Ellington Valley Technologies, Inc.

SMAART™ Transport Pro Operating Manual

November 2, 2026
Rev A

REVISION BLOCK

Rev	Change Description	ECO	Date
A	Initial release.	ECO-41	11/02/26

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About this Manual

This manual provides instructions for safe installation, set-up, and operation of the equipment. Before installing or operating the equipment, please read the entire manual and observe all hazard notices, symbols, and labels on the equipment and in the manual.

Technical Support and Contact Information

Safe and reliable operation of this equipment is conditional on all installation, operation and maintenance procedures being carried out in accordance with the appropriate manuals, by personnel having appropriate qualifications, experience, and training. Failure to observe the requirements of the manual may result in the user being held responsible for the consequences and may invalidate any warranty.

Customer Support	+1 (860) 661-1424 support@EllingtonValley.com

Software Revision

This manual is valid for Version Beta 4.X of the EVT software Ensight, where X refers to minor revisions of the software that do not affect the technical accuracy of this manual.

Manufacturer Address

SMAART™ Transport Pro Manufacturing Site
Ellington Valley Technologies Inc.
32 North Road
East Windsor, CT 06088
U.S.A.

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1. Safety Information

The chapter identifies potentially hazardous conditions which may be present during installation, operation, and serving of the equipment. The equipment is intended for indoor use in a safe, clean environment. The equipment should be kept dry and should be operated only in a non-explosive and non-toxic environment. The equipment is intended for the delivery of non-toxic, non-flammable, and non-corrosive gases.

Hazard Notices Used

The equipment poses potential hazards during installation, operation, and service. In this manual, there are four levels of safety precautions and importances that conform to ANSI Z535 and ISO 3864. These hazard notices identify the hazard, explain how to avoid the hazard, and identify probable consequences of not avoiding the hazard. These notations are provided primarily in the procedural sections and are intended to complement the ANSI and/or ISO safety labels physically located on the equipment.

DANGER	**Avoid hazard.** Danger notifications indicate a hazardous situation which, if not avoided, **will** result in serious injury or death. The hazard is imminent.
WARNING	**Avoid hazard**. Warning notifications indicate a hazardous situation which, if not avoided, **could** result in serious injury or death. The hazard is possible.
CAUTION	**Avoid hazard.** Caution notifications indicate a hazardous situation which, if not avoided, could result in minor to moderate injury and/or equipment damage.
NOTICE	Notice notifications provide information to follow to avoid damaging system hardware or losing data.

Symbols Used on the Equipment

	ON (Power) IEC 60417, No. 5007
	OFF (Supply) IEC 60417, No. 5008
	Protective Earth Terminal (Ground) IEC 60417, No. 5019
	General Warning ISO 7010, W001
	Warning: Risk of Electric Shock ISO 7010, W012
	Electronics Waste The equipment should not be discarded as unsorted waste but must be sent to separate collection facilities for recovery and recycling.

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General Safety Precautions

This section lists the hazards that could be encountered when installing, operating, and/or servicing the equipment. More specific hazards are listed throughout the manual in the relevant sections.

DANGER	**Suffocation Hazard.** The equipment uses nitrogen and other compressed gases during routine operation, which could displace the air in confined areas and create an oxygen deficient atmosphere. Ventilation is required to prevent high concentrations of gas from building up inside enclosed areas.
WARNING	**Personal Protective Equipment (PPE).** When handling/using chemicals for preparation or use within the equipment all applicable local and national laboratory safety practices must be followed. This would include, but is not limited to, following general laboratory and chemical handling safety practices, use of all relevant engineering controls such as ventilation hoods and appropriate selection and use of PPE. Failure to adhere to laboratory safety practices could lead to injury or death.
	Application Suitability: It is the customer's responsibility to determine the suitability and hazards of the equipment for a given application. Ellington Valley Technologies makes no representation that the potential hazards presented in this manual are the only hazards associated with this system and its installation, operation, and maintenance.
	Inhalation Hazard. Be sure that any sample exhaust ports are properly connected to a safe vent location to prevent exposure to potentially dangerous gas mixtures. Inhalation of certain gases may cause headache, dizziness, nausea, bodily irritation, irregular heartbeat, or death.
	Analysis of gases shall be below all hazardous limits for toxicity and caustic exposure (inhalation, skin contact, eye contact, and swallowing) as set forth by applicable national laboratory standards and governing regulatory agencies. Where toxic gases are analyzed, it is the end-user's responsibility to purge the equipment of hazardous residue in advance of any service.
CAUTION	Only trained and experienced operators should perform maintenance and repairs. Contact Ellington Valley Technologies for service and/or training.
	Do not substitute parts or modify equipment. Do not install substitute parts or perform any modifications to the hardware that has not been authorized by Ellington Valley Technologies.
	Use the proper power cord. Use the proper power cord. Only use a detachable power cord that is rated for the voltage and current specified on the equipment nameplate. The power cord should have a minimum cross-sectional area of 0.75 mm2 (18AWG). The power cord should be certified by an appropriately qualified agency such as UL, VDE, or Semko.
	Compressed Gas Hazard. The equipment requires compressed gas for zero and calibration gases. Check for leaks before turning on any gas supply and wear safety glasses to prevent injury. Failure to comply could result in injury.

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2. SMAART™ Pro Transport Overview

This chapter introduces the SMAART™ Transport Pro, explains the principle of operation, and provides an overview of the major components.

The SMAART™ Transport product line is a rack-mounted gas delivery platform designed to distribute calibration gases directly to analyzers and through the sampling system with consistency and control. Designed for flow rates up to 20LPM, the SMAART™ Transport Pro is built for modern workflows and simplified calibration setups. When paired with the Ensight software, the SMAART™ Transport Pro allows for high level automation in calibration gas distribution.

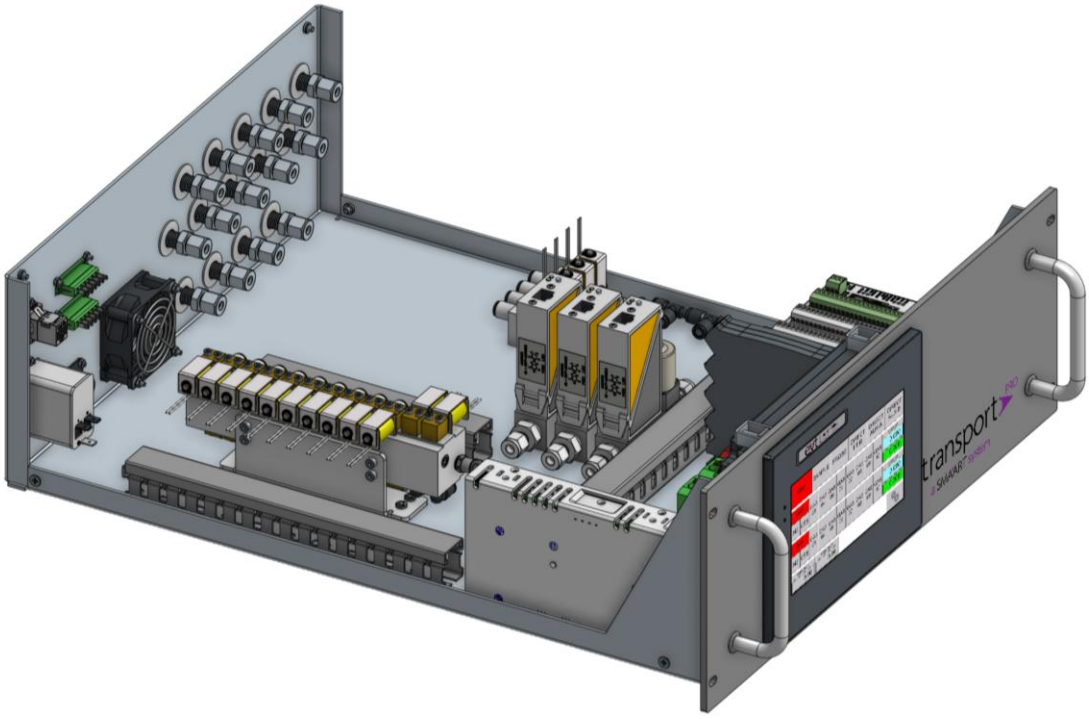

Table 2.1. SMAART™ Transport Pro Key Features

10 Input Ports • N_2, CTS, and up to 8 calibration gases
4 Output Ports • Probe (System or Spike) • Direct FTIR • 2 Additional Direct Outputs
Single High-Flow MFC (0-20 LPM)
Dual Low-Flow MFCs for Dilution • 0-2 LPM • 0-0.2 LPM

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3. Facility and Installation Requirements

This chapter describes how to prepare a site for installation, as well as procedures for uncrating the equipment and initial setup.

