Quick Start Guide
for Dosing Electronics
Model: ZOK-Z2

ZOK-Z2P

ZOK-Z2M

ZOK-E2K/Z2K

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.

1. Contents

Manufactured and sold by:

Kobold Messring GmbH
Nordring 22-24
D-65719 Hofheim
Tel.: +49(0)6192-2990
Fax: +49(0)6192-23398
E-Mail: info.de@kobold.com
Internet: www.kobold.com

2. Note

This document is intended for quick commissioning of the device and only contains the most important information. The complete device documentation can be found in the device data sheet as well as the operating instructions and the additional document “General safety instructions”.

3. Commissioning

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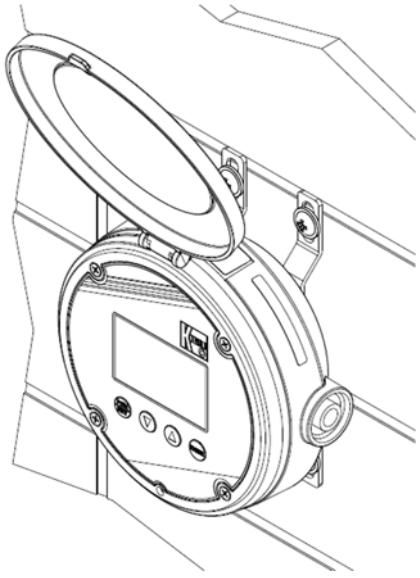
3.1 Assembly and mechanical connection

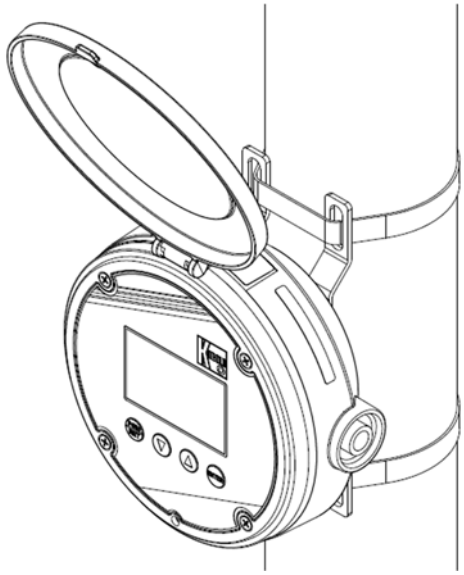
3.1.1 Compact version (Device electronics option -Z2)

The intended installation instructions can be found in the operating instructions for the respective sensor.

3.1.2 Single electronics ZOK-Z2K

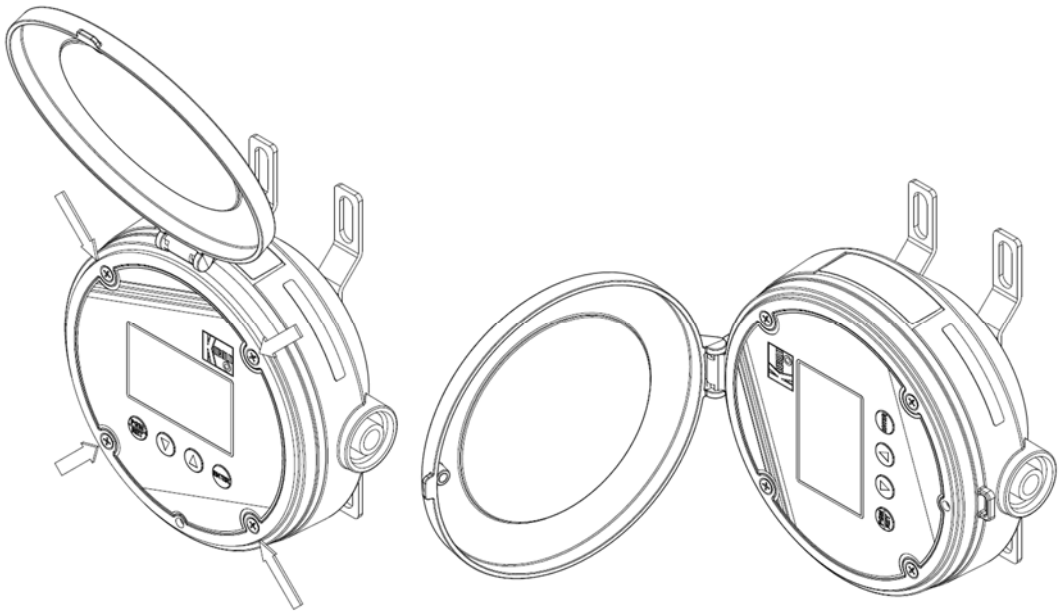
Attach to wall or pipe with the optionally available mounting sets.





