

**FUEL LEVEL SENSORS
MINI**

**SETTING UP AND
CONFIGURING
FUEL LEVEL SENSORS**

MINI

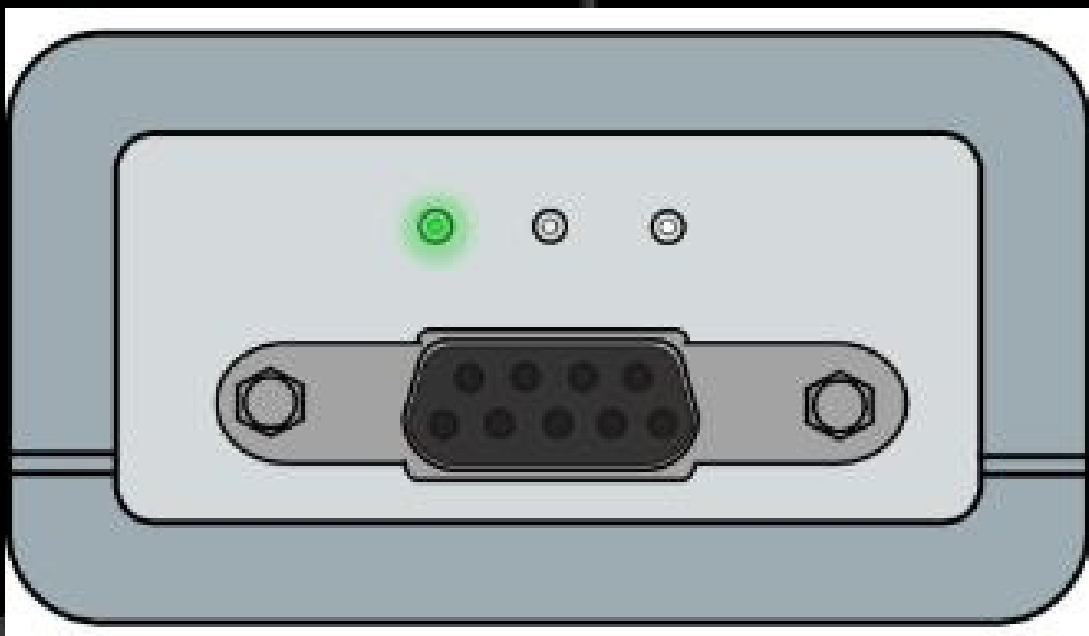
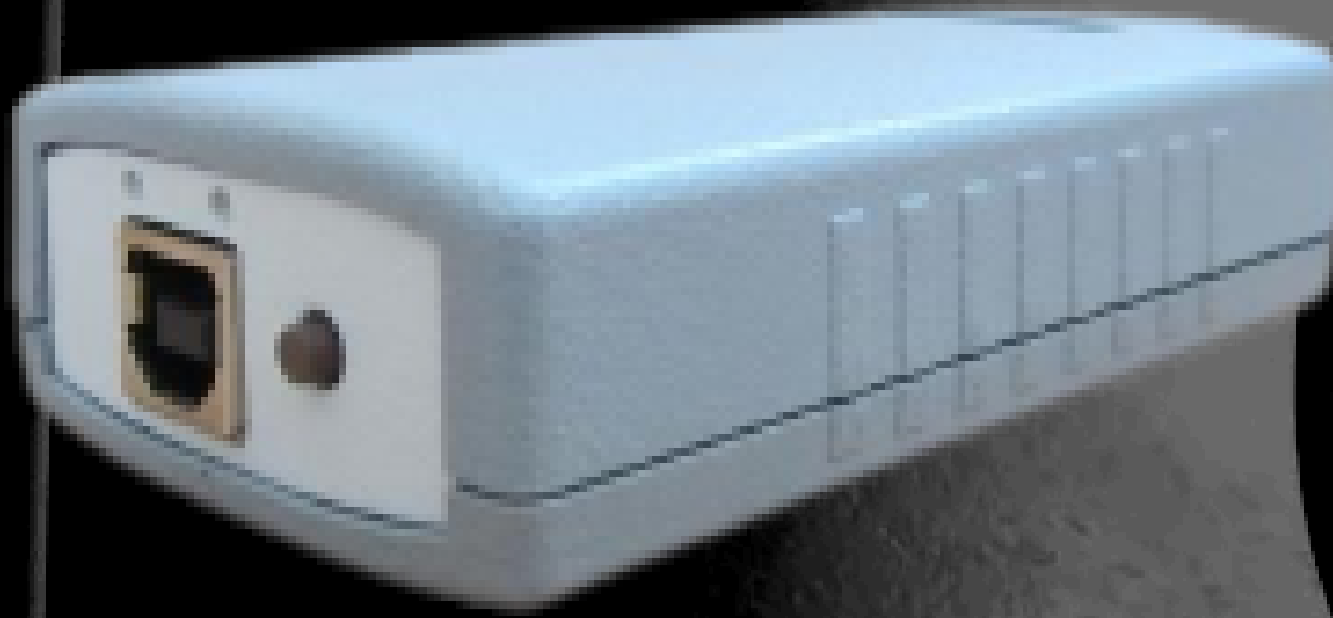
RS 232/485

