

Thermo Scientific Orion

2230XP Silica Analyzer

Unpacking the 2230XP Silica Analyzer

Thermo Scientific™ Orion™ analyzers are assembled, tested and packaged with great care.

1. Open the outer box. Remove the top two foam corner support pieces. See *Figure 1*.
2. Open the inner box. This box should contain the analyzer and user guide CD.
3. Remove the cardboard retaining shell by sliding it over the entire mounting board and the analyzer.
4. Carefully remove the entire mounting board with analyzer from the inner box.
5. Unbolt the analyzer from the mounting board by removing the four mounting screws with a Phillips head screwdriver. These screws may be discarded.
6. Carefully place the analyzer at a convenient location until proper installation can be completed.

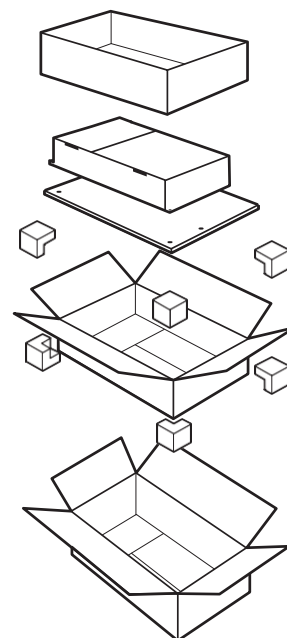


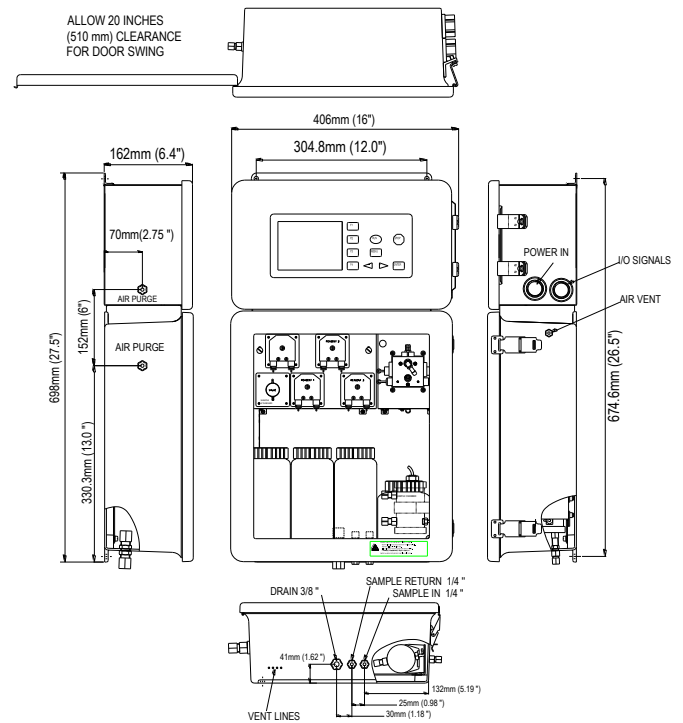
Figure 1

Mounting the 2230XP Silica Analyzer

The Thermo Scientific™ Orion™ 2230XP Silica Analyzer should be installed in a well ventilated location, with ambient temperature between 5 °C and 45 °C (41° to 113 °F); and relative humidity not to exceed 90% at 40 °C. The area must be free from dust, corrosive gases, vibration and shocks; sheltered from direct sunlight, and shielded from dripping water.

1. Use four #10 screws or equivalent for proper support.
2. Refer to *Figure 2* for dimensions (in mm and inches).
3. Make sure that the wall that you choose can support the weight of the instrument. (Approximately 20 kg or 44 lbs.)
4. Locate the instrument as close to the sampling point as practical to ensure complete purging of the sample line during each cycle.
5. Allow approximately 50 cm (20 in.) of clearance at the left side for door swing. Also allow enough clearance on the right side for wiring conduit.
6. Locate the analyzer height such that the display is at eye level height for an operator, allowing also for appropriate sample and drain connections.