For flexible installation, the display can be rotated in 90° increments.

Loosen the 4 fastening screws and screw the entire cover back on in the required orientation. Please ensure that the seal is seated correctly when disassembling and assembling.



3.1.3 Single electronics ZOK-Z2P (switch panel housing)

Installation in the control panel is carried out in a standard cutout 96x96 mm using the included fastening clips.

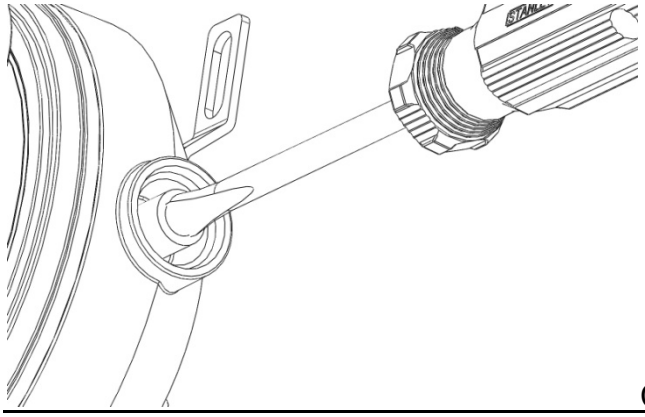
3.1.4 Individual electronics ZOK-Z2M (field housing)

Installation is carried out using an optional wall or pipe bracket.

3.2 Electrical Connection

3.2.1 Cable entry for housing option -K

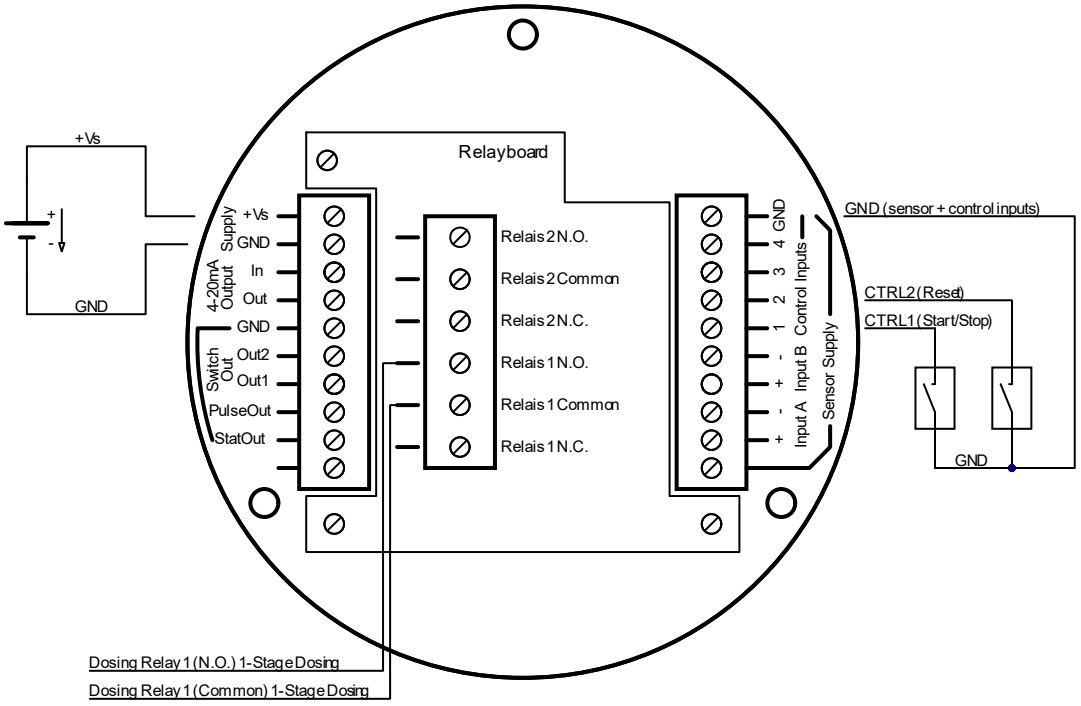
Up to 3 cable inlets (M20x1.5 or ½" NPT) are available for the electrical connection of the electronic options in the round plastic housing. To use these cable inlets, the factory-fitted closures must be broken out using a tool (e.g. screwdriver) and then a suitable cable gland must be screwed in. The cable glands are not part of the scope of delivery.