NIKOLIN LTD.

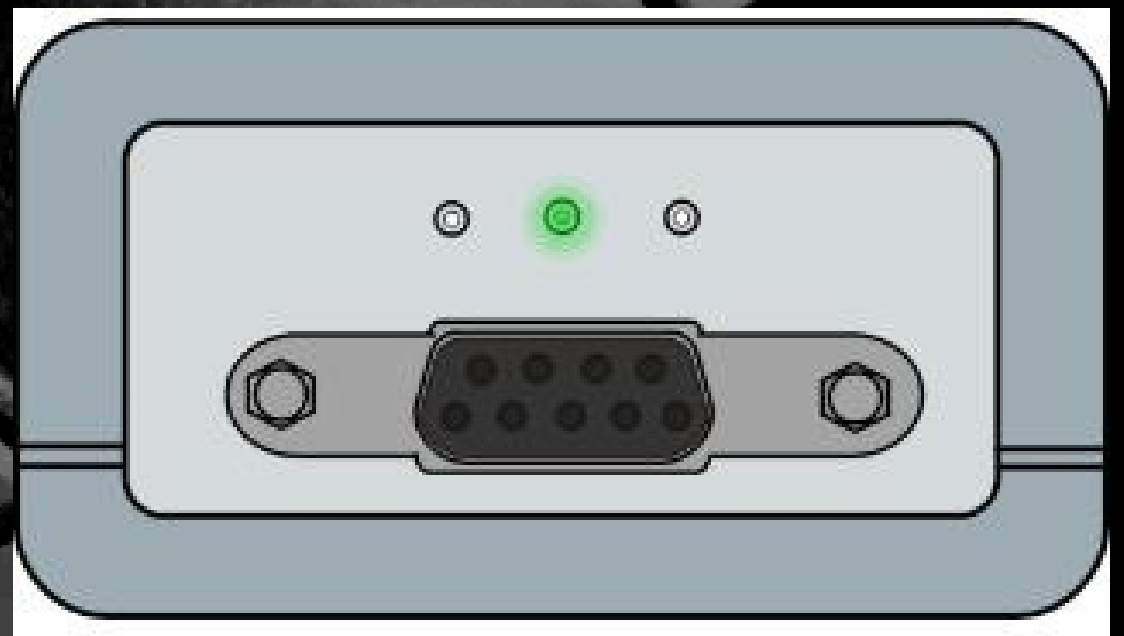
**Download archive with
DUTConfig program.**

