



SwemaFlow 126

Operating instructions

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1. Introduction

Thank you for choosing a quality instrument from Swema.
SwemaFlow 125D measures air flow directly in l/s, m³/h or cfm (when set to US units).

SwemaFlow 126 includes:

- Flow capture instrument
- Flow hood 300x300mm for exhaust flow (Some valves also supply)
- Carrying case, USB-cable, charger, Operating instructions
- Calibration certificate

Accessories:

Supply / Exhaust Flow hood 650 x 650 mm, h = 800 mm, Part.no: 769640

Cross for Swirl diffusers, Part no. 769650

Supply / Exhaust Flow hood 250 x 650 mm, h = 800 mm, Part.no: 760740

Exhaust Flow hood 300 x 300 mm, h = 130 mm, Part.no: 761550

2. Technical data

Measuring range:

Air Flow: 1,5... 125 l/s, 5,4... 450 m³/h, 3.2... 260 cfm

Temperature: 0...+50°C, 32...122°F

Barometer: 600... 1200 hPa, 18...35 inHg

Measurement uncertainty:

Air Flow: ±3% read value, min 0,5 l/s

Temperature: ±0,5°C

Barometer: ±3,5 hPa

Back-pressure method uncertainty: ±10% min 1 l/s

At 95% coverage probability in non condensing, non moist air, <80 % RH, non aggressive gases

Measuring method:

Mass flow, net of hot wires

Weight:

1,82 kg (including capture hood 300x300mm and throttle ring)

3. Function

The current flow is presented on the display two times seconds. Swema Flow 126 can display real or standard flow by measuring air temperature and barometric pressure.

On/Off (RED button)

Turn on and off the instrument by pressing the RED button. When turning on the instrument, the display will first show firmware version and then battery voltage. "It will after that go into BP (Back Pressure) mode. When "Real" is displayed SwemaFlow 126 the flow at actual temperature och barometric pressure. To change to standard flow "std" (The flow is recalculated to a density at 20°C and 1013hPa) the PC-program SwemaTerminal 3 is used. The program can be downloaded at www.swema.com.

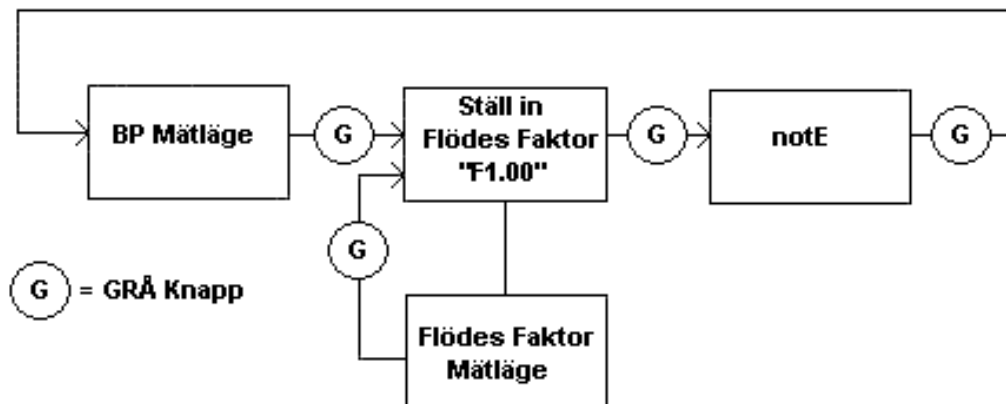
Toggle the display light by pressing the RED button while the BLUE button is held down. The instrument is shot off automatically after ten minutes if no button is pressed.

Unit (BLUE button)

By pressing the BLUE button the display toggles between l/s, m3/h, air temperature (°C) and barometric pressure (hPa). When set to US units it toggles between cfm, air temperature (°F) and barometric pressure (inHg).

Mode (GREY button)

Toggle between Back Pressure mode, Flow Factor mode and stored values (notE).



Flow hood selection

For exhaust flow any hood size can be selected. For supply flow, use a longer hood (650x650 or 250x650mm) to stabilize the flow.

