Minisonic II Quick Start Guide – For Water

The MinisonicII-PI kit is normally supplied with at least one set of probes that suit your application. They have ID markings on them SE1586, SE1515, SE1599 or SE1790)

MinsonicII-P Programming

1. Power up the MinisonicII by pressing the On button on the righthand side of the unit. The display will show the ”Flowrate” screen.
2. Enter the setup menu by pressing the Menu key, then use the red OK and Arrow keys to select “measurement config” then select “Flowrate Measurement” you will now have 3 fields that must be reviewed, “Pipe”, “Fluid” and “Pair of Probes”
3. Pipe External Diameter. To start select “Pipe” here you will see the current set pipe “Ext. Diameter”, to change this press the OK key and enter your pipe’s external diameter. The pipe diameter is entered using the red arrow keys, up and down change the selected digit, left and right allow you to select a new digit. When the external diameter is correct Press OK and you will see the new diameter displayed.
4. Pipe Wall Thickness. Now press the down arrow again to see the current set pipe wall “Thickness” If you need to change this use the arrow keys (as in step 3) when completed the unit should display the correct pipe wall thickness.
5. Pipe Wall Material. Next press the down arrow to display the current set pipe “Material” If you need to change this, press OK and select your pipe material from the list.
6. Units to Display, now press the down arrow twice from the pipe” Material” screen to show the “Displayed unit” screen. Here you can change the units.
7. Now press the back arrow and select the “Fluid” section and pick the best water temperature.
8. Next is “Pair of probes”, here you select your probes (see the markings on probes). Next is “Ultrasonic path” this is normally “V”
9. Saving setting, once you are happy with your settings, press the back key until you see the “Setup validation” Screen, here it will list the number of changes that have been made to the setup, now press the down button and select “Use modifications”, you will now see a busy screen, followed by a probe distance screen, please note thus distance in millimetres. Then press down twice and select OK to move to the flowrate screen.

Probes are normally supplied in a graduated slide rule, probes should have a thumb wheel that can be turned clockwise to retract the probe into the mounting, this enables easier fixing to the pipe.

Clamp on probe Fixing

10. Each probe has a marking on its side that you must measure the given “Probe Distance”. Locate the markings on your upstream and downstream probe and move them to the correct distance. Now lightly tighten the thumb screws to retract the probes into the mounting. Once this is done add a generous amount of the ultrasonic gel across the face of the probe.
11. The probe mounting should be attached to the side of the pipe (not the top or bottom) Now check again the “Probe distance” as you unscrew the thumb screws. As the probes connect to the pipe you should see ultrasonic gel seeping out.
12. You can now attach the probe cables; the upstream probe should connect to the cable with the “rep 1” marking and the downstream probe the “rep 2” marking. If this is incorrectly done you will get a negative flow reading.
13. When all the previous steps have been completed, and your pipe is flooded with water (flowing or not flowing) you should have a flow reading (the meter should display an IQ greater than1%), if it still shows flow fault please call assistance on 01462 488 224

MinisonicII-P Displayed Output

14. On the main flowrate screen, you will see a signal quality (IQ) this should be 100% along with a flow rate. Press down to see more data including Velocity, S. Sound, Gain and Delta T. A lower Gain means a stronger signal.
15. Now check the “S.Sound” is the speed that the sound waves are traveling through your water, this is an output from the meter so can be used to verify your installation as long as you know the temperature of the water, please check this against the table over the page.

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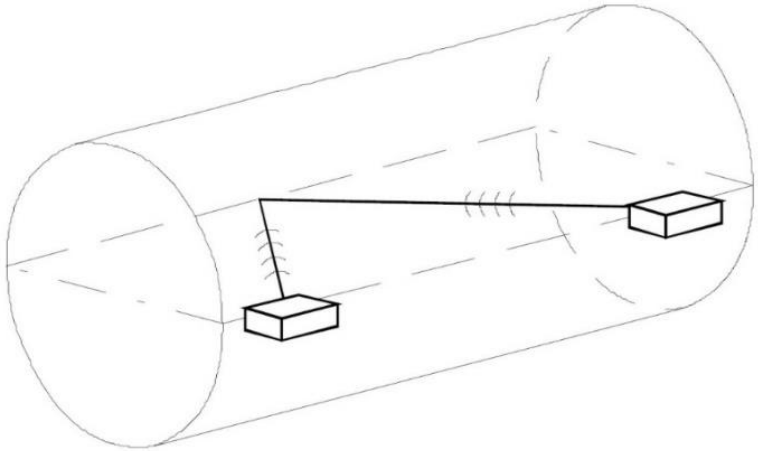
Speed of Sounds Waves in water

Water Temperature	S.Sound m/s
0 °c	1402
10 °c	1447
20 °c	1482
30 °c	1509
40 °c	1529
50 °c	1543
60 °c	1551
70 °c	1555
80 °c	1554
90 °c	1550
100 °c	1543

Water with Glycol 5% at Temperature	S. Sound m/s
10°c	1450
20°c	1472
30°c	1496
40°c	1519
50°c	1542

Probe Alignment Diagram



For technical help, please call Flowline on 01462 488 224

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