



Translation of the original operating instructions

Sniffer line

SL3000EX

Catalog No.
525-008, 525-009

From software version

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linj10en1-01-(2409)



INFICON GmbH
Bonner Strasse 498
50968 Cologne, Germany

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1 About this Manual

These operating instructions describe the setup and maintenance of the SL3000EX sniffer line.

Product names may occur in the document, which are added for identification purposes only and belong to the respective owner of the rights.

1.1 Target Groups

This instruction manual is intended for operators and technically qualified personnel with experience in leak detection technology and the integration of leak detectors in leak detection systems. In addition, the installation and use of the device require knowledge of electronic interfaces.

1.2 Warnings



DANGER

Imminent hazard resulting in death or serious injuries



WARNING

Hazardous situation resulting in potential death or serious injuries



CAUTION

Hazardous situation resulting in minor injuries



NOTICE

Hazardous situation resulting in damage to property or the environment

2 Safety

2.1 Intended use

The SL3000EX sniffer line is used to locate gas leaks on test objects in conjunction with the Ecotec E3000 leak device and compatible INFICON devices in Zone 2 hazardous areas. The sniffer line may only be used indoors.

The device is not intended to be used for identification of a potential hazard, and not used for safety alarm initiation, notification or releasing function.

Incorrect usage

- Extension of the cable between interface box and Ecotec E3000Extension and compatible INFICON devices
- Installation of the Interface Box or Ecotec E3000 and compatible INFICON devices in potentially explosive atmospheres
- Use with devices other than Ecotec E3000 and compatible INFICON devices
- Use in radioactive areas
- Use of accessories or spare parts, which are not included in this instruction manual
- Use outside the technical specifications, see "Technical Specifications"
- Testing of wet or damp test objects
- Pumping off solids
- Suctioning of liquids into the device
- Using the device with detectable defects or defective power switch
- Use of the device in ATEX Zone 0 and ATEX Zone 1

2.2 Duties of the Operator

- Read, observe, and follow the information in this manual and in the work instructions provided by the owner. This concerns in particular the safety and warning instructions.
- Always observe the complete operating instructions for all work.
- If you have any questions about operation or maintenance that are not answered in this operating instructions, contact INFICON service.

2.3 Owner Requirements

The following notes are for companies or any person who is responsible for the safety and effective use of the product by the user, employees or third parties.

Safety-conscious operation

- Operate the device only if it is in perfect technical condition and has no damage.
- Only operate the device properly in accordance with this instruction manual, in a safety and risk conscious manner.
- Adhere to the following regulations and observe their compliance:
 - Intended use
 - Universally valid safety and accident prevention regulations
 - International, national and local standards and guidelines
 - Additional device-related provisions and regulations
- Only use original parts or parts approved by the manufacturer.
- Keep this instruction manual available on site.

Personnel qualifications

- Only instructed personnel should be permitted to work with and on the device. The instructed personnel must have received training on the device.
- Make sure that authorized personnel have read and understood the instruction manual and all other applicable documents.

2.4 Dangers

The insulation between an intrinsically safe circuit and the frame of the equipment or parts which are earthed does not satisfy the 500V r.m.s. test voltage requirements.

- Observe the notes on correct installation in the "Installation [▶ 13]" chapter.

3 Scope of delivery

Item	Quantity
SL3000EX 5m, including 385mm flexible sniffer tip or SL3000EX 10m, including 600mm flexible sniffer tip	1
Operating manual	1

4 Description

4.1 SL3000EX

The SL3000EX sniffer line is used to locate gas leaks on test objects in conjunction with the Ecotec E3000 leak detector E3000 and compatible INFICON devices.

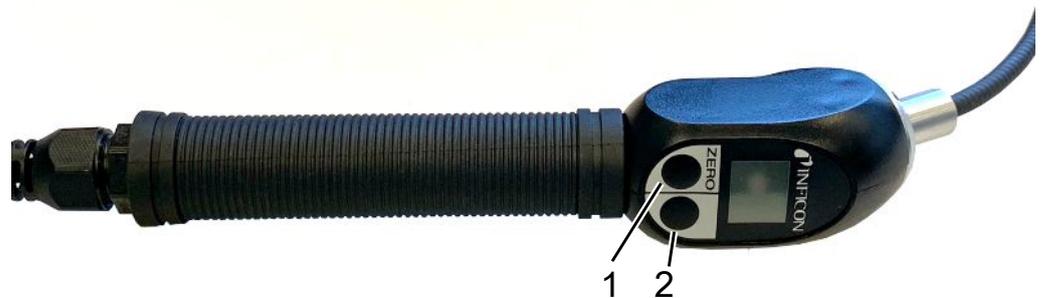
The sniffer line consists of a multi-function cable, a sniffer handle, a sniffer tip and an interface box.

