Dill-Tech

Distributor of Subsurface Detection System and Utility Instruments

SPECIFICATION SHEET

SoundWater Flow Computer

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A fixed-installation solution for Cypress Ultrasonic Flowmeters

Meet SoundWater Flow Computer.

The SoundWater Flow Computer is a wall mounted display and computer that connects to the Cypress Ultrasonic Flowmeter. It accepts one or two flowmeters for displaying measurements, totalizing, averaging flows, adding or subtracting flows, or proportional output (dosing/mixing). It also connects to your SCADA, PLC, or HMI systems, and is ideal when a local display is required.

Industries

- Waterparks, Pools, and Aquariums
- Building Commissioning and Maintenance
- Agricultural Irrigation
- Building Water Management

Fast to install, easy to use.

Advantages

MEASUREMENTS YOU CAN TRUST

Our proprietary SoundWater Reciprocity Architecture™ prevents zero-flow drift and eliminates the need for calibration, resulting in long-term measurement stability and accuracy.

INCREASES PRODUCTIVITY

Featuring compact lightweight construction and intuitive apps—our products streamline installation, training, and setup—saving you time and money.

MADE IN USA

Locally owned and operated out of Wenatchee, Washington, our products are built with American quality and ingenuity.

WORKS IN TOUGH APPLICATIONS

Our transducers auto-adjust ultrasonic power output depending upon pipe and fluid conditions—giving you more frequent measurements when things get tough (e.g., corroded pipe or murky fluid).

LONG LIFE / LOW MAINTENANCE

SoundWater products are built to last using the highest quality materials, gasketed & double O-ring seals, and silicone gel to protect electronics.

SERVICE & ACCOUNTABILITY

We establish long-term customer relationships based on trust and service. We will respond to your needs and requests within 24 hours.

Advantages & Features

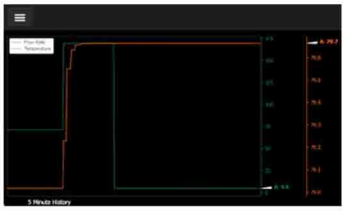
- Wall mounted touch screen & app
- Connect up to two flowmeters
- Average two flows for better accuracy or lack of straight pipe
- Subtract or add flows for diverging or converging pipes
- Divide flows for mixing/dosing and proportional pump control
- Connects with your SCADA, PLC, or HMI
- Long-term flow monitoring
- Can be installed long distances from flowmeter(s)
- Easy setup for communication outputs: Modbus, 4-20mA, and pulse
- Electrically isolated Modbus, and isolated 4-20mA outputs are ideal for maintaining stable communications in electrically noisy environments

Intuitive Touchscreen Display

The built-in touchscreen is your access to the Flow Computer App featuring a familiar user experience similar to our Cypress and Orcas mobile apps. Swipe, tap, scroll, and (if needed) use an on-screen keyboard to specify parameters. The display is backlit for maximum visibility in darkness or sunlight.

Preset menus, plain-language dialogs, and intuitive navigation let you easily choose from pre-loaded settings. There is little to no programming setup required: simply connect power and your Cypress flowmeter, and in seconds the SoundWater Flow Computer displays flow measurements in English or metric units.

Display Samples

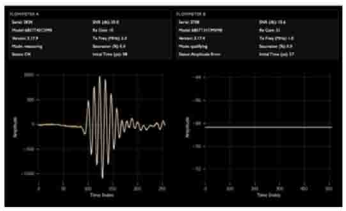


Measurements

The Flow Computer can be configured to display a single measurement — or up to six simultaneously on the screen Available measurements are flow rate, velocity, total net, total reverse, total forward, temperature, liquid sound speed, and energy loss. Measurements may be from one flowmeter or a combination of two flowmeters.

To monitor one flowmeter, no setup is required. Additional measurements may be added from the setup menus.

Swipe to the next page to view trend lines of measurements during the past five minutes.

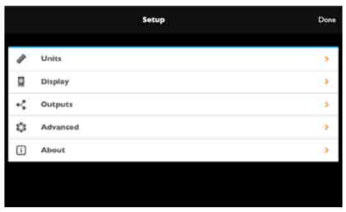


Diagnostics Screen

Displays diagnostics for connected flow meters to evaluate the quality of measurements and help when installing flowmeters. The ultrasound signal is also shown in real time for faster troubleshooting.

Hardware Setup

Configure pulse output, 4-20mA output, or Modbus RTU/RS485 output to connect to your data acquisition system or automated process.

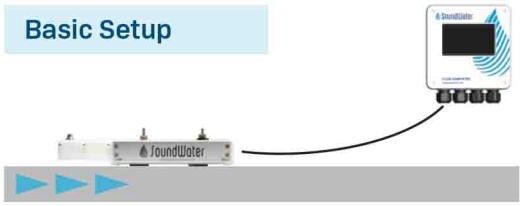


Setup Menu

The setup menu allows you to configure the units, display settings, hardware outputs, and more to your exact needs.

Typical Applications

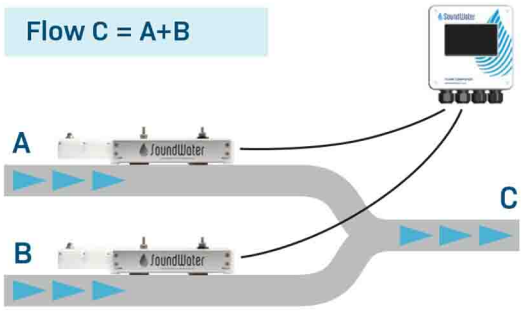
Basic Setup



Basic Setup

Connect the Flow Computer to a single flowmeter — whether it's nearby or thousands of feet away. Display flow rate, total volume, and even fluid temperature (see details below).

