# Conductive Level Switch



- pmax: 10 bar
  tmax: 100 °C,
  (150 °C for CIP process)
- 1 to 4 electrode stems,
  any lengths upto 1500 mm
- Process connections:
  G ½, G 1
  installation meets hygiene standards through EHEDG-certified installation system LZE
- Materials approved for handling of foodstuffs
- Optional head mounted transmitter
- Optional:
  E-CTFE coating

Weld-in sleeve LZE



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**Model:**
LNK

### Description:

The conductive KOBOLD level probes LNK together with the transducer for head mounting or the external evaluating electronic are used for level monitoring. This method is based on the evaluation of the electrical conductivity of the medium. In combination with the KOBOLD LZE or LZE-R (p. 53-60) weld-in sleeves , the probe provides a measuring point that has no dead space and meets hygiene standards (EHEDG approval certificate). This level switch is therefore ideally suited for CIP/SIP cleaning.
The level switch is available with 1 or 2-4 electrodes, also available with E-CTFE coating. This allows foaming media to be detected reliably.
The output signal from the probes with head mounted transmitter can be connected directly to a PLC for evaluation. This means lower installation costs, minimum wiring requirements and a high degree of noise immunity.
The device is available with an optional M12x1 plug connector.

### Fields of use:

- Level monitoring in all conductive media

### Technical data:

| | |
|---|---|
| Measuring principle: | conductive |
| Process temperature: | 0...100 °C,<br>150 °C for CIP process |
| Ambient temperature: | 0...70 °C |
| Operating pressure: | max. 10 bar |
| Material | |
| • Head, thread supports: | stainless steel 1.4404 |
| • Insulating section: | PEEK |
| • Electrode stem: | stainless steel 1.4404 |
| • Stem coating: | E-CTFE, coating 0.3 mm |
| Electrode length: | 4 - 1500 mm |
| Process connection: | G ½ with 1 electrode stem<br>G 1 with 2-4 electrode stems |
| Connection: | cable gland connection<br>M16x1.5<br>optional M12x1 plug |
| Protection: | IP 67 |

### Technical data (continued):

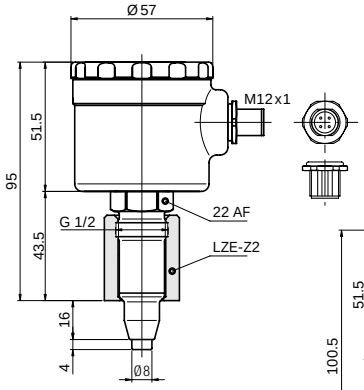
| | |
|---|---|
| Min. conductivity: | 10 µS/cm |
| Weight: | approx. 0.6 kg |

**Level module LNR-K1 for one switch point (1 or 2 stem probe)**

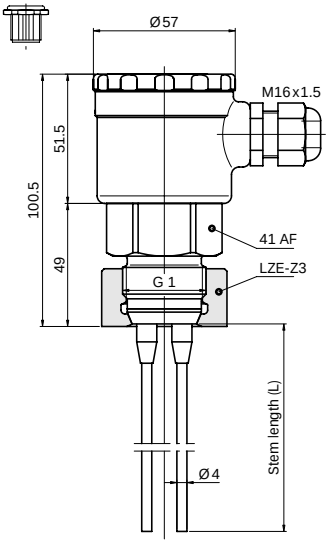
| | |
|---|---|
| Power supply: | 15...36 $V_{DC}$, 15 mA |
| Electrode voltage: | approx. 2 $V_{AC}$ / 600 Hz |
| Sensitivity (adjustable): | 4 steps 0.1/1/10/100 kΩ |
| Function: | Full/empty report (determined via the polarity of the supply voltage) |
| Output: | PNP transistor output (open collector),<br>$U_{off}$ = +Vs – 1 V<br>max. 50 mA, short-circuit-proof |
| Switch delay (fixed): | 1 s |
| Weight: | approx. 40 g |

### Dimensions:

**1 stem probe**




**Multi stem probe**




**Order data** (Example order): **LNK- 1 2 0 A A A A 00K**

| Model | Design (Process connection) | Electrode material | Electrode coating | Lengths of 1. stem | Lengths of 2. stem | Lengths of 3. stem | Lengths of 4. stem | Evaluation/ electronic connection |
|---|---|---|---|---|---|---|---|---|
| **LNK-** | **1** = 1 electrode (G 1/2)<br>**2** = 2 electrodes (G 1)<br>**3** = 3 electrodes (G 1)<br>**4** = 4 electrodes (G 1) | **2** = stainless steel | **0** = without coating<br>**E** = E-CTFE-coating | **A** = 4 mm stump<br>**B** = 100 mm<br>**C** = 250 mm<br>**D** = 500 mm<br>**E** = 750 mm<br>**F** = 1000 mm<br>**G** = 1500 mm | **A** = 4 mm stump<br>**B** = 100 mm<br>**C** = 250 mm<br>**D** = 500 mm<br>**E** = 750 mm<br>**F** = 1000 mm<br>**G** = 1500 mm<br>**0** = no other stem | **A** = 4 mm stump<br>**B** = 100 mm<br>**C** = 250 mm<br>**D** = 500 mm<br>**E** = 750 mm<br>**F** = 1000 mm<br>**G** = 1500 mm<br>**0** = no other stem | **A** = 4 mm stump<br>**B** = 100 mm<br>**C** = 250 mm<br>**D** = 500 mm<br>**E** = 750 mm<br>**F** = 1000 mm<br>**G** = 1500 mm<br>**0** = no other stem | **00K** = without electronic, cable con. M16x1.5<br>**00S** = without electronic, M12x1 plug<br>**NPK** = switching electronic; PNP switch output, thread. cable con.<br>**NPS** = switching electronic; PNP switch output, M12x1 plug |

EHEDG certification of the connection system in combination with weld-in sleeve LZE (see brochure N1, page 53-60)

External switch electronic: Electrode relay NE 104 and NE 304 (see brochure N1, page 33-36)





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