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Orion Navigator Pro 2.0 Measurement Software

User Manual

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Introduction

Thermo Scientific Orion Navigator Pro 2.0 Measurement Software for Orion Versa Star Pro Meters

This user manual provides setup and operating instructions for the Thermo Scientific™ Orion™ Navigator Pro™ computer software for use with the Thermo Scientific™ Orion™ Versa Star Pro™ meters to assist with digital data reporting.

Orion Navigator Pro 2.0 computer software and Orion Versa Star Pro meters are designed to offer a computer-driven measurement system for generating electronic measurements, calibration data and audit trails.

Orion Navigator Pro 2.0 software offers multi-level system access for an administrator and up to 100 users. The system administrator can customize each user's access level from full system access to basic data collection only. The Navigator Pro software controls all meter functions including meter settings, calibration, measurement, and reporting to help ensure data integrity and provide a complete audit trail.

Orion Navigator Pro 2.0 software is designed to create electronic data records and audit trails with password-protection, which can be used to assist with 21 CFR Part 11 requirements when paired with each laboratory's proper IT protocols, SOPs and training records.*

Updates to the Orion Navigator Pro 2.0 software include:

- Increased number of users from 10 to 100
- User-defined automatic logoff feature
- Added communication failure / disconnection log
- Optional company/lab name and logo on printout
- Optional administrator-only configurable data output (PDF, Word, Excel or CSV)
- Individual direct print of data log and calibration log

**It is the responsibility of each laboratory to validate the Navigator Pro computer software for its intended use, including all regulatory requirements and create protocols, procedures and trainings that address compliance requirements outside of the Navigator Pro functions.*

Getting Started

Orion Navigator Pro Computer Software

Thermo Scientific Orion Navigator Pro communication software is compatible with Thermo Scientific Orion Versa Star Pro meters.

This software allows the user to connect the meter and the computer. The user can access all the features and functionality of the meter and command the meter from your computer.

You can also transfer the calibration and measurement data from the meter to the computer, and allow data to be exported to preferred out format any of .pdf, .excel, .word and CVS formats. Transferred data can be easily printed from the computer.

Intended Use

Please read this software user manual thoroughly.



CAUTION: Any use outside of these instructions may cause permanent damage to the equipment.

Operating System Requirements

System Requirements

The computer operating system must be Windows 7, 8 or 10 for both 32-bit and 64-bit versions.

Table 1: Installation Requirement

System requirements	
Operating System	Microsoft® Windows® 10 (desktop OS) Microsoft Windows 8.1 Microsoft Windows 7
CPU Type	1 gigahertz (GHz) or faster 32-bit (x86) or 64-bit (x64) processor
Memory	For 32-bit: 2 GB (Min. 300 MB availability required for the targeted Application usage) For 64-bit: 2 GB (Min. 300 MB availability required for the targeted Application usage)
Display Resolution	1366 x 768 with True Color
Disk Space	Software Installation 100 MB
Communication Port	One available USB 2.0, USB 3.0 or RS232
.NET Framework	.NET Framework Version 4.5
Visual Reports	Adobe Reader® or equivalent PDF Reader
Additional Requirements	
Disk Space for application data	1 GB free hard disk Subject to change based on application data growth

Meter Software Requirements

1. The meter must be an Orion Versa Star Pro model with serial number V10000 or higher and software revision 10.0 or higher.
 - a. Verify the product name above the display is “Orion Versa Star Pro”.
 - b. Verify the serial number label on the back of the instrument shows “Orion Versa Star Pro”.
 - c. Verify the instrument serial number is V10000 or higher.
2. If the meter is the correct Orion Versa Star Pro model, but the meter software revision is not correct, see the instructions in the **Orion Versa Star Pro Meter Software Upgrade** section.
3. All legacy Versa Star meters with serial numbers of V09999 and below are not compatible with the Navigator Pro 2.0 software. Contact your local Technical Sales -Representative or our Technical Support Specialists for assistance.

Orion Versa Star Pro Meter Software Upgrade

Installing Versa Star Pro Software

Versa Star Pro meters must be at software revision 10.0 or higher to use the Navigator Pro software.

Note: Back up any stored data in the meter before upgrading the software.

1. Download the latest software file for Versa Star Pro meters at www.thermofisher.com/orionsoftware and unzip/extract the software file to the computer’s desktop.
2. Disconnect the power adapter from the meter.
3. Connect the USB cable (included with meter) to the Mini B USB input on the meter and USB input on the computer.
4. Press and hold the F1 key on the meter keypad while connecting the power adapter to the meter.
5. After about five seconds, a Removable Disk window (i.e. E:) will open on the computer. Release the F1 key.
 - a. Note that the meter display will not turn ON.
 - b. For Windows 7 users, a removable disk window will not open automatically. Go to the start menu, select

My Computer, locate the removable disk and double click to open.

6. Delete the file in the removable disk window.
7. Transfer the new software file to the removable disk window and wait for the file to transfer completely.
8. Disconnect the power adapter and USB cable from the meter.
9. Connect the power adapter to the meter.
10. Wait for the meter to load the updated software. Ensure uninterrupted power throughout the update process. If needed, the meter will automatically update the module software.

Orion Navigator Pro 2.0 Computer Software Installation

Prerequisites

Versa Star Pro meters must have a serial number V10000 or higher and software revision 10.0 or higher to use the Navigator Pro software.

Installing Orion Navigator Pro Computer Software

Download the Orion Navigator Pro computer software from the included CD or USB Drive.

1. Double click the Navigator Pro.msi file. This will open the Welcome page of the installer.
2. Click the **Next** button.
3. Select the location of the installation folder and then Click the **Next** button.
4. Click the **Next** button to start the installation.
5. Wait while the software is being installed. When the message box confirms that the software has been successfully installed, Click the **Close** button.

The Versa Star Pro Navigator icon should now be available on the desktop. Double click the Versa Star Pro Navigator icon to launch the software program.



Navigator Pro software/Meter Operation

1. The Navigator Pro software computer software is operated entirely with a keyboard and mouse connected to a computer.
2. The computer software will detect a connected meter and USB connection type automatically.

Note: If you are using the RS232 port to connect meter and Navigator Pro software, make sure baud rate settings are same in meter and Navigator Pro software.

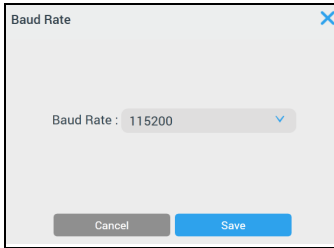


Figure 1. Baud Rate Setting

Note: When using a USB or RS232 connection, make sure the meter is connected correctly. This can be confirmed by checking the meter display symbol (USB or RS232).

Note: If the Navigator Pro computer software launches without a meter connected, the computer software will indicate that no meter is detected. Refer to **Figure 5**.

3. Once a meter is detected by the computer software, all settings, data and information stored on that meter will be automatically displayed on the Navigator Pro software.

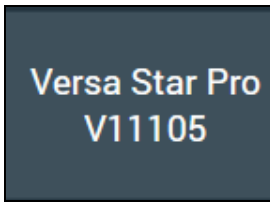


Figure 2. Meter Detection

4. The Navigator Pro software overwrites the read type with Auto-Read for all channels. The user with permissions as designated in system access, only change the read type for all channels from the Navigator Pro software. Refer to **Figure 16**.
5. The Navigator Pro software automatically detect and display the active channels. Refer to **Figure 14**.
6. The Navigator Pro software automatically detect and display the correct measurement module being used per channel.

7. The Navigator Pro software is able to display the appropriate parameters.
8. The user with permissions as designated in system access will be able to create, edit, select, copy or delete any method for any module for a meter.

Any change the user makes from the Navigator Pro software will simultaneously change on the meter. This will ensure the meter and Navigator Pro software setup parameters are the same throughout operation.

Connecting Navigator Pro Software and Versa Star Pro Meter

Before connection, make sure that USB or RS232 icon is displayed on the **meter screen**. Confirm the mode of interface (RS232 or USB) with screen icon. If not, change the communication mode to USB or RS232 in instrument setting under main setup to match with interface mode.

Double click on the Orion Navigator Pro application icon. When the meter is connected, the screen will display its serial number.

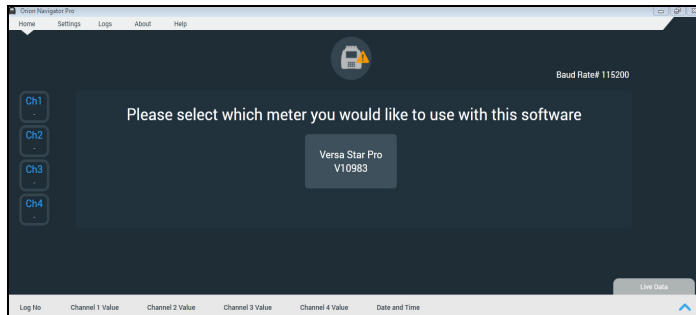


Figure 3. Meter connection screen

Click on the meter name with serial number to login. Refer to **Figure 2**.

