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Airflow Monitor Digital 1000 Kit No 9743211 and 9743212

Guardian Digital 1000 Operation

The Guardian Digital Airflow Monitor consists of the airflow sensor, the Alarm Unit and the 15 VDC power supply. For 115V operation the alarm unit is powered by plugging the power supply into the outlet on top of the fume hood or a building outlet. The alarm has “Enter”, “+”, and “-” buttons to program the monitor. There is also a green LED “SAFE”, yellow LED “CAUTION”, and red LED “LOW” with audible alarm for airflow conditions. The audible alarm can be permanently muted if desired. The Guardian Digital 1000 Airflow Monitor displays a face velocity value, provides an RS232 communications port to a PC or building computer system, can be configured for external input connections such as night setback or external alarm and provides up to three output relays that can be configured. For complete detailed information, please refer to the separate Labconco 1000 Alarm User’s Manual provided with the hood.

Guardian Digital 1000 Installation Procedure

1. The Fume Hood comes prepared to accept the Digital 1000 airflow alarm system.
2. First, remove the front panel by lifting it straight up and out away from the hood.
3. Next, remove the cover plate located at the top of the right corner post.
4. Install the monitor to the upper right corner post using the two screws that came with your kit. See Figure 1.
5. The connection of the air sensor, adapter and hose will follow next.
 - a. Connect one end of the supplied sidewall adapter with nut included in your kit by removing the uppermost plastic plug from the 1/2" hole in the sidewall of the hood and replacing it with the adapter and nut. The nut is located inside the fume hood. See Figure 2.
 - b. Cut 1.5" of the white hose (1.0" OD x .79" ID) supplied with your monitor. Connect one end of the hose to the sidewall adapter. See Figure 2.
 - c. Connect the square air sensor to the other end of the white hose and be sure to connect the sensor cable from the air sensor to the back of the monitor. This completes the airway connection per Figure 2.

6. In your kit you will find an electrical cover plate and a snap-in electrical outlet. Snap the outlet in place making sure that the outlet is secure.
7. Next, remove and discard the electrical cover plate that is on the junction box at the top of your hood.
8. Wire the cover plate that you just prepared to the existing wires inside of the hood junction box per the wiring diagram on top of the fume hood. **WARNING: make sure that the power is disconnected to your hood prior to connecting the new cover plate.**
9. Secure the cover plate to the junction box with the existing screw.
10. Plug the output cord of the power supply to the back of the monitor and plug the power supply into the outlet on the cover plate of the junction box.
11. Replace the front panel and calibrate your unit according to the instruction manual that came with your monitor. For additional calibration guidelines follow the steps listed below.