Cable inlet breakout

For the ZOK-Z2 electronics options with housing ‘P’, the electrical connection is made at the rear via plug-in screw terminals.

3.2.2 ZOK-2K connection assignment, voltage option 6 for 1-stage dosing function



3.2.3 Supply voltage (separate and compact version)

Voltage option 6: 12 to 28 VDC (terminals +Vs / GND)
Voltage option 0: 90 to 260 VAC (terminals ~ / ~)

3.2.4 Signal inputs for ZOK-Z2

The flow sensor signal is connected to the signal connection terminal as follows:

Signal type	Wiring	Connection terminal			Parameter signal input / sensor type
		+	-	Sensor supply	
Active pulse signal	2/3-wire	A+	GND	(sensor supply)	„Active signal“
Hall sensor NPN	3-wire	A+	GND	sensor supply	„HALL“
Sensor NPN	3-wire	A+	GND	sensor supply	„NPN“
Sensor NPN	3-wire	A+	GND	sensor supply	„NPN“
Reed switch	2-wire	A+	GND		„Reed“
Induction coil	2-wire	A+	A-		„Coil“
NAMUR sensor	2-wire		-	+	„NAMUR“

The connection of the various flow signal transmitters and the parameterization of the correct input type can be found in the detailed operating instructions.

3.2.5 External control inputs

There are 2 control inputs available for external control of the START/STOP and RESET dosing functions. The corresponding function can be activated by an active control signal or by a passive normally open contact. In both cases, the function is actively triggered (falling edge) by the change from HIGH to LOW level at the input. When using an active control signal, the signal amplitude of the HIGH level may be 12 to 28 Vdc. When using simple normally open contacts, the input potential is internally pulled to HIGH when the contact is open. If the contact is closed, the potential is pulled to GND and the control function is activated. Control input CTRL3 and CTRL4 are not used in the ZOK-Z2.

Function of the control inputs:

Control input	ZOK-Z2
CTRL1	Dosing start/stop
CTRL2	Dosing quantity reset

Wiring of the control inputs with passive normally open contacts

3.2.6 Dosing outputs (2 potential-free relay outputs)

The two dosing switching outputs are made available at the relay outputs. You can choose between normally closed and normally open contacts (standard: normally open contact)

Relay 1: Switching contact for 1-stage dosing function
Relay 2: Switching contact for 2nd stage with 2-stage dosing function

3.3 Parameterization of the externally connected flow sensor (ZOK-Z2K/M/P only)

The compact flow meters with dosing unit -Z2 are calibrated at the factory and do not require any further parameterization!
When commissioning, the separate ZOK-Z2 dosing units require parameterization for the connected sensor - at least with regard to the sensor measuring range and the sensor pulse rate. All other parameter adjustments are optional.

