CU 3X2, CU 3X4

Installation and operating instructions

CU 3X2, CU 3X4
Installation and operating instructions
Other languages
http://net.grundfos.com/qr/i/96842987

GRUNDFOS

CU 3X2, CU 3X4

Original installation and operating instructions

Table of contents

1. General information

Read this document before you install the product. Installation and operation must comply with local regulations and accepted codes of good practice.

1.1 Hazard statements

The symbols and hazard statements below may appear in Grundfos installation and operating instructions, safety instructions and service instructions.

DANGER

Indicates a hazardous situation which, if not avoided, will result in death or serious personal injury.

WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious personal injury.

CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate personal injury.

The hazard statements are structured in the following way:

SIGNAL WORD

Description of the hazard

Consequence of ignoring the warning

- Action to avoid the hazard.

1.2 Notes

The symbols and notes below may appear in Grundfos installation and operating instructions, safety instructions and service instructions.

Observe these instructions for explosion-proof products.

A blue or grey circle with a white graphical symbol indicates that an action must be taken.

A red or grey circle with a diagonal bar, possibly with a black graphical symbol, indicates that an action must not be taken or must be stopped.

If these instructions are not observed, it may result in malfunction or damage to the equipment.

Tips and advice that make the work easier.

2. Product description

The CU 3X2 is a flexible control unit for control and monitor of up to six pumps. In the following sections, two variants are described:

- CU 352
  - water supply and booster systems
  - heating and air-conditioning systems.
- CU 362
  - wastewater and draining applications.

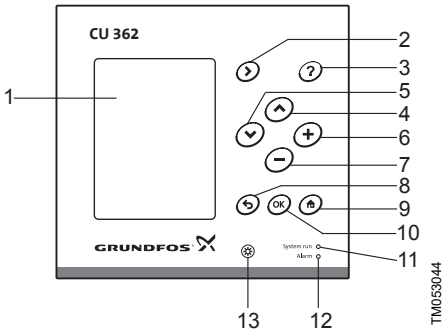
The two variants are referred to as CU 3X2 in the following sections.

WARNING
Death or serious personal injury

- If the CU 3X2 is not used as specified by the manufacturer, the protection provided by the product may be impaired.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



Example of CU 3X2

Pos.		Description
1		LCD display
2		Changes to next column in menu structure.
3		Changes to help text. [1]
4		Goes up in lists.
5		Goes down in lists.
6		Increases the value of a selected parameter.
7		Reduces the value of a selected parameter.
8		Goes one display back.
9		Goes back to menu "Status".
10		Saves a value.
11		Green indicator light (operation)
12		Red indicator light (alarm)
13		Changes the brightness of the display.

1) Some help texts apply to the entire display, other texts to the individual lines of the display.

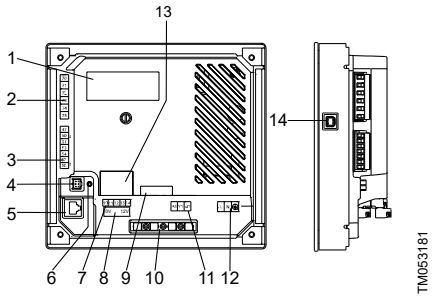
2.1 Indicator lights

The CU 3X2 has a green and a red indicator light.

The green indicator light shows that the power supply is switched on.

The red indicator light shows that the system is in alarm mode.

2.2 Terminals



Back of the CU 3X2

Pos.	Description
1	Nameplate
2	Terminals for digital output relays
3	Terminals for analog inputs
4	Service connection
5	Ethernet (RJ45)
6	Voltage indicator
7	Terminals for digital inputs
8	Terminals for backup battery
9	Terminals for CIM module (optional)
10	Cable clamps for GENIbus connections
11	Internal GENIbus connection
12	Terminal for power supply
13	Label for backup battery
14	USB port

Related information

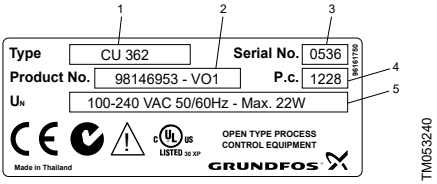
9.12 Terminal groups

2.3 Potentially explosive environments

The CU 3X2 must not be installed in explosive environments, but may be used together with Grundfos pumps approved for installation in potentially explosive environments.

3. Identification

The CU 3X2 can be identified by the nameplate on the back.



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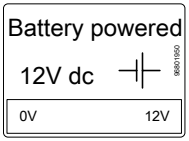
Example of nameplate

Pos.	Description
1	Type designation
2	Product number and version number
3	Serial number
4	Production code (year and week)
5	Rated voltage, frequency and power

The CU 3X2 has a label for the backup battery.



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Label for backup battery

TM005827

Protective earth terminal

3.1 Type key

Example CU-3X-2

Code	Description
CU	Control unit
3X	Controller series
2	Model number

4. Installation preparation

The CU 3X2 is only intended for control panels.

Before installation, check the following:

- The CU 3X2 corresponds to the order.
- It is suitable for the power supply available at the installation site.
- It does not have any visible damage.

WARNING
Electric shock
Death or serious personal injury
- Switch off the power supply before making connections. Make sure that it cannot be switched on unintentionally.

WARNING
Electric shock
Death or serious personal injury
- The electrical installation must be carried out by an authorised person in accordance with local regulations.

WARNING
Death or serious personal injury
- Observe local regulations for safety, health and environment.

WARNING
Electric shock
Death or serious personal injury
- The terminals L and N as well as 70 to 75 may be connected to dangerous contact voltage. External control voltage from other groups may occur.

