1. Application

The gas detector **ecom-LSG-CO** is designed to detect gas leaks at engines and their exhaust system. The instrument displays existing carbon monoxide concentrations and warns, if an alarm threshold of 1600 ppm CO is exceeded, by an acoustic signal. The sensor head is connected to a flexible gooseneck so that even the most difficult parts of the system can be achieved.

> ⚠ **Carbon monoxide is poisonous and can be fatal!**

> ⚠ **The instrument is not suitable for personal safety use!**

2. Instrument Design

Gooseneck

Display

<HOLD> key

<I/O> key

LED warning light

Sensor head

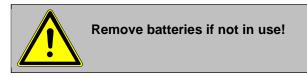Headphone connection

Contact pins

3. Power supply

The **ecom-LSG-CO** is delivered with two batteries 1,5 V AAA (Micro). Alternatively the following battery types can be used:

      1,2 V AAA NiCd (Nickel-Cadmium)
or   1,2 V AAA NiMh (Nickel-Metall-Hydride)

Low batteries are indicated by **„bAtt"** in the display (capacity for approx. 1 h). If the voltage drops further, **"bAtt"** appears more than once in the display and the **ecom-LSG-CO** switches off automatically.

For recharging the batteries you can use the charging station (option).
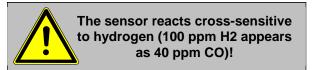
> ⚠ **Remove batteries if not in use!**

4. Battery change

Open the battery compartment located on the back of the instrument and exchange the batteries (respect polarity / do not short-circuit). Always dispose of used batteries and accumulators in official recycling containers only (e.g. in battery shops).

5. Operation

Turn the **ecom-LSG-CO** in CO free air on by pressing the button <I/O>. The display shows the version number and the sensor is set to 0.

6. Leak detection

> ⚠ **The sensor reacts cross-sensitive to hydrogen (100 ppm H2 appears as 40 ppm CO)!**

Move the sensor head slowly along the components to be tested. As soon as the instrument approaches a leak, the measured value display reacts with increasing values (when CO is in the flue gas). By pressing the **<HOLD>** key, the highest measured value since switching on the instrument is displayed (value flashes - back to the actual measured value by pressing **<HOLD>** key again).

If a concentration of 1600 ppm CO is exceeded, the instrument warns with the LED warning light and an audible signal (can be disabled). Optionally, if required (strong ambient noise) a headphones (in ear) is connectable to the **ecom-LSG-CO** (headphone jack). Please use only the headphones supplied by ecom.

Headphone (option)

> ⚠ **Never connect other components than the ecom headphone to the headphone connection - the unit can be damaged!**

7. Adjustments

If the **<I/O>** key is pressed when the instrument is in use, the lighting can be switched on and off with the **<HOLD>** key (LI 0 = off / LI I = on).

After the **<I/O>** key is pressed again the acoustic signal can be switched on and off with the **<HOLD>** key (SO 0 = off / SO I = on).

After adjustment switch back to the measurement with **<I/O>** key.

8. Reset zero point

Set the zero point only in clean air again! For this purpose, the **<HOLD>** key must be pressed until the measured value is 0.

9. Error messages

The following error messages may occur:

E I = Electronic failure   Instrument should be
                           checked by ecom service

E 2 = Electronic failure   Instrument should be
                           checked by ecom service

E 3 = Electronic failure   Instrument should be
                           checked by ecom service

E 4 = Electronic failure   Instrument should be
                           checked by ecom service

E 5 = Zero error   Switch on instrument
sensor defective or   again in fresh air
charged with CO   - no success:
during activation   Instrument should be
                           checked by ecom service

10. Switch off

Keep the **<I/O>** key pressed until the value in display is gone.

Technical data

Indication range: 0 - 2000 ppm CO

Power supply:
Batteries 2 x 1,5 V AAA (micro) or
2 x 1,2 V AAA NiCd (Nickel-Cadmium) or
2 x 1,2 V AAA NiMh (Nickel-Metallhydride)

Operation temperature: - 5 to 40 °C
Storage temperature: - 25 to 40 °C
Operation moisture: 20 to 80 % rF

Dimensions:
   - Housing: 155 x 35 x 22 mm
   - Gooseneck: 355 mm long
Weight: approx. 200 g

To secure the accuracy of your measuring instrument we recommend the annual check by an authorized ecom partner. In the case of strong demand (e.g. permanent several hours of measurement per day, rough conditions etc.) shorter intervals between checks should be selected - please contact your ecom partner. All ecom partners are listed under www.ecom.de.

Subject to technical changes
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세일국제무역 주식회사
서울특별시 구로구 공원로 81,
301호 (구로동, 엘림빌딩)
Telefon: +82 (0) 2 837 - 6974
Telefax: +82 (0) 2 859 - 2059
Internet: http://www.seic.co.kr
eMail: info@seic.co.kr

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Operation Instructions

ecom® LSG-CO