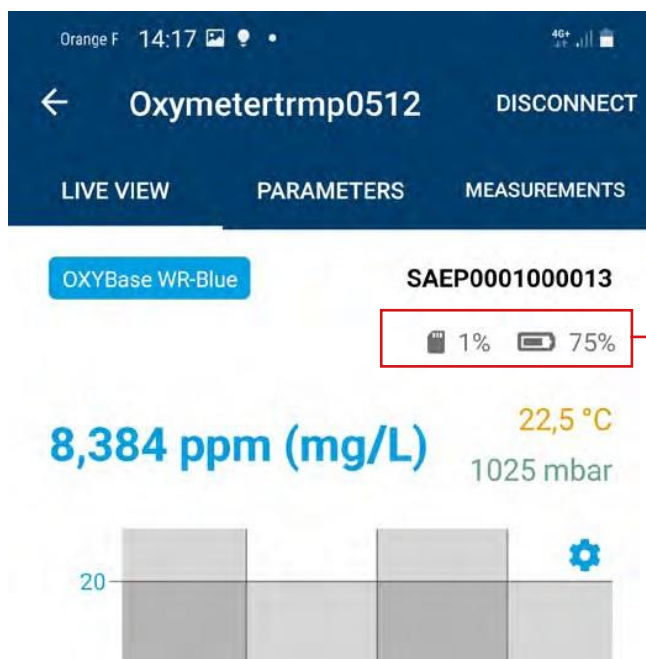


Two types of battery are recommended for your Oxymeter

- PANASONIC Ni-MH 2700 rechargeable
- Energizer Ultimate Lithium

#### 4- DO NOT MIX THE BATTERIES, NEVER RECHARGE non rechargeable battery.

If the batteries are replaced with the alternative recommended type, it is suitable to modify the battery type in the settings (parameters/system/change battery type)



When the battery level indicator shows a low level, it is necessary to change all the batteries.

In the case of batteries replacement, perform a single measurement SINGLE to refresh the battery indicator level.

In case of deep discharge of the batteries: the charger may display NULL. You have to wait a few hours and leave the batteries on the charger.

### 3- CALIBRATION CHECK

#### a- Quick check

You can check the calibration by performing an AIR measurement, you need to set the temperature in manual mode first and enter the current temperature value. Choose the %O<sub>2</sub> oxygen unit, the value displayed should be 20.7% O<sub>2</sub> more or less 0,5%.

#### b- Deep check

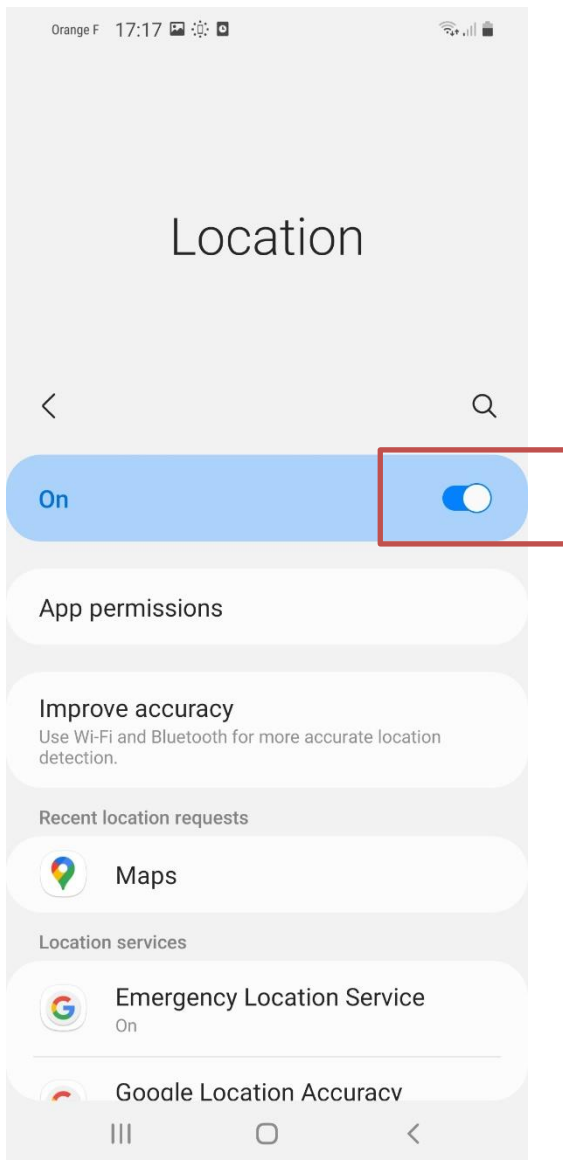
Add 100 mL water to a suitable vessel. To obtain air-saturated water, blow air into the water using an air-pump with a glass-frit (air stone), creating a multitude of small air bubbles, while stirring the solution. After 20 minutes, switch of the air-pump and stir the solution for another 10 minutes to ensure that the water is not supersaturated.