3.3.1 Parameterization of the measuring range of the flow meter

Type	Menu item / Parameter name	Input unit
Sensor start of measuring range	throughput measurement / start of measuring range A	l/min (factory default value)
Sensor end of measuring range	throughput measurement / measuring range end value A	l/min (factory default value)

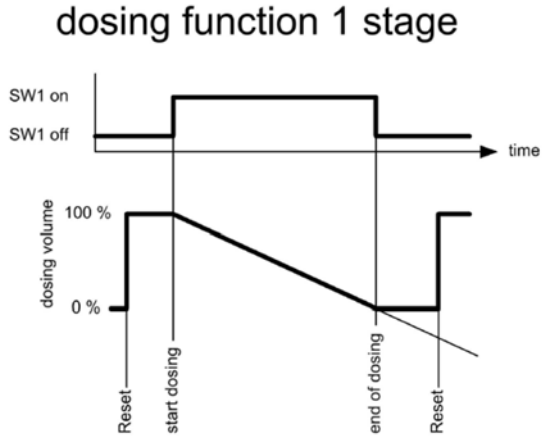
3.3.2 Parameterization at scaling point A0

Type	Menu item / Parameter name	Input unit
Sensor A scaling point Q0	Signal input / scaling A / scaling point A0 / flow rate Q0	l/min (factory default value)
Sensor A scaling factor K0	Signal input / scaling A / scaling point A0 / K factor K0	Pulse / Liter (factory default value)

3.4 Dosing function

To set up a dosing system, a flow sensor is connected to input A and up to 2 switching actuators (valves) to the dosing output relay. The use of the second signal input B is not possible. A 1-stage and a 2-stage operating mode is available:

- In 1-stage operating mode, relay output 1 becomes active when the dosing process starts and inactive when the process ends.
- In 2-stage operating mode, relay output 2 becomes active after dosing the volume “Start delay” and becomes inactive again after dosing the volume [“Dosing quantity” - “Stop delay”].
  A detailed functional description of the 2-stage dosing function can be found in the ZOK-Zx operating instructions.



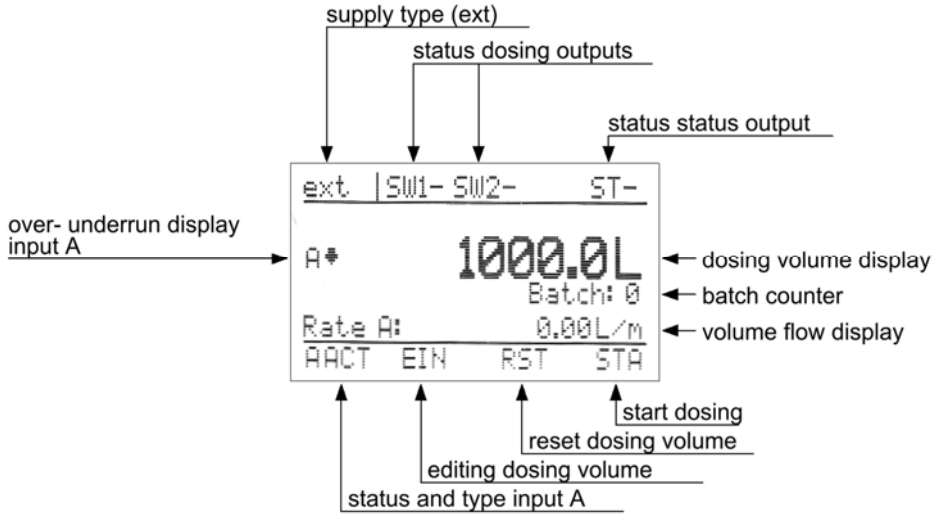
3.4.1 Using the dosing function via the user menu

Depending on the status of the dosing operation, the function of the three right control buttons changes. The respective key function is shown in the display in the bottom line:

In “Dosing inactive” status
Key function **RST** = Resets the dosing counter to the default value
Key function **STA** = Starts the dosing process
Key function **ON** = Switches to the setting menu for the dosage value

In the “Dosing activated” status
Button function **STO** = Stops the dosing process manually

After the dosing quantity has been completely recorded, the status changes from active operation to inactive operation and the dosing output is deactivated.



3.4.2 Using the dosing function via the external control inputs

The dosing functions START / STOP and RESET can be remotely controlled in parallel via the external control inputs, see section 3.2.5.