Conductive Level Switch

CERTIFIED EHEDG TYPE EL NOVEMBER 2004

- 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

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Description:

The conductive KOBOLD level probes LNK together with the transducer for head mounting are used for level measurement. This method is based on the evaluation of the electrical conductivity of the medium. In combination with the KOBOLD LZE (p.119-124) or LZE-R (p. 125-128) weld-in sleeves, the probe provides a measuring point that has no dead space and meets hygiene standards and (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 divice is available with an optional M12x1 plug connector.

Fields of use:

- Level monitoring in all conductive media

Technical data:

Measuring principle:	conductive
Prozesstemperatur:	0...100 °C, 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 G 1 with 2-4 electrode stems
Connection:	Threaded cable connection M16x1.5 optional M12x1 plug
Protection:	IP 67

Technical data (continued):

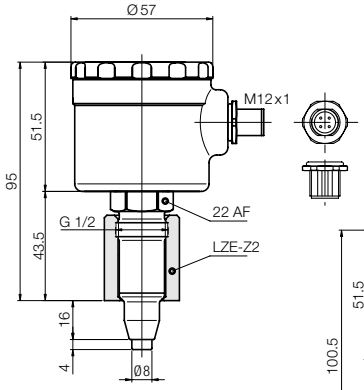
Min. conductivity:	10 µS/cm
Weight:	approx. 0.6 kg

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

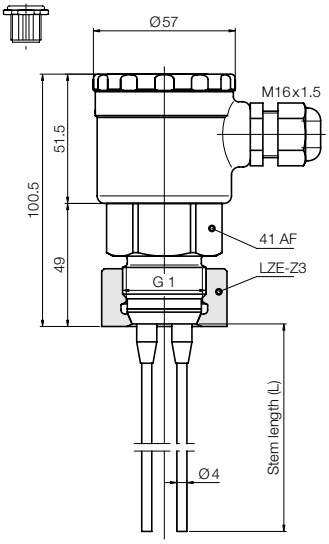
Power supply:	15...36 V_{DC}, 15 mA
Electrode voltage:	approx. 2 V_{AC} / 600 Hz
Sensitivity (adjustable):	4 steps 0.1/1/10/100 kΩ
Function:	Full/empty report (determined via the polarity of the supply voltage)
Output:	PNP transistor output (open collector), U_{off} = +Vs – 1 V max. 50 mA, short-circuit-proof
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) **2** = 2 electrodes (G 1) **3** = 3 electrodes (G 1) **4** = 4 electrodes (G 1)	**2** = stainless steel	**0** = without coating **E** = E-CTFE-coating	**A** = 4 mm stump **B** = 100 mm **C** = 250 mm **D** = 500 mm **E** = 750 mm **F** = 1000 mm **G** = 1500 mm	**A** = 4 mm stump **B** = 100 mm **C** = 250 mm **D** = 500 mm **E** = 750 mm **F** = 1000 mm **G** = 1500 mm **0** = no other stem	**A** = 4 mm stump **B** = 100 mm **C** = 250 mm **D** = 500 mm **E** = 750 mm **F** = 1000 mm **G** = 1500 mm **0** = no other stem	**A** = 4 mm stump **B** = 100 mm **C** = 250 mm **D** = 500 mm **E** = 750 mm **F** = 1000 mm **G** = 1500 mm **0** = no other stem	**00K** = without electronic, cable con. M16x1.5 **00S** = without electronic, M12x1 plug **NPK** = switching electronic; PNP switch output, thread. cable con. **NPS** = switching electronic; PNP switch output, M12x1 plug

EHEDG certification of the connection system in combination with weld-in sleeve LZE (see Page 000)

External switch electronic: Electrode relay NE 104 and NE 304 (see page. ....)

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