

## Fume Hood Monitor

## Bulletin 873-a



The Waddell Fume Hood Face Velocity Monitor is an accurate and dependable solution for real-time indication of fume hood performance with additional functions provided to ensure technician safety as well as close control of space conditions.

### Display and Alarms

The monitor displays the fume hood face velocity, low-safe-high airflow LED graph, and provides audible alarms with operator mute function. Additional functions can be programmed including fume hood purge, night setback, and lighting.

Colored LEDs indicate system performance at a glance: Alarm (RED), Caution (Amber), and Safe (Green).

### Features

- Accurate 3-Digit Display
- LEDs Show Hood Safety
- Visual and Audible Alarms
- Dual Units (FPM or m/s)

### Benefits

- Operator Safety by ensuring hood is safe for use
- Alarms on low flow rates as well as high flow rates.
- Responsible over time

### System Operation

The monitor is matched with a separate controller mounted locally to the hood. The controller accepts a linear analog signal proportional to the position of the sash, an airflow station in the exhaust valve for airflow, and an optional operator presence sensor.

The controller determines the required airflow rate based on sash position and occupancy then modulates the exhaust valve actuator position to maintain the proper exhaust flow rate for tight control of the fume hood performance. Fume containment and energy efficiency are ensured.

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|-----------------------------|------------------------------|
| • Display Range             | 0-199 Ft/Min (0-1.01 m/sec)  |
| • Alarm Range               | 0-199 Ft/Min (0-1.01 m/sec)  |
| • Sensor Display Resolution | 1 ft/min                     |
| • Face Velocity Accuracy    | +/- 5%                       |
| • Field Set up              | 1 point velocity calibration |
| • Alarm Mute                | Temporary/Permanent          |
| • RS 485                    | For Laptop of BAS            |
| • Input Power               | 24V AC                       |
| • Agency                    | CE Listed                    |
| • Humidity                  | 20 to 80% non-condensing     |
| • Operating Temperature     | 50 to 125 F°                 |

### Monitor Notes

- Purge
  - When the Purge button is pressed on the unit, the valve actuator is commanded to a full open position. The monitor will display a red light and activate the audible alarm. If desired, this alarm can be sent remotely to the BAS
  - To return to a normal condition the Purge button is pressed a second time. The fume hood will return to normal operation, and the alarm will be cleared.
- Night Set Back
  - A time of day function in the controller board triggers a Night Set Back program, setting the set point to a preset lower value. The night set back LED will illuminate on the Waddell face velocity monitor.
- Alarms
  - High Sash Alarm – If the sash position sensor measures a value above a maximum safe opening, an audible/visual alarm is triggered at the Waddell monitor and an alarm is sent to the BAS.
  - Warning Flow - If the face velocity falls out of the safe measured level for a specified length of time, an audible/visual alarm is triggered at the Waddell monitor and an alarm is sent to the BAS.