WARNING
Electric shock
Death or serious personal injury
- All wires to units outside the control panel must be type H05VV-F according to CENELEC HD21 to avoid injury from touching wires.
- **USA and Canada:** Field wiring installation must comply with the National Electrical Code (NEC) and/or the Canadian Electrical Code.

WARNING
Electric shock
Death or serious personal injury
- The installation must incorporate a circuit breaker in order to switch off the mains supply. It must be close to the CU 3X2 and easily accessible for the operator. It must be marked as circuit breaker for the CU 3X2. The circuit breaker must comply with IEC 60947-1 and IEC 60947-3.

WARNING
Electric shock
Death or serious personal injury

- Short-circuit protection
- The installation must incorporate external fuses.

- **EU/IEC:** Use fuses that comply with IEC 60127. Rated maximum 10 A, minimum 250 VAC in both line and in neutral when connecting the controller to the power source.
- **USA and Canada (branch circuit protection):** Use a UL/CSA-listed non-time delay, class-rated Branch Circuit Fuse (such as class RK5) rated maximum 10 A, minimum 250 VAC in both line and in neutral when connecting the controller to the power source.

WARNING
Death or serious personal injury

- The terminals are only separated with basic insulation. Therefore, do not connect a PELV circuit to a terminal adjacent to a terminal connected to live voltage.
- PELV circuits and live wires must be separated with double or reinforced insulation.

4.1 Location

The CU 3X2 is designed for installation in the front of a control panel or a separate cabinet.

For outdoor installation, the CU 3X2 must be mounted in a control cabinet with an enclosure class of minimum IPX4.

4.2 Enclosure class

The CU 3X2 is IP54 when mounted on the front of an IPX4 enclosure. The cabinet must be of a flame-retardant material.

USA and Canada

The CU 3X2 is type 3R when mounted on the front of a cabinet with type rating 1, 2, 3, 3R, 5, 12, 12K or 13.

4.3 Terminals

All terminals are suitable for 0.5 to 2.5 mm^2 or AWG 20-13 conductors.

4.4 Cables

Cables must be rated min. 70 °C.

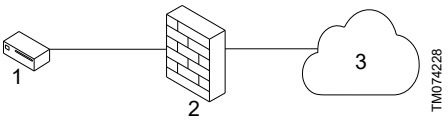
4.5 Security

The CIM module provides a secure way of performing data transmission to the cloud. It uses encryption and mutual authentication based on X.509 certificates for access authentication. The connected Grundfos host products must be behind a firewall or connected to a private network. If a firewall or private network is not in place, the Grundfos host product may be subject to a cybersecurity risk and becomes vulnerable to an attack or compromise.

The CIM module acts as fieldbus master for the GENIbus and Modbus RTU protocols. These protocols use the underlying RS485 protocol communication. As this protocol does not have any built-in security, it is highly recommended to allow only authorized persons physical access to the installation and otherwise adhere to the initiatives suggested in the local risk assessment if one has been prepared.

4.5.1 CU 352/354/362/372/3X2 DH

CU 3xx is a traditional network connected device and must be placed on a private network behind a firewall. It must not be connected directly to the Internet. Also, no TCP/IP ports must be forwarded to the product. If remote access to the device is needed, use technologies such as Virtual Private Networks (VPNs) to ensure a secured connection. Consider contacting an IT infrastructure specialist to establish such a solution.



Secure connectivity for CU 352/354/362/372/3X2 DH

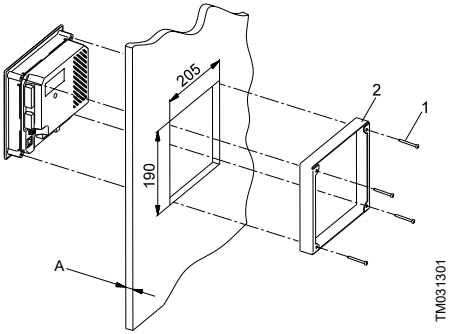
Pos.	Description
1	Grundfos device
2	Firewall
3	Internet

5. Mechanical installation

Fasten the CU 3X2 with the four screws (M5 x 10) supplied with the unit (pos. 1).

Maximum torque: 0.5 Nm.

For the dimensions of the CU 3X2, see section *15. Dimensions*.

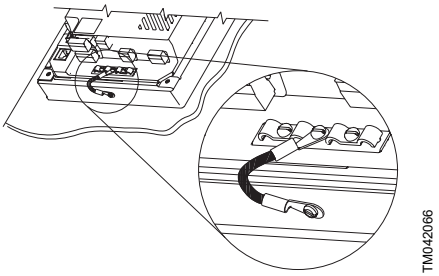


Mounting in panel front (standard)

Pos.	Description
A	Minimum 1.5 mm Maximum 3 mm

In order to achieve enclosure class IP54, the CU 3X2 must be mounted in a panel or cabinet.

Connect the earth terminal (between the cable clamps) on the CU 3X2 to the mounting frame (pos. 2, fig. *Mounting in panel front (standard)*).



Earth connection

Related information

10. Overview of inputs and outputs

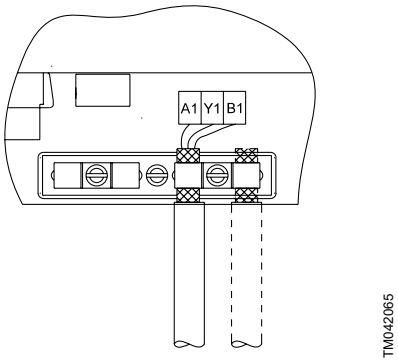
15. Dimensions

6. EMC-correct installation

The CU 3X2 is mounted in a panel which also contains an IO 351 module, contactors and other power equipment. The panel can also contain other Grundfos modules and frequency converters.