⚠CAUTION	Do not attempt to install, commission, maintain, or operate this equipment unless you have been trained or are an experienced instrument technician.

Installation Site Requirements

Table 3.1. Facilities Requirements

Condition	Requirement	Cords / Tubing	Fittings
Power	120-240 VAC, 50/60 Hz, 2A max		
Gas Requirements		¼" Tubing	¼" Swagelok
Interface Connections		CAT5E/6 Patch Cord	
Pump Control Cable (Optional)		4-Conductor CPC Cable	
Analog Input Cable (Optional)		Screw terminal for 4-20mA wire pairs	

Table 3.2. Environmental Requirements

Condition	Requirement
Operating Temperature	0 to 40°C *MFCs require ambient operating temperature variability of no more than ±2°C for optimum performance. Flow/dilution values may degrade outside of this range.*
Humidity	5-95% non-condensing
Altitude	0-2500 meters
Storage Temperature	See Table 3.5 for requirements.
Overvoltage Category	**Category II.** Equipment with plug and socket connector or fixed connection supplied from the electrical system of a building.
Pollution Degree	**Pollution Degree 2.** Normally only nonconductive pollution occurs. Temporary conductivity caused by condensation is to be expected.
Mains Supply Voltage Fluctuations	± 5%

Table 3.3. Gas Sampling Requirements

Condition	Requirement
Input Gas Pressure	30-50 PSIG; 40 PSIG Nominal *DO NOT INCREASE CYLINDER PRESSURE BEYOND 50 PSIG TO INCREASE FLOW.*

Installation Dimensions

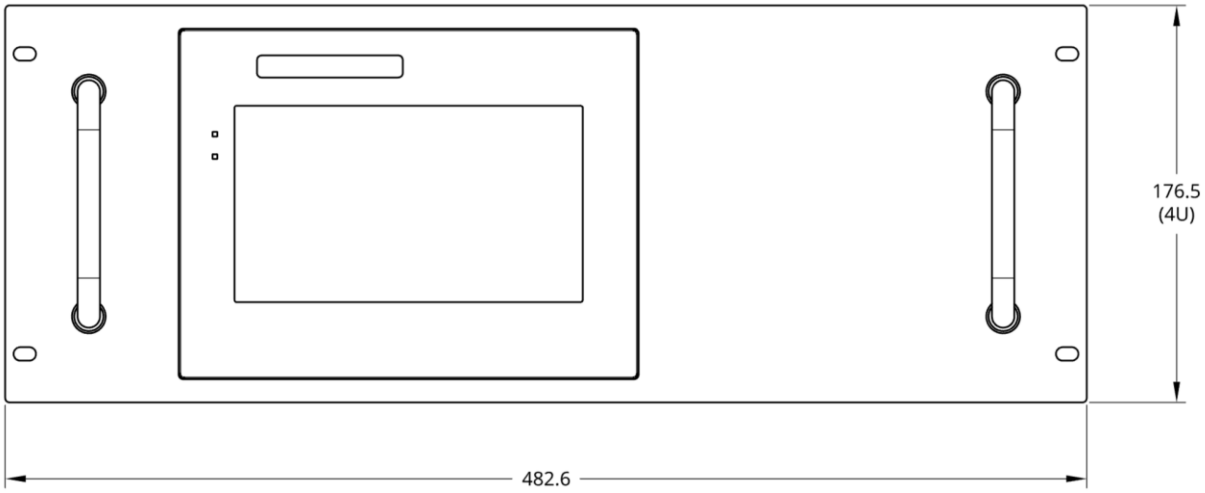
The overall dimensions of the equipment are shown below. The equipment should be installed to allow clearance for operation and service.

Table 3.4. Installation Dimensions

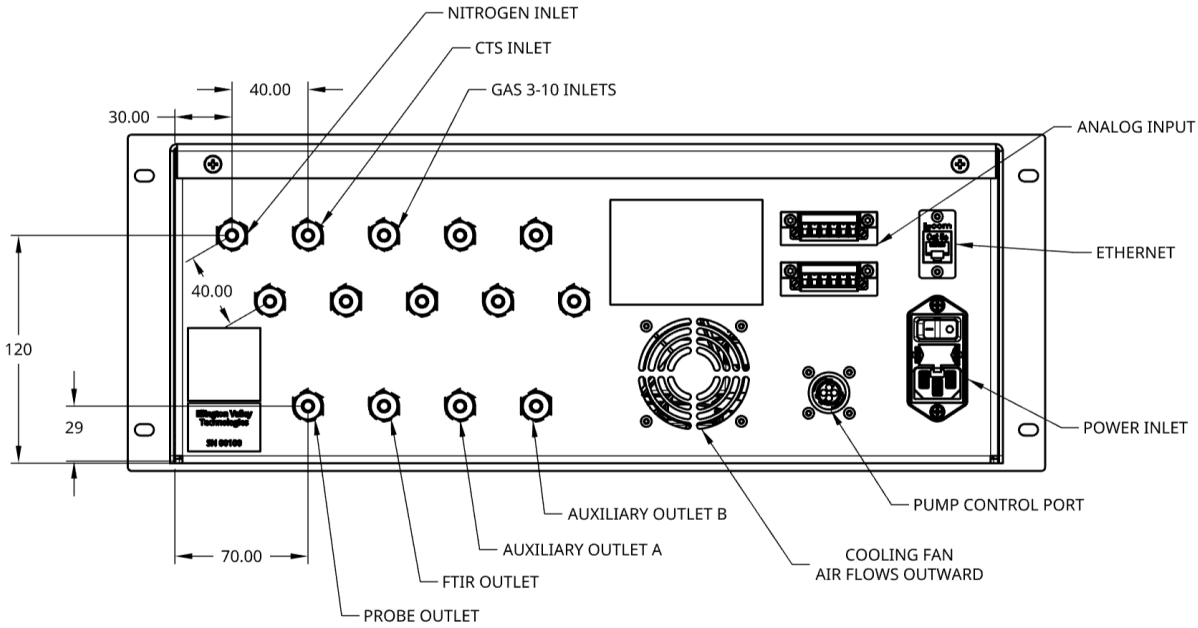
SMAART™ Transport Pro	Dimension (W x D x H)	Weight
Imperial Measurements	19 x 7 x 25.2”	28 lbs.
Metric Measurements	483 x 177 x 640 mm	12.7 kg

