AKO

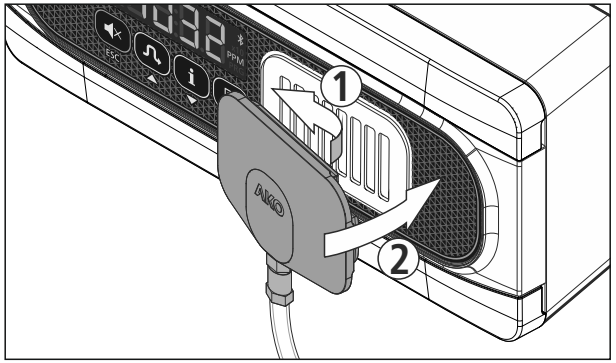
en 5812H002 Ed.05

Calibration kit

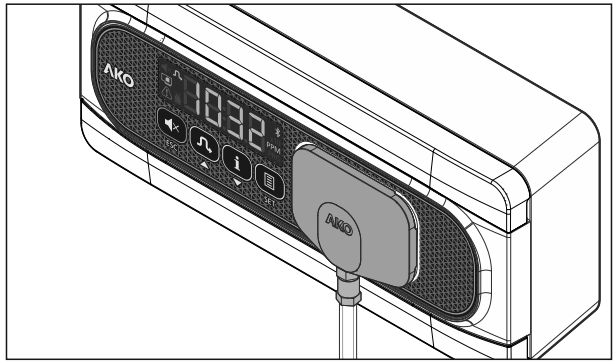
AKO-58110

Installation

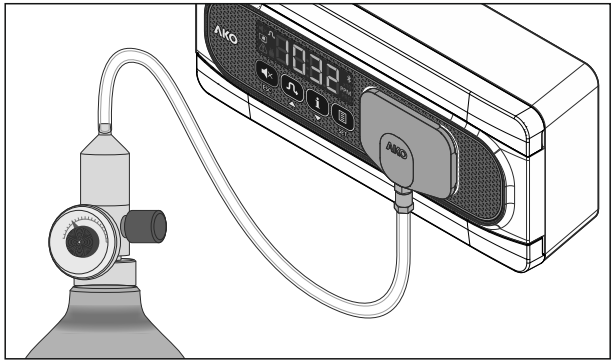
The **AKO-58110** calibration kit enables the testing, verification of accuracy, reset to zero and calibration of the transmitter.



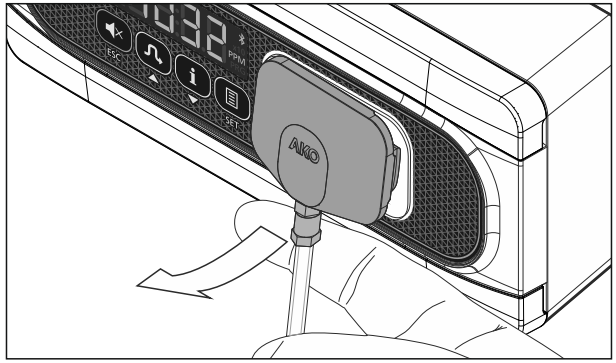
Install the kit, attaching it to the transmitter window as shown in the image.



Press hard until it fits together perfectly.



Connect the regulator of the gas pump to the free end of the transparent tube.



To extract it, pull out from the lower end.

Operation test (Bump Test)

Materials required: **AKO-58110** calibration kit **+** Gas cylinder*

EN-378 and **F-GAS** international standards require verification of the correct operation of the transmitter at least once per year. Please check what current local regulations specify for such cases. **Always ensure that you comply with current local regulations.**

- Before starting the verification procedure, check the Pre-Alarm configuration (**AL2**). This should be enabled in order to check it has been activated. It is advisable to disable the Pre-Alarm delay (**AL5**) and Alarm delay (**AL8**) to speed up the verification process.
- Install the **AKO-58110** calibration kit.
- Open the shut-off valve of the gas cylinder and wait.
- After a few moments, the transmitter concentration reading will begin to rise until it reaches the Pre-Alarm and then Alarm level.
- Check that both the Pre-Alarm and the Alarm signal correctly and that the corresponding relays are activated.
- Close the shut-off valve of the gas cylinder, disconnect the cylinder and remove the calibration kit from the transmitter.

The transmitter may take a few moments to go back to showing the concentration values from before the verification procedure.
Once the verification procedure is complete, remember to readjust the Pre-Alarm (**AL2**) and delay (**AL5** and **AL8**) parameters to the values prior to the beginning of the verification procedure.

*Use a cylinder with a type of gas that is suitable to the sensitivity of the transmitter to be calibrated. When calibrating the **AKO-575400** universal gas transmitter, use a R134a gas cylinder.

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We reserve the right to supply materials that might vary slightly to those described in our Technical Sheets. Updated information is available on our website.

