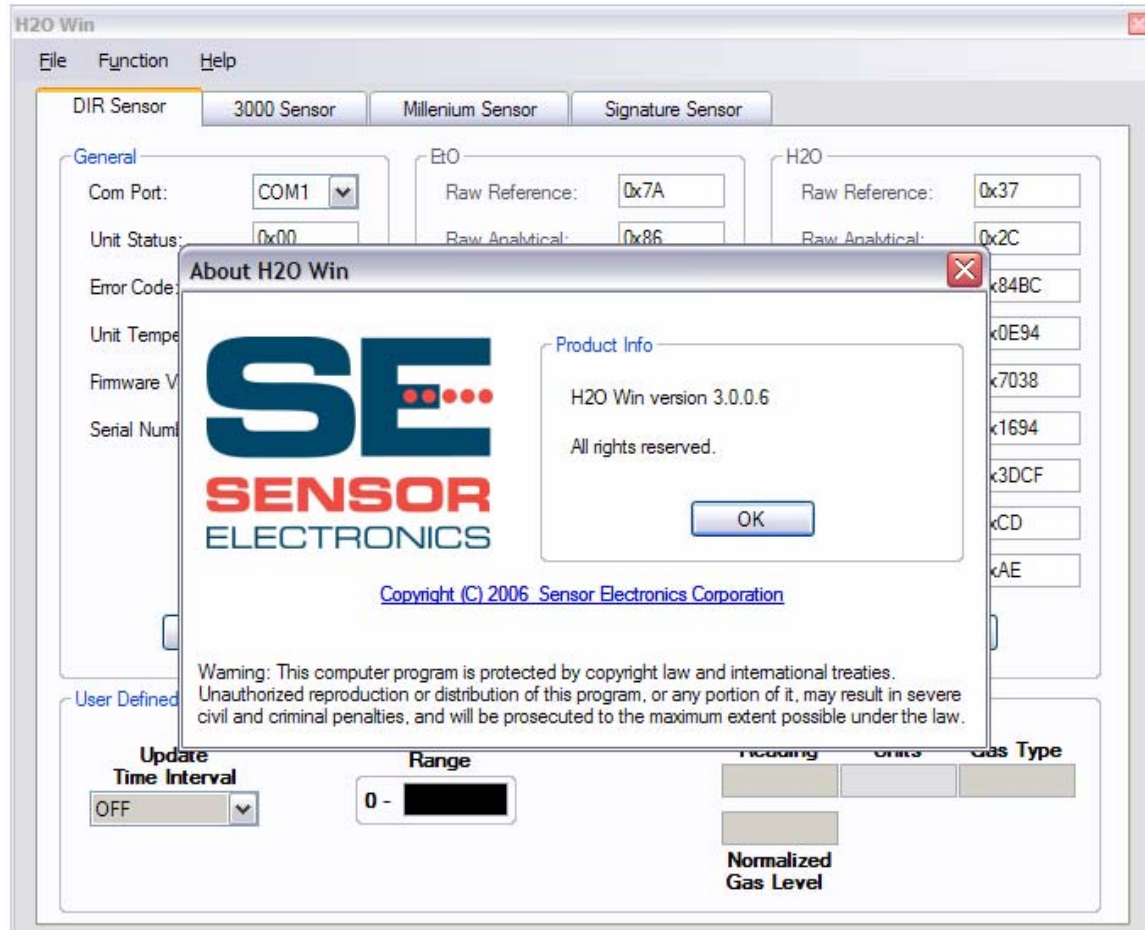


SEC H2O Win Software for SEC Signature DIR EtO/H2O Monitor

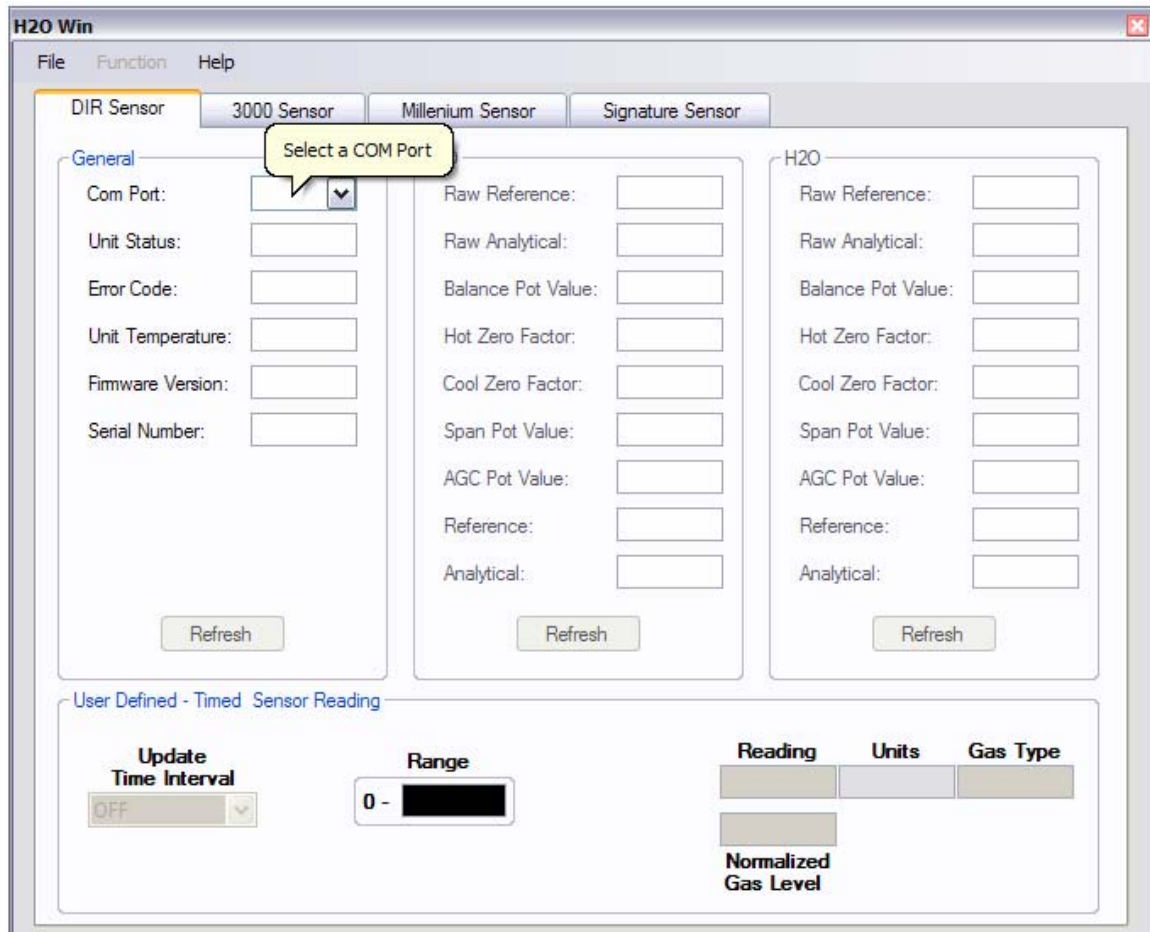


Current version of SEC software used with SEC Signature DIR. This software can be downloaded from the Sensor Electronics website. www.sensorelectronics.com

Note: The SEC H2O Win software requires Microsoft.Net to run. The download process will prompt the operator to download this software. Download the x86 version.

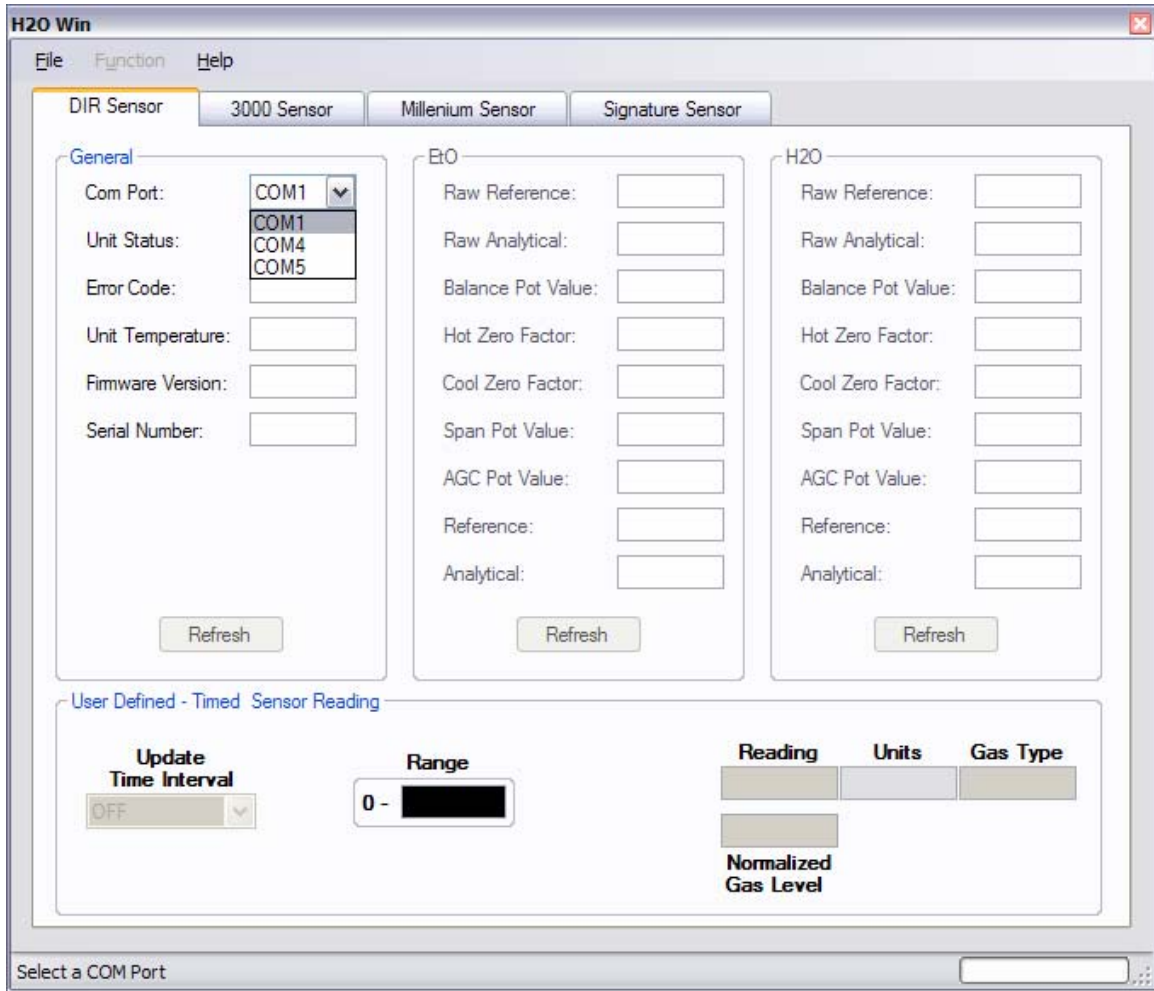
The software is used on a PC connected to an SEC PC IR Link Kit (PN 1420636) via a 9 pin serial (straight through) cable. The SEC Signature is wired to the SEC PC IR Link, if the SEC Signature DIR is powered from a different 24 VDC power supply (external to the PC IR Link) only the white (communication wire) and black (DC Common) wire need to be connected to the PC IR Link to communicate.