**Download the latest virtual COM port
drivers according to your OS version.**

**Connect the sensor to a PC via an
adapter via the RS485/RS232 interface.**



RS232 mode



RS485 mode

**Select the RS232/RS485 operating mode
on the adapter.**

**Attention: the color of the wires on
the cable.**

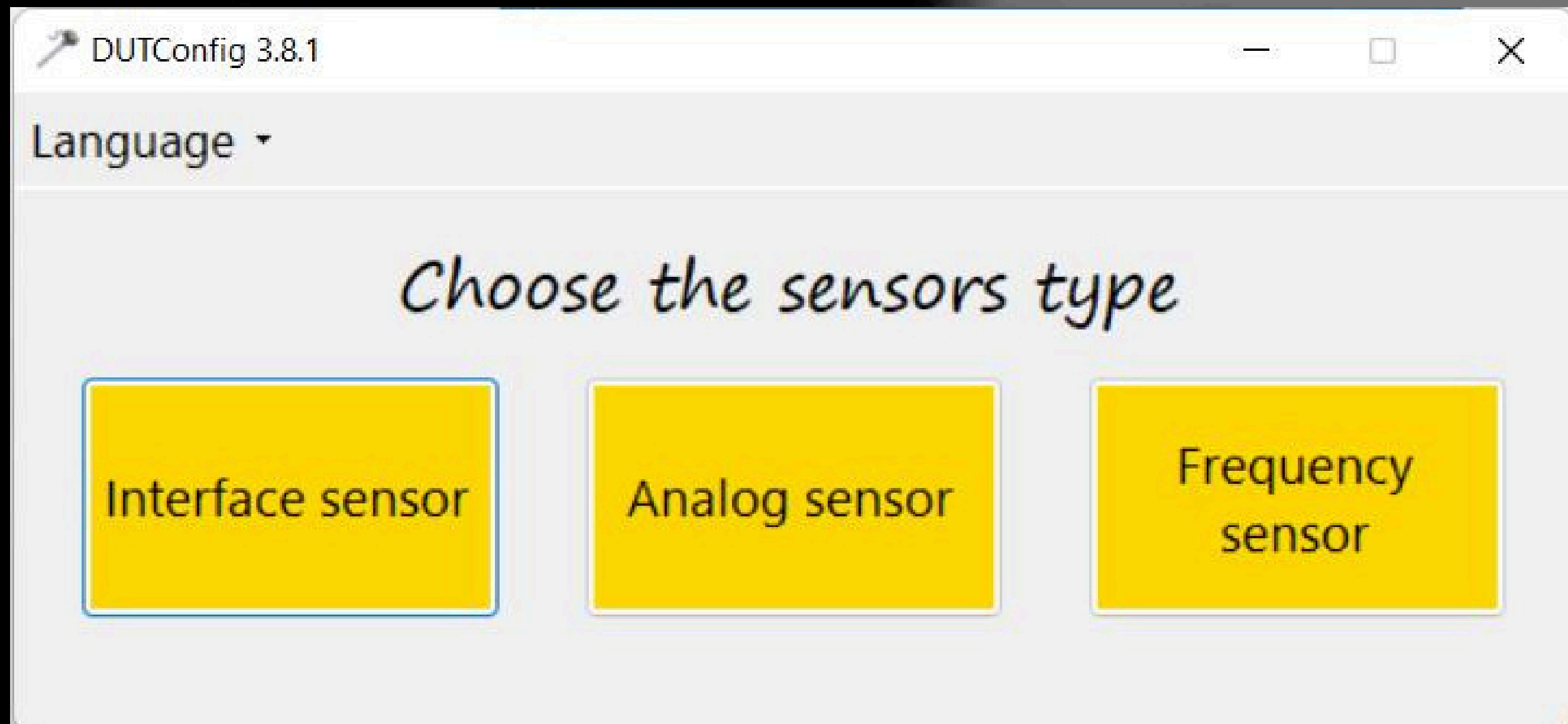
Blue +

Brown -

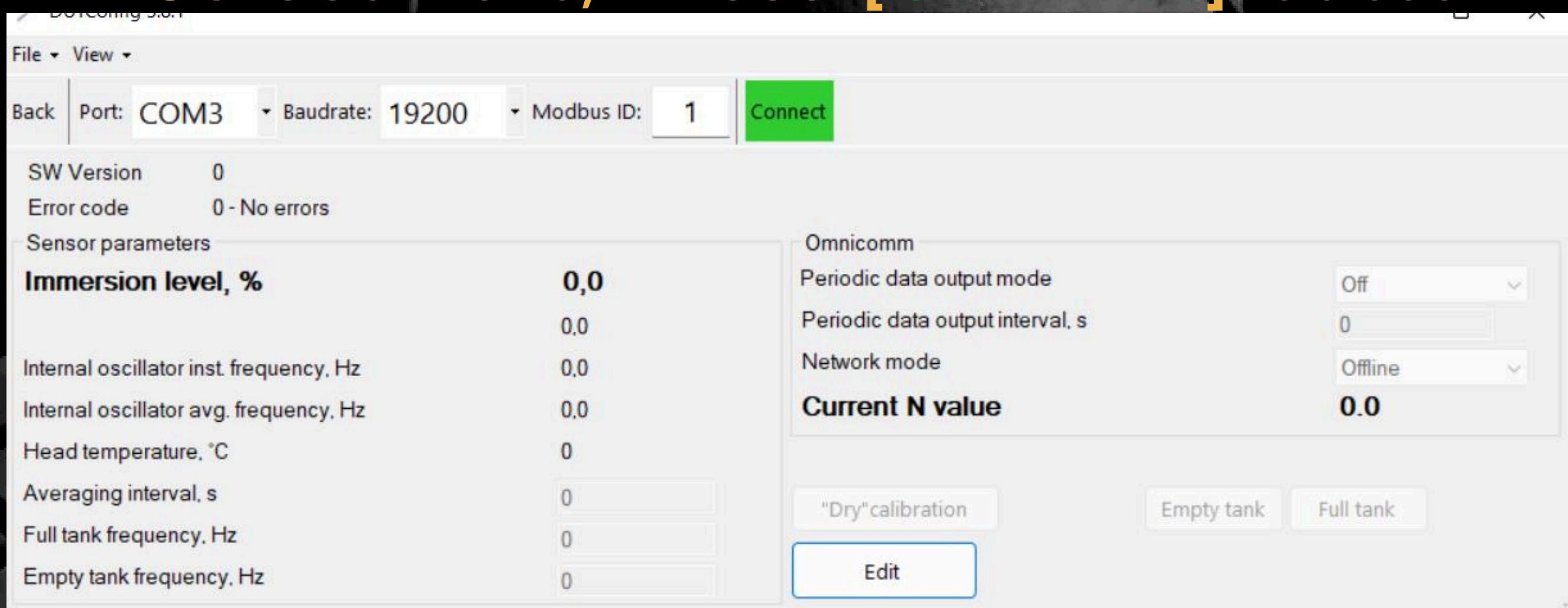
Yellow RX (A)

Black TX (B)

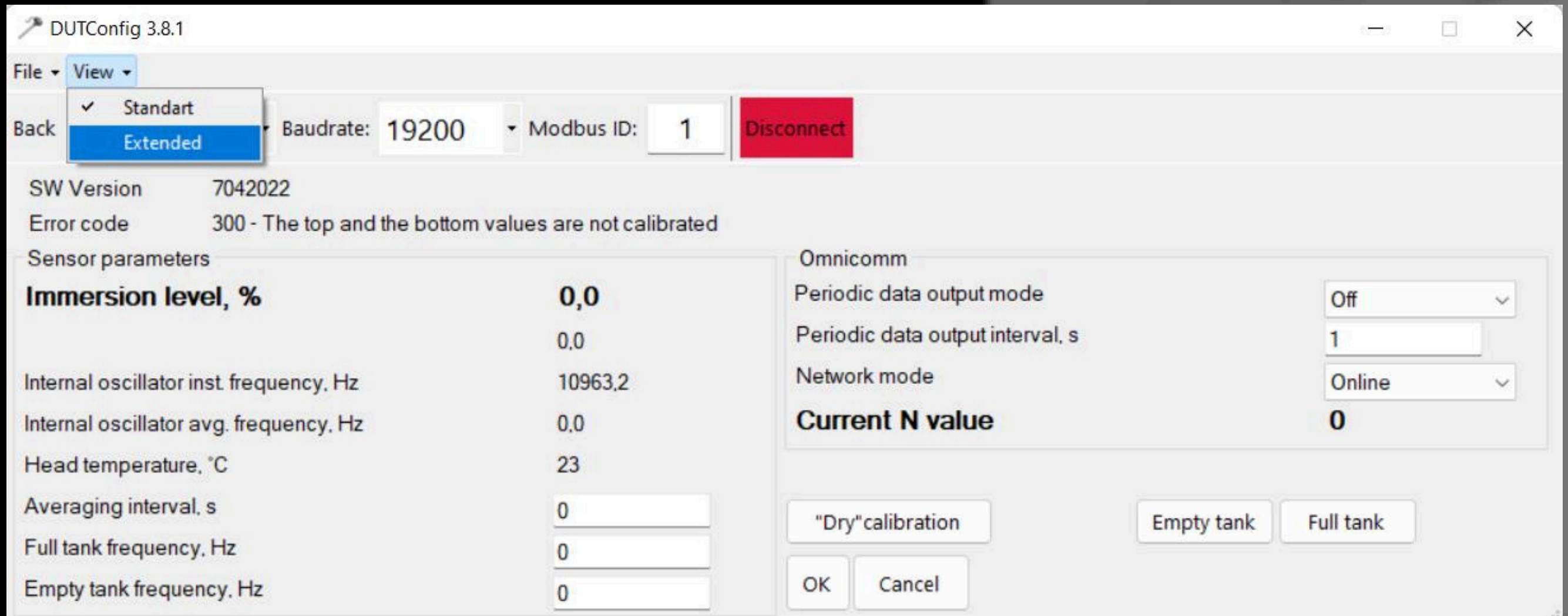
Select the sensor type in DUTConfig software: Interface



