7. SwemaTerminal 3 - PC

By connecting to SwemaTerminal 3 (freeware on swema.com) it is possible to see the measurement values on a PC. Click file to save to a file. Click on “LOG” to log the values at choosen sampling frequency to the choosen file. Open a Terminal by clicking “File” at the top of the program and then “Terminal Window”.

”**Real” or ”Standard flow”:** Print “d” to select ”Real flow” - as it is at present temperature and barometric pressure or “Standard flow” to present the air flow at standard condition of 1013 hPa (29,9 inHg) and 20 °C (68 °F). Print “u” and select US (cfm, ° F) or SI units.

8. Technical data

Measuring range air flow: 1-65 l/s, 3,6-234 m³/h, 2,1 ...137,7 CFM
Measuring range temperature: 0-50°C, 32...122 °F
Measuring range barometer: 600...1200 hPa, 18...35 inHg
Measuring method: Mass flow, 1,7 dm² net of hot wires
Shaft adjustable length: 45...80 cm
Measurement opening (inner at valve): 19 x 20 cm, **Height:** 33 cm
Weight with telescopic shaft: 1,5 kg
Charging: 2 hours, with adapter 769400:100-240VAC, out:12VDC, 2,08A
or adapter 760290 200-250VAC, out 12VDC, 1,6A, Booth Europlug - EN 50075
Alternative charger: use RC-5320 charging plug, 4,15...16VDC, Max 2,4A
Plug polarity: Plus in middle, minus on side.
Alternatively charge through the USB connector: 4,1-6,3VDC, max 1.6 A.
Operation time: 2 hours with backlight and 65 l/s
9 hours without backlight and 0-10 l/s
Measuring media: Dry and moist air, nonaggressive gases

Uncertainty with coverage probability 95%:
Air flow at 20...25°C: ±3,5% read value Min 1 l/s, ±3,6 m³/h, ± 2,1 CFM
Temperature: ±1 °C, ±2 °F, **Barometer:** ±3,5 hPa, ±0,1 inHg
95% coverage probability in non condensing, non moist air, <80%RH,
non aggressive gases.
Note: When the instrument has been adjusted at Swema, the user need not to correct the measured values with corrections of the calibration protocol to obtain above stated uncertainty.

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SwemaFlow 236

Operating instructions

vers 1.03 CW20160905

1. General

SwemaFlow 236 measures air flow, temperature and barometric pressure.
The instrument is turned on and off with the red button next to the display. When the instrument is turned on the display shows the firmware version followed by the voltage of the battery before it is ready to measure. The instrument is automatically turned off after ten minutes.

The measuring equipment includes:

- Air flow hood instrument for valves up to 19x20 cm
- Telescopic handle
- Carrying case
- Charger

Accessories:

Foldable hood for measurement on supply and exhaust air valves up to 330x330 mm. Height = 560 mm,
Part.nr. 459.096

Foldable exhaust hood 300 x 300 mm, h = 100 mm
Part.nr 762.330

2. Function

The display is updated two times per second.

l/s, m^3/h, °C or hPa

Select the unit by pressing down the grey button (approx. 2s). If the measured value is in HOLD function it will be changed to the corresponding value. To select US units (cfm, ° F) see section 6. SwemaTerminal 3 - PC.

HOLD function

Press down the grey button shortly to freeze the measured value, ”Hold” will be shown on the display. Realese it by pressing down shortly again.

Display

Double click on the grey button to turn the digits on the display for easier readings. Activate the light in the display by pressing simultaneously both buttons. The light is automatically switched off when the voltage goes low.

3. Charging

SwemaFlow 236 has built-in rechargeable Li-Ion-batteries. The adapter can be connected to the instrument a longer time without damaging the battery. Green fixed light - charging, No light - battery can be fully charged - check. You can use the instrument while charging.

Battery check

When switching ON the instrument the display shows the voltage of the battery. A fully charged instrument shows approximately 4.2 V (with no adapter connected). When the supply voltage is lower than 3.4 V a battery symbol will be visible on the display and the instrument can be used for another 10 minutes. When the supply voltage is lower than 2.75 V the instrument automatically shuts OFF.

SwemaFlow 236

4. Measurement

Place the hood with a good seal around the valve.
Read the air flow value on the display.

Pressure drop

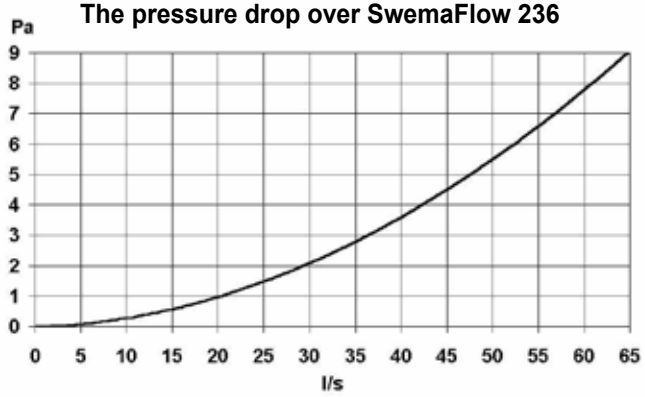
The pressure drop over the hood is low (diagram). But the hood can reduce the flow if the pressure drop over the valve is low. When the pressure drop over the hood is larger than 5% of the pressure drop over the valve, adjustment of the measured value can be made according to the table below.

Correction table:

A= Pressure drop over the hood in % of the pressure drop over the valve
B= Correction factor (multiply read value with B)

A%	B
5	1.01
10	1.05
20	1.11

The pressure drop over SwemaFlow 236



5. Calibration

SwemaFlow 236 is calibrated and adjusted by SWEMA before shipment. It is not possible to adjust SwemaFlow 236 without special instrument. If there is any problem the instrument should be sent to Swema or Swema distributor for repair. Swema recommends a calibration and adjustment interval of six months.

6. Telescopic handle

To adjust the length of the telescopic shaft, place one hand on the handle and the other at the top of the shaft. Turn the handle counter clock-wise (see picture) and adjust the shaft to the desired length. Turn the handle clock-wise to lock it. Don’t try to turn the plastic fitting between the two metal shafts.