⚠ CAUTION

Danger of blockage due to liquids

Liquid may destroy the device.

- ▶ Do not draw in any liquids (e.g. water or adhesives).



1	"ZERO" push button	2	Push button (individual assignment)
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There are two push buttons on the sniffer handle. Pressing the left button sets the background display to ZERO. For more information on the functions of these buttons, refer to the operating instructions of the leak detectors used.

SL3000EX with flexible sniffer tip



1	Sinter filter (bronze Poral filter)	5	Brass capillary filter
2	O ring	6	Metal filter
3	Sniffer tip	7	Cotton filter
4	Small O-ring	8	Replacement brass capillary filter

A water protection tip must not be used.

4.2 Technical Data

4.2.1 Name plates SL3000EX

Sniffer 525-008 SL3000EX 10m:

INFICON GmbH
Bonner Str. 498 D-50968 Köln MADE IN GERMANY
Type: 525-008 SL3000EX 10m
 II 3G Ex ic IIB T6 EPL Gc I.S.
CI II Zone 2 AEx ic IIB T6 Gc
CI II Div 2 Gp C, D 
0°C ≤ Ta ≤ +40°C


Intertek
5027724 Control no.: 5027724 6/2023
ITS23CA105253486X
ETL 23 ATEX 0346X

Control drawing nr.: 200013234
Ser. No.: 90001234580

Sniffer 525-009 SL3000EX 5m:

INFICON GmbH
Bonner Str. 498 D-50968 Köln MADE IN GERMANY
Type: 525-009 SL3000EX 5m
 II 3G Ex ic IIB T6 EPL Gc I.S.
CI II Zone 2 AEx ic IIB T6 Gc
CI II Div 2 Gp C, D 
0°C ≤ Ta ≤ +40°C


Intertek
5027724 Control no.: 5027724 6/2023
ITS23CA105253486X
ETL 23 ATEX 0346X

Control drawing nr.: 200013234
Ser. No.: 90001234580

Interface box:

INFICON GmbH
Bonner Str. 498 D-50968 Köln
Country of Origin: Federal Republic of Germany
SL3000EX, II(3)G [Ex ic Gc] IIB, [Ex ic], -20°C ≤ Ta ≤ +40°C
[AEx ic Gc] IIB CI II Div 2 Gp C, D U_n: 250 V
ITS23CA105253486X ETL 23 ATEX 0346X

Serial No.: 90001623971



4.2.2 EX certification (intrinsic safety)

Conforms to UL Std. 60079-0, 60079-11, 61010-1

Cert. to CSA Std. C22.2#60079-0, C22.2#60079-11, C22.2#61010-12

EX marking	Ex ic IIB T6 EPL Gc I.S.
Sniffer line	 II 3G ITS23CA105253486X ITS-I 23 ATEX 537680X CI I Zone 2 AEx ic IIB T4 Gc CI I Div 2 Gp C, D
EX marking	II(3)G, II [Ex ia Gc] IIB [Ex ia], I.S.
Interface-Box	U_m : 250 V, P_o : 27 mW, I_o : 15 mA, U_o : 7.14V ITS23CA105253486X ITS-I 23 ATEX 0744XCI I Div 2 Gp C, D

Table 1: EX marking

4.2.3 Mechanical data

SL3000EX	
Gas flow	(160 sccm)
Connection on the device	Via separate socket on the device
Acknowledge faults via buttons on the sniffer probe	Yes
End standby via a button on the sniffer probe	Yes
Acknowledge calibration via a button on the sniffer probe	Yes

4.2.4 Electrical data

SL3000EX	
Operating voltage	5V
Mains frequency	DC voltage
Power consumption	20 VA

4.2.5 Ambient conditions

SL3000EX	
Max. height above sea level	2000 m
Maximum relative humidity	75% to 31 °C and 50% above 31 °C
Max. storage temperature	-20 °C to +60 °C
Pollution degree	2
Permissible ambient temperature (during operation)	5 °C to 40 °C

5 Installation

DANGER

Explosion hazard from wrong or missing grounding

Wrong or missing grounding can cause sparks. This can ignite the surrounding potentially explosive atmosphere.

