

The terminal program

Terminal.exe

INDICATIONS
Enter --

SENSOR-VALUES

INDICATIONS
Enter --

STANDARD-VALUES

INDICATIONS
Enter --

MASS-VALUES

CONFIGURATIONS
Enter --

DIAMETER OF PIPE

CONFIGURATIONS
Enter --

SENSORAREA

CONFIGURATIONS
Enter --

MEDIUM

CONFIGURATIONS
Enter --

ANALOG-RANGE

CONFIGURATIONS
Enter --

RELAY

CONFIGURATIONS
Enter --

MEANVALUE

CONFIGURATIONS
Enter --

MIN. QTY. SUPPR.

CONFIGURATIONS
Enter --

OFFSET

CONFIGURATIONS
Enter --

SET ADDRESS

CONFIGURATIONS
Enter --

SET BAUDRATE

CONFIGURATIONS
Enter --

SELECT LANGUAGES

contact
 softflow.de GmbH
 Ulmenstr. 39
 D-15370 Fredersdorf
 Phone : +49(0)33439 548904
 Fax : +49(0) 33439 548905
 Email : post@softflow.de
 www.softflow.de

INHALT

The terminal program	3
Connecting with a PC.....	3
Program loading and installing.....	3
Program starting and configure.....	4
Port.....	5
Baudrate.....	5
Address.....	5
The program functions.....	7
Simulation of keyboard and display.....	7
Data logger with the PC.....	7
Administration of the calibrating datas (calibrating curve).....	10
Typ SF-586a, configuration and measurement	11
MAINMENUE.....	11
INDICATIONS.....	11
Sensor values.....	12
Standard values.....	12
Mass values.....	12
CONFIGURATIONS.....	13
PIPE DIAMETER.....	13
SENSOR AREA.....	13
MEDIUM.....	13
ANALOG RANGE.....	14
RELAY SWITCH CONTACT.....	15
Configuration as counter.....	15
Configuration as set point.....	16
MEANVALUE.....	17
MIN. QTY. SUPPR.....	17
OFFSET.....	18
SET ADDRESS.....	18
SET BAUDRATE.....	18
SELECT LANGUAGES.....	19

The terminal program

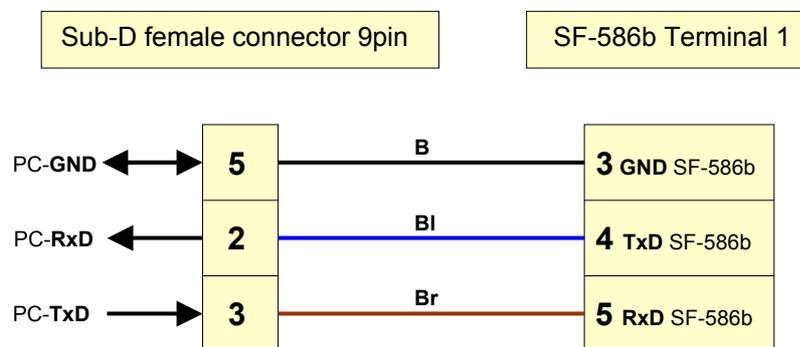
The program is made for simulation of a keyboard and the display of the SF-586a/b on a PC for configuration and display the measurement datas, for logging datas and for administration of the calibrating datas (calibrating curve).

Connecting with a PC

For connecting with a PC you need a cable with 3 lines and a female 9 pin Sub-D connector. For short cable length you need no shield. When using a shield, please connect it with PIN 5 (GND) only on the PC side.

The connecting is shown in the following picture.

The colors of the three lines could be different when using other cables.



Program loading and installing

This program can be downloaded for free from our web site.

You will find it under: <http://www.softflow.de/englisch/produkt4.htm>



Terminal-E-V1-5-1.zip

With *Setup.exe* or *SF-586a/b Terminal 1.5.1 Setup.msi* please install the program (both options can be used, they leads to the same result).



Terminal.exe

The program is stored in the directory:

C:\Programme\softflow.de\SF-586a/b Terminal 1.5.1

The configuration file is in the directory:

C:\Dokumente und Einstellungen\USER\Anwendungsdaten\softflow.de\SF-586a/b Terminal 1.5.1

USER is the actual user. The names of the directories can be different when using operating systems with other languages.

