

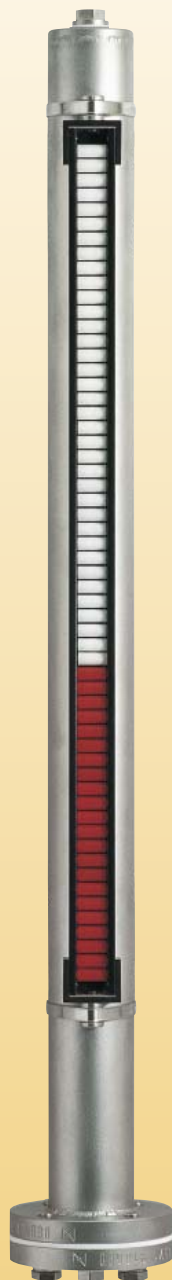


## Bypass Level Indicators with Threaded Connection



measuring  
•  
monitoring  
•  
analysing

### NBK-01



- Measuring length: max. 5500 mm
- $p_{\max}$ : PN 16/150 lbs;  $t_{\max}$ : -40 °C ... +120 °C
- Viscosity: max. 200 mm<sup>2</sup>/s
- Accuracy of transmitter: ±1 mm
- Material: stainless steel 1.4301
- Connections: R 1/2, R 3/4, R 1, R 1 1/4 according to DIN EN 10226-1  
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 contacts



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**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 4-20 mA is output by means of a fitted transmitter.

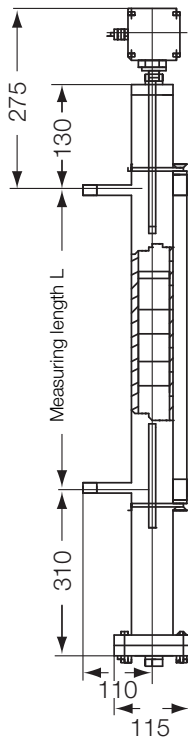
**Limit contacts**

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**

- Bypass tube: Ø 60.3 mm, stainless 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
- Float: Titanium
- Flat Gasket: PTFE
- Max. medium temp.: -40 °C ... +120 °C
- Max. pressure: PN 16
- Max. viscosity: 200 mm<sup>2</sup>/s
- Density: 0.78 ... 1.18 kg/dm<sup>3</sup>
- Max. measuring length: 5500 mm
- Overall length: see dimensions
- Indication error: ± 20 mm with deviation from the desired density
- Roller indication: aluminium section with polypropylene rollers (max. 120 °C)
- Protection: IP 54

**Limit contacts model NBK-R**

- Contact operation: bistable changeover contact
- Switching hysteresis: approx. 15 mm
- Max. Switch capacity: 60 W/VA, 230 V<sub>AC/DC</sub>, 1 A
- Resistance: 100 mΩ
- Medium temperature: max. 100 °C
- Ambient temperature: -40 °C ... +75 °C
- Connection: 3 m PVC cable
- Housing: polycarbonate
- Protection: IP 67

**Magnetostrictive sensor with 4-wire transmitter**

- Output: 4-20 mA
- Supply voltage: 24 V<sub>DC</sub>, max. 150 mA
- Load: max. 500 Ω
- Max. length: 4000 mm
- Medium temperature: max. 120 °C
- Ambient temperature: -25 °C ... +85 °C
- Accuracy: ±1 mm
- Housing: Aluminum pressure-cast
- Protection: IP 65

**Order Details** (Example: NBK-01 R15 RP0A)

Desired medium density	Allowed medium density (indication error ± 20 mm)	Design	Order number*
1 kg/dm <sup>3</sup>	0.9 - 1.18 kg/dm <sup>3</sup>	with roller indication	NBK-01...RP0A
1 kg/dm <sup>3</sup>	0.9 - 1.18 kg/dm <sup>3</sup>	with transmitter	NBK-01...00TA
1 kg/dm <sup>3</sup>	0.9 - 1.18 kg/dm <sup>3</sup>	with roller indication and transmitter	NBK-01...RPTA
0.8 kg/dm <sup>3</sup>	0.78 - 0.88 kg/dm <sup>3</sup>	with roller indication	NBK-01...RP0C
0.8 kg/dm <sup>3</sup>	0.78 - 0.88 kg/dm <sup>3</sup>	with transmitter	NBK-01...00TC
0.8 kg/dm <sup>3</sup>	0.78 - 0.88 kg/dm <sup>3</sup>	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.