Automatic Control Unit

Cervomatic EDP.2

Installation/Operating Manual

KSB

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Installation/Operating Manual Cervomatic EDP.2

Original operating manual

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1 General

1.1 Principles

This operating manual is valid for the type series and variants indicated on the front cover.

The operating manual describes the proper and safe use of this equipment in all phases of operation.

The name plate indicates the type series, the main operating data and the serial number. The serial number uniquely describes the product and is used as identification in all further business processes.

In the event of damage, immediately contact your nearest KSB service facility to maintain the right to claim under warranty.

1.2 Target group

This operating manual is aimed at the target group of trained and qualified specialist technical personnel.

1.3 Other applicable documents

Table 1: Overview of other applicable documents

Document	Contents
Operating manual	Description of the proper and safe use of the pump in all phases of operation
Wiring diagram	Description of the electrical connections
Supplementary operating manual[1)]	Description of the proper and safe use of supplementary product components

For accessories and/or integrated machinery components, observe the relevant manufacturer's product literature.

1.4 Symbols

Table 2: Symbols used in this manual

Symbol	Description
✓	Conditions which need to be fulfilled before proceeding with the step-by-step instructions
▷	Safety instructions
⇨	Result of an action
⇨	Cross-references
1. 2.	Step-by-step instructions
	Note Recommendations and important information on how to handle the product

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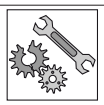
1 Optional

1.5 Key to safety symbols/markings

Table 3: Definition of safety symbols/markings

Symbol	Description
DANGER	**DANGER** This signal word indicates a high-risk hazard which, if not avoided, will result in death or serious injury.
WARNING	**WARNING** This signal word indicates a medium-risk hazard which, if not avoided, could result in death or serious injury.
CAUTION	**CAUTION** This signal word indicates a hazard which, if not avoided, could result in damage to the machine and its functions.
	**Explosion protection** This symbol identifies information about avoiding explosions in potentially explosive atmospheres in accordance with EU Directive 2014/34/EU (ATEX).
	**General hazard** In conjunction with one of the signal words this symbol indicates a hazard which will or could result in death or serious injury.
	**Electrical hazard** In conjunction with one of the signal words this symbol indicates a hazard involving electrical voltage and identifies information about protection against electrical voltage.
	**Machine damage** In conjunction with the signal word CAUTION this symbol indicates a hazard for the machine and its functions.

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2 Safety

DANGER

All the information contained in this section refers to hazardous situations.

In addition to the present general safety information the action-related safety information given in the other sections must be observed.

2.1 General

- This operating manual contains general installation, operating and maintenance instructions that must be observed to ensure safe operation of the system and prevent personal injury and damage to property.
- Comply with all the safety instructions given in the individual sections of this operating manual.
- The operating manual must be read and understood by the responsible specialist personnel/operators prior to installation and commissioning.
- The contents of this operating manual must be available to the specialist personnel at the site at all times.
- Information and markings attached directly to the product must always be complied with and kept in a perfectly legible condition at all times. This applies to, for example:
  - Markings for connections
  - Name plate
- The operator is responsible for ensuring compliance with all local regulations not taken into account.

2.2 Intended use

- The values specified in the technical product literature for the mains voltage, mains frequency, ambient temperature, and motor current must not be exceeded. The automatic control unit must only be operated in accordance with the instructions provided in the other applicable documents (⇨ Section 1.3, Page 5) .

2.3 Personnel qualification and personnel training

All personnel involved must be fully qualified to install, operate, maintain and inspect the equipment this manual refers to. The responsibilities, competence and supervision of all personnel involved in transport, installation, operation, maintenance and inspection must be clearly defined by the operator.

Deficits in knowledge must be rectified by means of training and instruction provided by sufficiently trained specialist personnel. If required, the operator can commission the manufacturer/supplier to train the personnel.

Training on the automatic control unit must always be supervised by specialist technical personnel.

