

Specification text for XPA1 Explosion Proof Alarm, to go into 11610 Laboratory Fume Hoods document.

To be inserted in section 2.03 FUME HOOD CONSTRUCTION, as the second item L.

L. Explosion Proof Monitor/Alarm System: [Specified Option]

Where shown or specified provide Explosion Proof Monitor/Alarm System model XPA1 which monitors duct static pressure and provides audible and visual alarm if airflow drops below safe levels. The technology used in the **XPA1** shall be based on differential pressure sensed via a static probe in the exhaust duct (field mounted). As the duct pressure drops due to failure of the exhaust system or as the sash is raised above safe levels, the pressure change in the exhaust duct triggers the low flow alarm.

1. Explosion proof monitor shall consist of UL or FM listed enclosures, including control box with main circuit board, operator display with light level sensor, horn and pressure switch furnished complete and factory mounted. The monitor shall have green and red light emitting diode display, which provides clear indication of safe or unsafe airflow condition. Monitor shall be contained in an explosion proof instrument housing with clear tempered glass lens. FM or UL listed housing shall not be modified by drilling holes for switches or indicator lights.
2. Calibration is the responsibility of the owner and is required once the hood is stationed and the hood exhaust and room supply systems are balanced. A secondary calibration has been factory set into the alarm's pressure gauge only to determine that the alarm is functional and ready for shipment. **The primary calibration must be completed in the field.**
3. Static Pressure Sensor: Dwyer model 1950G explosion proof UL listed pressure switch, factory mounted to the top of the fume hood.
4. Alarm Signal: Audible signal and a visual, red light emitting diode:
 - a. Silence capability shall be by momentarily covering the light sensor on the front of the safety monitor, which temporarily disables the audible alarm.
 - b. When alarm the condition is corrected and face velocity and volume returns to specified levels the Explosion Proof Monitor shall automatically reset and begin routine monitoring.
 - c. Provide alternate mode in which audible alarm is silenced indefinitely but visual indication remains activated. While alarm silenced, visual indication shall flash.
5. Provide test circuit to verify proper Explosion Proof Monitor operation. Test function shall be accessed while alarm is indicating a safe condition and is initiated by momentarily covering the operator display.
6. Provide monitor with remote alarm output including both normally open and normally closed contacts for connection to building alarm system if required.
7. Electrical rating: Maximum 120 VAC, and maximum current rating of 0.25A. Mains breaker rated at 15A. Includes one (1) Relay Output rated 0.5A at 125 VAC/1A at 24VDC.
8. Installer shall provide explosion proof wiring materials and glands on site for final connection to building supply.
9. All housings and enclosures shall be FM or UL listed for Class 1, Division 1, Groups C and D.
10. Warranty period shall be twelve (12) months from date of shipment to customer.