Drawings and Figures

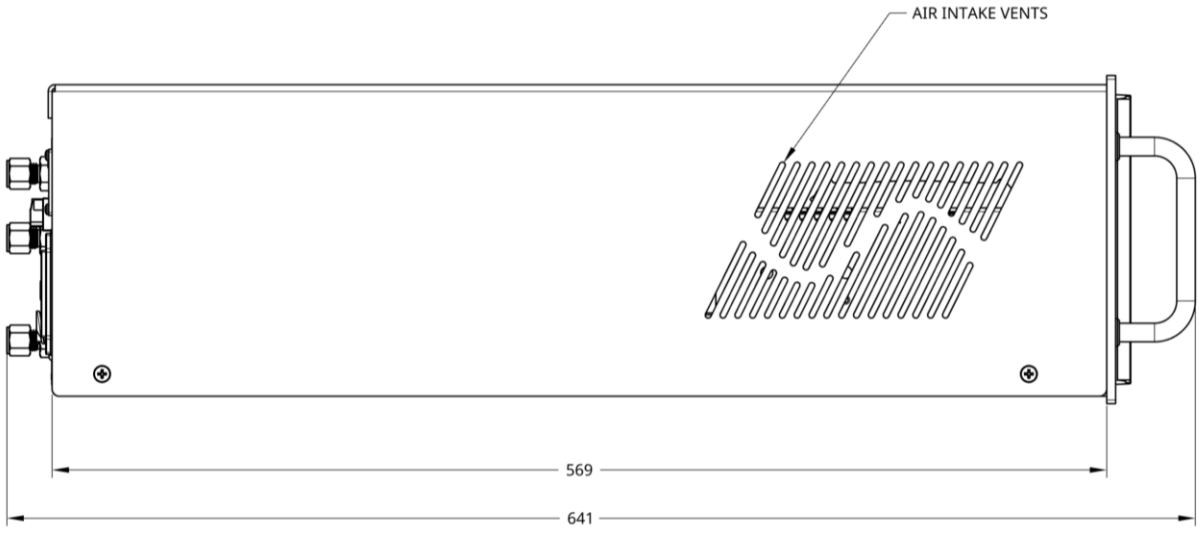
Front View



Rear View



Side View



Top View



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Initial Inspection

The equipment is carefully packed to reach its destination in excellent condition. When the equipment is received, inspect the box for damage. If any damage is found, notify the freight carrier and Ellington Valley Technologies immediately. If it is necessary to return the equipment, obtain an RMA Number before shipment. The original packing materials are required to return the instrument, and the use of unsuitable packing material during return shipment will void the instrument warranty.

⚠CAUTION	Unpacking the equipment cold may result in damaging condensation on the electronic components. Allow 24 hours for the equipment to reach room temperature before unpacking.

System Storage

If the system needs to be stored before installation, ensure the system is stored in its original packaging in an area where both humidity and temperature are controlled by the following conditions:

Table 3.5. System Storage Requirements

Condition	Requirement
Temperature	-10 to 70°C
Humidity	5-95%, non-condensing
Packaging	Original packaging must stay closed.

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Initial Setup

Overview of Mechanical and Gas Connections



Customer Supplied Gas Lines and Connection

The SMAART™ Transport Pro is equipped with ten dedicated gas inputs.

- The **N2** port, taking the place of **Gas 1**, is reserved for supply nitrogen. This port is placed strategically along the internal gas manifolds to facilitate purging of other gases when nitrogen is selected.
- The **CTS** port, taking the place of **Gas 2**, is reserved for supply CTS, Calibration Transfer Standard, gas if using an FTIR, or other defined gas.
- **Ports 3 through 10** are user defined gases.

A purging run with N_2 is recommended between gases to prevent line contamination within the system.

Table 3.6. SMAART™ Transport Pro Fuses and Circuit Breakers

Location	Identifier	Value	Description
Rear Fused Power Inlet	T2A/250	2A	Main Power Fuse

A maximum flow rate of 20 LPM is achievable while connected to most sampling systems. For sampling systems with significant outlet back pressure due to length or other flow restrictions, the system may not deliver 20 LPM.

⚠WARNING **DO NOT INCREASE CYLINDER PRESSURE TO INCREASE FLOW.**

If this occurs, remove any restrictions on the outlet plumbing. If needed, lower the set point to a deliverable flow rate. If this flow is too low to overcome the sampling pump, the pump flow needs to be restricted.

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4. Ensight Software Overview

The Ensight software allows for automated control of the SMAART™ Transport Pro and enables data acquisition by capturing 4/20mA analog inputs and/or using MODBUS Master to capture other instruments outputs via TCP. The software is used to define connected hardware (**SOLUTION**), define inputs and their identifiers (**METHOD**), run the measurement and review results (**RUN**). The Ensight Software is packaged with the SMAART™ Transport Pro on a USB flash drive that includes content packages such as ready-made Solutions and Methods.

Installing Ensight

Run the Ensight installer that is located on the provided USB on the Windows computer that will control the instrument. See Appendix A to connect the SMAART™ Transport Pro to the computer.

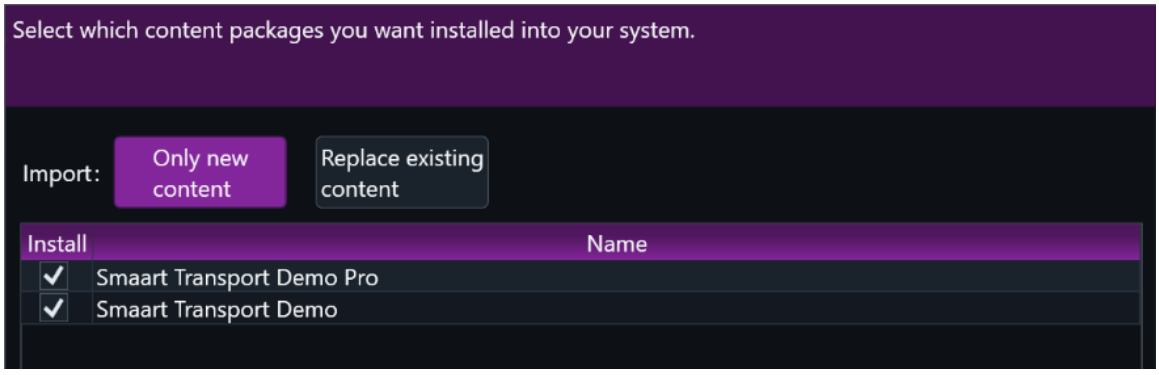
Ensight database and logs are stored in C:\ProgramData\Ensight. The assets (solutions, methods, profiles, runs) live in Repository\Repository DB.db, and per-application error logs are written to Error Logs.

Ensight Software Setup

During installation, select the content packages to install on the control computer.

1. Step One: Select Content

   Setup opens on **Select which content packages you want installed into your system.** Each available package has a check box. Select the desired packages, then choose to install only new content or replace existing content. Importing only new content is normally selected unless there is a need to overwrite and replace existing content.



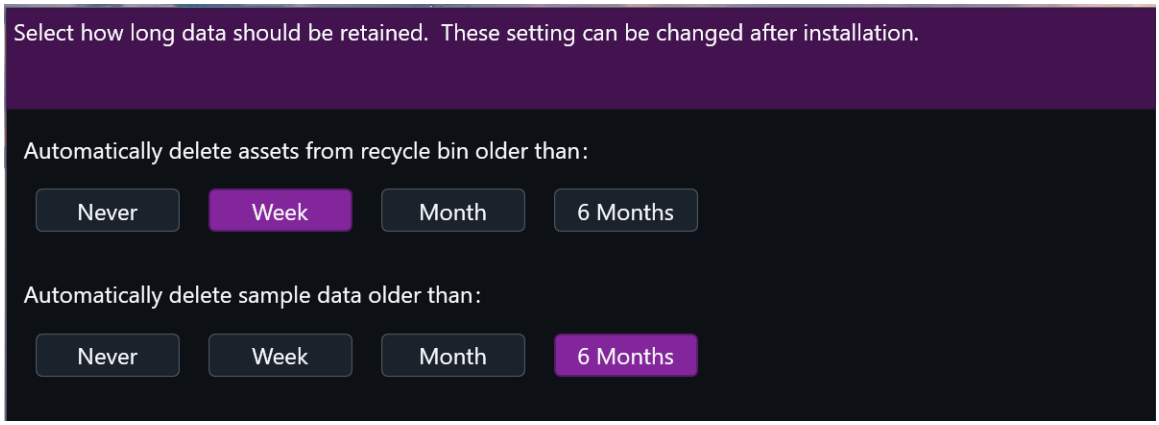
   - **Only New Content:** Adds packages that are not already installed and leaves existing content alone.
   - **Replace Existing Content:** Overwrites matching content with the package version.