- ▶ The device may only be operated with the protective earth wire connected.
 - ⇒ Observe the grounding requirements for type of protection Ex i according to IEC/EN 60079-14.
- ▶ Connect the external earthing of the interface box to the equipotential bonding system over the entire area in which the intrinsically safe circuits are installed. Minimum conductor cross-sectional area is 4 mm² or 11 AWG.
- ▶ Ensure that the external grounding connections exist, are in good condition, and are not damaged or corroded.

DANGER

Explosion hazard due to gas accumulation in the Ecotec E3000 and compatible INFICON devices

If the unit fans fail, gas may accumulate in the Ecotec E3000 and compatible INFICON devices.

- ▶ Remove the test probe from the leakage area in case of a rough leakage.

NOTICE

The cable for the protective earth wire connection is not part of the scope of delivery and must be provided by the user.

The cross-section of the protective earth wire must be at least 4 mm² or 11 AWG.

For connection to the leak detector Ecotec E3000 and compatible INFICON devices, the sniffer line is connected to the connection socket provided on the front of the device for this purpose.

The sniffer line communicates with the leak detector via multi function cable cable and is supplied with power via the data cable.



Fig. 1: The grounding cable (here yellow-green) must be attached to the protective conductor connection of the interface box using the preassembled washer and nut!

- ✓ The external earthing of the interface box is connected to the equipotential bonding system over the entire area in which the intrinsically safe circuits are installed. Minimum conductor cross-sectional area is 4 mm² or 11 AWG.
- ✓ The leak detector is supplied by an electric circuit that meets the requirements for "Limited-energy circuits" of EN 61010-1.
- ✓ The protective conductor of the interface box is connected.
- ▶ Connect the sniffer line to the leak detector.
 - ⇒ The sniffer line is now ready for operation.

Application area

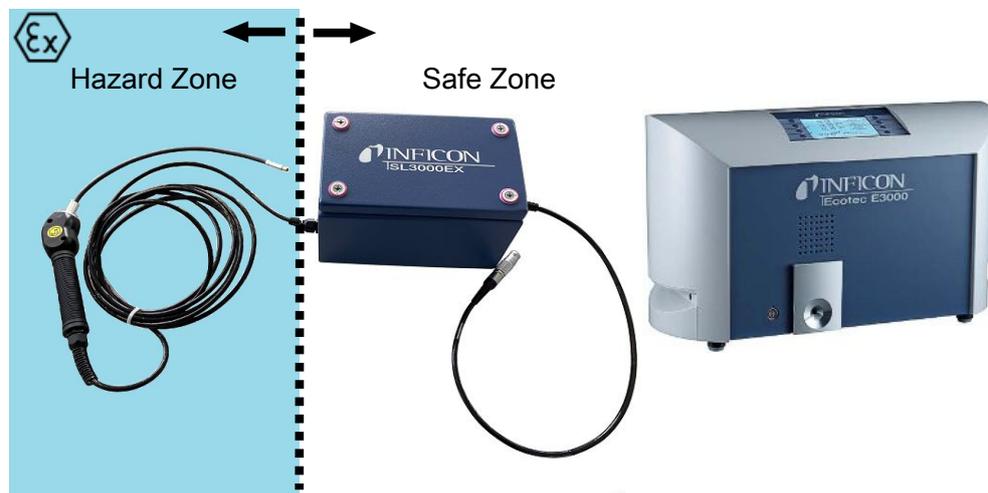


Fig. 2: Application area

6 Maintenance

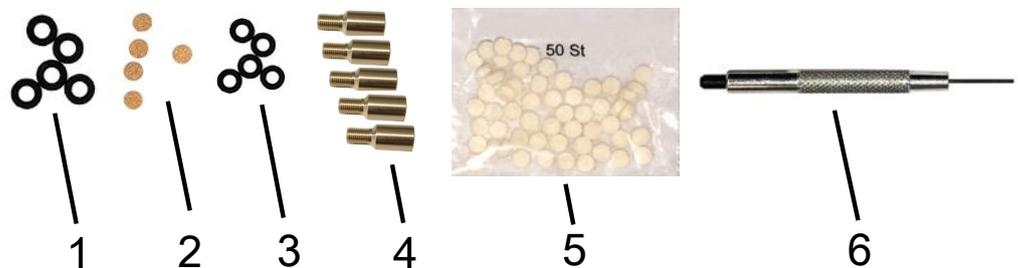
6.1 Cleaning the housing

The sniffer line (including interface box, handle and sniffer tip) is mainly made of plastic.

- 1 Make sure that the connection to the sniffer line is disconnected on the leak detector.
- 2 Wipe the sniffer line with a slightly damp and soft cloth. Use only very little water for moistening. Avoid cleaning agents that contain alcohol, fat or oil.

