AKO 5761H012 Ed.08 en

Gas detector
Quick guide

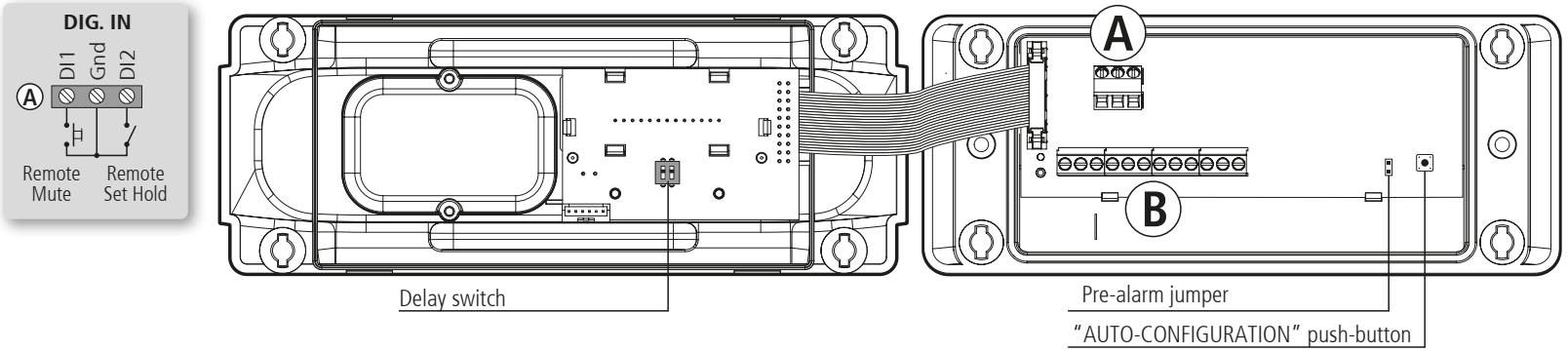
AKO-5761x

Warnings

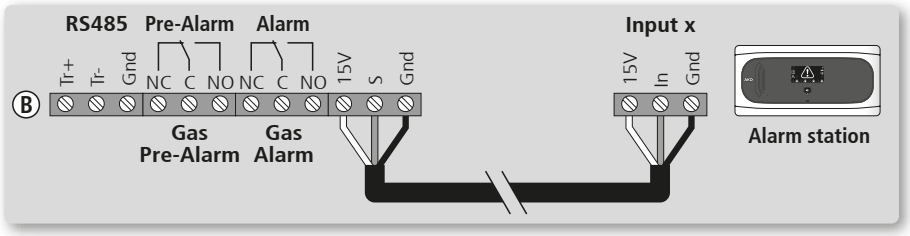
-Detectors should be installed in a place protected from vibrations, water and corrosive gases, where the ambient temperature does not exceed the value indicated in the technical data.
-Detectors are not suitable for areas classified as potentially explosive.
-Detectors supervise a point and not an area. 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.

Working conditions:
-Avoid handling refrigerant gases near the sensor. If this is unavoidable, use Set Hold or Maintenance mode.
-Keep the detector work environment free of chemical agents (solvents, acetone vapours, paints, alcohol, cleaning products, silicone and derivatives, ethylene, etc.).
-Avoid installing the detector near products or devices that might give off CO_2. (**AKO-57615** only)
-Human breathing near the detector may increase the level of CO_2. and generate false alarms. (**AKO-57615** only)
-Do not paint the detector or place it near solvents or paints. (**AKO-57613/4** only)
-The sensor should be installed away from:
-Areas where fermentation and ripening processes of products (bread, pizza, fruit, etc.) may occur. (**AKO-57613/4** only)
-Smoke outlets located in confined spaces or from engines, generators or motorised machinery (fork-lift trucks, etc.).
-Particularly damp areas or with strong ventilation.
-The detector should usually be installed in an area where gas may concentrate, near to places where gas leaks could start.
-The detector's location will depend on the refrigerant and will be in areas where gas leaks could concentrate. Taking into account individuals' safety and their use of space, the lowest position of this space will be considered for refrigerants heavier than air (HCFC, HFC and CO_2) and the highest possible position will be considered for refrigerants lighter than air (NH_3).

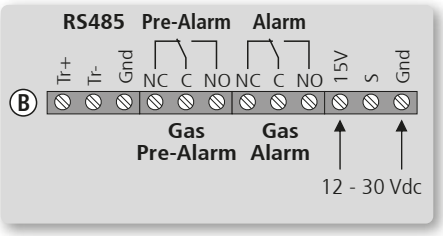
Wiring



Connection to alarm station



Independent operation



Always disconnect the power supply to do the wiring.
The wiring between the detector/transmitter and the station should **NEVER** be installed in a conduit together with power, control or supply cables.
Cables for wiring the relay contact should have an adequate section depending on the unit to be connected.
Certain international standards maintain that the power supply of the alarm should originate from a different circuit to that used by the refrigeration and ventilation system. **Please ensure that you comply with current local regulations.**

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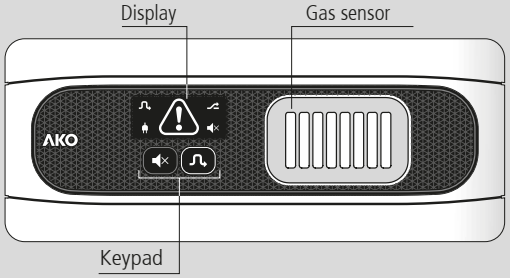
We reserve the right to supply materials that might vary slightly to those described in our Technical Sheets. Updated information is available on our website.

