



AKO-575744 AKO-575400

Warning



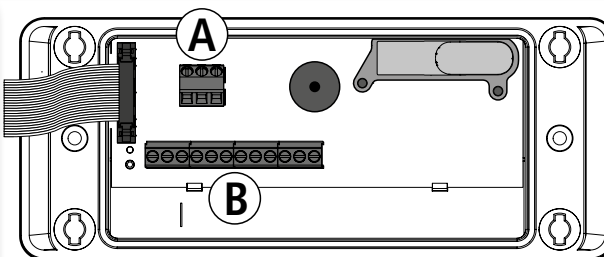
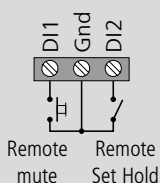
- Transmitters / detectors should be installed in a place protected from vibrations, water and corrosive gases, where the ambient temperature does not exceed the value indicated in the technical data.
- The transmitters / detectors are not suitable for areas classified as potentially explosive.

-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.

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
- 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.

DIG. IN



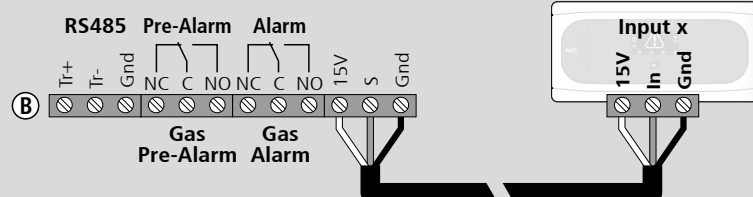
- Always disconnect the power supply to do the wiring.
- The wiring between the transmitter and the station must **NEVER** be installed in a conduit together with power, control or power supply cables.

Cables for wiring the relay contact should have an adequate section depending on the unit to be connected.

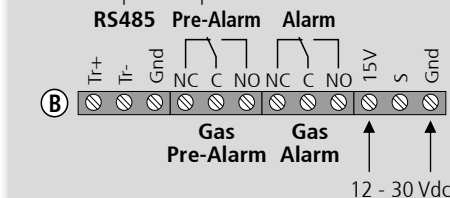
Certain international standards maintain that the power supply of the alarm should originate from a different circuit to that used by the refrigeration and ventilation system. **Please ensure that you comply with current local regulations.**

If connecting to a MODBUS network the double connection strips included must be used (see box)

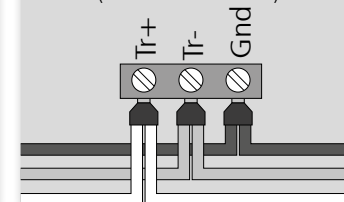
o00=0: Connection to alarm station



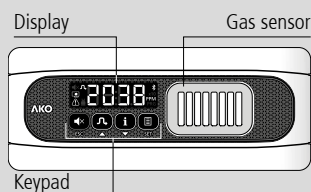
o00=1: Independent operation



Detail of MODBUS connection (Wire ferrules included)



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.



Fixed: CAMM module in operation
Flashing: Malfunction in CAMM module



Bluetooth activated (CAMM module only)



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



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.
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.

Operation

Without alarms

The display shows the current gas concentration in ppm.
Parameter **b02** 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 exceeded. If the transmitter is connected to a station, the station will emit the acoustic alarm. The relays will be activated in both devices.
There are two alarm levels depending on the concentration of gas detected: Pre-Alarm and Alarm. Both are factory preset but can be modified by means of parameters **AL3** and **AL6**. These values comply with domestic and international regulations (RSIF, EN 378 and EN 14624). However, please ensure that these values comply with current local regulations. In order to modify these values, parameter **AL1** should be configured to 1.

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-575744-40 °C to 50 °C
Other models.....-30 °C to 50 °C
Storage ambient temperature:
AKO-575744-40 °C to 60 °C
Other models.....-30 °C to 60 °C
Range of maximum moisture permitted . 0 - 95 % HR (without condensation)
Protection degree..... IP 68
Type of sensor NDIR (Non-Dispersive Infrared Technology)
Display range:
AKO-5757440 - 10000 x1 ppm
Other models.....0 - 2000 x1 ppm
Estimated working life..... 5 years
Dimensions 202 mm (W) x 82 (H) x 55.5 mm (D)

Default parameters

To set the device to factory default, switch off the power supply and switch it on again, press the sequence **▲**, **▼** and **SET** within 2 minutes. The display shows the message dFp (default parameters) with a choice of two options:
0: Parameters are not modified
1: All parameters are reset to their default values.

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 **"PrG"** appears on the display. To modify the Pre-Alarm and Alarm levels, press **SET** for 3 seconds or until **"RL3"** appears on the display (Only if AL1=1).

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

SET This accesses the level shown on the display or, when setting a parameter, it accepts the new value.

