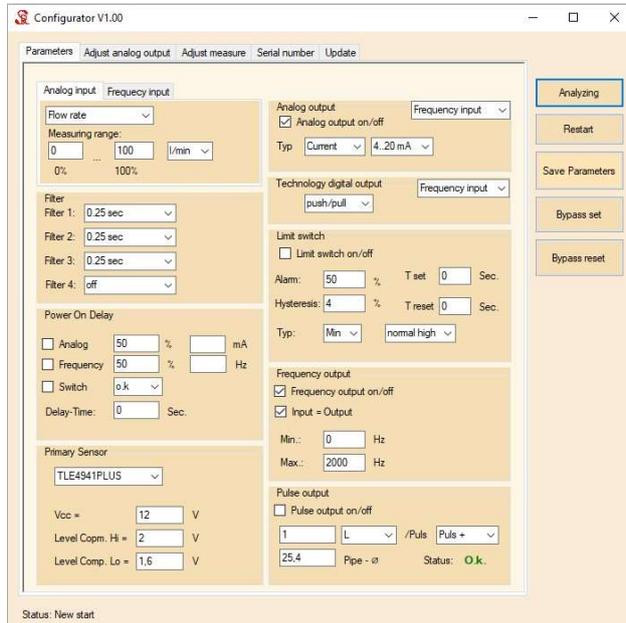


User's manual



Configurator program

Interface IC-1

1 General information

-Safe operation is only possible when the operating conditions correspond to the conditions described here.

-Performing the work described here for the installation and configuration of the sensor, possible due to safety engineering conditions and warrant conditions, should only be done by personnel authorized by the manufacturer.

-Disassembly and modification by yourself is prohibited.

-If the device is not used in accordance with the instructions or for purposes not described in the manual, it may result in danger.

-This device is not intended for use in potentially explosive environments and safety-related system parts in accordance with SIL.

-These instructions should be kept so that the personnel may use it at any time.

-All operations with the device must be carried out by professionally trained personnel using protective clothing.

-Please read this manual and make sure you can use this product for the right application.

-The operator of the device is responsible for using the device for its intended purpose, as well as for its serviceability during use.

-The operator of the device is also responsible for compliance with all safety standards and regulations in accordance with the current legislation.

2 Warranty

-The conformity of the device and these instructions has been checked for conformity, however deviations are not excluded.

-Therefore, we do not guarantee full compliance with these instructions for the device. The instructions are checked and the necessary changes, if any, will be made in the next edition.

-Technical changes may also be made to the device.

3 Standards

This device complies with Directive 2004/108 / EC.

4 Product Requirements

-The IC-1 interface allows connecting Senerion GmbH devices via USB to a computer.

System requirements:

-Windows 10

-USB connector

5 The delivery includes

-IC-1 interface

-USB cable

-Sensor cable

-USB stick with the "Configurator" program

6 LEDs features

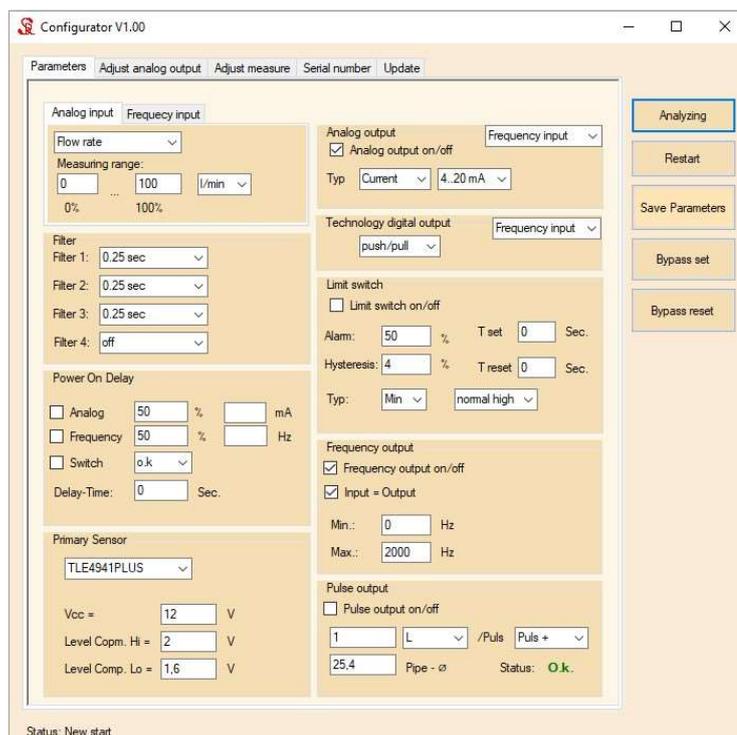
-There are two LEDs on the front panel.

-Green indicates that the supply voltage for the sensor is normal.

-Yellow indicates that signals from the sensor are connected to the rear panel connector.

