sauermann®

FG 110

Gas leak detector

Description of the device

1. Backlight key
2. OK key
3. On/Off/Esc key
4. Select key
5. Hold/min/max key

General features

Measurement units	ppm, %vol, %LEL
Measuring element	Semiconductor sensor
Display	4 lines, LCD technology. Dimensions 50 x 36 mm 2 lines of 5 digits with 7 segments (value) 2 lines of 5 digits with 16 segments (unit)
Probe	Flexible, 300 mm
Housing	ABS, protection IP54
Keypad	5 keys
European directives	2014/30/EU EMC; 2014/35/EU Low Voltage; 2011/65/EU RoHS II; 2012/19/EU WEEE
Power supply	4 batteries AAA LR03 1.5 V
Battery life	20 hours
Ambience	Neutral gas
Conditions of use (°C, %RH, m)	From 0 to +50 °C. In non condensing conditions. From 0 to 2000 m.
Storage temperature	From -20 to +80 °C
Auto shut-off	Adjustable from 0 to 120 min
Weight	295 g

Technical specifications

Accuracy[1]	Measurement range in CH_4	Resolution
20% of full scale	From 0 to 10,000 ppm From 0 to 1% vol 0 to 20% LEL	1 ppm 0.001% vol 0.001% LEL

% LEL: is the limiting concentrations of gas (in air) that is needed for the gas to ignite and explode.
Example for CH_4 gas: 100% LEL = 5% vol

% vol: is the concentrations of gas (in air) expressed in percentage of volume in air.
Example for CH_4 gas : 1% vol = 10 000 ppm

[1] All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

Perform a measurement

- Turn on the device by pressing on "On/Off/Esc".
  The device displays its name "FG110".
  When it turns on, the device emits a beep then performs a pre-heating phase. This phase lasts 60 seconds. The count of this pre-heating time displays on screen.
- During the normal functioning, in the absence of gas leak, the device emits a regular beep*.
- Otherwise, if the device detects the presence of gas, the repetition frequency of the beep will increase as the detected concentration increases.

Freeze the measurement

During a measurement :
- Press once on "Hold/min/max".
  "Hold" appears on screen and the measurement is frozen.
- Press on "On/Off/Esc" to exit the hold function.
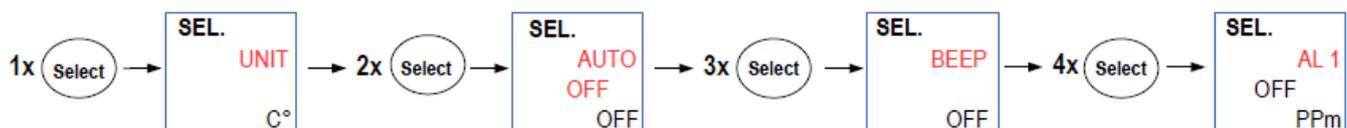 The device returns to the measurement display.

Display the minimum and the maximum

Once the measurement is frozen :
- Press on "Hold/min/max".
  The device displays the maximum value measured since the last questioning at the top of the screen and the minimum value measured since the last questioning at the bottom of the screen.
- Press on "On/Off/Esc" to return to the measurement display.
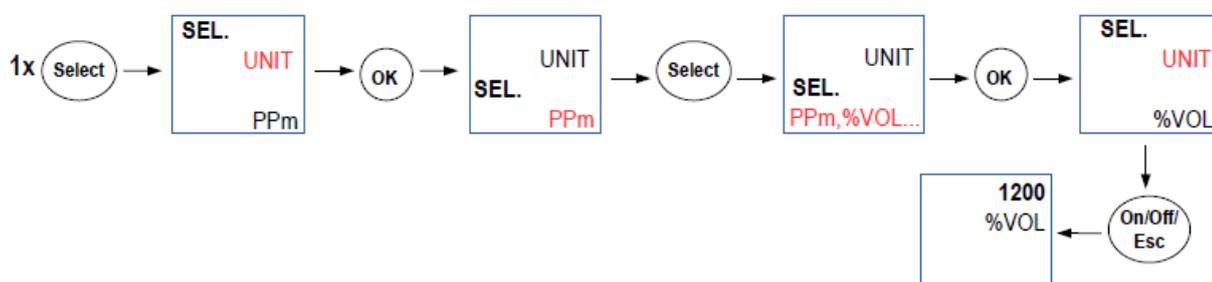
Adjust the device