Description



Constant: Gas pre-alarm activated.
Quick flashing: Gas alarm activated.
Slow flashing: Gas alarm saved.
Quick-flashing, 3 short beeps every 2 minutes: Sensor error

Constant: Set Hold mode activated
Flashing: Maintenance mode activated

Audible alarm silenced or disabled (See AUTO-CONFIGURATION)

Second set of Pre-alarm / Alarm levels activated

Powered via an external power supply (Independent operation)

For gas Pre-alarm / Alarm, pressing briefly silences the alarm tone.
During AUTO-CONFIGURATION, enable / disable the audible alarm.

Pressing for 3 seconds activates or deactivates Set Hold mode.
Pressing for 6 seconds activates or deactivates maintenance mode.

Pressing both keys for 6 seconds: Activation / deactivation of the second set of Pre-alarm / Alarm levels.
Should there be a sensor error, restart the detector.

Detector initialisation

Each time that the detector is supplied with power, an initialisation process begins, during which the key flashes. During this process, the alarms, digital inputs and keyboard are disabled.
After a few moments, the detector begins to operate normally. However, at least 5 minutes should elapse for optimal operation to be reached.

AUTO-CONFIGURATION function (only in independent operation)

Allows for digital input polarity to be configured and for the audible alarm to be enabled / disabled.

1.- Ensure that both digital inputs are in standby (not activated)
2.- Disconnect the power supply, connect it again and press the 'AUTO-CONFIGURATION' push-button 5 consecutive times before 2 minutes have elapsed. The and indicators light up alternately.
3.- Press the key to enable / disable the mute key.
4.- Keep the "AUTO-CONFIGURATION" push-button pressed down for 5 seconds to save the configuration of the digital inputs.

Optionally, we can return the detector to its factory settings. To do so, press the "AUTO-CONFIGURATION" push-button 5 times before step 4.

Pre-alarm jumper

Allows for Pre-alarm detection to be enabled / disabled. Before using this option, ensure that regulations allow for two alarm levels.

Pre-alarm enabled Pre-alarm disabled

When using the ammoniac (AKO-57613) or CO_2 (AKO-57615) detector, the pre-alarm must be enabled.

Pre-alarm and Alarm delay switch

Define the time elapsed between when the Pre-alarm / Alarm level is reached and the Pre-alarm / Alarm launches (Indicated on Display, audible alarm and relay activation).

Without delay* 30 s. 60 s. 180 s.

Set Hold mode

Prevents false alarms when charging or cleaning the chambers.
While this mode is activated, pre-alarms will not signal and alarms will signal as pre-alarms when faced with all effects (sound, relay activation and signalling).
To activate/deactivate this mode, press the key for 3 seconds. The display will show the indicator.
You may also activate/deactivate this function remotely using digital input 2 (DI2) if required.
This mode will remain active for a maximum of 5 hours, then will deactivate automatically.
If this mode is activated using the key, it can only be deactivated using the same key. This is also true when activating the mode using digital input 2.

Maintenance mode

Disables gas pre-alarms and alarms for 1 hour for maintenance tasks.
While this mode is activated, no gas pre-alarm or alarm will sound.
To activate/deactivate this mode, press the key for 6 seconds. The indicator will flash.

Pre-alarm and Alarm levels

	GASES DETECTED	DEFAULT LEVELS		SECOND SET OF LEVELS	
		PRE-ALARM	ALARM	PRE-ALARM	ALARM
AKO-57613	R-717 (NH_3/ammonia)	500 ppm	1000 ppm	-	-
AKO-57614	R-134a, R-22, R-404A, R-407A, R-407C, R-407F, R-409A, R-408A, R-410A, R-422A, R-422D, R-424A, R-434A, R-442A, R-448A, R-449A, R-450A, R-452A, R-453A, R-454C, R-454B, R-455A, R-507A, R-513A	500 ppm	1000 ppm	1500 ppm	3000 ppm
AKO-57615	R-744 (CO_2)	4000 ppm	8000 ppm	5000 ppm	10000 ppm

In the event of a sensor error, the detector emits 3 alert tones every 2 minutes, the icon flashes and the Pre-Alarm relay is activated.

Pre-Alarm
NC C NO

Operation check (Bump test)

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.**

We recommend using **AKO-58110** cable. To carry out this check, follow the instructions included in the kit.

Technical specifications

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 **AKO-57615** ..... -40 °C to 50 °C
Other models ..... -20 °C to 50 °C
Storage ambient temperature ..... -30 °C to 60 °C
Range of maximum moisture permitted ..... 0 - 95 % HR (without condensation)
Protection degree ..... IP 68
Type of sensor **AKO-57613 / 57614** ..... Semiconductor
AKO-57615 ..... NDIR (Non-Dispersive Infrared Technology)
Full scale **AKO-57613 / 57614** 3000
AKO-57615 10000
Dimensions ..... 202 mm (W) x 82 (H) x 55.5 mm (D)