Note: Please wait while retrieving data from device. Navigator Pro software can detect more than 1 meter simultaneously.

Meter Connection

This screen shows the list of Versa Star Pro meter's connected to the system.

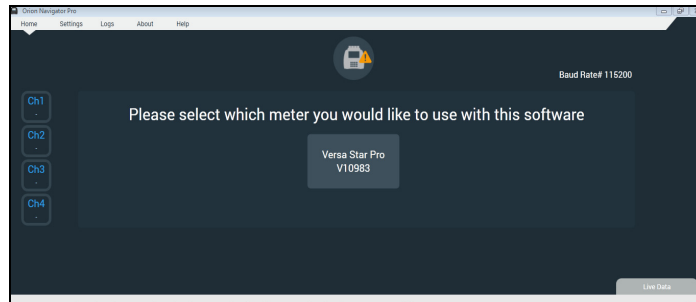


Figure 4. Meter Connection

If meter is not connected to the computer, it shows the error message.

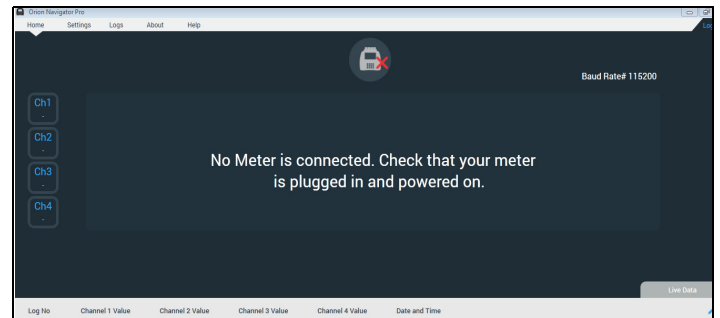


Figure 5. Meter no connection screen

Note: If the application software shows meter with a “X” mark, Check the following to confirm the meter connectivity.

- Make sure the selection on the meter for communication is matched with the PC connection (RS232 or USB).
- If the selected mode is RS232, make sure meter baud rate and Navigator Pro software baud rate setting are matched. Refer to **Figure 1**.

User Account Creation

To create user accounts, Admin account have to be created, after software installation.

Create Admin User Account

If the selected device does not have a Primary user/Admin user, create an Admin user account. Click on **Create Admin Account**, you will be redirected to the create a new account on the user screen.

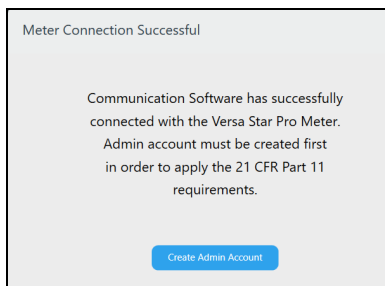


Figure 6. Create Admin Account screen

Fill the necessary fields as shown in **Figure 7**.

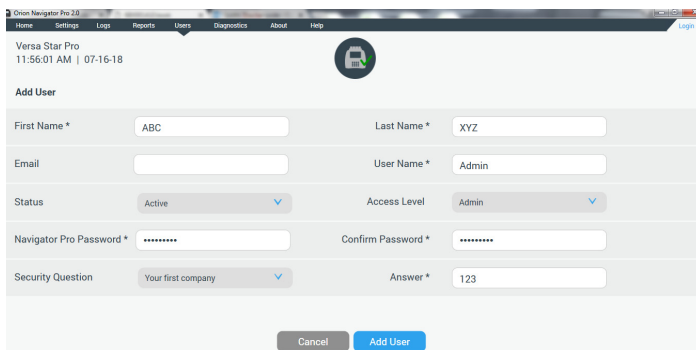


Figure 7. Fill Admin account screen

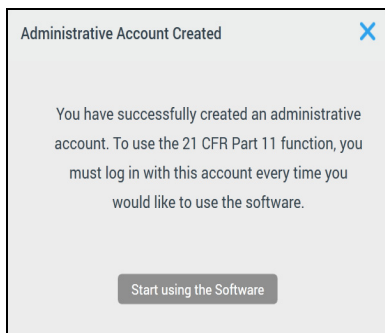


Figure 8. Administrative Account Created

Note: Only one Admin user for the application software. 100 user accounts can be created by Admin user. Only Admin user have the access permission to following Menu/Functions.

- Users
- Reports
- Settings
 - Application Settings

Note: The administrator's user ID is "admin".

New Application User

To add new user, login as Admin and click Users. Select Add New and fillup required information to complete the process, refer **Figure 9**.

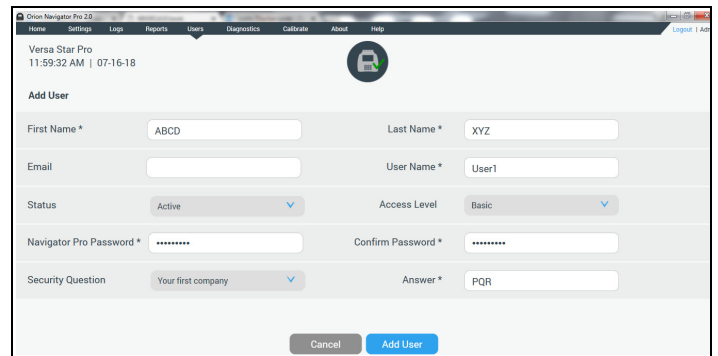


Figure 9. Add user screen

Existing Application User

User can log in using the User ID and password

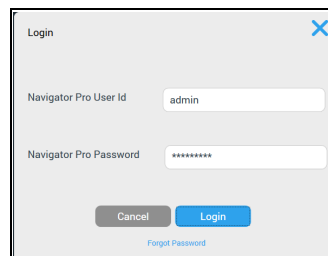


Figure 10. Existing Application user password screen

Note: Create users by Admin User.

- Click **Users** to view the list of users added to the system.

Table 2: Types of user roles

User role	Authority
Admin	Complete authority.
Admin (Full)	Complete authority but cannot delete users.
Advanced	Limited access.
Basic	Only for measurement.
Custom	Assign as per requirement.

Navigator Pro password should contain at least one uppercase alphabet, lowercase alphabet, number and a special character.

Note:

- If you forget the password you can retrieve the password using the security question or you have to get the help from the Admin user to retrieve the password.
- Account will automatically freeze after three wrong password entries. Admin user can reactivate the account.
- If no activity is recorded for more than 20 minutes, application software automatically log out from the user account.

Settings

Setting menu has channel setting which are connected to the device, instrument settings and methods.

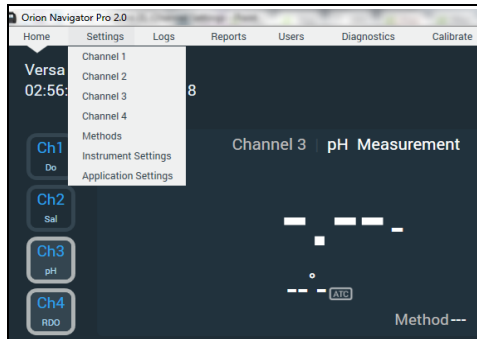


Figure 11. Channel Settings

Channel Settings

Click and select **channel**. Change the settings as required.

- Setup Option
- Temperature

Refer to **Figure 12**.

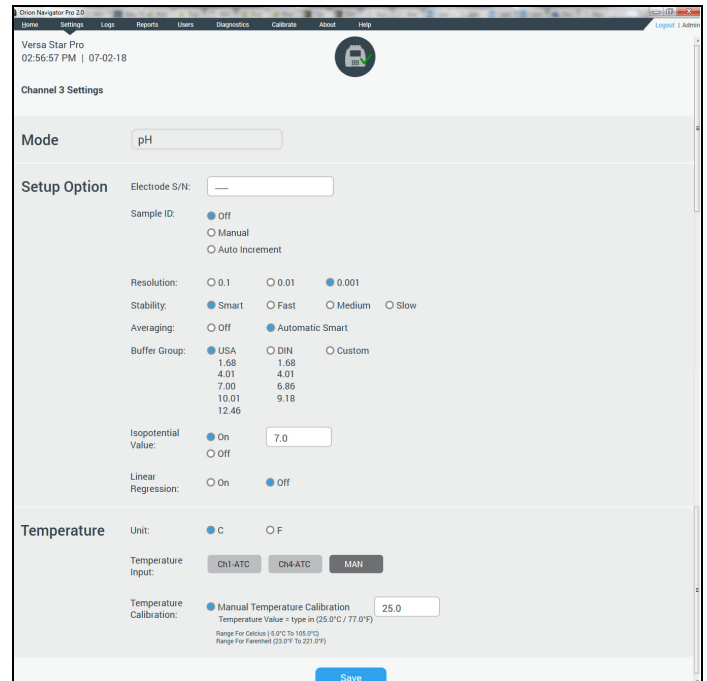


Figure 12. Channel 1 Settings

After making changes in the channel setup screen. Click **Save** to confirm the settings.

