

# LSK x2x Conductive Level Sensor

Wetted parts in acid-proof, stainless steel and PEEK

Compact, food compatible, hygienic design

3A approved, FDA and EHEDG compliant

Process temperature -20...140°C

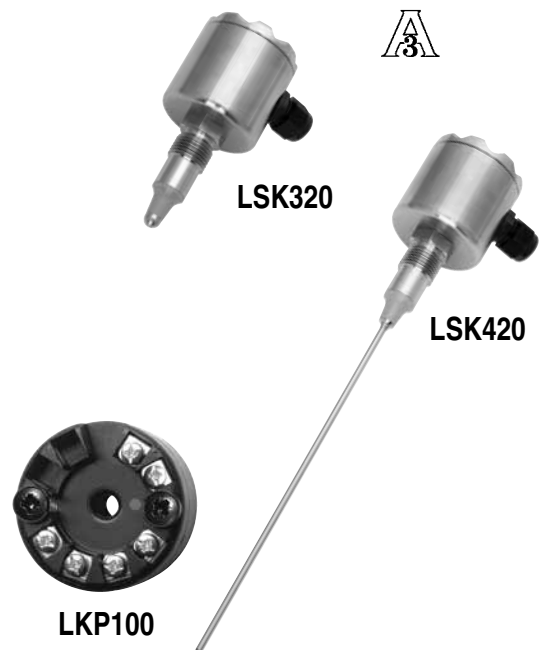
Optimised flow geometry

Millimetre precise switch point

Installation in pipes from DN25 and upwards

Optional PTFE coating

Optional switching electronics (LKP100)



## Description

The conductive level sensor LSK is used for level detection and dry run protection in conductive liquids.

The LSK measures the resistance between the ground potential and the sensing element covered by the conductive liquid.

The tank or pipe side acts as the ground potential. If the tank is made of a non-conducting material a ground electrode must be installed.

The LSK provides a resistance output by itself. A level control module e.g. LKP 100 or DNGA 230100 must be installed to provide a relay output.

The hygienic installation is ensured by using a hygienic process weld-in sleeve e.g. PM 020. The rod electrode can be shortened to any required length simply by cutting the length.

The LSK is well suitable for CIP and SIP processes.

## Technical Data

### Sensor

<b>Principle</b>	Resistive measurement
<b>Process connection</b>	G1/2 hygienic
<b>Stub</b>	ø8 mm
<b>Rod</b>	ø4 mm
<b>Electrode</b>	20...200 cm, see "Ordering Details"
<b>Insulating material</b>	PEEK

### Electrical connection

<b>Cable gland M16</b>	Plast
<b>Plug M12</b>	Nickel-plated brass or Stainless Steel

### Mechanical data

<b>Housing</b>	Stainless Steel, W1.4301/AISI 304
<b>Process conn. and rod</b>	Stainless Steel, W1.4404/AISI 316 L
<b>Process temperature</b>	-20...140°C
<b>Amb. temperature</b>	-20...85°C
<b>Protection class</b>	IP67
<b>Media pressure</b>	Max. 16 bar
<b>Vibrations</b>	IEC 68-2-6, GL test2
<b>Powder Coating</b>	PTFE, Accofal 3G54
<b>Approval</b>	3A
<b>Adapters</b>	Refer to "Accessories" data sheet

### Amplifier LKP100

<b>Input</b>	Electrode and ground
<b>Amb. temperature</b>	-20...60°C
<b>Power supply</b>	18...36 Vdc; 10 mA max. (+ load)
<b>Sensitivity</b>	200 Ohm; 2 KOhm, 20KOhm (wiring)
<b>Switching function</b>	Selectable output polarity
<b>Damping</b>	0.5 sec. (fixed)
<b>Relay output</b>	Max. load 50 mA, short circuit protected
<b>Monitor</b>	LED
<b>Dimensions</b>	ø44 x 21 mm

### EMC data

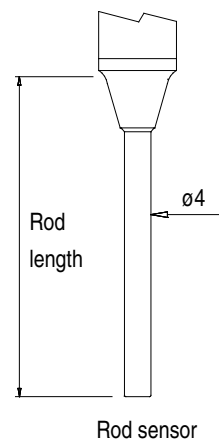
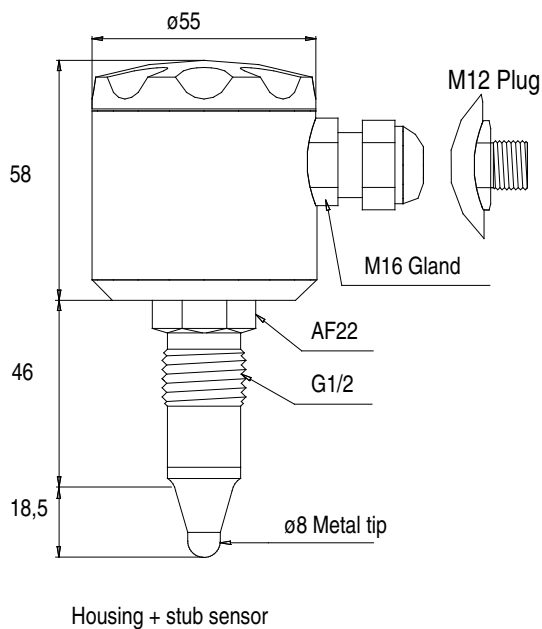
<b>Immunity</b>	EN 61326
<b>Emission</b>	EN 61326

