sc200 EDDs for SIMATIC PDM

Basic Instructions

June 2011

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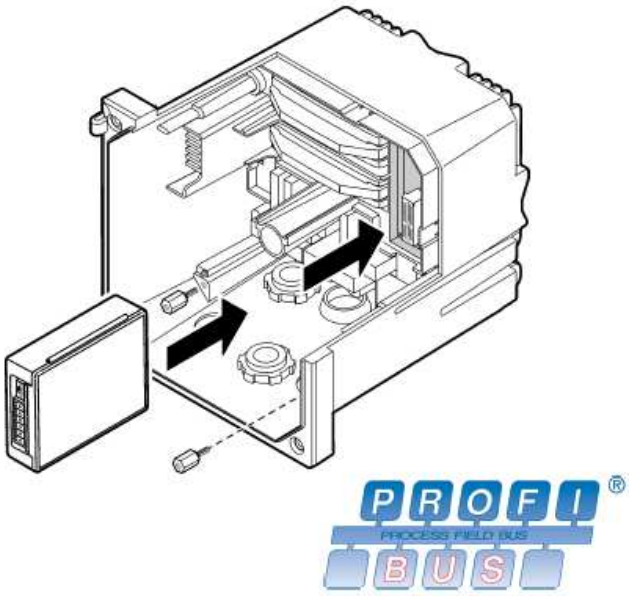
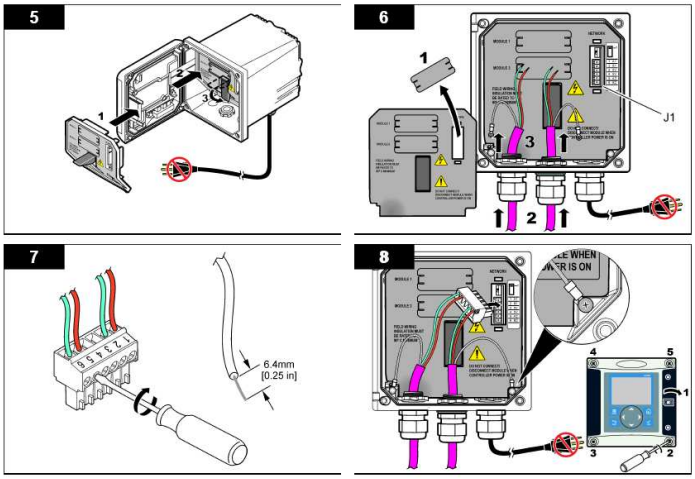
Introduction & Identification

The sc200 standard controller is part of the platform for all intelligent probes and analyzers from HACH / HACH-LANGE. The sc platform is a full digital communication system based on the open Modbus standard. Equipped with the Profibus interface card the sc200 controller provides the complete range of values and parameters in a standardized method. The sc200 is a PNO/PTO certified Profibus DP/V1 device which allows access from master class1 (PLC SCADA) and master class 2 systems such as SIMATIC PDM.

Requirements - SC Controller

1. sc200 equipped with a Profibus network card. Standard sc200 versions can be upgraded for Profibus using article number *YAB102 (Profibus Upgrade Kit)*
2. GSD file HALA09AC for general configuration