2.4 Consequences and risks caused by non-compliance with this manual

- Non-compliance with these operating instructions will lead to forfeiture of warranty cover and of any and all rights to claims for damages.
- Non-compliance can, for example, have the following consequences:
  - Hazards to persons due to electrical, thermal, mechanical and chemical effects and explosions
  - Failure of important product functions
  - Failure of prescribed maintenance and servicing practices
  - Hazard to the environment due to leakage of hazardous substances

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2.5 Safety awareness

In addition to the safety information contained in this operating manual and the intended use, the following safety regulations shall be complied with:

- Accident prevention, health regulations and safety regulations
- Explosion protection regulations
- Safety regulations for handling hazardous substances
- Applicable standards, directives and laws

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3 Transport/Storage/Disposal

3.1 Checking the condition upon delivery

1. On transfer of goods, check each packaging unit for damage.
2. In the event of in-transit damage, assess the exact damage, document it and notify KSB or the supplying dealer and the insurer about the damage in writing immediately.

3.2 Transport

The automatic control unit must be shut down for transport.

Table 4: Ambient conditions for transport

Ambient condition	Value
Relative humidity	Max. 80% (no condensation)
Ambient temperature	-10 °C to + 70 °C

CAUTION

Improper transport

Damage to the automatic control unit!

- ▷ The automatic control unit must always be transported properly and in its original packaging.
- ▷ For transport, observe the transport instructions on the original packaging.
- ▷ Do not throw the automatic control unit.

1. Unpack the automatic control unit upon receipt and check for in-transit damage.
2. Report any in-transit damage to the manufacturer immediately.
3. Dispose of packaging material in accordance with local regulations.

3.3 Storage

If the ambient conditions for storage are met, the automatic control unit will give reliable service even after a prolonged period of storage.

CAUTION

Damage during storage due to humidity, dirt or vermin

Corrosion/contamination of automatic control unit!

- ▷ For outdoor storage, cover the (packed or unpacked) automatic control unit and accessories with waterproof material.

Table 5: Ambient conditions for storage

Ambient condition	Value
Relative humidity	Max. 80% (no condensation)
Ambient temperature	-10 °C to + 70 °C

- Store the automatic control unit under dry and vibration-free conditions, if possible in its original packaging.
- Store the automatic control unit in a dry room where the level of atmospheric humidity is as constant as possible.
- Prevent excessive fluctuations in atmospheric humidity (see table on ambient conditions for storage).

If properly stored indoors, the equipment is protected for a maximum of 12 months.

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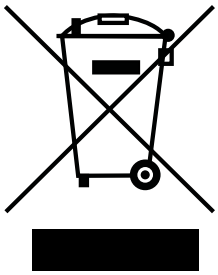

3.4 Disposal

Electrical or electronic equipment marked with the adjacent symbol must not be disposed of in household waste at the end of its service life.

Contact your local waste disposal partner for returns.

If the used electrical or electronic equipment contains personal data, the operator is responsible for deleting it before the equipment is returned.

NOTE

Due to certain components it contains, the device is classified as special waste and meets RoHs 2011/65/EC requirements.

Once decommissioned, the device must be properly disposed of in accordance with local regulations.

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4 Description

4.1 General description

- Automatic control unit for automatically starting and stopping a pump

4.2 Product information as per Regulation No. 1907/2006 (REACH)

For information as per chemicals Regulation (EC) No. 1907/2006 (REACH), see http://www.ksb.com/reach.

4.3 Designation

Example: Cervomatic EDP.2

Table 6: Designation key

Code	Description
Cervomatic	Type series
E	Single-phase AC
D	Three-phase current
P	Electrical protection
2	Product version

4.4 Name plate

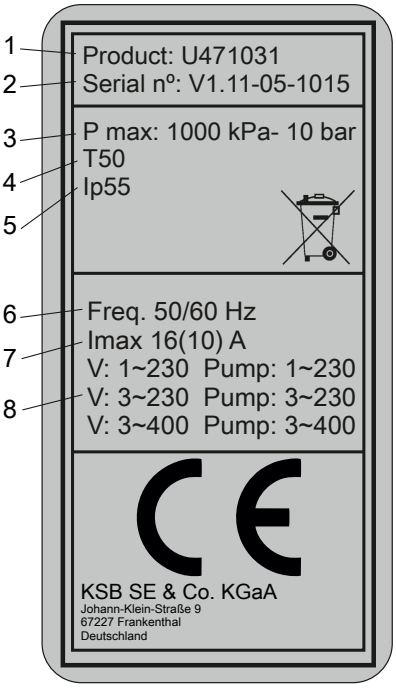

Fig. 1: Name plate (example)

