



Installing a Sensor Cartridge

INSTALLING A SENSOR CARTRIDGE



Introduction

Before installing a sensor cartridge check that the number on the cartridge label matches the gas type and range for the function required. All cartridges are supplied calibrated. (See **Calibrating the cartridge** for potential zero calibration requirement.)

WARNINGS

1. The apparatus is not suitable for use in oxygen enriched atmospheres ($>21\%V/V$). Oxygen deficient atmospheres ($<10\% V/V$) may suppress some sensor outputs.
2. Operator should be fully aware of the action to be taken if the gas concentration exceeds alarm level.
3. Installation should consider not only optimum siting for gas detection related to potential leak points, gas characteristics and ventilation but also placement where the potential for mechanical damage is minimised or avoided.
4. Exposures above the recommended range may result in ambiguous readings and may require subsequent re-calibration of the Certified Sensor.
5. When installed to measure flammable gas it is essential that overrange latching is enabled either locally at the transmitter or remotely in the control network. Depletion of oxygen as a consequence of displacement by flammable gas can result in the gas reading returning to zero.
6. Do not modify or alter the construction of the unit as essential safety requirements may be invalidated.
7. Refer to local or national regulations relative to installation and use at the site.
8. Dispose of in accordance with local disposal regulations.
9. To avoid invalidating certification only fit Apex cartridges to the Apex Certified Sensor. Do not fit Apex cartridges to uncertified products

CAUTIONS

Only cartridges with the following part numbers can be fitted to the Certified Sensor:

2110B30x0, 31x0, 32x0, 33x0, 34x0 series

2110B3700 - 2110B3999 range

Fitting the cartridge

If fitting a cartridge to a unit that is powered up ensure that the subsequent procedure is followed to make certain unwanted fault signals are not generated.

1. Access the **Main Menu** on the host Transmitter Unit.
2. Select **Configuration Menu** and press **OK** or **↵**.
3. Enter the password and then select **Change Cartridge** and press **OK** or **↵**.
*The display reads **Change Cartridge Now**.*
4. Remove the sensor cap.
5. Carefully remove the old cartridge.
*The display reads **Cartridge: Not Present**.*
6. Carefully plug the cartridge into the sensor body.

Ensure that the cartridge locating tab lines up with the locating tab recess in the sensor body and push the cartridge, without twisting, until it is fully home (see diagrams).



If the cartridge will not push fully home, re-check that the locating tab is correctly aligned with the tab recess in the sensor body. Position the locating tab so it is resting on the tab recess wall to the right or left of the tab recess, and then turn the cartridge until the locating tab drops into the recess.

Caution: Do not force the cartridge as this may cause damage to the pins of the connecting plugs.

7. Once fitted, re-fit the retaining cap or sensor accessory, or refit the sensor to the manifold assembly (for Extractive/Pyrolyzer units).

If required fit the filter supplied with the cartridge to the inside of the sensor cap. Refer to the Transmitter Unit's technical handbook for details.

Activating the cartridge

When fitted correctly the display reads **Cartridge: Present**.

1. Press **OK** or **↵**.
*If a different type of cartridge has been fitted then the new parameters are displayed. The display reads **Working Please Wait** and then **Success! OK: Continue**.*

2. Press **OK** or **↵** and then **ESC** twice to return to the **Gas Reading** screen.

3. Wait for **15 minutes** to allow the cartridge to stabilise.

*If after 15 minutes the message **Calibration required** is displayed then re-zero the cartridge using the calibration procedure (refer to the following section for details).*

Calibrating the cartridge

Caution: Cartridges are supplied calibrated, however a zero calibration is required for all cartridges fitted in Duct Adapter or Extractive/Pyrolyzer applications.

If local regulations require the unit to be calibrated on commissioning/start-up, refer to the Transmitter Unit's technical handbook for details.

Please Note:

While every effort has been made to ensure accuracy in this publication, no responsibility can be accepted for errors or omissions. Data may change, as well as legislation, and you are strongly advised to obtain copies of the most recently issued regulations, standards, and guidelines. This publication is not intended to form the basis of a contract.

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