7 Program "Configurator"

The program "Configurator" is on the stick and needs to be copied on computer. You can also run the program from the stick.



8 Steps to Install UNI-F-DA in a VHS Sensor

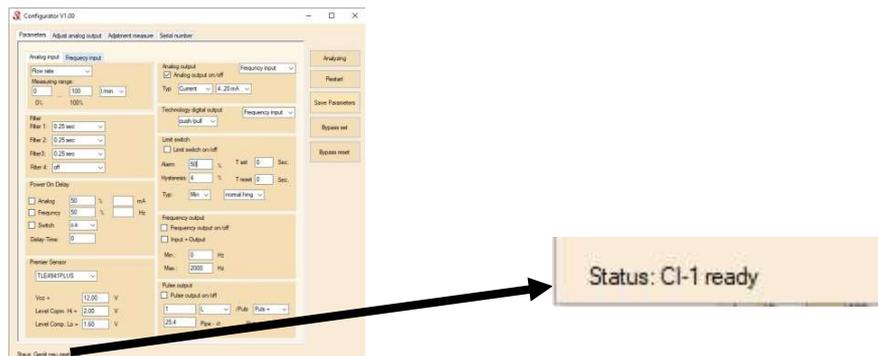
8.1 Connect the IC-1 interface to the computer using a USB cable.

8.2 Wait for the computer to recognize the new device and finish installing the driver.

8.3 No additional power supply is required to operate the interface.

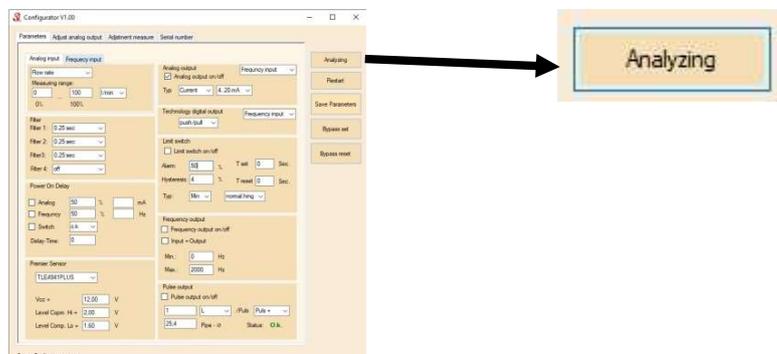
8.4 Start the Configurator program.