To ensure proper operation, it is important to install the electronic modules in an EMC-correct way:

- Ensure a sufficient earth connection between the CU 3X2 and the frame. See fig. *Earth connection*.
- Use screened cables for GENIbus. Connect the screen to the cable clamp of the CU 3X2 in front of the terminals A1, Y1 and B1. See fig. *Screen fixed with cable clamp*. Use a screened cable for the CIM module as well.



Screen fixed with cable clamp

Any isolating plastic tape between the screen and the sheath must be removed before mounting the cable in the cable clamp.

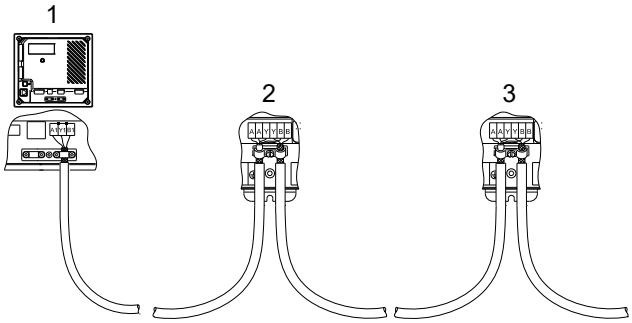
- Signal conductors for digital and analog inputs and outputs should be screened. For instance, run the screen all the way to the CU 3X2 and connect it to the frame with a cable clamp. Do not twist the screen ends to avoid pig tails as this destroys the screen effect at high frequencies. Use cable clamps instead.

Related information

5. Mechanical installation

6.1 Internal GENIbus connection

Internal communication is established through GENIbus.



GENIbus connection

Pos.	Description
1	CU 3X2
2	Unit n
3	Unit n+1

The module type and the number of modules depend on the application software.

6.2 Fieldbus communication interface modules

The CU 3X2 can be connected to an external communication network through an add-on Communication Interface Module (CIM).

The CIM modules must be ordered separately.

Connect the CIM module as described in the installation and operating instructions supplied with the module.

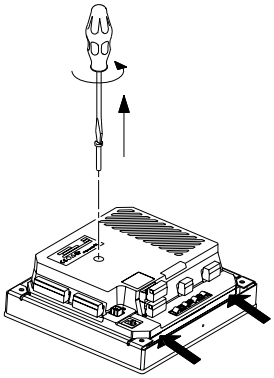
6.3 Fitting the CIM module

WARNING
Electric shock
Death or serious personal injury
- Switch off the power supply to the CU 3X2 before fitting the CIM module.

The CIM module must be fitted by an authorised person.

WARNING
Electric shock
Death or serious personal injury
- Electrostatic discharge (ESD) must be avoided when fitting the CIM module, for instance by wearing an antistatic wrist strap as shown in step 3.

1. Remove the screw in the back cover of the CU 3X2.



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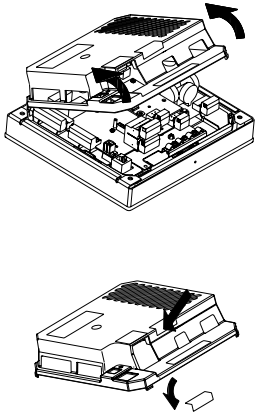
2. Open the back cover and break off the tap.



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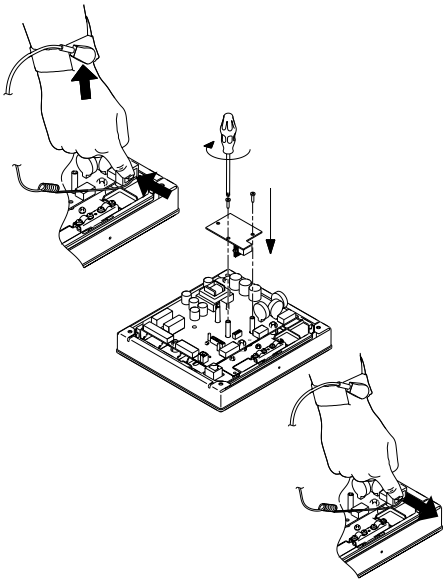
3. Fit the CIM module.



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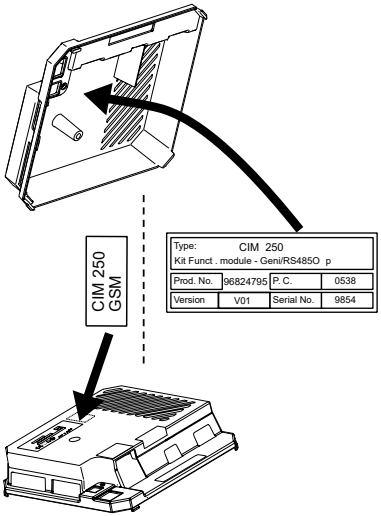
4. Place the labels supplied with the CIM module on the back cover.



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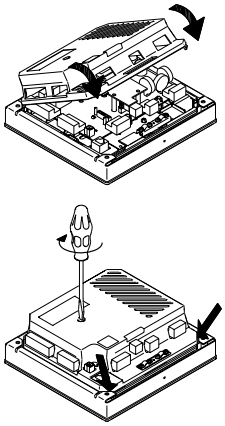
5. Refit the back cover to the CU 3X2 and secure it with the mounting screw.