   Use **BROWSE** if the packages live somewhere other than the default location. Click **NEXT**, then **FINISH** when selection is set.

2. Set Data Retention

The **Storage Management** page defines assets and data retention.

- **Automatically delete assets from recycle bin older than:** User defined asset purge frequency.
- **Automatically delete sample data older than:** User defined data purge frequency.



NOTICE Both data retention limits can be changed later from the **Setup** > **Options**.

3. Finish And Install

Select **FINISH** to start installing the selected content. Setup writes the packages into the repository, and the Solutions will now appear inside Ensight.

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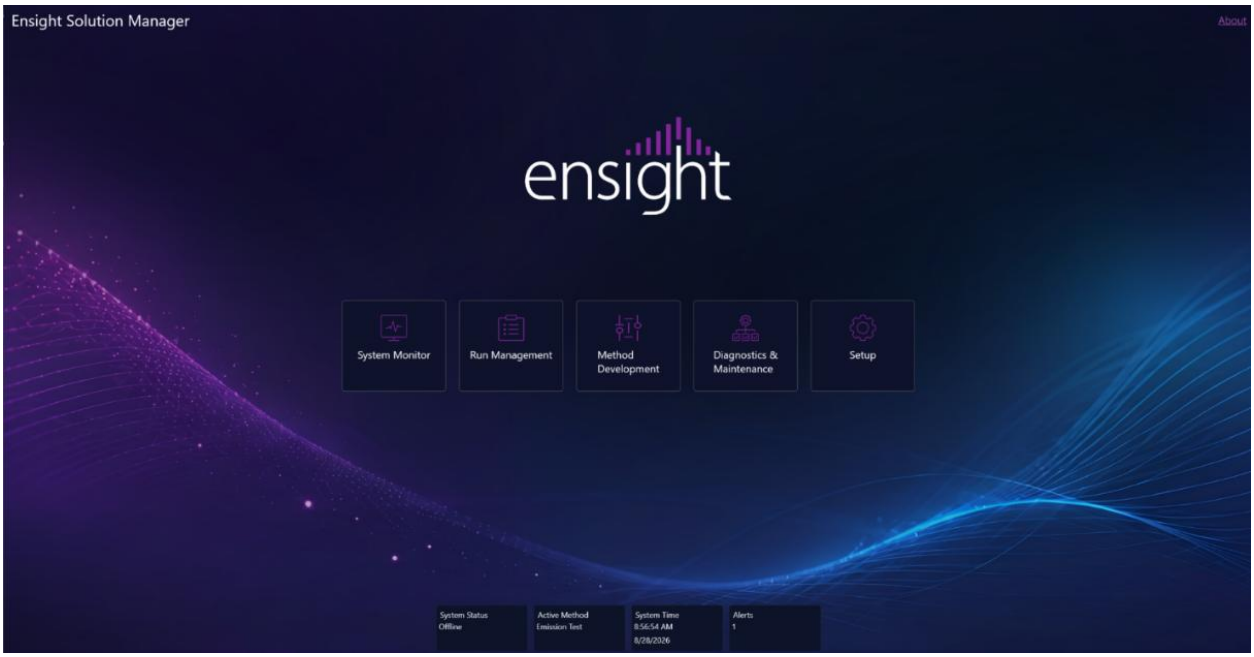
5. Navigating Ensight Software

This chapter details how to navigate through the Ensight software.

Home Screen

The home screen has six navigational menu options that allow full control of hardware and automation.



Menu Option	Function
About	Opens Version and Build information of the software.
System Monitor	Select and run a Solution and watch the instrument(s) live. Start a method, follow its work steps, see the hardware dashboard, alarms, and results as they come in.
Run Management	Open, review, and reprocess past runs.
Method Development	Build and edit the methods and reference libraries that belong to the active Solution.
Diagnostics & Maintenance	Keep the system healthy: import & export manager, repair the asset repository, and access the recycle bin.
Setup	Configure the hardware and software configuration: create and activate Solutions, set up external inputs, and manage reference libraries.

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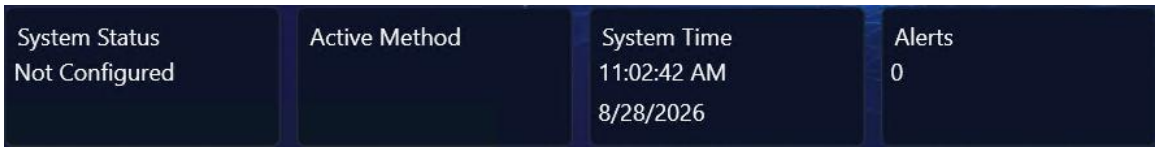
Status Bar

Status Field	Purpose
System Status	The current state of the connected Solution.
Active Method	Displays the loaded method. It remains blank until a Solution is activated and a method is selected.
System Time	System date and time; runs will be timestamped with this.
Alerts	Displays active alerts. Alerts can be reviewed in System Monitor or click on the Ale.



System Status States

Status	Meaning
Service Unavailable	Solution Manager cannot reach the Device Service. The service may still be starting or may have stopped. Wait a moment, and if it persists, make sure the Ensight Device Service is running.
Not Configured	Connected to the service, but no Solution is active. Go to Setup to activate a Solution.
Offline	A Solution is active, but the hardware is not communicating. Check the connection settings and confirm the instrument is powered on.
Connecting / Connected	The system is establishing, or has established, its link to the hardware.
Idle	Connected and ready to start a run.
Acquiring Run	The activated method is running.

Navigating Between Screens

Three controls manage all navigation, and they sit in the same place on almost every screen.

Home		Navigate back to the home screen from any screen.
Back		Step back one screen.
Done		Closes editor and management screens, returning to previous screen.

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6. Solution Overview

This chapter provides instructions on how to activate, build, and configure a Solution for the SMAART™ Transport Pro. A solution must be active before a Method can be run. Multiple Solutions can be created and saved, however, only one Solution is active at a time.

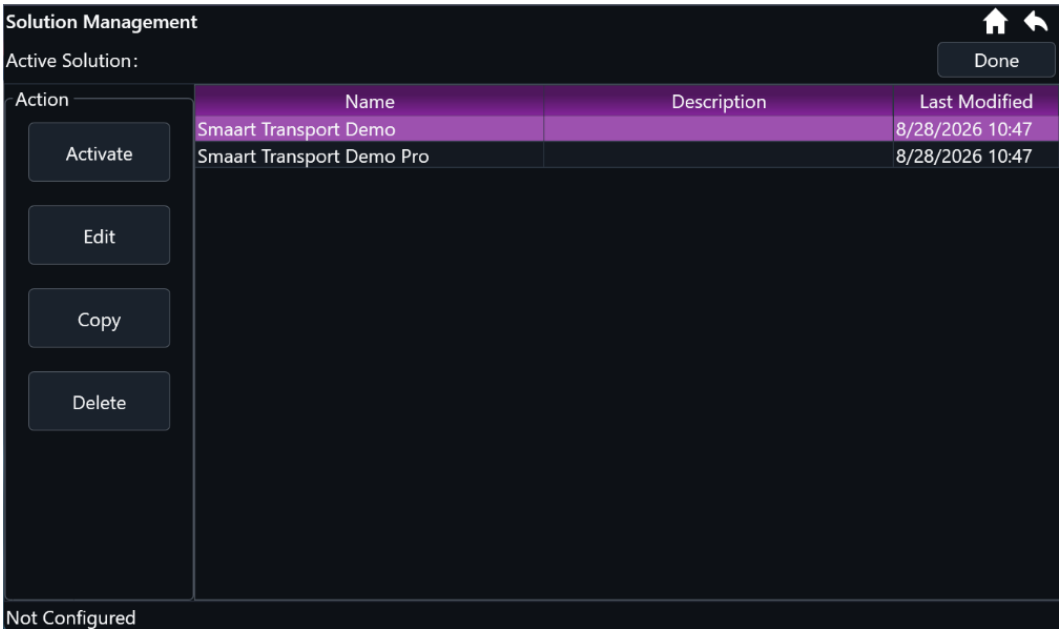
A Solution bundles four things:

- The components included in the system (the gas delivery platform, the analyzer, publishers, etc.).
- Component configurations and communications
- The methods that run on the instrument.
- The reference library the instrument measures against.