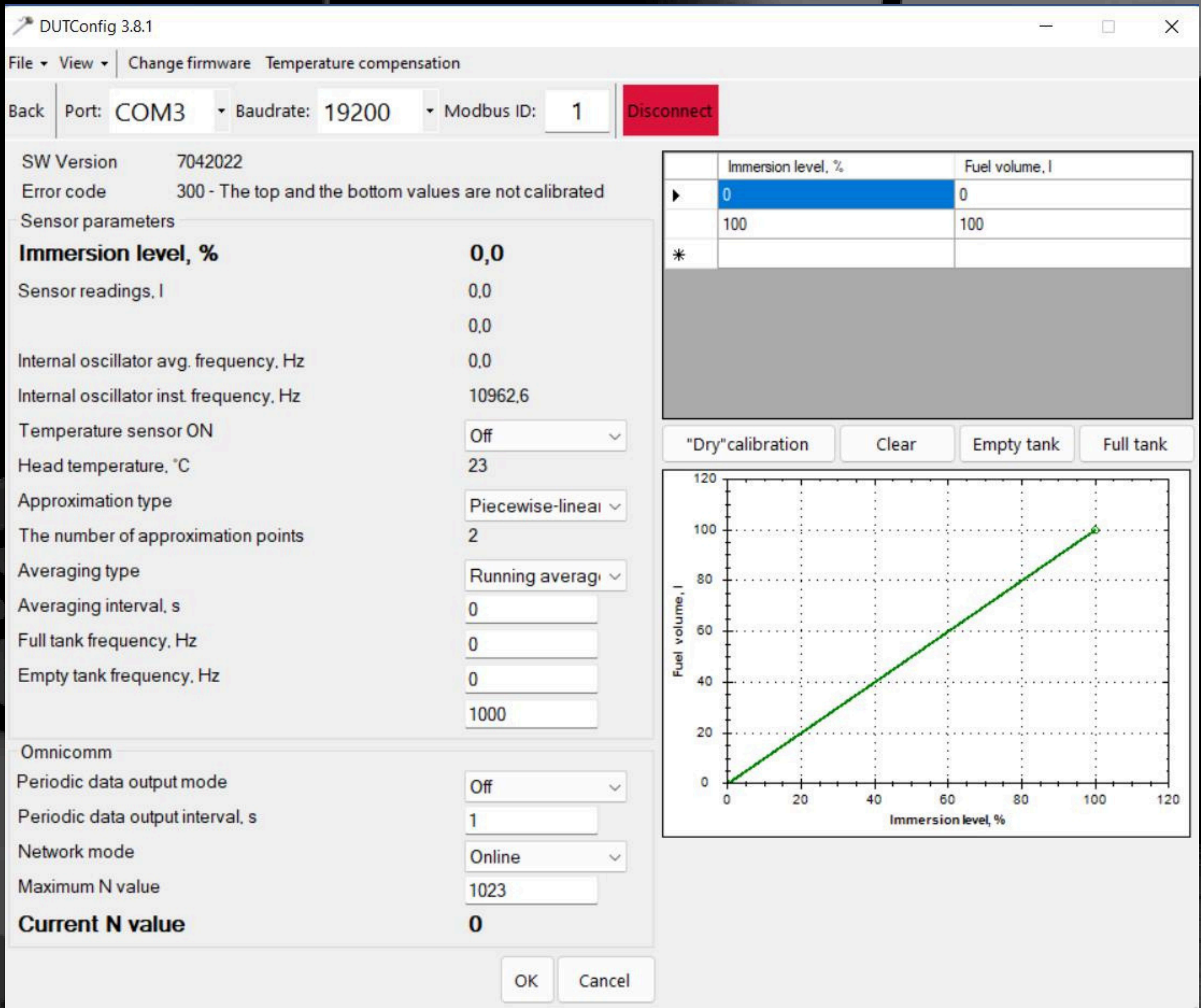
Select Port, Press [Connect] button



ATTENTION!!! Before calibrating the sensor, it is necessary to cut the sensor 2-4 cm shorter than the tank height, make sure that **Thermal compensation is disabled**, Averaging interval is 0. And also set the Maximum value N 1023 ... 