



OpenAir™

## VAV static – PC Tool

for use with GDB / GLB / ASV181.1E/3

## ACS941

Version 2.00

### Use

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The ACS941 software is used for setting and displaying the parameter values with the help of a PC. It is designed for use with the following types of controllers:

- **VAV static – Compact Air Volume Controller GDB181.1E/3**
- **VAV static – Compact Air Volume Controller GLB181.1E/3**
- **VAV static – Modular Air Volume Controller ASV181.1E/3**

The connection between PC and VAV static controller is made via the AST11 interface converter.

### Ordering and delivery

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ACS941 can be ordered in 2 different ways:

1. As an individual item: PC Tool **ACS941**
2. As a component of the **AST21** service case comprising:
  - The ACS941 software
  - The AST11 interface converter
  - Cables for the connection between AST11 and VAV static
  - Operating Instructions

### System requirements

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- Operating system: Windows 2000 or Windows XP
- RS-232 port

## Notes for the user

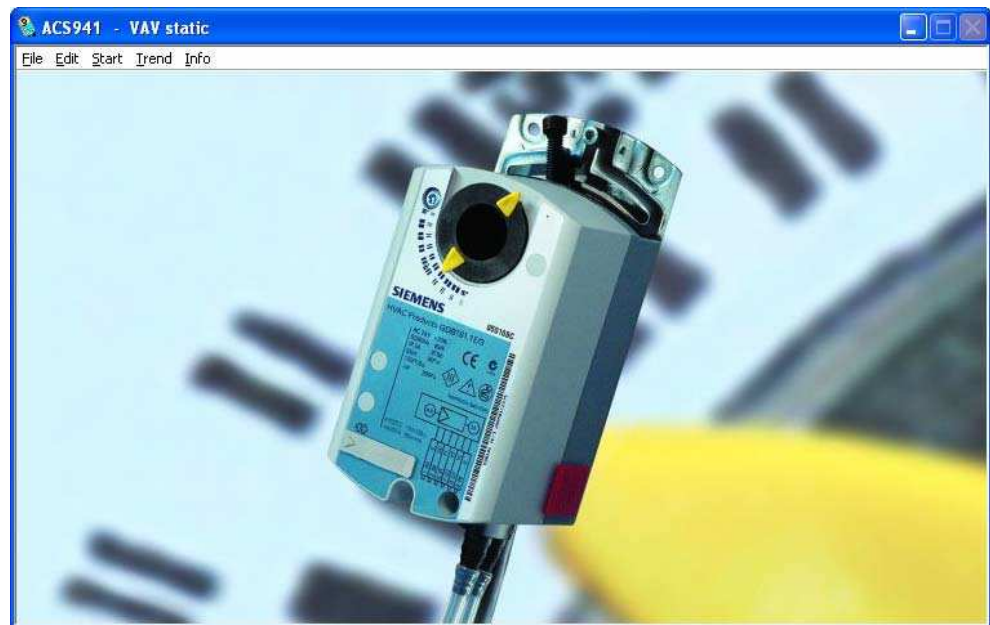
To enable the software to be used, the AST11 interface converter (to be ordered as a separate item) must be connected to a VAV static controller on one side and the serial RS-232 port of a PC on the other side.

The connection between AST11 interface converter and VAV static controller is to be made with one of the connecting cables supplied with the AST11 (refer to Data Sheet N5852).

When power is applied to the interconnected devices, the VAV static controller will be ready for operation after about 5 seconds, enabling parameter settings or readouts to be made.