Verification of accuracy (Calibration) (AKO-575xxx only)

Materials required: **AKO-58110** calibration kit **+** Calibrated gas cylinder*

AKO recommends verifying the accuracy of the transmitter at least once per year. Please check what current local regulations specify for such cases.
Always ensure that you comply with current local regulations.

- Install the **AKO-58110** calibration kit.
- Open the shut-off valve of the gas cylinder and wait.
- After a few moments, the transmitter concentration reading will begin to rise. Wait for the reading to stabilise.
- Compare the reading displayed with the calibrated value of the gas cylinder. If the accuracy is sufficient for the intended application, it is not necessary to carry out a calibration. If the opposite is true, calibrate the transmitter.
- Close the shut-off valve of the gas cylinder, disconnect the cylinder and remove the calibration kit from the transmitter.

The transmitter may take a few moments to go back to showing the concentration values from before the verification procedure.

Reset to zero (AKO-575xxx only)

OPTION A: CLEAN AIR

- Before beginning the reset to zero procedure, ensure that the area of the premises is **free of freon gas** and any other substances that could affect the transmitter, and that the transmitter **has been operating for at least 20 minutes.**
- Enter the programming menu by pressing the **SET** key for 10 seconds and access section `in0`, parameter `r00`. The unit will request a confirmation code (`Cod`). Use keys ▼ and ▲ to enter code 63 and press **SET.**
- Use keys ▼ and ▲ to select option 1 and press **SET**. This will start the process.
- During the process, the display will alternate between showing the gas concentration and the `CAL` message and the illuminated symbol. This process will last for between 30 seconds and 5 minutes. On completion, if the reset to zero process has been successful, the display will show "`End`" and emit a long beep.

OPTION B: WITH NITROGEN GAS

Materials required: **AKO-58110** calibration kit **+** Nitrogen gas cylinder

- After initiating the reset to zero process, ensure that the transmitter **has been operating for at least 20 minutes**.
- Install the **AKO-58110** calibration kit.
- Enter the programming menu by pressing the **SET** key for 10 seconds and access section `in0`, parameter `r00`. The unit will request a confirmation code (`Cod`). Use keys ▼ and ▲ to enter code 63 and press **SET.**
- Seleccionar la opción 1 mediante las teclas ▼ y ▲ y pulsar **SET**, el proceso se inicia.
- Open the shut-off valve of the gas cylinder and wait.
- During the process, the display will alternate between showing the gas concentration and the `CAL` message and the symbol illuminated. This process will last for between 30 seconds and 5 minutes. On completion, if the reset to zero process has been successful, the display will show "`End`" and emit a long beep.
- Close the shut-off valve of the nitrogen gas cylinder, disconnect the cylinder and remove the calibration kit from the transmitter.

If any problems have been detected during the reset to zero process, the transmitter will emit three short beeps and display one of the following error codes:

CODE	ERROR
EC	A reading of greater than 300 PPM has been detected during the process.
Et	The temperature of the sensor has experienced a variation of greater than 5 °C.
Eto	The maximum time period (5 min) has been exceeded and the reading has not stabilised.

Full scale setting (AKO-575xxx only)

Materials required: **AKO-58110** calibration kit + 2000 PPM calibrated gas cylinder*

Check whether current local regulations require a specific calibration frequency. **Always ensure that you comply with current local regulations.**

- After initiating the calibration process, ensure that the transmitter **has been operating for at least 20 minutes**.
- Reset the transmitter to zero..
- Install the **AKO-58110** calibration kit.
- Press the **SET** key for 10 seconds to enter the programming menu.
- When calibrating an **AKO-575400** universal transmitter, configure parameter `Gc2` to `ALL`.
- Access section `in0`, parameter `r01`. The unit will request a confirmation code (`Cod`). Use keys ▼ and ▲ to enter code 63 and press **SET**.
- Use keys ▼ and ▲ to select option 1 and press **SET**. This will start the process.
- Open the shut-off valve of the gas cylinder and wait.
- During the process, the display will alternate between showing the gas concentration and the `CAL` message and the illuminated symbol. This process will last for up to 15 minutes. On completion, if the calibration process has been successful, the display will show "`End`" and emit a long beep.
- Close the shut-off valve of the calibrated gas cylinder, disconnect the cylinder and remove the calibration kit from the transmitter.

If any problems have been detected during the calibration process, the transmitter will emit three short beeps and show one of the following error codes:

CODE	ERROR
Et	The temperature of the sensor has experienced a variation of greater than 5 °C.
Eto	The maximum time period (15 min) has been exceeded and the reading has not stabilised.

The transmitter may take a few moments to go back to showing the concentration values from before the calibration procedure.
AKO-575400 only: Once the verification procedure has been completed, remember to adjust parameter `Gc2` to the value prior to the start of the calibration procedure.

*Use a cylinder with a type of gas that is suitable to the sensitivity of the transmitter to be calibrated. When calibrating the **AKO-575400** universal gas transmitter, use a R134a gas cylinder.