Program starting and configure

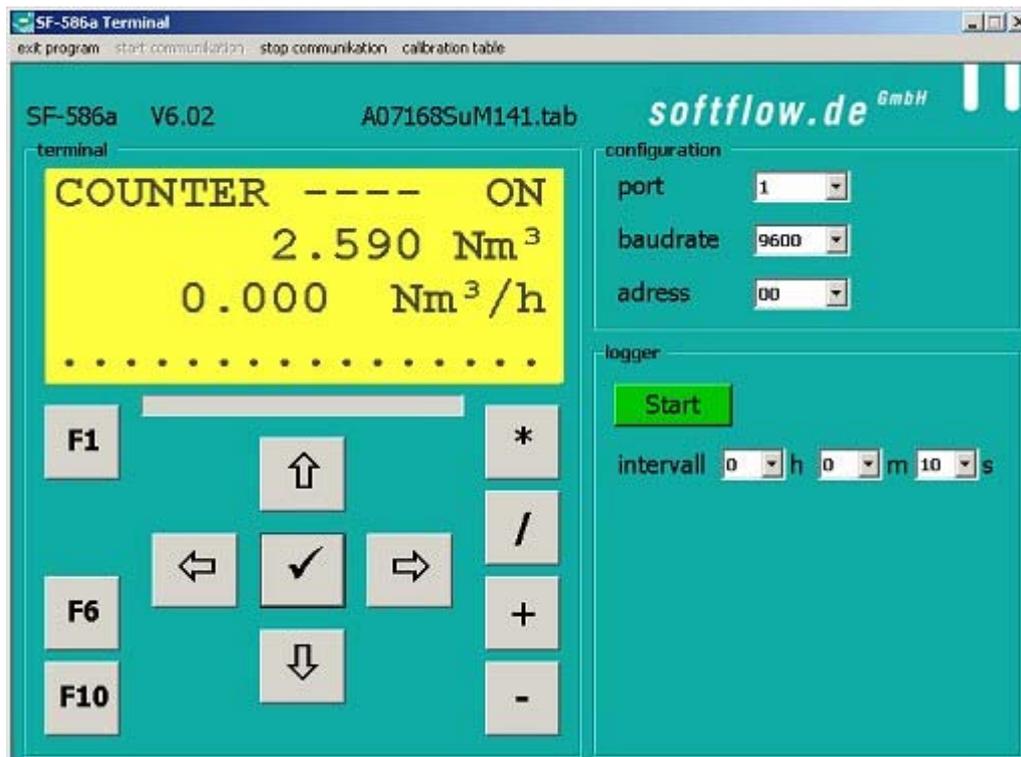
Bevor starting the program, please take notice of the following:

1. Make a connection between PC-RS232 and the electronic
2. Switch on the unit

Now you can start the program on the PC.
The following message will be shown:



If no unit was identified, then please check the above topics and the following points of explanation about the configuration:



Port

With the **port-configuration** you can select the COM-port of your PC.

Baudrate

With the **baudrate-configuration** you can/must select the transmission rate of the PC RS232 interface.

ATTENTION !

If these adjustments of PC and SF-586a/b are not equal, the contact between both will lost. The baudrate of the SF-586a/b can selected in the menue „baudrate“ of the SF-586a/b.

Address

With the **address-configuration** you can select the address of the connected SF-586a/b.

ATTENTION !

If these adjustments of PC and SF-586a/b are not equal, the contact between both will lost. The address of the SF-586a/b can selected in the menue “adress” of the SF-586a/b.

Delivery status of the SF-586a/b units is the following configuration:

baudrate	9600
address	00

The actual status of address and baudrate will be shown for a short time on the display of the SF-586a/b after switching power on:

```
SF-586a      V6.02
NV_RAM: OK
A07168SuM141.tab
ADDR.0      9.6Kb/s
```

If the contact is lost, you can synchronize with these information the terminal program again.

