



Hydrostatic Level Measurement

with Capacitive Pressure Sensor



measuring
•
monitoring
•
analysing



Transmitter:

- Linearized tank contents measurement
- Linearization for standard tank shapes preprogrammed
- 2 inputs (allows differential pressure measurement)
- 2 switching outputs
- 1 alarm relay
- Analogue output 0/4 - 20 mA



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KOBOLD Messring GmbH
Nordring 22-24
D-65719 Hofheim/Ts.
☎ (06192) 299-0
Fax (06192) 23398
E-mail: info.de@kobold.com
Internet: www.kobold.com

Model:
LPA



Description of transmitter:

The processor controlled KOBOLD tank level measuring instrument type LPA is an evaluation device for all applications with tank level measurement. It is used with the KOBOLD pressure sensor LPC, but can also be connected to all standard sensors with analogue output signal 0/4 to 20 mA, such as the potential level probe LNP.

The transmitter LPA linearizes all standard tank shapes mathematically correct. Only the tank type has to be selected and its dimensions entered. Special tanks with special shapes can be linearized with up to 25 measuring points by volumetric calibration.

This device is also suited for tank level measurement in pressurized tanks by means of a second analogue input. Residual deflection in the pressure transmitter due to ageing can be corrected automatically with an additional level probe mounted in the tank. The scope of the display and all other values can be defined from the splash-proof tactile keypad.

Areas of application

- Tank level measurement
- also in pressurized tanks

Technical details

Transmitter LPA:

- Inputs: 2 x 0/4-20 mA ($R_i=50 \Omega$), measuring range 0-22 mA, 3 electrically isolated control inputs, LOW=0-3 V_{DC}, HIGH=7-24 V_{DC}
- Measuring accuracy: 0.1 % ±1 digit
- Resolution: 15 bit + sign
- Display: 7-segment LED, 4 1/2-digit, 13 mm
- Range: -19999 to 19999 digit
- Temperature drift: < 0.003 % K
- Case: panel mount, 96x48x152 mm with 2 fixing clips
- Panel cut-out (WxH): 92x45 mm, tol. -0.5 mm
- Ambient temperature: 0-50 °C
- Storage temperature: -20 to +70 °C
- Humidity: 0-95 % non-condensing
- Switching output: 2 changeover contacts, 250 V / 3 A_{AC}, contacts gold plated
- Switching functions: adjustable: min/max, switching point, hysteresis, falling or rising slopes
- Alarm output: 1 N/O contact, 250 V / 3 A_{AC} (relay opens in case of error)
- Sensor supply: approximately 25 V, max. 50 mA (short-circuit-proof)
- Power supply: 230 V_{AC}, 50 Hz, approx. 7 VA 24 V_{DC} ±10 %, max. 0.3 A
- Analogue output (optional): 0/4-20 mA, 12 bit resolution
- Load: max. 500 Ω
- Protection: front IP 65, rear IP 20
- Noise immunity: according to EN 50082-2 (industrial)
- Weight: approximately 0.6 kg

Order Details (Example: LPA-N 0 0)

| Model | Description | Power supply | Output |
|-------|---------------------------------|---|--|
| LPA-N | Tank level measuring instrument | 0 = 230 V _{AC} 3 = 24 V _{DC} | 0 = standard 3 = with analogue output 0/4-20 mA |