Choose the oxygen unit %EAS and perform measurements after temperature stabilization the value should be around 100% (+-4%).

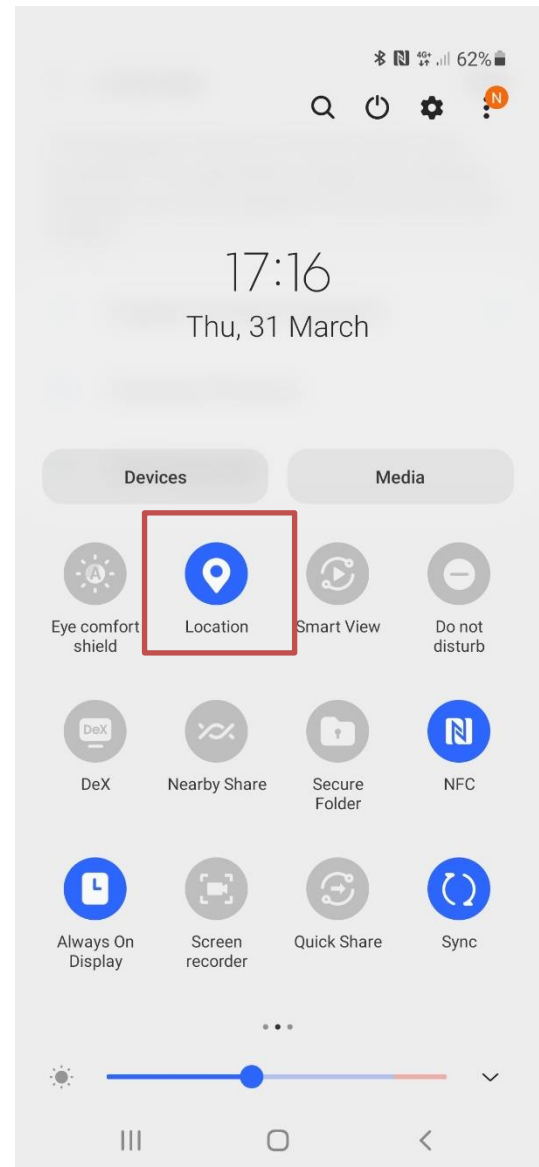


## Annex I- Location authorization on Android devices

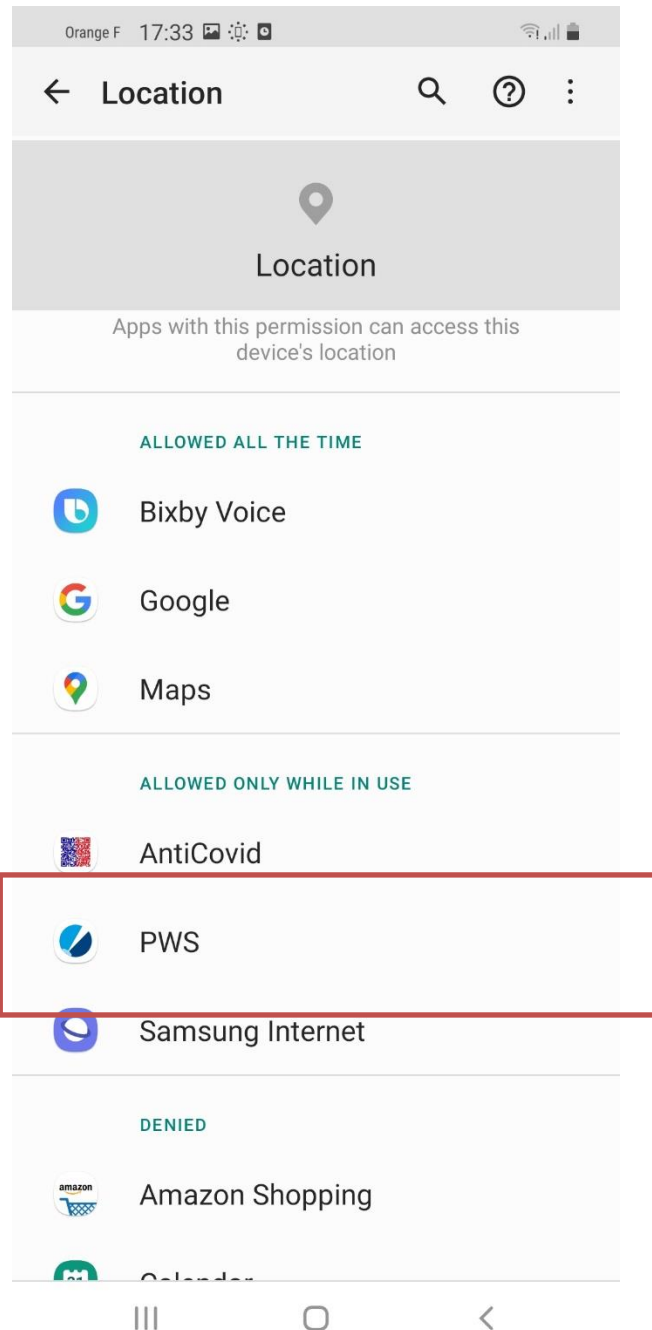