ESC This exits the parameter without saving changes, returns to previous level, or exits programming.

Level 1	Level 2	ALARM CONFIGURATION				
		Description	Values	Def.	Def.	Max.
RL	RL 1	Alarm levels: 0: According to regulation 1: Set by user		0	1	1
	RL 2	Pre-Alarm 0: Disabled; 1: Enabled		0	1	1
	RL 3	Pre-Alarm Level (1) AKO-575744 Other models	PPM	b02 / AL4+1	4000 500	AL6
	RL 4	Pre-Alarm Differential	PPM	10	100	200
	RL 5	Pre-Alarm Delay (0: Disabled)	min.	0	0	15
	RL 6	Alarm Level (1) AKO-575744 Other models	PPM	AL3	8000 1000	10000 2000
	RL 7	Alarm Differential	PPM	10	100	200
	RL 8	Alarm Delay (0: Disabled)	min.	0	0	15
EP		Exit to level 1				
Level 1	Level 2	BASIC CONFIGURATION				
		Description	Values	Def.	Def.	Max.
Gc	Gc 1	Type of gas to be measured (Reading only)		-	-	-
	Gc 2	Gas to be measured with the Universal sensor (Only if Gc1=brd1) ALL; 125; 134A; 404A; 407A; 407F; 410A; 448A; 449A; 513A; 452A; 32; 23; 455A (2)			ALL	
	b0 1	Display 0: Measurement in PPM 1: Type of gas to be measured		0	0	1
	b0 2	Minimum value to be shown on the display (Lower values are shown as 0) Does not affect the values shown by communication (AKONet or CAMM module)	PPM	0	0	250
	b0 3	Function of the mute key (Applicable to Alarm and Pre-Alarm) 0: Disabled 1: Deactivate acoustic alarm 2: Deactivate relay 3: Deactivate both		0	1	3
	b0 4	Acoustic alarm 0: Disabled 1: Enabled		0	1	1
	b 10	Access code (password) function 0: Disabled; 1: Block access to parameters 2: Block keypad		0	0	2
	b 1 1	Access code (password)		0	0	99
	b20	MODBUS address		1	(3)	247
	b2 1	MODBUS speed 0: 9600 bps 1: 19200 bps 2: 38400 bps 3: 57600 bps		0	0	3
bcn	b22	STOP bits for MODBUS communication 1: 1 STOP bit, 2: 2 STOP bits		1	1	2
	b23	MODBUS communication parity 0: No parity, 1: Odd, 2: Even		0	0	2
	EP	Exit to level 1				

Level 1	Level 2	INPUT AND OUTPUT CONFIGURATION				
		Description	Values	Def.	Def.	Max.
i 00	i 00	Reset to zero of the sensor (Calibration only)* 0: Disabled 1: Reset to zero activated		0	-	1
	i 0 1	Setting the sensor (Calibration only)* 0: Disabled 1: Setting activated		0	-	1
	i 1 1	Polarity of digital input 1 (Remote Mute) 0: Activates on opening contact; 1: Activates on closing contact		0	0	1
	i 2 1	Polarity of digital input 2 (Remote Set Hold) 0: Activates on opening contact; 1: Activates on closing contact		0	0	1
	o000	Type of output 4/20 mA (Reading only) 0: Calibrated for alarm station; 1: Linear		0	0	1
	EP	Exit to level 1				
Level 1	Level 2	INFORMATION (Reading only)				
		Description	Values	Def.	Def.	Max.
P	P 1	Programme version		-	-	-
	P r	Programme revision		-	-	-
	b 1	Bootloader version		-	-	-
	b r	Bootloader revision		-	-	-
	P P r	Parameter map revision		-	-	-
	P C r	CRC value of the programme		-	-	-
	b C r	CRC value of the bootloader		-	-	-
	EP	Exit to level 1				

*Not valid for AKO-575744 / AKO-575744N / AKO-575744NR

MESSAGES	
PRL	Gas pre-alarm activated. Flashing together with the gas concentration.
RL	Gas alarm activated. Flashing together with the gas concentration.
Scn	Initialisation process of the gas sensor. This may last for up to 3 minutes.
ES	Error or malfunction of the sensor. The Pre-Alarm relay is activated, the transmitter emits 3 alert tones every 2 minutes and the AL icon flashes. Deactivate the power supply and activate it again. If after a few seconds the error persists, please contact your technical support centre.
ESh	The sensor has reached its maximum working temperature.
ESL	The sensor has reached its minimum working temperature.

- (1) In order to modify these levels, parameter **AL1** should be configured to 1.
(2) **R-450A, R-442A, R-454A, R-454C, R-1234YF, R-1234ZE** are detected using **GC2=RL1**. **R515b** is detected with **GC2=RL1** and with **GC2=513A**.
(3) The **MODBUS** address will be shown on the transmitter label by default.