Gas transmitter with NBIoT communication
Quick guide

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 from 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.).
- 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.
- Particulaly 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.
- The gases currently used in industrial refrigeration, for which this transmitter has been designed, are heavier than air. They are therefore always concentrated 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.

Operation
Without alarms
The display shows the current gas concentration in ppm.
Parameter b12 allows you to fix a value below which the display will always show zero.

Alarms
The transmitter emits an acoustic alarm, the alarm indicator flashes and activates the relays when certain gas concentration levels are reached. If the transmitter is connected to a station, the station will emit the acoustic alarm. The relays will be activated in both devices.

Simplified declaration of conformity
AKO Electromecánica S.A.L. hereby declares that the radiotelelectric device types AKO-575xxx (Gas transmitter with NBIoT 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/assets/uploads/DUEC575xxxx.pdf
**Setup wizard**

1. Connect the power supply, the display will show the message 'Int' flashing with 0.
2. Use keys ← and → to select one of the options depending on the type of installation and press SET to confirm.

   - n1: Demo mode
   - n2: Connection to alarm station
   - n3: Independent operation

   1 minute elapses without any key being pressed, the transmitter will automatically proceed to demo mode.

AkoNet-575400 only

3. The display will show the message GeC. Use keys ← and → to select the type of gas to be measured (ALL, 125, 134A, 40A, 407A, 407F, 410A, 4148A, 449A, 513A, 452A, 32, 23 or 445A), and press SET to confirm.

**All models**

The transmitter will begin to operate normally.

- If the transmitter is connected to an alarm station, initiate the configuration wizard in the transmitter before doing so in the station.
- This function will not reinitialize once the transmitter has been configured. To reactivate the function, disconnect the power supply, reconnect it and press ← and SET before 2 minutes are up.
- If this is not the first time you initiate the wizard, after completing the last step the display will show the message d/P (parameters per defect). You can choose to change two options:
  - 0: Only changing the parameters which affect the wizard (GeC, b04 and w0D). The other parameters will remain the same.
  - 1: All parameters return to their factory setting except those which have been modified by the wizard.

   * Demo mode shows the reading of the gas concentration on a flashing panel with the message Int. It does not activate Alarms or Pre-Alarms. This mode enables you to postpone configuration of the transmitter.

**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 a device” and continue.

- 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: https://helps.ako.com/myPanel/all.html

   * 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**

If 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 NB-IoT 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.

**Parameters**

The unit operating parameters are organised in different groups or families according to their function. The Def. column indicates the default parameters set in the factory. In order to access the programming menu, hold the SET key for 6 seconds, or until ‘Pr-C’ appears on the display. To modify the Pre-Alarm and Alarm levels, press SET for 3 seconds or until ‘M3’ appears on the display (Only if All=1).

This allows you to scroll through the different levels, or when setting a parameter, to change its value.

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**Technical specifications**

- Power supply: 12 - 30 Vdc
- Consumption Typical: 75 mA
- Dimensions: 202 mm (W) x 82 (H) x 55.5 mm (D)
- Band: NB10 (Narrow band, B20 for Europe)
- Maximum transmission power: 23.5 dBm conducted
- Antenna: Internal

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**Input and output configuration**

<table>
<thead>
<tr>
<th>Description</th>
<th>Values</th>
<th>Min.</th>
<th>Def.</th>
<th>Max.</th>
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</thead>
<tbody>
<tr>
<td>Operation modes (Reading only)</td>
<td>Demo mode;</td>
<td>0</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2: Independent operation</td>
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<tr>
<td>Programme revision</td>
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<td>Bootloader version</td>
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<tr>
<td>Parameter map revision</td>
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<tr>
<td>CRC value of the programme</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>CRC value of the bootloader</td>
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<td></td>
</tr>
<tr>
<td>Output to level 1</td>
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</tbody>
</table>
| 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.

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**Messages**

- E5: The sensor has reached its maximum working temperature.
- E5L: The sensor has reached its maximum working temperature.