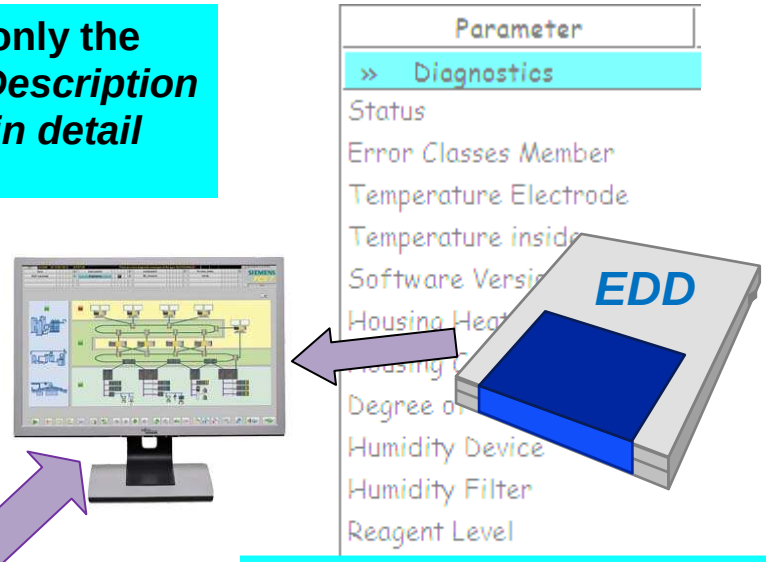
Note: **Please reboot the controller after the initial configuration and start up.**

Start-up takes approximately 60 seconds.

Operation Overview

The EDD files enable the PDM operations and face plates to run all HACH probes and analyzers. These files are used to describe the entire set of probe/sensor properties as well as the menus, online windows and the face plate behavior.

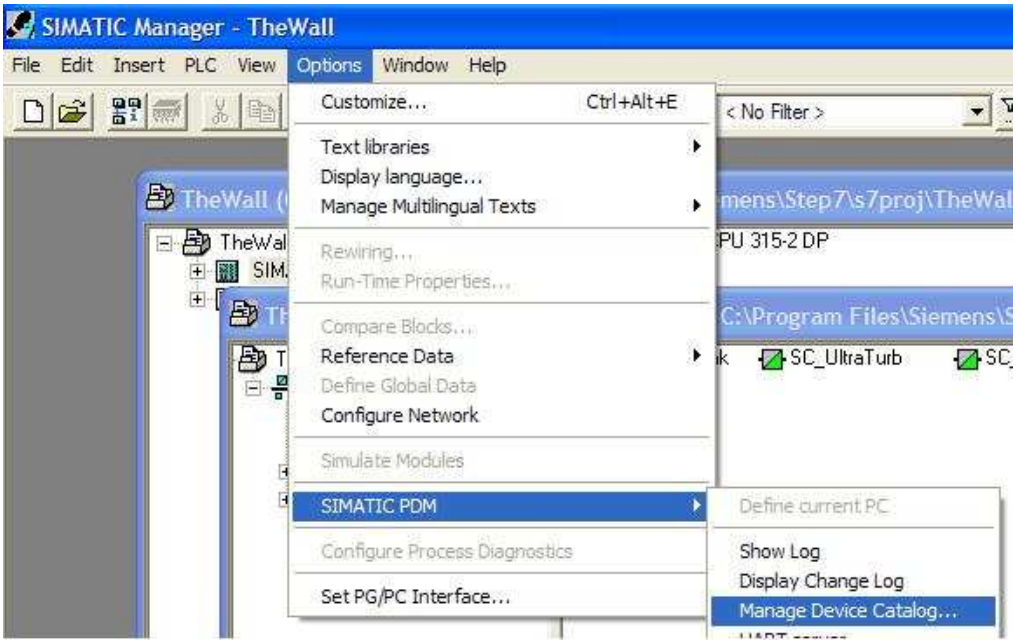
SIMATICPDM needs only the EDD *Electronic Device Description* to adapt the devices in detail