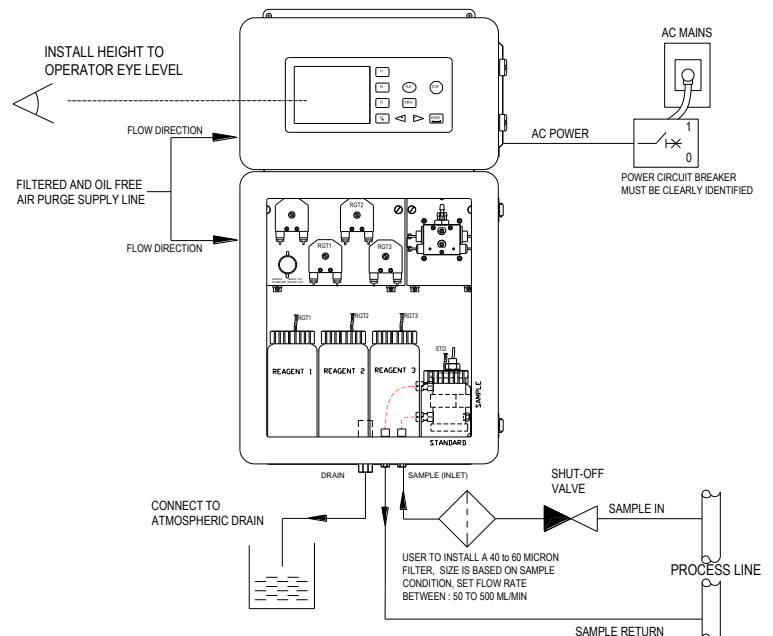
Figure 2



Plumbing the 2230XP Silica Analyzer

The sample inlet, sample return and drain connections are made on the bottom side of the instrument. See *Figure 3*. The sample inlet and sample return fittings on the bottom of analyzer require ¼-inch OD (6 mm OD) flexible tubing. The drain fitting at the bottom of the analyzer requires ⅜-inch OD (9.6 mm OD) flexible tubing.

Figure 3



Wiring Power to the 2230XP Silica Analyzer

The analyzer has been designed to be hard-wired with provisions for the AC power lines to be routed in conduit pipes connecting to the ¾-inch FNPT hubs located on the left side of the electronics enclosure. See *Figure 4*. When using line cords, use only certified power cords of 3 core, min 0.75mm² / 18AWG, min. temperature of 75 °C, H05VV-F. The power safety ground must be provided for proper operation.

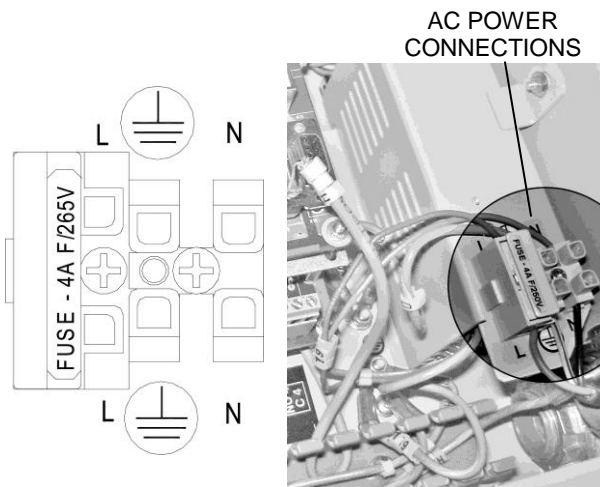


Figure 4

Preparing the 2230XP Silica Analyzer for Operation

To allow longer lifetime of unit, the pinch valve and pump-head tubing are not fully engaged when the unit is shipped from the factory. To return the analyzer to operation, complete the following. (Note: this step must be repeated for all three Pump heads.)

1. Remove tape.
2. Slide tube retainer into place along keyway.
3. Install tubing cover by squeezing both sides, and sliding into grooves. See *Figure 5*.
4. Install Reagents. Very carefully match reagent numbers and colors in their proper order.
5. Install Standard.
6. Prime the tubing. Please repeat the following sequence 3 times. (See User Guide - Section 3.3 - for details)
7. Press Menu
 - a. Select Services
 - b. Select Prime Fluidics
 - c. Select Prime All

Note: This procedure will run automatically and take approximately 10 minutes per cycle.