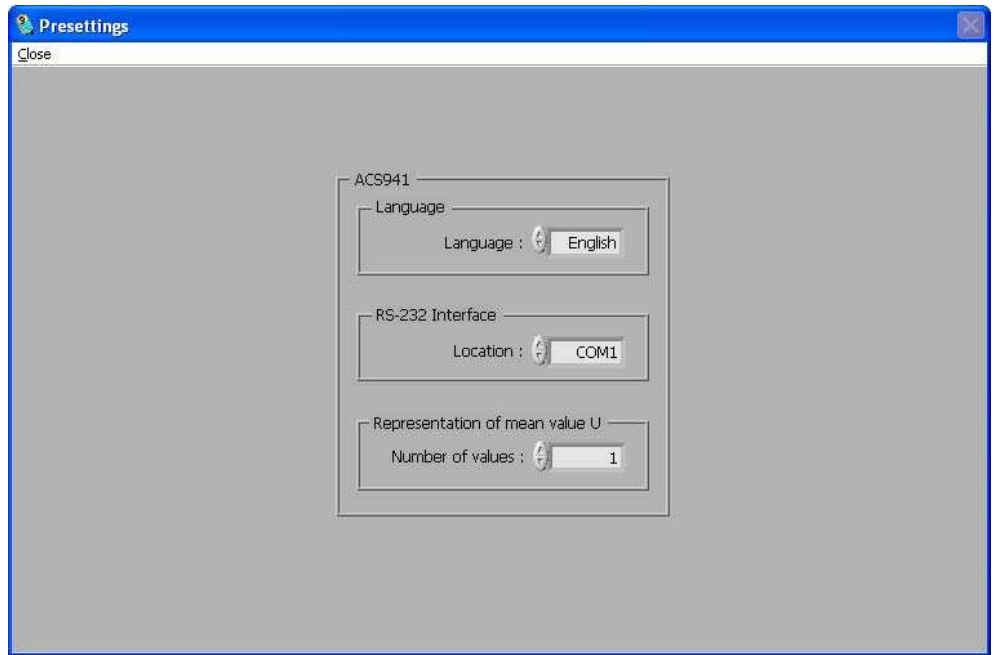
The functions provided are matched to the controllers type GDB / GLB / ASV181.1E/3.

## Main window "ACS941 - VAV static"



Menu   Submenu	Meaning
File   <i>Exit</i>	Leaving the program.
Edit   <i>Presettings</i>	Opening dialog box "Presettings".
Start	Opening dialog box "VAV static - Online".
Trend	Opening dialog box "Trend - Online" / "Trend - Offline".
Info	Information about the ACS941 version and software version of the VAV static controller.

## Dialog box "Presettings"



Group box	Meaning
ACS931	User settings.
<i>Language</i>	Selecting the language (de/en/fr) for the dialog.
<i>RS-232 Interface</i>	Selecting the serial port on the PC.
<i>Representation of mean value U</i>	Selecting the number of measured values (0...10) for indicating the actual value signal of the air flow.

Menu / Submenu	Meaning
Close	Back to the main menu.

## Dialog box "VAV static - Online"

Group box	Meaning
Project	Displaying the project data.
EEPROM	VAV static parameters.
<i>Set values</i>	Active parameter values.
<i>Reference values</i>	Backup parameter values from manufacturer.
Info	Displaying waiting times and status information.
Calibration	Control and calibration functions.
Control	Setpoint preselection functions.
Measured values	Displaying setpoints and actual values, pressure differential and air flow.
Settings	Entering the setpoint with digital setpoint preselection (overriding by PC tool) and number of values for mean value "U".

Menu / Submenu	Meaning
File	Project handling.
<i>Open Project</i>	Opening the archived project.
<i>New Position</i>	Opening an existing project position.
Close	Back to the main window.

### Project



Project-specific data can be displayed in this box (retrieved via *File* | ...).

Display boxes	Action
Project: <input type="text"/>	Project name.
Position: <input type="text"/>	Mounting location.
Siemens Controller: <input type="text"/>	Type of Siemens VAV static controller.
Manufacturer Designation: <input type="text"/>	Type of air volume controller (usually loaded via <i>Edit</i>   <i>Load EEPROM values</i> ).