The program functions

The program is partitioned in 3 function groups:

1. Simulation of keyboard and display for configuration and viewing the measuring datas of the SF-586a/b
2. Data logger with the PC
3. Administration of the calibrating datas (calibrating curve)

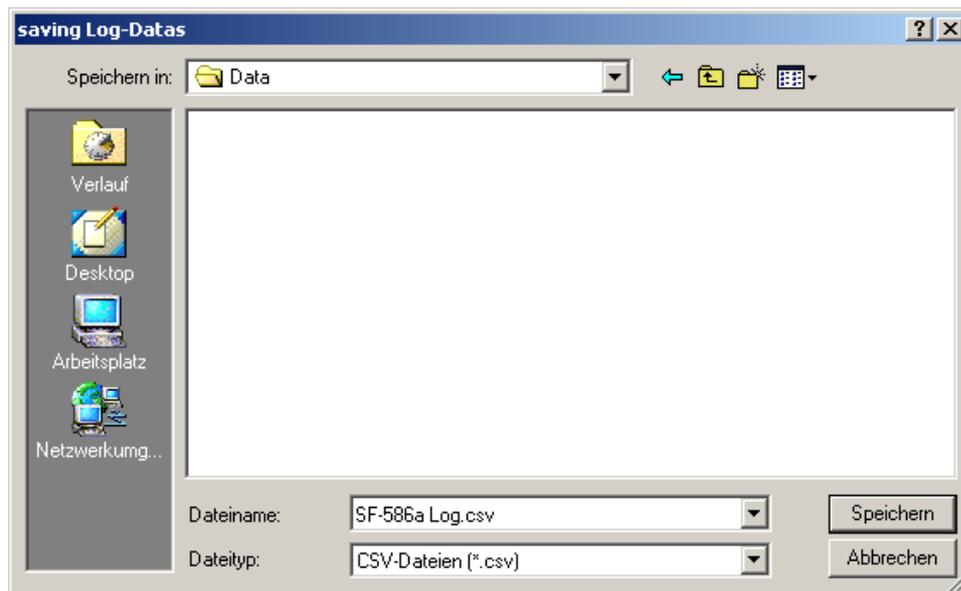
Simulation of keyboard and display

In the mode *CONFIGURATIONS (SF-586a/b)* you can select the needed input windows and then you can make the configuration inputs.

In the mode *INDICATIONS (SF-586a/b)* you can select the needed output windows, showing the actual results of the measurement.

Data logger with the PC

In the line *Interval* please select the time for the measuring interval. After using the *START* button the window *saving Log-Datas* will open:



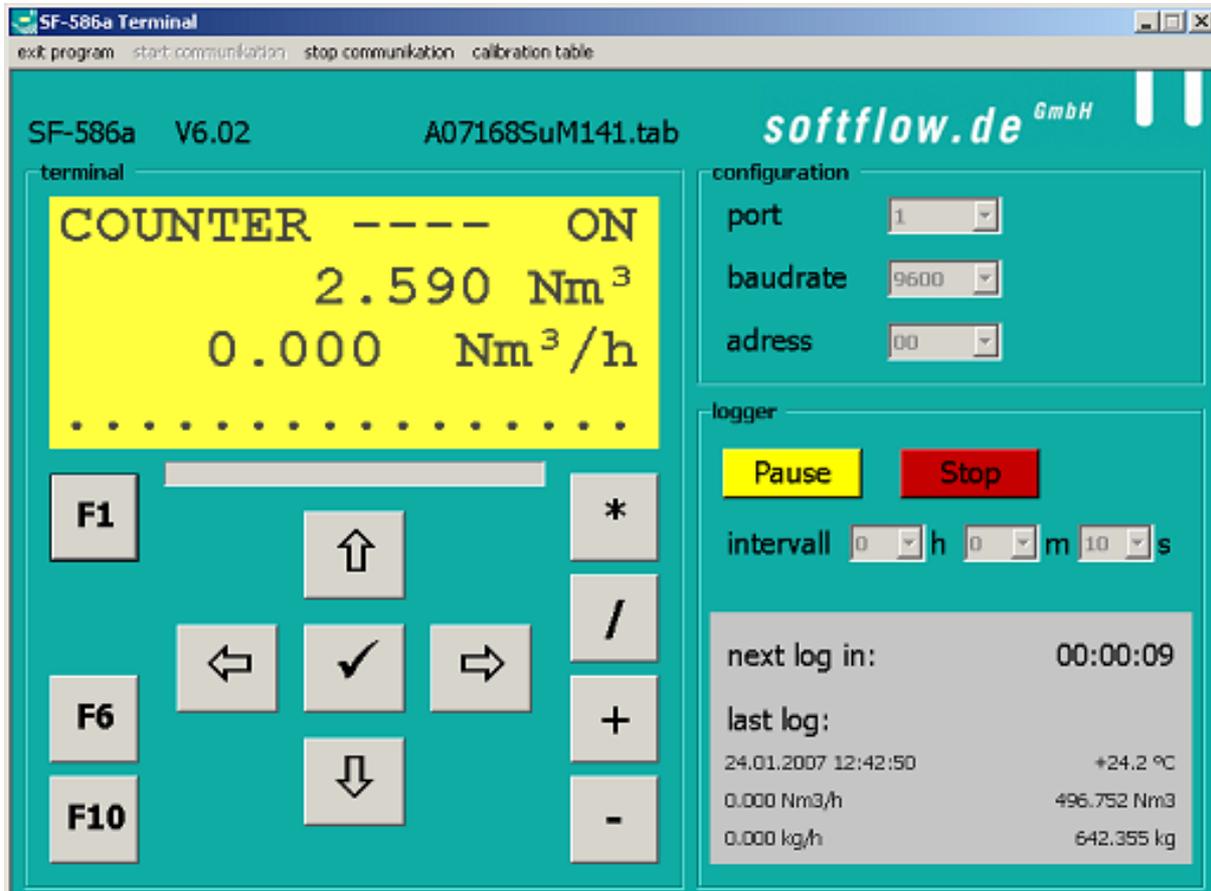
Please give in the file name. After ending these input the recording of datas will start at once (in the selected file, with the selected measuring interval).