1	Product code	2	Serial number, firmware version V1.11, 05 not relevant, month of manufacture 10, year of construction 15
3	Max. operating pressure	4	Max. ambient temperature
5	Enclosure	6	Frequency
7	Max. rated pump current 10 A continuous load 16 A brief load	8	Control voltage

4.5 Design details

Design

- Automatic control unit
- Pressure-dependent pump start and pressure-dependent or flow-dependent stop of the pump
- Integrated check valve

Electrical connection

- 1~230 / 3~230 / 3~400 V AC, 50/60 Hz
- Enclosure IP55
- 1.5 m power cable with shockproof plug

4.6 Technical data

Table 7: Performance data

Characteristic	Value
Maximum operating pressure	10 bar
Maximum rated pump current	10 A
Fluid temperature	0 - +40 °C
Ambient temperature	0 - +50 °C
Maximum flow rate	15 m^3/h
Minimum flow rate	0.09 m^3/h
Maximum start pressure (pressure-dependent mode)	6.5 bar
Maximum stop pressure (pressure-dependent mode)	7 bar
Range of start pressure (on/off mode)	1 - 5 bar

4.7 Configuration and function

Function

- Pressure-dependent pump start
- Pressure-dependent or flow-dependent stop of the pump
- Integrated dry running protection
- Integrated overload protection

Operating modes

On/off mode:

- The pump set is started when the pressure in the pipe drops.
- The pump set is stopped when flow is interrupted.

Pressure control

- The pump set is started when the pressure in the pipe drops.
- The pump set is stopped when the stop pressure in the pipe is exceeded.

Further functions

- Integrated dry running protection of the pump
- Integrated overload protection

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4.8 Displays and indicator lamps

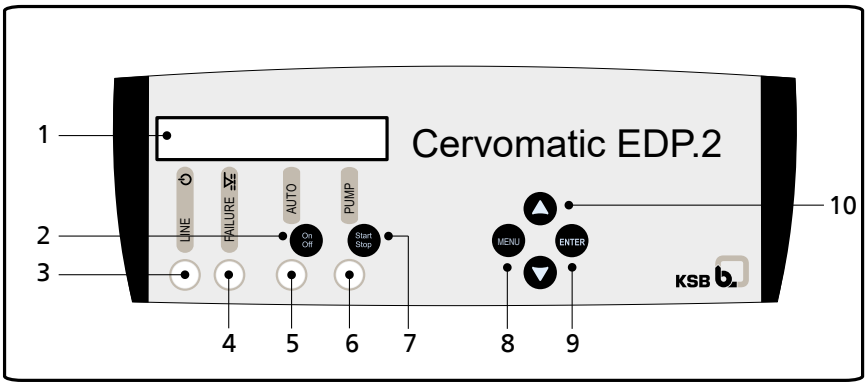

Fig. 2: Indicator lamps

1	Display of various parameters during configuration. In operation, the current pressure, configured start-up pressure and alerts are displayed.
2	AUTO On/Off button: For selecting between manual and automatic mode.
3	LINE LED (green): Illuminates when the automatic control unit is connected to the power supply.
4	FAILURE LED (red): Illuminates or flashes, depending on the type of fault.
5	AUTO LED (green): Illuminates in automatic mode; does not illuminate in manual mode.
6	PUMP LED (yellow): Illuminates when the pump is operating.
7	PUMP start/stop button: Can only be pressed when automatic mode is deactivated (AUTO LED does not illuminate).
8	MENU button: Opens and closes the configuration menu.
9	ENTER button: Saves configured values. A new field appears in the configuration menu every time the button is pressed. Press MENU to exit the configuration display.
10	▲ and ▼ button: Adapts the configuration parameters up and down.

4.9 Fluids handled

- Drinking water
- Service water
- Stormwater
- Fire-fighting water
- Cooling water

5 Installation at Site

5.1 Safety regulations

DANGER

Incorrect installation

Danger to life!

- ▷ Install the automatic control unit in a flood-proof location.
- ▷ Never install the automatic control unit in potentially explosive atmospheres.
- ▷ The automatic control unit is not suitable for controlling pumps in potentially explosive atmospheres.

