pAdvisor - Quick Guide

- Tool for SATRON Preon pressure and dp Smart/Hart transmitters

Contents:

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1. Software features

Features:

- **Configuration**
  Transmitter's configuration can be uploaded from the transmitter, edited and downloaded back to the transmitter. Configurations can also be saved to a file and reopened in pAdvisor when needed and printed out.

- **Trim and Calibration**
  Dp/pressure transmitter trimming and calibration functions.

- **Recorder**
  To monitor process pressure and temperature values on screen and save measurements to a file for later analysis.

- **Diagnostic**
  To test transmitter's output current and output current loop.
  HART communication status information and Alarm/Error messages.

With pAdvisor you will always have:

- **All Special features for Satron Preon transmitters**
  You have a full access to all Satron Preon Smart transmitter's special definitions and functions (e.g. User Function definitions for pressure/output response, VDU transmitter's settings, trimming and process values monitoring, transmitter status information...).

- **Free software upgrades**
  The latest version of the Satron pAdvisor software can be downloaded from www.satron.com (free of charge).

SATRON pAdvisor software (for Windows XP / Vista / 7 / 8 / 10 / 11)

2. Installation and setup

2.1 Download packed ’pAdvisor_vxxx_InstallFiles.zip’ file from Satron web page ’www.satron.com’. Extract this file to your hard drive.

2.2 Locate the extracted ’setup.exe’ file on your hard drive.

2.3 To start the setup procedure, run the ‘setup.exe’ file with adequate user privileges, preferably as an Administrator.

2.4 Follow the on-screen instructions.

2.5 Start pAdvisor:
- select Windows ’Start’ → ’Programs’ → ’pAdvisor’

When starting pAdvisor software for the first time:

2.6 Check that the supply voltage (24VDC) and HART modem are connected to the transmitter.

2.7 When pAdvisor software is running click ’Settings / Asetukset’-button in the 'Start Window’ and select your HART modem’s COM port from the serial port list. Click ‘Save and Close’ and in the ‘Start Window’ click ‘Start communication!’. When the transmitter answers, this COM port will be set as default port for the HART modem in the future.

2.8 See the connections examples; click ’Program info’ → ’View calibration connections’ and select Example1, -2, -3 or -4).

If the HART communication is not working with the transmitter, make sure the needed drivers for your HART modem are installed correctly. Change the HART modem to some other COM port, go to 'Settings / Asetukset'-window again and select this new COM port, click ’Save and Close’-button.
Try to establish a new connection in the pAdvisor 'Start Window’, click 'Start communication!'.

Note: A load resistance must be connected in the mA loop, recommended 250 Ω.

3. Basic functions

3.1 Start pAdvisor

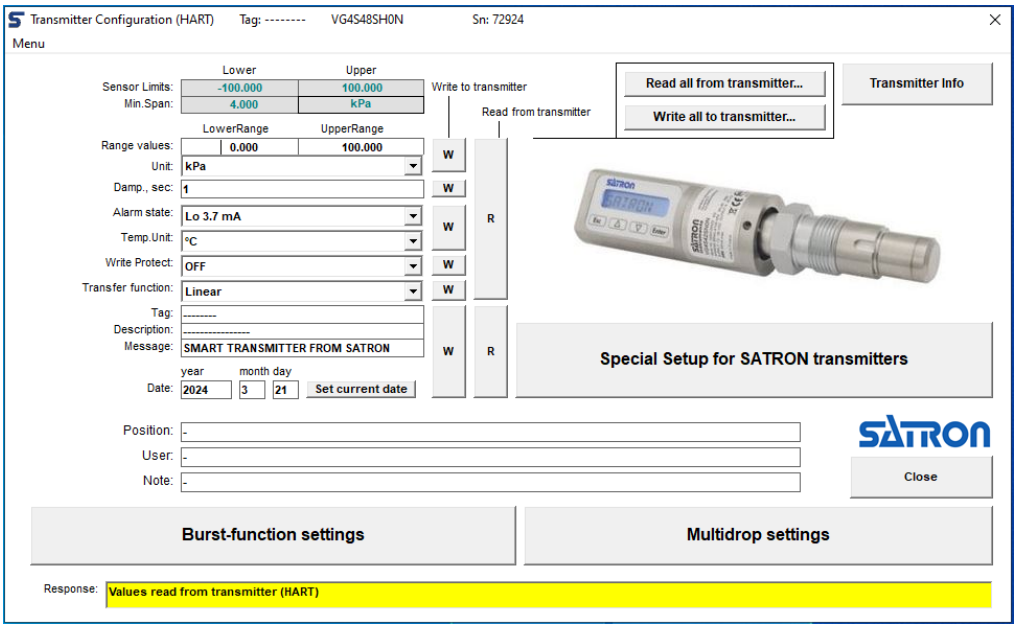
Start pAdvisor, browse: 'Start → Programs → pAdvisor'
-when the software is running, click 'Start communication!'-button

