Sensor Calibration Software

User Manual

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1 Introduction

The Analox Device Calibration Software Tool is a PC based application which allows a USB capable Analox Sensor to be calibrated for use in its intended environment.

The software allows for both low and high point calibration and provides a real time display of the devices current activity and measurements.

NOTE: THIS MANUAL ONLY COVERS INSTALLATION ON WINDOWS 8 & 10

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2 Requirements

2.1 Operating system

Windows 8 or above

2.2 Software

- The Microsoft .NET Framework 2.0 is required to run the Calibration Software. This should already be installed but is also available as a download from Microsoft if required.

NOTE: **WINDOWS 8 & 10 DEVICES WILL AUTOMATICALLY INSTALL THE APPROPRIATE FTDI DRIVER REQUIRED FOR THE USB SERIAL CONVERTER.**

2.3 Hardware

- USB cable (Type A Male to Type B Male).

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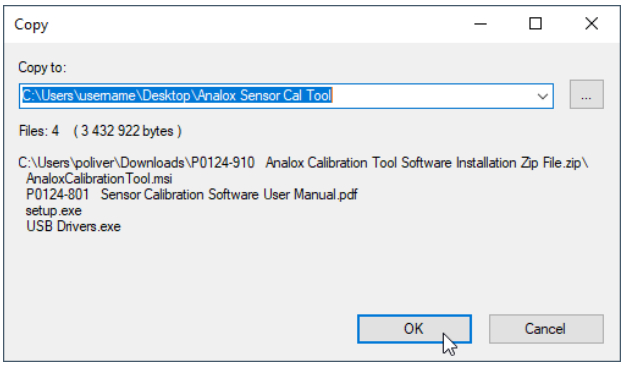
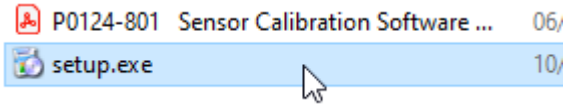
3 Installation details

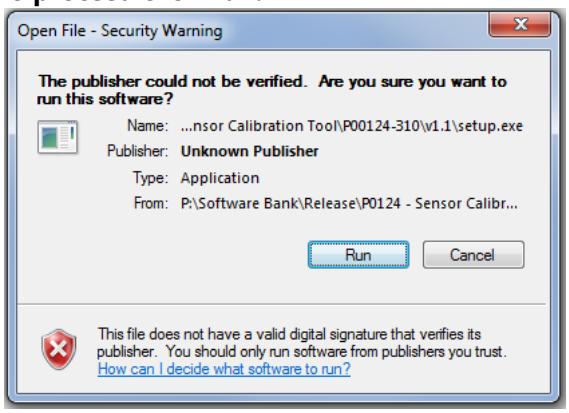
1] Download the software from:
https://drive.google.com/file/d/0B_7yOP8oV_zLTVBidkFUeU5aRWc/view

2] Create an appropriately named folder on your desktop and extract the downloaded files into it.

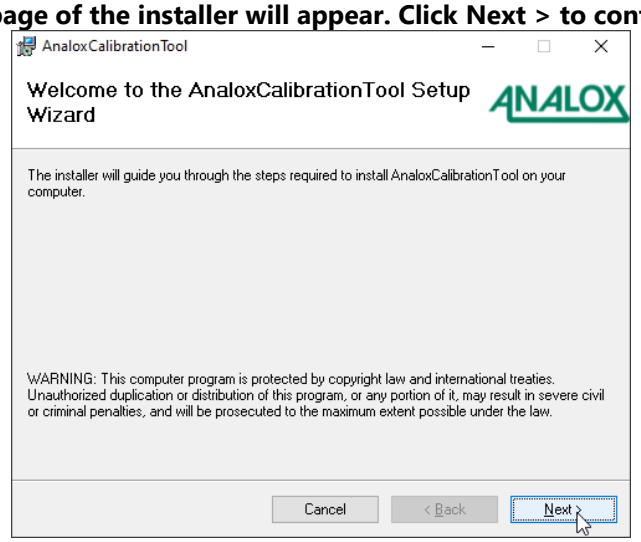


3] Run setup, this will check for the components required by the Calibration Software and install the software. A warning box may appear as shown below. Seek advice from the System Administrator before continuing. To proceed click Run.





4] The welcome page of the installer will appear. Click Next > to continue.