SEC H2O Win Software for SEC Signature DIR EtO/H2O Monitor



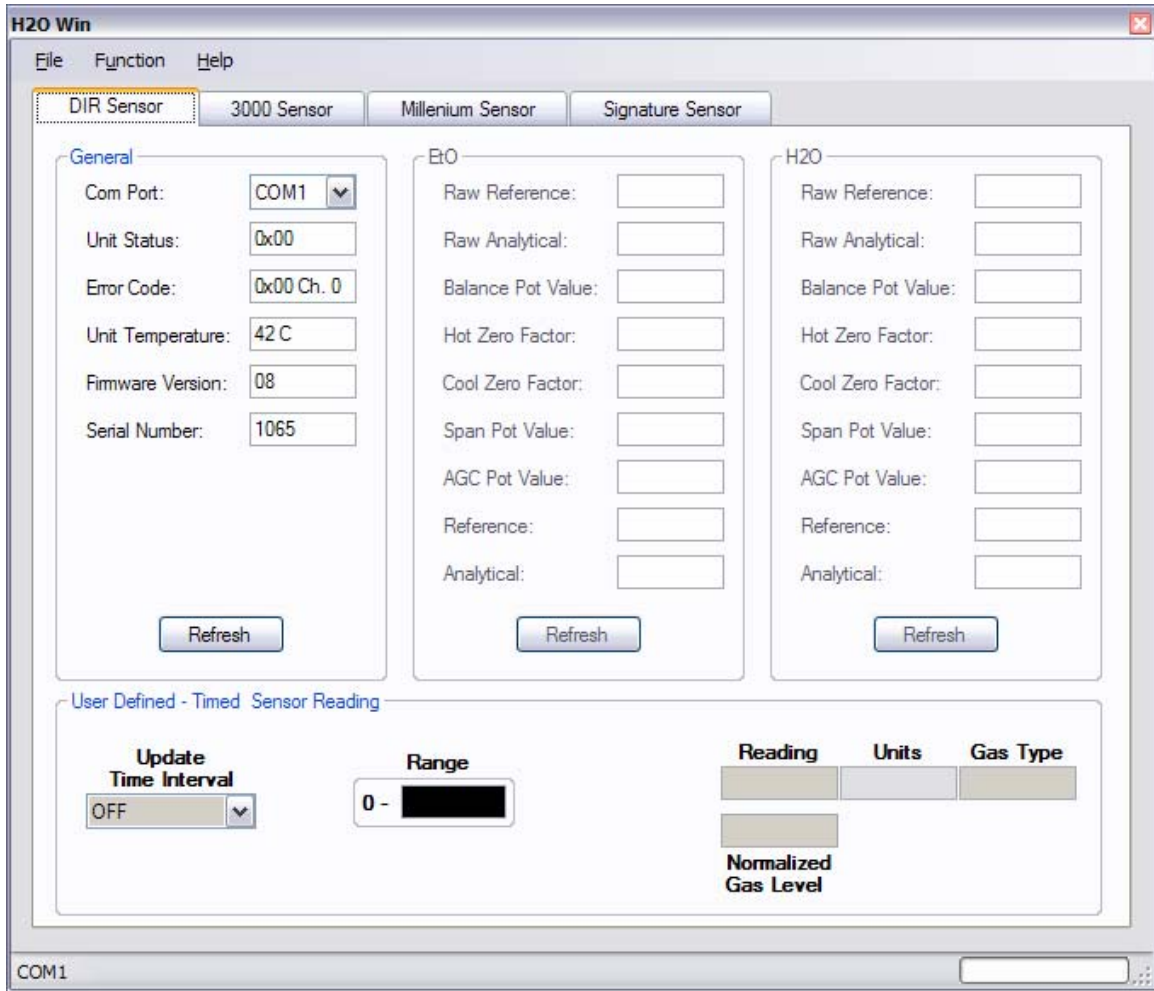
Select the communication port used on the PC. If the computer does not have a 9 pin serial port a USB to 9 pin serial adaptor can be used.

SEC H2O Win Software for SEC Signature DIR EtO/H2O Monitor



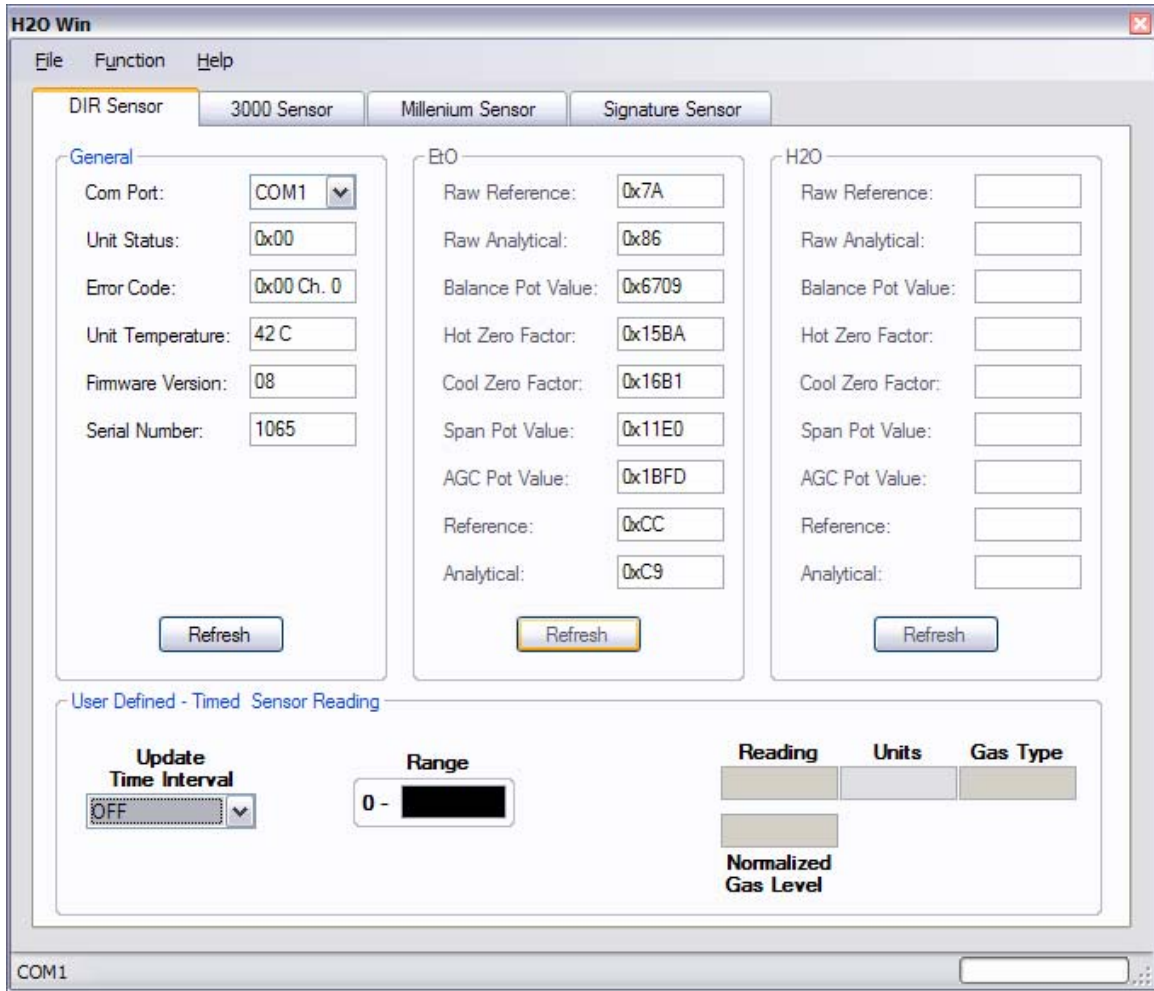
The software recognizes the available ports on the PC. Select the one to be used.

SEC H2O Win Software for SEC Signature DIR EtO/H2O Monitor



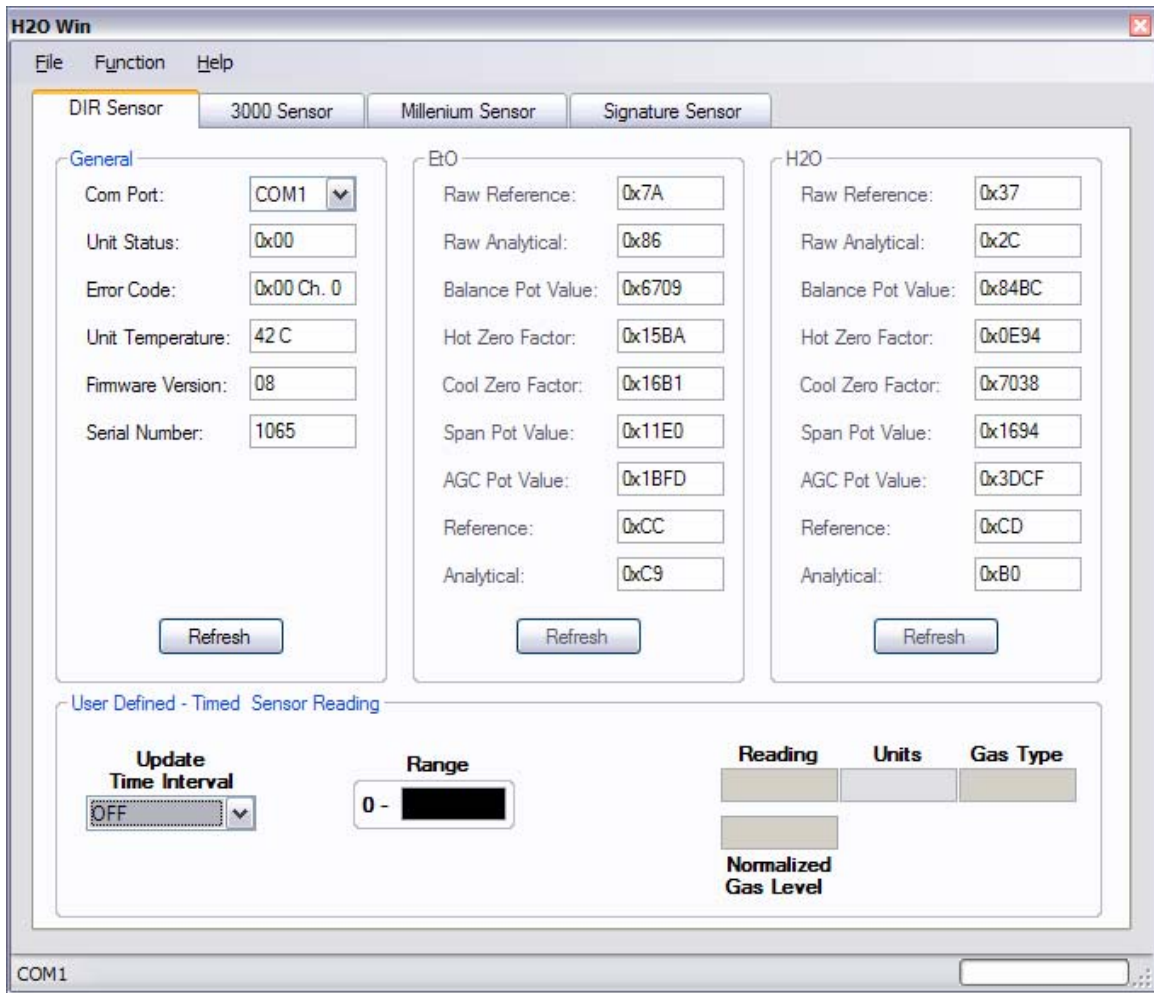
Once communication is established the “General” area is automatically updated. The General, EtO and H2O areas are all manually updated using the individual “Refresh” buttons.