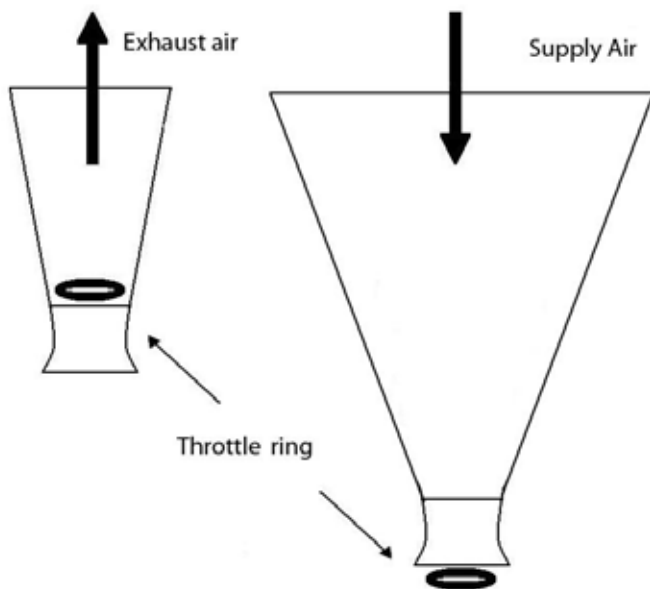
The included 300x300 hood can be used for supply if it gives the same result on the valve type as one of the longer hoods.

All hoods to SwemaFlow 126 can be used for exhaust flow measurements.

BP Mode (Back Pressure)

When measuring with any Flow capture the flow may be influenced by the Flow capture itself. The flow may be throttled. This can be corrected by using Back Pressure mode. By measuring two times, with and without an extra throttle ring, SwemaFlow 126 calculates the flow that reflects the true flow with no capture interference.

It doesn't matter if you start to measure with or without the throttle ring the important thing is that one measurement is with the throttle ring and the other one without. It's important where the throttle ring is placed, when measuring with the throttle ring it should always be placed after the hot wires in the sense of flow direction.



BP Measurement (BLACK button)

Place the hood with the sealing list making a proper seal around the valve. Start with or without the throttle ring and press the BLACK button (button on the side). SwemaFlow 126 will wait 2 seconds to let the flow stabilize in the flow capture, the display will show "P1" (Point 1) and start to count up from 0 to 2 (the stabilization time). It will after that make a measurement for 5 second during wich the display will show the measured value. When finished "P2" (Point 2) will be shown in the display. Within 1 minute Point 2 need to be measured otherwise SwemaFlow 126 will return to Point 1. Remove or put on the throttle ring and press the BLACK button again, SwemaFlow 126 will repeat the same procedure as for P1. When finished the display will show the True value without any influence by the flow capture. If the value is flashing it means that something is wrong and the value might not be correct, if so, make a new measurement. By pressing the GREY button the lowest measurement (with throttle ring) of the two points are displayed for 2sec before it return to the true value again. By pressing the BLUE button the higher of the two points will be displayed for 2sec.

Save measurement (BLACK button held down)

When P1 and P2 is measured the measurement can be saved by holding down the BLACK button for 2 sec. The display will show which note number the measurment is saved as and then return to measuring mode.

If you don't want to save the measurement just press the BLACK button and you will return to measurement mode without saving.

Flow Factor Measurement (F-mode)

In Flow Factor mode the flow is multiplied with a flow factor (flow factor 1.00 will not alter the flow). A flow factor can be used to compensate for example a leakage. Warning: Changing to anything else than 1.00 will alter the reading from calibration certificate. The display will show the text "Factor" when the instrument is in F-mode. While in BP Mode change to F-mode by pressing the GREY button. (Bp-mode does not use a Flow factor) The instrument will change to F-mode and display F1.00 or the value of flow factor that the instrument used last time in F-mode after being turned on. For example F1.10 will multiply measured flow with 1.10 and display the result.

Take a measurement with a Flow Factor

To measure with the flow factor displayed next to F press BLACK BUTTON for less than 2 seconds. To change the flow factor instead hold down the BLACK button for minimum 2 seconds when F1.00 is shown. The first digit will start flashing. Change value by pressing GREY or BLUE button. When correct value is chosen confirm by press shortly the BLACK button and the second digit will start flashing. Repeat the same procedure with the second and third digit. After the third digit is confirmed the instrument will start measuring in F-mode. Measuring can be stored in the same way as in BP-mode. To return to BP Mode press GREY button 3 times (First press will show FX.XX, second will show notE and the third will take you to BP mode).