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7. Startup

Startup must be carried out by an authorised person.

Prior to startup, read the installation and operating instructions.

8. Technical data

Transient voltage, that is present in the mains supply, is category 2.

Altitude above sea level

Maximum 2000 m.

Ambient temperature

- During operation: -20 to +60 °C (must not be exposed to direct sunlight).
- In stock: -20 to +60 °C.
- During transportation: -20 to +60 °C.

At temperatures below 0 °C, the display may react slowly.

Relative air humidity

5 to 95 %.

Enclosure class

IP54 from the front of the module.

IP1X from the rear of the module.

For indoor use only.

Pollution degree

External pollution degree 3.

9. Electrical data

9.1 Supply voltage

1 × 100-240 VAC ± 10 %, 50/60 Hz, PE

(Class 1 equipment).

Overvoltage category II.

9.2 Power consumption

Maximum 22 W.

9.3 Circuit breaker

Installation of circuit breakers must comply with local regulations.

9.4 Backup fuse

Maximum 10 A. Both standard fuses as well as quick- and slow-blow fuses are suitable.

9.5 Short-circuit protection

Use fuses that comply with IEC 60127.

USA and Canada (branch circuit protection):

Use a UL/CSA-listed non-time delay (high capacity) fuse that complies with the UL248 series or an inverse time circuit breaker that complies with UL489.

Fuse types RK1, RKS, J and CC are acceptable.

9.6 Digital inputs

Open-circuit voltage	24 VDC
Closed-circuit current	5 mA, DC
Frequency range	0-4 Hz

9.7 Analog inputs

Input current and voltage	0-20 mA 4-20 mA 0-10 V
Tolerance	± 3.3 % of full scale
Repetitive accuracy	± 1 % of full scale
Input resistance, current	< 250 Ω
Input resistance, voltage	> 50 kΩ ± 10 %
Supply to sensor	24 V, 30 mA, short-circuit protected

9.8 Digital outputs (relay outputs)

Normally open contacts	C, NO
Maximum contact load	240 VAC, 2 A
Minimum contact load	5 VDC, 10 mA

9.9 Conductors

Rigid conductors	0.5 - 2.5 mm^2 20-13 AWG (US)
Flexible conductors without ferrule	
Flexible conductors with ferrule With/without plastic collar	0.5 - 1.5 mm^2 20-13 AWG (US)

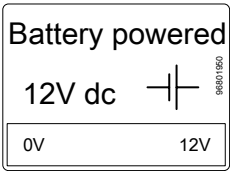
9.10 USB port

USB port	USB 2.0, type B

9.11 Battery backup (UPS)

A battery can be connected to the CU 3X2 as backup for the normal power supply. The battery can be connected directly to the CU 3X2 without a fuse.

With the backup battery, the CU 3X2 can continue to operate despite interruptions in the normal power supply.



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Label for backup battery

9.11.1 Battery data

The backup battery should meet the below requirements:

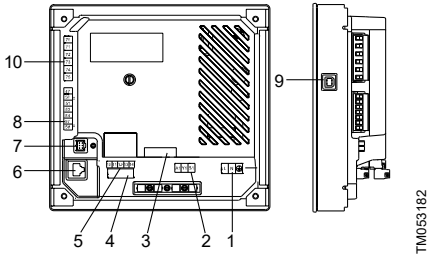
Battery make	Power Sonic
Battery type	Lead acid battery AGM type
Battery series	PS 12xxx series UL R/C under file number MH20845
Rated voltage	12 V
Battery capacity	40 Ah, recommended (24 hours operating time)
Nominal charging time	8 hours (40 Ah battery)

9.11.2 Battery monitoring

The CU 3X2 can monitor the following:

- short circuit
- wrong polarity
- defective battery
- missing battery
- low battery voltage.

9.12 Terminal groups



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Terminal groups

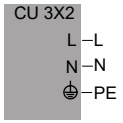
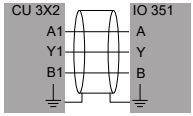
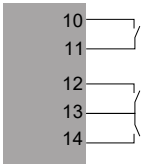
The terminals of the groups 2, 3, 5 and 6 are insulated from all other terminal groups by reinforced insulation, 2224 VAC.

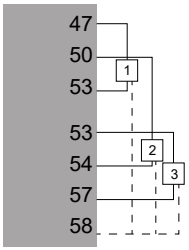
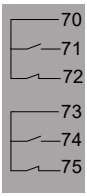
Group 1	Connection of power supply
Group 2	Internal GENIbus connection
Group 3	Fieldbus connection (CIM module) (not standard)
Group 4	Connection of backup battery
Group 5	Digital inputs
Group 6	Ethernet connection
Group 7	Service connection (GENIbus)
Group 8	Analog inputs
Group 9	USB port
Group 10	Digital outputs

All control terminals in groups 2, 3, 5 and 6 are supplied with Safety Extra-Low Voltage (SELV).

10. Overview of inputs and outputs

DI: Digital input
DO: Digital output
AI: Analog input
NC: Normally closed contact
NO: Normally open contact
C: Common.
Position numbers, see fig. *Terminal groups*.