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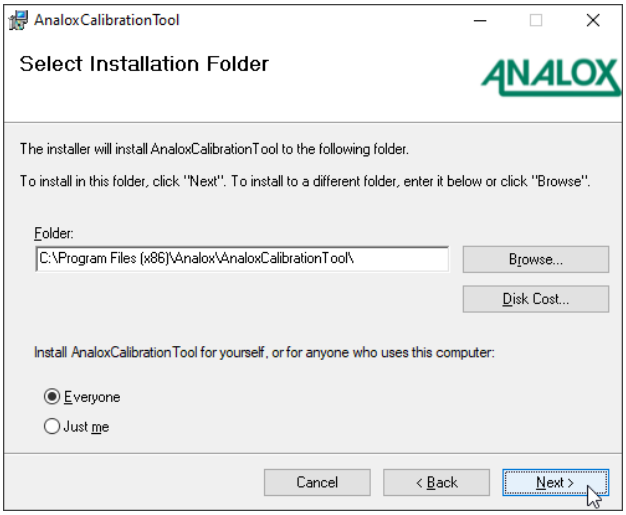
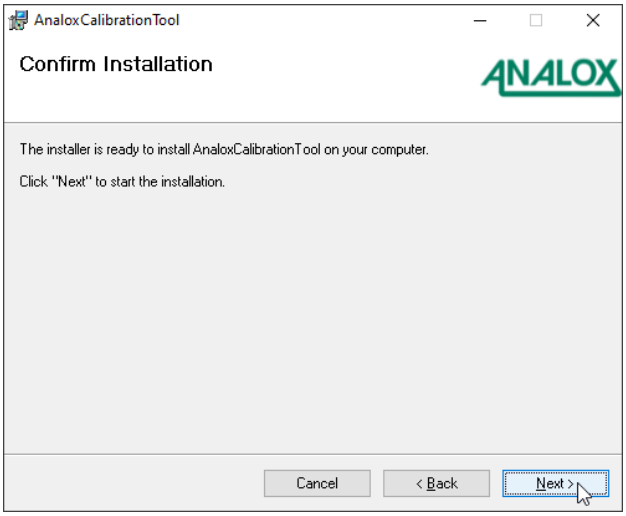
5] Ensure the Folder box contains the directory you wish the software tool to be installed in. Use the Browse button if you wish to change the target folder.

6] Select the appropriate level of access for the tool – Select Everyone if the software will be accessible by all users of the computer. Select Just me if the software tool will be useable only by the user account currently performing the installation.

7] Click Next > to continue.



8] Click Next > to confirm the installation.



9] A warning box may appear during the installation asking for administrator login details. Seek advice from the System Administrator before continuing. To proceed with the installation click Run once administration login details have been entered.

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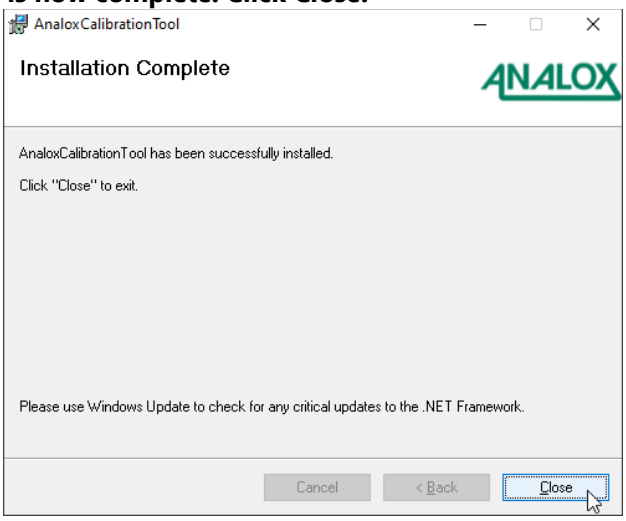
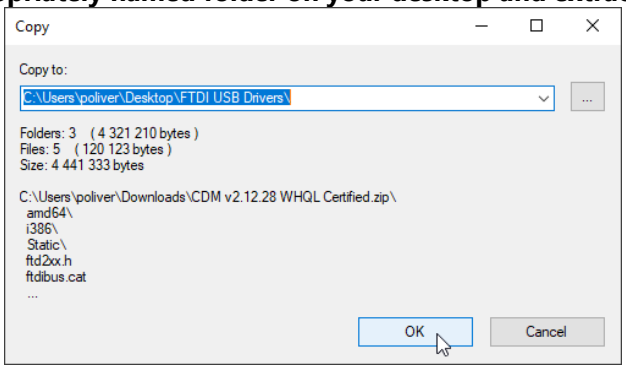
10] The installation is now complete. Click Close.



11] Create an appropriately named folder on your desktop and extract the drivers into it.



3.1 Windows 8 & 10 driver installation:

1] The appropriate driver will automatically be installed for the USB Serial Converter, so no other installation is required.

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4 Operating instructions

1] From the desktop navigate to Start > All Programs > Analox > Analox Calibration Tool > Analox Calibration Tool.

2] The window below will appear.

3] Insert the USB cable into a USB port on the PC. Ensure that the cable is also connected to an Analox USB sensor.

4] Click Refresh. This refreshes the list of devices in the drop down box.

5] Click the small arrow of the drop down box. The newly connected sensor will appear in this list.

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6] Select the device from the list and click Connect.

7] The device will now connect and may perform a warmup procedure as shown below.

NOTE: A SENSOR ENTERS WARMUP MODE ON POWER UP. WARMUP TYPICALLY TAKES 30-60 SECONDS.