5.2 Checks to be carried out prior to installation

The place of installation must meet the following requirements:

- Dry
- Frost-proof
- Well ventilated
- Lockable; unauthorised access must be prevented.
- Flood-proof
- Installation in potentially explosive atmospheres is not permitted.

Ambient conditions

The ambient conditions specified in the following table must be observed:

Table 8: Ambient conditions

Characteristic	Value
Temperature during operation	0 °C to +50 °C
Relative humidity	Non-condensing
Installation altitude	Max. 1,000 m above MSL

5.3 Connecting the automatic control unit

CAUTION

Automatic control unit lifted by the cable

Damage to the automatic control unit!

- ▷ Do not lift the automatic control unit by the cable.

- Remove the automatic control unit from its original packaging.
- Mount the automatic control unit in the vertical position directly on the pump.
- For wet-installed pumps, mount the automatic control unit to the rigid discharge pipe in a flood-proof location.
- Always install the automatic control unit with the discharge side pointing upwards.
- Screw the accompanying accumulator into the rear of the housing using suitable sealing material (Teflon tape).

NOTE

The automatic control unit has an integrated accumulator. An external accumulator is not required.
For frequent water extraction, it is recommended that the system be used in dedicated pressure-dependent mode and an external accumulator be installed.

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5.4 Connecting the piping

Connect all piping without transmitting any stresses or strains.

5.4.1 Connecting the piping (dry installation)

- The automatic control unit can be connected directly to the pump discharge nozzle.
- Always mount the automatic control unit in the vertical position.

CAUTION

Plastic threaded connections sealed with hemp

Stresses/strains and leaks in the plastic piping!

▷ Use Teflon tape for sealing.

Automatic control unit connection between pump and consumer installation

- Route connecting line between pump and automatic control unit.
- The diameter of the connecting line must at least equal the diameter of the pump discharge line.
- Observe the direction of fluid flow (see arrow on automatic control unit).

5.4.2 Connecting the piping (wet installation)

DANGER

Automatic control unit submerged

Danger to life!

▷ Never submerge the automatic control unit.

- Use suitable connecting elements to connect the pump's discharge line directly to the pump discharge nozzle.
- The diameter of the connecting line must at least equal the diameter of the pump discharge line.
- Observe the direction of fluid flow (see arrow on automatic control unit).
- Always mount the automatic control unit in the vertical position.
- The pump has an integrated vent valve.
  For submersible borehole pumps, the automatic venting function facilitates priming under back pressure.

CAUTION

Plastic threaded connections sealed with hemp

Stresses/strains and leaks in the plastic piping!

▷ Use Teflon tape for sealing.

5.5 Electrical connection

DANGER

Electrical connection work by unqualified personnel

Risk of fatal injury due to electric shock!

▹ Always have any work on the connection to the power supply performed by a trained electrician.

- Remove the cover of the control electronics and make all connections as per specifications on the terminal strip.
- Check power supply.

Set the selector switch to define the voltage:

	To A for 220 - 240 V
	To B for 380 - 415 V

Pumps with three-phase motors

NOTE

An upstream motor protection switch is recommended.

- Power supply of automatic control unit: Connect L1, L2 and L3 via a 3-pole motor protection switch (recommended) in de-energised state and connect the PE conductor to ensure correct earthing.
- Motor power supply: Connect motor to U, V, W and PE (earth).
(⇨ Section 9.1, Page 24)

Pumps with AC motors

NOTE

An upstream motor protection switch is recommended.

- Power supply of automatic control unit: Connect L1 and L2 via a motor protection switch (recommended) in de-energised state and connect the PE conductor to ensure correct earthing.
- Motor power supply: Connect motor to U, V and PE (earth).
(⇨ Section 9.1, Page 24)

NOTE

The earth conductor must always be longer than all other conductors. The earth conductor is the first to be connected during installation and the last to be removed when dismantling.

Connecting additional equipment

- **Alarm monitoring:**
The automatic control unit has a volt-free contact with a maximum amperage of 1 A for transmitting signals to various alarm devices (visual, acoustic, etc.).
Connection procedure (⇨ Section 9.2, Page 25)

- **Level switch of inlet tank:**
(e.g. via float switch in inlet tank)
Input for stopping pump as soon as the external switch for detecting the minimum fill level trips.
Connection procedure (⇨ Section 9.2, Page 25)

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When closing the housing after establishing the electrical connection, ensure that the housing gasket is correctly seated. Ensure that the internally routed wires do not get trapped.
Check the pump's direction of rotation during commissioning.

