- AirQS-101 - is used as a safety device for monitoring the CO concentration resulting from incomplete combustion. It also informs you of the actual temperature, humidity and light intensity in the area.
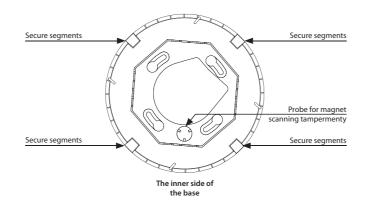- Provides a quick solution to learn about undesirable CO concentrations that can be immediately reacted too.
- The self-test function alerts you to a detector malfunction, eliminating its malfunction.
- Anti-sabotage: If access to the device is unauthorized, a message is immediately sent to the server.
- Thanks to the wireless solution and Sigfox / LoRa / NB-IoT communication, it can communicate instantly to your chosen location and be operated immediately.
- Data is sent to the server from which it can be subsequently displayed as a smartphone, application, or Cloud notification.
- Battery power can be sent to the server when it is powered by a battery.
- Power supply: battery 4 x 1.5 V AA.

Technical parameters	AirQS-101S	AirQS-101L	AirQS-101NB
Power supply			
Battery power:	battery 4x 1.5 V AA		
Battery life by frequency *:			
1x 10 minutes	2.5 years		
1x 60 minutes	3.5 years		
1x 12 hours	3.5 years		
1x 24 hours	3.5 years		
Input			
Measurement of CO concentration:	YES		
Sensitivity:	0 - 10 000 ppm		
Accuracy:	5% (0 - 500 ppm)		
Temperature measuring:	built-in sensor		
Sensitivity:	-25 .. 110 °C		
Accuracy:	± 3 °C		
Humidity measuring:	built-in sensor		
Sensitivity:	0 .. 90 % RH		
Accuracy:	± 4 %		
Light intensity measurement:	built-in sensor		
Range:	0.045 - 188 000 Lx		
Setting			
Alarm Detection:	message to the server, indication LED, audible alarm		
Battery status view:	message to the server, indication LED		
Button SET:	Test / setting / signalling		
DIP switch:	Position 1 - Turn off scanning signaling		
Control			
Detection area:	max. 40 m³		
Recommended installation height:	max. 4 m		
Acoustic signal:	greater than 85 dB at 3 meters		
Test button SET:	yes		
Communication			
Protocol:	Sigfox	LoRa	NB-IoT
Transmitter frequency:	RCZ1 868 MHz	868 MHz	LTE Cat NB1**
Range in open space:	Approx. 50 km***	Approx. 10 km***	Approx. 30 km***
Transmission power (max.):	25 mW / 14 dBm	25 mW / 14 dBm	200 mW / 23 dBm
Other parameters			
Humidity:	up to 92% relative humidity (RH) / 10% to 85% RH, no condensation or frost		
Working temperature:	0…+40°C (Pay attention to the operating temperature of batteries)		
Storage temperature:	-30…+70°C		
Operation position:	Horizontal (ceiling) / Vertical (Wall)		
Mounting:	screws		
Protection degree:	IP20		
Color:	white		
Dimension:	Ø 120 x 36 mm		
Weight:	184 g (without battery)		

Device description

Button SET

The front of the detector

Two-color LED position

Holes for locking segments

Battery

Holes for locking segments
Two-color LED position

DIP switch

Holes for locking segments

Battery

Two-color LED position
Tamper position

Holes for locking segments

The underside of the detector

Secure segments

Secure segments

Secure segments

Secure segments

Probe for magnet scanning tampermenty

The inner side of the base

* Values are calculated under ideal conditions and may vary according to alarm frequency
** Multiple frequency bands of B1 / B3 / B5 / B8 / B20 / B28
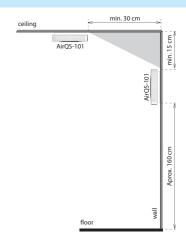*** Depending on network coverage

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Function

The detector detects carbon monoxide (CO) content in confined spaces by means of a sensor. It is designed to alert you to the presence of CO before the condition becomes critical - that is, before most people experience the symptoms of CO poisoning, so you have time to solve the problem calmly.

Indications and states of the detector:
After inserting the batteries, the detector sends a preliminary message containing the measured values of temperature, humidity, light intensity, CO status and firmware version of the device.

- The detector scans every 10 seconds, the green LED blinks at the same time (the LED can be turned off by a DIP switch). Every 10 minutes the detector senses temperature, humidity and light intensity. It sends the measured and status data report at six hour intervals.
- Alarm indication for CO detection:
  30 ppm = no alarm signalled within 120 minutes.
  50 ppm = alarm signalling within 60-90 minutes.
  100 ppm = Alarm signalling within 10-40 minutes.
  Above 300 ppm, the detector must declare an alarm within 3 minutes.
- Alarm - sensor detects CO, red LED flashes at 1 second, detector sounds loud, intermittent "beep". Terminate alarm by ventilating the CO (fan ...).
- Dead battery:
  - sending a message to the server
  - Every 5 seconds 3x the red LED on the detector will flash.
- Detector failure:
  - sending a message to the server
  - Indication of the yellow LED on the detector and one short beep every 40 seconds.
- Removed from base:
  - sending a message to the server.
  - every 2 seconds the red LED on the detector blinks.

Location

ceiling
min. 30 cm
AirQS-101
min. 15 cm
AirQS-101
Aprox. 160 cm
wall
floor

Appropriate location
- Carbon monoxide has the same density as the air in the room and is therefore uniformly dispersed. However, since CO originates as a product of an incomplete combustion process, it is very likely that it will have a higher temperature than the ambient air and will therefore slowly climb to the ceiling. Detector location is useful at a height of about 1.6 m above the floor.
  - If you attach the device to a wall, it must be higher than the top edge of the window and door but at least 15 cm below the ceiling.
  - If you attach the device to the ceiling, it must be at least 30 cm from each wall
  - If the ceiling is inclined, place the device in the upper part of the room
- To increase security, detectors should be installed in any room with a fuel-burning appliance (gas, wood, coal, etc.) 2-3 meters away from the CO source (boiler, fireplace, water heater ...).
- Warning sound of the detector must be heard in the bedroom and rooms where you regularly spend time.
- In one-room sleeping and living rooms at the same time, such as studios, caravans or boats, the detector should be placed as near as possible to the sleeping area and as far as possible from the stove or combustion point.
- It is recommended that the CO detector be installed on each floor of a multi-storey house (e.g. CO in the cellar may not reach the alarm on the 1st floor).