flowline
SPECIALISTS IN FLOW MEASUREMENT
Minisonic II Quick Start Guide – For Water. Ultraflux

The MinisonicII Portable kits are supplied sensors to suit your application. The sensors have ID markings KE1791, KE1790, KE1662, KE1815, KE1595 or KE1899

MinsonicII-P Programming

1. Power up the MinisonicII by pressing the on button on the right-hand 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 "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 sensors (see the markings on sensors). Next is "Ultrasonic path" this is normally "V"
9. Saving setting, once you are happy with your settings, press the menu key and you will 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 DS sensor spacing distance screen, please note thus distance in millimetres. Then press down twice and select OK to move to the flowrate screen.

Sensors are supplied in a slide rule support. Sensors have a thumb wheel that can be tighten retract the sensor into the mounting, enabling easier fixing to the pipe.

Clamping Sensors to your pipe

10. Each sensor has an indented marking on its side this is the point you measure between to achieve the DS Distance from Step 9. Locate the indented markings on your upstream and downstream sensor and move the sensors to the correct DS distance. Now gently tighten the thumb screws to retract the sensor into the mounting. Once this is done add a generous amount of the ultrasonic gel across the face of the probe.
11. Next attach the sensors to the side of your pipe (not the top or bottom)sensor mountings are Magnetic, but you might need the straps for some pipes. Once sensors are attached to the pipe, unscrew the thumb screws to push sensors towards the pipe wall, you should see ultrasonic gel seeping out. New double check the D.S distance as sensors may slide during this step.
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 done incorrectly you will simply 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 03333 397 997

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 should be used to verify your installation is correct (as long as you know the temperature of the water), please check this against the table over the page.
16. If you need help to setup or download the logger call us on 03333 397 997.

Speed of Sounds Waves

in water

Water Temperature	Speed of 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

For technical help, please call Flowline on

03333 397 997