Special feature:

Using *File | Open Project* and *File | Load Position*, archived parameter values can be loaded to the air volume controller for checking purposes. If the values loaded by VAV static do not accord with the archived values, the relevant boxes for the reference values will be highlighted in red. The set values loaded by VAV static will be overwritten by the project data.






EEPROM

Button	Action
	When clicking on “Send to VAV”, the values displayed in group boxes “Set values” will be downloaded to the VAV static controller and then verified.
	When clicking on “Read from VAV”, the data saved in the VAV static controller will be loaded back to group boxes “Set values” and “Reference values”.

Info

When clicking on “Open fully” or “Close fully”, information about the waiting time and – during zero point calibration – extra information will be highlighted in red.

Calibration




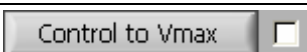
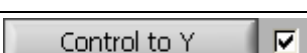
Button	Action
	Actuator will travel to the fully open position (depending on the selected direction of rotation).
	Actuator will travel to the fully closed position (depending on the selected direction of rotation).
	Actuator will stop.
	The VAV static controller will switch to control mode.  Note: This mode depends on the parameters set and on the input signals applied (Y1, Y2, YC).
	Enforced calibration of the differential pressure measuring unit of the VAV static controller. When clicking on “Zero point calibration”, the same text will appear in the Info group box for about 1 minute. When this information disappears, zero point calibration is completed and the VAV static controller is again ready to operate in normal mode.  “Zero point calibration” also appears in the Info group box when zero point calibration is periodically triggered by the VAV static controller.

Control

Control is used for analog or digital preselection (overriding by PC tool) of the air flow setpoint. A choice of 2 modes is available: “Y analog” and “Y digital”.

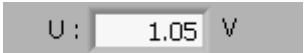
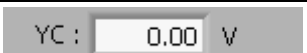
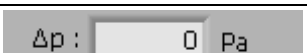
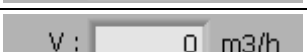
On startup, “Y analog” will be activated as the standard setting. Setpoint preselection is made via an analog signal at input “YC” of the VAV static controller.

If a change from digital to analog setpoint selection is made during operation, the waiting time will be 70 seconds.

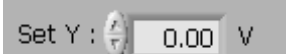
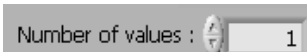
Button	Action
	For analog preselection of the air flow setpoint.
	For digital preselection (overriding by PC tool) of the air flow setpoint. The associated buttons are active only if the following conditions are satisfied: <ul style="list-style-type: none"> <li>• VAV static operating mode “con” has been selected</li> <li>• Button “Y digital” in group box “Control” has been clicked</li> <li>• Button “Control” in group box “Calibration” has been clicked</li> </ul>
	The VAV static controller maintains the “Vmin” value (set values).
	The VAV static controller maintains the “Vmax” value (set values).
	The VAV static controller maintains the “Y” value. Note that the signal at output “U” depends on the parameters “Vn”, “Vmin” and “Vmax”.