-when the 'Start communication!'-button is clicked and HART communication is ok, you will see the next view:

3.2 Configuration

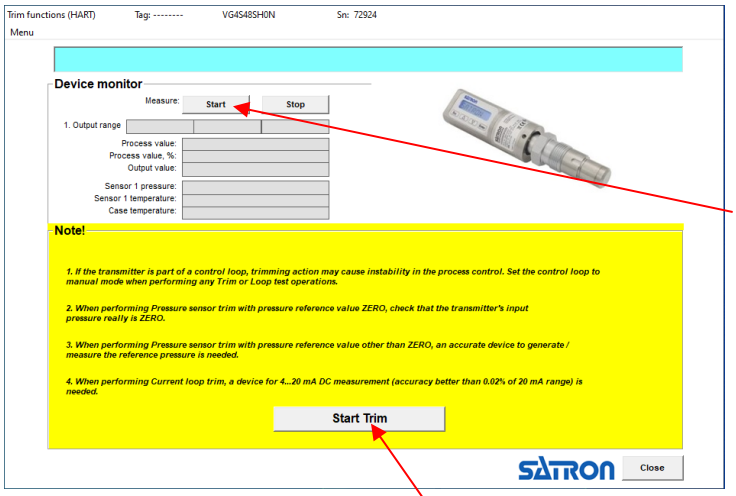
In the ‘Configuration’-window, configuration (range, units, damping, transfer function etc…) can be uploaded from transmitter, edited and downloaded back to the transmitter. After the download is finished, the software reads back the configuration data from the transmitter and the set configuration can be verified.

The configuration can be saved to a file, opened from the file back to pAdvisor software and printed out.

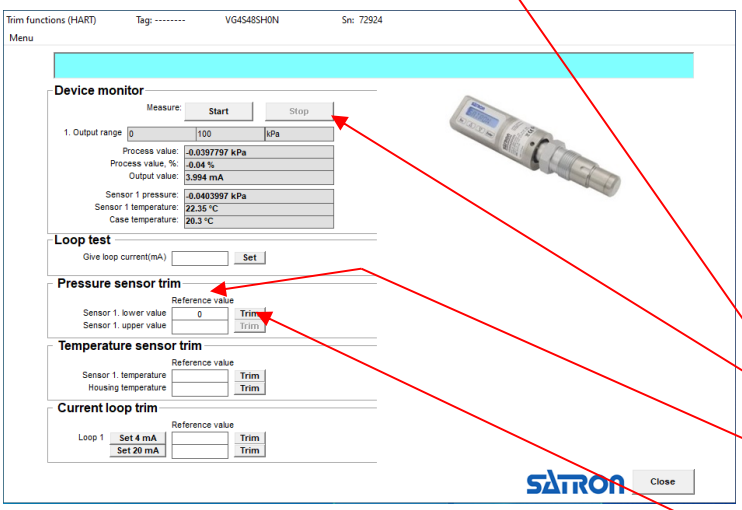


3.3 Trim, Sensor zero and span trim

The pAdvisor software can be used to perform transmitter's pressure and output current trim procedures with the help of suitable external calibration equipment.