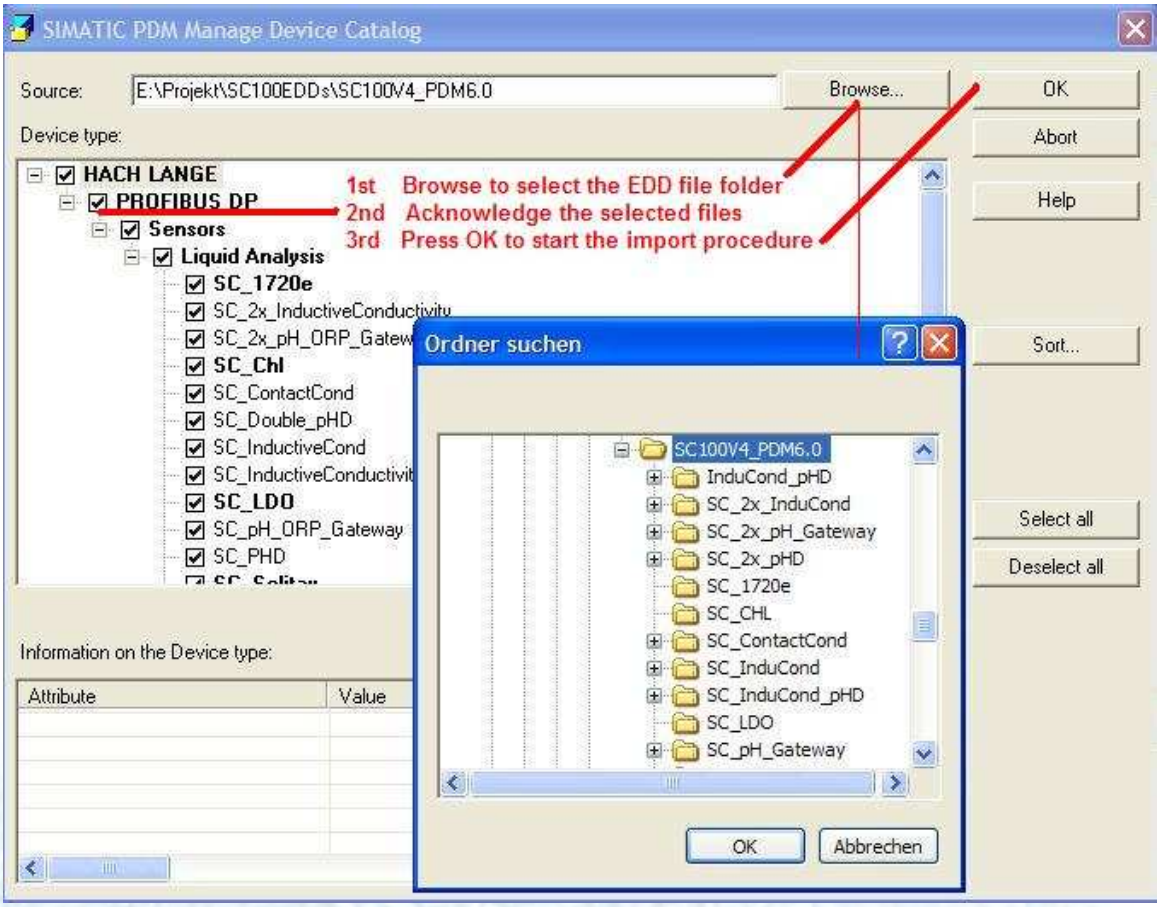


- ❑ **Diagnostics**
- ❑ **Parameterization**
- ❑ **Online values / displays**
- ❑ **Upload and Download settings**
- ❑ **Backup and Restore**