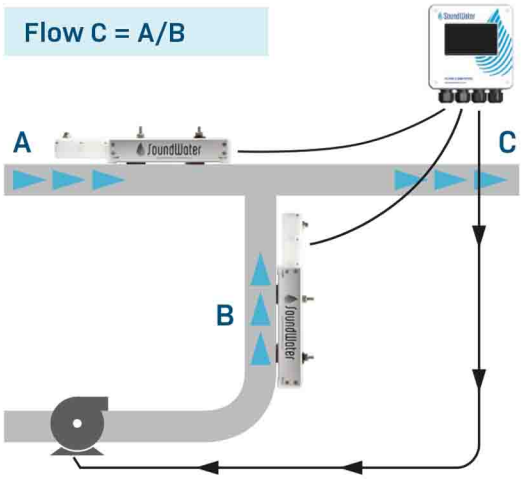
Flow C = A+B



Converging or Diverging Flows

When two pipes converge into one and the combined flow is desired, the Flow Computer can be configured to show the total flow (A + B, which equals C) on the display.

Flow C = A/B

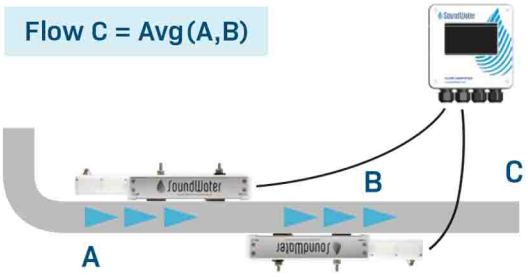


Proportional Pump Control

For mixing and dosing applications, one flow feeds into another flow to produce a controlled proportional mixture. In this case the Flow Computer can be configured to divide one flow by another and display the proportions.

In addition, that proportional flow can be output from the Flow Computer's hardware outputs (4-20mA, pulse, Modbus) as feedback to control a pump and accurately regulate the dosed/mixed proportions.

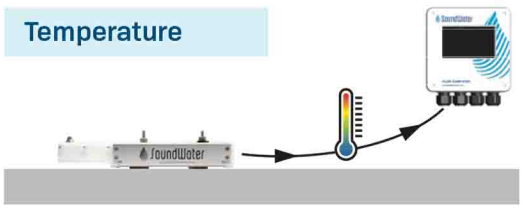
Flow C = Avg(A,B)



Increased Accuracy or Limited Straight Pipe

Need more accuracy? Don't have enough straight pipe? We have a solution: install two flowmeters on one pipe, connect them to the Flow Computer and select to average the two flows. The addition of the second flowmeter adds another ultrasonic beam into the fluid to sample more of the fluid cross section and improves measurement accuracy.

Temperature



Display Fluid Temperature

Need temperature? Our ultrasonic flowmeters not only measure flow, but they also use ultrasound to measure fluid temperature inside the pipe! From the Flow Computer setup menu, simply select to display a temperature measurement, and from which flowmeter.

NOTE: *Temperature measurement for water applications is limited to 32°–175° F (0°– 80°C) and you must provide the fluid's static pressure (defaults to 80 psi). If the pressure in your system is relatively stable and fluid temperature is within the aforementioned range, this may be a great tool for thermal measurement.*

Flow Computer Specifications*

* Specifications subject to change

Compatibility	Compatible with any SoundWater Cypress Ultrasonic Flowmeter with RS485 option -MB
Outputs	**CURRENT** (4-20 mA) Current proportional to flow; user programmable **PULSE** NFET (NPN type) open drain output with frequency proportional to flow; user programmable **MODBUS RTU** RS485, user programmable port settings **DIGITAL ALARM** NFET (NPN type) open drain output; user programmable high & low triggers (windowing) Outputs may be configured to any data metrics from Flowmeter A, Flowmeter B, or combinations of both flowmeters (average, add, subtract, divide/proportion, etc.)
Display	Displays Flowmeter A, Flowmeter B, and/or combinations of both flowmeters (average, add, subtract, divide/proportion, etc.) Available Measurements: flow rate, velocity, total net, total reverse, total forward, temperature, liquid sound speed, energy loss Metric and English units Powerful backlight for clarity in dark or bright environments App-based interface and color touchscreen; scroll, tap click for fast setup and use Select to display up to six different measurements on the screen
Power	12-24V DC external power; 6W Optional 100-240 VAC 50/60Hz power (-AC option)
Strain Relief	Standard ABS strain reliefs Optional aluminum strain reliefs (-AL option)
Hardware	**MODEL** — **POWER / CORD GRIPS** FC100 — 12-24 VDC with ABS cord grips FC100-AL — 12-24 VCD with aluminum cord grips FC100-AC — 100-240 VAC 50/60Hz with ABS cord grips FC100-AL-AC — 100-240 VAC 50/60Hz with aluminum cord grips
Environmental	Ambient temperature -40˚ to 140˚ F (-40˚ to 60˚ C) IP65 splash proof; weather resistant
Materials	**BODY:** Epoxy coated aluminum enclosure, rubber gasket seal **FASTENERS:** Stainless steel
Distributor	DILL-TECH, Bullcreek, Western Australia

Dimensions

REV 10-01-22

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