-Click 'Start'-button and check measured values from transmitter



Example1. Sensor zero trim

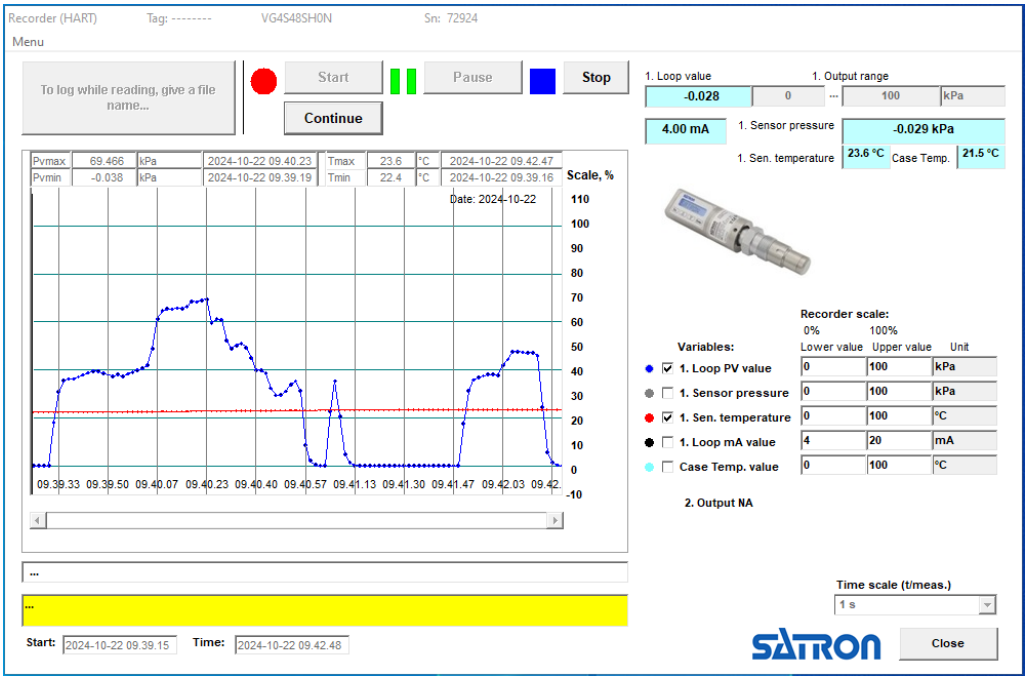
If the true pressure input to transmitter is zero, and you want to set transmitter's measurement value (= process value) to zero, follow these next steps:

- Click 'Start Trim'-button
- If 'Device monitor' is running, stop it, click 'Stop'-button
- Give true pressure (in this case = 0) to 'Reference value'-textbox on the line 'Sensor 1. lower value'
- Click 'Trim'-button
- Click 'Start'-button and check that the transmitter's pressure value is now zero.

4. Special functions

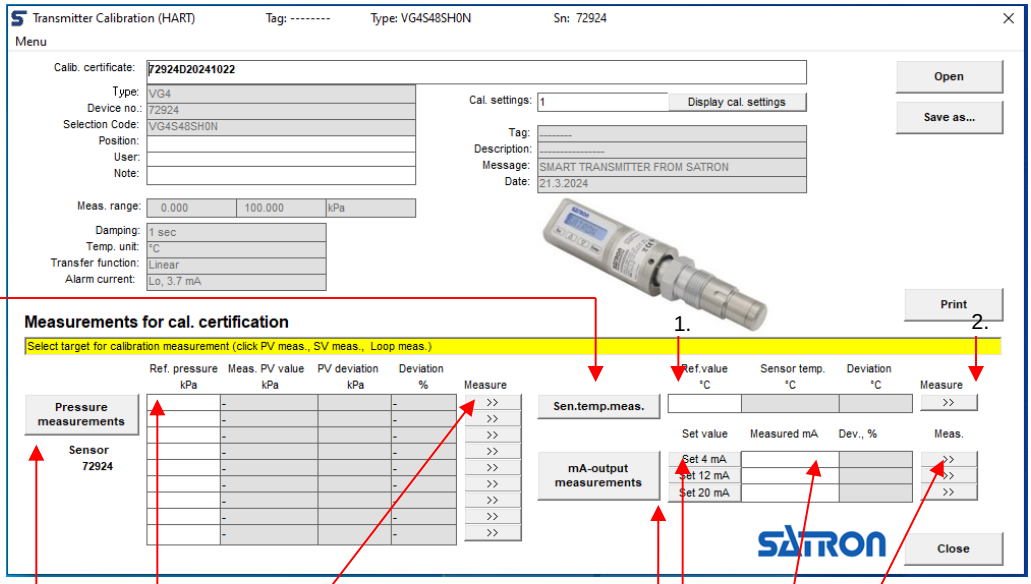
4.1 Recorder

In the ‘Recorder’-window the process value, mA value and temperature values can be monitored on screen and saved to a file for later analysis.



4.2 Calibration

A calibration certificate for Satron p/dp transmitter can be created, printed, saved to a file, and reopened for later analysis in the 'Calibration'-window.



