

Operating Instructions for By-pass level indicator

Model: SZM



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2. Note

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 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) 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

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

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

Diagram 6, Pipe, Group 1 dangerous fluids

Diagram 7, Pipe, Group 2 no dangerous fluids

Diagram 8, Pipe, Group 1 dangerous fluids

Diagram 9, Pipe, Group 2 no dangerous fluids

3. Instrument Inspection

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:

- By-pass level indicator model: SZM
- Capacitive switch (option)

4. Regulation Use

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

The Kobold Unirota SZM model by-pass level indicator works on the basis of the intercommunicating vessels principle. The SZM type glass tube level indicator is applicable for the indication of liquid level in small and middle-sized, standing or lying round containers used in food, pharmaceutical and chemical industries. The level of the liquid in the glass tube of the appliance is the same with the level in the round containers. The level of the liquid can be seen through the sight glass.

The loads occurring at the installation is absorbed by the fixing device, thus the glass tube is protected against breaking. The fixing device also protects the glass tube against the mechanical impacts that may occur following the installation. We recommend that the normal design level indicators be fitted on vessels containing pure liquids, while the indicators mounted with cleaning stubs (a low, or low-top stub) be fitted on containers filled with contaminated liquid.

6. Mechanical Connection

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 by-pass level indicator at the side of the round containers, 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.
- Make sure that the connections are in plain.

7. Electrical Connection

7.1 Capacitive switch (option)



Caution! Make sure that the voltage values of your system correspond with the voltage values of the measuring unit.

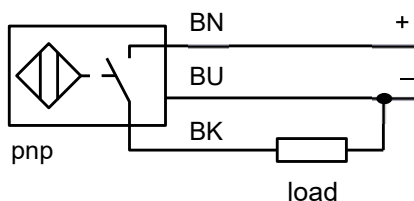
- Make sure that the supply wires are de-energized.
- Plug in the system according to the connecting diagrams.

7.1.1 We recommend the use of wires with cross sectional area of min. 0.25 mm²



Attention! Incorrect wiring will lead to damage of the unit's electronics.

7.1.1.1 Wiring diagram



8. Operation

Capacitive proximity switches are designed for non-contact and wear-free detection of metal (electrically conductive) and nonmetal (electrically non-conductive) objects.

Note: Customer cannot retrofit the contacts himself. If retrofitting of contacts is desired, the SZM should be ordered with a remark "prepared for retrofitting of limit contact".

Installing of the capacitive switch

- Slide the switch housing up until the glass tube is empty under the switch.
- Set the switching state LED off by adjusting the potentiometer located the end of the switch.
- Slide the switch housing down until the glass tube is full under the switch.
- The LED must be on. If not, repeat the process from the first step until the LED on.

Adjustment of limit-values

The switch-point can be adjusted to the desired levels by using the clamping screw on the holder of switch.

Reference edge: approx. the middle of the sensor.

Slide the switch housing up or down until the reference edge coincides with the desired switch-point scale reading.

9. Commissioning

Because of the setting behaviour of seals, all screw connections must be retightened.

If vent and drain valves have been installed, close them before filling.

Fill vessel and switch on electrical controller, if available. If there are gate valves between bypass process connection and tank, first slowly open the upper valve (pressure equalisation) and then the lower valve (liquid side).

Now the liquid in the bypass pipe will rise until the level between the tank and the bypass pipe is equalised. The value of the liquid level can be read on a scale (if any) on the bypass tube.

10. Maintenance

If the medium to be measured is clean, the series SZM is virtually maintenance-free.

If deposits form on the inner housing or parts, periodic cleaning of the unit is recommended.

At case of SZM-x1..., SZM-x2..., SZM-x3..., SZM-x5..., SZM-x8 (with cleaning hole):

- Drain the residual medium down from your appliance using the drain valve (SZM-x5...), the cup of cleaning hole (SZM-x2..., SZM-x3...) or outlet screw (SZM-x1...).
- If your appliance has shut-off valves, turn them off.
- Remove the units from the container with a suitable tool.
- Screw the cleaning hole out. It can be located at the bottom (SZM-x2..., SZM-x3...) or top (SZM-x1..., SZM-x3..., SZM-x5...).
- Clean the by-pass level indicator with a suitable cleaning.
- Do the reassembly in reverse order.

11. Technical Information

Operating instructions, data sheet, approvals and further information via the QR code on the device or via www.kobold.com

12. Order Codes

Operating instructions, data sheet, approvals and further information via the QR code on the device or via www.kobold.com

13. Dimensions

Operating instructions, data sheet, approvals and further information via the QR code on the device or via www.kobold.com

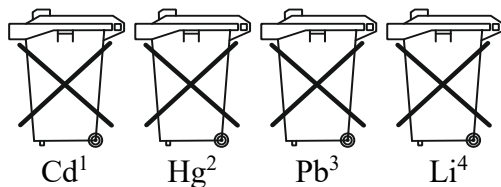
14. Disposal

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.

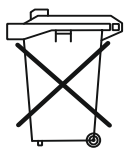
Batteries

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



15. EU Declaration of Conformance

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

By-pass level indicator

Model: SZM-...

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
2015/863/EU

RoHS (category 9)
Delegated Directive (RoHS III)

Nyíregyháza, 10 May 2022



Dénes Szabó
General Manager

16. 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
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RoHS – Richtlinie /RoHS Directive EN 50581:2012	2011 / 65 / EU	08.06.2011
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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
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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