Group	Terminal	Designation	Data	Diagram
1	L	Connection to phase conductor	1 × 100-240 VAC ± 10 %, 50/60 Hz	
	N	Connection to neutral conductor		
	PE	Connection to protective earth		
2	A1	RS-485 A	GENIbus (Fix the screen with a cable clamp.)	
	Y1	RS-485 GND		
	B1	RS-485 B		
	⏚	Functional earth		
3	Connection to external fieldbus, see the installation and operating instructions for the CIM module.			
4	0 V +12 VDC	Connection to battery	Backup battery	
5	10	DI1	Digital input	
	11	GND		
	12	DI2		
	13	GND		
	14	DI3		
	All terminals (except for mains terminals) must only be connected to voltages not exceeding 16 V_{rms} and 22.6 V_{peak} or 35 VDC.			
6	Ethernet RJ45			
	External computing devices connected to the Ethernet connection must comply with the standards IEC 60950 and UL 60950.			
7	GENIbus		Service connection	

Group	Terminal	Designation	Data	Diagram
8	47	+24 V	Supply to sensor. Short-circuit-protected 30 mA.	
	50	+24 V	Supply to sensor. Short-circuit-protected 30 mA.	
	51	AI1	Input for analog signal, 0-20/4-20 mA or 0-10 V	
	53	+24 V	Supply to sensor. Short-circuit-protected 30 mA.	
	54	AI2	Input for analog signal, 0-20/4-20 mA or 0-10 V	
	57	AI3		
	58	GND [2]		
	All terminals (except for mains terminals) must only be connected to voltages not exceeding 16 V_{rms} and 22.6 V_{peak} or 35 VDC.			
9		USB port	USB 2.0, type B	
10	70	Relay 1	C	
	71		NO	
	72		NC	
	73	Relay 2	C	
	74		NO	
	75		NC	

[2] GND is isolated from other earth connections.

Related information

5. Mechanical installation

6.3 Fitting the CIM module

9.12 Terminal groups

11. Maintenance

The CU 3X2 is maintenance-free during normal use and operation. It should be cleaned with a wet cloth.

12. Service

The CU 3X2 cannot be serviced. It must be replaced if defective.

13. Replacing the CU 3X2

1. Switch off the power supply to the CU 3X2.
2. Switch off the power supply to components with external supply.
3. Mark the individual conductors with the numbers of the corresponding terminals.
4. Disconnect all conductors.
5. Remove the CU 3X2 from the panel/cabinet.
6. Fit the new unit as described.
7. Connect all conductors according to markings.
8. Configure the new CU 3X2 with a PC Tool. See the service instructions.

Related information

5. Mechanical installation

13.1 Replacing the CIM module

1. Switch off the power supply to the CU 3X2.
2. Switch off the power supply to components with external supply.
3. Mark the individual conductors with the numbers of the corresponding terminals.
4. Remove the screws that holds the CIM module.
5. Remove the CIM module from the CU 3X2.
6. Fit the new CIM module.
7. Connect the CIM module as described in the installation and operating instructions supplied with the CIM module.

Related information

6.3 Fitting the CIM module

14. Fault finding

WARNING
Electric shock
Death or serious personal injury

- Before making any connections in pumps or the control cabinet, make sure that the power supply is switched off for at least 5 minutes and it cannot be switched on unintentionally.

14.1 Alarm and warning codes

14.1.1 Code 1 (Leakage current)

- Code 1 is shown on the display.
- Origin of the alert: CUE.

Cause	Remedy
Leakage current is detected.	• Check CUE local HMI for fault description.

14.1.2 Code 2 (Phase error)

- Code 2 is shown on the display.
- Origin of the alert: MP 204/CUE.

Cause	Remedy
The product is configured for 2 or 3 phases but only 1 phase is connected.	• Make sure that the mains power connection setting is correct according to the number of phases connected (1, 2 or 3 phases).
One of the power supply phases is not connected.	• Connect the phase.
The fuse is blown somewhere on the incoming power line.	• Replace the fuse.
The phase is disconnected.	• Check the circuit breakers.

14.1.3 Code 3 (External fault)

- Code 3 is shown on the display.
- Origin of the alert: MP 204/IO 351/IO 113/CUE.

Cause	Remedy
Fault occurs in the external module.	• Check all external modules connected through GENIbus.

14.1.4 Code 4 (Too many restarts)

- Code 4 is shown on the display.
- Origin of the alert: MP 204.

Cause	Remedy
The pump is blocked or partly blocked that causes motor overload.	• Remove the blockage from the pump, pipes, or valves.

14.1.5 Code 6 (Mains fault)

- Code 6 is shown on the display.
- Origin of the alert: MP 204/CUE.

Cause	Remedy
Phase is missing or it is drifted.	• Check the voltages between the phases. • Check the pre-fuses. • Check the circuit breakers.

14.1.6 Code 9 (Phase sequence reversal)

- Code 9 is shown on the display.
- Origin of the alert: MP 204.

Cause	Remedy
The power supply phase is set incorrectly.	• Check the phase sequence and interchange the two phases.

14.1.7 Code 10 (Communication fault, pump)

- Code 10 is shown on the display.
- Origin of the alert: IO 113.

Cause	Remedy
Fault in communication to SM 113.	• Check the cables between IO 113 and SM 113.

14.1.8 Code 11 (Water in oil)

- Code 11 is shown on the display.
- Origin of the alert: IO 113.

Cause	Remedy
Inappropriate water-in-oil content.	• Water-in-oil content is exceeded. Replace the lower shaft-seal and the oil.

14.1.9 Code 12 (Time for service (general service information))

- Code 12 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
The pump requires service in regular intervals.	• Contact Grundfos or an authorised service workshop. • Enable service countdown with Grundfos GO Remote: **Settings** > **Service**.