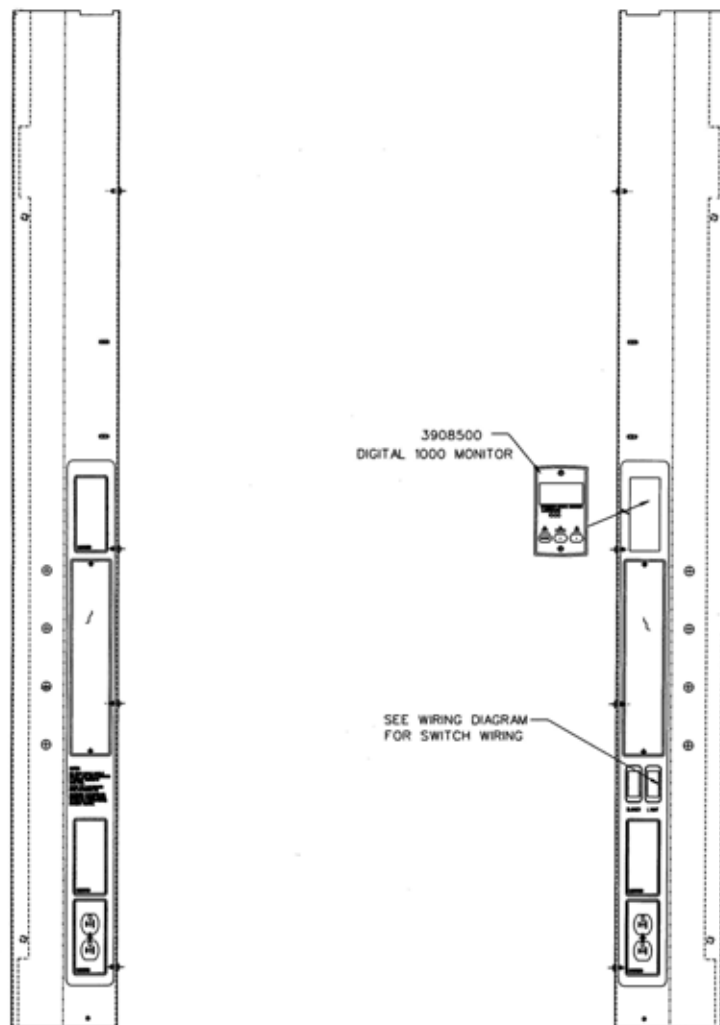


Figure 1

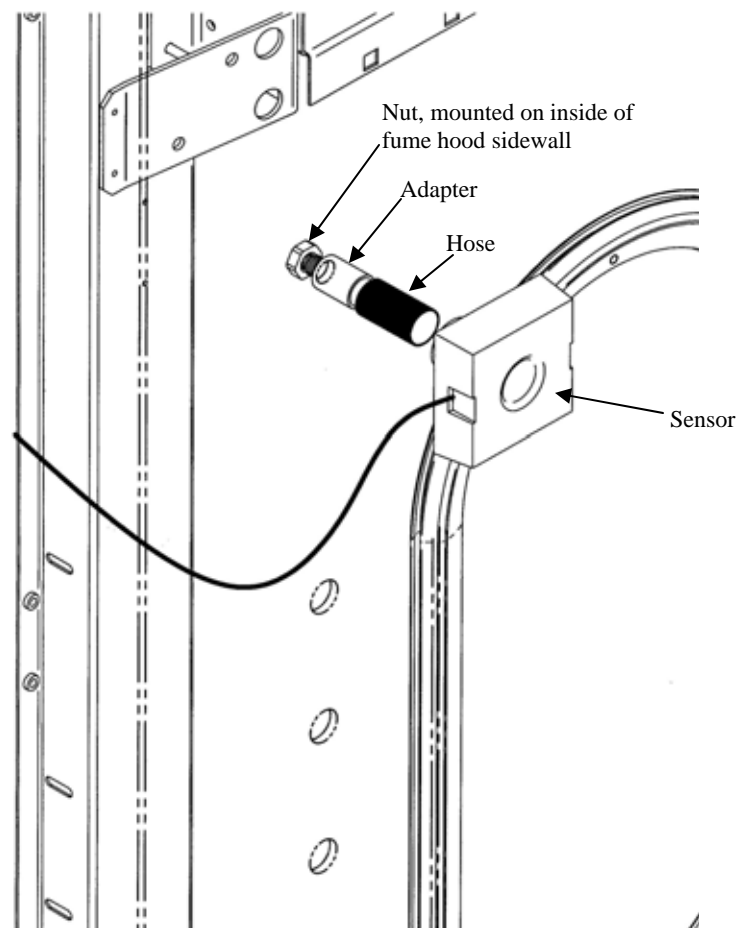


Figure 2

Digital 1000 Calibration

1. Calibrate the airflow monitor according to the instruction manual that comes with the kit and follow the steps listed below. To successfully calibrate, it will be necessary to change the face velocity by moving the sash position. Typical calibration conditions are set at face velocity air sample differences of at least 20 feet per minute. The airflow monitor is factory set to be calibrated with a difference of at least 50 fpm and can be changed by changing the “lower/higher air sample difference”. The following suggested in flow face velocity speeds are recommended to successfully calibrate. Typical low air alarms are set 10-20 fpm below operational speeds. Follow Step 2 below and review the Guardian 1000 Alarm User’s Manual that comes with the airflow monitor.