SEC H2O Win Software for SEC Signature DIR EtO/H2O Monitor

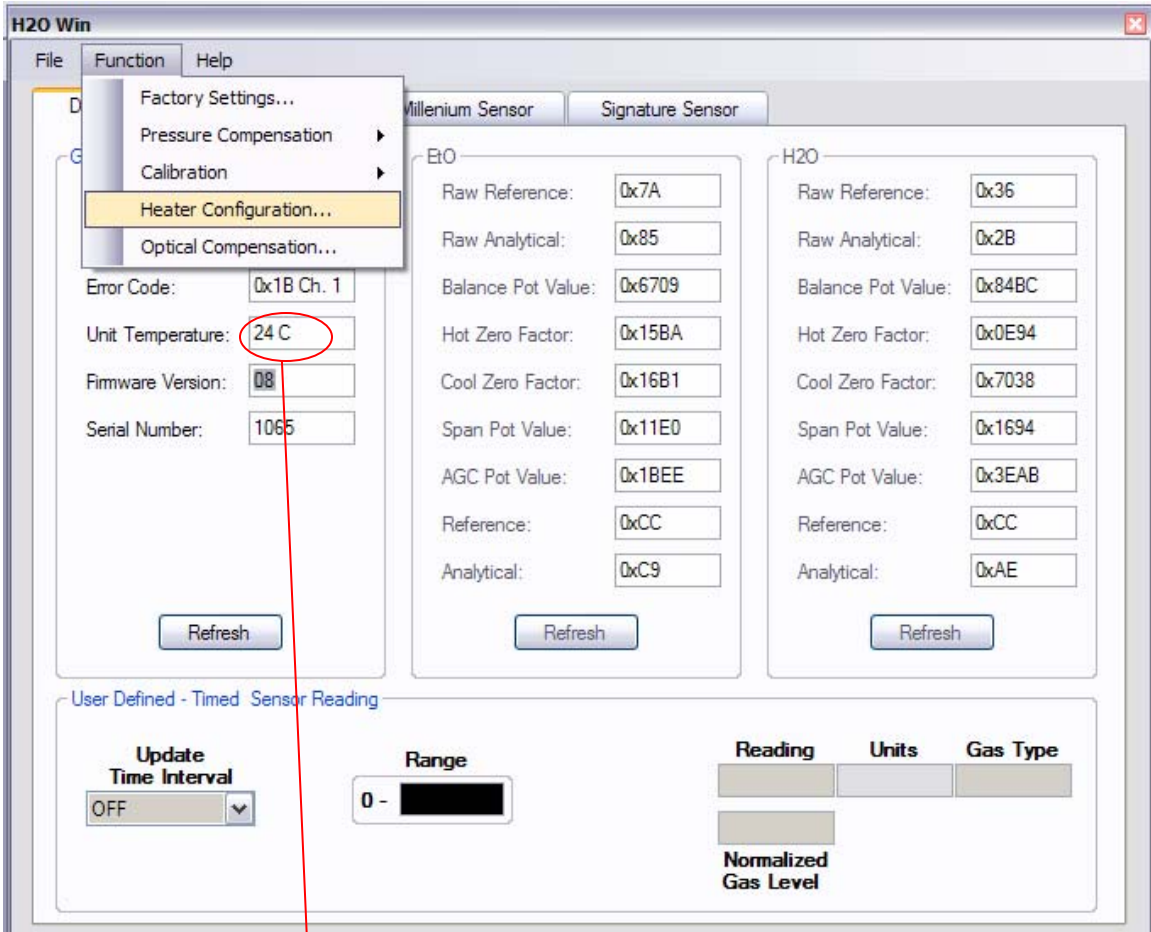


Example of selecting Refresh EtO channel.

SEC H2O Win Software for SEC Signature DIR EtO/H2O Monitor



Example of selecting Refresh H2O channel.



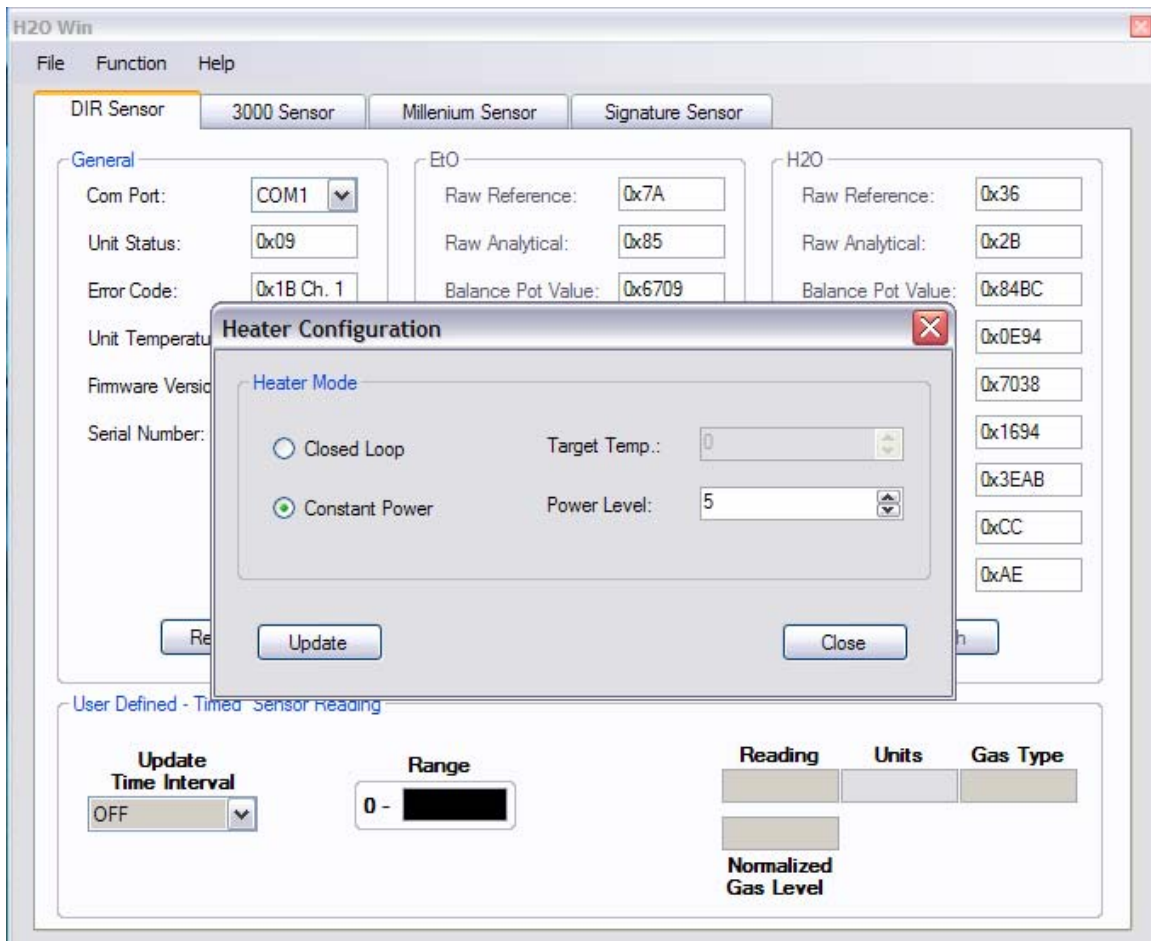
The Function tab will allow the operator to configure the SEC Signature DIR. When prompted for a password the password is:

sec

First step is to configure the heater. The heater is configured by monitoring the SEC Signature DIR's temperature. The temperature should be a minimum of 5 degrees C above process temperature throughout the entire process cycle.