14.1.10 Code 15 (SCADA callback error)

- Code 15 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
The SCADA fails to respond.	• Check the network connection. • Check if the SCADA phone number is correct. • Check the status of the external SCADA system.

14.1.11 Code 16 (Other)

- Code 16 is shown on the display.
- Origin of the alert: CUE.

Cause	Remedy
CUE reports a fault.	• Check the fault locally on the CUE drive.

14.1.12 Code 17 (Performance requirement cannot be met)

- Code 17 is shown on the display.
- Origin of the alert: dosing pump.

Cause	Remedy
The dosing volume is not met.	• Check the status of the dosing pump. • Calibrate the dosing pump.

14.1.13 Code 18 (Commanded alarm standby (trip))

- Code 18 is shown on the display.
- Origin of the alert: MP 204.

Cause	Remedy
Test trip is activated.	• Push the reset button on MP 204.

14.1.14 Code 19 (Diaphragm break (dosing pump))

- Code 19 is shown on the display.
- Origin of the alert: dosing pump.

Cause	Remedy
Diaphragm break is detected.	• Replace the diaphragm in the dosing pump.

14.1.15 Code 20 (Insulation resistance low)

- Code 20 is shown on the display.
- Origin of the alert: IO 113/MP 204.

Cause	Remedy
Insulation resistance is too low.	• Check the settings, replace the motor, if necessary.

14.1.16 Code 21 (Too many starts per hour)

- Code 21 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
Maximum number of starts is exceeded.	• User settings of the maximum number of starts are exceeded. Evaluate the settings. Evaluate the stop/start levels to increase the pump-run time.

14.1.17 Code 22 (Moisture switch alarm, digital)

- Code 22 is shown on the display.
- Origin of the alert: IO 113.

Cause	Remedy
Moisture switch is activated. Moisture is detected in the motor.	• The pump or the motor needs overhaul. • Contact Grundfos.

14.1.18 Code 24 (Vibration)

- Code 24 is shown on the display.
- Origin of the alert: IO 113.

Cause	Remedy
Vibration threshold is exceeded.	• Check the pump, valves or pipes for any blockages. The pump may need overhaul.

14.1.19 Code 25 (Setup conflict)

- Code 25 is shown on the display.
- Origin of the alert: IO 113.

Cause	Remedy
The level control is configured incorrectly.	• Check and adjust the level control configuration with Grundfos GO Remote. • Check the DIP-switch settings of the IO 113. • Check the warning and alarm thresholds in the IO 113 by using the PC Tool Water Utility.
The IO terminal is configured incorrectly.	• Select the IO terminal that needs to be changed in Grundfos GO Remote and adjust the configuration.

14.1.20 Code 26 (Load continues even if motor is off)

- Code 26 is shown on the display.
- Origin of the alert: MP 204.

Cause	Remedy
Current is drawn when it should not be.	• Check the motor relay. Contact welding, if necessary.

14.1.21 Code 27 (Motor protection, tripped)

- Code 27 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
Motor protection is tripped.	• Check the possible causes, such as the pump, valves or pipes being blocked.

14.1.22 Code 30 (Change bearings (specific service information))

- Code 30 is shown on the display.
- Origin of the alert: CUE.

Cause	Remedy
CUE reports change bearings.	• Check the local alarms and instructions on the CUE.

14.1.23 Code 32 (Overvoltage)

- Code 32 is shown on the display.
- Origin of the alert: MP 204/CUE.

Cause	Remedy
Voltage is too high.	• Voltage on 1 or multiple phases is too high. Check the incoming voltage.

14.1.24 Code 33 (Soon time for service (general service information))

- Code 33 is shown on the display.
- Origin of the alert: dosing pump.

Cause	Remedy
Service interval of the dosing pump is close.	• User defined service interval is close. Arrange a preventive maintenance action on the dosing pump.

14.1.25 Code 35 (Gas in pump head, deaerating problem)

- Code 35 is shown on the display.
- Origin of the alert: dosing pump.

Cause	Remedy
Gas or air is detected in the pump head.	• Check the inlet line and repair it if necessary. • Provide positive inlet pressure (place the dosing medium tank above the pump). • Check the dosing pump I/O for remedy.

14.1.26 Code 36 (Discharge valve leakage)

- Code 36 is shown on the display.
- Origin of the alert: dosing pump.

Cause	Remedy
Pressure valve leaks in the dosing pump.	• Check the valve and tighten it up. • Replace the valve if necessary. • Flush the system. • Check the O-ring position. • Install a strainer in the inlet line. • Check the dosing pump I/O for remedy.

14.1.27 Code 37 (Suction valve leakage)

- Code 37 is shown on the display.
- Origin of the alert: dosing pump.

Cause	Remedy
Suction valve leaks in the dosing pump.	• Check the valve and tighten it up. • Replace the valve if necessary. • Flush the system. • Check the O-ring position. • Install a strainer in the inlet line. • Check the dosing pump I/O for remedy.

14.1.28 Code 38 (Vent valve defective)

- Code 38 is shown on the display.
- Origin of the alert: dosing pump.

Cause	Remedy
Venting valve is defective in the dosing pump.	• Replace the venting valve. • Check the dosing pump I/O for remedy.

14.1.29 Code 40 (Undervoltage)

- Code 40 is shown on the display.
- Origin of the alert: MP 204/CUE.

Cause	Remedy
Voltage is too low.	• Voltage on one or multiple phases is too low. Check the incoming voltage.

14.1.30 Code 47 (Cable break)

- Code 47 is shown on the display.
- Origin of the alert: dosing pump.

