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in the UK



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# Filter Saturation Alarm

## Suitable for use with the Airone R range of filtration fume cupboards



Integrated into Airone R control system for convenience and ease of use

Sensor situated to allow exhaust air to pass over it

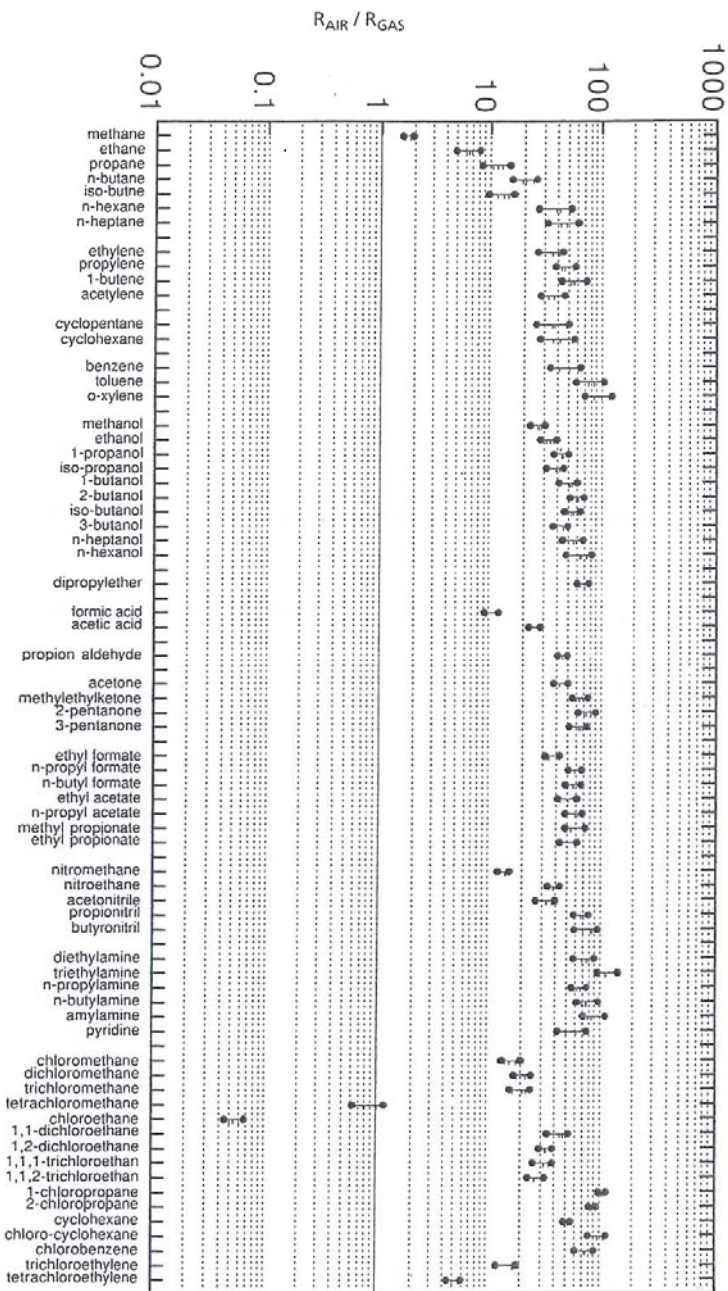


**Benefits & features:**

- Detects low concentrations of Hydrocarbons, some gases and Organic Acids
- Alarms at contaminants in exhaust air
- Alarm mute function
- Detects filter breach (i.e. by leak/saturation) long before laboratory is unduly contaminated



# Filter Saturation Alarm



**Figure 1.** The Sensitivity levels are expressed by the ratio between sensor resistance at 1000 ppm of gas and sensor resistance in air ( $R_{AIR} / R_{GAS}$ ).

The horizontal lines between two dots show the range of sensitivity. The average levels are indicated by short vertical lines.

The sensor's resistance to the flow of electricity increases with increasing concentrations of gases/vapours in the air passing over it. The sensor shows a different sensitivity to different vapours/gases; as such the ratio of the resistance of the sensor in air to the resistance of the sensor in the vapour/gas is used as a measure of sensitivity. A lower ratio of  $R_{AIR} / R_{GAS}$  implies that the sensor is more sensitive to a particular substance.

The sensitivity ranges of some common substances (typical data) are shown in Fig 1.



Due to the range of different sensitivities to vapours, the sensors cannot be calibrated to alarm to set concentrations of all vapours. The sensor is however a very useful safety feature in the laboratory as the alarm will sound long before the laboratory is unduly contaminated due to room dilution factors.

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