8.5 Make sure the interface is found by the program.

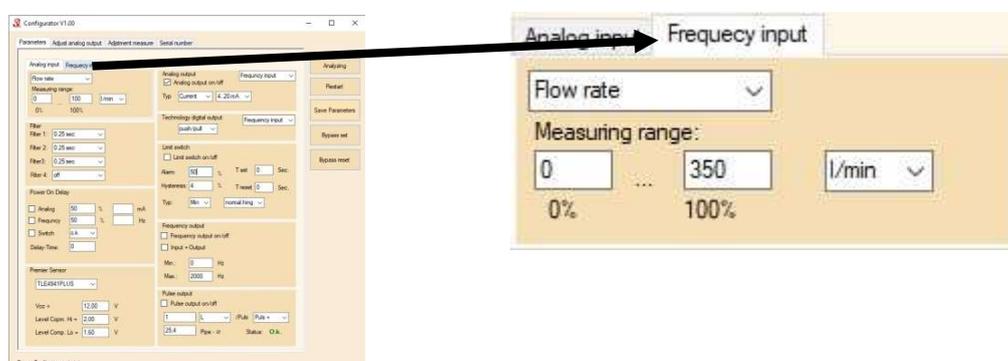


8.6 Connect the UNO-F-DA sensor with a cable to the interface.

8.7 Click Analyzing and wait for results.

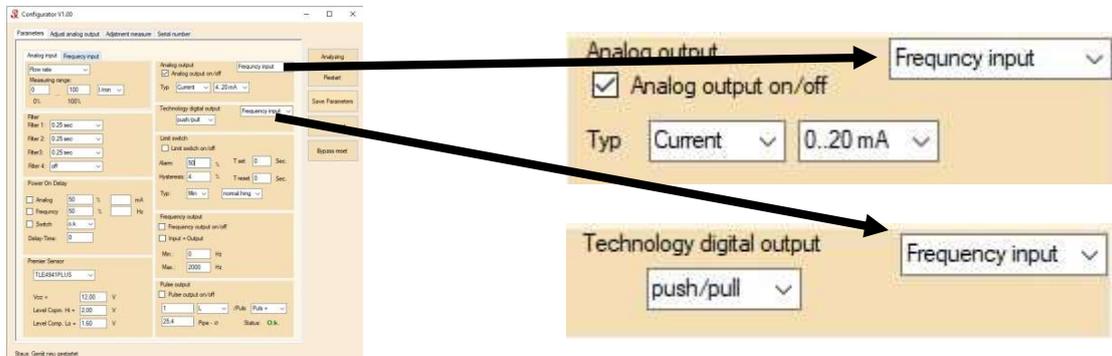


8.8 Switch from analog input to the frequency input.

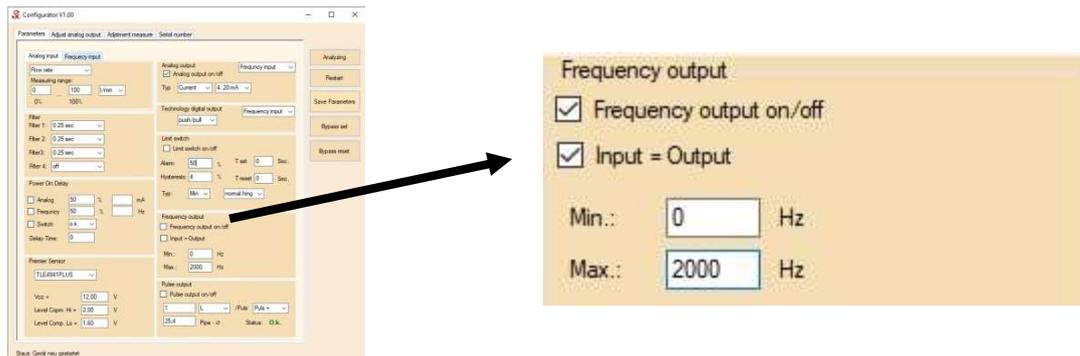


8.9 Adjust the flow rate, the measuring range and the unit depending on the specific VHS.

8.10 Set in Analog and Technology Digital Output to Frequency Input.



8.11 Go to the Frequency output and activate the frequency output and Input = Output.



8.12 Click Save Parameters

8.13 Connect the Oscilloscope to the connector on the IC-1 interface.



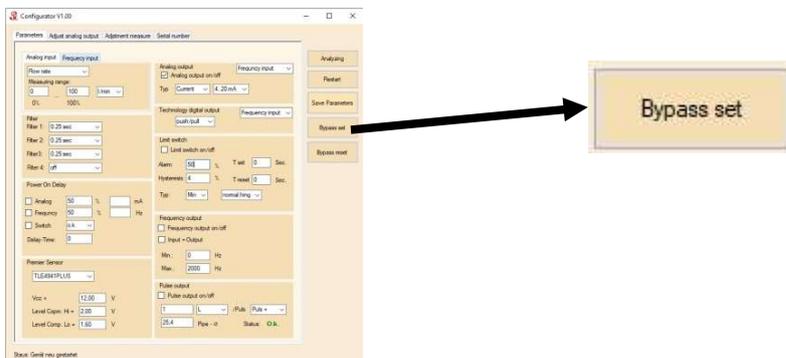
- 1 +Vcc
- 2 Analog output
- 3 Analog output0V
- 4 Digital output

Connection to following plugs:

2- Oscilloscope input

3 - 0V

8.14 Press Bypass set so that the LEDs activate in yellow which means the plugs are now active.



8.14 Checkup of your montage

-Rotate the VHS sensor screws.

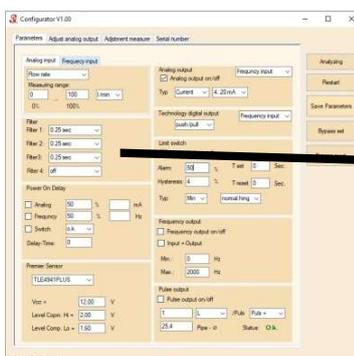
-Make sure the primary sensor detects the rotation of the screw.

-If there is no signal, turn the UNI-F-DA sensor until it is in the proper position and a signal appears.

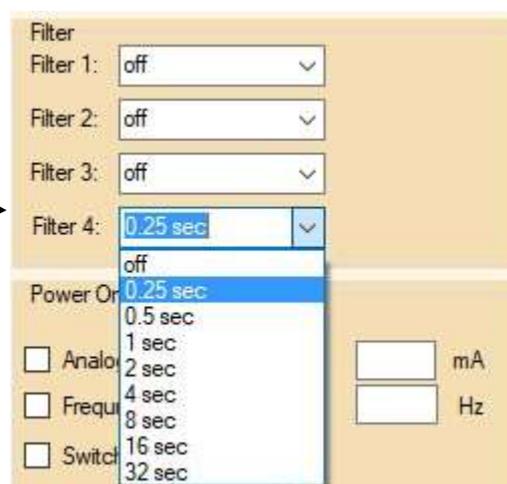
-The pulse wide modulation should be 50 % (Width of the pulse as wide as the idle state) with no pulse loss.

