

Operating Instructions
for
Flow assembly for three glass
electrodes conduit thread Pg 13.5

Model: AZA-Z5



We don't accept warranty and liability claims neither upon this publication nor in case of improper treatment of the described products.

The document may contain technical inaccuracies and typographical errors. The content will be revised on a regular basis. These changes will be implemented in later versions. The described products can be improved and changed at any time without prior notice.

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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 machinery directive.

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:

- Flow assembly model: AZA-Z5

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. Description

Flow fittings serve to accommodate electrochemical measured value transducers (e.g. pH and Redox combination electrodes, glass conductivity sensors, compensation thermometer, etc.) with Pg13.5 screw-in thread and an insertion length of 120 mm. Fitting types for 1 to 3 measured value transducers are available.

The fittings are directly installed in feed pipes for material under measurement or in the bypass. They protect the installed sensors against breakage and their special design type ensures correct flow to the sensor, preventing measuring errors. Various fastening variants and materials are available. Other versions and materials can be offered on request.



CAUTION!

In the case of systems that are subject to pressurization and thermos tress, the user must be sure to select the corresponding version of the fittings and the measured value transducers.

When planning the piping, the following aspects are to be considered:

- Fittings must be easily accessible in order to enable regular maintenance/cleaning of the measured value transducers and/or the fitting
- Bypass measurements are recommended as the preferred option; it should be possible to remove sensors using shut-off valves
- When the plant is idle, the pH and Redox electrodes must not become dry for an extended period of time – it must be ensured that the structure includes residual liquid in the fitting
- In the case of systems that are subject to pressurization and thermos tress, the user must be sure to select the corresponding version of the fittings and the measured value transducers
 - The system designer must check the suitability of the materials (e.g. chemical compatibility) - prior to use in chemical media in particular, the resistance of the fittings and their materials must be checked and a leak test must be performed



CAUTION!

The mounting, startup, and maintenance must only be performed by expert personnel.



CAUTION!

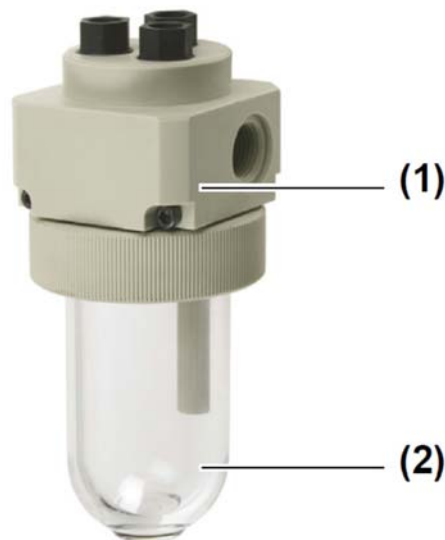
Only original spare parts may be used for the fittings.

5.1 Flow fitting for max. 3 measured value transducers

Fitting type AZA-Z5 is suitable for the insertion of 1 to 3 measured value transducers with Pg13.5 thread and an insertion length of 120 mm.

The extra code "ground electrode" enables the discharge of undesired electrical and electro-static voltage potentials, which occur in complex plants and can distort the measured values.

Fittings with a measuring vessel made from polypropylene (PP) are deployed in cases where the transparent material PC (standard) is not suitable, e.g. processes with sharp (sudden) fluctuations in temperature.



- (1) Case
- (2) Measuring vessel

6. Mounting

6.1 General information on mounting the flow fittings

- Ensure correct installation position
- For service and maintenance work, the installation location must be easily accessible; therefore, avoid installing in inaccessible locations
- See also data sheet, technical data

6.2 General information on mounting electrodes in flow fittings

- Ensure correct installation position
- Screw the electrode into the fitting with the Pg thread, tightening only until the electrode is securely positioned; do not exceed the maximum tightening torque (max. tightening torque for pH electrodes 3.0 Nm)
- See also data sheet, technical data



CAUTION!

The electrode must always be inserted vertically from above into the flow fitting – never from below.



CAUTION!

Electrochemical sensors are sensitive products.

Observe the respective specific features of the sensors (such as temperatures, pressure, etc.; see technical data), avoiding pressure surges and temperature fluctuations where possible.

It is therefore recommended that the sensor is not installed in the main stream of a plant. In the case of installation in a bypass, you must provide shut-off valves in order for the sensor to be dry when it is removed for maintenance/cleaning.



CAUTION!

Ensure that the thread and the O-rings are clean, otherwise liquid can penetrate the fitting. When inserting a glass electrode, note that the glass membranes may break easily in the event of improper handling.



NOTE!

An impedance converter can be mounted between the pH electrode and the cable socket N.