With *PAUSE* the recording will be stoped.

With *START* the recording will be proceeded.

With *STOP* the recording will be ended.

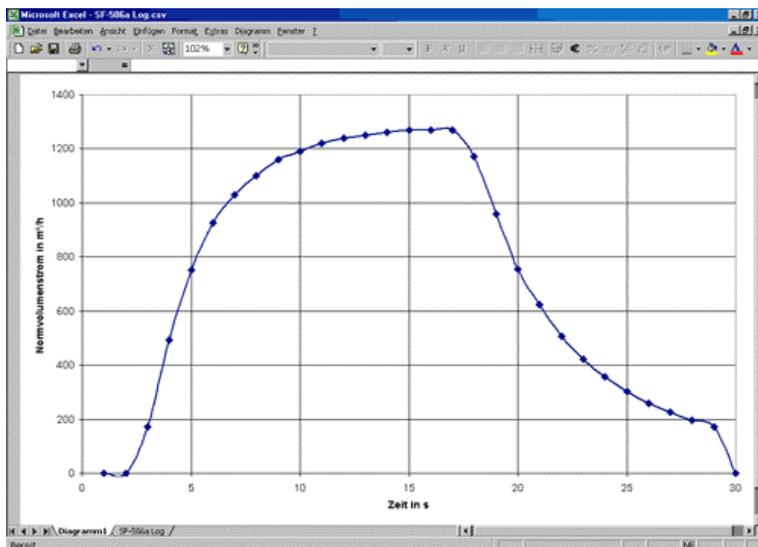
In the following picture you see the terminal window with the started data logger. In this example a measuring interval of 10 seconds is selected.



The datas will be stored in the selected directory as a table, CSV formatted (*Character Separated Values*) for using in other applications. An example you can see in the next picture.

Datum	Normvolumenstrom in m3 pro h	Normvolumen in Nm3	Massenstrom in kg pro h	Masse in kg	Temperatur in Grad C
04.10.2004 10:24:32	0	0	0	0	32,2
04.10.2004 10:24:33	0	0	0	0	32,2
04.10.2004 10:24:34	171	0	255	0	32,2
04.10.2004 10:24:35	494	0,091	689	0,166	31,8
04.10.2004 10:24:36	752	0,268	1000	0,346	31,8
04.10.2004 10:24:37	925	0,506	1220	0,739	31,1
04.10.2004 10:24:38	1030	0,778	1350	1,007	31,1
04.10.2004 10:24:39	1100	1,075	1430	1,391	30,3
04.10.2004 10:24:40	1160	1,39	1500	1,902	30,3
04.10.2004 10:24:41	1190	1,716	1540	2,325	29,7
04.10.2004 10:24:42	1220	2,051	1580	2,76	29,7
04.10.2004 10:24:43	1240	2,393	1600	3,203	29,3
04.10.2004 10:24:44	1250	2,739	1620	3,652	29,3
04.10.2004 10:24:45	1260	3,087	1630	4,103	28,9
04.10.2004 10:24:46	1270	3,438	1640	4,557	28,9
04.10.2004 10:24:47	1270	3,791	1650	5,015	28,6
04.10.2004 10:24:48	1270	4,143	1630	5,357	28,6
04.10.2004 10:24:49	1170	4,486	1480	5,799	28,4
04.10.2004 10:24:50	959	4,779	1210	6,178	28,4
04.10.2004 10:24:51	755	5,011	953	6,544	28,3
04.10.2004 10:24:52	623	5,202	786	6,725	28,3
04.10.2004 10:24:53	507	5,357	641	6,925	28,2
04.10.2004 10:24:54	421	5,485	534	7,128	28,2
04.10.2004 10:24:55	358	5,593	454	7,231	28,2
04.10.2004 10:24:56	303	5,684	385	7,375	28,2
04.10.2004 10:24:57	260	5,762	330	7,471	28,2
04.10.2004 10:24:58	225	5,829	286	7,555	28,3
04.10.2004 10:24:59	196	5,887	249	7,628	28,3
04.10.2004 10:25:00	171	5,938	219	7,682	28,3
04.10.2004 10:25:01	0	5,961	0	7,707	28,3