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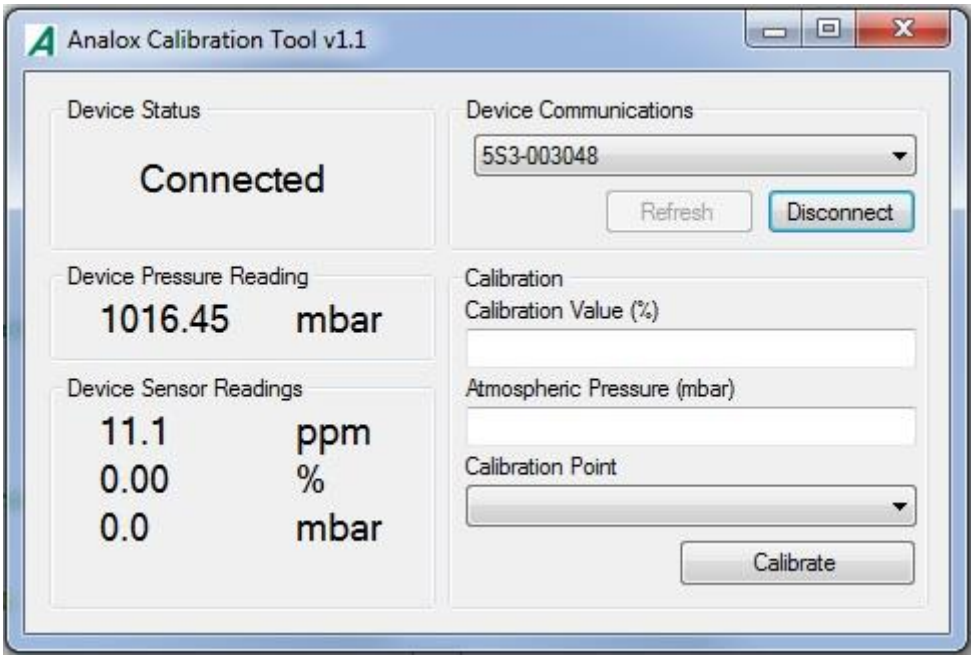
8] After the device has completed its warmup procedure, the device status will change to Connected and the Pressure Reading/Sensor Readings will begin to update.



9] The software displays the following measurements from the sensor

Device Pressure Reading (mbar) – This is the atmospheric pressure as determined by the sensor, measured in mbar.

NOTE: NOT ALL SENSORS ARE FITTED WITH LOCAL PRESSURE GAUGES. IN THIS CASE THE READING WILL DISPLAY 1000MBAR AND WILL NOT CHANGE.

Device Sensor Readings (ppm, %, mbar) – These readings are the current gas values as determined by the sensor and conversions from the native units.

10] To perform a calibration, fill in the fields in the Calibration section of the window.

Calibration Value (%) – The certified bottle value which will be used for calibration.

NOTE: THIS FIELD REQUIRES A PERCENTAGE VALUE. ANY PPM MEASUREMENTS MUST BE CONVERTED INTO A PERCENTAGE BEFORE BEING ENTERED.

Atmospheric Pressure (mbar) – The pressure, in mbar, of the atmosphere in which the sensor currently resides.

Calibration Point – High or Low calibration point as required.

NOTE: FOR CO2 SENSOR LOW CALIBRATION, A 0% CO2 GAS AND CALIBRATION VALUE MUST BE USED.

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11] After entering these values into the fields and selecting a Calibration point, click Calibrate.

12] After a short time a notification window will appear informing of the successful calibration and the device will enter warmup again. Repeat the calibration again for the second Calibration Point.

13] In the event of an unsuccessful calibration the notification window will inform of the error code and the reason for the failed calibration. Common errors are detailed in section 5 Trouble Shooting.

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5 Troubleshooting

Issue	Solution
A connected sensor does not appear in the Device Communication drop down list.	Ensure the USB cable is properly attached to the PC and the sensor. Ensure the correct FTDI USB drivers are properly installed.
A Calibration Error message (listed) appears after attempting to calibrate a device:	
• Calibrations too close	The high and low calibration points are too close in value. Ensure that the calibration gas values chosen are sufficiently separated with respect to the range of the sensor
• Calibration correction too negative	The negative calibration correction required for the given gas value is too large for the current sensor reading. Ensure that the correct calibration value is entered, in the correct units and check that the correct calibration point has been selected.
• Calibration correction too positive	The positive calibration correction required for the given gas value is too large for the current sensor reading. Ensure that the correct calibration value is entered, in the correct units and check that the correct calibration point has been selected.
• Calibration value too small	The calibration value supplied is too small to correctly calibrate the sensor. Ensure that the correct calibration value is entered, in the correct units and check that the correct calibration point has been selected.
• Calibration value too large	The calibration value supplied is too large to correctly calibrate the sensor. Ensure that the correct calibration value is entered, in the correct units and check that the correct calibration point has been selected.

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