HOLD function (BLACK button)

If the BLACK button is pressed down shortly the display will freeze the measured value. "Hold" is shown in the upper left corner of the display. Press the BLUE button to toggle between the frozen values (frozen air flow, temperature and barometric pressure). Release frozen values by pressing down the BLACK button for less than 2 seconds.

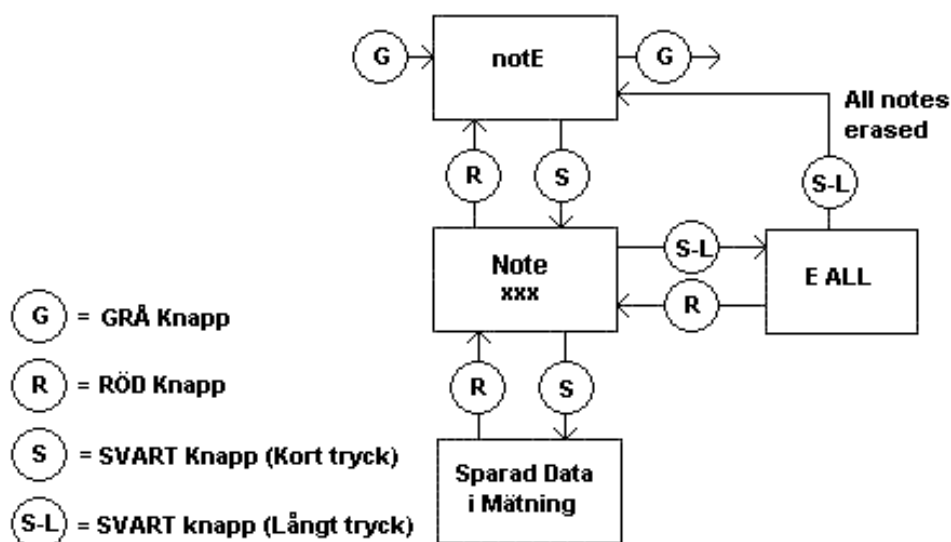
Save measurement (BLACK button held down)

If a measurement is frozen it can be saved by holding down the BLACK button for 2 sec. The display will show which note number the measurement is saved as in the note book and then return to measuring mode.

Note book (notE)

If GREY button is pressed two times when in BP Mode notE will be displayed. To enter the note book press the BLACK button. "Note" and the number of the last saved note will be shown on the display. With GREY and BLUE button it's possible to scroll through the saved notes. To return to notE press RED button.

To see saved measurement in a note press BLACK button. With GREY and BLUE button it's possible to scroll through the saved measurements in the note (air flow, temperature and barometric pressure). To return to notes press the RED button. To erase the note memory hold down the BLACK button for 2sec, "E ALL" (Erase All?) will be shown in the display. To erase the note memory hold down the BLACK button for 2sec, "E ALL" (Erase All?) will be shown in the display. After all notes are erased "notE" will be shown in the display, press GREY button to go to BP Mode. Use the PC-program SwemaTerminal 3 to transfer saved data to PC.



4. Charging

SwemaFlow 125D has built-in rechargeable Li-ion-batteries. Battery charge time is approximately 4h. The charger can be connected to the instrument longer without damaging the battery. The battery can also be charged with a USB cable connected to a computer. The green led will have a fixed light during charging, when fully charged the green led will be turned off. It is recommended not to use the instrument while charging. Therefore the display is blinking as a warning during charging. Caution! Use only the original charger other charger can damage the batteries.