Note: If any exceptions, warning will be displayed. Only after resolving exceptions, application will allow you to save the setting options.

Channel 1-4 Setup Menu

Channel setting based on the module connections.

PH/ISE Measurement Module

pH, mV, Relative mV, ORP and ISE Settings

When using a pH/ISE module that is set to the ISE measure mode, an Incremental Techniques sub-menu is also available. This section provides detailed information on the Mode menus for each measurement parameter available when using a pH, pH/ISE or pH/LogR module.

pH Mode Settings

Table 3: pH Mode Settings

Main Menu	Setting	Details
Electrode SI No	----	Enter the electrode serial number or clear all to shown no value (----)
Sample ID	Off, Manual, Auto Increment	Enter an alphanumeric for manual sample ID or a numeric value as the starting value for auto incremental sample ID
Resolution	0.1, 0.01, 0.001	Set the resolution of the measurement value
Stability	Smart, Fast, Medium, Slow	Set when a measurement is recognized as stable
Averaging	Off, Automatic Smart	Set averaging for faster measurement stability
Buffer Group	USA, DIN, CUSTOM	USA: 1.68, 4.01, 7.00, 10.01, 12.46 DIN: 1.68, 4.01, 6.86, 9.18 Custom: Enter 1 to 6 buffer values μ 1.00 pH apart
Isopotential Value	Off, On	Default value is 7.000
Linear Regression	Off, On	Set point-to-point (Off) or single best fit (On) slope

mV, Relative mV and ORP Mode Settings

Table 4: mV, Relative mV and ORP Mode Settings

Main Menu	Setting	Details
Electrode SI No	----	Enter the electrode serial number or clear all to shown no value (----)
Sample ID	Off, Manual, Auto Increment	Enter an alphanumeric for manual sample ID or a numeric value as the starting value for auto incremental sample ID
Stability	Smart, Fast, Medium, Slow	Set when a measurement is recognized as stable
Averaging	Off, Automatic Smart	Set averaging for faster measurement stability

ISE Mode Settings (pH/ISE Measurement Module Only)

Table 5: ISE Mode Settings (pH/ISE Measurement Module Only)

Main Menu	Setting	Details
Electrode SI No	----	Enter the electrode serial number or clear all to shown no value (----)
Electrode Type	Ag+ BF4- Br- Ca++ Cd++ Cl- Cl2 ClO4 CN- CO2 Cu++ F- I- K+ KF Na+ NH3 NO3- NOx O2 Pb++ REDOX S- SCN- X- X-- X+ X++	Set the ion selective electrode (ISE) being used. If the type of ISE is not listed, select X- for monovalent anion, X-- for divalent anion, X+ for monovalent cation and X++ for divalent cation. The type of ISE selected will set the expected calibration slope range and slope direction as positive or negative.
Sample ID	Off, Manual, Auto Increment	An alphanumeric manual ID or a numeric value as the starting value for auto incremental ID
Significant Digit	1 Digit, 2 Digit, 3 Digit, 4 Digit	Set how many significant digits will be shown for the resolution of the measurement value
Stability	Smart, Fast, Medium, Slow	Set when a measurement is recognized as stable
Averaging	Off, Automatic Smart	Set averaging for faster measurement stability
Measurement Unit	ppm, Molar, mg/L, %, ppb, None	Set the displayed measurement units
Isopotential Value	Off, On	Default value is 1.000
Linear Regression	Off, On	Set point-to-point (Off) or single best fit (On) curve
Blank Correction	Off, On	Correct for non-linearity in low level ISE readings
Low Level Stability	Off, On	Extend stability wait time for ISE calibration points

Conductivity Measurement Module

Conductivity, TDS, Salinity and Resistivity Settings

This section provides detailed information on the Mode settings for each measurement parameter available when using a conductivity module.

Conductivity Mode Settings

Table 6: Conductivity Mode Settings

Main Menu	Settings	Details
Cell K	0.475	Enter the nominal cell constant (K) value of the conductivity probe, value is used when performing an automatic conductivity calibration
Ref. Temperature	5°C, 10°C, 15°C, 20°C, 25°C	Set the reference temperature that all displayed conductivity measurements will be reported to using the selected temperature compensation
Temp. Compensation	Linear, nLFn, nLFu, EP, Off	Set the temperature compensation type used to calculate and report conductivity measurements at the selected reference temperature
Temperature Coeff.	2.10	Enter the temperature coefficient value for linear temperature compensation
Stability	Smart, Fast, Medium, Slow	Set when a measurement is recognized as stable
Averaging	Off, Automatic Smart	Set averaging for faster measurement stability
Settings Cell Type	Standard, USP	Select Standard for most conductivity probes or USP for ultra pure water 2-cell conductivity probe (Catalog Number 013016MD)
Electrode SI No	----	Enter the serial number or clear all to shown no value (----)
Sample ID	Off, Manual, Auto Increment	Enter an alphanumeric manual ID or a numeric value as the starting value for auto incremental ID

TDS Mode Settings

Table 7: TDS Mode Settings

Main Menu	Settings	Details
Cell K	0.475	Enter the nominal cell constant (K) value of the conductivity probe, value is used when performing an automatic conductivity calibration
TDS Factor	Linear, ISO/EN 27888 0.49	Set the TDS factor type used to convert conductivity to TDS measurements; enter a 0.02 to 9.99 value for the Linear TDS factor type
Ref. Temperature	5°C, 10°C, 15°C, 20°C, 25°C	Set the reference temperature that all displayed conductivity measurements will be reported to using the selected temperature compensation
Temp. Compensation	Linear, nLFn, nLFu, EP, Off	Set the temperature compensation type used to calculate and report conductivity measurements at the selected reference temperature
Temperature Coeff.	2.10	Enter the temperature coefficient value for linear temperature compensation
Stability	Smart, Fast, Medium, Slow	Set when a measurement is recognized as stable

Main Menu	Settings	Details
Averaging	Off, Automatic Smart	Set averaging for faster measurement stability
Cell Type	Standard, USP	Select Standard for most conductivity probes or USP for ultra pure water 2-cell conductivity probe (Catalog Number 013016MD)

Salinity Mode Settings

Table 8: Salinity Mode Settings

Main Menu	Settings	Details
Cell K	0.475	Enter the nominal cell constant (K) value of the conductivity probe, value is used when performing an automatic conductivity calibration
Salinity Type	Practical Salinity, Sea Water	Set the salinity type used to convert conductivity to salinity measurements
Stability	Smart, Fast, Medium, Slow	Set when a measurement is recognized as stable
Averaging	Off, Automatic Smart	Set averaging for faster measurement stability
Cell Type	Standard, USP	Select Standard for most conductivity probes or USP for ultra pure water 2-cell conductivity probe (Catalog Number 013016MD)

Resistivity Mode Settings

Table 9: Resistivity Mode Settings

Main Menu	Settings	Details
Cell K	0.475	Enter the nominal cell constant (K) value of the conductivity probe; value is used when performing an automatic conductivity calibration
Ref. Temperature	5°C, 10°C, 15°C, 20°C, 25°C	Set the reference temperature that all displayed resistivity measurements will be reported to using the selected temperature compensation
Temp. Compensation	Linear, nLFn, nLFu, EP, Off	Set the temperature compensation type used to calculate and report resistivity measurements at the selected reference temperature
Temperature Coeff.	2.10	Enter the temperature coefficient value for linear temperature compensation
Stability	Smart, Fast, Medium, Slow	Set when a measurement is recognized as stable
Averaging	Off, Automatic Smart	Set averaging for faster measurement stability
Cell Type	Standard, USP	Select Standard for most conductivity probes or USP for ultra pure water 2-cell conductivity probe

DO/RDO Measurement Module

Dissolved Oxygen Settings

This section provides detailed information on the Mode settings for each measurement parameter available when using a DO/RDO module.

Table 10: RDO and DO Mode Settings

Main Menu	Settings	Details
Electrode SI No	----	Enter the serial number or clear all to shown no value (----)
Sample ID	Off, Manual, Auto Increment	Enter an alphanumeric manual ID or a numeric value as the starting value for auto incremental ID
Measurement Unit	mg/L, %	Set the displayed measurement units
Resolution	% Mode 1, 0.1 mg/L Mode 0.1, 0.01	Set the resolution of the measurement value
Stability	Smart, Fast, Medium, Slow	Set when a measurement is recognized as stable
Averaging	Off, Automatic Smart	Set averaging for faster measurement stability
Pressure Comp	Auto Manual 760.0	Set the barometric pressure compensation source as Auto to use the built-in barometer or Manual to enter a value. Select the Auto option to calibrate the barometer pressure reading
Salinity Correction	Auto, Manual	Set the salinity correction source as Auto to use a conductivity module and probe to measure the sample salinity or Manual to enter a value

Instrument Settings Setup Menu

Use the Instrument Settings menu to review and update meter settings. The default settings are in bold or shown with the selection box checked in the following table.