The SMAART™ Transport Pro ships with ready-made Solutions for common testing methods that can be activated immediately without needing to create one.

Solution Management

Open Setup › Solutions. The **Solution Management** screen lists every Solution by name, description, and the date it was last modified. When a solution is activated, the name of the solution is populated at the top next to **Active Solution**. Along the side are the available Solution actions.



Action	Function
Activate	Selected Solution becomes the active one.
Edit	Opens the selected Solution in the editor to change components, configuration, or methods.
Copy	Duplicates the selected Solution for editing purposes without modifying the original.
Delete	Sends the selected Solution to the recycle bin.

Activate a Solution

1. Open Solution Management.
   From the home screen, click **SETUP**, then **SOLUTIONS**.

2. Select the Solution.
   Click the desired Solution, the row will highlight.

3. Click Activate.
   The selected title will appear next to **ACTIVE SOLUTION**.

NOTICE	Activating a Solution also loads a default method, which will be listed next to **Active Method** in the status bar.

4. Click Done.
   The Solution is now active across the whole application, and the System Status bar begins working through **CONNECTING**. If the hardware is not reachable, the status states **Offline**, this is normal until the instrument is connected.

Building & Editing a Solution

Select a Solution and click **EDIT** or **NEW** to open the **Solution Editor**.

Tab	Purpose
General	The Solution's name and description, and which reference library it uses.
Methods	The methods that are tied to the selected Solution (also reachable from Method Development).
Component Configuration	The detailed settings for each component added, including the hardware connection.
Component Selection	Which hardware and software components make up this Solution.
Delete	Sends the selected Solution to the recycle bin.

NOTICE	For access to Component Selection, Advanced Solution must be enabled. To enable Advanced Solution, select Setup, then Options, then Enable advanced solution editing features.

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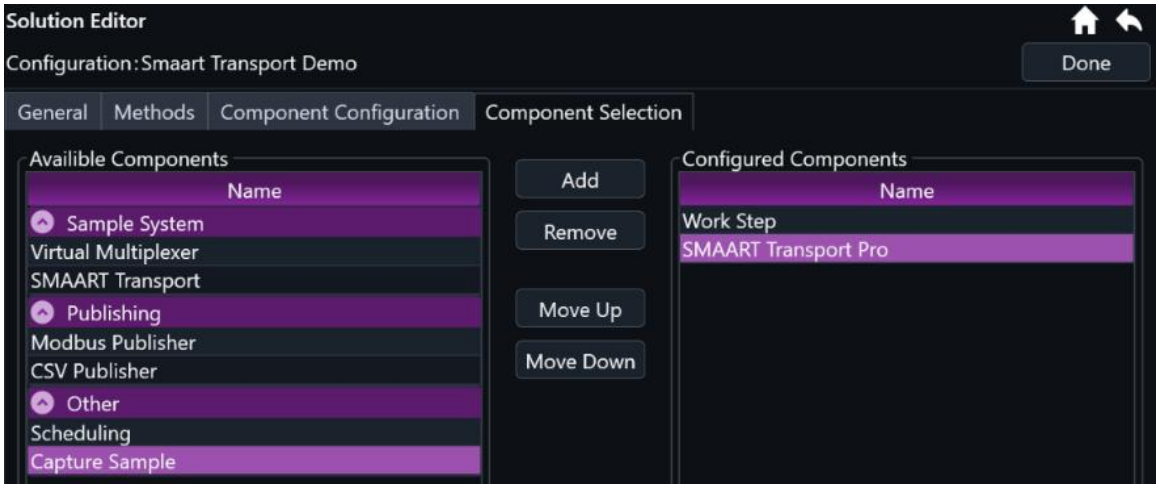
Component Selection

The **Available Components** catalog on the left is organized by category. Available components are dependent on the system configuration. Select a component and click **Add** to move it into **Configured Components** on the right. Use **Remove** to take one out and **Move Up** or **Move Down** to set their order. Double clicking the Component will also add/remove it.



Category	Component	Function
Sample System	SMAART™ Transport Pro	The SMAART™ Transport Pro platform, which dilutes and distributes calibration gases to selected analyzers.
Publishing	CSV Publisher	Publishes data measurements in a comma separated file (CSV).
	MODBUS Publisher	Publishes data measurements out over MODBUS to another system.
Other	Scheduling	Runs methods automatically on a schedule.
	Work Step	Enables work step authoring so a method can orchestrate a sequence of instrument actions.
	Capture Sample	Controls how often sample data is collected. Add it only when no other device in the Solution already collects sample spectra.

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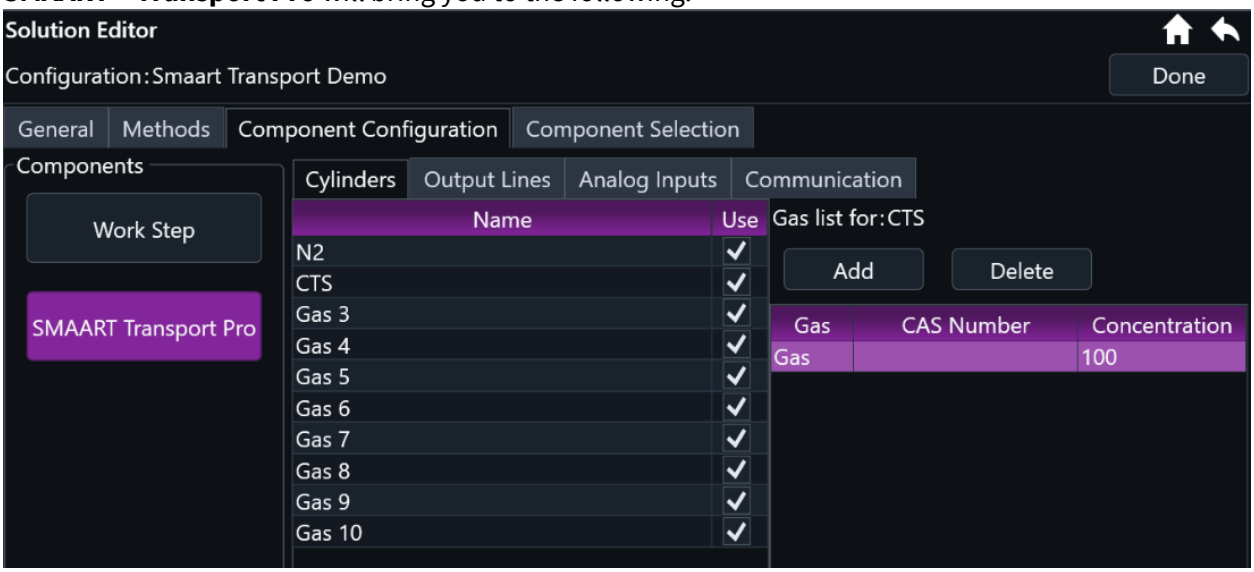
Configure The Gas Delivery Platform

On the **Component Configuration** tab, pick a component from the **Components** list. Selecting **SMAART™ Transport Pro** will bring you to the following:



For the SMAART™ Transport Pro, the settings are grouped into four sub-tabs.

