

AKO

GB 5757H412 Ed.01

CO₂ gas transmitter with
NBloT communication
Quick guide

**AKO-575744NR**

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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.

Warning



- Transmitters / detectors should be installed in a place protected from vibrations, water and corrosive gases, where the ambient temperature does not exceed the value indicated in the technical data.
- The transmitters / detectors are not suitable for areas classified as potentially explosive.

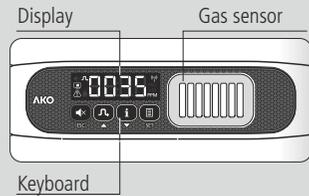
-Transmitters/detectors supervise a point and not an area. If the gas leak does not reach the sensor, or the level of concentration in that point does not reach the foreseen values according to the type of gas no alarm will be activated. If perimeter supervision is required, several sensors should be installed around that area.

- Avoid installing the device on metal walls or near devices that may produce radio emissions.
- This device must be installed in a location where a minimum distance of 20 cm to the human body can be guaranteed, in order to ensure compliance with standards on human exposure to electromagnetic fields.

Working conditions:

- Avoid handling refrigerant gases near the sensor. If this is unavoidable, use Set Hold or Maintenance mode. Do not paint the sensor or place it near solvents or paints. Exposure to acetone vapours may generate false alarms.
- The sensor should be installed away from:
 - Smoke outlets located in confined spaces or from engines, generators or motorised machinery (fork-lift trucks, etc.).
 - Particularly damp areas or areas with strong ventilation.
- The detector should usually be installed in an area where gas may concentrate, near places where gas leaks could start
- CO₂ is heavier than air. Therefore, it always concentrates in the lowest part of the refrigerated room or space. Please take this into consideration when choosing the installation site. It is advisable to leave a distance of around 50 cm free.

Description



Fixed: Gas pre-alarm activated.
Flashing: Gas alarm activated.



Fixed: Set Hold mode activated
Flashing: Maintenance mode activated



The display shows the type of gas detected.



Constant: NBloT module in operation
Flashing: Malfunction in NBloT module



Constant: Connected to the NBloT network (Narrow band)
Switched off: NOT connected to the NBloT network or expired license.

PPM

The display shows the current gas concentration in ppm (parts per million).

x10

The value displayed should be multiplied by 10.



Gas alarm on mute

PRG

Unit in programming mode.



If the gas Pre-Alarm or Alarm sounds, pressing once will mute the alarm tone (See parameter **b03**).
In the programming menu, it exits the parameter without saving changes, returns to previous level or exits programming.



Pressing for 3 seconds activates or deactivates Set Hold mode.
Pressing for 6 seconds activates or deactivates maintenance mode.
In the programming menu it allows scrolling around the different levels, or during the setting of a parameter, changing its value.



+ Forces data transfer to the cloud via NBloT connectivity.

ESC SET

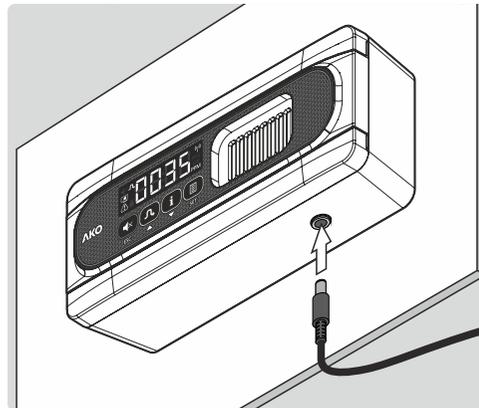


Pressing once (< 1 second) will show the type of gas detected, the date and time in sequential order.
Pressing for 3 seconds displays the Pre-Alarm and Alarm levels that have been configured.
In the programming menu it allows scrolling around the different levels, or during the setting of a parameter, changing its value.



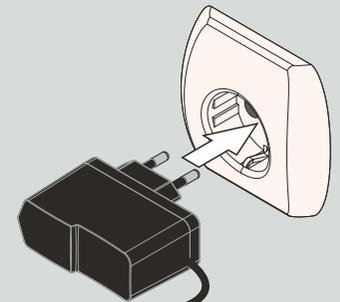
Pressing for 3 seconds accesses the configuration of alarm and pre-alarm levels.
Pressing it for 6 seconds accesses the advanced programming menu.
In the programming menu, it accesses the level shown on the display or, during the setting of a parameter, accepts the new value.

Start-up



INSTALLATION

Follow the instructions included in the installation template.



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Signing up to akonet.cloud

In order for the transmitter to be able to send operating data to akonet.cloud, it must be registered. To do this, go to <https://akonet.cloud> (requires registration), click on "Add new device"  and continue with one of these two methods:

- A.-Enter the serial number (S/N) and validation code / IMEI that appear on the tag and press "Search".
- B.-Capture the QR code that appears on the tag using the  option (requires having a camera on your PC, tablet or mobile phone).