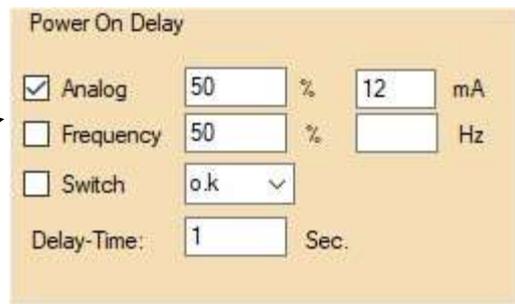
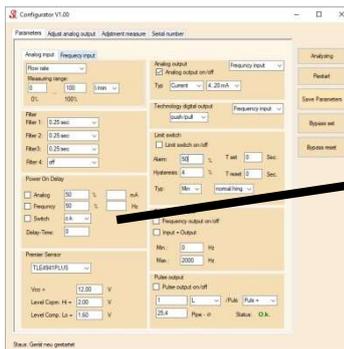
-If the signal quality is good, secure the UNI-F-DA sensor to VHS with the locknut.

8.15 If the fluid flow has ripples, you can smooth them out by filtering the signal by changing the seconds in Filter 4.



8.16 Sets the output signals at power-on.

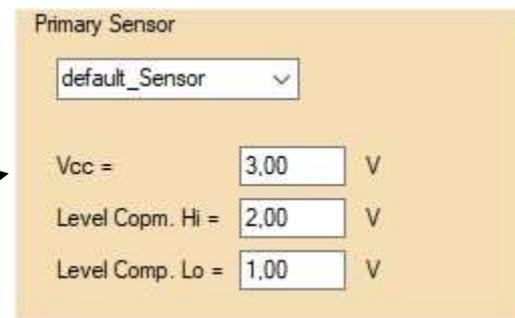
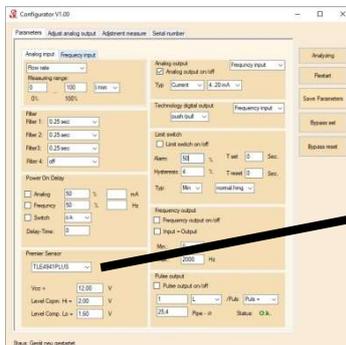




-It is possible to set a fixed state of the outputs for the "Delay - Time".

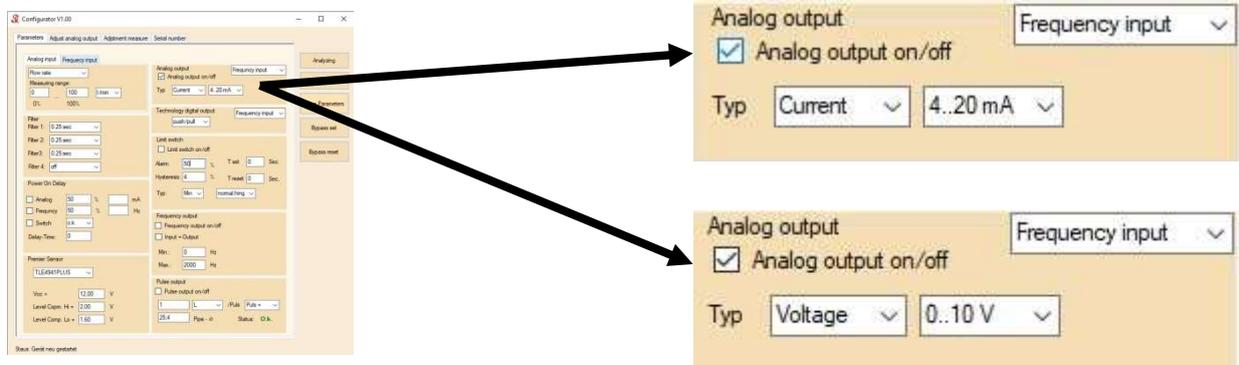
-This is useful when the equipment is taking time to get up and running. In this case, the sensor will not generate signals that can be perceived by the equipment as "Error".

8.17 You should not change any setting at the section Primary Sensor, because it may result in the inoperability of the sensor, which is not recommended.



8.18 Parameterised in the section Analog output

-When reading the sensor parameters, the current output 0/4 .. 20 mA or the "Voltage" output 0 .. 5 / 10V will be set automatically.