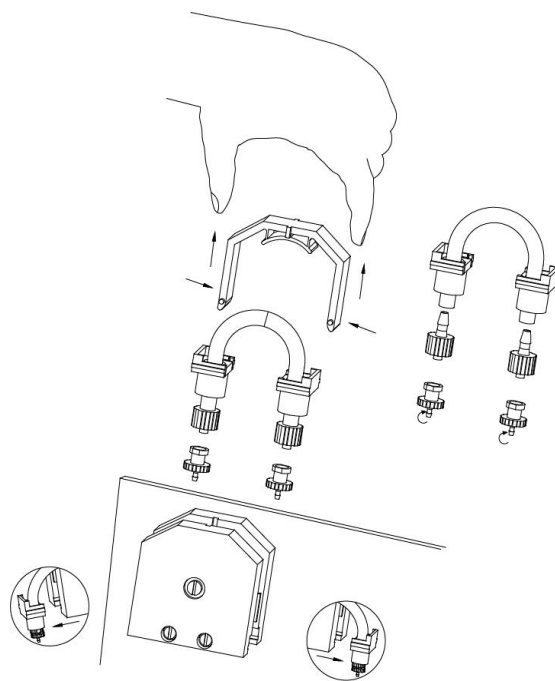


Figure 5

User Interface Tree MENU NAVIGATION

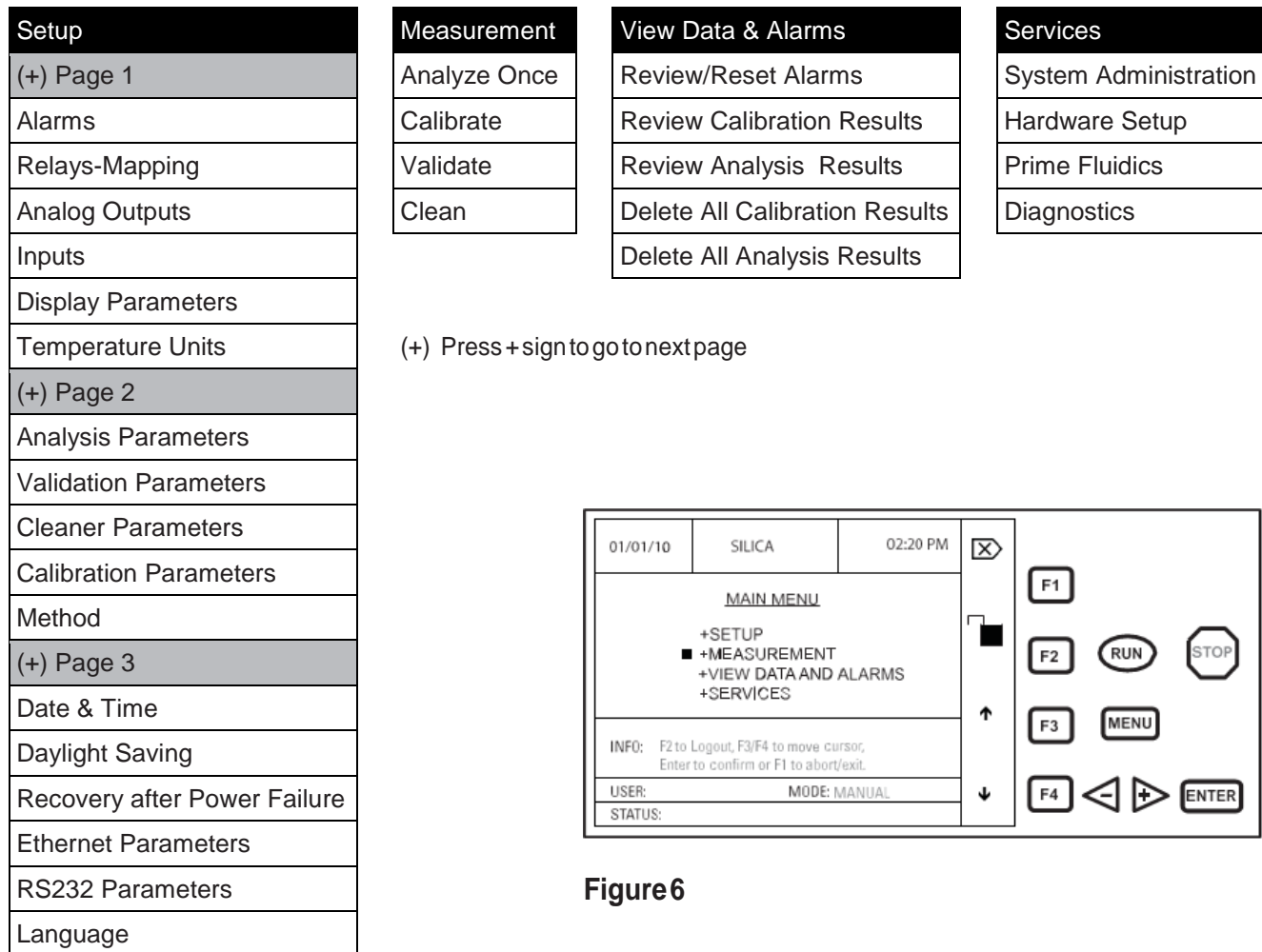


Figure 6

Operating the 2230XP Silica Analyzer

Each Orion 2230XP Silica Analyzer gets thoroughly wet-tested and calibrated at the factory. The analyzer typically runs unattended, analyzing sample streams and calibrating itself at regular intervals. All relevant parameters were programmed at the factory based upon your application. Consequently, the analyzer is fully prepared for routine operation once you complete these startup procedures.

To place the analyzer in routine service, press the control panel RUN key. See *Figure 6*.

Note: When running the analyzer for the first time it is a good idea to place the system in RUN for 12 hours before using. This will allow the system to flush any contaminants out of the system that might have gotten in during installation.

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