6.2 Maintenance sniffer tip

Supplementary pack set



1	O-rings (5x)	4	Replacement brass capillary filter (5x)
2	Sinter filter (bronze porous filter, 5x)	5	Cotton filter (50x)
3	Small O-rings (5x)	6	Needle tip tool

Change cotton filters in the sniffer tip



- ✓ The cotton filters in the sniffer tip are dirty (brass capillary filters).
 - ✓ The capillary filter is not removed.
- 1 Carefully remove both cotton beads from the front using the pointed end of the needle tip tool.

Note: The metal filter behind it is maintenance-free and must not be damaged or moved out of position by the needle point tool. This would impair the effectiveness of the metal filter. For the position of the metal filter, see also "SL3000EX [▶ 9]".

- 2 Using the blunt end of the needle tip tool, stuff two clean cotton filters into the capillary filter.

Capillary filter change with flexible sniffer tip



- | | | | |
|---|--------------|---|------------------------|
| 1 | Small O-ring | 2 | Brass capillary filter |
|---|--------------|---|------------------------|

✓ A damaged brass capillary filter should be replaced with another brass capillary filter. A capillary filter made of plastic must not be used.

- 1 Unscrew the capillary filter.
- 2 Take the new brass capillary filter and slide an intact O-ring over the thread for sealing. The capillary filter already has the necessary filters installed.
- 3 Screw the new capillary filter onto the sniffer tip hand-tight.

NOTICE

Perform a leakage resistance check “Checking connection between capillary filter and ground [▶ 17]” after each capillary filter change.

Capillary filter change with rigid sniffer tip



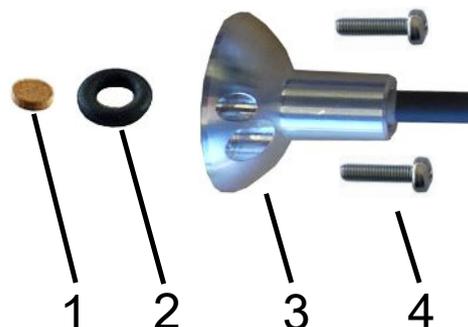
✓ A damaged brass capillary filter should be replaced with another brass capillary filter. A capillary filter made of plastic must not be used.

- 1 Unscrew the capillary filter.
- 2 Screw a new brass capillary filter onto the sniffer tip hand tight. The capillary filter already has the necessary filters installed. An O-ring for sealing is not required.

NOTICE

Perform a leakage resistance check “Checking connection between capillary filter and ground [▶ 17]” after each capillary filter change.

Check / replace sinter filter and O-ring



1	Sinter filter (bronze Poral filter)	3	Connection adapter
2	O ring	4	Mounting screws (2x)

- ✓ The leak detector is switched off and the sniffer line is removed.
- ✓ The sniffer tube is removed from the sniffer handle.
 - 1 Loosen the two fastening screws.
 - 2 Remove the O-ring and the sinter filter.
 - 3 Visually inspect the sinter filter and the O-ring for dirt and damage.
 - ⇒ If you notice any damage or contamination, replace the O-ring with the sinter filter.
 - 4 Reinsert the O-ring with the sintered filter into the sniffer tip.
 - 5 Screw the sniffer tube back on to the sniffer handle.
- ⇒ The sniffer line is ready to be used again.

NOTICE

Perform a leakage resistance check "Checking connection between capillary filter and ground [▶ 17]" after each sintered filter change.

6.3 Checking connection between capillary filter and ground

DANGER

Danger of deflagration or explosion

If there is poor conduction between the filter tip and the interface box, sparking may cause deflagration or explosion.

- ▶ Check the leakage resistance each time the filter tip is changed.
- ▶ To ensure EX protection, the leakage resistance must be < 50 Ohm.
- ▶ In case of service, send the sniffer line and the interface box to INFICON Service.