Sub-Tab	Function
Cylinders	The incoming cylinder gas lines (N2, CTS, and Gas 3 through Gas 10), whether each is in use, and the gases on each line with their CAS Number and Concentration.
Output Lines	Where the sample is sent, such as the FTIR analyzer or an auxiliary output.
Analog Inputs	The analog channels the platform reads, with their scaling.
Communication	Configures communication to the hardware.

Set Cylinder Gas List

To automatically dilute and deliver calibration gases, gas inputs must be configured.

1. Select the numbered cylinder input position.
   On the **CYLINDERS** tab, click the desired line.

2. Enter the Gas Information
   Fill in the gas **NAME**, **CAS NUMBER**, and **CONCENTRATION**. For multicomponent cylinders: click **ADD** and repeat for every gas in that cylinder.

3. Mark In Use
   Tick the **USE** box for each connected line, this will allow the method to select it.

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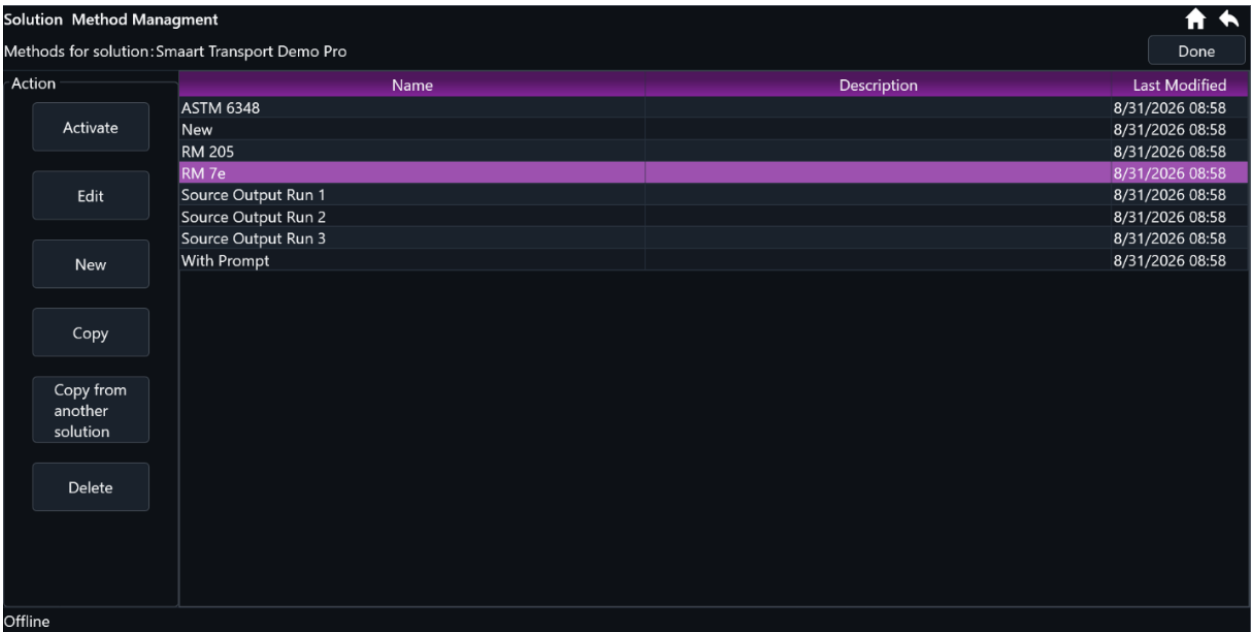
7. Method Development

This chapter gives an overview of the method editor and method management. A method defines the instrument techniques, measurements and reporting, alarms to watch, and the exact sequence of steps to perform.

Method Management

Methods belong to the active Solution. From the home screen, select **METHOD DEVELOPMENT**, then **METHOD**. The **SOLUTION METHOD MANAGEMENT** screen lists every method in the Solution with its description and last-modified date.



Action	Purpose
Activate	Loads the selected method so it becomes the Active Method shown in the status bar.
Edit	Opens the selected method in the editor.
New	Create a new, empty method in the Solution.
Copy	Duplicate the selected method.
Copy from Another Solution	Copies a method in from another Solution.
Delete	Send the method to the recycle bin.

The Method Editor

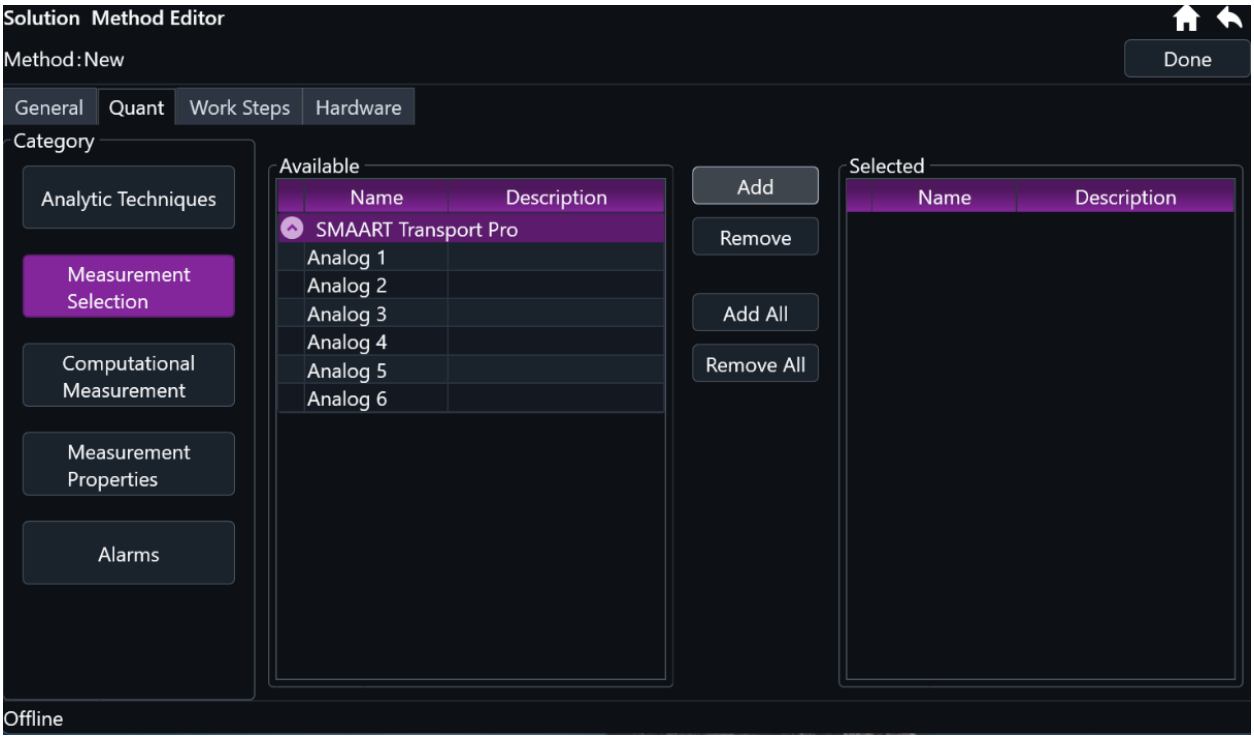
Select a method and click **EDIT** to open the **SOLUTION METHOD EDITOR**. Its functions are divided into four tabs: **GENERAL**, **QUANT**, **WORK STEPS**, and **HARDWARE**.

General

Set the method **NAME** and an optional **DESCRIPTION**. Select **OVERRIDE RUN NAME** to name all data under a certain prefix instead of the default.

Quant

The **QUANT** tab is where the method is built, selecting measurement parameters and properties. The categories listed on the left must be completed the first time a method is created.