Low Air Alarm Set Point	Hood Operating in Flow Speed	Low Calibration Set Point	High Calibration Set Point
40 – 50 fpm	60 fpm	40 – 60 fpm	100 – 120 fpm
60 – 70 fpm	80 fpm	50 – 90 fpm	100 – 150 fpm
80 – 90 fpm	100 fpm	50 - 110 fpm	100 – 170 fpm

2. Go to SETUP and then CONFIGURE, then go to CAL CONFIG MENU and change the “lower/higher air sample difference” to 20 fpm. This will allow you to successfully calibrate with values of a minimum of 20 fpm difference.
3. While in CAL CONFIG MENU, change the “sensor difference” from 10% to 3%.
4. While in CAL CONFIG MENU, adjust the red low air alarm to the desired setting such as 60 fpm. Then adjust the yellow “CAUTION or WARNING” to 63 fpm. Then adjust the “CAUTION or WARNING” air reset to 3 fpm. This sets the alarm condition and can be altered as desired.
5. To complete the CAL CONFIGURATION, be sure to enter “DONE”.
6. To start the calibration mode, use the Labconco 1000 Manual and enter “CALIBRATION” mode on the display from the SETUP menu.
7. Follow the instructions on the display and alter the low face velocity by altering the sash position to its most open position. Measure the average face velocity and enter the low value on the display. Be careful not to block the opening. The low exhaust velocity calibration will take about 5 seconds.
8. Now alter the high exhaust velocity by altering the sash position to a lower open position. Measure the average face velocity and enter the high value on the display. The high value must be at least 20 fpm greater than the low value. The high exhaust velocity calibration will take about 5 seconds.
9. Be sure to enter “DONE” after successfully completing the low and high calibration set points.
10. Once calibration is completed go to “RUN” and hit “ENTER”. The value should read close to the high calibration set point where the sash was left in its last position.
11. Recheck the face velocity with an anemometer to confirm the display on the digital airflow monitor at various sash positions.

WARRANTY

We are committed to providing our customers with quality equipment and service after the sale. Part of this objective involves keeping you informed of changes and new product additions.

Labconco provides a warranty on all parts and factory workmanship. The warranty includes areas of defective material and workmanship, provided such defect results from normal and proper use of the equipment.

The warranty for all Labconco products will expire one year from date of installation or two years from date of shipment from Labconco, whichever is sooner, except the following:

- Purifier® Delta® Series Biological Safety Cabinets and PuriCare® Lab Animal Products, which carry a three-year warranty from date of installation or four years from date of shipment from Labconco, whichever is sooner.
- Carts carry a lifetime warranty.
- Glassware is not warranted from breakage when dropped or mishandled.

This limited warranty covers parts and labor, but not transportation and insurance charges. In the event of a warranty claim, contact Labconco Corporation or the dealer who sold you the product. If the cause is determined to be a manufacturing fault, the dealer or Labconco Corporation will repair or replace all defective parts to restore the unit to operation. Under no circumstances shall Labconco Corporation be liable for indirect, consequential, or special damages of any kind. This statement may be altered by a specific published amendment. No individual has authorization to alter the provisions of this warranty policy or its amendments. Lamps and filters are not covered by this warranty. Damage due to corrosion or accidental breakage is also not covered.

WARNING: various federal, state or local regulations may govern the disposal and/or emission of substances used in connection with this equipment. All users of this equipment are urged to become familiar with any regulations that apply in the user's area concerning the dumping of waste materials in or upon water, land or air and to comply with such regulations.

Shipping Claims-

If a shipment is received in visibly damaged condition, be certain to make a notation on the delivering carrier's receipt and have his agent confirm the damage on your receipt. Otherwise, the damage claim may be refused.

If concealed damage or pilferage is discovered, notify the carrier immediately and retain the entire shipment intact for inspection. Interstate Commerce Commission rules requires that the claim be filed with the carrier within 15 days after delivery.

NOTE: Do not return goods. Goods returned without prior authorization will not be accepted. Labconco Corporation and its dealers are not responsible for shipping damage. The recipient must file claims directly with the freight carrier. If authorization has been received to return this product, by accepting this approval, the user assumes all responsibility and liability for biological and chemical decontamination and cleansing. Labconco reserves the right to refuse delivery of any products that do not appear to have been properly cleaned and/or decontaminated prior to return.

Contacting Labconco-

If you have any questions that are not addressed in these instructions, or if you need technical assistance, please contact Labconco Sales Information Department at either 1-(800) 821-5525, and Service Information at (800)-522-7658 or (816) 333-8811, between the hours of 7:00 a.m. and 6:00 p.m. Central Standard Time. Visit the Internet at <http://www.labconco.com> or e-mail: labconco@labconco.com