- Communication – Select the method used for information transfer/interface in between Navigator Pro software and the meter. Set the baud rate when RS232 is selected as the interface method.
- Calendar – Enter the time, set the time format as 12 hours (am/pm) or 24 hours, enter the date and set the date format as Day-Month-Year (all numeric), Month-Day-Year (all numeric) or Day-Month-Year (DD-MMM-YY, three letter short form of month).
- Data log – If the data log function is “ON”, data will be logged into the meter. If the data log function is “OFF”, data will not be logged into the meter.
- Printing – Turn the printing function to an external device ON or OFF.

Note: Always set the printing setting to “ON” to interface Navigator Pro software.



CAUTION: Changing these settings may affect the communication between the software and meter.

- Printing Format – Select how information will be transferred to an external device, as comma delimited (CSV) or standard text (Printer).

Note: Always set the printing format option to CSV to interface Navigator Pro software.



CAUTION: Changing these settings may affect the communication between the software and meter.

Measurement

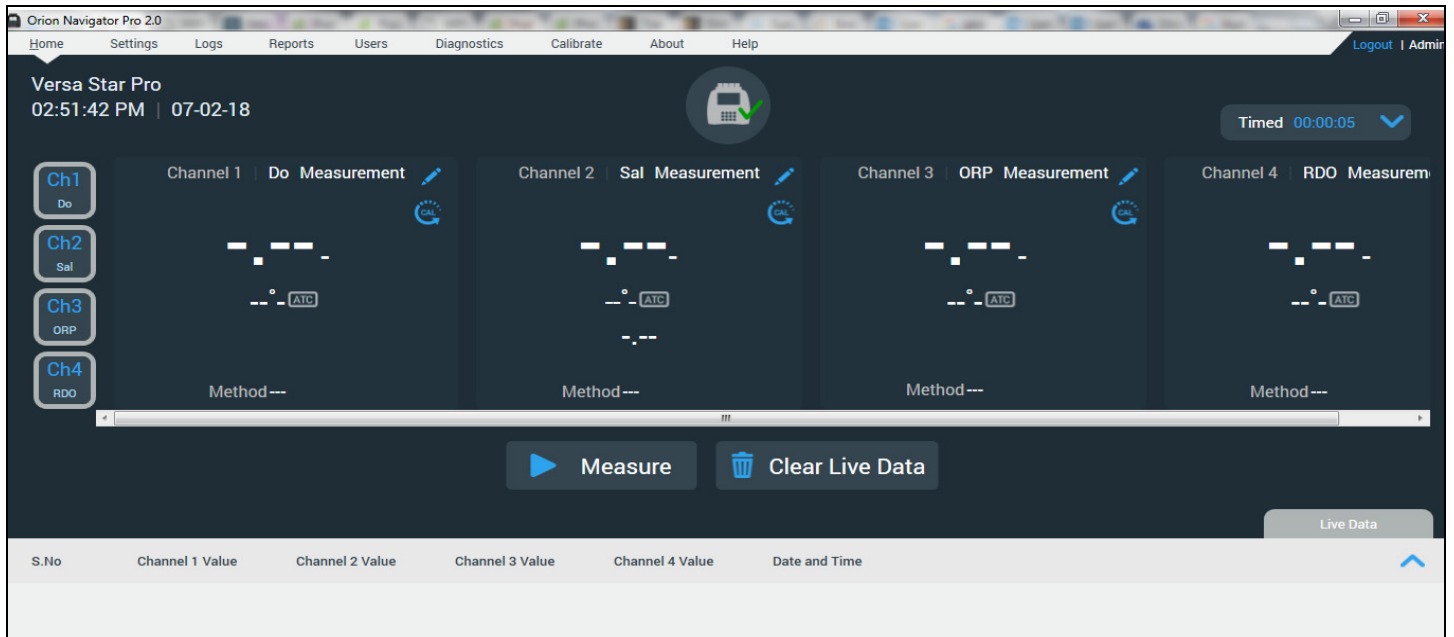


Figure 13. Measurement screen

Once login is successful Navigator Pro software will display the home screen and the measurement window will open.

The measurement screen will display the information for each channel performing measurement as shown in **Figure 13**.

- Active / Inactive Channel: The active channels connected to the meter will appear with the respective mode type in the screen. Inactive channels are not highlighted. Only active channels can be measured



Figure 14. Active/ Inactive channels

- Enable / Disable Modules: The channels can be enabled or disabled based on the module connected to the device. Highlighted channels are connected to the device

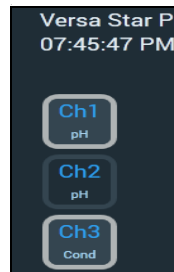


Figure 15. Enable / Disable Modules

Click **Measure** to start the measurement.

Click **Stop** to stop the measurement.

Note: During the measurement, all the functions are inactive until you Click **Stop** or measurement completion.

Measurement Read Types

There are four options for the measurement read type – Auto-Read, Timed, Single-Shot and Continuous.

The read type determines how the software takes a measurement and when the measurement is sent to the data log.

Auto-Read

Click **Auto-Read** as the read type, a measurement is initiated automatically and Stopped when a stable reading is achieved. To start the new measurement click **Measure**.

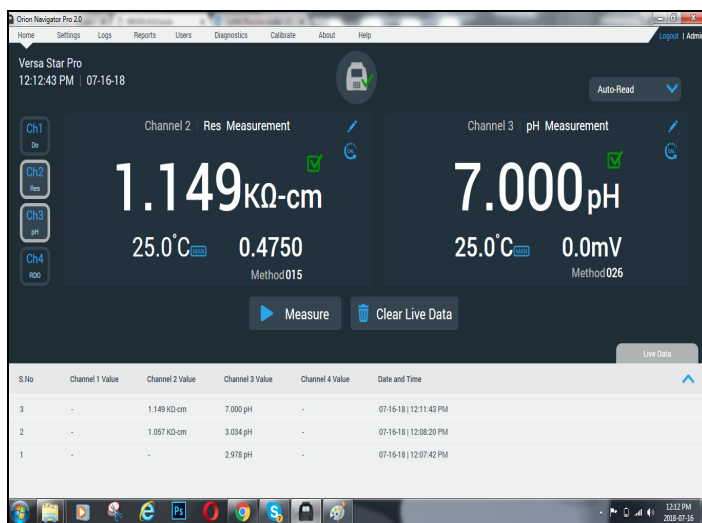


Figure 16. Auto-Read Screen

Timed

Click **Timed** as the read type and enter a time interval, measurements are recorded at the predefined time intervals.

Measurements are continuously updated on the display until you stop the measurement by clicking **Stop**.

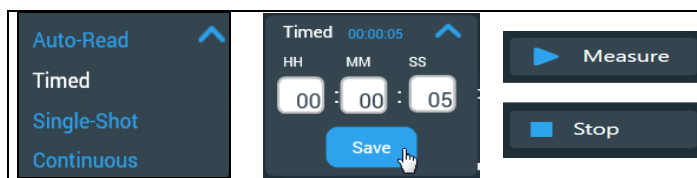


Figure 17. Timed Screen

Single-Shot

Click **Single-Shot** as the read type and enter a wait time, a single measurement is recorded, locked and held on the display after the predefined wait time has elapsed. To start a new measurement using the same wait time, Click **Measure** key.

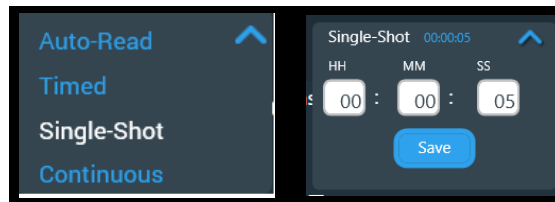


Figure 18. Single-Shot Screen

Continuous

Click **Continuous** as the read type, measurements are continuously updated on the display. The Stabilizing and Ready icons specify the measurement value stability. This is useful when performing an experiment that requires continuous measurements to be observed.

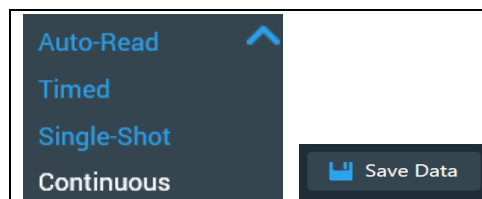


Figure 19. Continuous Screen

Note: When measurement process is in progress regardless of the ready type, no other tabs will be functional. Click **Stop** to stop the measurement process to access other tabs.