Measurement Selection

Select which measurements this method reports. The **AVAILABLE** list shows what the Solution's components can provide. Use the add/remove controls to build the **Selected** list on the right.

Computational Measurement

Build a measurement that is calculated from other values rather than read directly, using the **Expression Editor**. Write a formula from the building blocks Ensight provides:

- Basic Algebraic Operators and General Math Functions for arithmetic.
- Trigonometric Functions and Conditional Functions for anything more involved.
- Boolean Operators for logic.
- Constants and Variables, including the other measurements in the method, which are inserted by name.

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Measurement Properties

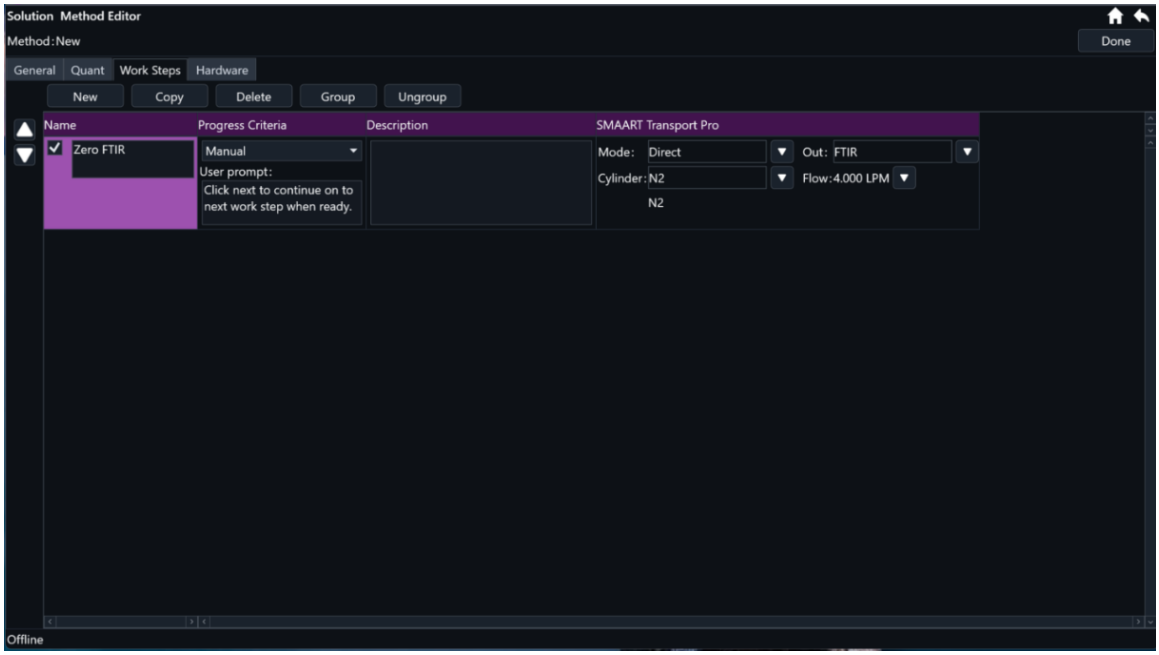
Set how each measurement is presented: **UI Label**, **Units**, and display **Format**.

Alarms

Configure alarm conditions based on hardware outputs, measurements, or computational measurements.

Work Steps:

The **Work Steps** tab is a sequencer. Each step tells the hardware what to do and the duration for the step, and the instrument works through the list in order when the method runs.



Every step carries three things: **NAME**, **PROGRESS CRITERIA** (decides when the step is finished and when to advance to the next step), and **DESCRIPTION** dialog box to provide background information on the step, and the per-component settings for that step. **SMAART Transport** defines the gas, the target concentration, desired flow rate, and where the gas is being sent.

Status	Meaning
Duration	A set amount of time has passed. Entered as hours, minutes, and seconds.
Manual (User Prompt)	The operator reads the written prompt and clicks **Next** to continue. Use this when a person needs to do or check something.
Sample Counter	A set number of samples has been collected.
While Cycle Counter	Selected step(s) will loop for a set number of cycles when Process Criteria are Grouped,
None	No progress criteria

NOTICE The recommended **Process Criteria** if a data acquisition instrument is not connected to Ensight is **Manual**.

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Build A Work Step Sequence

1. Add a Step

   Click **NEW**. Give the step a clear name.

2. Configure Advancing to Next Step

   Choose the **PROGRESS CRITERIA**. For a timed step, set the **Duration**. For a step that waits on a person, choose **MANUAL** and write a prompt.

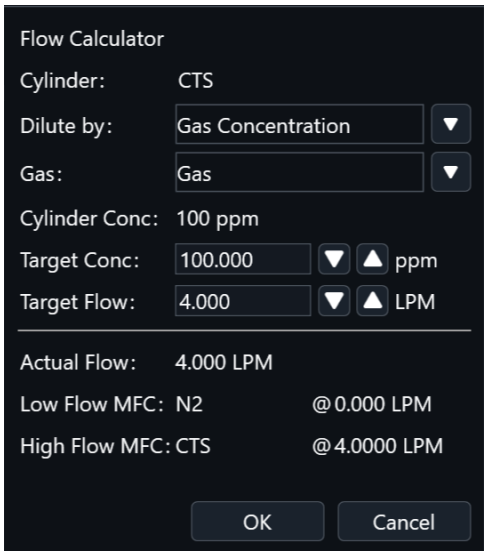
   - For a **SAMPLE COUNTER**, select the number of desired data points before the method progresses.
   - For no advancement criteria in situations where gas selection is triggered by MODBUS, select **NONE**.

NOTICE	Setting a short equilibration time on flow-changing steps will allow the reading to settle before the criteria starts.

3. Configure the SMAART Transport Pro

   Under the SMAART™ Transport Pro header, several different criteria can be defined in each Work Step. The **MODE** dictates the type of measurement, If Mode is set to **Direct**, **OUT** determines which instrument, and **CYLINDER** selects the cylinder being delivered. Select the Calculator  next to **Flow** to open the **Flow Calculator.**

   The **Flow Calculator** gives the user full control over gas dilutions and flow rates. The connected cylinders can be delivered undiluted or at a diluted via concentration. The target concentration and flow rates are configurable. The software automatically utilizes the best MFC for the selected flow rates based upon the **Target Flow. This** ensures the highest delivery accuracy.



4. Order and Group

   Use the up and down arrows to put the steps in the right order. Select multiple Work Steps and select **Group** to bundle related steps together.

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8. Publishing and Integration

This chapter provides instructions on how to transfer results from Ensight to another program or export them to a file for review.

Exporting Data

There are two publishing component options for transferring measurements. Either one can be added to the Solution from Component Selection in the **SOLUTION EDITOR**, then configured on where to send the data.

Component	Function
CSV Publisher	Write each measurement to a comma separated file, set the destination under **SAVE CSV TO**.
MODBUS Publisher	Publishes measurements over MODBUS so a control system, historian, or PLC can read them directly.

Default Connection Settings

Status	Meaning
MODBUS IP Address	192.168.254.72
MODBUS Port Number	502
MODBUS Slave ID	1
Data Location	C:\ProgramData\Ensight

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9. Running a Method

This chapter gives an overview of how to begin a run and what happens during each stage.

