



BVS4300D

Outdoor Stationary Discrete Water Sampler



Rugged Steel Enclosure

Vacuum technology for better samples

Overview

The BVS4300D is a discrete, stationary water sampler designed to handle your extreme outdoor environments. Each of your samples is placed into a separate container. The sampler is housed in a corrosion-resistant steel enclosure with a locking door and bolted-down instrument panel.

The BVS4300D uses reliable, long-lasting, vacuum technology to draw water through its intake tubing. This sampling method results in faster sample draws and less disturbance of the sample contents. There is also less wear on the tubing, resulting in less frequent maintenance.

Vacuum technology benefits over peristaltic pump samplers:

- ▶ Accurate sample volumes
- ▶ Rapid transport velocities mean more-representative samples
- ▶ Less disturbance of sample
- ▶ Minimal wear on the tubing, resulting in less-frequent maintenance
- ▶ Reduced cross-sample contamination

The [BVS4300C](#) is similar to the BVS4300D, but it is a composite sampler that deposits its samples into a single container.

Benefits and Features

- ▶ Rapid transport velocities of samples, meaning more accurate samples—even of solids
- ▶ All information easily controlled and viewable on a 2 by 16 character backlit LCD
- ▶ Optional glass-door fridge and optional heater
- ▶ Interfaces with Campbell Scientific data loggers for more measurement and control capabilities

Detailed Description

Vacuum Pump

The BVS4300D uses an external vacuum pump to draw water through intake tubing, instead of the traditional peristaltic pump that induces flow by squeezing flexible tubing. Because the vacuum method disturbs the water samples less, they better represent the original water solution, especially if the

solution has high concentrations of suspended solids. To prevent cross contamination, the samplers use air pressure (up to 28 psi) to purge the tubing of excess water.

Controller/Interfacing with a Data Logger

The BVS4300D includes a programmable controller with 16-key intuitive touchpad. The controller can accept a pulse input (such as from a rain gage) or a 4 to 20 mA signal (such as from

a flow meter), or the controller can initiate a sample on a timed basis.

The sampler can also be interfaced with our data loggers. Our data loggers can measure nearly any turbidity, water level, or hydrometeorologic sensor, as well as control the sampler based on time, event, or measured conditions.

Specifications

Specialized Applications	Outdoor, refrigerated
5/8 Inch ID Tubing Compatible	Yes
Sample Container	› One 10 L bottle, four 4 L bottles, eight 2 L bottles, or twelve 1 L bottles (super clean) › One 8 L bottle, one 20 L bottle, or 24 0.5 L bottles (standard clean)
Cabinet	NEMA3R
Dimensions	1.6 x 0.66 x 0.66 m (63 x 26 x 26 in.)
Weight with Refrigerator	141 kg (310 lb)
Weight without Refrigerator	109 kg (240 lb)

Supply Voltage

Sampling System	115 Vac/60 Hz or 12 Vdc
Refrigeration and Heating Units	115 Vac/60 Hz

Vacuum System

Pinch Valve	Fixed – normally open
Purge Cycle	Adjustable from 5 to 99 s
Suction Cycle	Variable (Adjusts automatically to double the input value of the purge time setting or until liquid contacts level electrode in metering chamber.)
Sample Volume	› Adjustable, 50 to 500 cc › Adjustable, 500 to 1000 cc
Horizontal Sample Transport Velocity	› 1.2 m/s (4 ft/s) at 53.3 m (175 ft) › 2.2 m/s (7.1 ft/s) at 7.6 m (25 ft) › 1.9 m/s (6.2 ft/s) at 15.2 m (50 ft) › 1.7 m/s (5.6 ft/s) at 22.9 m (75 ft) › 1.5 m/s (5 ft/s) at 30.5 m (100 ft) › 1.1 m/s (3.7 ft/s) at 61 m (200 ft) › 0.8 m/s (2.6 ft/s) at 76.2 m (250 ft)

Horizontal Maximum Transport Distance	76.2 m (250 ft)
Metering Chamber Cover	Nylon
Volume Control Tube	316 stainless steel
Metering Chamber Level Electrode	316 stainless steel
Intake Hose Material	Nylon-reinforced PVC
Discharge Hose Material	Latex

Controller

Display	2 x 16 character backlit LCD
Touchpad	6 key (with multi-level menu)
Start Delay	Disabled, time/day, pulse count, 4 to 20 mA (0 to 100 pulses/min.), external contact, level control
Sample Initiation	Disabled, time/day, pulse count, 4 to 20 mA (0 to 100 pulses/min.), external contact
Program Type	Composite, multi-composite, consecutive, daily cycle, timed step
Clock	Real-time clock and operating system
Direct Function Keys	Manual sample, manual purge, manual bottle advance, restart
Alarm Outputs (Independent)	Cycle abandoned (pulse output), sample fault, container full
Status Outputs	Sample taken (pulse output)
Switches	Run/off (SPST toggle), on/off (5 A lighted breaker); heater on/off; refrigerator on/off
Available Displays	Real-time clock, process timing, process controls, pulse counting, event response, multi-level description, flashing prompts, diagnostics

For comprehensive details, visit: www.campbellsci.com/bvs4300d 



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