6 Commissioning/Start-up/Shutdown

6.1 Commissioning/Start-up

6.1.1 Prerequisites for commissioning/start-up

Ensure that the following requirements are met prior to commissioning/start-up:

- The rainwater harvesting system has been properly connected to the electric power supply and is equipped with all protection devices.
- All relevant VDE standards and/or regulations applicable in the country of use are complied with.

6.1.2 Commissioning

NOTE

An upstream motor protection switch is recommended.

Energise the system. (⇨ Section 9.1, Page 24)
Wait 5 seconds while the automatic control unit performs the autotest.

The configuration menu automatically opens when the automatic control unit is commissioned for the first time.
A message on selecting the user interface language appears on the LCD display.
Select the appropriate language and start the configuration routine.
(⇨ Section 6.1.3, Page 18)
As soon as the device is configured, press the AUTO On/Off button (green LED does not illuminate) to toggle to manual mode.
Check the direction of rotation and correct pump suction by pressing the Start/Stop button.
Press AUTO On/Off. The automatic control unit is ready for operation.

6.1.3 Configuration

NOTE

P_{ON} must be at least 0.2 bar higher than the static system pressure.
Example: Static system pressure of 2 bar (20 m water column), P_{ON} ➔ 2.2 bar.
P_{ON} must always be selected 0.5 bar lower than the pump nominal pressure.

NOTE

P_{OFF} must always be selected 0.5 bar lower than the pump nominal pressure in dedicated pressure-dependent mode.

NOTE

Press the ▲ ▼ buttons to change the values and ENTER to save them.
Press MENU to exit the configuration procedure.
Every time the ENTER button is pressed, the different displays are shown with the individual configuration steps.

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Table 9: Displays and configuration

	Display		Button
0	PLINE PON 03,0 bar 02,0 bar	Press the MENU button for 3 seconds to start the configuration.	MENU 3”
1	Cervomatic EDP.2 V 0.0	The message that is briefly displayed provides information on the software version.	3”
2	LANGUAGE ENGLISH	Use the ▲ ▼ buttons to select the respective language: "SPRACHE DEUTSCH", "LANGUAGE ENGLISH", "LANGUE FRANÇAISE", "LINGUA ITALIANA" and "IDIOMA ESPAÑOL".	ENTER
3	INT. MAX. OFF	To protect the motor from overheating, specify the rated current from 0 to 10 A using the ▲ ▼ buttons. The corresponding value is specified on the name plate of the motor. Press ENTER to confirm.	ENTER
4	LEVEL PROBE NO	If no external device is available to detect the minimum water level in the inlet tank, press ENTER to confirm. Otherwise, use the ▲ ▼ buttons to change/set from NO to YES.	ENTER
5	OPERATING MODE ON-OFF OPERATING MODE PRESSOSTATIC	The operating mode can be selected with the ▲ ▼ buttons in this step. There are 2 options available: ▪ **On/Off mode:** Only the start-up pressure is configured here. When this pressure is reached, the pump is started with the delay configured in the next step and is stopped when it is no longer required. ▪ **Pressure-dependent mode:** The start-up pressure value and stop pressure value of the pump are configured here.	ENTER
6	P ON 05,0 bar P ON 05,0 bar	Indicates the start-up pressure for the pump. The required pressure values can be set within the respective range using the ▲ ▼ buttons: ▪ **On/Off mode:** 1 to 5 bar. ▪ **Pressure-dependent mode:** 0 to 6.5 bar.	ENTER
7	P OFF 06,0 bar	Indicates the stop pressure of the pump for dedicated pressure-dependent mode. The stop pressure must be between 1 and 7 bar or be 1 bar higher than the start-up pressure. The values can be changed by pressing the ▲ ▼ buttons.	ENTER
8	START DELAY 00 sec.	Indicates the delay when the pump is started after the start-up pressure was reached. Select the time required using the ▲ ▼ buttons.	ENTER
9	STOP DELAY 00 sec.	Indicates the stop delay of the pump after the stop pressure was reached. Select the time required using the ▲ ▼ buttons.	ENTER
10	PLINE PON 05,0 03,0 PLINE PON POFF 05,0 02,0 06,0 PLINE INT F 05,0 9,0 1	The automatic control unit is ready for operation. Press the AUTOMATIC On/Off button; the green LED illuminates. Shown on the LCD display: ▪ **On/Off mode:** current pressure (PLINE) and start-up pressure (P_{ON}). ▪ **Pressure-dependent mode:** current pressure (P_{LINE}), start-up pressure (P_{ON}) and stop pressure (P_{OFF}). An expert view mode can be selected with the following parameters in automatic mode: ▪ P_{line}: current pressure. ▪ INT: present current consumption. ▪ F: position of the flow sensor (0: no flow, 1: with flow)	On Off

