



Where should gas detectors / gas sensors be installed?

This is the single most asked question of General Monitors. Unfortunately, there are no hard and fast rules for installing gas detectors since there are so many variables that must be taken into account. Ultimately, the customer must evaluate conditions at the facility to make this determination.

The following installation guidelines should be considered:

1. **The vapor density or relative weight of gases:** Gas sensors should be located near the floor for gases or vapors three or four times heavier than air. They should be installed near the ceiling or roof to detect lighter than air gases.
2. **Ignition sources:** Gas detectors should be located between a potential leak source and a source of ignition, preferably closer to potential leak sources.
3. **Air currents:** The general guideline is to locate the gas sensor where the prevailing air currents contain the maximum concentration of the gas being monitored.
4. **Dispersion of gas:** Generally, gas detectors should not be far removed from any potential source of escaping gas. Liquids of low volatility, in particular, require the location of the gas sensor in the immediate area of the vapor source. Liquids with high flash points, or slow rates of dispersion may produce a low reading if the gas sensor is any distance from the spill or break.
5. **Temperature limitations:** All gas detectors have ambient temperature limitations and the installation of the gas sensor must be within the specified range.
6. **Vibration:** Vibration may be damaging to the detector and must be considered in selecting the gas sensor location. In general, this means anchoring the detector to a wall or firm base rather than to a motor housing.
7. **Wiring:** Good instrument wiring practices should be incorporated in the gas sensor installation, and wiring separate from other AC wiring.
8. **Accessibility:** Since it is desirable to calibrate on a periodic basis, gas sensors should be installed in a location permitting reasonable access.
9. **Moisture protection:** Sensors should be mounted where they are protected from immersion or direct contact with water.
10. **Dust protection:** Sensor dust covers should be used if the gas sensors are mounted in dirty or dusty environments.