Live Data

Live data list show measuring values with respective mode type. Click **Clear live data** to clear the list. You can find the cleared data in datalog for reference.

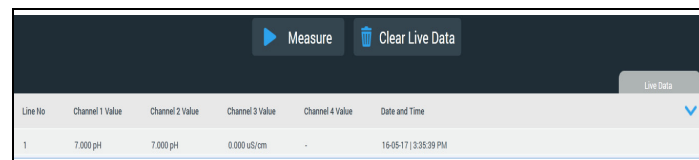


Figure 20. Clear live data screen

Measurement Mode Selection Button

The Measurement Mode Screen allows the user to select a new mode or edit current mode settings for each channel. Click **Save**.

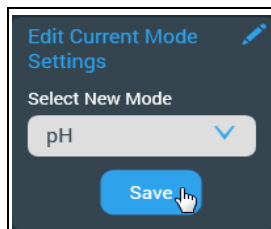


Figure 21. Edit current mode setting screen

Note: Channel settings will be respective to selected mode in the HOME screen.

Calibration

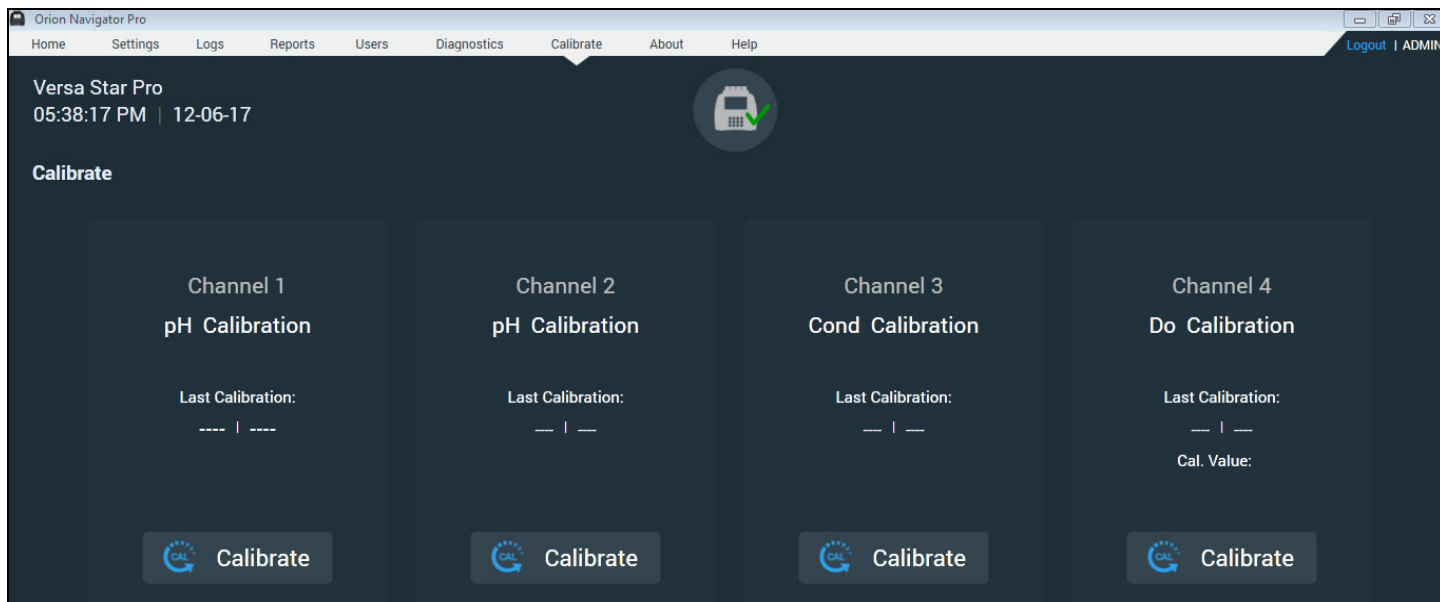


Figure 22. Calibrate Screen

Click **Calibrate** tab on menu bar to process the calibration.

Note: You can view the attached modules with a **Calibrate** tab at the bottom of each connected module.

Click **Calibrate** tab to start calibration and follow the instructions to complete the calibration process.

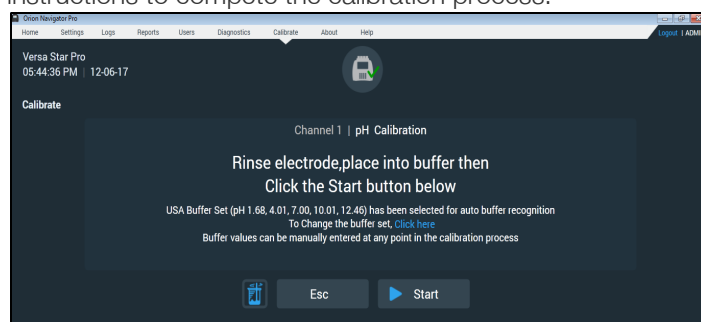


Figure 23. pH Calibration Screen

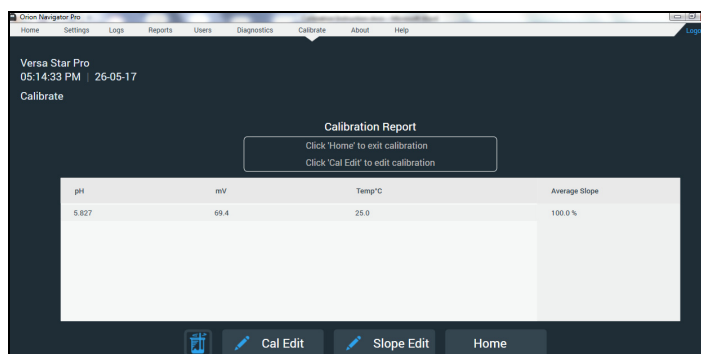


Figure 24. Calibration Report

After calibration, Click on **Home** tab to navigate to the Home screen.

Note: To calibrate other modules, Click the **Calibrate** tab to start the calibration process.

Note: Calibration process can also be started by clicking **Calibrate** icon on the measurement screen. Refer **Figure 25**

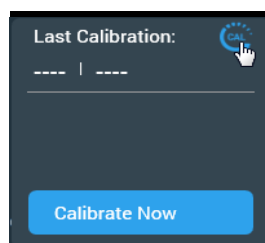


Figure 25. Calibrate now screen

Logs

Logs contains active, inactive, measured and calibrated data.

Use the Log View menu to access the data log and calibration log. Click **Logs** to get the following options from the drop-down menu:

- Datalog
- Archived log
- Meter datalog
- Archived meter data log
- Calibration log and
- Archived Calibration log

Datalog

Datalog has the data which are measured with different modes and modules. These data list can be expanded to find a detailed view of the measurement when you click the arrow.

Orion Navigator Pro 2.0

Home Settings **Logs** Reports Users Diagnostics Calibrate About Help

Versa Star Pro
03:06:05 PM | 07-02-18

Data Log

Date Range to Time Range to Filter Export Print Archive Data Log

S.No	Channel 1 Value	Channel 2 Value	Channel 3 Value	Channel 4 Value	Date and Time
22	9999 mg/L	259.5 mS/cm	6.902 pH	9999 %	07-02-18 3:05:13 PM

Print

Channel 1

Account Name:	Admin	Mode:	DO	Calibration Date:	06-29-18
Meter Model:	Versa Star Pro	Current Value:	41145.4	Calibration Time:	6:01 PM
Meter Serial #:	V111105	Current Unit:	nA	Sol. Temp:	19.3
Meter SW Rev:	11.20	DO Saturation Value:	9999	Sol Temp Unit:	C (ATC)
Electrode ID:	---	DO Saturation Unit:	mg/L	Membrane. Temp:	19.4
Sample ID:	---	DO Value:	3972.05	Membrane Temp Unit:	C (ATC)
Module Serial #	VA10883	DO Unit:	%	Pressure Value:	756.6
		Salinity Value:	0.0	Pressure Unit:	mmHg
				Slope Value:	10.4
				Slope Unit:	nA/%sat
				Method Name:	001

Channel 2

Account Name:	Admin	Mode:	COND	Calibration Date:	06-29-18
Meter Model:	Versa Star Pro	Conductivity Value:	259.5	Calibration Time:	6:01 PM
Meter Serial #:	V111105	Conductivity Unit:	mS/cm	Method Name:	015

Figure 26. Datalog Screen

Meter Data Log

Versa Star Pro meters offer a 2000 point data log. Each point includes measurements from one to four channels, depending on which channels were actively displayed in the measurement mode when the point was saved. When the data log function is turned on, the read type selected for each displayed channel (Auto-Read, Timed, Single-Shot or Continuous) determines how the point is saved to the data log.