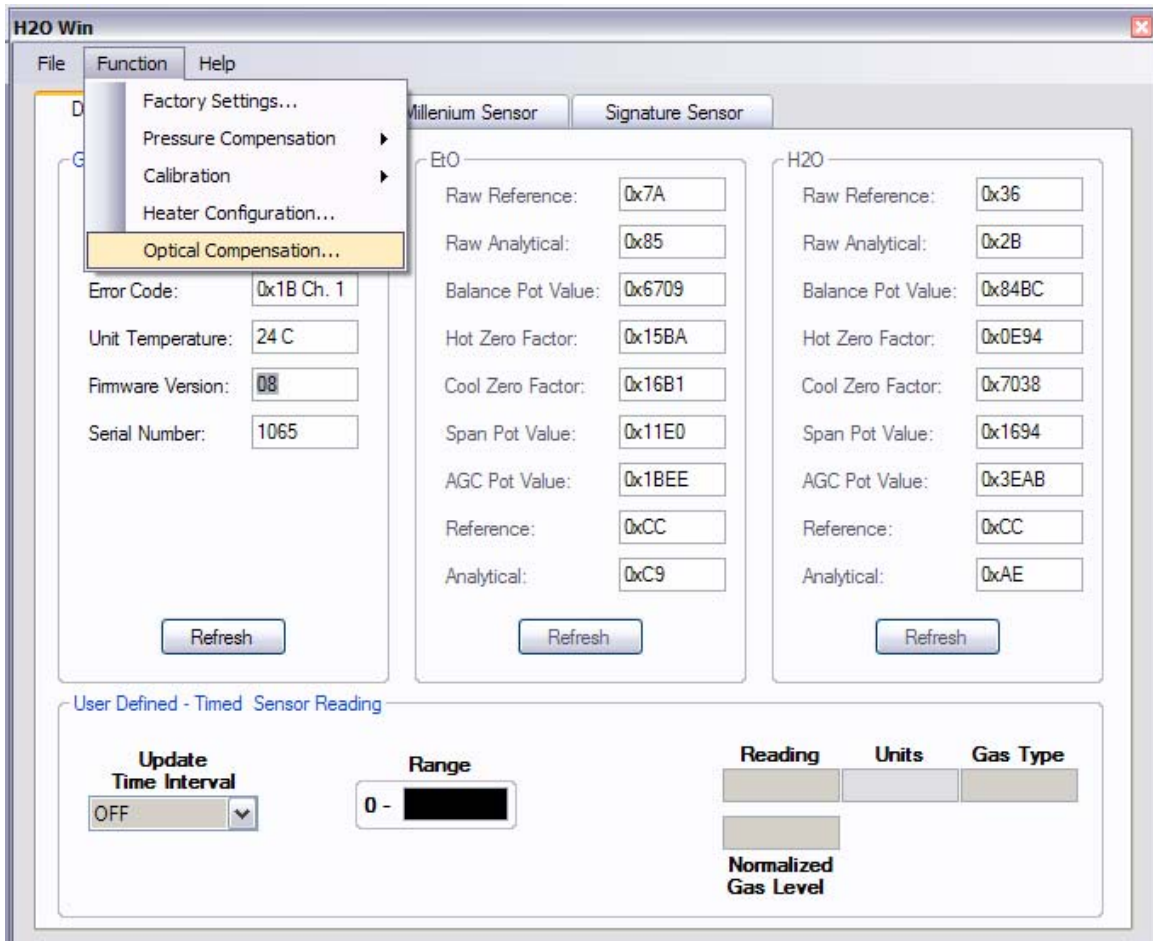
Insulating the SEC Signature DIR is recommended.

SEC H2O Win Software for SEC Signature DIR EtO/H2O Monitor



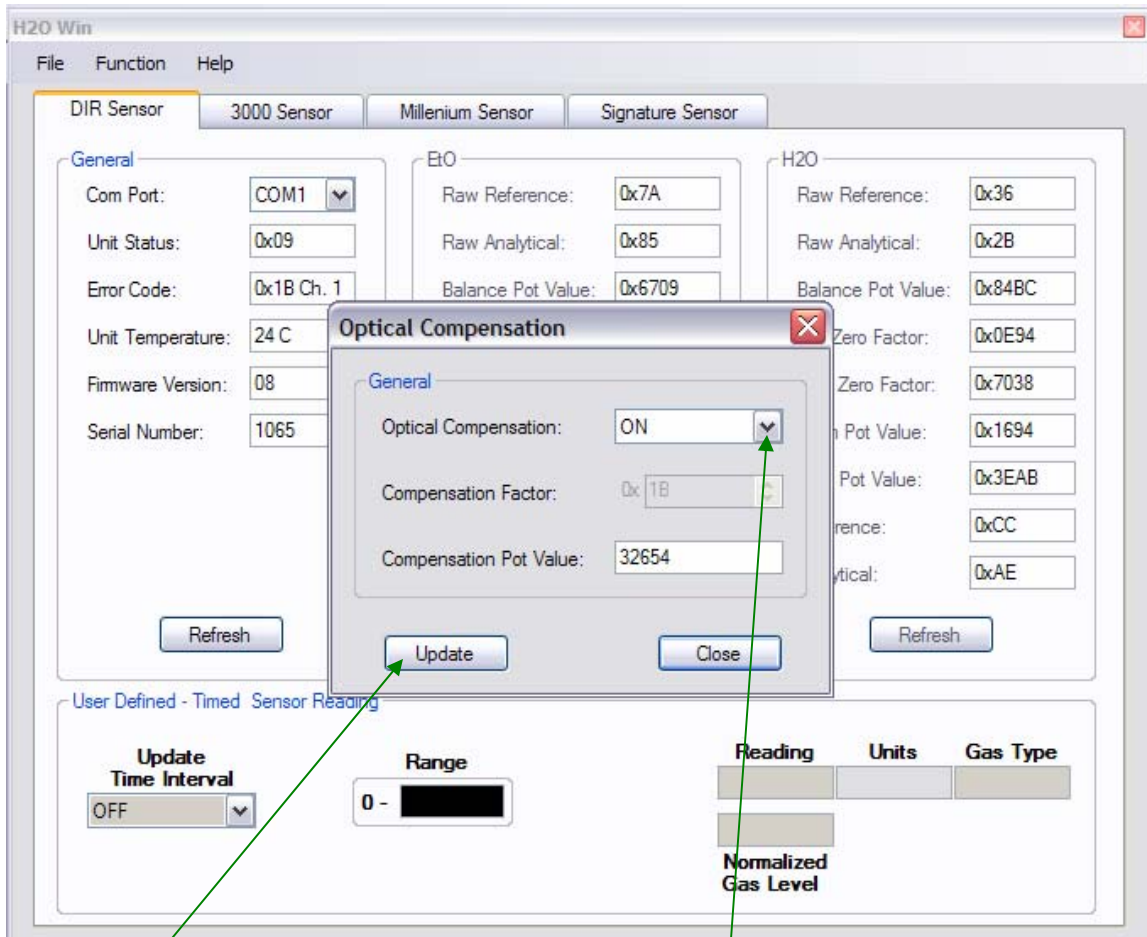
SEC recommends the SEC Signature be operated in the constant power mode. The SEC Signature DIR heat can be raised by increasing the Power Level number and lowered by decreasing the Power Level number. The Power Level number scale is 0-10. Once the number is changed, select Update to load the new number into the SEC Signature DIR.

SEC H2O Win Software for SEC Signature DIR EtO/H2O Monitor

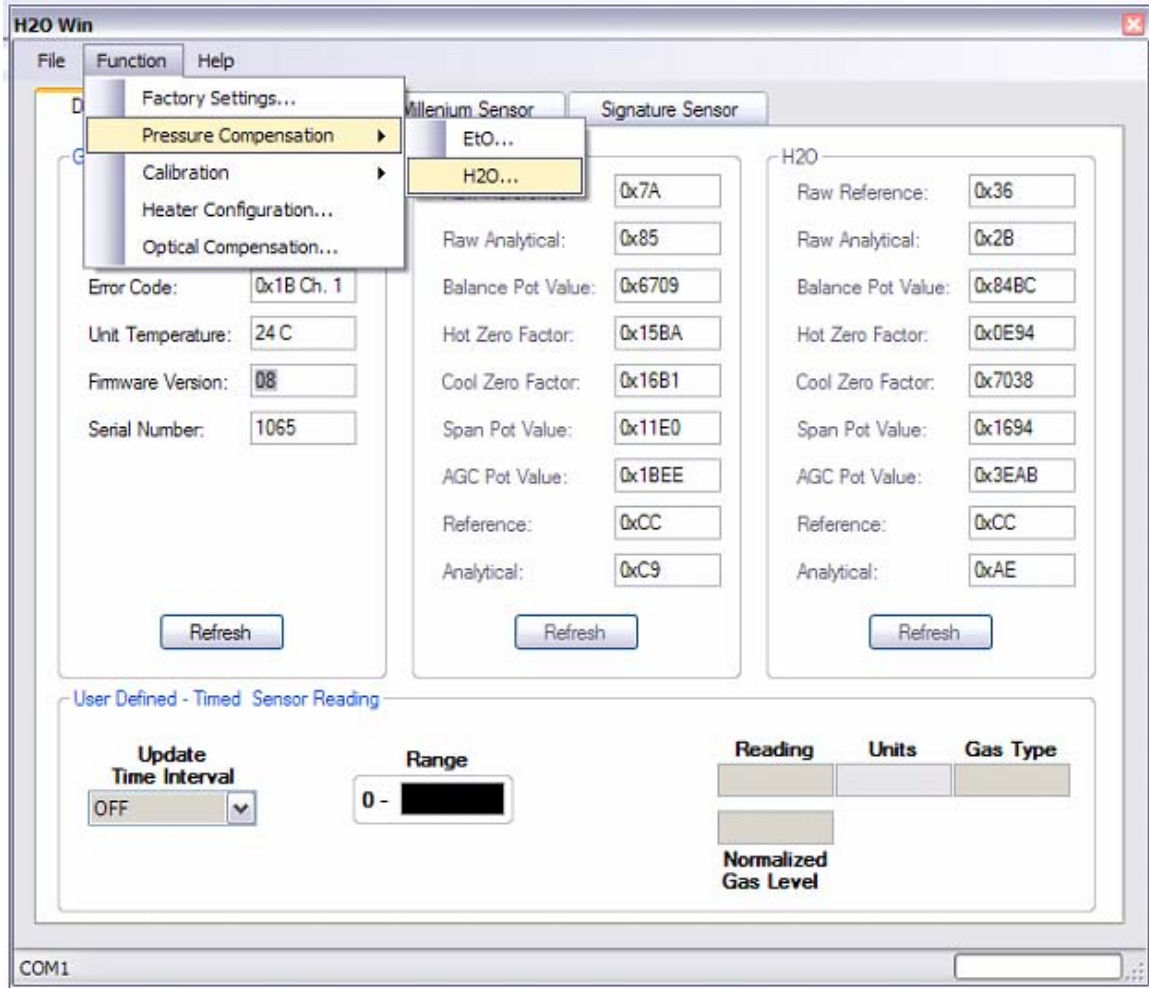


Optical Compensation is used to cancel any EtO response on the H2O channel.