Recording all datas on hard disk and converting for e.g. to an Excel-format:



Evaluation of all relevant datas and graphical description:

Administration of the calibrating datas (calibrating curve)

With the function *SF-586a/b calibration table* you can read out the calibration datas and also write back to the SF-586a/b.

The datas can be edited and also stored on a PC.

ATTENTION !!

THE UNCONTROLLED CHANGING OF DATAS IN THE CALIBRATION TABLE CAN CAUSE MALFUNCTIONS OF THE UNIT.

SF-586a calibration table
close window

table

no	v in norm cm/s	P in µW
0	0	105000
1	100	232795
2	200	286375
3	300	324732
4	400	356041
5	500	381482
6	600	403366
7	700	422851
8	800	440584
9	900	456823
10	1000	471680
11	1100	485581
12	1200	499090
13	1300	512275
14	1400	524865
15	1500	536598

read out table

write in table

load table

save table

name
A07168SuM141

Typ SF-586a/b, configuration and measurement

MAINMENU

MAINMENU Enter ← → INDICATIONS	MAINMENU Enter ← → CONFIGURATIONS
--	---

with ⇐ or ⇒ switching between the windows
enter activate the chosen window

INDICATIONS

INDICATIONS Enter ← → SENSOR-VALUES
INDICATIONS Enter ← → STANDARD-VALUES
INDICATIONS Enter ← → MASS-VALUES
INDICATIONS Enter ← → BACK TO MAINMEN.



with ⇐ or ⇒ switching between the windows
enter activate the chosen window

Sensor values

Enter /	Enter /	Enter /
N: 0.000 Nm ³ /h	M: 0.000 kg/h	v: 0.00 Nm/s
T: +29.3 °C	T: +30.0 °C	T: +30.0 °C
.....

/ change the window
enter leave the window

The value of the velocity is valid under 0°C and 1013,25mbar.

Standard values

COUNTER ---- ON
2.590 Nm ³
0.000 Nm ³ /h
.....

* totalizer for the standard volume flow **ON/OFF**
F1 deleting the totalizer of the standard volume flow
enter leave the window

An overflow of the totalizer will indicate by *, the limit is **99999999.999 * Nm³**.
 Reaching the limit of the volume flow measuring range will also indicated by *.
 The display indicates: **xxxx.yyy * Nm³/h**.

Mass values

COUNTER ---- ON
3.348 kg
0.000 kg/h
.....

* totalizer for the mass flow **ON/OFF**
F1 deleting the totalizer for the mass flow
enter leave the window

An overflow of the totalizer will indicate by *, the limit is **99999999.999 * kg**.
 Reaching the limit of the mass flow measuring range will also indicated by *.
 The display indicates: **xxxxx.yyy * kg/h**.