Device drop-down menu

Select the measuring unit

The device is on and displays the measurements.
- Press on "Select".
  "UNIT" blinks on screen.
- Press on "OK".
  The unit currently used blinks on screen.
- Press on "Select" until the desired unit appears: ppm, %VOL, %LEL.
- Press on "OK" to validate the unit selection.
- "UNIT" blinks on screen.
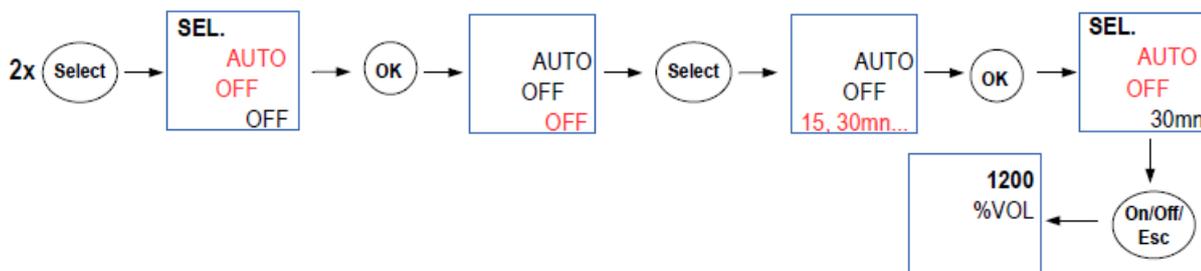- Press on "On/Off/Esc" to return to the measurement display.

*The alarm must be activated so that the device emits beeps (see p.3 for the alarm activation).

Adjust the auto shut-off
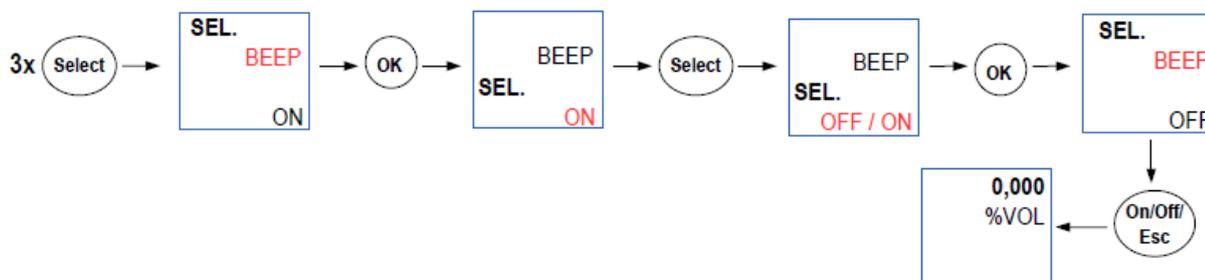
The device is on and displays the measurement.
- Press on "Select" until "AUTO OFF" blinks on screen.
- Press and "OK".
  The time before the device auto shut-off blinks at the bottom of the screen.
- Press on "Select" until the required time before auto shut-off appears: 15, 30, 45, 60, 75, 90, 105, 120 minutes or OFF.
- Press on "OK" to validate.
  "AUTO OFF" blinks on screen.
- Press on "On/Off/Esc" to return to the measurement.

Activate or deactivate the keys beep

The device is on and displays the measurement.
- Press on "Select" until "BEEP" blinks on screen.
- Press on "OK".
  "OFF" or "ON" blinks on screen.
- Press on "Select" to activate the keys beep "ON" or deactivate it "OFF".
- Press on "OK" to validate.
  "BEEP" blinks on screen.
- Press on "On/Off/Esc" to return to the measurement.

Adjust the alarm

This function allows to activate an alarm. When the device detects a leak, it emits a beep whose frequency is increasingly fast as and when the concentration increases and gets closer to defined alarm threshold. The beep becomes continuous when the device reaches and exceeds this threshold. This threshold is between 1000 and 10 000 ppm.
The device is on and displays the measurement.
- Press on "Select" until "AL 1" blinks on screen.
- Press on "OK".
  A succession of 5 zeros displays and the first zero blinks.
- Press on "Select" to select the first digit value : 0, 1 or Off.
- If 1 is selected, the maximum threshold (10 000 ppm) is reached. Press on "OK" until "AL 1" blinks on screen.
- If Off is selected, the alarm is deactivated. Press on "OK" to validate, "AL 1" blinks on screen.
- If 0 is selected, the following digit blinks. Press on "Select" to select its value, then press on "OK". The following digit blinks, perform the same procedure. Press on "OK" when the last digit value is selected, "AL 1" blinks on screen.
- Press on "On/Off/Esc" to return to the measurement display.

Activate the backlight

The device is on.
- Press on "Backlight" to activate the device backlight.
- Press again on this key to deactivate the backlight.

Change the batteries

- Remove the front part at the back of the device.
- Change the old batteries by AAA LR03 1.5V batteries.
- Replace the front part.