

**Operating Instruction  
for  
Bypass-  
Level Indicator  
Cable version**

**Model: NBK-19**

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## **2. Note**

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Please read these operating instructions before unpacking and putting the unit into operation. Follow the instructions precisely as described herein.

The instruction manuals on our website [www.kobold.com](http://www.kobold.com) are always for currently manufactured version of our products. Due to technical changes, the instruction manuals available online may not always correspond to the product version you have purchased. If you need an instruction manual that corresponds to the purchased product version, you can request it from us free of charge by email ([info.de@kobold.com](mailto:info.de@kobold.com)) in PDF format, specifying the relevant invoice number and serial number. If you wish, the operating instructions can also be sent to you by post in paper form against an applicable postage fee.

Operating instructions, data sheet, approvals and further information via the QR code on the device or via [www.kobold.com](http://www.kobold.com)

The devices are only to be used, maintained and serviced by persons familiar with these operating instructions and in accordance with local regulations applying to Health & Safety and prevention of accidents.

When used in machines, the measuring unit should be used only when the machines fulfil the EC-machine guidelines.

### **as per PED 2014/68/EU**

The device is depressurized.

In acc. with Article 4 Paragraph (3), "Sound Engineering Practice", of the PED 2014/68/EU no CE mark.

## 3. Instrument Inspection

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Instruments are inspected before shipping and sent out in perfect condition. Should damage to a device be visible, we recommend a thorough inspection of the delivery packaging. In case of damage, please inform your parcel service / forwarding agent immediately, since they are responsible for damages during transit.

### Scope of delivery:

The standard delivery includes:

- Measuring tube
- Float
- Magnet system
- 2 x deflection pulleys
- 2 or 3 fastening clamps
- cable with 2 simplex-clamps

## 4. Regulation Use

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Any use of the Bypass-Level Indicator, model: NBK-19, which exceeds the manufacturer's specifications, may invalidate its warranty. Therefore, any resulting damage is not the responsibility of the manufacturer. The user assumes all risk for such usage.

## 5. Electrical Connection

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### Optional electrical add-on parts (transmitter and limit contacts)

There are separate operating instructions for installing and starting up the optional electrical attachments: MM, NBK-R, NMT/NBK-T

These operating instructions document the following electrical add-on parts:

### Transmitter:

Reed contact resistor chain model **W**

Reed contact resistor chain with transmitter model **M**

Magnetostrictive sensor with transmitter model **T**

### Limit Contacts:

Reed switch limit contact model **NBK-R**

## **6. Operating Principle**

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The Kobold bypass level indicator type NBK-19 is based on the simple principle of cable and deflection pulley. The tank float, made of PPH or stainless steel, is moved upwards and downwards by the medium according to the liquid level in the tank. The tank float has a counter float (counterweight) which moves in a transparent PVC tube depending on the liquid level. The two floats are connected to each other through a cable and 2 deflection pulleys. The magnetic counter float has a ring marker for reading of the scale on the bypass PVC tube.

The following options are available:

- **Magnet roller indicator**

When the counter float travels past the red/white rollers, they rotate through 180°. The rollers change from white to red when the liquid level rises and from red to white when the level falls. The liquid level is continuously indicated as a red column, even in the event of a power outage.

## **7. Mechanical connection**

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- Affix the pipe clamps supplied at the relevant vertical height (for sizes, see section **Fehler! Verweisquelle konnte nicht gefunden werden. Fehler! Verweisquelle konnte nicht gefunden werden.**) to the tank or in an appropriate manner.
- Remove the packaging from the bypass float, pull the float a little upwards in the tube and fix in place.
- Snap the bypass tube into the pipe clamps, adjust and place the lower end of the tube onto a support (floor).
- Bolt the bypass tube to the pipe clamps.
- Affix the loose roller bearings supplied onto the tank, such that a cable can be introduced into the tank without being impeded.
- Run the cable over the pulley into the tank and affix the tank float using the simplex clamps, such that the level in the tank corresponds to the scale on the bypass tube.

## 8. Operation

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### 8.1 Operation of the level indicator

The screw connections should be checked and tightened where necessary.

Fill the container and switch on the electrical control system, where used.

The liquid, which now enters the tank, raises the tank float and lowers the bypass float, which then shows the level of liquid in the tank in the bypass tube and on the scale or the roller indicator where present.

## 9. Fault diagnosis and dealing with malfunctions

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Fault / malfunction	Possible cause
The cable is loose when the tank is full	The bypass float is resting on the base of the tube. The cable is too long.
The bypass float knocks against the head of the tube.	The tank float is partly or completely out of the medium in the tank. The cable is too short.
The tank and bypass floats no longer move.	The cable is caught.

## **10. Technical Information**

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Operating instructions, data sheet, approvals and further information via the QR code on the device or via [www.kobold.com](http://www.kobold.com)

## **11. Order Codes**

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Operating instructions, data sheet, approvals and further information via the QR code on the device or via [www.kobold.com](http://www.kobold.com)

## **12. Dimensions**

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Operating instructions, data sheet, approvals and further information via the QR code on the device or via [www.kobold.com](http://www.kobold.com)

## 13. Disposal

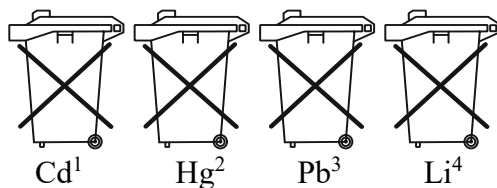
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### Note!

- Avoid environmental damage caused by media-contaminated parts
- Dispose of the device and packaging in an environmentally friendly manner
- Comply with applicable national and international disposal regulations and environmental regulations.

### Batteries

Batteries containing pollutants are marked with a sign consisting of a crossed-out garbage can and the chemical symbol (Cd, Hg, Li or Pb) of the heavy metal that is decisive for the classification as containing pollutants:



1. „Cd" stands for cadmium
2. „Hg" stands for mercury
3. „Pb" stands for lead
4. „Li" stands for lithium

### Electrical and electronic equipment





## **14. EU Declaration of Conformance**

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We, KOBOLD Messring GmbH, Hofheim-Ts, Germany, declare under our sole responsibility that the product:

**Bypass level indicator      model: NBK-19...**

to which this declaration relates is in conformity with the standards noted below:

**EN IEC 63000:2018** Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

Also, the following EEC guidelines are fulfilled:

**2011/65/EU**  
**2015/863/EU**

**RoHS** (category 9)  
Delegated Directive (RoHS III)

Hofheim, 13 Oct.. 2022



H. Volz  
General Manager



M. Wenzel  
Proxy Holder

## 15. UK Declaration of Conformity

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We, KOBOLD Messring GmbH, Hofheim-Ts, Germany, declare under our sole responsibility that the product:

**Bypass level indicator      model: NBK-19...**

to which this declaration relates is in conformity with the standards noted below:

**BS EN IEC 63000:2018**

Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.

Also, the following UK guidelines are fulfilled:

**S.I. 2012/3032**      The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

Hofheim, 13 Oct. 2022



H. Volz  
General Manager



M. Wenzel  
Proxy Holder