Bypass Level Indicators

Cable Design

- For media with a density of 1.0 kg/dm³
- Measuring in an open tank
- Measuring length: max. 4.8 m
- t_{max}: 60 °C
- Float material: PP-H or stainless steel 1.4301
- Level indication via a scale on the bypass tube

Options:

- 2-coloured roller display
- Analogue output through reed contact chain or magnetostrictive measuring sensor
- Limit switch

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Model:
NBK-19

Description

The KOBOLD bypass level indicator model NBK-19 is based on the simple function principle of cable and deflection pulley. The tank float, made of PPH or stainless steel, is moved up and down by the medium depending on the level in the tank. This tank float has a counter-float (counterweight), which moves correspondingly in a transparent PVC tube in dependence on the level. The floats are connected to one another by means of a cable over 2 deflection pulleys. The magnetic counter-float has a ring marking for reading the scale on the bypass PVC tube.

The following options 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.

Measuring sensor

A measuring sensor with a resistor chain or a magnetostrictive sensor can be fitted outside the bypass tube for remote transmission of the level. A continuous standard signal of 4 to 20 mA is received with the help of a built-in measuring transducer. This standard signal can be displayed via analogue or digital display appliances.

Universal Indicating Unit

A universal indicating unit of type series ADI can be mounted on the bypass to display and evaluate the standard signal (4 - 20 mA) generated by the transmitter. For stability reasons this appliance is not fitted at the bypass tube but supplied with a wall bracket.

Limit contacts

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

Technical Data

Bypass tube:	PVC, transparent, Ø 63 x 3 mm headpiece PVC grey
Measuring length:	0.2 m to 4.8 m
Fastening strap:	PP
Counterweight:	Ø 54 x 82.5; painted steel
Float:	PP-H Ø 98, cylindrical or stainless steel 1.4301; 200 x 100, lentiform
Medium density:	1.0 kg/dm³
Cable:	PP; Ø 2 mm stainless steel 1.4401; Ø 1 mm
Deflector pulleys:	PA6, bearing block 1.4301 1.4305, bearing block 1.4301
Scale:	Polyester; transparent, glued to the tube
Roller display:	red-white, PP, protection IP 54
Operating temperature:	max. 60 °C
Viscosity:	1 - 200 mm²/s

Limit contacts type NBK-R

Contact operation:	bistable changeover contact
Switching hysteresis:	approx. 15 mm
Max. switch capacity:	60 W/VA; 230 $V_{AC/DC;}$ 1.0 A (NBK-R)
Ambient temperature:	max. 60 °C
Protection:	IP 67
Connection:	3 m PVC cable
Housing:	plastic

Measuring sensor
Reed contact resistor chain type: ...W...

Total resistance:	approx. 5 kΩ
Measuring-circuit voltage:	max. 24 V_{DC}
Measuring current:	max. 0.1 A
Ambient temperature:	max. 60 °C
Protection:	IP 65
Resolution:	10 mm (ML < 2000 mm) 20 mm (ML ≥ 2000 mm)

Measuring sensor type: ...M...
Reed contact resistor chain with 2-wire Measuring transducer

Output:	4 - 20 mA
Supply voltage:	16 - 32 V_{DC}
Load:	(U_B - 9 V) 0.02 A [Ω]
Ambient temperature:	max. 60 °C
Protection:	IP 65
Resolution:	10 mm (ML < 2000 mm) 20 mm (ML ≥ 2000 mm)

Technical Data (cont.)

Measuring sensor type: ...T...
Magnetostrictive sensor with 4-wire
Measuring transducer

Output:	4 - 20 mA
Load:	max. 500 Ω
Max. length:	4000 mm
Supply voltage:	24 V_{DC}, max. 150 mA
Power consumption:	< 5 W (without load)
Accuracy:	± 1 mm
Ambient temperature:	max. 60 °C
Protection:	IP 65

Dimensions see following page

Order Details (Example: **NBK-19K00 00 0 W 0**)

Model	Roller display	Measuring sensor	Tank float and cable	Option
NBK-19K00	**00** = without **RP**= with roller display	**0** = without **T** = Magnetostrictive sensor **W** = Reed contact resistor chain **M** = Reed contact chain with measuring transducer	**W** = PP-H **Z** = 1.4301	**0** = without **M**= Polyester scale
NBK-R	Standard limit contact			
NBK-19BF	Fastening strap			
NBK-19P	Additional roller with bearings			
NBK-CP	Spare counter-thread (magnet system)			

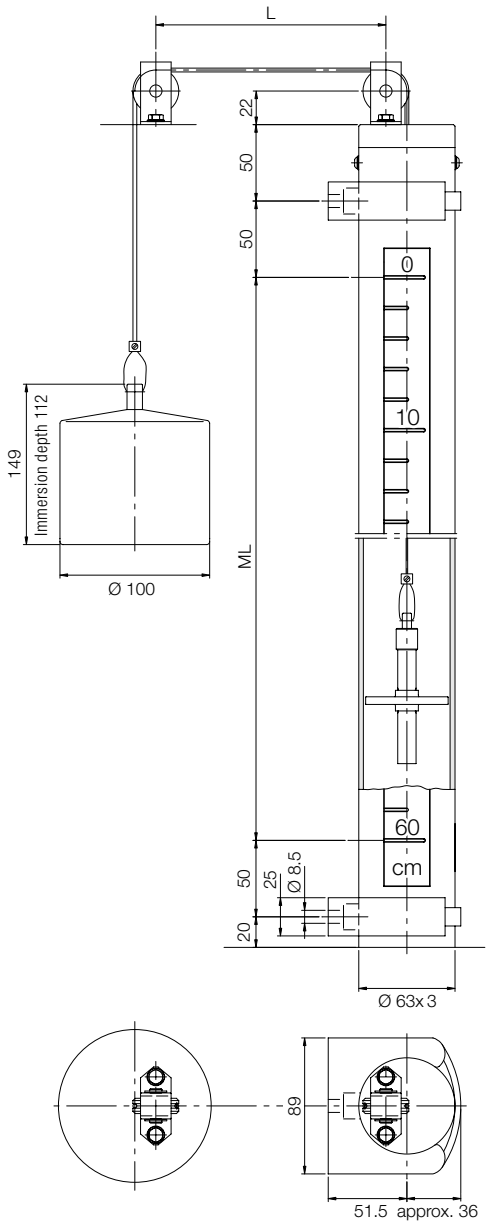
Length ML (measuring length) and L (roller clearance) must be shown in clear text in the order.

Enclosed to the delivery: 2 rollers with bearings, 2 fastening straps.

N2

Dimensions

NBK-19 with option W, PP-H design



Dimensions

NBK-19 with option Z, stainless steel design