4095 (recommended 4095).



To do this, select the menu **Mode** → **Advanced** in the main program window.

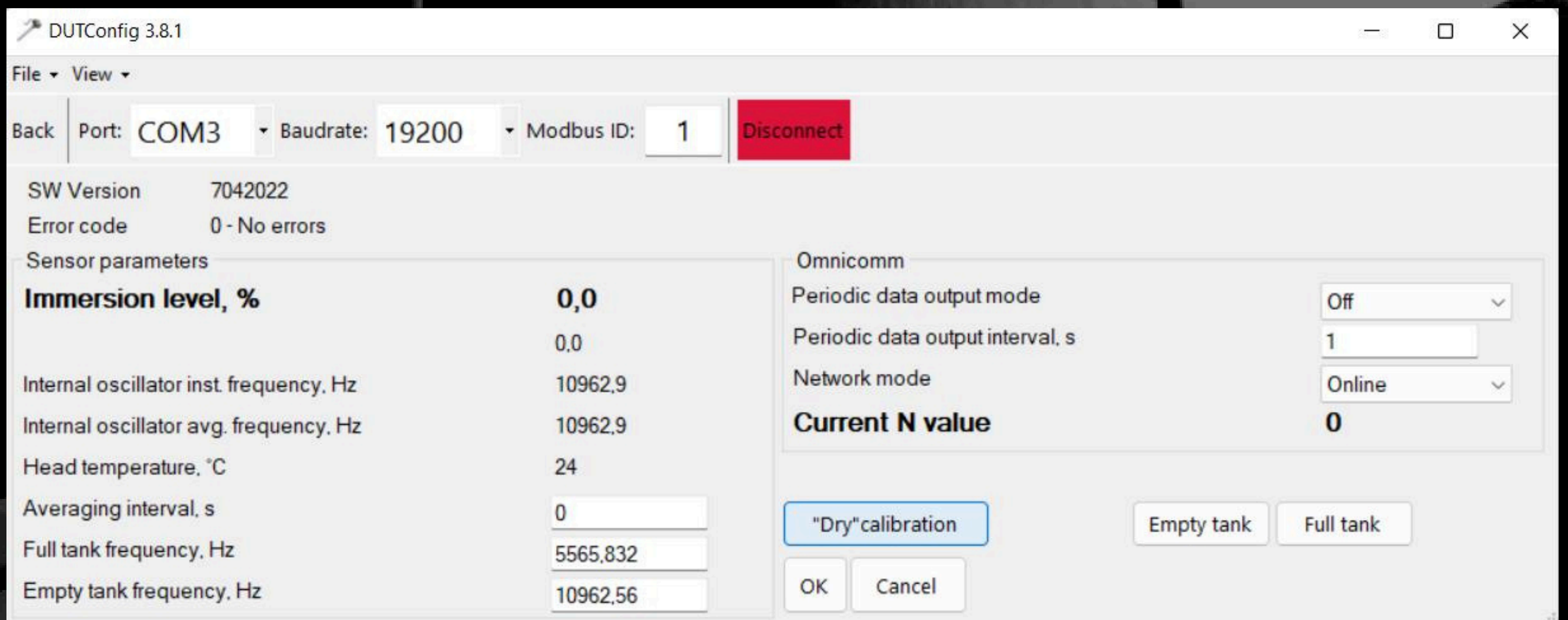


Press the **[Set]** button - Set the desired values - Press the **[OK]** button.

