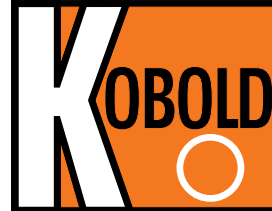




Hydrostatic Level Measurement

with Capacitive Pressure Sensor



measuring
•
monitoring
•
analysing



Pressure sensor:

- Measuring range: to 4 bar rel.
- Measuring accuracy: $\leq 0.2\%$ of full scale
- t_{max} : 150 °C
- Robust, capacitive measuring cell
- Process connection: G 1 hygienic mounting (EHEDG, 3-A) with installation system LZE
- Flush mounted ceramic diaphragm, Al_2O_3



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Model:
LPC



Description of pressure sensor:

The food stuff compatible KOBOLD pressure sensors series LPC are ideally suited for measuring tank contents using the hydrostatic principle. The pressure sensor is mounted with the KOBOLD weld-in sleeve LZE in the bottom of the tank, for example, and outputs a 4-20 mA signal that is proportional to pressure or level. This analogue signal can be processed with the help of evaluation device LPA or output directly to the PLC.

All wetted parts are stainless steel. The pressure sensitive diaphragm is made of highly purified ceramic. Thus the sensor is ideally suited for CIP/SIP cleaning.

The electrical connection is carried out either in the connecting head or with an M12 plug connection. Zero point and FS values can be adjusted with the three internal buttons. The zero-point can be set by keystroke. Pressure compensation to atmospheric pressure is achieved with a second Pg gland.

Areas of application

- Pressure measurement in the food-processing industry
- Tank contents measurement
- also in pressurized tanks

Technical details

Pressure sensor LPC:

Pressure ranges: 0-0.2 / 0.4 / 1.0 / 2.0 / 4.0 bar rel.

Overpressure resistance: minimum 6 bar, see table

Accuracy: ≤ 0.2 % of FS

Temperature drift
zero-point: 0.02 % K of upper range value
rate of rise: 0.02 % K of upper range value

Medium temperature: 0-100 °C, with neck well to 150 °C

Ambient temperature: 0-70 °C

Materials
Housing: stainless steel 1.4305 (V2A)
screw neck: stainless steel 1.4571 (V4A)
diaphragms: ceramic Al₂O₃

Process connection: G 1, hygienic weld-in sleeve LZE-NZ1

Connection: cable gland Pg 9 (internal 2-pin terminal 1.5 mm²)
option: M12 plug connector 1.4305 (V2A)

Output: 4-20 mA, 2-wire

Load: max. 500 Ω

Power supply: 12-36 V_{DC}, max. 120 mA

Protection: IP 67

Noise immunity: according to EN 50082-2 (industrial)

Weight: approximately 0.6 kg

Overpressure resistance

Pressure range	Allowed overpressure
0.2 bar	6 bar
0.4 bar	6 bar
1.0 bar	10 bar
2.0 bar	18 bar
4.0 bar	25 bar

Order Details (Example: LPC-N 1 P 02)

Model	Description	Mechanical design	Electrical connection	Pressure ranges
LPC-N	capacitive pressure sensor	1 = standard 3 = with neck well (to 150 °C)	P = connection Pg 9 M = M12 plug connector	02 = 0-0.2 bar 04 = 0-0.4 bar 10 = 0-1.0 bar 20 = 0-2.0 bar 40 = 0-4.0 bar

Hygienic compatible adapters (LZE, LZE-NR) can be found on page 119-128.

Dimensions

Pressure sensor LPC