6.1.4 Pre-charging of accumulator

The accumulator is pre-charged to a pressure of 3.5 bar at the factory. The accumulator should be pre-charged to a pressure of 0.2 bar below the pump start-up pressure configured for dedicated pressure-dependent mode.
If pressure is insufficient:

- In manual mode, open a consumer installation and pre-charge the accumulator via the valve using a bicycle pump and adapter.
- Screw the valve cap back onto the valve. Press AUTO On/Off.

6.2 Shutdown/storage/preservation

- Pull the pump plug.
- Remove the automatic control unit from the piping.
- Rinse off with clean water.
- Press in the check valve at the automatic control unit and shake water out of the automatic control unit.
- Leave the automatic control unit to dry and store in a dry, dark and frost-proof room.
- Special preservation measures are not required.

6.3 Returning to service

For returning the equipment to service, observe the items on commissioning/start-up.

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7 Maintenance

Check the proper functioning of the automatic control unit once per year.

8 Trouble-shooting

⚠ WARNING

Improper work to remedy faults

Risk of injury!

- ▷ For any work performed to remedy faults, observe the relevant information given in this operating manual and/or in the product literature provided by the accessories manufacturer.

If problems occur that are not described in the following table, consultation with the KSB service is required.

A1 Lack of water

A2 Fill level sensor

A3 Pressure sensor damaged

A4 Overcurrent

A5 Pump fuse

A6 Accumulator

None No display

Table 10: Trouble-shooting

	Display Fault message Description	**System behaviour**	**Remedy**
A1	A1 LACK OF WATER Fault message: LED "FAILURE" FLASHES (FAULT). Fault message after acknowledgement: LED "FAILURE" ILLUMINATED (FAULT). If the automatic control unit detects a lack of water at the automatic control unit inlet for more than 10 seconds, the pump is stopped and the ART logic is triggered.	The ART logic restarts the pump after 5 minutes and 30 seconds have lapsed to reinstate the function. If there is still a lack of water, the automatic control unit restarts the function every 30 minutes over a period of 24 hours. If the system still detects a lack of water after several repeat attempts, the pump is stopped permanently until the fault has been rectified.	No water is present at the inlet and the safety system was triggered as a result: Check the water supply inlet. The pump can be filled with water by pressing the START/STOP button (the AUTO On/Off LED should not illuminate; if this is the case, deactivate the LED by pressing the button).
A2	A2 LEVEL Fault message after acknowledgement: LED "FAILURE" ILLUMINATED (FAULT). If a float is installed in the inlet tank, the float switch immediately stops the pump as soon as a lack of water is detected. The system then outputs a lack-of-water message (A1).	The pump remains stopped until the fill level sensor detects water in the tank again.	Check tank.
A3	A3 TRANSDUCER Fault message after acknowledgement: LED "FAILURE" ILLUMINATED (FAULT). Damage to the pressure sensor is shown on the LCD display of the automatic control unit. Call in customer service.	Operation of the automatic control unit is interrupted.	Call in customer service.

