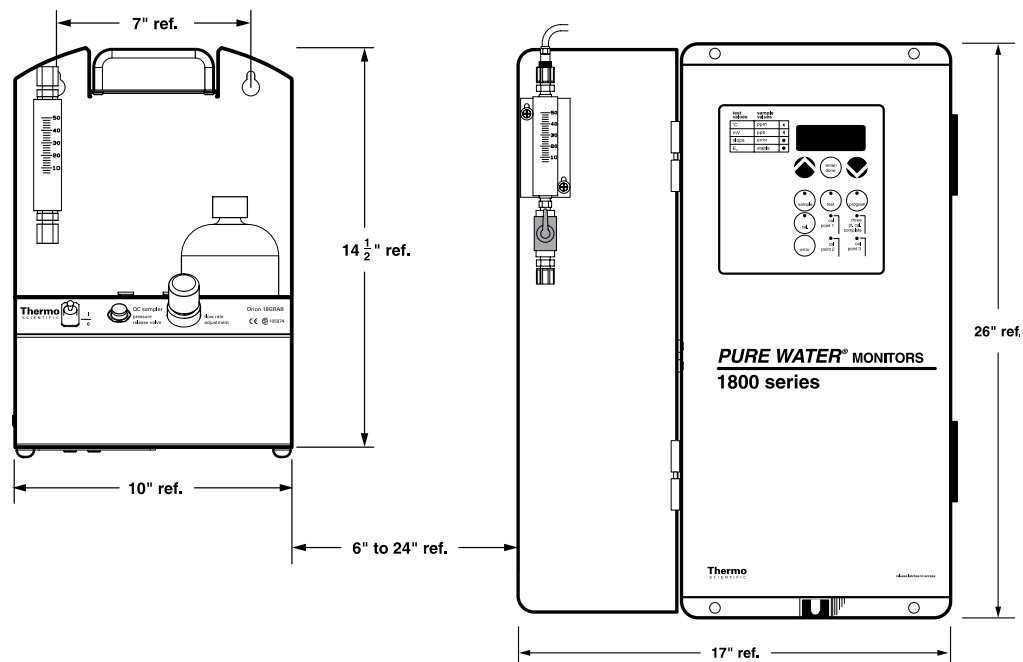


Thermo Scientific Orion QC Sampler for 1800 Series Monitors

Introduction

The QC sampler allows for rapid sampling where no online instrumentation is present and provides troubleshooting to validate readings without disturbing process operations. Operators can temporarily interrupt the flow of water to the 1800 series monitor and substitute it for a sample coming from the QC sampler. In this way, samples from other part of the plant, or validation and calibration standards, can be analyzed.

Recommended Mounting Dimensions



Installation and Operation Procedure

1. Turn a flow valve (6) off on the 1800 series monitor to stop the sample flow to the flow cell. Loosen the compression nut located on the top of the flow meter and remove the restrictor tubing (1) from the compression fitting. See **Figure 1**.
2. Carefully remove the QC sampler and the appropriate wall adapter from the shipping box.
3. The QC sampler may either be mounted next to the monitor or placed on top of the 1800 series monitor when it is in use.
4. Locate the tee fitting in the QC sampler package. Wrap a small piece of Teflon tape around the 1/8" pipe thread end of the fitting (1) and screw into the top of the 1800 series flow meter.
5. Reinstall the restrictor tubing (4) on the top of the tee fitting using the compression fittings (3).
6. Connect the exit tubing of the QC sampler, which is the loose end with the valve at the end (12), to the remaining inlet on the tee fitting via the compression fittings (3).
7. Unscrew the cap from the 1 liter plastic bottle (5) and remove bottle from the QC sampler. Fill the bottle with validation standard or an offline sample to be analyzed.
8. Place the bottle back in the QC sampler and screw the cap tightly so the O-ring has compressed and made a tight seal.
9. Shut off the valve (6) to stop sample flow through the monitor.