#### Measured values

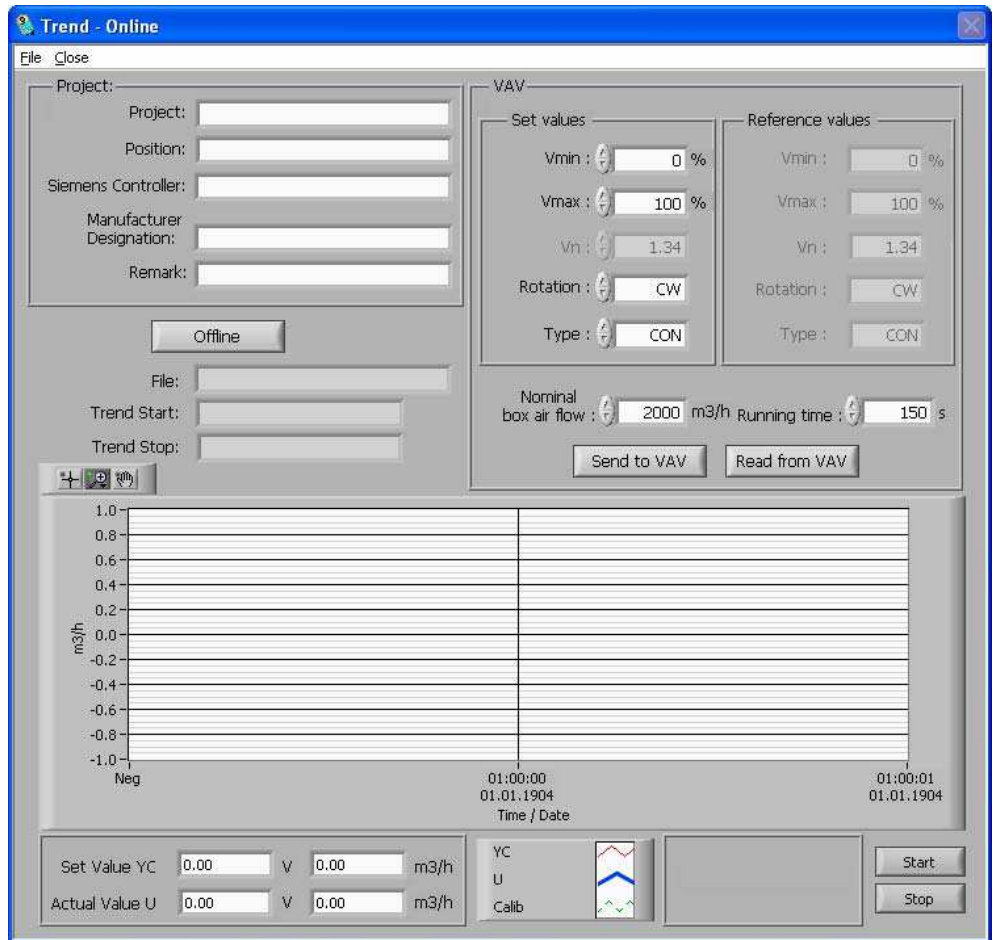
Measured values are used for displaying the actual value, the setpoint, the differential pressure and the air flow.

Display box	Action
	Air flow output voltage.
	Adjusted analog or digital air flow setpoint in Volt.
	Differential pressure in Pascal.
	Air flow in m <sup>3</sup> /h.

#### Settings

Text box / Spin box	Action
	Manual preselection of the digital setpoint: Range DC 0...10 V, resolution 0.05 V. If a change to digital setpoint preselection is made, the setpoint is to be entered here.
	This box is used for entering the number of values (1...10) required for calculating the mean value of signal “U”. This can be used for stabilizing display of the value in box “U”. The stabilized value is not available at output “U” of the VAV static controller.

Dialog box “Trend - Online” / “Trend - Offline”



Group box, button	Meaning
Project	Display and entry box for archiving the project data.
VAV	VAV static parameters.
<i>Set values</i>	Active parameter values.
<i>Reference values</i>	Backup parameter values from the manufacturer.
Trend ...	Displaying graphs, date and time of day of start and stop, file name and current measured values (online).
<input type="button" value="Offline"/> or <input type="button" value="Online"/>	Changing from online to offline mode.  Changing from offline to online mode.
<input type="button" value="Start"/>	Starting trending. Important: If started, previous recordings will be deleted. Therefore, be sure to save them under <i>File   Save Trend!</i>
<input type="button" value="Stop"/>	Stopping trending.

Menu / Submenu	Meaning
File	Project handling.
<i>Open Project</i>	Opening the archived project (online only).
<i>Load Position</i>	Opening the available position in the poject (online only).
<i>Start Trend</i>	Loading the archived trend (offline only).
<i>Save Trend</i>	Saving the measurement (online only).
<i>Print ...</i>	Printing the contents of dialog box "Trend (...)".
Close	Back to the main window.