Importing the PDM EDD

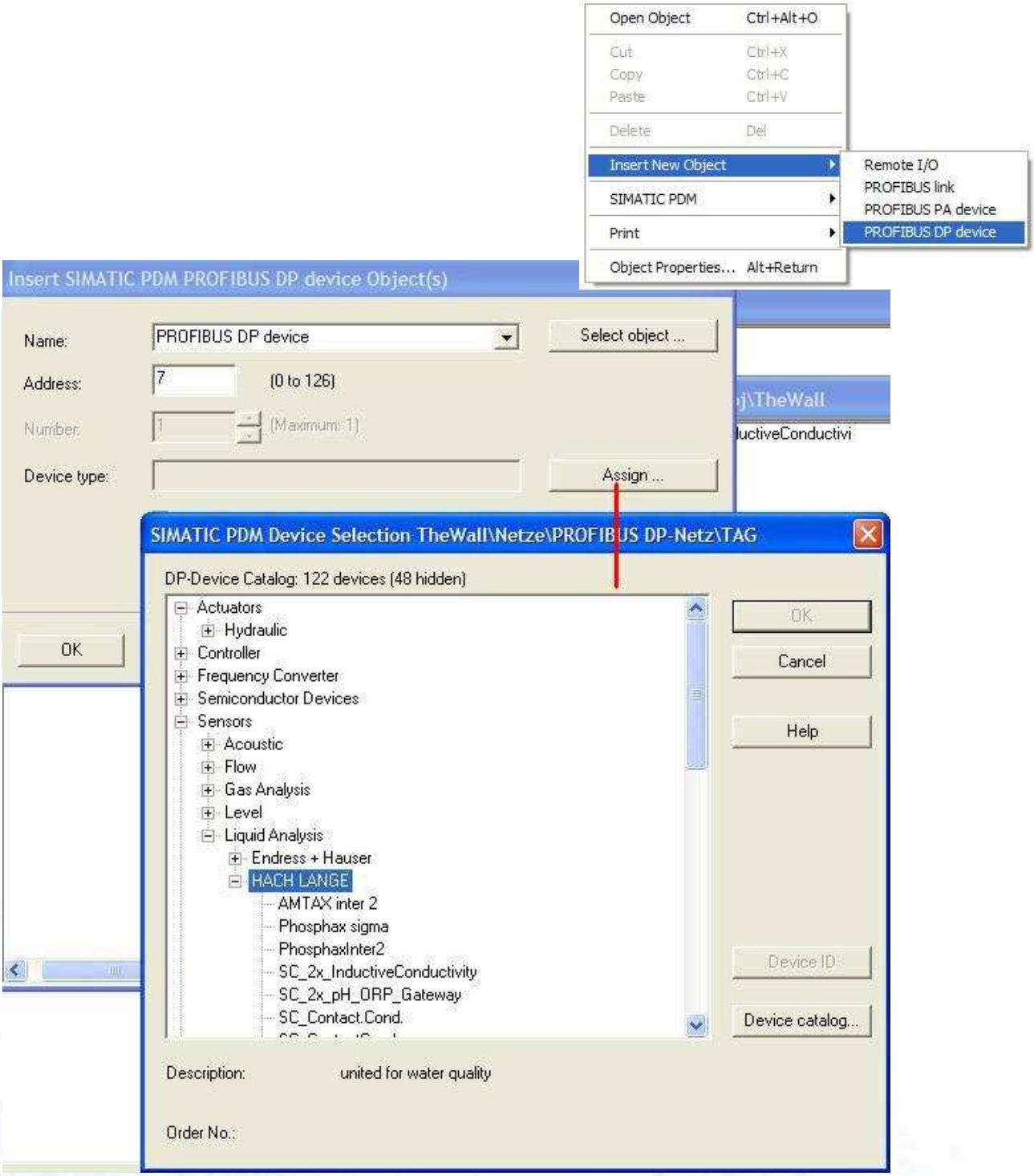
Using the SIMATIC Manager, navigate to:
OPTIONS > SIMATIC PDM > Manage Device Catalog





PDM Device Selection and Assignment

HACH LANGE sensors are now available within the device catalog located at:
Sensors > Liquid Analysis > HACH LANGE



HACH EDD Structure

HACH EDD's are all structured in the same manner.