### Step 1/2 : Location must be enabled



OR

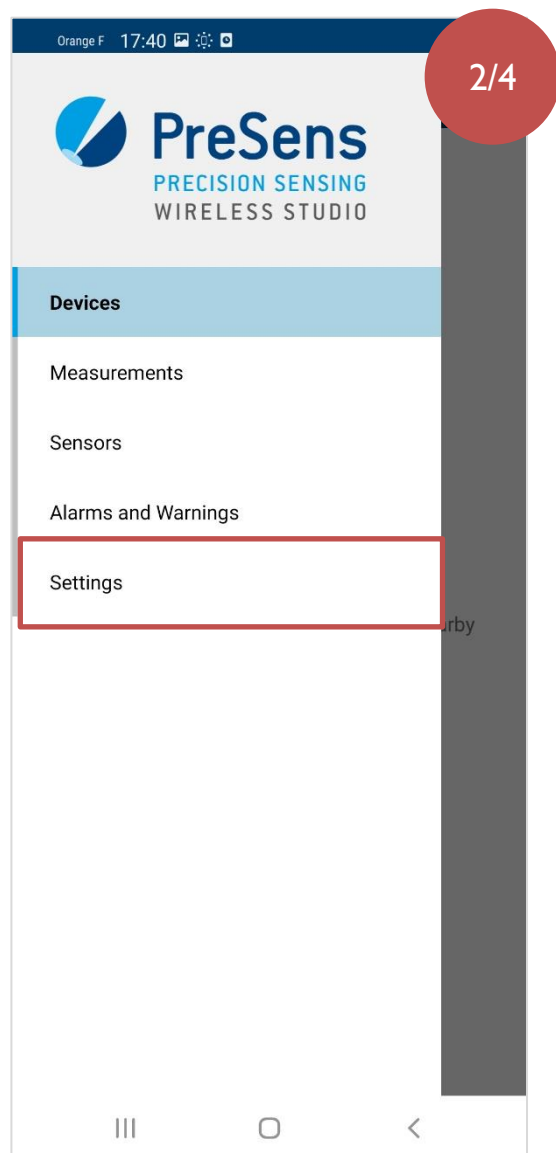
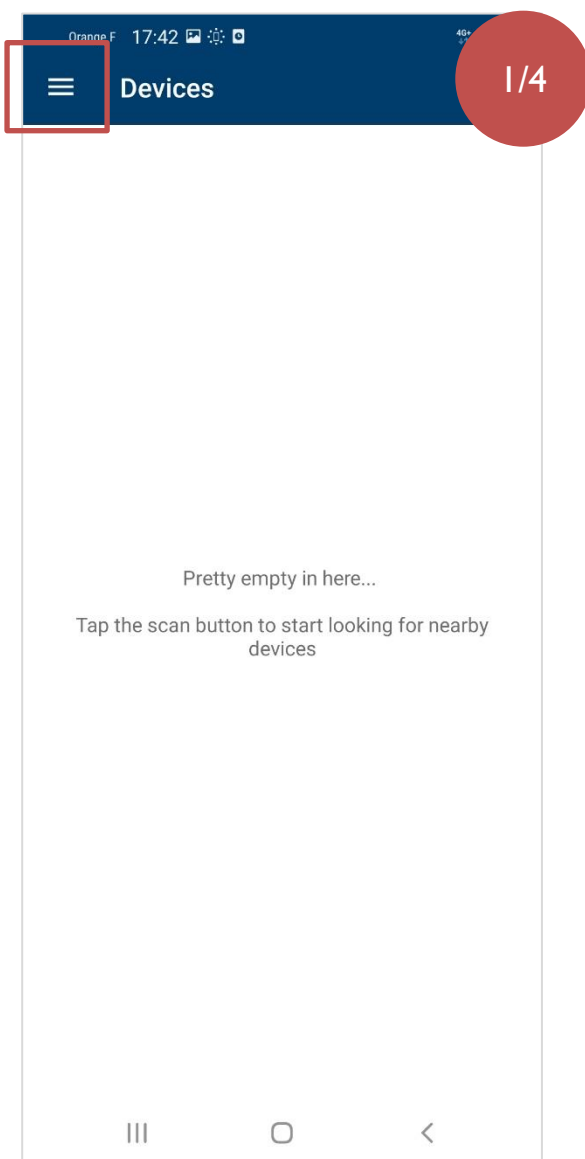