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	Display Fault message Description	System behaviour	Remedy
A4	A4 OVERCURRENT Fault message: LED "FAILURE" FLASHES (FAULT). Fault message after acknowledgement: LED "FAILURE" ILLUMINATED (FAULT). The pump has an overcurrent protective device that responds in accordance with the value defined in the configuration menu. These overcurrents generally pertain to pump malfunctions or power supply faults.	If this fault is detected, the system attempts to restart the pump four times. If the pump still does not start after the fourth attempt, it remains stopped until the fault has been rectified.	Check the status of the pump. Impeller is blocked. Verify the amperage entered in the configuration menu (it is recommended that you always set the amperage to 15 % above the rated pump current). Check the fuses for damage. The pump is put back into operation as soon as the problems have been resolved. The INSTALLATION menu is then displayed for entering the appropriate amperage. (⇨ Section 6.1.3, Page 18)
A5	A5 PUMP OFF Fault message after acknowledgement: LED "FAILURE" ILLUMINATED (FAULT). The automatic control unit does not detect any throughflow and stops the pump to prevent greater damage from occurring. There are 3 fuses, each of which has a 10 A rating. Use suitable fuses if pumps with different current input are operated.	The system remains stopped until the problem has been resolved by implementing appropriate measures.	Check the status of the fuses and replace the fuses if necessary. The motor winding and current input of the pump should also be checked. The pump is put back into operation as soon as the problems have been resolved. The INSTALLATION menu is then displayed for entering the appropriate amperage. (⇨ Section 6.1.3, Page 18)
A6	A6 ACCUMULATION Fault message after acknowledgement: LED "FAILURE" ILLUMINATED (FAULT). The system checks the status of the accumulator at regular intervals. This occurs only in pressure-dependent mode. [2)]	The system continues to operate even if the pressure in the accumulator is insufficient. It is highly recommended that you check the accumulator immediately.	The system has detected that the accumulator is damaged. Check the pre-charge pressure of the accumulator, the status of the membrane and the spherical accumulator and replace the membrane if necessary. (⇨ Section 6.1.4, Page 20)
None	No display - -	-	Check the electrical connection and power supply. Call in customer service.

2 No longer available from 2014 production date

9 Related Documents

9.1 Wiring diagrams

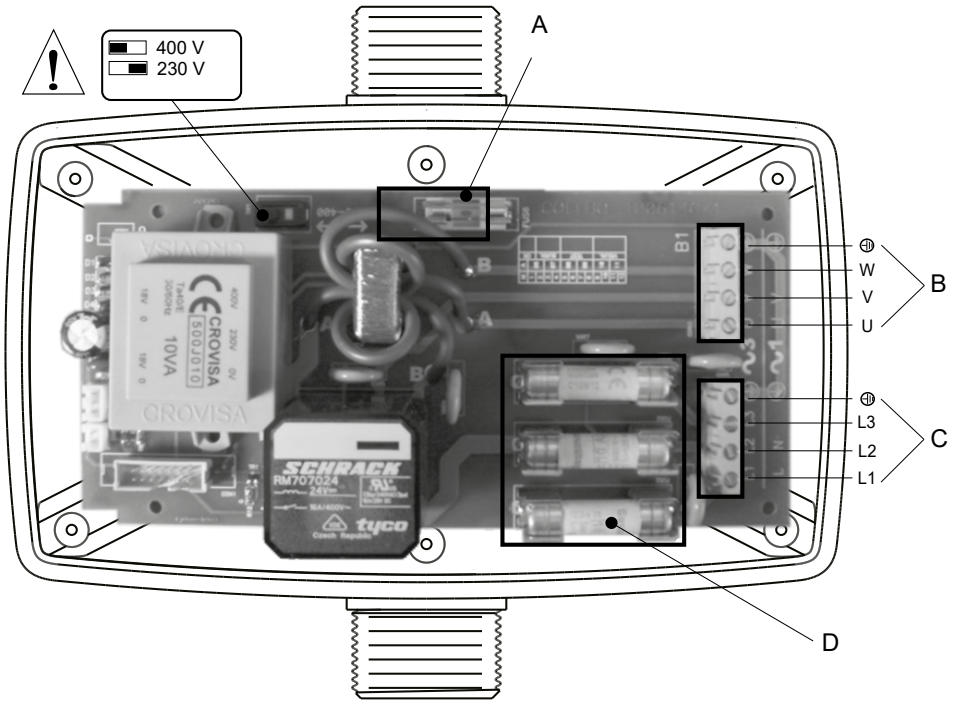

Fig. 3: Connections at automatic control unit

A	Transformer fuse 250 mA	B	Pump connection
C	Power supply connection	D	Pump fuse 10 A