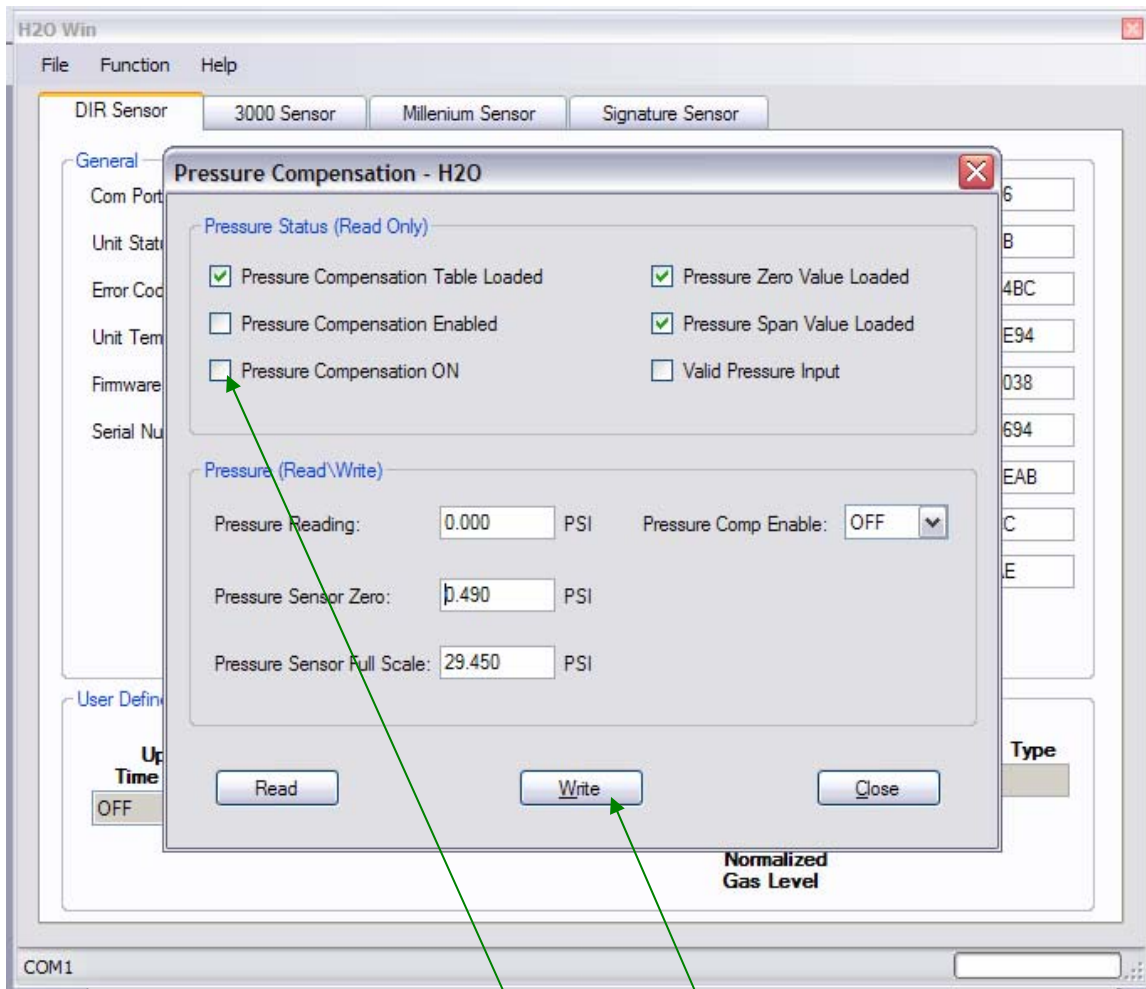
SEC H2O Win Software for SEC Signature DIR EtO/H2O Monitor



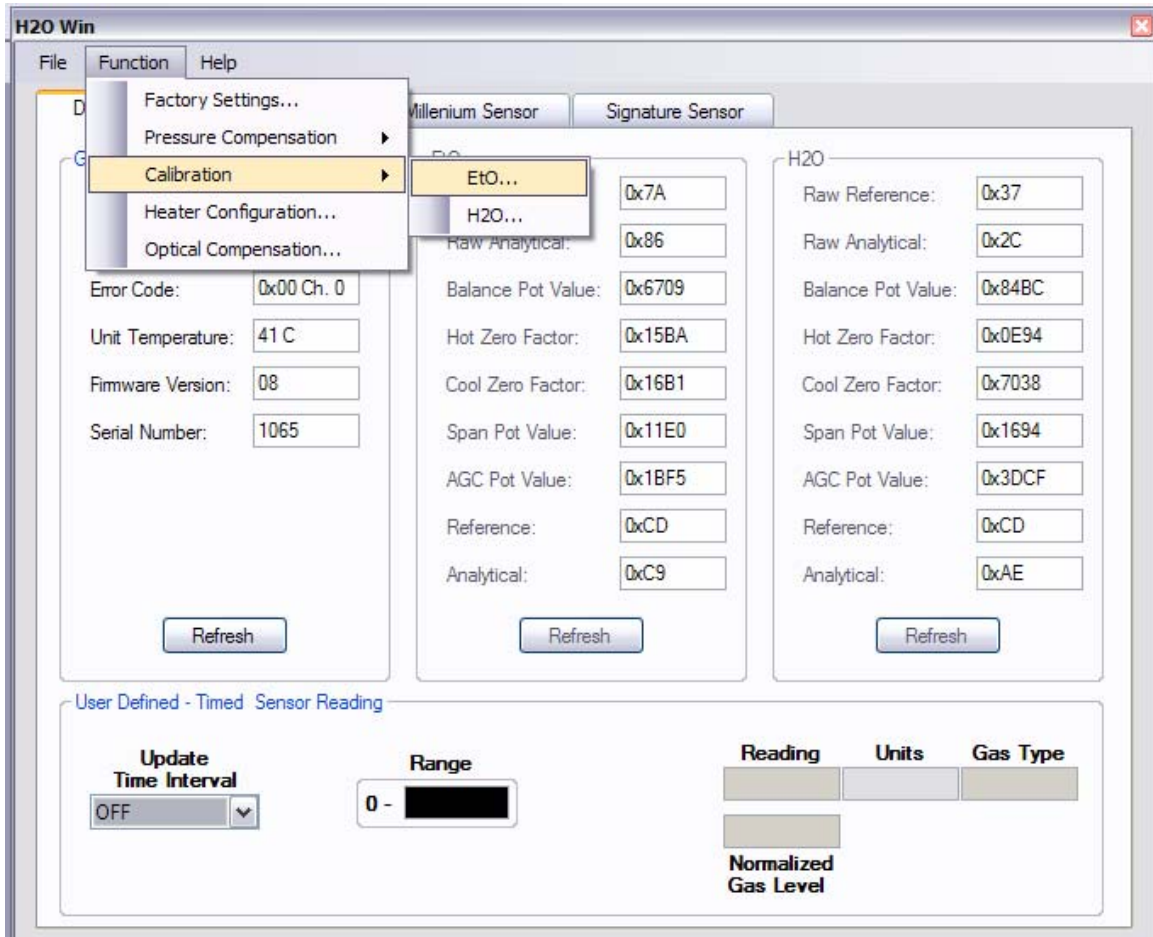
The operator can turn the Optical Compensation ON or OFF. If a change is made, select Update to send the information to the SEC Signature DIR.



Pressure Compensation is used to cancel pressure effects on the H2O channel. If Pressure Compensation is disabled the SEC Signature DIR assumes all pressure rise in the chamber is due to water vapor. When other vapors such as nitrogen or EtO are injected into the chamber, there will be an effect on the H2O molecule absorption characteristics. If accurate H2O readings are recorded / required throughout the entire cycle, SEC recommends adding an absolute pressure transmitter to the SEC Signature DIR circuit and enabling the pressure compensation feature. Details can be found in the SEC Signature DIR Instruction Manual.

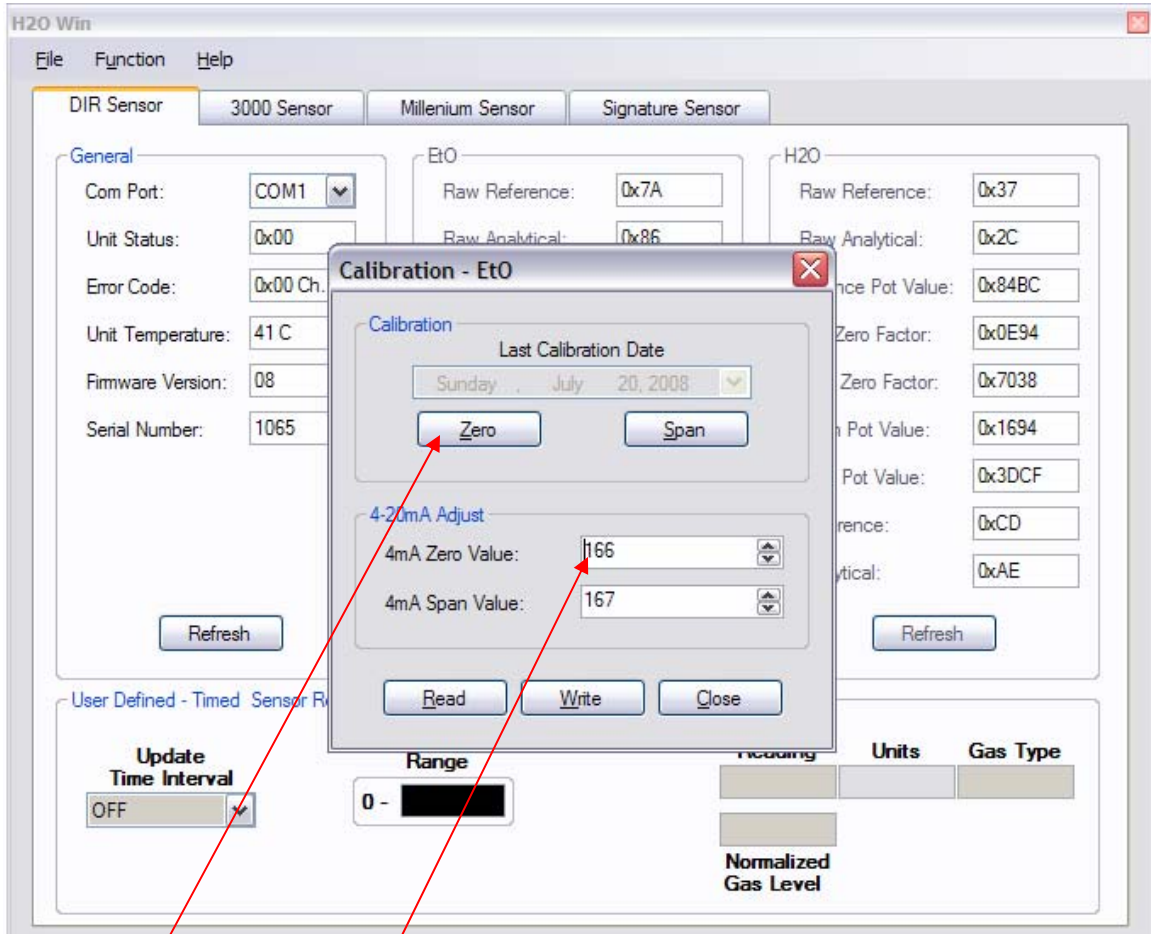


The page allows the operator to configure the pressure compensation features. The SEC Signature DIR only knows PSIA. If an absolute pressure transmitter with another measurement scale is used (inHg, bar, etc), the units must be converted to PSIA and input into the SEC Signature DIR as PSIA. To turn the Pressure Compensation ON click the box and Write it to the SEC Signature DIR.