Before Starting

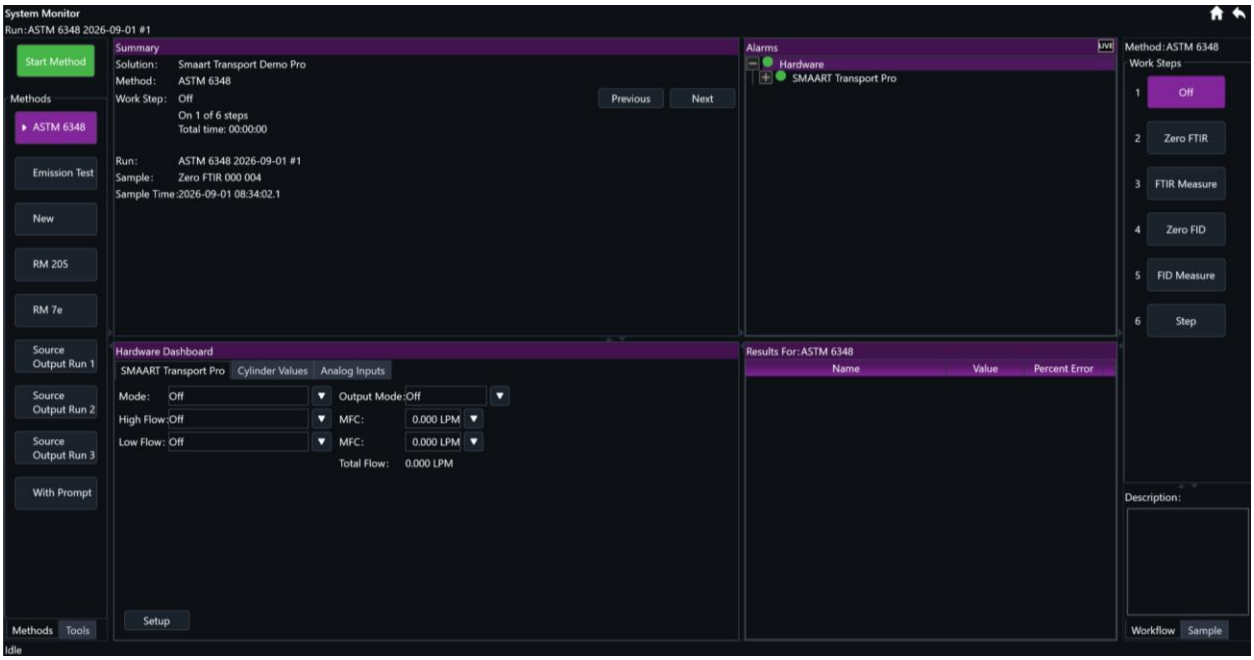
A run needs three things to be true:

- A Solution is active (name is not blank).
- The status is **Idle** or **Connected**.
- A method is selected, shown next to **Active Method**.

NOTICE	If the status reads **Offline** or **Service Unavailable**, the hardware is not connected to the software yet. The connection must be fixed before attempting to start a run.

System Monitor

Click **System Monitor** from the home screen. This is where the run can be observed via the two tabs on the left, **Methods** and **Tools**, along with several panels that update live during a run.



Action	Meaning
Methods List	Every method that can be run, with the green Start Method button above it.
Summary	The active Solution, method, current run, sample, and sample time.
Alarms (LIVE)	Live alarm status for the hardware and the gas platform.
Work Steps	The steps of the running method and the current place in the sequence. This can be toggled in the **Tools** tab.
Data Table	A running tabulation of data vs. time . This can be toggled in the **Tools** tab.
Error Log	A running tabulation of any errors that may occur while collecting data. This can be toggled in the **Tools** tab.

Action	Meaning
Sample List	A running tabulation of data names as they are collected and hardware information. This can be toggled in the **Tools** tab.
Save as .CSV	Save the live data from the data table to a .csv file.
Hardware Dashboard	Live readings from the SMAART™ Transport Pro.
Results	The measured values for the active method as they are produced.

1. Select the Method
   On the **Methods** tab, select the desired method.

2. Select Start Method
   Press the green **Start Method** button. The status bar moves off **Idle** and the run begins.

3. Follow Work Steps
   The **Work Steps** panel highlights the current step and counts the progress. This can be toggled via the **Tools** tab in the bottom left. The **Hardware Dashboard** shows the gas platform responding, and **Results** fill in as previously selected/inserted values are measured.

4. Answer Prompts
   If a step was built with a **Manual** criterion, the run pauses and shows the prompt. A run with a manual step will not continue until the prompt is completed or advanced.

5. Finish the Run
   The run works through post-run processing and returns to a resting state. To finish a run early, use the **Stop Method** control, which takes the system through a clean shutdown of the run. Once a method is stopped, the hardware will revert to the first Work Step in the sequence.

NOTICE To pause a run while data is being collected, select the method name.

The table below defines the stages each run goes through. During a run, the status bar will name the current stage.

Stage	Meaning
Idle	Connected and ready. Runs start from here.
Start Run	The run is being set up.
Waiting on Preconditions	The system is held until the conditions the method needs are met, such as flow stabilization or the hardware reaching a state.
Acquiring Run	Spectra are being collected and measurements produced. This is the main body of the run.
Run Suspended / Resuming Run	The run is paused and can be resumed.
Post Run	The run finished collecting and is doing its final processing.
Aborting Run / Post Run Abort	The run is being stopped early and cleaned up.
Stopping / Stopped	The run has ended.
Error Recovery	Something went wrong and the system is recovering. Check the alerts and error logs.

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Reviewing and Analyzing Runs

The data collected from every run is saved according to previously established user settings. **Run Management** is where a run can be reopened, and the results can be reviewed.

Run Management

Click **Run Management** from the home screen. It offers two ways in:

- **Runs** list the collected runs to browse, sort, and open them.
- **Review Run** reopens a run to review the results in detail.

Reviewing a Run

Open a run to see what was captured. A run holds the sample information recorded at the time of the run for captured results. From the review screens it is possible to:

- Step through the samples in the run and read the results for each.
- Show output **Overlays** to compare one against another dataset/run.

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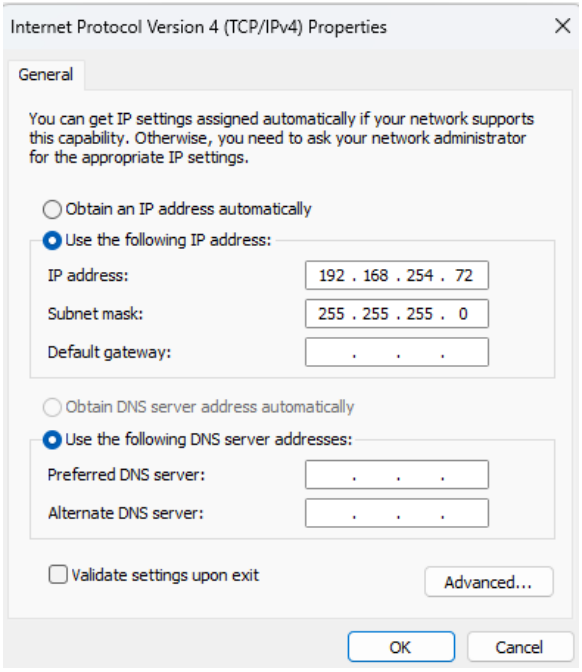
Appendix A. Connecting SMAART™ Transport Pro to a PC

1. Ensure SMAART™ Transport Pro is powered on using the provided cable and connected to computer via ethernet cable.

2. To define the IP address and connect the instrument to the PC, perform the following:

   - Open **VIEW NETWORK SETTING** and select the connected ethernet to open ethernet properties.
   - Select **INTERNET PROTOCOL VERSION 4 (IPV4)**.
   - Select **USE THE FOLLOWING IP ADDRESS** and type in the IP address **192.168.254.72**.
   - The subnet mask will automatically populate with **255.255.255.0**.
   - Select **OK**.



3. Ensure that Ensight is configured to Hardware.

   - Open the **SOLUTION EDITOR,** then **COMPONENT CONFIGURATION.** Click on **SMAART TRANSPORT PRO,** select **COMMUNICATION.** Click on **HARDWARE.** This should automatically populate the software with the appropriate settings.
   - Return to the home screen utilizing the home icon in the upper right. If set up correctly, the **SYSTEM STATUS** will say **IDLE** or **CONNECTED**.

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