

# **Operating Instructions**

# for

# **Immersion assembly**

Model: AZA-Z3



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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#### Manufactured and sold by:

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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 <u>www.kobold.com</u> 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 (<u>info.de@kobold.com</u>) 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 <u>www.kobold.com</u>

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:

• Immersion assembly model: AZA-Z3

### 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

Immersion fittings are used for holding electrochemical sensors (e.g. pH and redox electrodes, glass conductivity cells, compensation thermometers etc.) with a Pg 13.5 screw-in thread and a fitting length of 120 mm.

Fitting types for 1 sensor are available.

The fittings are mounted in open channels or containers. They protect the installed sensor from breaking and enable measurement in different immersion depths. Thanks to various options and accessories, the fittings can be optimally adjusted to the conditions on site. Two pipe clips for wall mounting are provided for the standard versions.

#### The following points have to be taken into account

The fittings must be easily accessible, to ensure that the sensor can be cleaned and serviced at regular intervals.

pH and redox electrodes must not be allowed to remain dry for a prolonged period - this can be prevented by using a wetting cup.

The suitability of the materials (e.g. chemical compatibility) has to be tested by the system designer.



#### CAUTION! The fitting must not be n

The fitting must not be pressurized via the measured medium.

### 6. Mounting

#### CAUTION!

Please make sure that the threads and O-rings are clean, otherwise liquid may leak into the fitting.



### CAUTION!

When installing a glass electrode, please be aware that the glass membrane is very fragile.



### **CAUTION!**

When screwing in the electrodes, only tighten them up to the point where they fit tight. Don't exceed the max. tightening torque (e.g. max. 3 Nm for pH electrodes).

### 6.1 Electrode



(9) Protection tube

Step	Activity
1	Unscrew electrode holder (8) from immersion tube (2).
2	Screw electrode (7) into electrode holder (8). Max. tightening torque 3 Nm.



#### NOTE! Washer (5) and O-ring (6) must be on the electrode (7).

Step	Activity
3	Unscrew lid of cable fitting (1) and slide it over connecting cable.
4	Take out slotted sealing insert and place it around connecting cable.
5	Insert cable with sealing into cable fitting and slide it through
	immersion tube (2) <sup>a</sup> .
6	Screw N cable connector (3) onto electrode head (4).
7	Screw electrode holder (8) into immersion tube (2), screw on lid of
	the cable fit-ting (1) and tighten it with a maximum torque of 3.5 Nm

<sup>a</sup> Procedure for electrodes with N connection or M12 connection (digiLine).

In case of using electrodes with VarioPin connection, the connecting cable with the ferrules must be slided through the immersion tube, starting at the electrode end (VarioPin connector doesn't fit through cable fitting).

### 6.2 Pipe clips (standard)

Step	Activity
1	Mount pipe clips on tank, spacing them out as appropriate.
2	Snap fitting into pipe clips.

#### Immersion depth of fitting



#### CAUTION!

In order to prevent the ingress of liquid into the fitting, the first 120 mm of the immersion tube (measured from the cable gland) must not be immersed in the liquid to be measured.

### 6.3 Wetting cup model AZA-Z3N

### Mounting for version without spray cleaning head



- (1) Fitting dimension (2) Holder
- (3) Screws

Step	Activity
1	Release screws (3).
2	Slide holder (2) of wetting cup over bottom of immersion fitting.
3	Place holder (2) to fitting dimension 50 mm (1).
4	Fix holder (2) with screws (3).

### CAUTION!

To ensure the proper functioning of the wetting cup, spacers have to be fitted between the pipe clips and the tank (included in installation kit).

### Mounting for version with spray cleaning head





- (1) Spacer
- (2) Screws

(3) Nozzle top

Step	Activity
1	Place wetting cup over bottom end of immersion fitting.
2	Put spacers (1) between upper part of spray cleaning head (3) and screw holes of wetting cup.
3	Pass screws (2) through screw holes of wetting cup and spacers and screw them into threaded holes of spray cleaning head.
4	Tighten screws.



### CAUTION!

To ensure the proper functioning of the wetting cup, spacers have to be fitted between the pipe clips and the tank (included in installation kit).

### 6.4 Pipe clips with spacer (standard)

Step	Activity
1	Mount the pipe clips on the tank, spacing them out as appropriate.
2	Snap the fitting into the pipe clips.

#### Immersion depth of the fitting

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CAUTION! In order to prevent the ingress of liquid into the fitting, the first 120 mm of the immersion tube (measured from the cable gland) must not be immersed in the liquid to be measured.

### 6.5 Wetting cup model AZA-Z3N





(1) Screws

(2) Wetting cup holder

(3) Fitting dimension 115 mm

Step	Activity
1	Release the screws (1).
2	Slide the holder (2) of the wetting cup over the bottom of the immersion fitting.
3	Place the holder (2) to the fitting dimension 115 mm (3).
4	Fix the holder (2) with the screws (1).

### 7. Maintenance



### NOTE!

The fitting (including the electrode) must be cleaned at regular intervals. In order to do this, you have to unscrew the protection tube. The sensing part of the electrode is now freely accessible. Cleaning interval and cleaning agent depend on the type and degree of the contamination.

After each disengagement of the threaded joints, the O-rings have to be lubricated with a suitable lubricant (depending on the solution) and the sealing faces have to be checked for damage.

### 8. Malfunction



NOTE!

Ingress of liquid into the fitting may be caused by damaged sealing faces or O-rings. Because of its design, the fitting is not pressure-tight.

If	Then
the fitting is leaking,	check if all moveable components are screwed in at least hand-tight and make sure that the sealings are inserted and undamaged.
the possibilities of wear and tear depend on chemical exposure,	check the sealings at regular intervals and replace them if necessary. pay attention to material changes (embrittlement of plastic etc.).

# 9. Technical Information

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

# 10. Order Codes

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

## 11. Dimensions

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

### 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, Hofheim-Ts, Germany, declare under our sole responsibility that the product:

Immersion assembly

Model: AZA-Z3

to which this declaration relates is in conformity with the following EU Directives:

2011/65/EU 2015/863/EU **RoHS** (category 9) Delegated Directive (RoHS III)

poor. Willing

H. Volz General Manager

M. Wenzel Proxy Holder

Hofheim, 04 July 2023