Cause	Remedy
Cable breakdown.	• Check the cable/plug connections and replace them if necessary. • Check the signal transmitter. • Check the dosing pump I/O for remedy.

14.1.31 Code 48 (Overload)

- Code 48 is shown on the display.
- Origin of the alert: AI/MP 204/CUE.

Cause	Remedy
The pump is clogged, which causes the motor current to increase. This may cause damage to the pump.	• Remove the blockage. • Check the pit conditions to avoid a possible blockage in the future.

14.1.32 Code 49 (Overload)

- Code 49 is shown on the display.
- Origin of the alert: CUE.

Cause	Remedy
CUE reports overcurrent.	• Check the local alarms on the CUE. Check the pump, valves or pipes for blockage.

14.1.33 Code 51 (Blocked motor/pump)

- Code 51 is shown on the display.
- Origin of the alert: dosing pump.

Cause	Remedy
The pump cannot rotate due to a blockage.	• Dismantle the pump by removing the pump head, and remove any blockages or impurities preventing the pump from rotating. • Check the water quality to eliminate the risk of lime precipitation. Before dismantling the pump, drain the system or close the isolating valves on either side of the pump. The pumped liquid may be scalding hot and under high pressure.

14.1.34 Code 55 (Motor current protection activated (MCP))

- Code 55 is shown on the display.
- Origin of the alert: CUE.

Cause	Remedy
CUE reports MCP.	• Check the local alarms on the CUE. • Check the pump, valves or pipes for blockage.

14.1.35 Code 56 (Underload)

- Code 56 is shown on the display.
- Origin of the alert: AI/MP 204/CUE.

Cause	Remedy
The measured current is below the minimum.	• Make sure that the nominal pump current is configured correctly in Grundfos GO Remote. • Make sure that the pump is connected to the pump terminals on the product. • Make sure that the pump cable is not damaged. • Make sure that the pump rating is within the specified current or power rating of the product.

14.1.36 Code 57 (Dry running)

- Code 57 is shown on the display.
- Origin of the alert: CU 362/dosing pump.

Cause	Remedy
The water level in the pit is low and the pump stops due to the dry-running function.	• Check the inflow of the pit. • Check the level of the chemical tank. • Check and configure the sensor stop level.

14.1.37 Code 58 (Low flow)

- Code 58 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
Alarm for low flow is exceeded.	• Check the pump, valves or pipes for blockage.

14.1.38 Code 64 (Overtemperature)

- Code 64 is shown on the display.
- Origin of the alert: IO 113.

Cause	Remedy
Stator temperature threshold is exceeded.	• Check the pump, valves or pipes for blockage.

14.1.39 Code 69 (Overtemperature PTC (IO 11X))

- Code 69 is shown on the display.
- Origin of the alert: IO 113.

Cause	Remedy
Motor temperature is too high. The pump has run for too long.	• Allow the pump to cool down. • Adjust the distance between the start and the stop levels.

14.1.40 Code 70 (Overtemperature, PTC/thermal switch)

- Code 70 is shown on the display.
- Origin of the alert: IO 351/MP 204/CUE.

Cause	Remedy
Motor temperature is too high.	• Check the pump, valves or pipes for blockage.

14.1.41 Code 71 (Overtemperature, Pt)

- Code 71 is shown on the display.
- Origin of the alert: MP 204.

Cause	Remedy
Stator temperature threshold is exceeded.	• Check the pump, valves or pipes for blockage.

14.1.42 Code 72 (Hardware fault, type 1)

- Code 72 is shown on the display.
- Origin of the alert: CU 362/IO 351/IO 113/MP 204.

Cause	Remedy
Possible hardware fault.	• Power cycle the mains supply. If the fault still exists, check each module individually. Replace the controller or the module if possible. • Contact Grundfos or an authorised service workshop.

14.1.43 Code 76 (Other fault)

- Code 76 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
Internal communication fault.	• Power cycle the controller. If the fault still exists, replace the controller. • Contact Grundfos or an authorised service workshop.

14.1.44 Code 77 (Communication fault, twin-head pump)

- Code 77 is shown on the display.
- Origin of the alert: CUE.

Cause	Remedy
CUE reports communication fault.	• Check the local alarms and instructions on the CUE.

14.1.45 Code 84 (Memory access error)

- Code 84 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
An error is detected in the internal memory.	• Replace the control unit. • Contact Grundfos or an authorised service workshop.

14.1.46 Code 88 (Current sensor fault)

- Code 88 is shown on the display.
- Origin of the alert: CU 362 AI.

Cause	Remedy
External analogue current transformer fault.	• Check the connection to the external current transformer. Measure if the coil has an open circuit. Replace it if necessary.

14.1.47 Code 89 (Fault, primary sensor)

- Code 89 is shown on the display.
- Origin of the alert: CUE.

Cause	Remedy
Signal fault of the feedback sensor 1 on CUE drive.	• Check the sensor and the connections on the CUE drive.

14.1.48 Code 91 (Fault, temperature sensor)

- Code 91 is shown on the display.
- Origin of the alert: CUE.

Cause	Remedy
Signal fault of the temperature sensor 1 on CUE drive.	• Check the sensor and the connections on the CUE drive.

14.1.49 Code 93 (Signal fault, sensor 2)

- Code 93 is shown on the display.
- Origin of the alert: CUE.

Cause	Remedy
Signal fault of sensor 2 on CUE drive.	• Check the sensor and the connections on the CUE drive.

14.1.50 Code 102 (Dosing pump is not ready)

- Code 102 is shown on the display.
- Origin of the alert: dosing pump.