FLS calibration

Dry Calibration Method

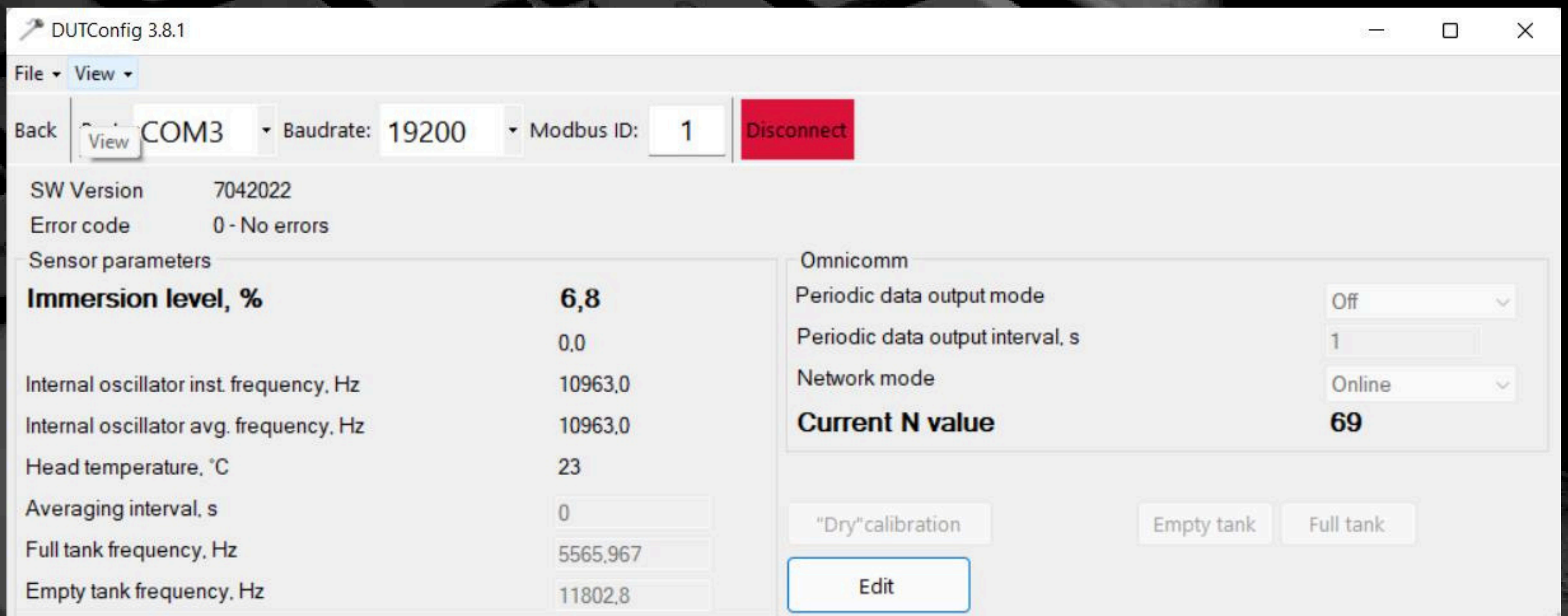
1. Click the **[Configure]** button in the DutConfig software.
2. Press the **Dry Calibration** button
3. Press the **[OK]** button.



4. The values for an empty and full tank will automatically fit into the required lines.

Tank calibration

Before calibration it is necessary to completely drain the fuel from the tank. Install the sensor on the tank using the mounting kit. Pour the first few portions of fuel into 5-10 liters. You can then increase the portion size. We fix the Current value of N, which corresponds to the amount of fuel in the tank. Write the compiled table of values into the terminal software.



After the end of calibration, set the Averaging Interval 30-90 seconds (Individually). Recommended for wheeled tractors - 30-40 seconds, tractors and agricultural equipment - 70 seconds, for equipment with a complex shape of the tank - 90 seconds.

