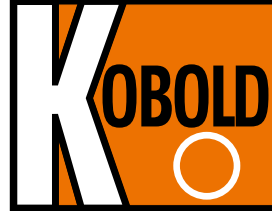




## Bypass Level Indicators with Threaded Connection



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



NBK-RS



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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

#### 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

#### Limit contact model NBK-RS

Contact operation:	bistable changeover contact
Switching hysteresis:	approx. 15 mm
Max. switching capacity:	230 V <sub>AC/DC</sub> , 1A, 60 W/VA
Resistance:	approx. 100 mΩ
Ambient temperature:	NBK-RS -40 ... +100 °C
Medium temperature:	NBK-RS -40 ... +120 °C
Cable connection:	silicone cable, colour coded 4Gx1 mm <sup>2</sup>
Cable gland:	M16x1.5 brass
Housing:	stainless steel 1.4301
Protection:	IP67

#### 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

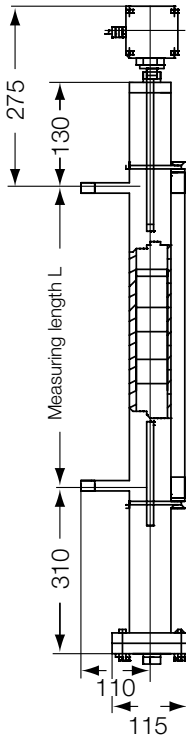
**Order Details** (Example: NBK-01 R15 RP0A)

Order number <sup>1)</sup>	Desired medium density	Allowed medium density (indication error ± 20 mm)	Design
NBK-01...RP0A	1 kg/dm <sup>3</sup>	0.9 - 1.18 kg/dm <sup>3</sup>	with roller indication
NBK-01...00TA	1 kg/dm <sup>3</sup>	0.9 - 1.18 kg/dm <sup>3</sup>	with transmitter
NBK-01...RPTA	1 kg/dm <sup>3</sup>	0.9 - 1.18 kg/dm <sup>3</sup>	with roller indication and transmitter
NBK-01...RP0C	0.8 kg/dm <sup>3</sup>	0.78 - 0.88 kg/dm <sup>3</sup>	with roller indication
NBK-01...00TC	0.8 kg/dm <sup>3</sup>	0.78 - 0.88 kg/dm <sup>3</sup>	with transmitter
NBK-01...RPTC	0.8 kg/dm <sup>3</sup>	0.78 - 0.88 kg/dm <sup>3</sup>	with roller indication and transmitter
NBK-R	Standard limit contact		
NBK-RS1U03 <sup>2)</sup>	Limit contact, bistable, change-over contact, max. +120 °C, 3 m silicone cable, weight: 505 g		
NBK-RS1U06 <sup>2)</sup>	Limit contact, bistable, change-over contact, max. +120 °C, 6 m silicone cable, weight: 826 g		
NBK-RS1U10 <sup>2)</sup>	Limit contact, bistable, change-over contact, max. +120 °C, 10 m silicone cable, weight: 1254 g		

<sup>1)</sup> 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.

<sup>2)</sup> Add Suffix „/NBK“, when ordered together with NBK

**Dimensions**



**NBK-RS**