Datalog has a date and time filter where measured data can be filtered as per convenience of the user.

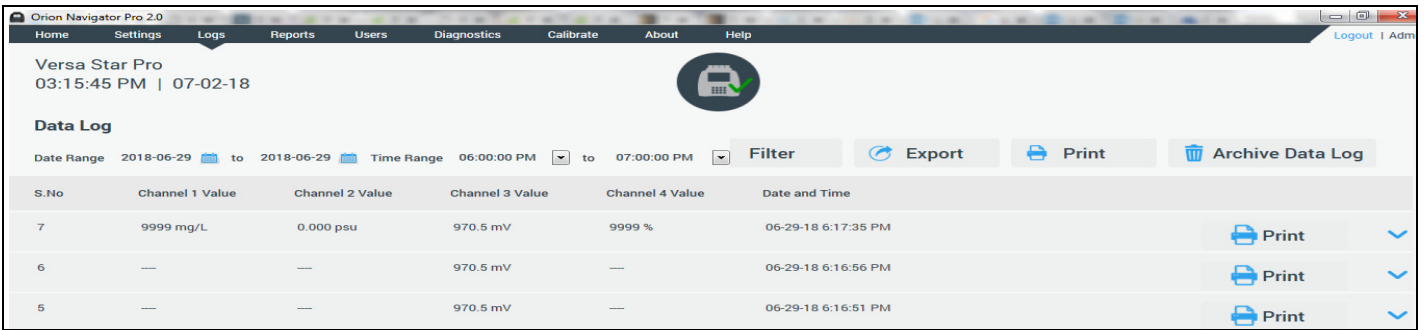


Figure 27. Datalog date filter

Export Datalog

Click **Export** from export data log application sub menu to pdf format.

Click **Export** with options to export data, as shown in **Figure 28**.

- All
- Number range and
- Date range.

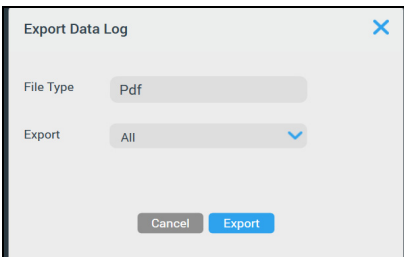


Figure 28. Export Datalog- PDF

Log No.	Channel 1	Channel 2	Channel 3	Channel 4
1	0.000 uS/cm	5.825 pH	---	---
	Meter Model Versa Star Pro Meter S. No. V11420 Meter SW Rev. 5.84 Date Time 26-05-17 6:18:29 PM Account Name MY			
	Ch1 Detail Electrode ID --- Calibration Time --- Sample ID --- Calibration Date --- Module Serial # VA13575 Temp. 25.0 Mode COND Temp. Unit C Cond. Value 0.000 Temp. Compensation Cond. Unit uS/cm Type Ln Condu. Value 0.000 Temp Co. eff 2.1 Condu. Unit uS Temp Co. eff Unit %/C Ref Temp. 25.0 Ref Temp. Unit C Cell K 0.4750 Cell K Unit /cm Method# 100			
	Ch2 Detail Electrode ID --- Calibration Time --- Sample ID --- Calibration Date --- Module Serial # VA14670 Temp. 25.0 Mode pH Temp. Unit 100.0 pH Value 5.825 Slope Unit % pH Unit mV Value 69.4 Method# 200 mV Unit mV			
2	0.000 uS/cm	5.825 pH	---	---
	Meter Model Versa Star Pro Meter S. No. V11420 Meter SW Rev. 5.84 Date Time 26-05-17 6:18:24 PM Account Name MY			

Figure 29. Export Datalog- PDF Output

Print Datalog

Click **Print** to print the datalog.

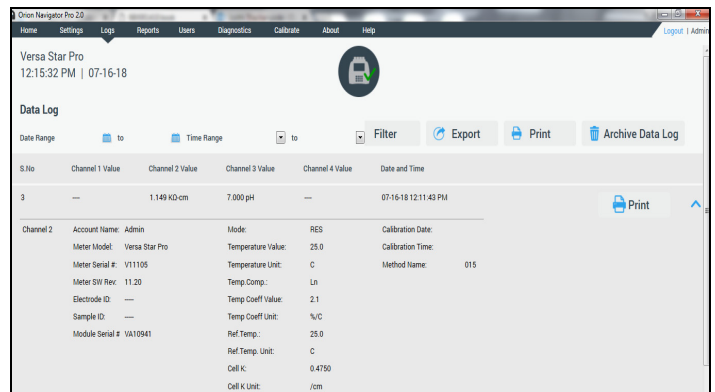


Figure 30. Print Data log Screen

Data Log Archive Function

When you click **Archive Data Log**, a window will appear for confirmation. Data will be archived once you click on **Yes, Archive Data Log** button.

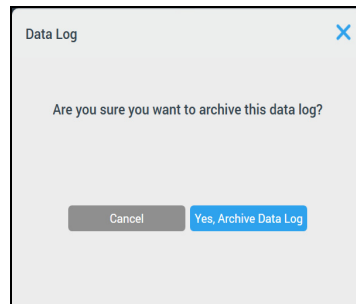


Figure 31. Archive Data Log Screen

Calibration Log Archive Function

Click **Archive Cal Log** to archive the respective calibration log.

Group Name	S.No	Channel 1 Value	Channel 2 Value	Channel 3 Value	Channel 4 Value	Date and Time
07-17-18 01:34:26 PM						
	34	--	--	6.556 pH	--	07-05-18, 1:48:53 PM
	33	--	--	6.621 pH	--	07-05-18, 1:48:27 PM
	32	--	--	6.889 pH	--	07-05-18, 1:28:59 PM
	31	--	--	9999 pH	--	07-05-18, 1:28:54 PM
	30	--	--	9999 pH	--	07-05-18, 1:28:49 PM
	29	--	--	9999 pH	--	07-05-18, 1:28:44 PM
	28	--	--	5.183 pH	--	07-05-18, 1:28:34 PM
	27	--	--	5.183 pH	--	07-05-18, 1:28:29 PM

Figure 32. Archived Log with Date and Time

Note: User cannot clear this data.

Calibration Log

Log #	Date and Time	Channel No.	Account Name	Electrode ID	Method Name	Module Serial #
301	07-02-18 03:19:13 PM	3	Admin		14-021	1234567

Slope	P1-P2	P2-P3	P3-P4	P4-P5	P5-P6
%	100.0 %	--	--	--	--
Offset mV	0.0				

Figure 33. Calibration Log

The calibration log contains up to the 30 most recent calibrations per measure mode of pH, RmV, ORP, ISE, incremental technique, conductivity, DO, RDO and temperature.

Log #	Date and Time
301	07-02-18 03:19:13 PM

Figure 34. Calibration log archive

Reports

Click **Reports** to get the following reports:

Access the Audit trail report and Use account maintenance report.

User Account Maintenance Report

User Account maintenance report that holds the records of the user details.

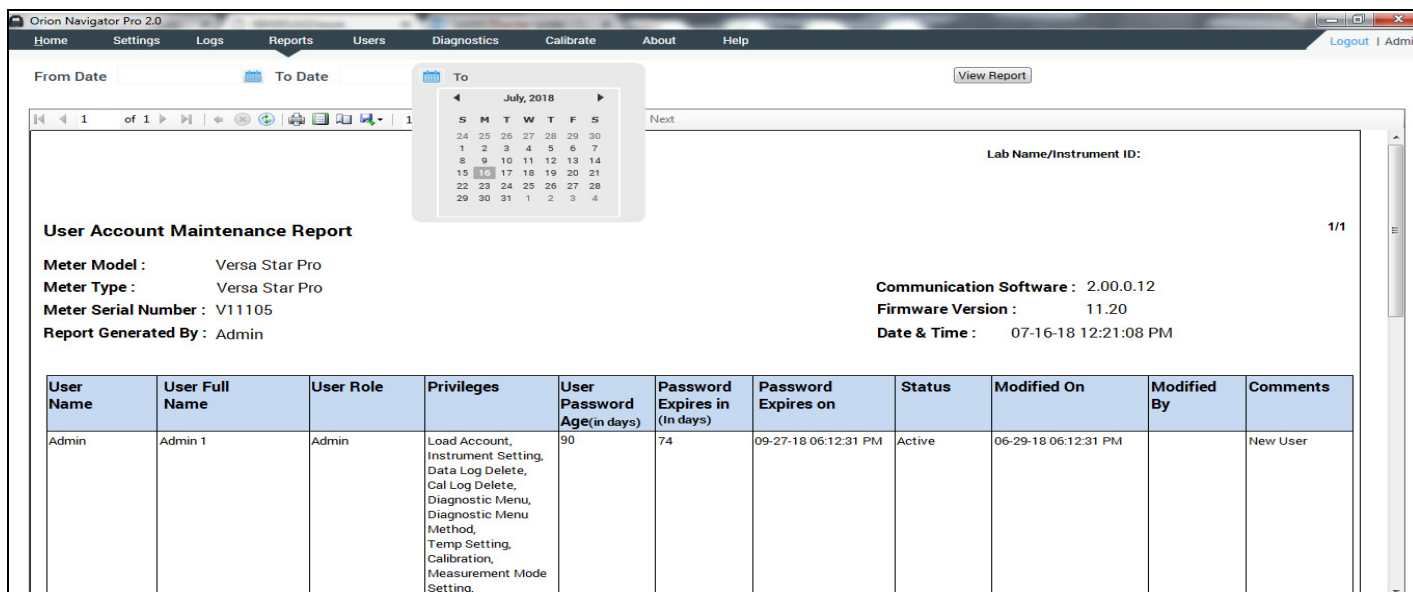


Figure 35. User Account maintenance report screen

Audit Trail

Audit trail report holds the records of all the changes that takes place in the application data.