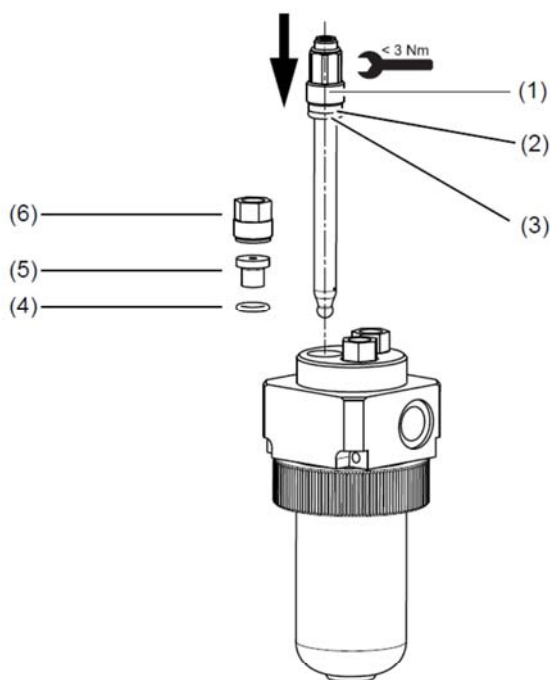
NOTE!

Observe the following important information when mounting:

The fitting must be mounted in the correct installation position and operated in the correct flow direction.

PVC fittings must be mounted in the piping system using the correct adhesive.

PVC fittings with screwed butt joint must not be mounted with pipe wrenches, as the union nuts are then overtightened and may rupture.



- (1) Electrode
- (2) Washer
- (3) O-ring
- (4) Seal
- (5) Plug
- (6) Screw connection

Step	Activity
1	Filler plug: loosen screw connection (6). Remove plug (5) and seal (4).
2	Screw electrode (1) into the fitting vertically from above (max. tightening torque 3 Nm).



CAUTION!

Washer (2) and O-ring (3) must be present on the electrode shaft.



CAUTION!

For pressure resistance, see technical data.

7. Maintenance



NOTE!

The maintenance must only be performed by expert personnel.



NOTE!

The fittings must be cleaned regularly. The cleaning interval and cleaning agent are determined by the type and level of pollution.

The use of concentrated aggressive chemical cleaning agents and solvents is generally not recommended. If these agents are used for cleaning purposes, however, then the material compatibility must be checked in advance.

The case can be opened for cleaning/maintenance purposes through the screw connection. Each time the screw connection is opened, the O-rings – depending on the measurement medium – are to be lubricated with a suitable lubricant, e.g. Vaseline, and the sealing surfaces are to be checked for damage.



CAUTION!

In order to clean and calibrate the measured value transducers, the fitting must be pressure-less.

Take suitable measures to prevent dry running of the line (shut-off valve or similar).

8. Malfunction



NOTE!

Damaged sealing surfaces or O-rings can lead to liquid escaping from the fitting. In this case, the fitting must be shut off immediately and maintenance must be performed.

If...	Then...
If the flow through the fitting is poor or insufficient,	avoid sharply fluctuating or jerky pressure changes and air bubbles.
If the fitting is not sealed,	check that all moving parts have been screwed at least hand-tight, that all seals have been inserted and are undamaged, that the plant pressure is not too high and that there are no visible cracks in the fitting case.
If the potential for wear and tear depends on the exposure to chemicals,	regularly check the seals and replace these as necessary, and pay attention to material changes (brittleness of the plastic, etc.) as these restrict the max. admissible pressure and temperature range.

9. Technical Information

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

10. Order Codes

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

11. Dimensions

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

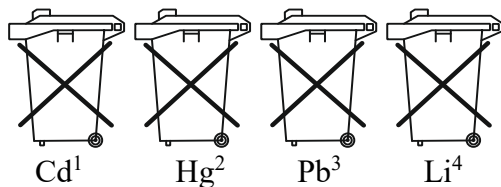
12. Disposal

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.

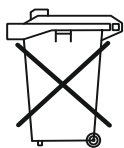
Batteries

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



13. EU Declaration of Conformance

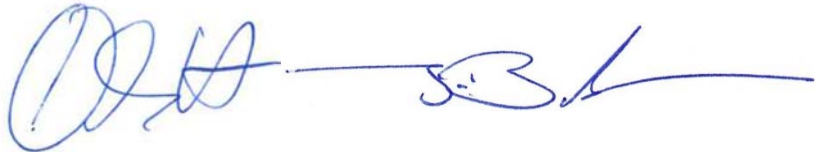
We, KOBOLD Messring GmbH, Nordring 22-24, 65719 Hofheim, Germany, declare under our sole responsibility that the product:

Flow assembly for three glass electrodes conduit thread Pg 13.5
Model: AZA-Z5

to which this declaration relates is in conformity with the following EU directives stated below:

2011/65/EU
2015/863/EU

RoHS (category 9)
Delegated Directive (RoHS III)



Hofheim, 01 Sept. 2023

H. Volz
General Manager

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