EtO channel Calibration

Note: If calibrating H2O channel with CO2 (20.5% volume), DISABLE both the Optical and Pressure Compensation before entering the calibration procedure. If calibrating the H2O channel with water vapor ENABLE both the Optical and Pressure Compensation if being used.



This box allows the operator to zero, span, adjust the 4mA zero current output value and adjust the 4mA (actually 12mA) span current output value.

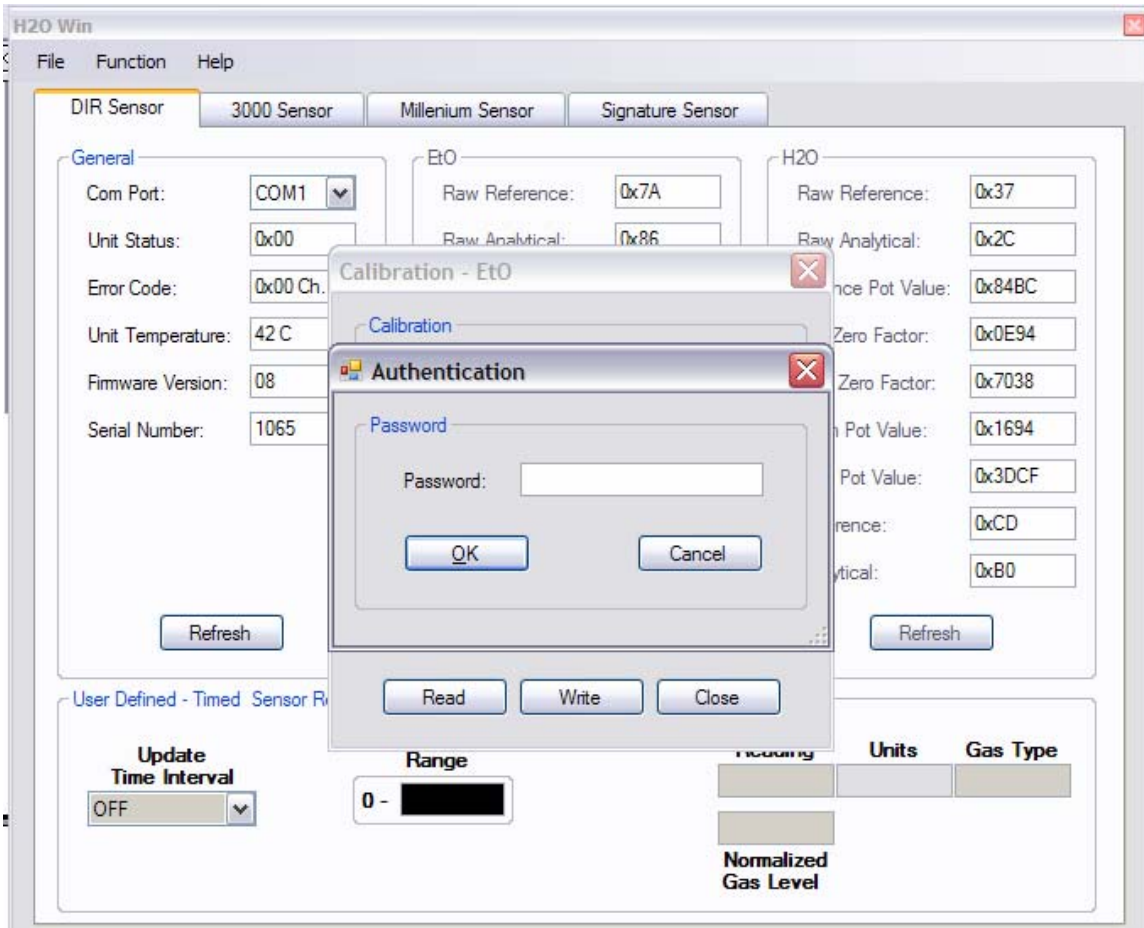
Zero

Apply 99.9% volume nitrogen to the SEC Signature DIR for approximately 5 minutes at 2 liter per minute flow rate. Select Zero button and the Authentication box (example on next page) will appear requiring the operator to enter the password. Enter password select OK and the EtO channel is zeroed. The H2O channel can be zeroed at this time also. The operator will have to close out of the Calibration EtO box and enter the Calibration H2O menu.

4mA Zero Value

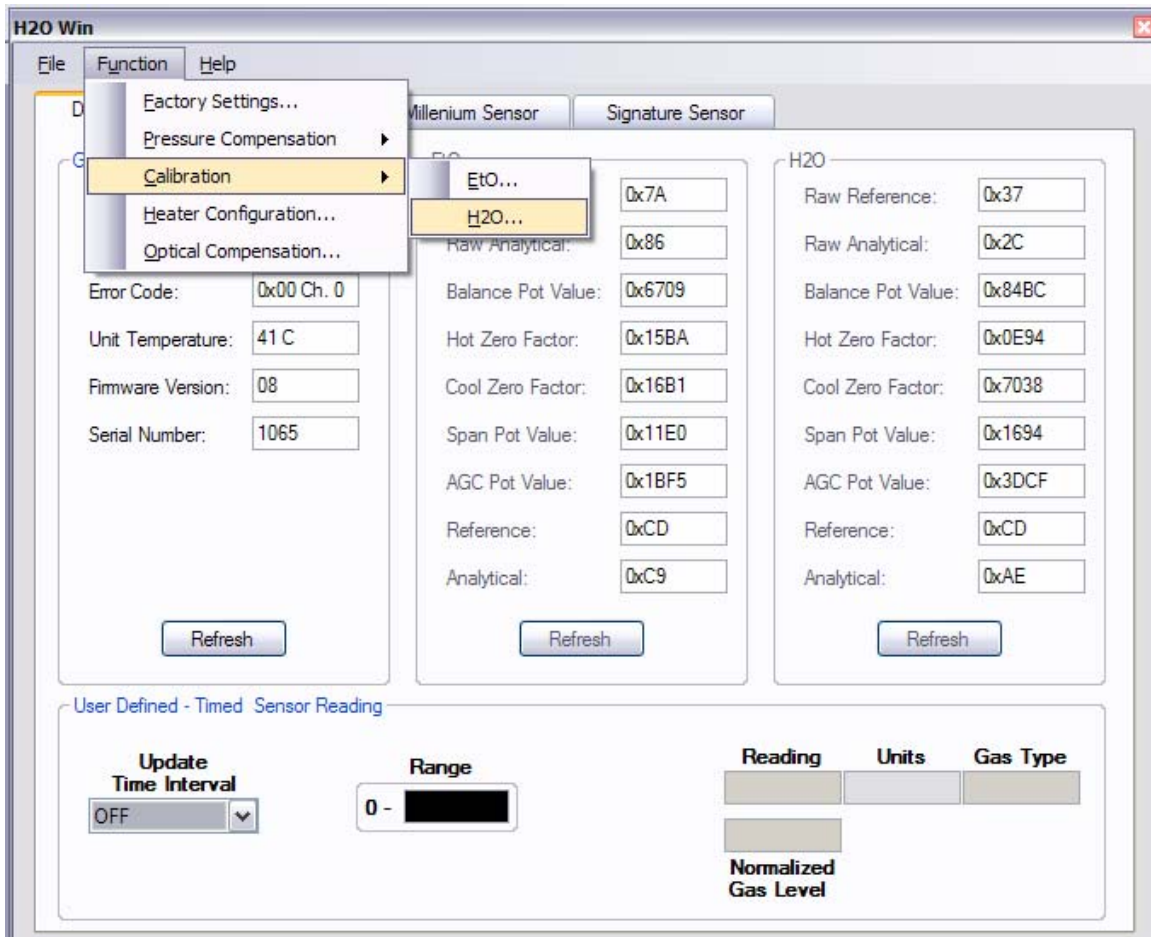
Once the SEC Signature is zeroed, the operator can tweak the current output to read 4 mA \pm 0.03 mA by changing the number up or down. Increasing the number raises the current output lowering the number decreases output current. One step change is approximately 0.03 mA. After the number is changed, the operator must select the Write button to load the new value into the SEC Signature DIR.

SEC H2O Win Software for SEC Signature DIR EtO/H2O Monitor



Password:

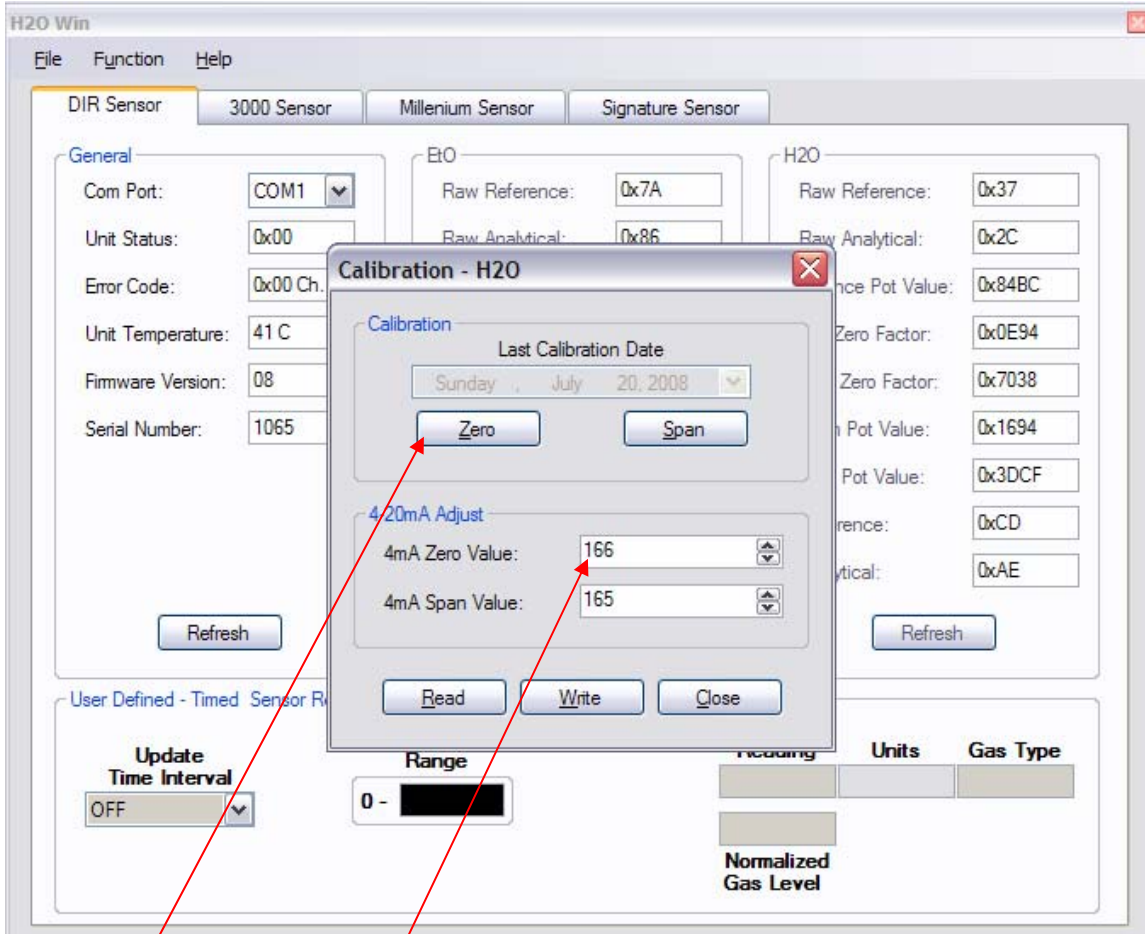
sec



H2O channel Calibration

Note: If calibrating H2O channel with CO2 (20.5% volume), DISABLE both the Optical and Pressure Compensation before entering the calibration procedure. If calibrating the H2O channel with water vapor ENABLE both the Optical and Pressure Compensation if being used.