The screenshot shows the DUTConfig 3.8.1 software window. The 'View' menu is open, showing 'Standart' and 'Extended' options. The 'Baudrate' is set to 19200 and 'Modbus ID' is 1. A red 'Disconnect' button is visible. The 'Sensor parameters' section includes:

SW Version	7042022
Error code	300 - The top and the bottom values are not calibrated
Immersion level, %	0,0
	0,0
Internal oscillator inst. frequency, Hz	10963,2
Internal oscillator avg. frequency, Hz	0,0
Head temperature, °C	23
Averaging interval, s	0
Full tank frequency, Hz	0
Empty tank frequency, Hz	0

The 'Omnicom' section includes:

Periodic data output mode	Off
Periodic data output interval, s	1
Network mode	Online
Current N value	0

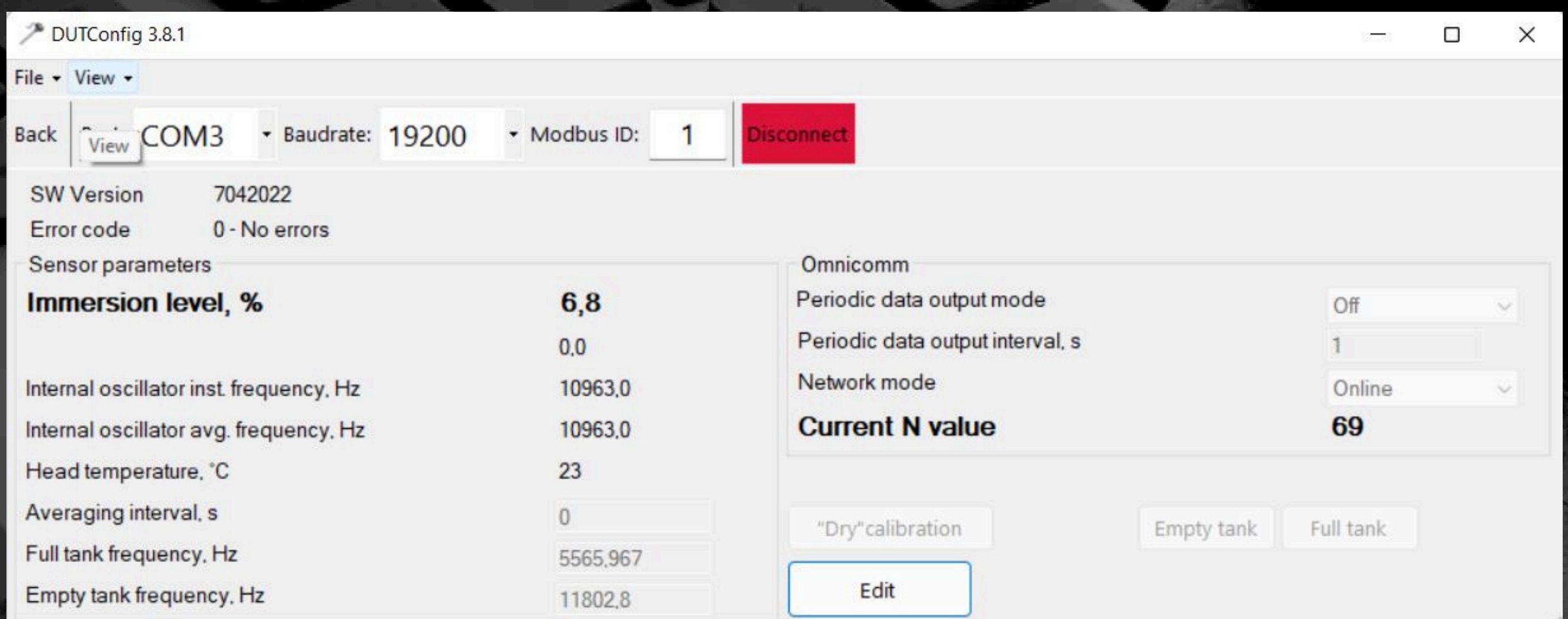
Buttons for calibration and tank status are also visible:

- "Dry" calibration
- Empty tank
- Full tank
- OK
- Cancel

Connecting 2 or more FLS to the terminal (only for RS485)

To connect two or more FLS to the terminal, it is necessary to set an individual ID (1-255) for each FLS, set the Network operation mode.

1. Press the [Setup] button;
2. Specify a new ID;
3. Set the Network operation mode - Network;
4. Press the [OK] button in the main program window.





NIKOLIN

FUEL CONTROL

NIKOLIN LTD.

194156,
Russia,
St. Petersburg,
avenue Engels,
d. 34 letter B, room 17N, 24
Tel. / Fax: + (812) 240-33-67,
+7 (981) 897-42-95
WWW.nikolin.spb.ru
E-mail: nikolinru@gmail.com

NIKOLIN LTD.