

A

Set-up your flow measurement in 5 steps



1. Choose a suitable mounting position for your transducers
2. Parameterise your flow transmitter by selecting „Quick Setup“
3. Mount the ultrasonic transducers on to the pipe
4. ZERO SETUP (if possible)
5. Start your flow measurement



Pipe must be completely filled before making the clamp-on measurement.

B

User Interface:



On/Off button. To switch off press button for approx. 5 sec.



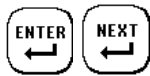
Activates the background lighting



Move cursor



Increases the value



Confirms your setting



Decreases the value



Back to previous menu



Activates a certain function

C

Mounting:



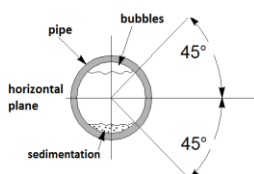
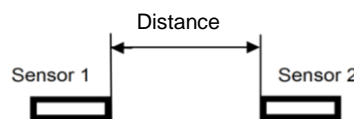
1 2 3 4 5 = Bar Index 5

Mounting with spacer bar:

Example: The 5 holes in the setup display correspond to the number of holes between the sensors, plus the mounting hole.

Mounting without spacer bar:

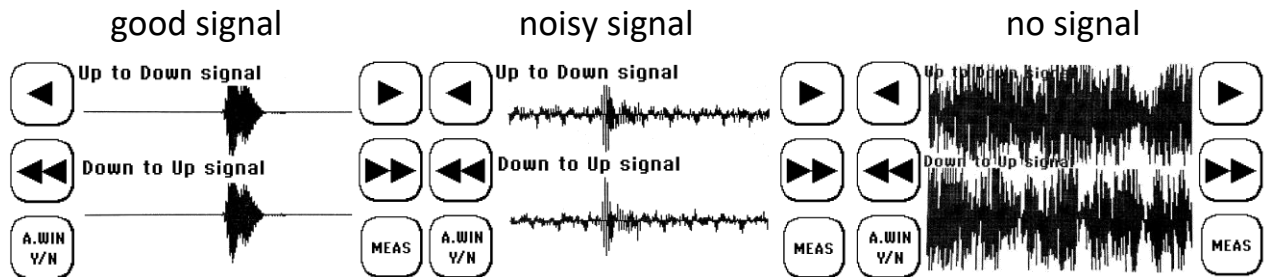
The displayed value is the distance between the inner transducer fronts.



Position the sensors according to the number of holes displayed. Apply coupling paste (Magnalube) to the sensors. Mount the transducers on a horizontal pipeline between two and four o'clock (see picture on the left)

D

Signals: The following graphs may be displayed in the oscilloscope window



The image in the middle shows a relatively poor signal-to-noise ratio, but a correct measurement in this case is still possible. If you do not have a valid signal check if you have used enough Magnalube, if the BNC cables are connected correctly, and if the deltawaveC-P is parameterised properly. Execute sensor test (see below) to test complete signal chain.

E

Troubleshooting:

Time:15:22:45	AUTOWINDOW: OFF	
Reun Num: 0		Flow 1
Vs 2215.0m/s	T1 22.0°C	STATUS: VS ERR
SigQ 100	T2 20.4°C	

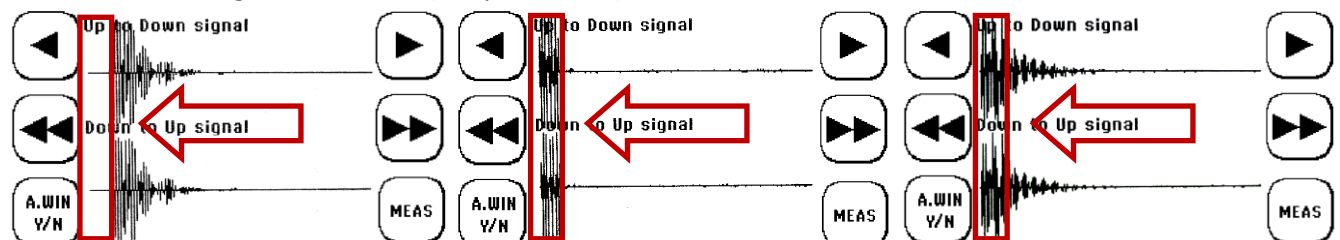
VS ERR:

The above error message appears in the measuring window if the current measured speed of sound deviates by more than 20% from the parameterised speed of sound. In the example (see picture above), water 20°C was parameterised (ca. 1486 m/s), the measured sound velocity deviates by more than 20% (green frame), so that "VS ERR" is displayed in the status line. Possible reasons:

1. Wrong signal (W instead of V, V instead of Z) → Check or move the signal in the OSC
2. Medium not correct / unknown → Check parameters and correct if necessary
3. After performing a sensor test → Perform the Quick Setup again

Sensor test:

1. Open oscilloscope window, AUTOWINDOW must be off
2. Reduce the delay to 0 µs via arrow buttons
3. Instead of the speed of sound "SENSETEST" is now displayed
4. Connect both sensors and apply some coupling gel
5. Hold the transducers as shown on the right (slightly offset!)
6. The sensors are working correctly, if after a short zero line received signals are visible (see picture left)



Picture left: Test ok, there are no signals at the beginning of the time frame

Picture middle: Test not ok, here the sensors are not connected, signals arrive at the beginning

Picture right: Test not ok, converter connected, but no acoustic contact

Note: The signal illustration may vary depending on the sending code and sensor type