These data are found on the tag on the right hand side of the transmitter.

More information can be found in the akonet.cloud user guide at:

"<http://help.ako.com/manuales/akonet-cloud>"

To access akonet.cloud, enter this address in your browser (the use of Google Chrome is recommended):

<https://akonet.cloud>.



 Before activating the device, make sure that there is enough reception at the installation location. **Activated devices may not be returned.**

Forcing transmission

When the steps of the configuration wizard and the registration process are completed in akonet.cloud, you must force a first transmission to verify the level of reception:

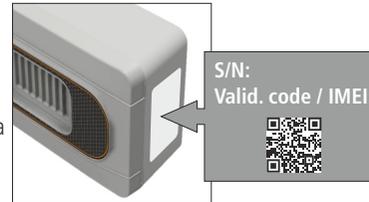
- Press and hold the ESC and SET keys for 3 seconds.
- After a moment, the display shows the quality of the NBloT signal received:

Low quality

Intermediate quality

High quality

Communication error



 The transmitter does not start transmitting data to akonet.cloud until the first transmission is forced.

Operation

Without alarms

The display shows the current gas concentration in ppm.

The transmitter regularly sends to the cloud (akonet.cloud) the gas concentration data and other operation information at specific intervals based on the akonet.cloud parameter "continual log interval".

Any change in the configuration of the transmitter or its operation (mode changes, errors, etc.) are sent to the cloud instantly.

Alarms

The transmitter emits an acoustic alarm, the alarm indicator flashes and activates the relays when certain gas concentration levels are exceeded.

There are two alarm levels depending on the concentration of gas detected: Pre-Alarm and Alarm. These have a factory setting of 1000 and 1400 PPM respectively. These values comply with domestic and international regulations. However, please ensure that these values comply with current local regulations. In order to modify these values, parameter **AL1** should be configured to 1.

Activations and deactivations of pre-alarms and alarms are sent to the cloud instantly.

There are two possible methods for modifying the transmitter's configuration:

- Through the device's programming menu (refer to the user manual available at www.ako.com).
- At www.akonet.cloud, by accessing the device parameters menu.

Simplified declaration of conformity

AKO Electromecánica S.A.L. hereby declares that the radioelectric device types **AKO-575xxxx** (Gas transmitter with NBloT communication) conform to the provisions set forth by Directive 2014/53/EU.

The full text of the EU conformity declaration is available at the following internet address:

<http://help.ako.com/manuales/declaracion-ue-de-conformidad>

Messages



Gas pre-alarm activated. Flashing together with the gas concentration.



Gas alarm activated. Flashing together with the gas concentration.



Initialisation process of the gas sensor. This may last for up to 3 minutes.



Error or malfunction of the sensor. The Pre-Alarm relay is activated, the transmitter emits 3 alert tones every 2 minutes and the  icon flashes. Deactivate the power supply and activate it again. If after a few seconds the error persists, please contact your technical support centre.



The sensor has reached its maximum working temperature.



The sensor has reached its minimum working temperature.

Technical specifications

AKO-575744NR

Power supply.....	12 - 30 Vdc
Consumption Typical.....	75 mA
Maximum.....	125 mA
Pre-Alarm/Alarm relay	SPDT 30 Vdc, 2 A, cos φ = 1
Working ambient temperature.....	-30 °C to 50 °C
Storage ambient temperature.....	-30 °C to 60 °C
Range of maximum moisture permitted	0 - 95 % HR (without condensation)
Type of sensor.....	NDIR (Non-Dispersive Infrared Technology)
Display range.....	0 - 2000 x1 ppm
Estimated working life	7 years
Dimensions	202 mm (W) x 82 (H) x 55.5 mm (D)
Bands.....	NBloT (Narrow band) LTE Cat NB1 B2, B3, B4, B8, B12, B13, B20

Band	Frequency Rx	Frequency Tx
2.....	1930 MHz ~ 1990 MHz	1850 MHz ~ 1910 MHz
3.....	1805 MHz ~ 1880 MHz	1710 MHz ~ 1785 MHz
4.....	2110 MHz ~ 2155 MHz	1710 MHz ~ 1755 MHz
8.....	925 MHz ~ 960 MHz	880 MHz ~ 915 MHz
12.....	729 MHz ~ 746 MHz	699 MHz ~ 716 MHz
13.....	746 MHz ~ 756 MHz	777 MHz ~ 787 MHz
20.....	791 MHz ~ 821 MHz	832 MHz ~ 862 MHz

Maximum transmission power.....	23.5 dBm conducted
Antenna	Internal

External power supply

Working ambient temperature.....	0 °C to 40 °C
Input power supply range	90 - 264 Vac / 47 - 63 Hz
Output voltage	15 Vdc
Peak output current	1 A