Following activities will be captured in the audit trail:

- Deletion
- Creation and
- Amendments

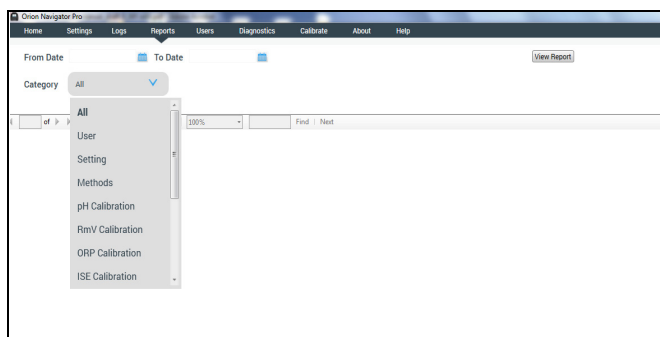


Figure 36. Audit trial report screen

Meter Diagnostics

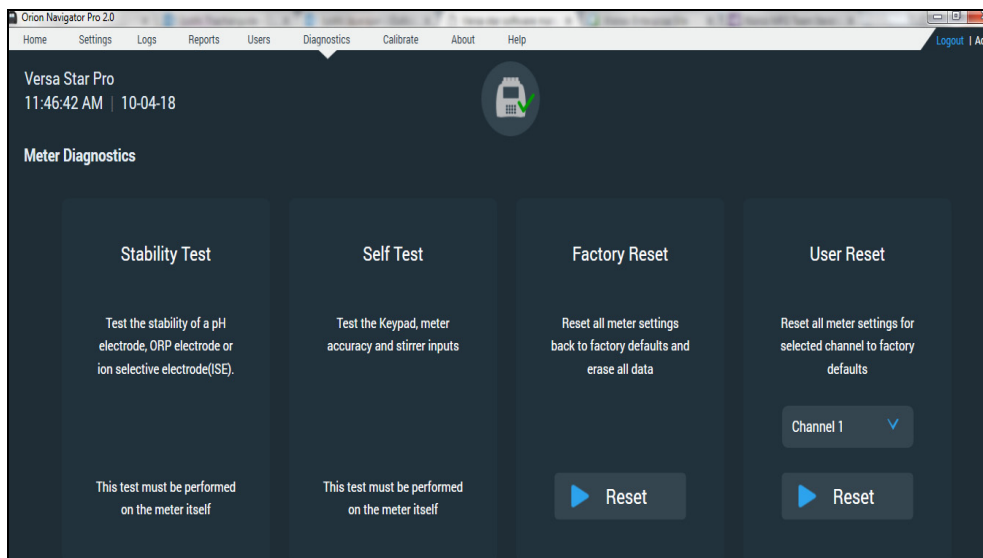


Figure 37. Meter Diagnostics Screen

Note: Diagnostics action is only for the meter.

Click **Diagnostics** menu to initiate the following meter diagnostics actions:

- Factory reset and
- Users reset

Meter Diagnostics screen can resolve issues within device or channel.

- Factory Reset – All meter settings are reset to factory defaults. Data log, calibration log and methods are deleted. If System Access feature is enabled, all system restrictions (names, passwords and access levels) are also deleted. When user selects **reset**, message appears to confirm the factory resetting before it erase all data.

Note: Create a new user when you login next, after reset.

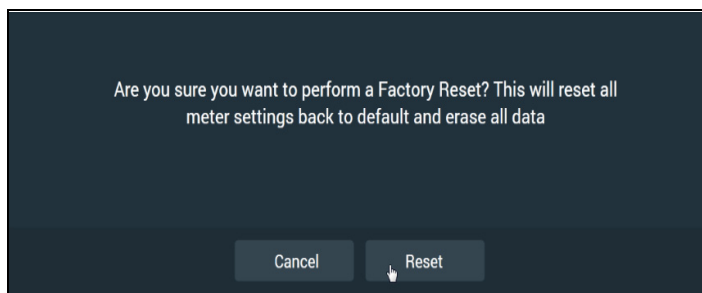


Figure 38. Factory Reset Screen

Note: The application will close after reset, and you need to create a new user account as you do with a new meter.

- User Reset – All settings for the selected channel are reset to factory defaults. Data log, calibration log and methods are retained. When user selects **User Reset**, message appears after the successful reset.

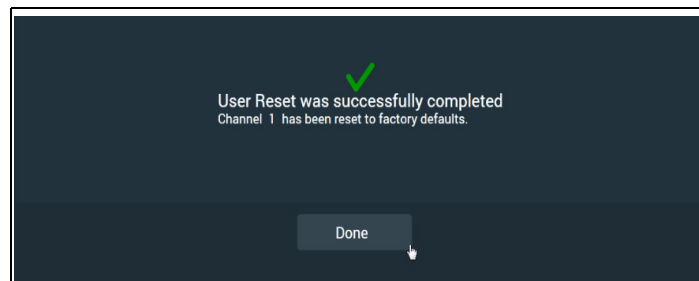


Figure 39. User Reset Screen

Note: Diagnostic menu access only to Admin user and Full user.

About

Click **About** to display information about the communication software which includes:

- Installed software version
- Model name
- Serial number
- Firmware version and
- Meter type



Figure 40. About Screen

Frequently Asked Questions

Can we create 100 users with “basic” access level permission?

Yes. Can create any combination of “full”, “advanced”, “basic” and “custom” users.

Can we install the software in network/Server?

No, License only for standalone computer, it will not work as network license.

I have a Versa star meter, can I update the meter with 10.0 software?

No, some of the functions will not work.

Can we connect Versa Star meter with 10.0 software to Navigator Pro Software?

No, it is not recommended.

If is there any update in the Navigator Pro software, Do we have to uninstall the software before install?

Yes, Please make sure navigator Pro software uninstall before installing new version.

What are the output formats customer can export?

XLS, .PDF, .WORD and CSV but at time only one output format available based on admin configuration. As a default output format is .PDF.

Can we include the company logo in the printouts?

Yes, Company logo can be set by Admin via “Application settings”

Can we reuse the “user name”?

No system will not allow to reuse the same user name.

Can we use the same password for different user name?

Yes, can.

Is there any expiry days for password?

Yes, 90 days.

What is the time line for application auto log off?

Default 20 min but this can be set in between 5 min to 60 min by Admin via “application settings”. It can also be set to Auto Off also if you don’t want to log off the application.

What is the no of character limit for user name?

20 alphanumeric and special Characters.

What is the no of character limit for sample ID?

10 alphanumeric characters

What is the no of character limit for password?

1 uppercase alphabet, 1 lowercase alphabet, number and special character with a maximum limit of 20.

If ‘Calibration Log is full.....’ message keep appearing what can we do?

Go to Versa Star Pro Meter & delete the relevant Calibration Log.

Can inactive User Name be reused?

No, once set to inactive, the User Name cannot be used.

What can I do if my User Account is locked & forget the Password?

Seek assistance from Admin to unlock the User Account for you.

How do I start a new data log?

Click ‘Archive Data Log’ in Data Log menu to start a fresh Data Log.

If the Auto Log Off of 20 minutes is too short for me, what can I do?

You can ask Admin to change the Auto Log Off up to 60 minutes.

Where can I view all the calibrations of different Modes?

Click ‘Calibration Logs’ under ‘Logs’ to view all existing & previous Calibrations done.

What is the format of the Company logo Image can be uploaded?

png.

Technical Support

For any questions or if you require assistance, contact our Technical Support Specialists:

Americas Technical Support Team

1-978-232-6000 | 1-800-225-1480 (US toll-free) |
wlp.techsupport@thermofisher.com

Europe Middle East Africa Technical Support Team

0049 6184 90 6321 | 00800 1234 9696 (free hotline from D, A, CH, F, UK, IRL) |
techsupport.labproducts.eu@thermofisher.com

Asia Pacific Technical Support Team

(65) 6778-6876 | customerservice.sg.wai@thermofisher.com

For additional product information, contact your local authorized dealer, local Thermo Scientific Orion technical sales representative or contact us using the Water and Laboratory Products (WLP) information at the end of this user manual. Visit www.thermofisher.com/water to view Thermo Scientific Orion products and download product literature, user guides and manuals, software updates, and additional application and technical resources.

