



Bypass Level Indicators with Threaded Connection



measuring
•
monitoring
•
analysing



- Measuring length:
max. 6 metres
- Pressure: max. PN 16 / 150 lbs
- Temperature: max. 120 °C
- Viscosity: max. 200 mm²/s
- Accuracy of transmitter:
±1 % mm
- Material:
stainless steel 1.4301
- Connection:
R 1/2, R 3/4, R 1, R 1 1/4
according to DIN 2999
1/2 NPT, 3/4 NPT,
1 NPT, 1 1/4 NPT
- Rugged, reliable magnetic
roller-type display located right
at unit; requires no auxiliary
power source
- Limit switch



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Model:
NBK-01



Description

Kobold bypass level indicators are used for continuous measurement, display and monitoring of liquid levels. The bypass tube is attached onto the side wall of the vessel.

According to the law of communicating tubes the level in the bypass tube equals the level in the vessel. A float with embedded magnets in the bypass tube follows the liquid level and transfers it in a non-contacting manner to a display fitted outside the tube or to a monitoring device. The following indication and monitoring devices are available:

Magnetic roller indicator

As the float passes by, the red/white rollers are rotated in succession by 180° around their own axes. The rollers change from white to red as the level rises and from red to white as the level falls. The level is continuously displayed as a red column, even when the power fails.

Transmitter

A magnetostrictive transmitter can be mounted outside the bypass tube to teletransmit the level. A continuous standard signal of 4 to 20 mA is output by means of a fitted transmitter.

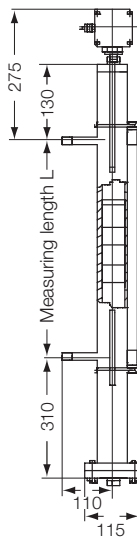
Limit contacts

Reed contacts for limit-value acquisition or also for level control can be secured to the bypass tube.

Applications

- Storage tanks
- Tanks on ships
- Mixing vessels
- Water tanks

Dimensions



Technical Details

Float: Titan
 Bypass tube: Ø 60.3 mm, st. steel, 1.4301
 Connections: R 1/2,
 Option: R 3/4, R 1, R 1 1/4
 1/2 NPT, 3/4 NPT,
 1 NPT, 1 1/4 NPT

Max. medium temperature: 120 °C
 Max. pressure: PN 16
 Max. viscosity: 200 mm²/s
 Density: 0.78 to 1.18 kg/dm³
 Max. measuring length: 6000 mm
 Overall length: see drawing
 Indication error: ± 20 mm with deviation from the desired density

Installation position: vertical
 Roller indication: aluminium section with polypropylene rollers
 Seal: flat gasket, PTFE

Limit contacts

Contact operation: bistable changeover contact
 Switching hysteresis: approximately 15 mm
 Housing: polycarbonate
 Protection: IP 65
 Max. switch capacity: 60 W/VA, 230 V/0.8 A
 Electrical connection: 3 m PVC cable
 Ambient temperature: max. 75 °C

Transmitter

Principle of measurement: magnetostrictive
 Supply voltage: 24 V_{DC}, max. 150 mA
 Output: 4 - 20 mA, 4-wire
 Load: max. 500 Ω
 Accuracy: ± 1 mm
 Max. length: 4000 mm
 Protection: IP 65
 Medium temperature: max. 100 °C
 Ambient temperature: max. 80 °C

Order Details (Example: NBK-01R15 RP01A)

Desired medium density	Allowed medium density (indication error ± 20 mm)	Design	Order number*	Density
1 kg/dm³	0.9 - 1.18 kg/dm³	with roller indication	NBK-01...RP0A	A=0.90 - 1.18 C=0.78 - 0.89
1 kg/dm³	0.9 - 1.18 kg/dm³	with transmitter	NBK-01...00TA	
1 kg/dm³	0.9 - 1.18 kg/dm³	with roller indication and transmitter	NBK-01...RPTA	
0.8 kg/dm³	0.78 - 0.88 kg/dm³	with roller indication	NBK-01...RP0C	
0.8 kg/dm³	0.78 - 0.88 kg/dm³	with transmitter	NBK-01...00TC	
0.8 kg/dm³	0.78 - 0.88 kg/dm³	with roller indication and transmitter	NBK-01...RPTC	
		Standard limit contact	NBK-R	

*Please replace the dots in the order number with the connection code (R15=R 1/2; R20=R 3/4; R25=R 1, R32=R 1 1/4; N15=1/2 NPT, N20=3/4 NPT, N25=1 NPT, N32=1 1/4 NPT). Please specify measuring length »L« in writing.