### Disposal of product and packing

According to national laws or by returning to Baumer

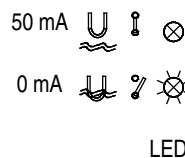
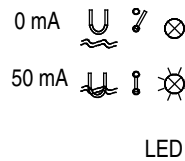
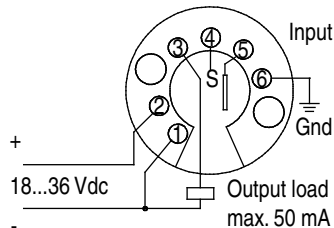
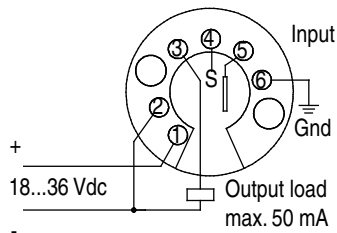
## Dimensional Drawings

[mm]



## Electrical Installation

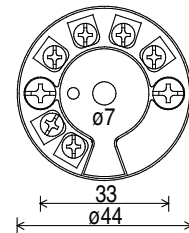
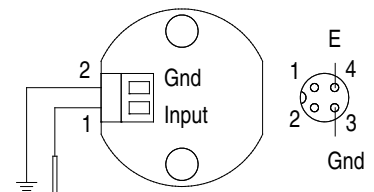
### Amplifier LKP100



### M12 Plug

- 1: Brown
- 2: White
- 3: Blue
- 4: Black

### Connection terminal M12 Plug



Sensibility	Connection	Typical application
20 KOhm / 50 mS/cm <sup>2</sup>	Terminal S connected to + (plus)	Water
2 KOhm / 500 μS/cm <sup>2</sup>	Terminal S not connected	Beer, juice, yoghurt
200 Ohm / 50 μS/cm <sup>2</sup>	Terminal S connected to - (minus)	Acid, Alkalis

Note: Terminal S is for local or remote setting of the sensibility.

## Ordering Details - LSK x2x

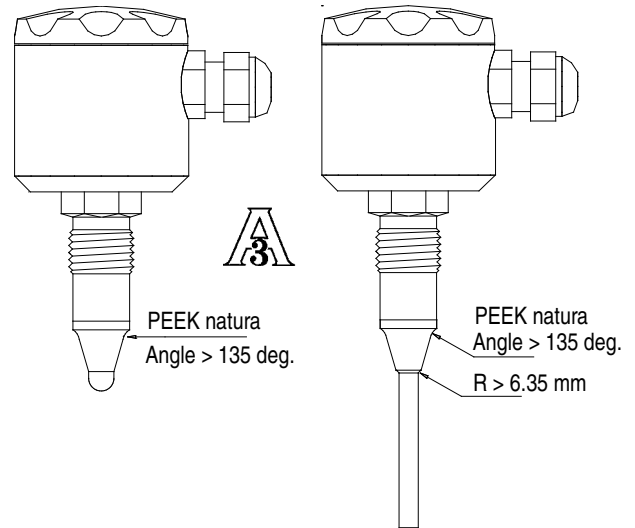
		LSK x2x (xxx) x		
Type (Excl. welding part or adapter)	Approval	4' digit		
Stub (Do not specify rod length)		0		
Uncoated - 1 rod		1		
Coated (PTFE) - 1 rod		2		
Stub (Do not specify rod length)	3A	3		
Uncoated - 1 rod	3A	4		
Coated (PTFE) - 1 rod	3A	5		
Amplifier		6' digit		
Without amplifier		0		
With built-in LKP100		1		
Rod Length (cm)		7'...9' digit		
As customers specification (max. 200 cm)			xxx	
Electrical connection		10' digit		
Cable gland, M16, Polyamid				1
Plug, M12, Nickel Plated Brass				2
Plug, M12, Stainless Steel				3

3.1 material certificate, type number 5509-227

## 3A Approval

The LSK32x, LSK42x and LSK52x are approved by 3A providing it is mounted in a 3A approved counter part and installed according to the guidelines given in the installation manual.

The 3A approved products fulfill the FDA demands and follow the EHEDG guidelines regarding design, materials and finishing. Refer to the 3A marked counter parts in the data sheet "Accessories".



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