CONFIGURATIONS

PIPE DIAMETER

CONFIGURATIONS Enter ← →	DIAMETER OF PIPE Enter + - ← → *
DIAMETER OF PIPE	309.7 mm

- ⇐ move cursor one step to the left
- ⇒ move cursor one step to the right
- + increase the marked position
- decrease the marked position
- * reset to factory settings
- enter** leave the window

SENSOR AREA

CONFIGURATIONS Enter ← →	SENSORAREA Enter + - ← → *
SENSORAREA	0327 mm ²

- ⇐ move cursor one step to the left
- ⇒ move cursor one step to the right
- + increase the marked position
- decrease the marked position
- * reset to factory settings
- enter** leave the window

MEDIUM

CONFIGURATIONS Enter ← →	STANDARD DENSITY Enter +- ↔↓↑ /*	STANDARD DENSITY Enter +- ↔↓↑ /*
MEDIUM	AIR 1.293 kg/m ³	USER DEFINED 0.000 kg/m ³

- ⇐ move cursor one step to the left
- ⇒ move cursor one step to the right
- + increase the marked position
- decrease the marked position
- ↓ step to the following medium in the table
- ↑ step to the previous medium in the table
- * reset to factory settings
- / changing the display between name / formular and density / k-factor
- enter** leave the window

Changing of the density and C-factor is only possible in the **USER DEFINED** medium datas in the medium table.

If one of the adjustments, mentioned before, are done, please actualise the **ANALOGRANGE** and the **SET POINT**, because the controller sets it automatically to the max. possible value.
Each input becomes effective immediately.

ANALOG RANGE

```

CONFIGURATIONS
Enter ← →

ANALOG-RANGE
    
```

```

STDV-FLOW 4-20mA
Enter +- ←→/* F1
16201 Nm³/h
16201 Nm³/h
    
```

```

MASSFLOW 4-20mA
Enter +- ←→/* F1
020948 kg/h
020948 kg/h
    
```

```

Temp. 4-20mA
Enter +- ←→/* F1
130 °C
130 °C
    
```

The analogue out (0/4-20mA or 0/2-10V) can be assign to the following signals:

STDV-FLOW standard volume flow
MASSFLOW mass flow
Temp. temperature

The configuration of a current or voltage output is done via the jumper within the electronic unit (described the operating instruction).

- ⇐ move cursor one step to the left
- ⇒ move cursor one step to the right
- + increase the marked position
- decrease the marked position
- / switch the analogue output between **STDV-FLOW**, **MASSFLOW** and **Temp.**
- * reset to the suggested value as upper limit for the analogue range
- F1** switch between 0 and 4-20mA or 0 and 2-10V
- enter** leave the window

The value in the third line of the input window is the maximum, which can be taken as the upper analogue range limit.

The chosen value sets the analogue signal to the maximum value (10V or 20mA) at this measuring point.

The measuring process will continue while adjusting the analogue output.

RELAY SWITCH CONTACT

```

CONFIGURATIONS
Enter ← →

RELAY
    
```

```

COUNTER LOCKED SW_1 gesperrt
Enter +- ←→ ↑ / Enter +- ←→ ↓ ↑ /*
    
```

The relay switch contact can be configured as a counter or as a set point.
 ↑ switching between counter and set point

Configuration as counter

```

COUNTER STD.VOL. COUNTER MASS
Enter +- ←→ ↑ / Enter +- ←→ ↑ /

0002.250 Nm3/Imp 0002.909 kg/Imp
    
```

The counter can be assign to the following signals:

COUNTER STD.VOL. standard volume
COUNTER MASS mass
locked counter modul is locked

⇐ move cursor one step to the left
 ⇒ move cursor one step to the right
 ↑ jump to the configuration of set point, if the counter is locked
 + increase the marked position
 - decrease the marked position
 / switching between signals
enter leave the window

NOTICE:

When switching on for the first time, the pulse adjusts to the lowest countable standard volume, with the upper limits of maximum flow and 120 pulse per minute. A changing of values always calculates a new smallest counting pulse. When the adjusted value is below this new min.value the counter puls will be reset to the min.value. Therefore, after changing, please check the parameters of the counter pulse.

Even if the counter clock is enabled, it will start only, if the relevant counter in the display is switched on. That is necessary for an exact synchronization of the counter clocks and the display counter.

