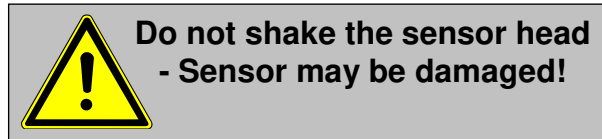
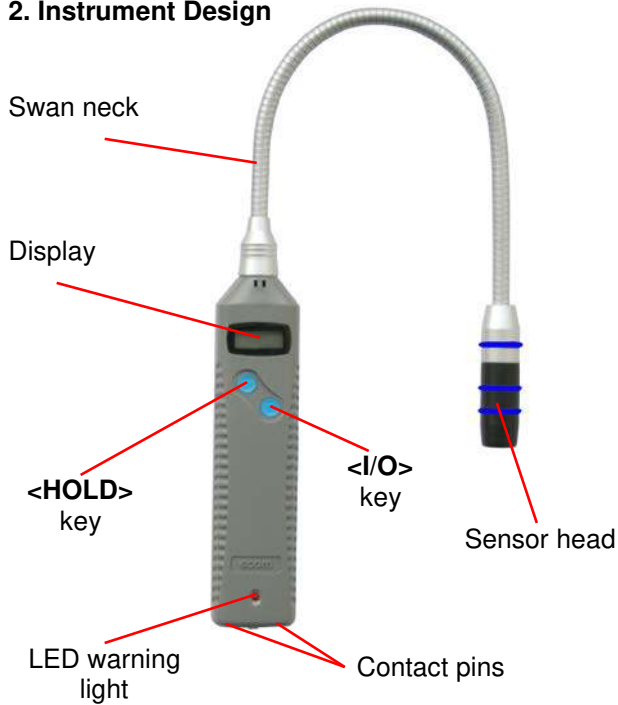


1. Application

The gas leak detector **ecom-LSK** is engineered for the quick and reliable identification of leakage sources at refrigerating plants and heat pumps. The instrument shows existing gas concentrations on the display and warns via optical and acoustical signals. The sensor sensitivity can be adjusted in 3 steps so that even small leakages can be traced. The sensor head is connected to a flexible swan-neck, so that hardly accessible plant sections can easily be reached.




2. Instrument Design



3. Power supply

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

or 1,2 V AAA NiCd (Nickel-Cadmium)
or 1,2 V AAA NiMH (Nickel-Metal-Hydride)

Low batteries are indicated by a grey battery symbol at the left side of the display (capacity for approx. 1 h). If the voltage further sinks, the battery symbol will turn to black and the **ecom-LSK** will switch off automatically. 

For recharging the batteries you can use the charging station (option).

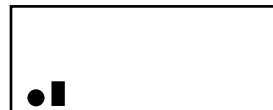


4. Batterie Change

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).

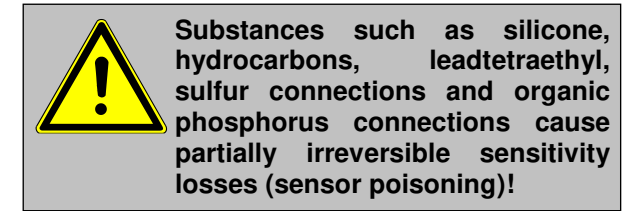
5. Operation

Switch on the **ecom-LSK** in gas-free air. Hereto press the <I/O> key until a beep is given. The instrument starts a warm-up phase during which the sensor is set to operation temperature (running bar graph on display). After warm-up phase the operability is signalized with 3 beeps and display shows the current gas concentration as bar graph:



-no gas concentration = 1 line
-gas concentration > 0,5 % = 14 lines

6. Leak Detection



Sweep the sensor head slowly along the installation to be checked. As soon as the unit nears a leakage, the display indication reacts and, by overpassing of the first threshold (2 lines in display), the red LED blinks.



The blinking red LED together with an acoustical signal (disconnectible) shows an increased concentration of gaseous hydrocarbons. Parallel to the increasing concentration, the signal tone is getting more intensive and the red LED blinks in shorter intervals, so that a leakage can be accurately localized.

The largest concentration registered so far is displayed with a grey bar (dragging announcement). The sensitivity of the sensor (middle sensitivity after switching on) can be adjusted in 3 steps (see Adjustments).

7. Zero Point

Indication drifts from the zero point can be corrected while pressing the <HOLD> key (dragging announcement gets erased). pressed longer than 2 seconds. The change of the zero point is indicated by flashing of the first bar. If the <HOLD> key is kept pressed longer than 2 seconds, the original zero point gets back (no flashing of the first bar).

8. Adjustments

If the <I/O> key is pressed, first the sensitivity step can be selected with the <HOLD> key (small bars = low sensitivity; middle bars = middle sensitivity; large bars = high sensitivity). After repeated pressing of the <I/O> key, the battery capacity is indicated. If only 4 bars (grey) are indicated, the capacity is still sufficient for approx. 1 hour. With the help of the <HOLD> key the following adjustments can be selected :

- without lighting/without acoustic signal
- with lighting/without acoustic signal
- without lighting/with acoustic signal
- with lighting/with acoustic signal

With the <I/O> key the selected adjustment is taken over and the adjustment menu is left.

9. Switch off

Keep the <I/O> key pressed until all bars in display are gone.

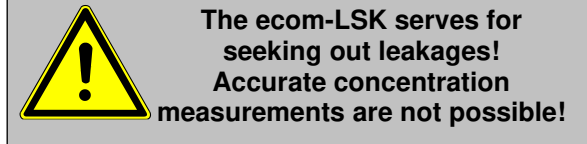
10. Function control

Unscrew the cover cap of the testing bottle and hold the sensor head over the opened bottle (see illustration). If the sensor is correct, the bar line display shows a clear reaction. The sensor can be changed at **switched off** instrument (unscrew sensor head - replace sensor element with a new sensor element - mount sensor head).



Technical data

Indication range:	bis 0,5 % R 134a
Sensitivity:	3 g/a
Reaction time:	< 2 seconds
Indication:	Bar diagram; Display size approx. 20 x 7 mm 1 bar = no concentration 14 bar = max. concentration



**The ecom-LSK serves for seeking out leakages!
Accurate concentration measurements are not possible!**

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)

Warm-up time: approx. 180 sec.
Operation temperature: - 5 to 40 °C
Storage temperature: - 25 to 40 °C
Operation moisture: 20 to 80 % rF



Changes in air humidity cause indicator falsifications!

Dimensions:
- Housing: 155 x 35 x 22 mm
- Swan-neck: 355 mm long
Weight: 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.rbr.de.

Subject to technical changes
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Operation Instructions

ecom® LSK