Batterinivå

När du slår på instrumentet kommer displayen att visa spänningsnivån på batteriet. Ett fulladdat batteri visar ungefär 4,1 V (den kommer att sjunka till 3,8-3.9V ganska snabbt). När spänningen är lägre än 3,1 V kommer en batteri symbol att börja visas på displayen. När spänningen är lägre än 2,8 V kommer instrumentet att automatiskt

5. Driver installation

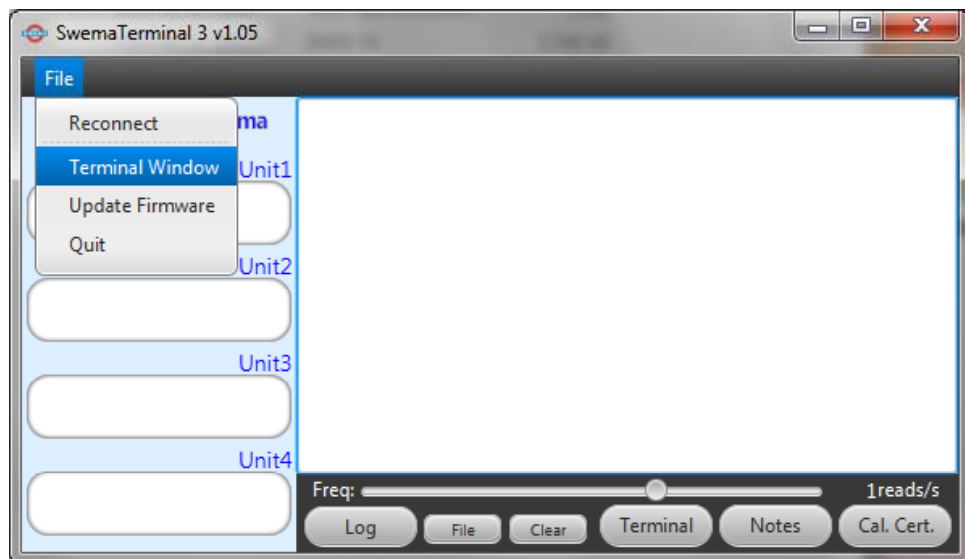
To use SwemaFlow 126 with a Windows 10 PC, just connect the USB cable and wait for the driver installation to complete. To use SwemaFlow 125D with an earlier OS driver matching .inf-files must be used by the OS. The necessary files and drivers are automatically installed with the free software "SwemaTerminal 3".

1. Download "SwemaTerminal 3" zip-file from www.swema.com.

2. Unzip the file and run the setup file. When the setup is done connect the USB cable to the PC and turn the instrument on. The PC will now install the necessary drivers automatically.

In case the driver installation doesn't succeed you can also do it manually. Open the device manager, right click on "unknown device" and then "update driver". The drivers can be found at "C:/Program Files/Swema" (make sure that the box "include sub folders" is checked).

6. SwemaTerminal 3



With SwemaTerminal 3 it's possible to change settings, print stored measurements, update firmware, print calibration protocol. Information of what kind of instrument and at which COM-port it's connected can be found on the top left side. For SwemaFlow 126 it is only possible to change settings in "Terminal Window".

Firmware update

On www.swema.com the newest firmware version will be possible to download. To update the firmware first download the new firmware to your PC. Start SwemaTerminal 3 with the SwemaFlow 125D connected to a USB port with the USB cable. In SwemaTerminal 3 click on "File" and then "Update firmware". A new window is opened, follow the instructions in that window.

Terminal Window

Under the "File" dropdown menu it's possible to open a Terminal window through SwemaTerminal 3 to access the instrument PC menu. There is access to for example Averaging time, automatic shut off time and the possibility to erase saved data (Erase Notebook).

7. PC-menu in instrument

After "Terminal Window" is clicked a new window is opened. Press "Enter" on the keyboard and the main terminal menu for SwemaFlow 126 will be opened. To change a setting use the PC keyboard and press on the corresponding letter.

SwemaFlow 126 Firmware: 1.02 Hardware: 0.9

[T] Averaging Time: 0.2 seconds responsive
[D] Density compensation: Real Flow
[S] Auto Shutoff: 10 minutes
[P] Print Calibration Certificate
[N] Print Notebook
[E] Erase Notebook
[O] Delimiter: Comma
[U] Unit System: US
[H] Charging: On
[] Space - Print Measurement Values

"Averaging time":

A higher "Averaging time" will use more internal samples for the averaging and give a more stable value.

"Real" or "Standard flow":

If set to "Real" the flow shows as it is at present temperature and barometric pressure. Standard air flow is used to present the air flow at standard condition of 1013 hPa (29,9 inHg) and 20 °C (68 °F).

"Auto Shutoff":

Set in minutes after how long time the instrument will be turned off if not used. If set to 0 min the auto shutoff is disabled.