- ***Profibus Interface:*** Identification of the DP/V1 Profibus interface card.
- ***Identification probe 1:*** Device ID, Serial number and sensor name of the first sensor.
- ***Identification probe 2:*** Device ID, Serial number and sensor name of the second sensor, if available. Verify the device ID with the EDD name/type to verify that the selected EDD matches the installed sensor types.
- ***Settings 1:*** All settings from the first sensor. The white background color indicates that the entry is writeable. Opening the face plate in MAINTENANCE mode allows only read access, write access is available using the "SPECIALIST" mode.
- ***Diagnostics 1:*** Diagnostic data derived from the first sensor.
- ***Measurements probe 1:*** All output values derived from the first sensor.
- ***Settings 2:*** All settings from the second sensor, if available.
- ***Diagnostics 2:*** Diagnostic data derived from the second sensor.
- ***Measurements probe 2:*** All output values derived from the second sensor.

SIMATIC PDM - SC_UltraTurb_LDO [Project: TheWall -- C:\Program Files\Siemens\Step7\s7proj\TheWall]

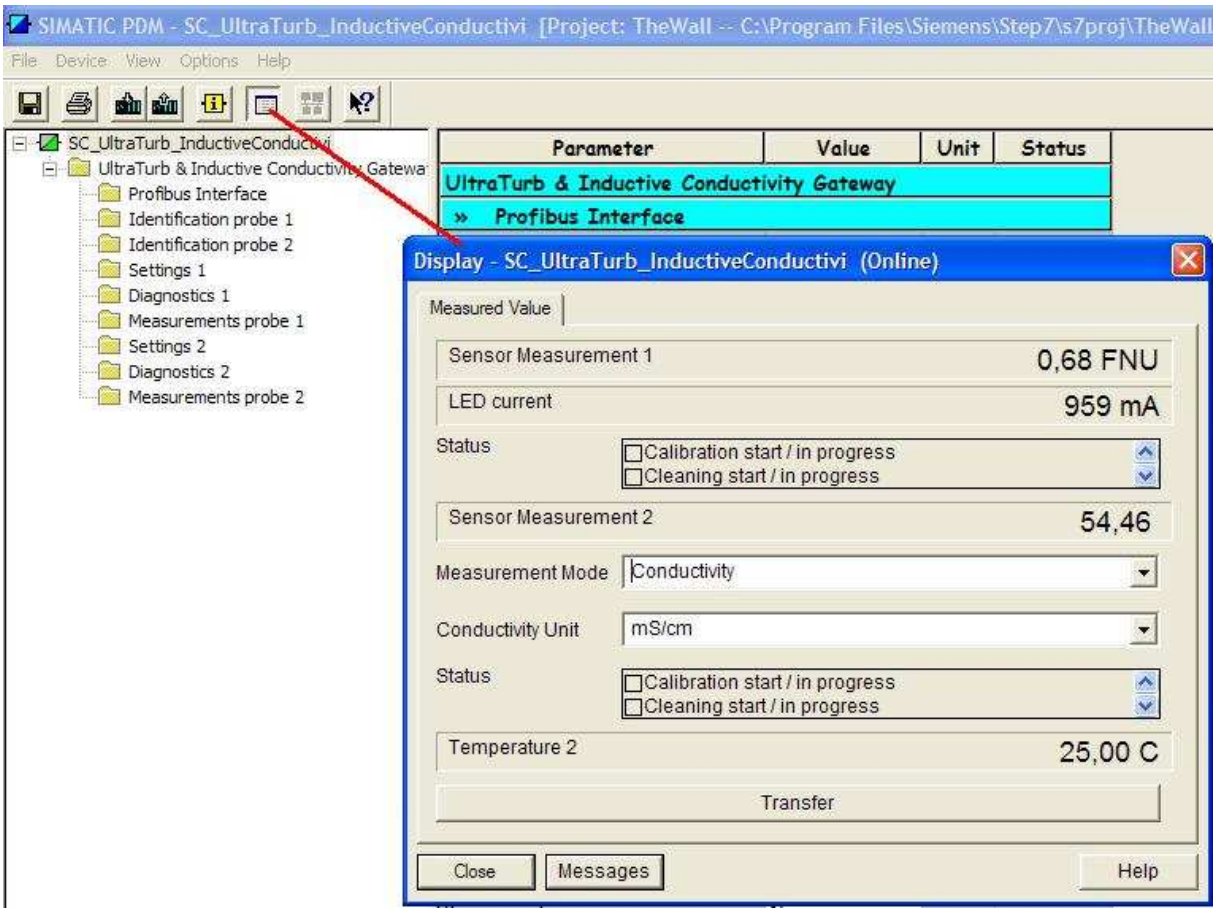
File Device View Options Help

- SC_UltraTurb_LDO
  - UltraTurb & LDO
    - Profibus Interface
    - Identification probe 1
    - Identification probe 2
    - Settings 1
    - Diagnostics 1
    - Measurements probe 1
    - Settings 2
    - Diagnostics 2
    - Measurements probe 2

Parameter	Value
UltraTurb & LDO	
» Profibus Interface	
Vendor Name	HACH LANGE
Fieldbus type	YAB015 DP/V1
Model Number	240107 Rel 1.2
» Identification probe 1	
Device ID	ULTRATURB SC
Serial No 1	0x0
Serial No 2	0x120
Serial No 3	0x7351
Location	UltraTurb 1st
» Identification probe 2	
Device ID	LDO
Serial No 1	0x3
Serial No 2	0x1141
Serial No 3	0x160
Probe Location	LDO 2nd
» Settings 1	
Measurement unit	FNU
Correction	1
Offset	0
Wiper state	park position
Response time	15

Online Measurement Windows

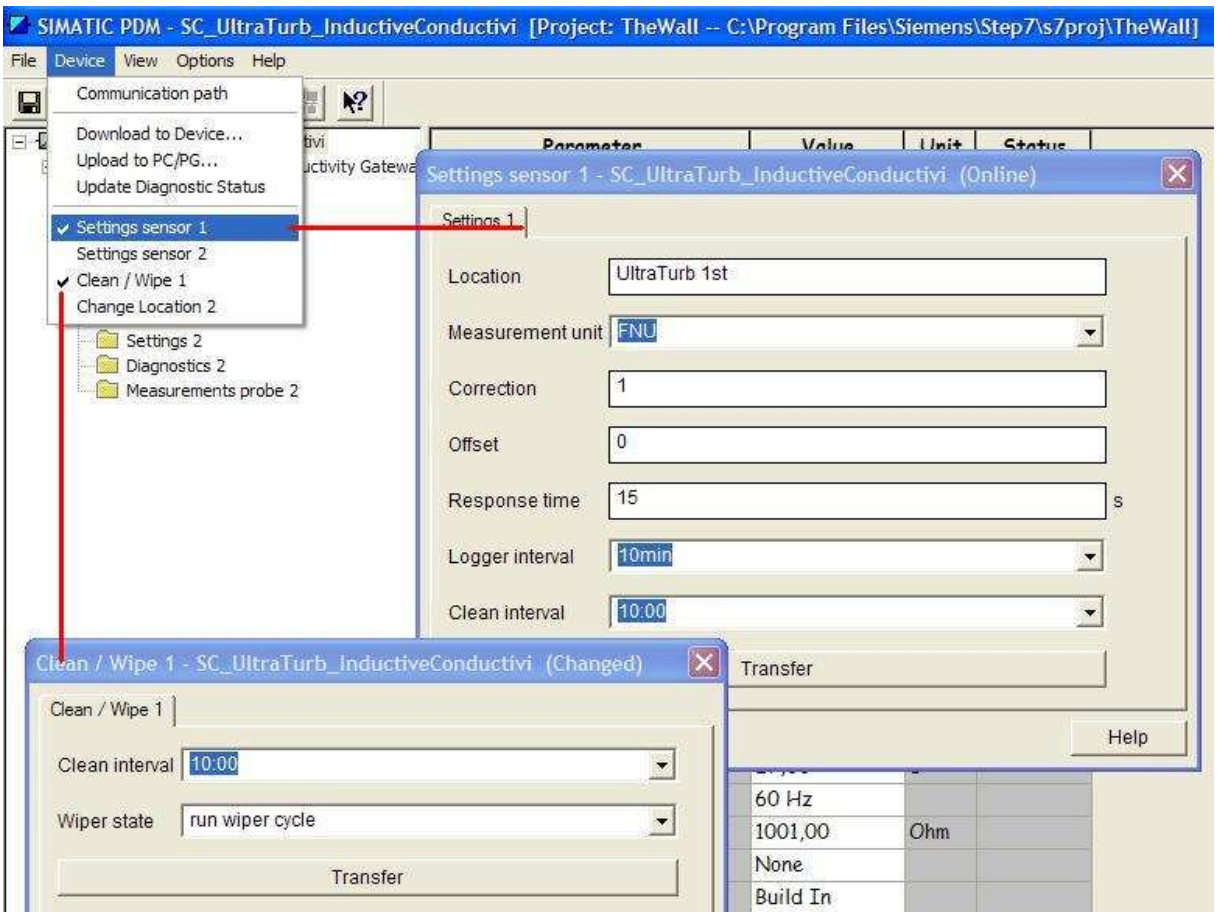
All HACH EDD's support a dynamic measurement monitor, displaying the measurements, units and status information which are updated periodically.