Temperature calibration:

-Click 'Sen.temp.meas.'
1. -Input reference temperature
2. -Click '>>'-button

Pressure calibration:

-Click 'Pressure measurements'
1. -Input reference pressure
2. -Click '>>'-button

Repeat the functions (1… 2)
on the next row (continue until
all values are given into the table / or as many as it is needed)

Current loop calibration:

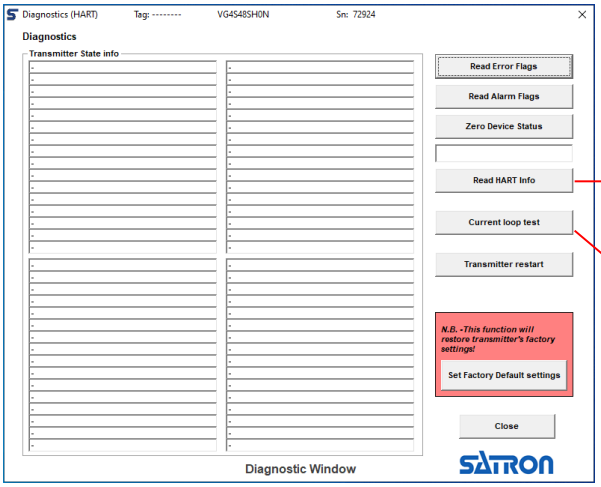
-Click 'mA-output meas..
1. Click 'Set 4 mA' button
2. Give measured reference mA value
3. Click '>>' button at the end of this row

4. Click 'Set 12 mA' button
5. Give measured reference mA value
6. Click '>>' button at the end of this line

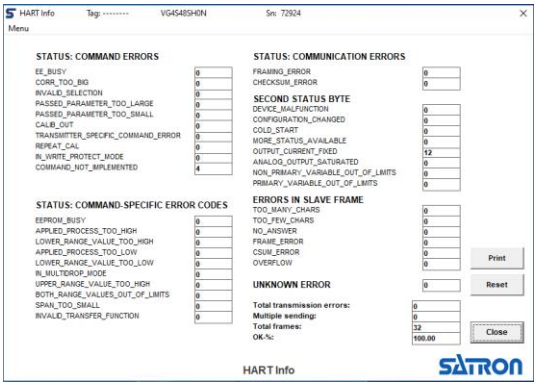
7. Click 'Set 20 mA' button
8. Give measured reference mA value
9. Click '>>' button at the end of this row

4.3 Diagnostic

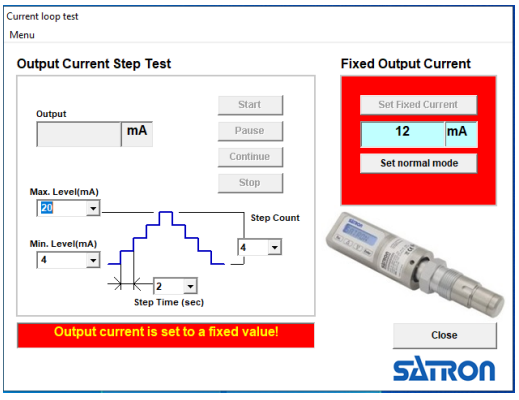
HART communication information and Alarm/Error messages can be read from the transmitter in the ‘Diagnostic’-window. Transmitter’s output current can be tested in the ‘Current loop test’-window. (Accessed via ‘Diagnostic’-window)