The following method for programming is recommended:

- adjustment of the basic values (pipe diameter, medium, etc)
- disable counter and reset to zero in the relevant display
- enable switch contact as counter for the chosen dimension
- starting the counter in the display of the chosen dimension

Configuration as set point

SP_1 STDV-FLOW	SP_1 MASSFLOW	SP_1 TEMPERATURE
Enter +- ←→↓↑ /*	Enter +- ←→↓↑ /*	Enter +- ←→↓↑ /*
ON 16200.7 Nm ³ /h	ON 020947.5 kg/h	ON 130.0 °C
OFF 16200.7 Nm ³ /h	OFF 020947.5 kg/h	OFF 130.0 °C

The set point can be assign to the following signals:

STDV-FLOW	standard volume flow
MASSFLOW	mass flow
Temp.	temperature
locked	set point modul is locked

- ⇐ move cursor one step to the left
- ⇒ move cursor one step to the right
- ⇅ move the cursor between line „ON“ and line „OFF“
- ↑ move the cursor between line „OFF“ and line „ON“ or jump to the counter configuration, if the set point is locked
- + increase the marked position
- decrease the marked position
- / switching between signals
- * upper range limit as set point
- enter** leave the window

The setpoint can be used as „window“ or as switch point with hysteresis.

Modus window: the switch point OFF is higher than ON. Measuring values between both points will set the switching contact. Measuring values higher than OFF or lower than ON will reset the switching contact.

Modus Hysterese: the switch point OFF is lower than ON. Measuring values higher than ON will set the switching contact. Measuring values lower than OFF will reset the switching contact.

Status switching point	Values: OFF > ON Status window	Values: OFF ≤ ON Status hysteresis
OFF	ON ≥ measuring value > OFF	measuring value < ON
ON	ON < measuring value ≤ OFF	measuring value ≥ ON
reset (OFF)	ON ≥ measuring value > OFF	measuring value < OFF

The suggested values of the configuration window correspond to the upper range limit of the measuring range.

The measuring process will continue while adjusting the set point.

Each input becomes effective immediately.

MEANVALUE

CONFIGURATIONS Enter ← →	MEANVALUE Enter + - *
MEANVALUE	10 VALUES

- + increase the marked position
- decrease the marked position
- * reset to factory settings

enter leave the window

Maximal 99 values for averaging are possible.

MIN. QTY. SUPPR.

CONFIGURATIONS Enter ← →	MIN. QTY. SUPPR. Enter + - ← → *
MIN. QTY. SUPPR.	0.60 m/s

- ⇐ move cursor one step to the left
- ⇒ move cursor one step to the right
- + increase the marked position
- decrease the marked position
- * reset to factory settings

enter leave the window

Measuring Values below the programmed value will switch off and indicated with zero. The adjustment of this window allows to prevent measuring of minimal air moving (convection).

OFFSET

<pre>CONFIGURATIONS Enter ← → OFFSET</pre>	<pre>OFFSET Enter F1 * OS: 00.00 m/s MV: 00.13 m/s</pre>
---	--

F1 take the current measurement value (MV) as Offset (OS)

***** reset to factory settings

enter leave the window

This menu allows to adjust the zero point. This procedure is similar to the tare of a balance. With **F1** the value of line 4 will taken as zero-point and subtracted from the internal measured values. For verification this value is indicated in line 3

NOTICE: This adjustment influenced (shifted) the whole measuring range, that's in contrast to the MIN. QTY. SUPPR. where is no effect to the measuring range.

SET ADDRESS

<pre>CONFIGURATIONS Enter ← → SET ADDRESS</pre>	<pre>SET ADDRESS Enter + - ADDRESS: 0</pre>
--	--

+ increase (+1) the address of the RS232C interface

- decrease (-1) the address of the RS232C interface

enter leave the window

Address values of between 0 and 99 are possible.

SET BAUDRATE

<pre>CONFIGURATIONS Enter ← → SET BAUDRATE</pre>	<pre>SET BAUDRATE Enter + - 9.6 Kb/sec</pre>
---	---

+ initialize the RS232C interface with the next higher Baudrate

- initialize the RS232C interface with the next lower Baudrate

enter leave the window

The following Baudrates for the RS232C interface are possible:

1,2 Kb/sec
2,4 Kb/sec
4,8 Kb/sec
9,6 Kb/sec
19,2 Kb/sec

SELECT LANGUAGES

CONFIGURATIONS Enter ← →	SELECT LANGUAGES Enter ↓↑
SELECT LANGUAGES	ENGLISH

↓ jump to the following display language

↑ jump to the previous display language

enter leave the window

The following languages are possible:

English

Deutsch

France

Espanol

contact

softflow.de GmbH

Ulmenstr. 39

D-15370 Fredersdorf

Phone : +49(0)33439 548904

Fax : +49(0) 33439 548905

Email : post@softflow.de

www.softflow.de