



- Measuring range: 0 to 500 mS/cm
- Repeatability: 1.0 % f.s.
- p_{max} : 10 bar; t_{max} : 150 °C
- Process connection: G 1", Hygienic mounting with installation system type LZE and LZE-NR (EHEDG, 3-A)
- Material: stainless steel 1.4305, PEEK
- Temperature compensation adjustable
- Insensitive to pollution, wear resistant measuring principle
- Hygienic mounting, CIP/SIP-compatible to 150 °C
- Digital display for temperature and conductivity
- 2 analogue outputs 4-20 mA (temperature/conductivity)



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Model:
LAL



Description of conductivity meter

The inductive KOBOLD conductivity meter LAL is used to measure the specific conductivity of liquid media. The device has a very small and compact immersion body, with a measuring channel that provides excellent passage for the medium.

Electrode decomposition and invalid measurements caused by soiling and polarization are prevented by the inductive method of measurement.

On the LAL the complete evaluating electronics is integrated in the connecting head. Thus advantages such as low installation costs, minimum wiring and a high degree of noise immunity are achieved. Two analogue outputs (4-20 mA) for conductivity and temperature are available. Conductivity and temperature are displayed at the integrated display. The three (four with the Q-version) measuring ranges and the temperature coefficient α can be configured on the device with the 3 internal set buttons.

Comparison between LAL S and Q versions

S-version	Q-version
-	Additional LF meas. range: 0-1 mS/cm
3 LF measuring ranges selectable	4 LF measuring ranges selectable
Repeatability: 1% f.s.	Repeatability: 5% f.s.
Resolution TK $\alpha = 0.02\% / K$	Resolution TK $\alpha = 0.01\% / K$
One temperature coefficient for all measuring ranges	Different temperature coefficients available for the four measuring ranges
Temperature range 0-150°	Temperature ranges selectable (see Technical details)

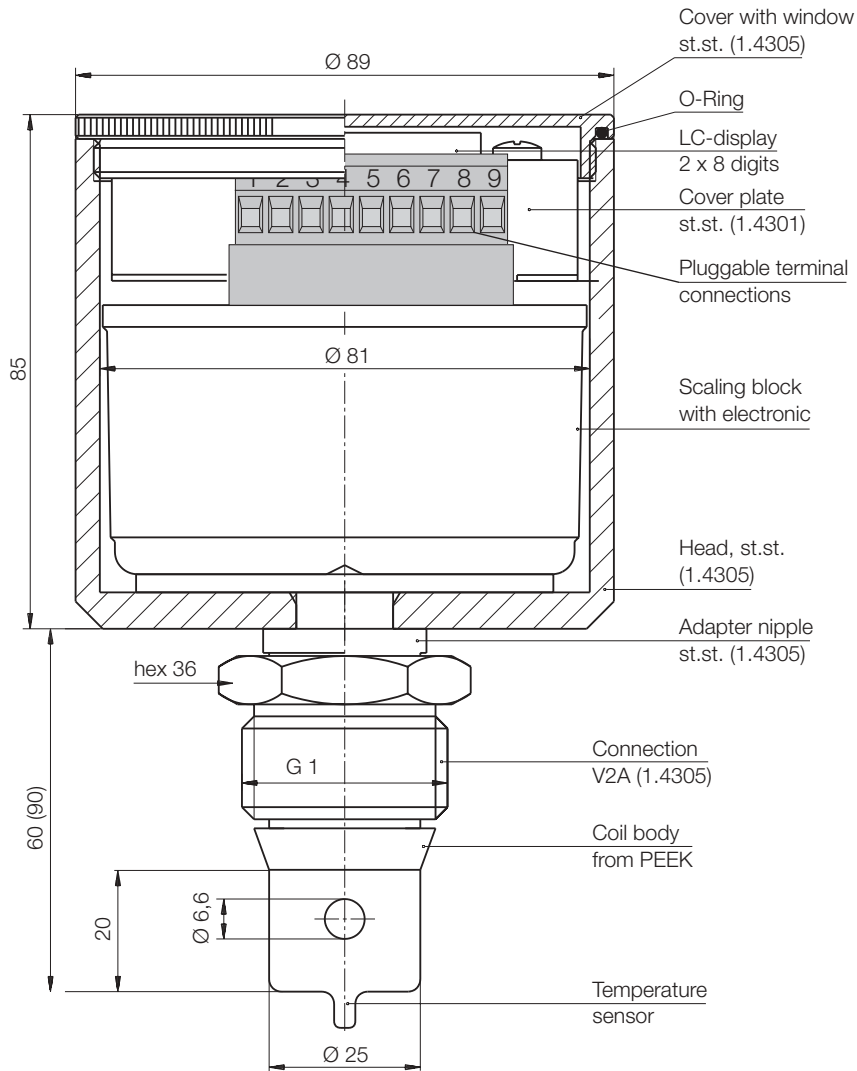
Application Examples

- Measuring specific conductivity in food applications
- CIP/SIP cleaning (phase separation cleaning agent/product)
- Strengthening cleaning agents
- Quality control of products

Technical details

Measuring technique:	inductive measurement of specific conductivity
Measuring ranges:	0-1 mS/cm (with Q-version only) 0-2 mS/cm 0-3 mS/cm 0-5 mS/cm 0-10 mS/cm 0-20 mS/cm 0-30 mS/cm 0-50 mS/cm 0-100 mS/cm 0-200 mS/cm 0-300 mS/cm 0-500 mS/cm
Meas. range selection:	3 ranges selectable (4 with Q-version) externally switchable over control inputs E1, E2 and Gnd: 18-36 V _{DC} , electrically isolated from supply voltage
Resolution:	10 μ S/cm
Accuracy:	1% FS
Repeatability:	1.0% FS
Temperature range:	S version: 0 to +150°C Q version: -20 to 80/130/150, -10 to 40, 0-50/100/150°C
Temperature accuracy:	to 100°C: $\leq 0.5^\circ C$, 100-150°C: $\leq 1.0^\circ C$
Response time T ₉₀ :	< 10 s
Temperature coefficient α :	0.00 to 5.00 % / K, resolution 0.02 % / K Q-version: resolution 0.01 % / K
Max. pressure:	10 bar
Materials	
head + cover:	stainless steel 1.4305, \varnothing 89 mm
immersion body:	PEEK
Process connection:	G 1 Hygienic mounting with sleeve system LZE, LZE-NR
Display:	LCD 2x8-digit with background illumination
Electrical connection:	2x cable gland Pg 9 optional: M12 plug connector
Terminal:	9-pin pluggable terminal block
Output	
conductivity:	4-20 mA, load 500 Ω max.
temperature:	4-20 mA, load 500 Ω max.
Power supply:	18-36 V _{DC} (electrically isolated), max. 250 mA
Protection:	IP 67
Noise immunity:	EN 50082-2 (industrial)
Weight:	approximately 1.6 kg

Dimensions



Order Details (Example: LAL-N S 09)

Model	Description	Version	Electrical connection
LAL-N	Inductive conductivity meter	S = S-version Q = Q-version	09 = Pg 9 12 = M12 plug connector

Please refer to our brochure "S2" ...



...for flow meters/monitors