SEC H2O Win Software for SEC Signature DIR EtO/H2O Monitor



This box allows the operator to zero, span, adjust the 4mA zero current output value and adjust the 4mA (actually 8mA) span current output value.

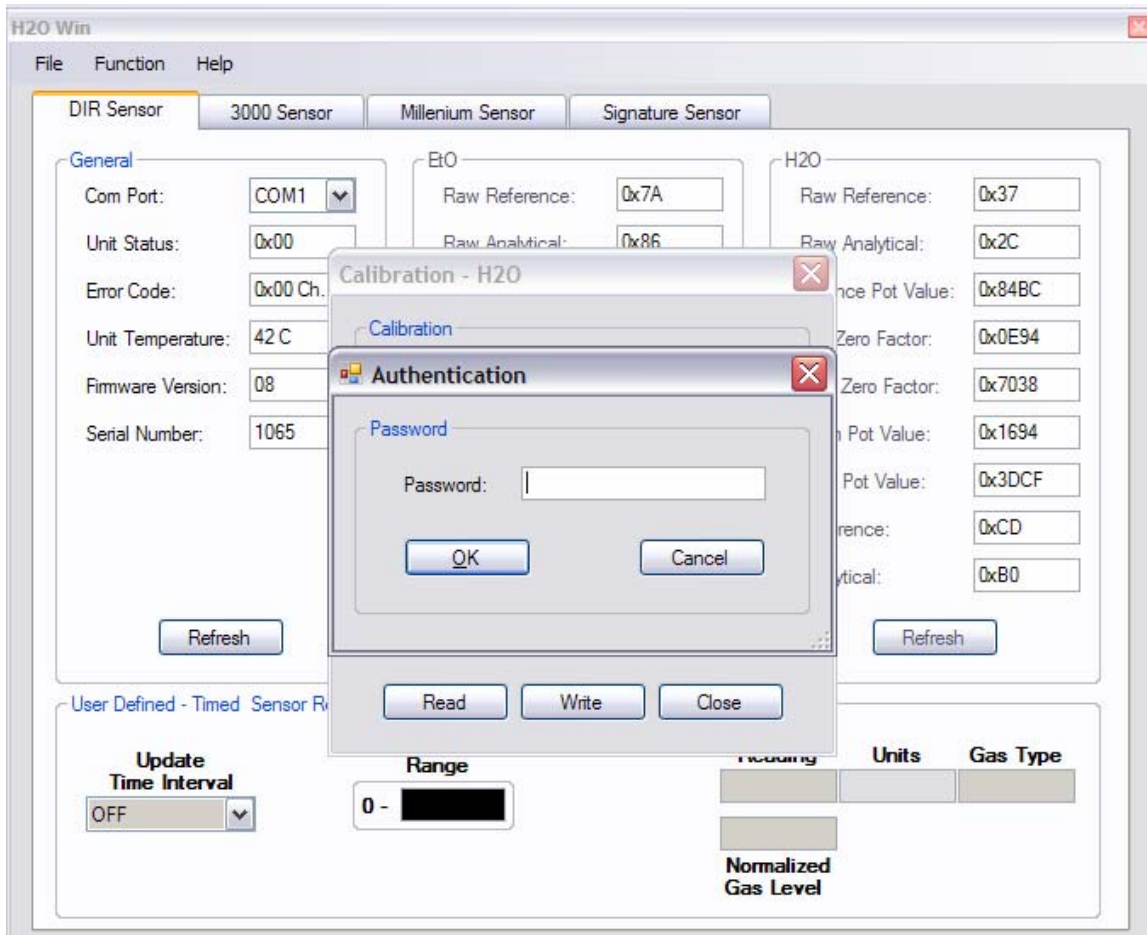
Zero

Apply 99.9% volume nitrogen to the SEC Signature DIR for approximately 5 minutes at 2 liter per minute flow rate. Select Zero button and the Authentication box (example on next page) will appear requiring the operator to enter the password. Enter password select OK and the H2O channel is zeroed. The EtO channel can be zeroed at this time if it has not been done. The operator will have to close out of the Calibration H2O box and enter the Calibration EtO menu.

4mA Zero Value

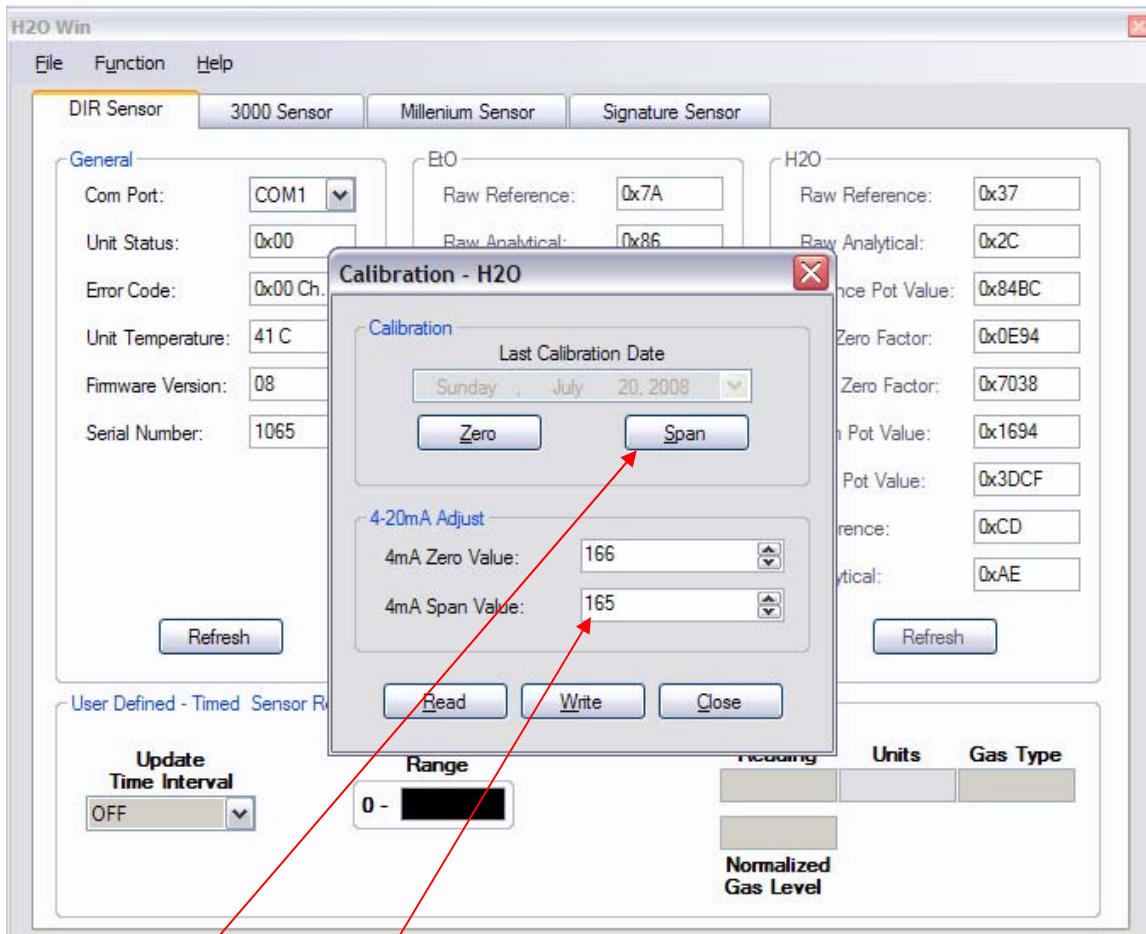
Once the SEC Signature is zeroed, the operator can tweak the current output to read 4 mA \pm 0.03 mA by changing the number up or down. Increasing the number raises the current output lowering the number decreases the output current. One step change is approximately 0.03 mA. After the number is changed, the operator must select the Write button to load the new value into the SEC Signature DIR.

SEC H2O Win Software for SEC Signature DIR EtO/H2O Monitor



Password:

sec



This box allows the operator to zero, span, adjust the 4mA zero current output value and adjust the 4mA (actually 8mA) span current output value.

