

Gas Detector Calibration

Calibrating a gas detector is a crucial process to ensure its accuracy and reliability in detecting hazardous gases. The calibration procedure may vary slightly depending on the specific make and model of the gas detector, so it's important to refer to the manufacturer's guidelines and instructions. However, here is a general guideline that can be followed for calibrating most portable gas detectors:

Note: Always follow the manufacturer's instructions and guidelines specific to your gas detector model.

Choose a Calibration Gas:

Select a calibration gas that closely matches the gas you want to detect. The concentration of the calibration gas should be within the range specified by the manufacturer.

Prepare the Calibration Equipment:

Ensure the calibration gas cylinder is properly connected to the calibration adapter or regulator. Confirm that the tubing is securely attached to both the gas cylinder and the gas detector.

Ventilate the Area:

Make sure you are in a well-ventilated area or conduct the calibration in an area where the target gas is not present.

Turn On the Gas Detector:

Power on the gas detector and allow it to complete its startup procedure.

Initiate Calibration Mode:

Access the calibration mode on the gas detector. This is typically done through the device's menu or a dedicated button.

Initiate Zero Calibration (Fresh Air Calibration):

In a clean air environment, initiate the zero calibration. This sets the baseline for the detector in the absence of the target gas. Follow the device's instructions for zero calibration.

Initiate Span Calibration:

Introduce the calibration gas to the sensor at the specified concentration. Initiate the span calibration according to the device's instructions. This step adjusts the sensor to the expected response in the presence of the target gas.

Verify Calibration:

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Gas detection
Metrology

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After the calibration is complete, the gas detector may display a confirmation message or indicate that calibration was successful. Verify that the calibration results are within the acceptable range.

Label Calibration:

Label the gas detector with the calibration date, calibration gas used, and any other relevant information.

Perform Bump Test (Optional):

A bump test involves exposing the gas detector to a small amount of gas to ensure that it responds appropriately. Some applications or regulations may require regular bump testing.

Document Calibration:

Keep a record of the calibration, including the date, calibration gas concentrations, and any deviations from the expected results.

Regular Calibration Schedule:

Establish a regular calibration schedule based on the manufacturer's recommendations and the specific requirements of your application.

Always refer to the manufacturer's guidelines for the specific gas detector model you are using, as procedures and requirements can vary. Additionally, adhere to any safety precautions outlined in the user manual or safety data sheets provided by the manufacturer.

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