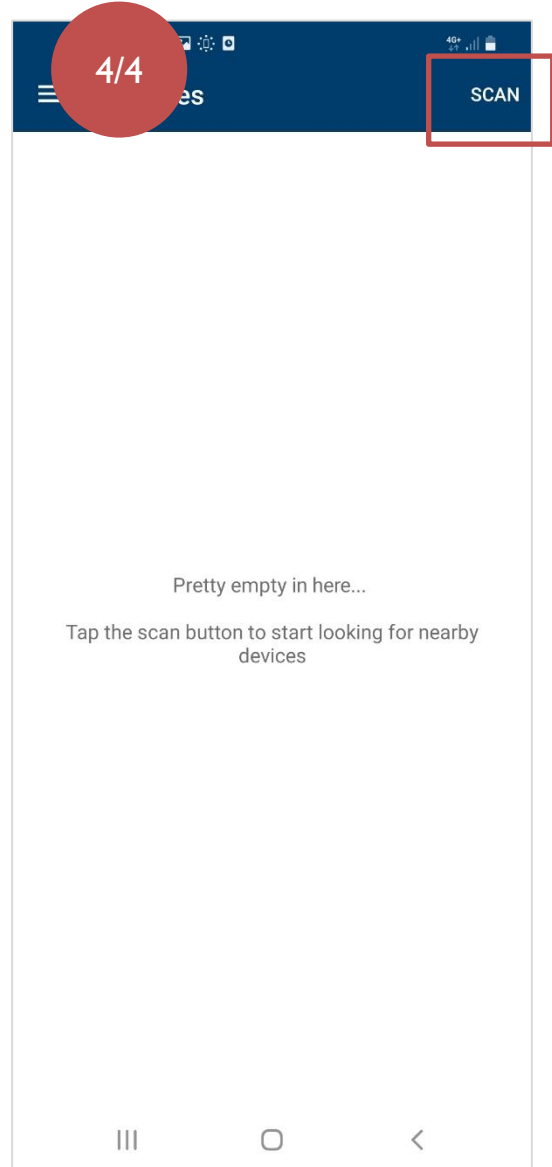
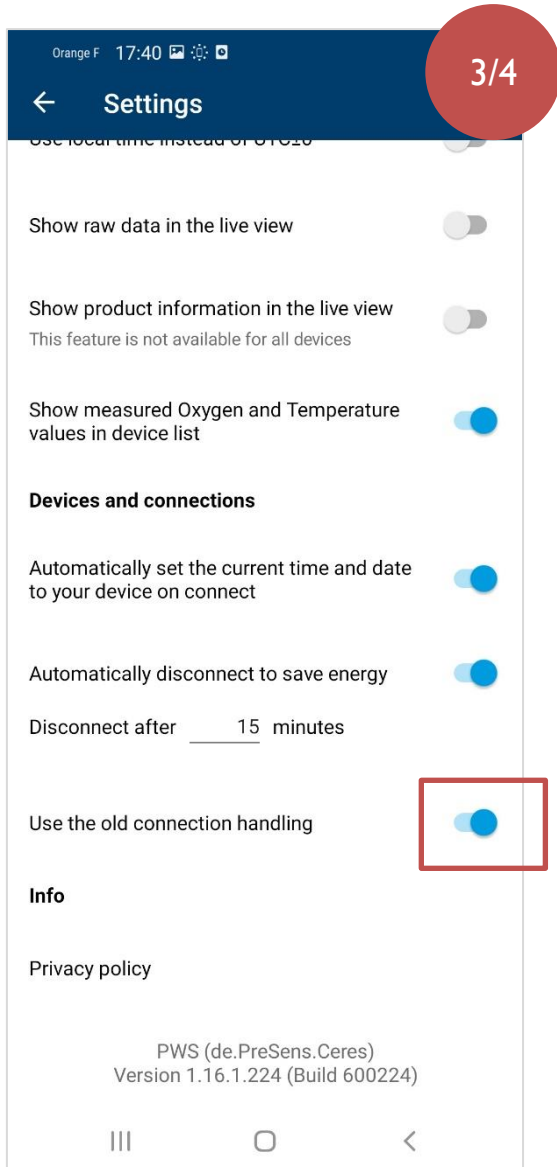
Step 2/2 : And PWS application must be allowed to access position



## For older Android versions

**Use the old connection handling:** The new PreSens Wireless Studio app has enhanced connection handling, which speeds up connection time on Android smartphones. If you use a smartphone with an older Android version and encounter problems during a connection attempt to your device, tap the radio button and use the old connection handling.





## CONTACT

[winequalitysolutions@vinventions.com](mailto:winequalitysolutions@vinventions.com)

Mobile: +33 6 84 42 71 88

Office: +33 9 77 48 06 81

### Address

7 Avenue Yves Cazeaux

30230 Rodilhan

France

[WWW.WINEQUALITYSOLUTIONS.COM](http://WWW.WINEQUALITYSOLUTIONS.COM)