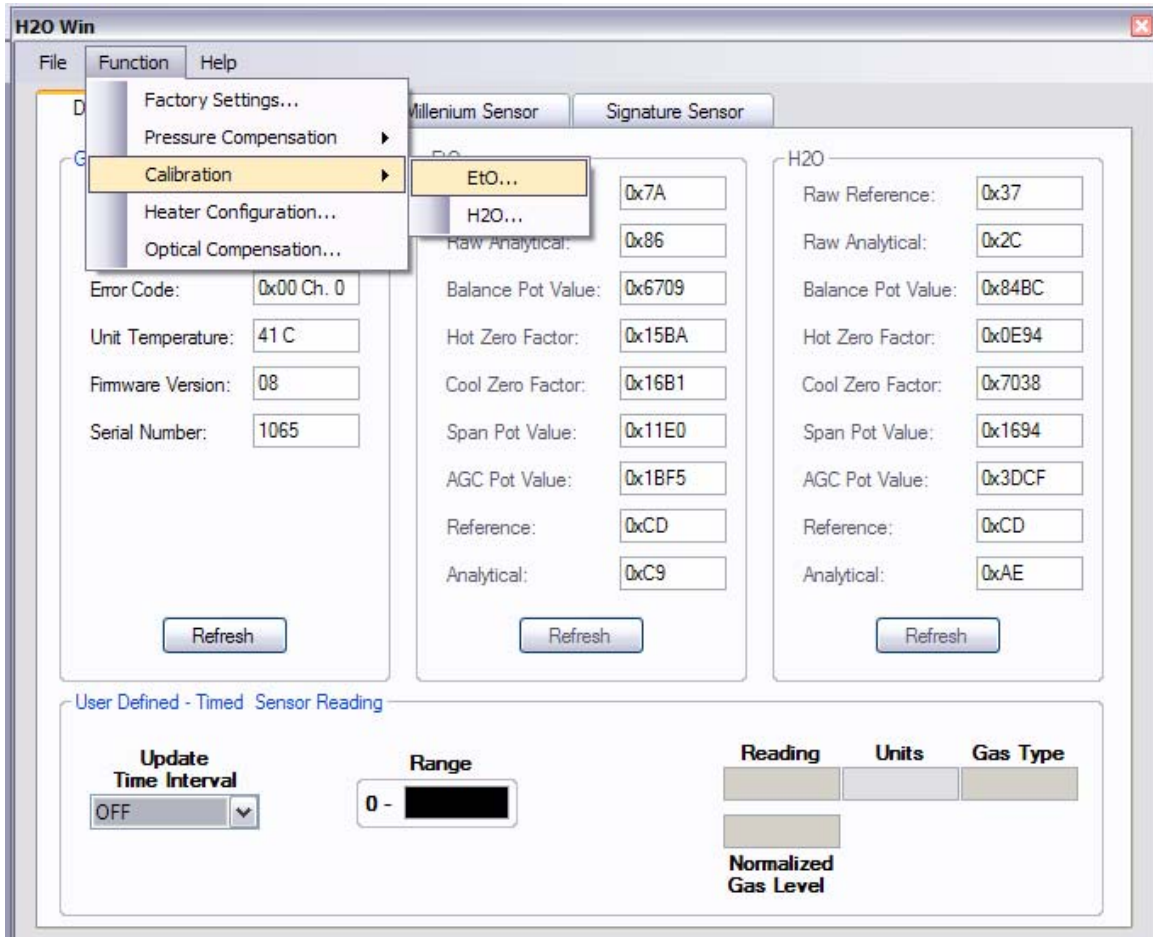
Span

Apply 20.5% volume CO₂ to the SEC Signature DIR for approximately 5 minutes at 2 liter per minute flow rate. Allow the SEC Signature DIR to stabilize. Select Span button and the Authentication box will appear requiring the operator to enter the password. Enter password select OK and the H₂O channel is spanned.

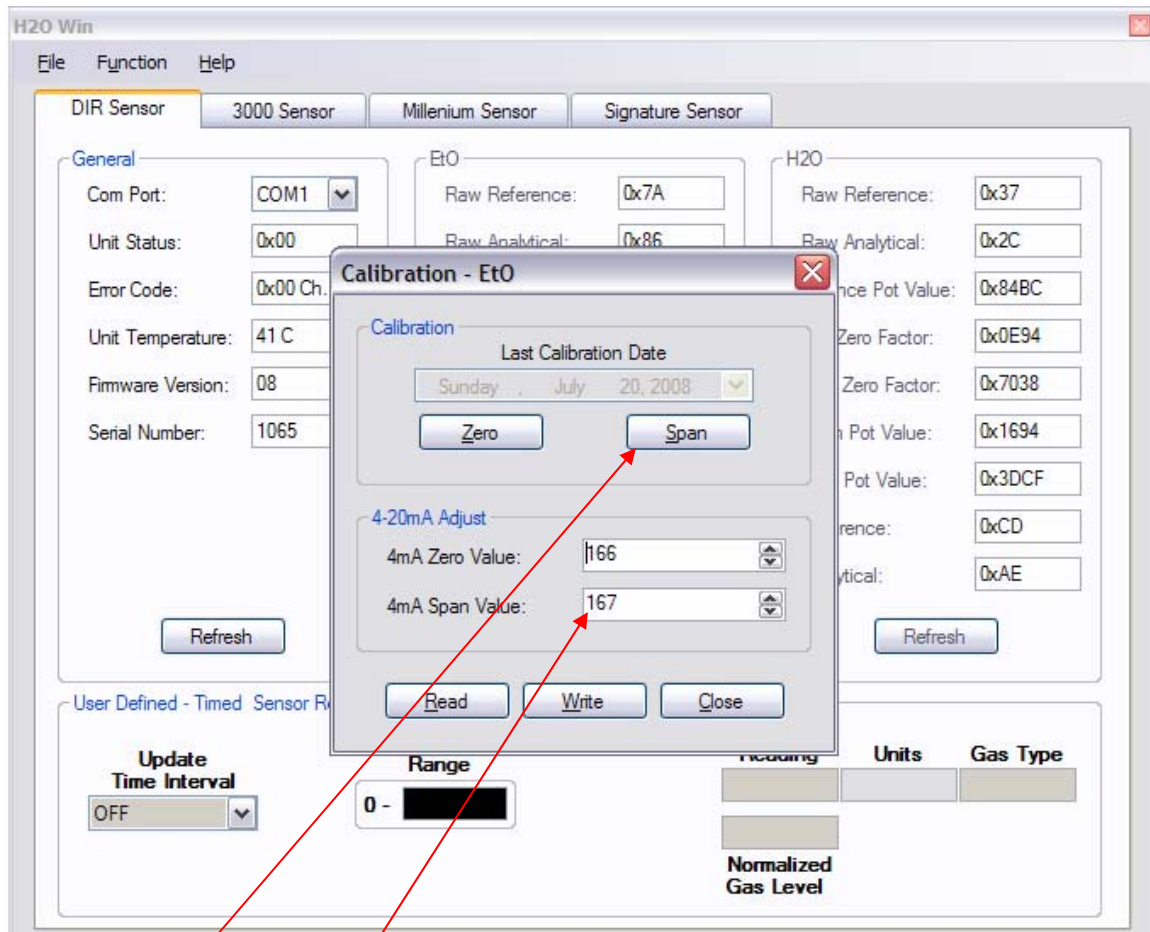
4mA Span Value

Once the SEC Signature is spanned, the operator can tweak the current output to read 8 mA ± 0.03 mA by changing the number up or down. Increasing the number raises the current output lowering the number decreases the output current. One step change is approximately 0.03 mA. After the number is changed, the operator must select the Write button to load the new value into the SEC Signature DIR.

SEC H2O Win Software for SEC Signature DIR EtO/H2O Monitor



The final step is to span the EtO channel.



This box allows the operator to zero, span, adjust the 4mA zero current output value and adjust the 4mA (actually 12mA) span current output value.

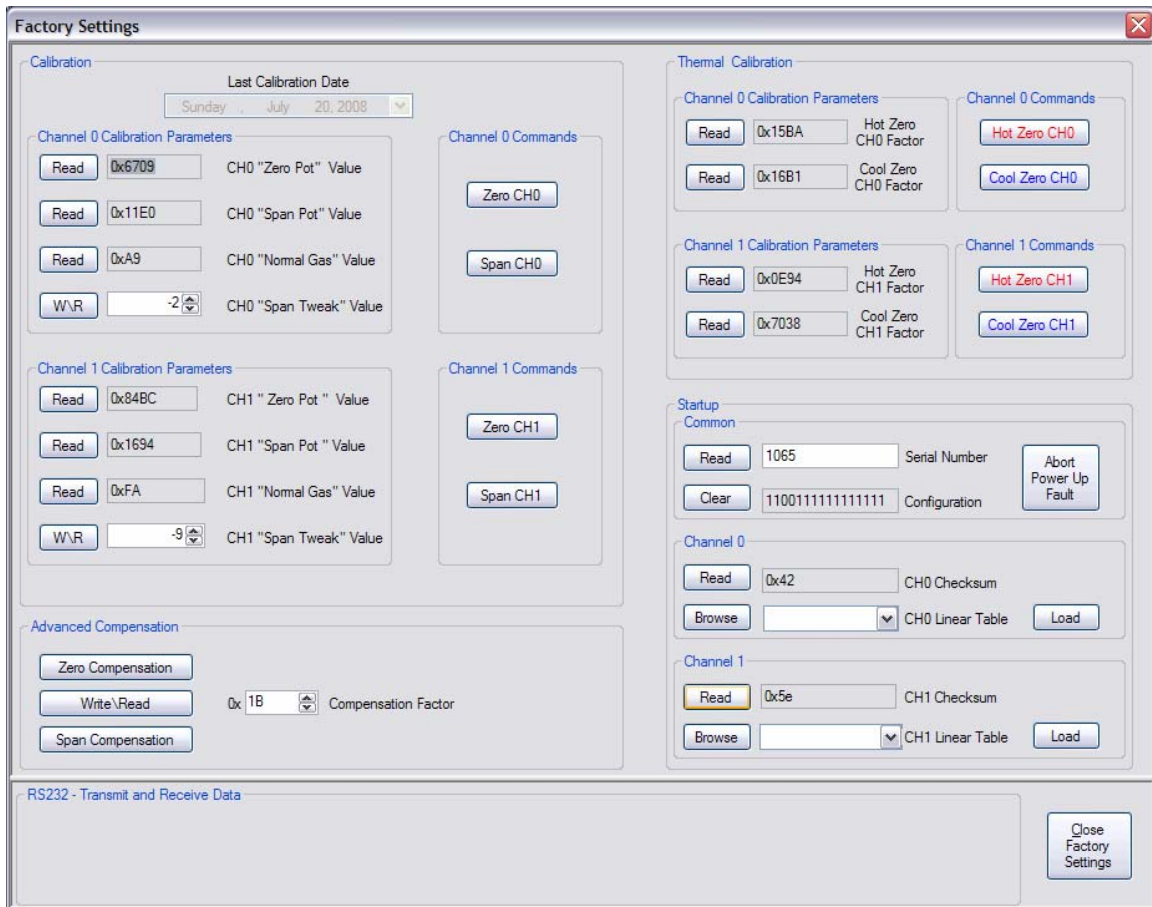
Span

Charge the chamber with EtO to 50% full scale. Allow the SEC Signature DIR to stabilize (approximately 15 minutes into EtO dwell. Select Span button and the Authentication box will appear requiring the operator to enter the password. Enter password select OK and the EtO channel is spanned.

4mA Span Value

Once the SEC Signature is spanned, the operator can tweak the current output to read 12 mA \pm 0.03 mA by changing the number up or down. Increasing the number raises the current output lowering the number decreases the output current. One step change is approximately 0.03 mA. After the number is changed, the operator must select the Write button to load the new value into the SEC Signature DIR.

SEC H2O Win Software for SEC Signature DIR EtO/H2O Monitor



This page can only be reached with a special password. Only factory trained operators have access to this page.