Online Configuration Windows

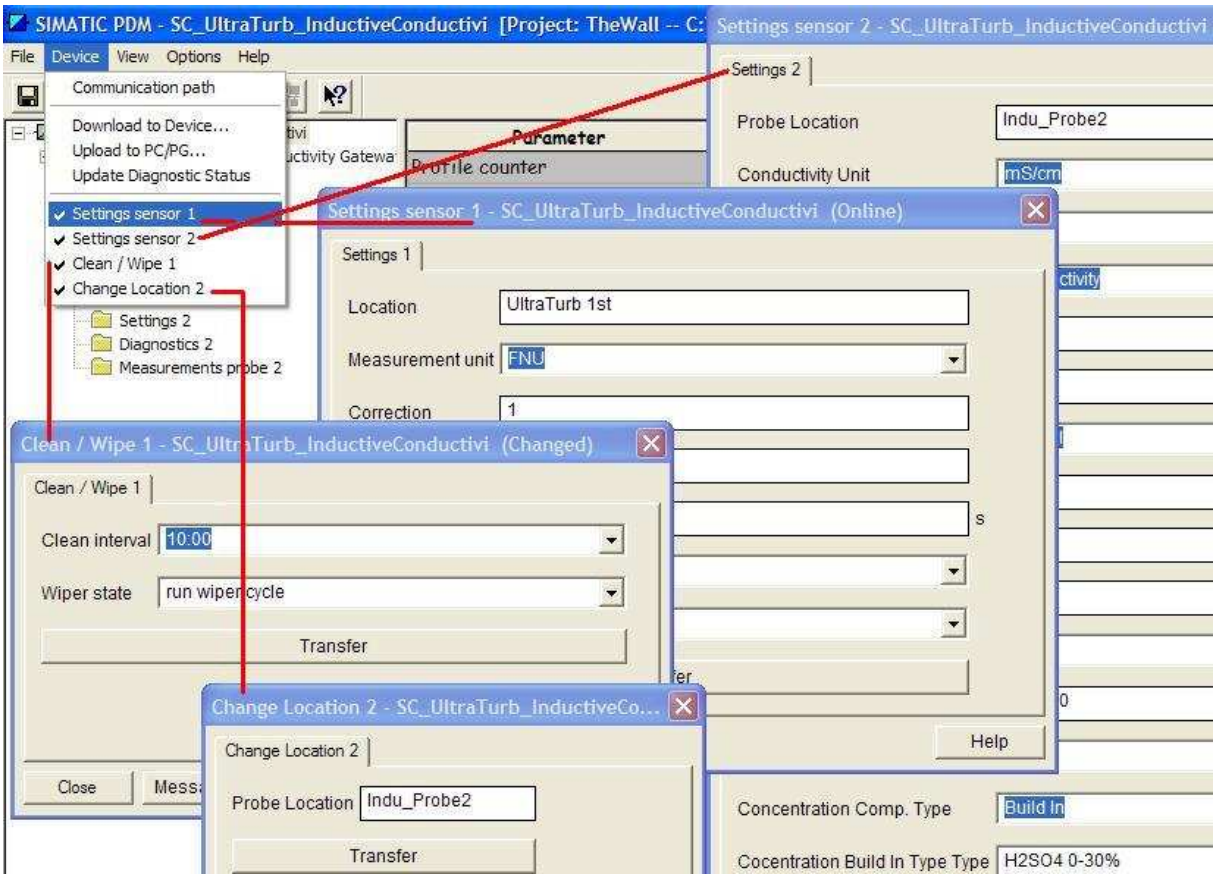
All HACH EDD's support a dialog for configuration purposes. Dual Sensor EDD's offer different windows for sensor 1 and sensor 2.