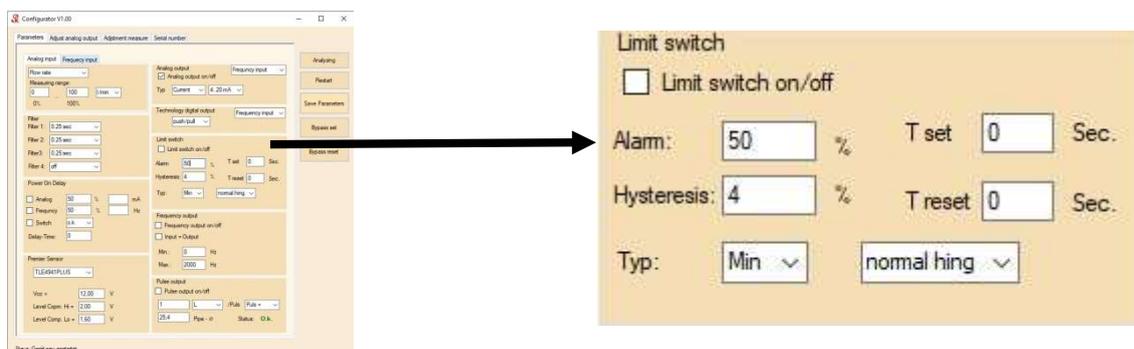


-You can turn on or turn off the analog output on/off in the section Analog output to activate or deactivate this function.

-Can be selected for current output 0..20mA or 4..20mA.

-For the "Voltage" output, you can set 0..10 or 0..5V.

8.19 Parameterizing the switch output



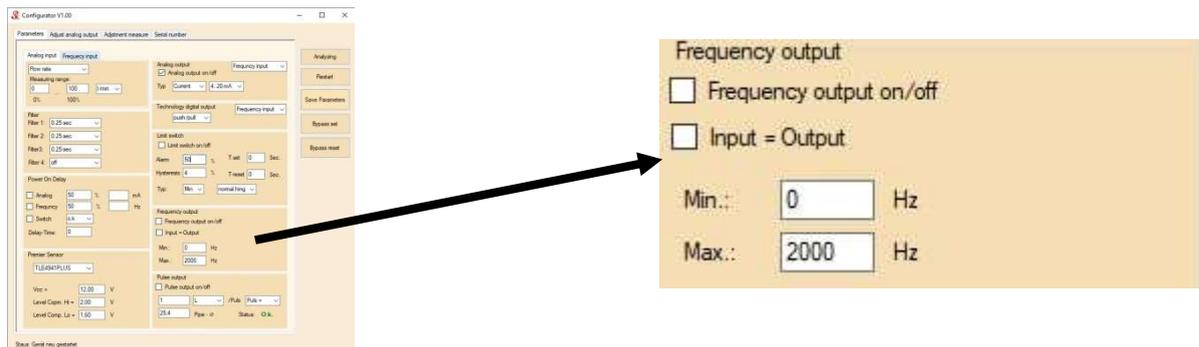
-You can activate or deactivate the switch output.

-Set the desired alarm level - "Alarm" 0.00 ... 100.00% of the measured range of the liquid flow.

-Set the desired characteristic - Min./Max.

-Set the desired hysteresis, switch-on and switch-off delay times.

8.20 Parameterisation of the Section Frequency output.

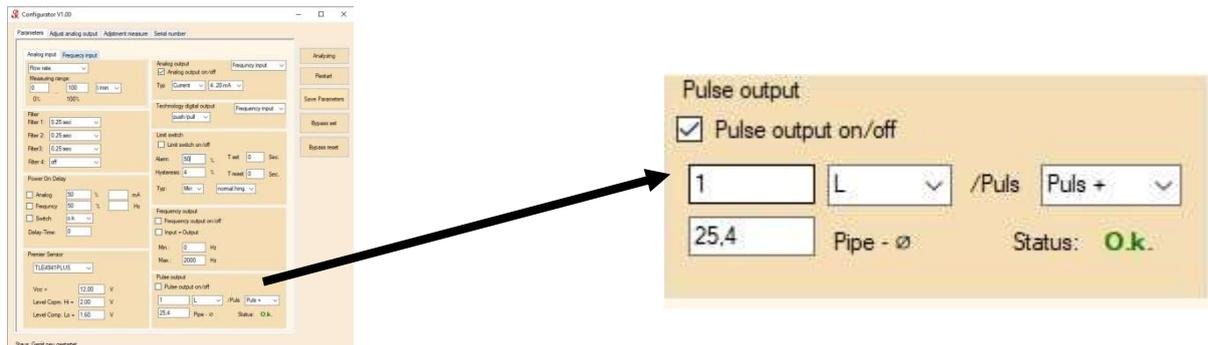


-Frequency output can be enabled or disabled.

-You can enable or disable the function input = output.

-If the output is used for a specific frequency, disable the output = input function and adjust the Max.