Ordering Information

Table 11: Ordering Information

Part Number	Description
VSTAR-NPCD	Orion Navigator Pro Computer Software on CD
VSTAR-NPUSB	Orion Navigator Pro Computer Software on USB Flash Drive
VSTAR00	Orion Versa Star Pro meter (modules sold separately) with electrode stand, universal power adapter, literature, computer cable, meter test certificate
VSTAR10	Orion Versa Star Pro pH meter with electrode stand, universal power adapter, literature, computer cable, meter test certificate
VSTAR12	Orion Versa Star Pro pH meter standard kit with 8302BNUMD ROSS Ultra Triode pH/ATC electrode, 096019 stirrer probe, 810199 ROSS pH buffer kit, electrode stand, universal power adapter, literature, computer cable, meter test certificate
VSTAR13	Orion Versa Star Pro pH meter difficult sample kit with 8172BNWP ROSS Sure-Flow pH electrode, 927007MD ATC probe, 096019 stirrer probe, 810199 ROSS buffer kit, electrode stand, universal power adapter, literature, computer cable, meter test certificate
VSTAR20	Orion Versa Star Pro conductivity meter with electrode stand, universal power adapter, literature, computer cable, meter test certificate
VSTAR22	Orion Versa Star Pro conductivity meter standard kit with 013005MD DuraProbe (K=0.475) conductivity probe, 1413µS conductivity standard, electrode stand, universal power adapter, literature, computer cable, meter test certificate
VSTAR23	Orion Versa Star Pro conductivity meter pure water kit with 013016MD pure water (K=0.1) conductivity probe with flow-cell, 100µS conductivity standard, electrode stand, universal power adapter, literature, computer cable, meter test certificate
VSTAR30	Orion Versa Star Pro DO/RDO meter with electrode stand, universal power adapter, literature, computer cable, meter test certificate
VSTAR32	Orion Versa Star Pro DO/RDO meter kit with 083005MD DO probe & calibration sleeve, 080513 DO probe maintenance kit, BOD funnel/stirrer, electrode stand, universal power adapter, literature, computer cable, meter test certificate
VSTAR40A	Orion Versa Star Pro pH/ISE meter with electrode stand, universal power adapter, literature, computer cable, meter test certificate
VSTAR40A2	Orion Versa Star Pro pH/ISE meter kit with 8102BNUWP ROSS Ultra pH electrode, 927007MD ATC probe, 096019 stirrer probe, 810199 ROSS pH buffer kit, electrode stand, universal power adapter, literature, computer cable, meter test certificate
VSTAR40B	Orion Versa Star Pro two channel pH/ISE meter with electrode stand, universal power adapter, literature, computer cable, meter test certificate
VSTAR40B2	Orion Versa Star Pro two channel pH/ISE meter kit with 8102BNUWP ROSS Ultra pH electrode, 927007MD ATC probe, 096019 stirrer probe, ROSS pH buffer kit, two electrode stands, universal power adapter, literature, computer cable, meter test certificate
VSTAR50	Orion Versa Star Pro pH and conductivity meter with electrode stand, universal power adapter, literature, computer cable, meter test certificate µ

Table 11: Ordering Information

Part Number	Description
VSTAR52	Orion Versa Star Pro pH and conductivity meter kit with 8157BNUMD ROSS Ultra pH/ATC electrode, 013005MD conductivity probe, ROSS pH buffer kit, 1413 μ S conductivity standard, stand, power adapter, lit, computer cable, meter test certificate
VSTAR80	Orion Versa Star Pro pH/LogR meter with 927007MD stainless steel ATC probe, electrode stand, universal power adapter, literature, computer cable, meter test certificate
VSTAR82	Orion Versa Star Pro pH/LogR meter difficult sample kit with 8172BNWP ROSS Sure-Flow pH electrode, 927007MD ATC probe, ROSS pH buffer kit, ROSS fill solution, electrode stand, universal power adapter, lit, computer cable, meter test certificate
VSTAR83	Orion Versa Star Pro pH/LogR meter micro sample kit with 8220BNWP ROSS Micro pH electrode, 927007MD ATC probe, ROSS pH buffer kit, electrode stand, universal power adapter, literature, computer cable, meter test certificate
VSTAR90	Orion Versa Star Pro pH/ISE, conductivity and DO/RDO meter with electrode stand, universal power adapter, literature, computer cable, meter test certificate
VSTAR91	Orion Versa Star Pro two channel pH/ISE, conductivity and DO/RDO meter with electrode stand, universal power adapter, literature, computer cable, meter test certificate
VSTAR92	Orion Versa Star Pro pH/ISE, conductivity and DO/RDO meter kit with 8157BNUMD ROSS Ultra pH/ATC electrode, 013005MD cond probe, 083005MD DO probe, stirrer probe, buffer kit, cond std, do kit, stand, power adapter, lit, computer cable, meter certificate
VSTAR93	Orion Versa Star Pro two channel pH/ISE, conductivity and DO/RDO meter kit with 8157BNUMD ROSS Ultra pH/ATC electrode, 013005MD conductivity probe, 083005MD DO probe, stirrer probe, ROSS pH buffer kit, 1413 μ S conductivity standard, DO maintenance kit, stand, power adapter, lit, computer cable, meter certificate
VSTAR94	Orion Versa Star Pro pH/ISE, conductivity and DO/RDO meter kit with 8157BNUMD ROSS Ultra pH/ATC electrode, 013005MD conductivity probe, 087010MD RDO optical DO probe, stirrer probe, ROSS pH buffer kit, 1413 μ S conductivity standard, stand, power adapter, lit, computer cable, meter certificate
VSTAR-CND	Versa Star conductivity, salinity, resistivity, TDS & temperature module
VSTAR-ISE	Versa Star pH, ISE, mV, ORP & temperature module
VSTAR-LR	Versa Star pH, mV, ORP & LogR temperature module
VSTAR-PH	Versa Star pH, mV, ORP & temperature module
VSTAR-RD	Versa Star RDO/dissolved oxygen (optical and polarographic) & temperature module

Appendix

Installing Versa Star Pro USB Driver for Computer Data Transfer

Note: Installation of this driver is required to transfer data from a Versa Star Pro meter to a computer via an USB port and to update the meter software.

1. Download the driver file at www.thermofisher.com/orionsoftware and unzip/extract the file to the computer desktop. The driver file can also be downloaded from the Versa Star Pro Literature CD (included with meter) and saved to the computer desktop.
2. Connect the power adapter to the meter and power on the Versa Star Pro meter.
3. Connect the USB cable (included with meter) to the Mini B USB input on the meter and then connect the cable to the USB input on the computer.
4. The “Found New Hardware Wizard window” will open. Select “No, not this time” and click the **Next** button.
5. Select “Install from a list or specific location (Advanced)” and click the Next button.
6. Select “Search for the best driver in these locations” and check the box next to the “Include this location in the search” option. Click the **Browse** button and set the computer desktop as the location. Click the **Next** button.
7. Wait while the driver is loading and accept any warning messages. Once the installation is complete, click the **Finish** button.
8. Set the Versa Star Pro meter setup parameters to allow transferring data from the meter to the computer via the USB drive.
 - a. On the meter in the measurement mode, press the f3 (setup) key.
 - b. Press the arrow keys to select Instrument Settings. Press the f3 (select) key.
 - c. Press the arrow keys to select Communication. Press the arrow keys to select USB.
 - d. Press the f2 (page 2) key.
 - e. Press the arrow keys to select Printing. Press the arrow keys to select On.
 - f. Press the arrow keys to select Print Format. Press the arrow keys to select CSV (comma delimited text) or Printer (standard text).
- g. Press the f2 (page 1) key and press the f1 (back) key until the meter returns to the measurement mode. Review the COM port location and settings. On the computer, open the Start Menu, Right-Click **My Computer** and select Properties. The System Properties window will open. Select the Hardware tab and click the **Device Manager** button.
9. The Device Manager window will open. Expand the Ports option and double click the “IAR Virtual COM port, IAR LPC-2478-SK board (COM)” option.
10. The IAR Virtual COM port, IAR LPC-2478-SK board (COM) Property window will open. Select the Port Settings tab and make sure the communication settings are:
 - Bits per second: 115200
 - Data bits: 8
 - Parity: None
 - Stop bits: 1
 - Flow control: None
11. The Orion Versa Star Pro meter is now able to transfer data to the computer using the virtual COM port and Navigator Pro, HyperTerminal or similar program.

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