## Online mode

When accessing dialog box "Trend - ..." and the VAV static controller is connected, the parameter values will automatically be loaded by the controller and displayed under the set values and reference values.

In group box "Project", information about the project for generating the measuring documentation can be entered in the relevant boxes.

### Note:

Prior to starting a measurement, ensure that previous recordings will be saved under *File | Save Trend*.

### Special feature:

Using *File | Open Project* and *File | Load Position*, archived parameter values can be loaded to the air volume controller for checking purposes. If the values loaded by VAV static do not accord with the archived values, the relevant boxes for the reference values will be highlighted in red. The set values loaded by VAV static will be maintained.

## Offline mode

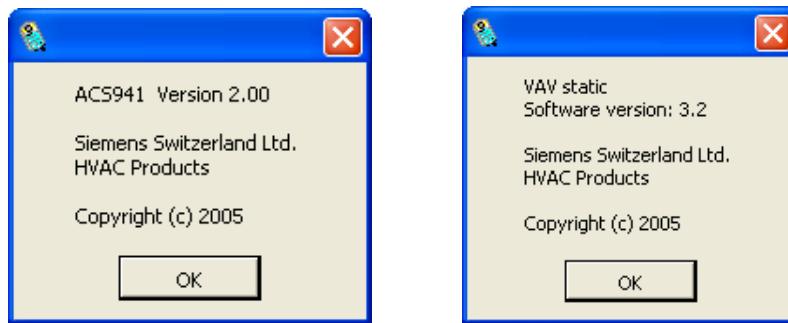
When using this mode, archived measurements can be displayed and printed at any time.



## Dialog box "Info"

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This dialog box provides information about the installed version of the PC tool and the software version of the VAV static controller. Example:



If there is a need to ask for support, please have the following information at hand:

- Type and version of the ACS941 PC tool
- Type and software version of the VAV static controller

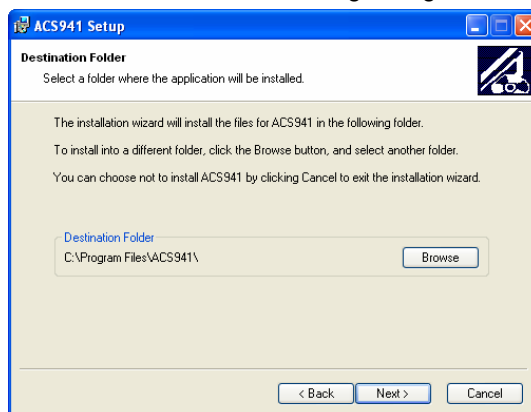
## Installation notes

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- Insert CD of the ACS941 in your PC's CD drive
- Double-click on the "Setup.exe" file. The following dialog box will appear:

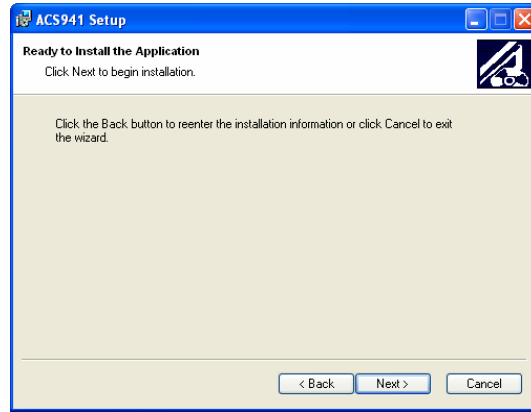


- Click on "Next". The following dialog box will appear:



- Click on "Browse" to install ACS941 in some other directory
- Click on "Cancel" if you do not want to install ACS941

- Click on "Next" to install ACS941 in that directory. The following dialog box will appear:



- Click on "Next" to install ACS941
- Click on "Finish" to complete installation of ACS941