8.21 Pulse output parameterization

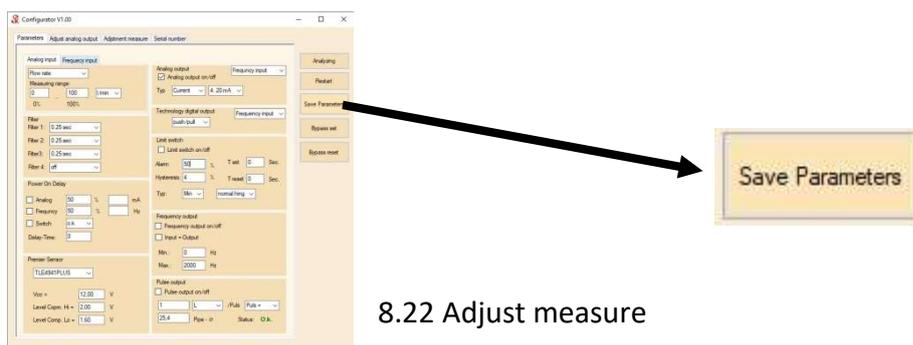


-Pulse output can be turned on and off.

-Adjust the desired amount of volume liquid at which the pulse should be generated.

-The program "Configurator" controls the parameters you have set and messages: "OK." or "Error".

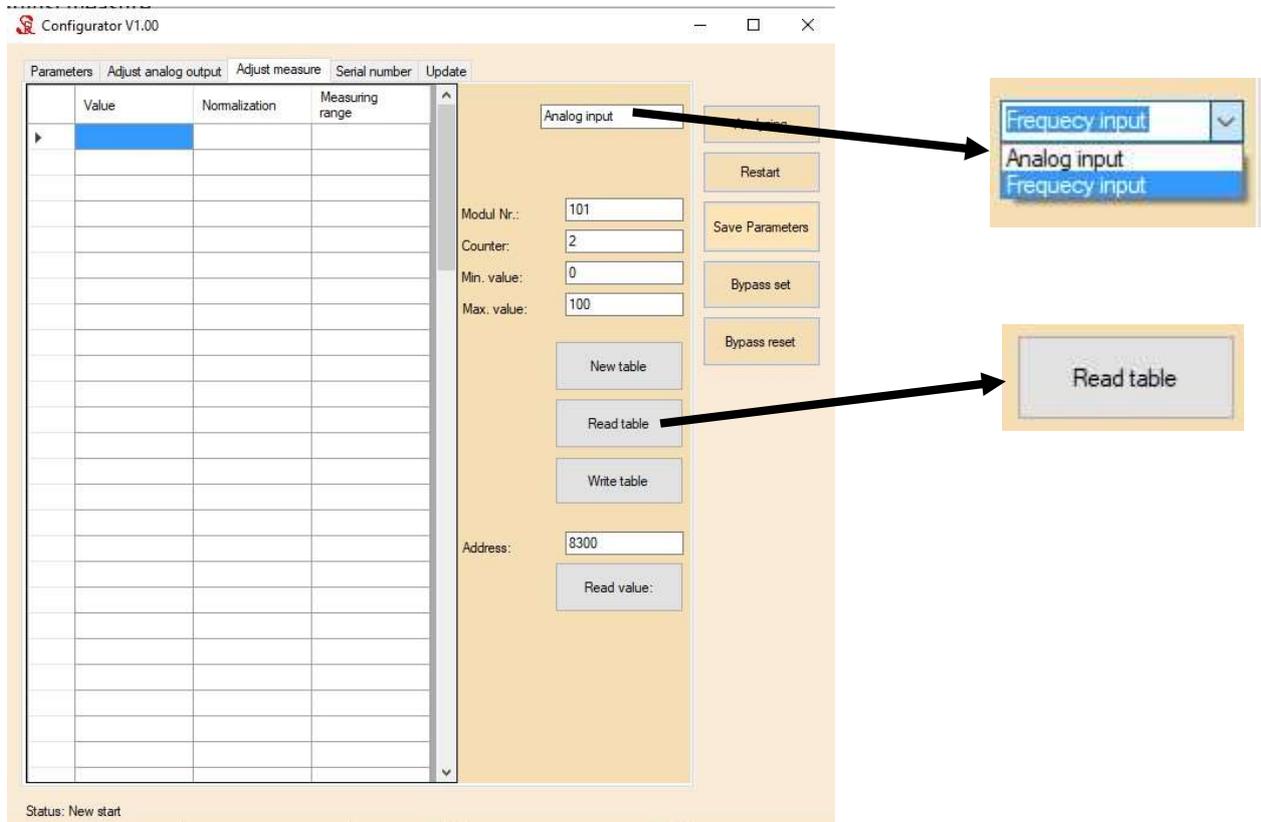
-After completing the installation of the parameters press Save Parameters.



8.22 Adjust measure

-Change Analog input to Frequency input.

-Press Read table.

