

**Operating Instructions  
for  
Variable area flow meter  
with needle valve**

**Model: UVR/UTR**



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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.

## 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:

- Variable area flow meter model: UVR/UTR

## 4. Regulation Use

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Any use of the device, which exceeds the manufacturer's specification, may invalidate its warranty. Therefore, any resulting damage is not the responsibility of the manufacturer. The user assumes all risk for such usage.

## 5. Operating Principle

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The Kobold UVR/UTR model flowmeter/monitor works on the basis of the suspended float principle. It is used for measuring the flow rates in closed pipe line systems.

The medium flows from below through a glass measuring cone that gets wider on top. Thus, the float is raised and indicates the respective flow rate on the scale provided on the measuring cone. To monitor flow rate limits, the UVR/UTR meters can be optionally furnished with "open collector" proximity switches. These structures are produced both furnished with needle valve and without needle valve.

**By its special design, this model is particularly suitable for applications where only very small operating pressures are available. Another advantage is offered by the very large sight glass which optically allows direct flow observation.**

## 6. Mechanical Connection

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### Before Installation:

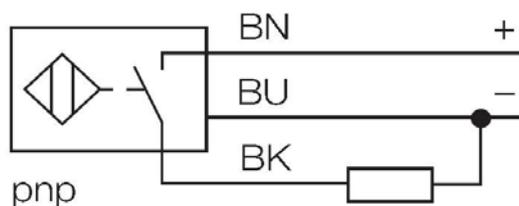
- Remove all transportation safety locks and ensure that no packing material remains within the unit.
- Be sure that the maximum allowable operating pressure and temperature is not exceeded (see Technical data).
- Install the flow meter in the piping system, ensure the instrument is under no mechanical stress/tension (install support bracing if necessary).
- Protect the measuring tube from external damage.
- Avoid pressure peaks in the measuring tube, e.g. from sudden surges or stoppage of flow.
- If possible, immediately after making mechanical connections, check whether the connections are properly sealed with no evidence of leakage

## 7. Electrical Connection

### 7.1 Inductive switch (option)

- Disconnect the sensor from the power supply.
- Screw on a screw nut (enclosed) with the sensor.
- Screw on the sensor into the sensor holder which is in the side of the flowmeter.
- Loose the screw of the sensor holder at the rod.
- Slide the sensor holder up or down until the reference edge coincides with the desired switch point scale reading.
- Cockle the screw of the sensor holder at the rod.
- Cockle the screw nut of the sensor.
- Wire the sensor to the electricity according to the following diagram.

#### Wiring diagram



## 8. Operation

**In order to initialise the inductive switch function, it is essential that the float activates the contact once in each direction.**

Adjustment of limit-values

The switch-point can be adjusted to the desired levels by using.

*Reference edge:* approx. the middle of the sensor.

- Loose the screw of the sensor holder at the rod.
- Slide the switch housing up or down until the reference edge coincides with the desired switch-point scale reading.
- Cockle the screw of the sensor holder at the rod.

Overranging

With non-pulsating flow, the maximum flow rate can be exceeded. Only an increase in pressure loss will result (max. permissible operating pressure must not be exceeded!)

# UVR/UTR

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## 9. Maintenance

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If the medium to be measured is clean, the series UVR/UTR is virtually maintenance-free. If deposits form on the inner housing or parts, periodic cleaning of the unit is recommended. Remove the units from the piping with a suitable tool; clean the flow meter with a suitable cleaning agent or make use of an ultrasonic bath.

## 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)

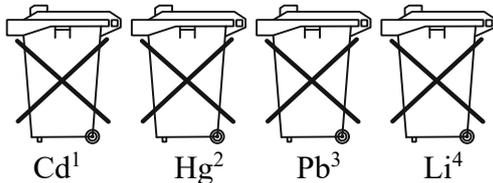
## 13. Disposal

### 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 Unirota Kft. Nyíregyháza Hungary, declare under our sole responsibility that the product:

**Variable area flow meter**

**Model: UVR/UTR...**

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 EC guidelines are fulfilled:

**2011/65/EU**

**RoHS** (category 9)

**2015/863/EU**

Delegated Directive (RoHS III)

Nyíregyháza, 10 May 2022



Dénes Szabó  
General Manager

## 15. EU Declaration of Conformance (contact)

**EU-Konformitätserklärung Nr.: 5020-2M**

EU Declaration of Conformity No.:

**TURCK**

Wir/ We: HANS TURCK GMBH & CO KG  
WITZLEBENSTR. 7, 45472 MÜLHEIM A.D. RUHR

erklären in alleiniger Verantwortung, dass die Produkte  
declare under our sole responsibility that the products

Induktive, kapazitive, magnetische  
und Ultraschall- Näherungsschalter:  
Inductive, capacitive, magnetic  
and ultrasonic proximity  
switches:

Der Typen beginnend mit:  
types starting with:  
BI, NI, S32SR, SI, WI, BR, MP, DBI, DNI, DTBI, DTNI, BC, NC, RU, WIM,  
BIM

auf die sich die Erklärung bezieht, den Anforderungen der folgenden EU-Richtlinien durch Einhaltung der  
folgenden Normen genügen:  
to which this declaration relates are in conformity with the requirements of the following EU-directives by compliance with the following  
standards:

EMV - Richtlinie /EMC Directive EN 60947-5-2:2007/A1:2012	2014 / 30 / EU	26.02.2014
RoHS – Richtlinie /RoHS Directive EN 50581:2012	2011 / 65 / EU	08.06.2011
Niederspannungsrichtlinie /Low Voltage Directive EN 60947-5-2:2007/A1:2012 (für die Geräte mit Versorgungsspannung / for equipment with supply voltage: >50V AC bzw. >75V DC)	2014 / 35 / EU	26.02.2014

Weitere Normen, Bemerkungen:  
additional standards, remarks:

Zusätzliche Informationen:  
Supplementary information:

Mülheim a. d. Ruhr, den 29.01.2019

Ort und Datum der Ausstellung /  
Place and date of issue



i.V. Dr. M. Linde, Leiter Zulassungen /Manager Approvals  
Name, Funktion und Unterschrift des Befugten /  
Name, function and signature of authorized person