Pump connection

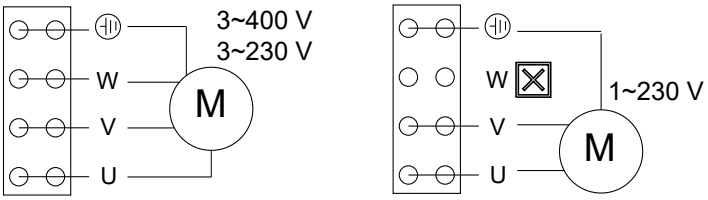

Fig. 4: Wiring diagram of automatic control unit to pump

Connection to power supply

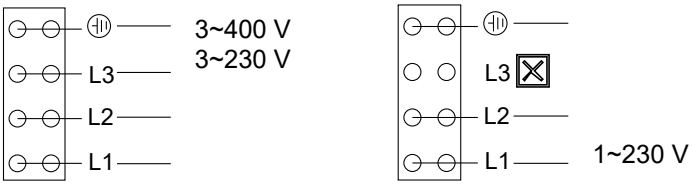

Fig. 5: Wiring diagram of automatic control unit to power supply

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9.2 Additional electrical connections

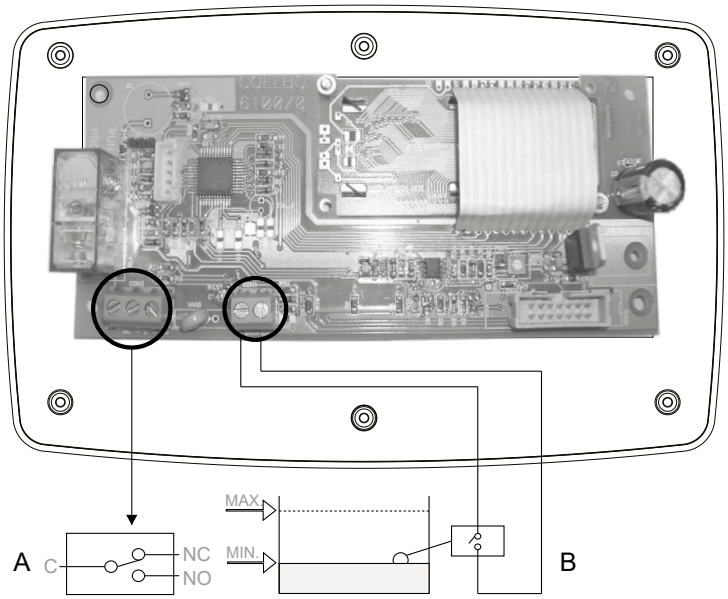


Fig. 6: Additional electrical connections

A	General fault message relay	B	Input for inlet tank monitoring

Cable entry

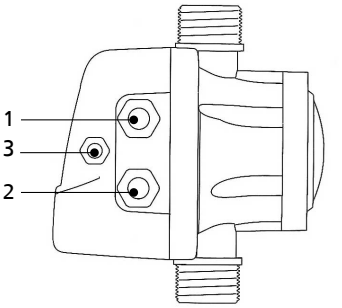


Fig. 7: Cable entry in housing

1	Pump	2	Power supply
3	Inlet tank monitoring (optional)		

10 EU Declaration of Conformity

Manufacturer:

KSB SE & Co. KGaA
Johann-Klein-Straße 9
67227 Frankenthal (Germany)

The manufacturer herewith declares that **the product**:

Cervomatic EDP.2

Serial number range: 2019w01 to 2022w52

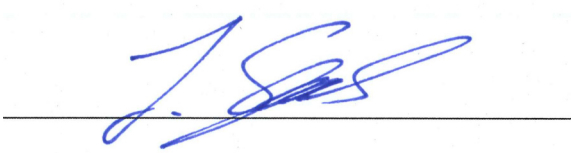
- is in conformity with the provisions of the following directives / regulations as amended from time to time:
  - 2014/30/EU: Electromagnetic Compatibility (EMC)
  - 2014/35/EU: Electrical Equipment Designed for Use within Specific Voltage Limits (Low Voltage)
  - Electrical components: 2011/65/EU Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

The manufacturer also declares that

- the following harmonised international standards have been applied:
  - EN 60730-1, EN 60730-1-6, EN 60730-2-6
  - EN 61000-6-2, EN 61000-6-3

The EU Declaration of Conformity was issued in/on:

Frankenthal, 1 January 2019



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