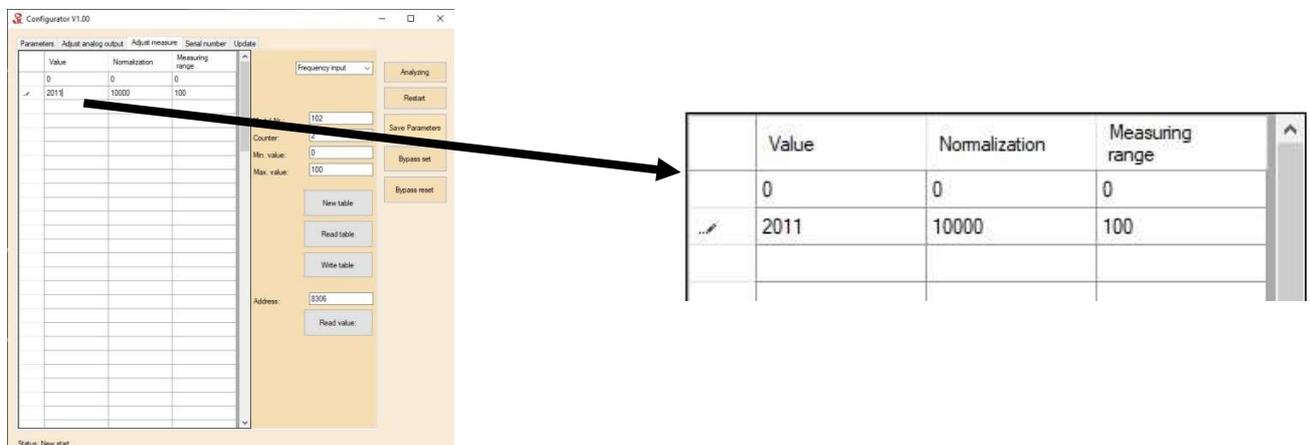


-Read the adjustment table for the frequency input.

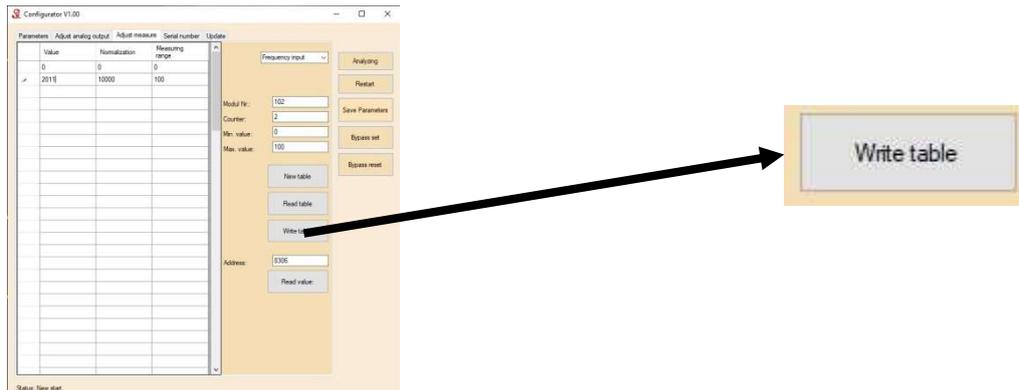
-Change the Max input frequency to match 100% of the measuring range of the VHS sensor.

-For example, for VHS DN32 max. The frequency at 350 liters per minute is 201.1 Hz.

-The frequency is entered with a multiplier of 10. Therefore you have to enter 2011 in the Value Slot.



-Write a new adjustment table to the sensor. Therefore press the Write table button.



-The first column of the table is the frequency of the input signal.

-The second column corresponds to the % of the measured range with a multiplier of 100.

For example:

	Value	Normalization	Measuring range
	0	0	0
	2011	10000	100

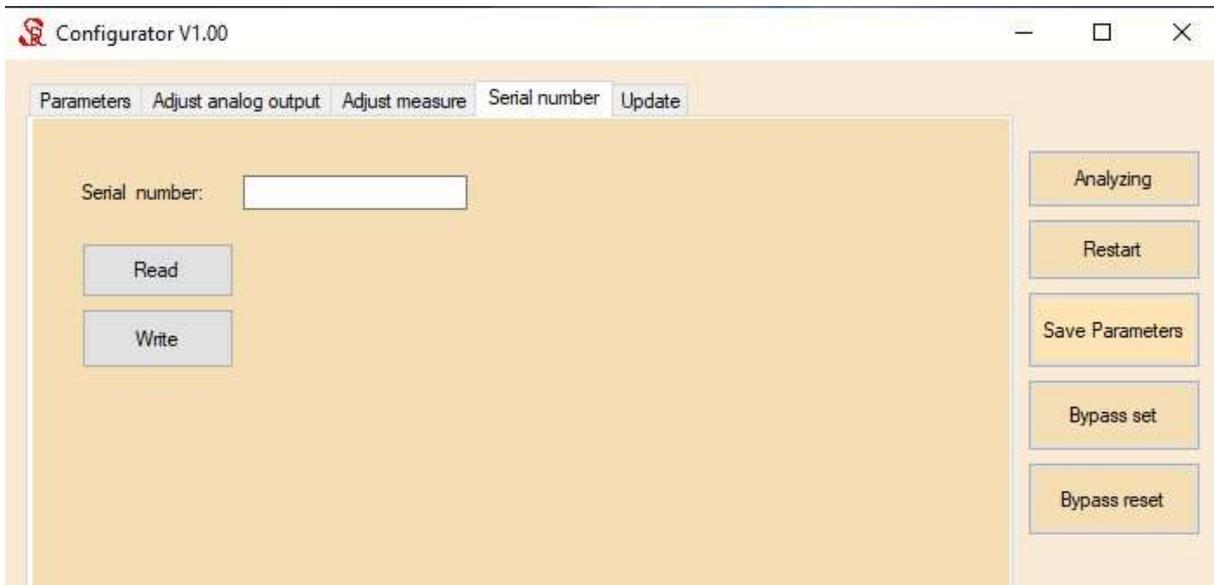
-0 is the frequency at no flow and corresponds to 0% of the measuring range.