Fig. 3: Checking connection between capillary filter and ground

6.4 Maintenance plan SL3000EX

Maintenance required	Assembly	Material	Material no:	Operating hours			Repair level
				2000	5000	10000	
Check sintered filter, replace if necessary	Sniffer tip	Sinter filter+ O-ring (5pcs)	20003500	X			I
Warning W35- "Flow too low" Exchange filter	Sniffer tip	Felt disc for capillary filter (50pcs)	200001116	depending on environment			I
Check capillary filter, replace if necessary	Sniffer tip	Capillary filter plastic	20003501			X	I
Rubberized sniffer probe, replace if necessary	Sniffer probe	Sniffer probe, rubberized (EX)	581-200		depending on usage		III
EX protection	EX Box	Flame Arrester	200010894		3 years/or after EX-incident		III
Zener diode	EX Box	Zener diode	200010895		3 years/or after fuse failure		III

Repair Level I: Customer

Repair Level II: Customer with technical training by INFICON

Repair Level III: INFICON Service Engineer

7 Decommissioning



WARNING

Danger due to harmful substances

Contaminated devices could endanger health. The contamination declaration serves to protect all persons who come into contact with the device.

► Fill in the declaration of contamination completely.

- 1 Please do not hesitate to contact us and send a completed declaration of contamination before sending anything to us.
 - ⇒ You will then receive a return number and the shipping address.
- 2 Use the original packaging when returning.
- 3 Before sending the device, attach a copy of the completed contamination declaration. See below.

7.1 Declaration of Contamination

Declaration of Contamination

The service, repair, and/or disposal of vacuum equipment and components will only be carried out if a correctly completed declaration has been submitted. Non-completion will result in delay.
 This declaration may only be completed (in block letters) and signed by authorized and qualified staff.

1 Description of product

Type _____

Article Number _____

Serial Number _____

2 Reason for return

↓

3 Operating fluid(s) used (Must be drained before shipping.)

↓

4 Process related contamination of product:

toxic	no <input type="checkbox"/> 1)	yes <input type="checkbox"/>	<p>2) Products thus contaminated will not be accepted without written evidence of decontamination!</p>
caustic	no <input type="checkbox"/> 1)	yes <input type="checkbox"/>	
biological hazard	no <input type="checkbox"/>	yes <input type="checkbox"/> 2)	
explosive	no <input type="checkbox"/>	yes <input type="checkbox"/> 2)	
radioactive	no <input type="checkbox"/>	yes <input type="checkbox"/> 2)	
other harmful substances	no <input type="checkbox"/> 1)	yes <input type="checkbox"/>	

1) or not containing any amount of hazardous residues that exceed the permissible exposure limits

The product is free of any substances which are damaging to health

yes

↓

5 Harmful substances, gases and/or by-products

Please list all substances, gases, and by-products which the product may have come into contact with:

Trade/product name	Chemical name (or symbol)	Precautions associated with substance	Action if human contact

↓

6 Legally binding declaration:

I/we hereby declare that the information on this form is complete and accurate and that I/we will assume any further costs that may arise. The contaminated product will be dispatched in accordance with the applicable regulations.

Organization/company _____

Address _____ Post code, place _____

Phone _____ Fax _____

Email _____

Name _____

Date and legally binding signature _____ Company stamp _____

Copies:
 Original for addressee - 1 copy for accompanying documents - 1 copy for file of sender

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8 Appendix

8.1 Accessories and spare parts

Sniffer tips SL3000EX	
FT385EX, 385 mm length, flexible	521-041
FT600EX, 600 mm length, flexible	521-040
FT120EX, 120 mm length, flexible	521-042
ST120EX, 120 mm length, rigid	521-043
Sniffer line SL3000EX	
SL3000EX 5m, including 385mm flexible sniffer tip	525-009
SL3000EX 10m, including 600mm flexible sniffer tip	525-008
Accessories	
Protec / EcotecII water protection tip	12246

8.2 CE Declaration of Conformity



EU Declaration of Conformity

We – INFICON GmbH - herewith declare that the products defined below meet the basic requirements regarding safety and health and relevant provisions of the relevant EU Directives by design, type and the versions which are brought into circulation by us. This declaration of conformity is issued under the sole responsibility of INFICON GmbH.

In case of any products changes made without our approval, this declaration will be void.

Designation of the product:

Sniffer line

Models: **SL3000EX**



II 3G Ex ic IIB T6 Gc for sniffer line
II (3)G [Ex ic Gc] IIB for interface box

Catalogue numbers:

525-008
525-009

Cologne, December 1st, 2023

p.p.
Dr. H. Bruhns, Vice President LDT

The products meet the requirements of the following Directives:

- **Directive 2014/34/EU (ATEX)**
- **Directive 2014/30/EU (EMC)**
- **Directive 2011/65/EU (RoHS)**

Applied harmonized standards:

- **EN 61326-1:2013**
Class A according to EN 55011
- **EN IEC 60079-0:2018**
- **EN 60079-11 :2012**
- **EN IEC 63000:2018**

Cologne, December 1st, 2023

pro
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