"Print calibration certificate" och "Print Notebook":

Show SwemaFlow 125D:s calibration certificate and print the stored measurements to the PC.

"Point" or "Comma":

Set point or comma as decimal separator for the the prinout of stored values and for logged measurement to PC.

"US" or "EU/ASIA":

Set unit system to US (ft³/min, °F, inHg) or EU/ASIA (l/s, °C, hPa).

Charging On /Off

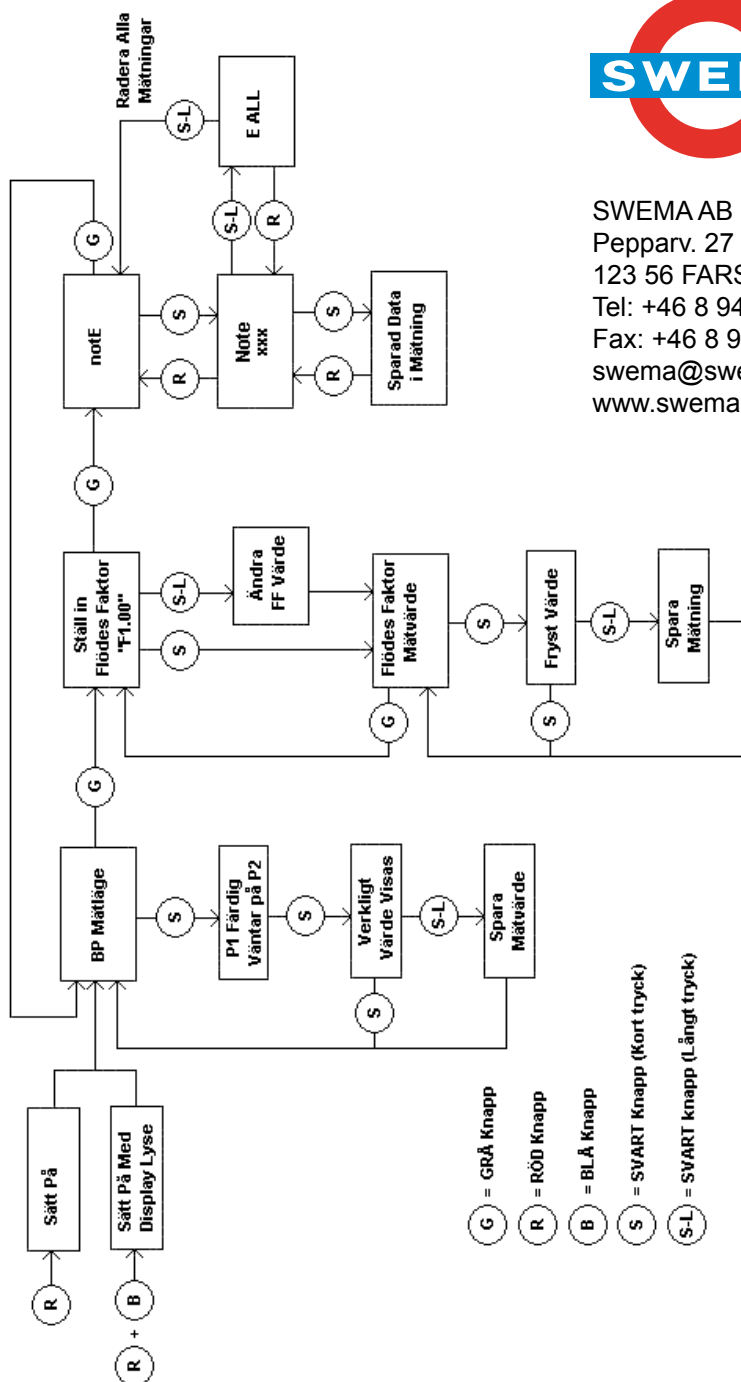
OBS: When transferring measurements values (with space), charging should be set to Off because the measurement values can be influenced by the charging.

Space

Sends measurement values to PC.



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- (G) = GRÅ Knapp
- (R) = RÖD Knapp
- (B) = BLÅ Knapp
- (S) = SVART Knapp (Kort tryck)
- (S-L) = SVART knapp (Långt tryck)