-2011 - 201.1Hz corresponds to 10000 or 100.00% of the measuring range.

-After setting the parameters and correcting the adjustment table, the device is ready for operation.

8.23 You can check the operation by activating the connector on the back of the interface and connecting the measuring devices press Bypass set.

8.24 Serial number of the instrument

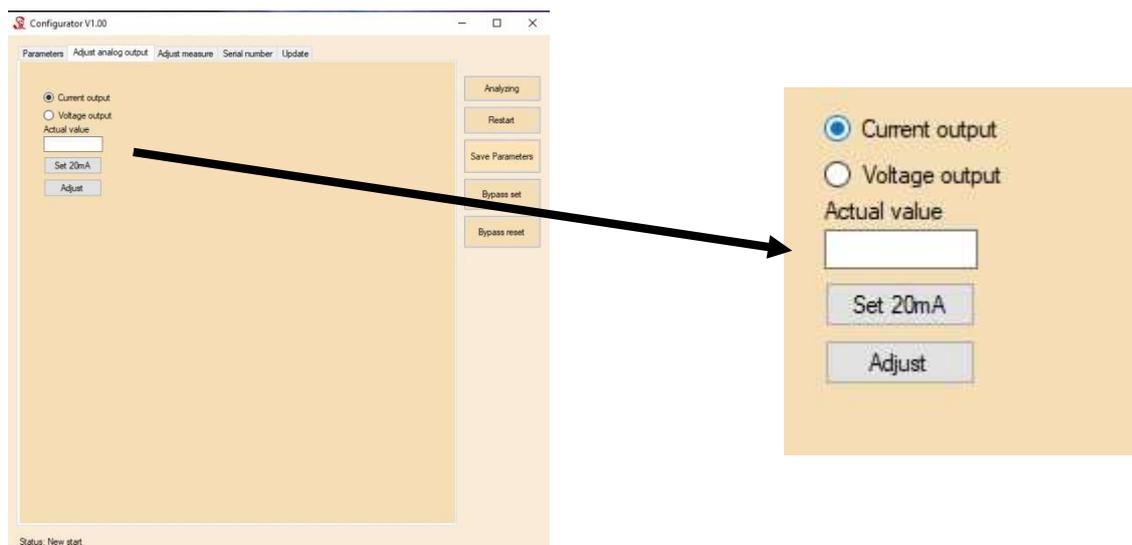


-You can read and write the serial number to the sensor.

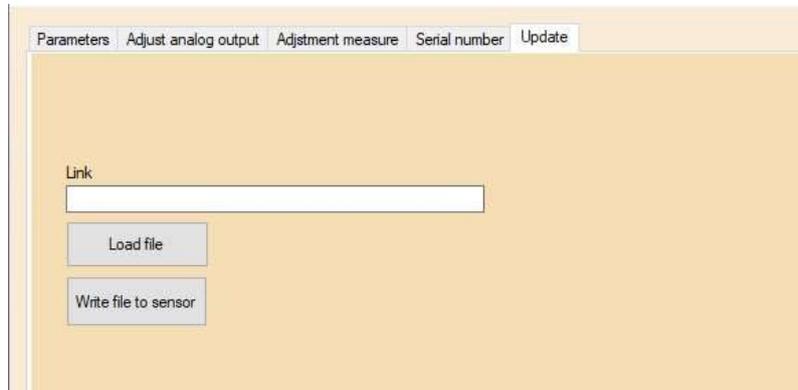
8.25 Adjust analog output

-It is possible to check and correct the current output or the "Voltage" output.

-The UNI-F-DA is delivered with the analog outputs already calibrated.



8.26 Update of application software



-The software is supplied by SESNSERION GmbH if required.

8.27 Transport and storage

-The interface should be transported in a package that ensures its mechanical safety. The interface can be stored at temperatures of 0 .. 60 ° C avoiding dampness.

-When disposing of the interface, it is necessary to provide for the separation of materials in accordance with applicable laws.