



Sensepoint XCD

Sensepoint XCD Calibration

It is recommended to periodically carry out a gas response check on the Sensepoint XCD to ensure correct operation. This may be done in two ways;

1. A simple Response Check often referred to as a “BUMP TEST” is a test using calibration gas applied to the sensor via the nozzle of the Weather Protection or using the Sensepoint XCD Gassing Cap.
If a BUMP TEST is done via the Weather Protection nozzle it may be necessary in windy conditions to increase the flow rate of the test gas by a further 1 LPM, OR, to shelter the weather protection from the wind.
2. A full gas calibration of the sensor as described in the following section, using ONLY the Sensepoint XCD Gassing Cap (Part No.: S3KCAL).

Zero and Span



CAUTION

Before initial calibration allow the detector to stabilize for 30 minutes after applying power.

When in zeroing and span calibration mode the current output from the detector is inhibited (default 2mA) to avoid false alarms.

For Flammable gas calibration use a calibration gas concentration of between 25%LEL and 75%LEL to ensure that the required accuracy can be attained.

For Hydrogen Sulfide type sensors refer to section 10.1.2 before conducting zero and span calibration.

To calibrate the detector, use an appropriate span gas cylinder, constant flow regulator AND the Sensepoint XCD Gassing Cap. The flow rates used for calibration gas are as follows:

Gas Type	Flow rate (L / Min)
Air or N2 for Zero	0.5 to 1.0
Flammable CAT	1 to 1.5
O2	0.5 to 1.0
H2S	0.5 to 1.0
CO	0.5 to 1.0
H2	0.5 to 1.0
NO2	0.5 to 1.0
Flammable IR	0.4 to 0.6
CO2 IR	0.4 to 0.6

A compressed air cylinder (20.9%Vol oxygen) should be used to perform the zero calibration if the area where the detector is located contains any residual amount of the target gas. If no residual gas is present then the background air can be used to perform the zero calibration. Contact your Honeywell Analytics representative for details of suitable calibration kits.

To calibrate the detector follow the procedure below.

NOTE

Oxygen sensor does not require a zeroing procedure. Background air (20.9%Vol oxygen) can be used to span the oxygen sensor in place of a compressed air cylinder (20.9%Vol oxygen). For oxygen sensors only do parts 1-4, 12, 13 (if compressed air cylinder is used), 14-17 and 22 of the procedure below.

Zero Calibration

1. If the ambient air is NOT considered reliable to use to set the ZERO, then remove the weather protection and fit the Gassing Cap accessory onto the sensor and apply a clean source of zero gas or compressed air.
2. To access the calibration menu, hold the end of the magnet over the switch located at the top center of the detector display (✓) for at least 3 seconds and then remove.
3. The display will indicate the first configuration mode menu 'SEt CAL'.



4. Put the magnet over the '✓' switch again and move to enter the Calibration menu.
5. The display will show the current gas reading, and the '0' icon flashes.



6. When the zero gas reading is stable use '✓' to confirm zero calibration.
7. If successful the display shows 'ZEro PASS' (if not successful, the display shows 'ZEro FAIL' and returns to configuration mode).



8. If using zero-air, turn it off. Zeroing is complete and saved.
9. The display shows 'SPAn' with 'YES' flashing.



10. If span calibration is required use '✓' proceed to the next step. If span calibration is not required, use '▼▲' to select 'No' and '✓' to return to configuration mode.

Span Calibration

11. The display shows the current calibration span gas concentration while flashing the ' ' icon. Use '▼▲' to change the calibration span gas concentration, and '✓' when required span calibration level is set.



12. The display will show the current gas reading, and the ' ' icon flashes.
 13. Connect the regulator to the span gas cylinder.
 14. Apply the span gas to the sensor using the Sensepoint XCD Gassing Cap. The live gas reading is displayed. When the reading is stable, use '✓' to confirm span calibration.



15. If the sensor has been replaced the following display may be shown.



16. Use '▼▲' to select 'YES' if the sensor has been replaced or 'No' if it has not been replaced.
 17. If the span calibration is successful the instrument will briefly display 'SPAN PASS' (if fails 'SPAN FAIL' displayed and returns to configuration mode).

NOTE

Calibration due warning counter is reset after a successful calibration.



18. The display alternates between "Purg gAS" and the gas reading to indicate that the unit is expecting the span gas to be removed from the sensor.



19. Promptly switch off the calibration span gas and remove the Sensepoint XCD Gassing Cap from the sensor to allow the gas to disperse.

20. When the reading falls below 50% of the calibration gas level the display indicates a countdown (up to 180 seconds dependant on gas type).



21. When the countdown is finished, the calibration procedure is complete.

22. The instrument returns to the 'Set CAL' menu. Activate the '▼' or '▲' switch to select another menu or select 'Quit' to return to normal monitoring mode.



NOTE

Remember to always replace the Weather Protection and other accessories.

Zero and Span Calibration of Hydrogen Sulfide sensors

Hydrogen Sulfide sensors can be affected by extreme humidity changes. A sudden increase in ambient humidity can result in a short-term positive drift in the instrument's reading. A sudden decrease in ambient humidity can result in a short-term negative drift in the instrument's reading. These are most likely to be noticed during calibration with dry or cylinder gas.

When calibrating Hydrogen Sulfide cartridges the following should be taken into account while following the Span/Zero procedure:

1. To zero the sensor, use a compressed air cylinder of 20.9%Vol oxygen (not Nitrogen). Do not use background air.
2. Apply the gas to the sensor for three minutes before using '✓' to confirm the zero calibration.
3. If a span calibration is to be performed, the span calibration gas should be applied to the sensor immediately after the zeroing procedure. Do not allow the sensor to return to ambient air conditions between steps 2 and 3.
4. Apply the span gas for two minutes before using '✓' to confirm the span calibration.

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