Note: Please close all dynamic measurement windows while performing parameterization or parameter download / upload procedures!



Online configuration windows are used to upload or download complete parameter sets. Particularly with regard to Dual Sensor EDD's, parameterization through the use of the assigned "Setting Windows" can be performed much faster than parameterization from the main page because only changed parameters will be updated.

Sensors equipped with a cleaning device or wiper (SOLITAX, ULTRATURB, etc.) and many analyzers have a separate dialog window available to start a cleaning cycle remotely.



Available Single Sensor EDDs

Single Sensor EDD's	
Device type	**EDD Name**
SOLITAX	SC200_solitax
LDO	SC200_LDO
34xx Contacting Conductivity Digital Gateway	SC200_ContactCond
37xx Inductive Conductivity Digital Gateway	SC200_InduCond
Surface Scatter 7	SC200_SS7
1720E Turbiditymeter	SC200_1720e
9184 SC Chlorine Analyzer	SC200_Chl
pH ORP Differential Sensor	SC200_PHD
pH ORP combination	SC200_Comb_ph_ORP
ULTRATURB plus sc	SC200_UltraTurb
NH4D sc	SC200_NH4D
NO3D sc	SC200_NO3D
Amtax sc	SC200_Amtax
Phosphax sc	SC200_Phosphax
SONATAX sc Ultrasonic Sludge Monitor	SC200_Sonatax
CLT10 / CLF10 Chlorine Analyzer	SC200_CLx10
FilterTrak 660sc	SC200_FT660
FP360 Oil In Water Fluorometer	SC200_FP360

Available Dual Sensor EDDs

Dual Sensor EDD's	
Device type	**EDD Name**
Dual pH ORP Differential Sensor	SC200_2x_pHD_V1_0
Dual 37xx Inductive Conductivity Digital Gateway	SC200_2x_InduCond_V1_0
Dual SC pH/ORP Combination Digital Gateway	SC200_2x_ph_V1_0
37xx Inductive Conductivity Digital Gateway + pHD	SC200_InduCond_pHD_V1_0
UltraTurb + 37xx Inductive Conductivity	SC200_UltraTurb_InduCond_V1_0
UltraTurb + LDO	SC200_UltraTurb_LDO_V1_0
UltraTurb + pHD	SC200_UltraTurb_pHD_V1_0

Sensor Sequencing:

Dual sensor EDDs combine two sensors operating with one sc200 controller. It is important that the order of the sensors be the same in the sc controller and in the EDD!

Order of the Sensors in the sc200:

The order of probes is determined by the order of installation. The first sensor that was scanned and recognized by the sc200 is the first Dual-EDD sensor. The second sensor is assigned to the second EDD sensor. Scanning both sensors at the same time will result in random assignment which may result in conflicts with the order in the EDD.

Note: The sensor order also specifies the data order for the cyclic Profibus communication!!