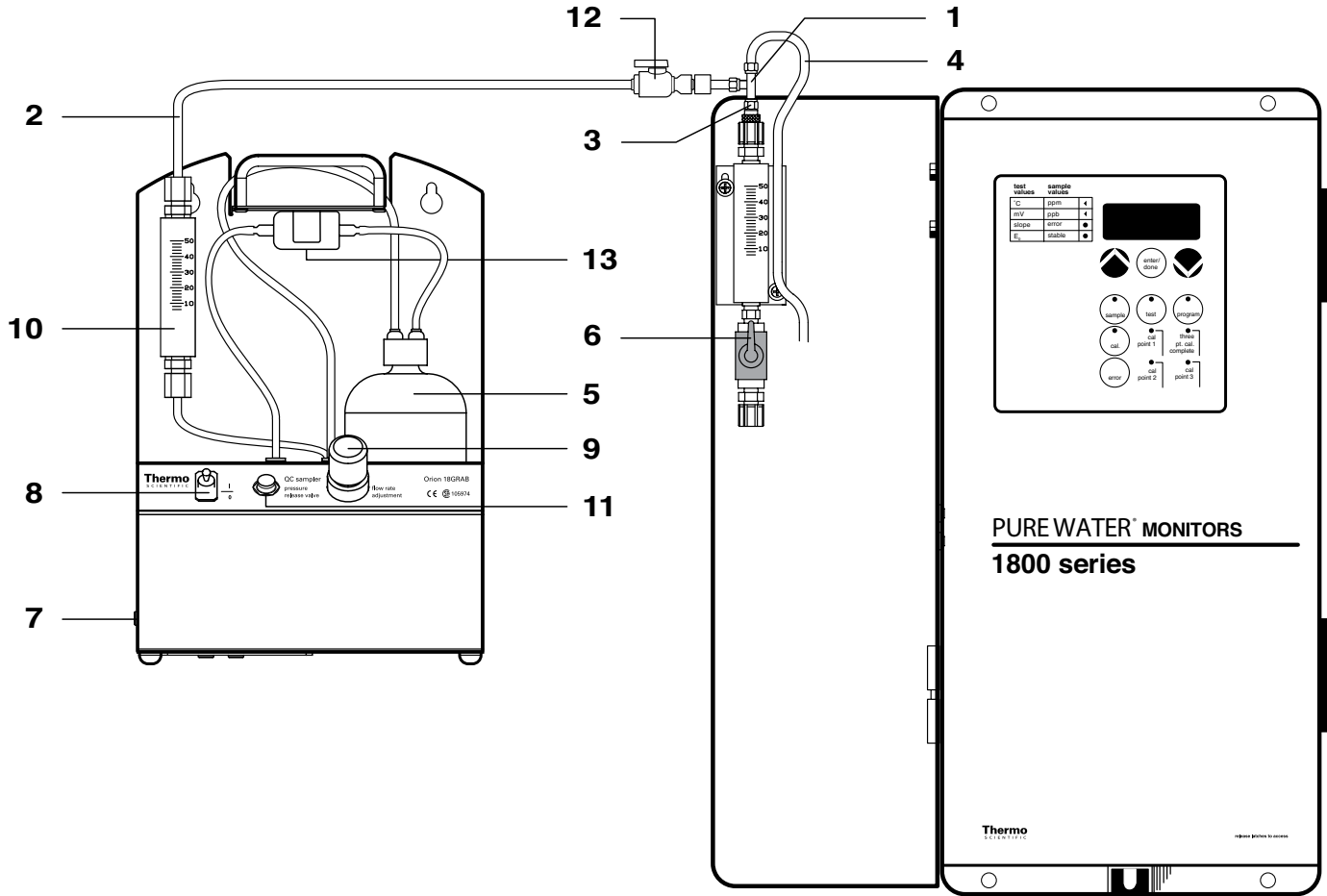
Note: This valve is lower than pictured on some 1800 series monitors.

10. A 9 volt DC wall adapter powers the QC sampler. Insert the power plug into the jack (7) on the left-hand side of the unit and plug the wall adapter into any convenient electrical outlet.
11. Flip the switch (8) to the "I" position and make sure that the valve (12) is in the open position with the handle in the direction of the sample flow.
12. Check the cap for any leaks and retighten the cap if necessary.
13. Pull out the black knob on the QC sampler (9) to regulate the flow rate and turn the knob clockwise until the flow meter (10) reads 40 mL/min.
14. Push in the knob (9) when the appropriate flow rate has been reached.
15. The sample will flow through the exit tubing of the QC sampler into the monitor. When the reading is stable on the monitor, usually in about five to ten minutes, record the value.
16. Shut off the QC sampler and press the release button (11) to release the pressure in the bottle.
17. Turn the valve (12) to the closed position, with the handle perpendicular to the sample flow, and remove the exit tubing of the QC sampler from the valve (12) in such a way so that the valve remains attached to the 1800 series monitor.

Note: The valve is a quick disconnect valve. To disconnect the valve, press the connecting collar towards the valve while pulling the tube out. To reconnect the valve, insert the tubing into the valve.

18. Open the flow valve (6) to resume the normal operation of the monitor.
19. The QC sampler can be now used to bring another sample to the monitor.
20. The air filter (13) should be changed on an annual basis.

Figure 1 – Connecting the QC Sampler to the Monitor



Maintenance

Replace the air filter during the annual cleaning. Periodically wipe away any dust with a wet cloth.

Velcro is included to help transport the QC sampler with the wall adapter.

Use only the included Thermo Scientific Orion AC adapter to maintain the CE compliance of the instrument.

Product Performance Specifications

Electrical Requirements	9 VDC, 9 watts
Input	115 VAC / 60 Hz adapter (Cat. No. 224329-A01) 230 VAC / 50 Hz adapter (Cat. No. 224330-A01)
Flow Rate	40 mL/minute nominal, set by pressure regulator
Compatibility	All 1800 and 2100 series monitors
Dimensions	14.5" x 10" x 6" (H x W x D) 36.8 cm x 25.4 cm x 15.2 cm (H x W x D)
Weight	10 lb 4.5 kg
Approvals	CE, CSA

Environmental Operating Conditions

Installation	Category II
Pollution	Category II
Temperature	5-45 °C
Humidity	95% relative humidity maximum, non-condensing
Altitude	2000 meters

Ordering Information

Cat. No.	Description
18GRAB	Thermo Scientific Orion 1800 and 2100 series QC sampler, includes (1) 1 liter polypropylene sample bottle, tubing, fittings, power supply and instruction sheet.
18GBTL	1 liter polypropylene bottle with cover, pack of 4
18GTBK	QC sampler replacement tubing kit
242782-001	Annual replacement air filter

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