4.3.2 ‘Transmitter status’-window



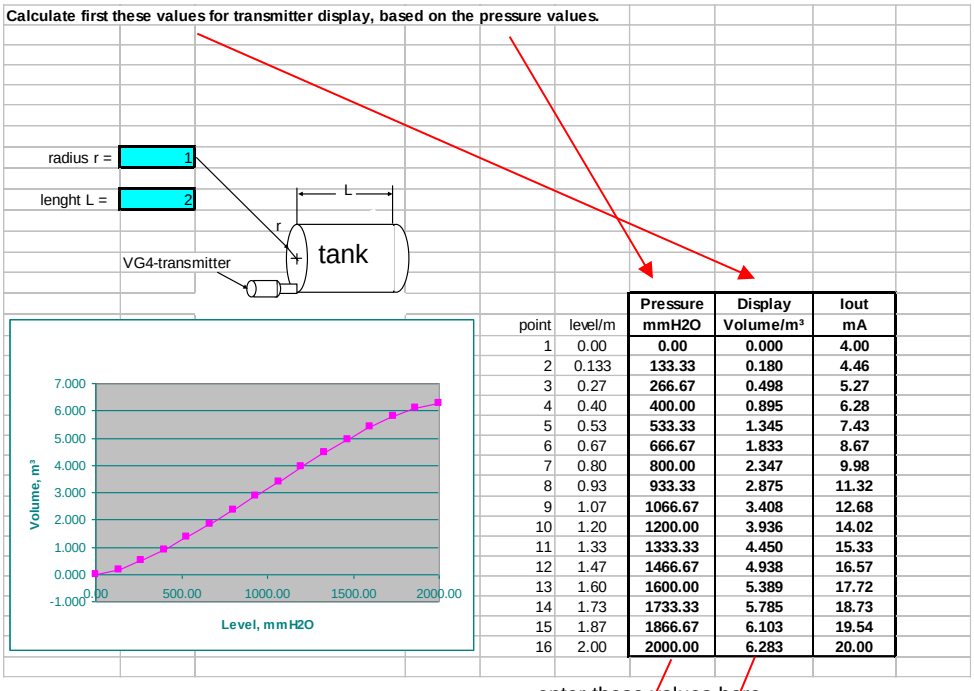
4.3.3 ‘Hart communication status’-window



4.3.1 ‘Current loop test’-window

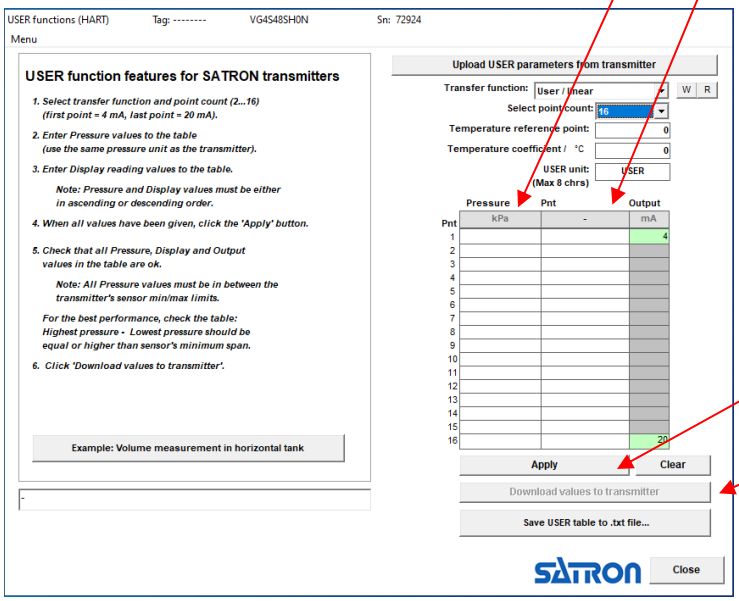
4.4 User Function settings

Example 2. Set the transmitter display value and output current to represent horizontal cylindrical tank volume with USER function (Access ‘User Function’, via ‘Configuration’-window).
(USER transfer function options are USER/Linear or USER/Spline.)



point	level/m	Pressure mmH2O	Display Volume/m³	Iout mA
1	0.00	**0.00**	**0.000**	**4.00**
2	0.133	**133.33**	**0.180**	**4.46**
3	0.27	**266.67**	**0.498**	**5.27**
4	0.40	**400.00**	**0.895**	**6.28**
5	0.53	**533.33**	**1.345**	**7.43**
6	0.67	**666.67**	**1.833**	**8.67**
7	0.80	**800.00**	**2.347**	**9.98**
8	0.93	**933.33**	**2.875**	**11.32**
9	1.07	**1066.67**	**3.408**	**12.68**
10	1.20	**1200.00**	**3.936**	**14.02**
11	1.33	**1333.33**	**4.450**	**15.33**
12	1.47	**1466.67**	**4.938**	**16.57**
13	1.60	**1600.00**	**5.389**	**17.72**
14	1.73	**1733.33**	**5.785**	**18.73**
15	1.87	**1866.67**	**6.103**	**19.54**
16	2.00	**2000.00**	**6.283**	**20.00**

enter these values here



Click ’Apply’, then ’Download values to transmitter’

We reserve the right to technical modifications without prior notice.