Cause	Remedy
The dosing pump is not ready.	• Check the status of the dosing pump.

14.1.51 Code 103 (Emergency stop)

- Code 103 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
Emergency stop is activated.	• Investigate the reason for activating the emergency stop.

14.1.52 Code 111 (Current asymmetry)

- Code 111 is shown on the display.
- Origin of the alert: MP 204.

Cause	Remedy
Current draw is unequal.	• Measure the winding resistance on the motor. • Check the incoming voltages. • Replace the motor if possible.

14.1.53 Code 112 (cos φ too high)

- Code 112 is shown on the display.
- Origin of the alert: MP 204.

Cause	Remedy
Maximum cos phi threshold is exceeded.	• Consider the settings. • Check the pump, valves or pipes for blockage.

14.1.54 Code 113 (cos φ too low)

- Code 113 is shown on the display.
- Origin of the alert: MP 204.

Cause	Remedy
Minimum cos phi threshold is exceeded. Possible motor or power cable fault.	• Consider the settings. • Check if the pump sucks in air.

14.1.55 Code 115 (The number of grinder reversals is exceeded or the grinder reversal attempt is failed)

- Code 115 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
Excessive number of grinder reversals occurred.	• Check the grinder for any blockage.

14.1.56 Code 116 (Overtemperature of the grinder motor)

- Code 116 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
Grinder motor is overloaded.	• Eliminate the cause of the overload.

14.1.57 Code 118 (Signal fault, hydrogen sulfide (H_2S) sensor)

- Code 118 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
Hydrogen sulfide (H_2S) sensor fault.	• Check or replace the remote hydrogen sulfide (H_2S) sensor.

14.1.58 Code 145 (Temperature, upper bearing)

- Code 145 is shown on the display.
- Origin of the alert: IO 113.

Cause	Remedy
Support bearing temperature threshold is exceeded.	• Overhaul the motor if possible.

14.1.59 Code 146 (Temperature, lower bearing)

- Code 146 is shown on the display.
- Origin of the alert: IO 113.

Cause	Remedy
Main bearing temperature threshold is exceeded.	• Overhaul the motor if possible.

14.1.60 Code 148 (Motor bearing temp. high (Pt100), DE)

- Code 148 is shown on the display.
- Origin of the alert: CUE.

Cause	Remedy
Motor bearing temperature is too high.	• Check the local temperature sensor on the CUE drive. • Consider the settings on the CUE drive. • Replace the motor if possible.

14.1.61 Code 149 (Motor bearing temp. high (Pt100), NDE)

- Code 149 is shown on the display.
- Origin of the alert: CUE.

Cause	Remedy
Motor bearing temperature is too high.	• Check the local temperature sensor on the CUE drive. • Consider the settings on the CUE drive. • Replace the motor if possible.

14.1.62 Code 155 (Inrush fault)

- Code 155 is shown on the display.
- Origin of the alert: CUE.

Cause	Remedy
CUE drive reported inrush fault.	• Check the CUE drive for local alarms.

14.1.63 Code 159 (CIM module fault)

- Code 159 is shown on the display.
- Origin of the alert: add-on CIM card.

Cause	Remedy
The CIM module is installed incorrectly.	• Ensure that the module, including the cables, is fitted correctly.
The CIM module is defective.	• Contact Grundfos.

14.1.64 Code 160 (CIM card fault)

- Code 160 is shown on the display.
- Origin of the alert: add-on CIM card.

Cause	Remedy
CIM card fault.	• Check the status of the add-on CIM card. Make sure that the CIM card is installed correctly.

14.1.65 Code 165 (User defined AI sensor 1/2/3 signal fault)

- Code 165 is shown on the display.
  - Sub-alert code 1001: Signal fault, analog input AI1.
  - Sub-alert code 1002: Signal fault, analog input AI2.
  - Sub-alert code 1003: Signal fault, analog input AI3.
  - Sub-alert code 2001: Signal fault, Pt sensor.
- Origin of the alert: CU 362.

Cause	Remedy
The signal from the sensor is out of the configured range.	• Check the sensor signal. • Replace the sensor.

14.1.66 Code 168 (Signal fault, pressure sensor)

- Code 168 is shown on the display.
- Origin of the alert: CU 362 AI.

Cause	Remedy
Sensor signal fault.	• Check the sensor signal. • Replace the sensor.

14.1.67 Code 169 (Signal fault, flow sensor)

- Code 169 is shown on the display.
- Origin of the alert: CU 362 AI.

Cause	Remedy
Sensor signal fault.	• Check the sensor signal. • Replace the sensor.

14.1.68 Code 170 (Signal fault, water-in-oil (WIO) sensor)

- Code 170 is shown on the display.
- Origin of the alert: IO 113.

Cause	Remedy
WIO sensor fault.	• Check the WIO sensor connection. Test the sensor with mA generator.

14.1.69 Code 175 (Signal fault, temp. 2 sensor (t_mo2))

- Code 175 is shown on the display.
- Origin of the alert: IO 113/MP 204/CUE.

Cause	Remedy
Pt100 sensor is failed.	• Check the Pt100 sensor for malfunction.

14.1.70 Code 176 (Signal fault, temp. 3 sensor (t_mo3))

- Code 176 is shown on the display.
- Origin of the alert: CUE.

Cause	Remedy
Signal fault of sensor 3 on the CUE drive.	• Check the sensor and the connections on the CUE drive.

14.1.71 Code 179 (Signal fault, upper bearing temperature)

- Code 179 is shown on the display.
- Origin of the alert: IO 113.

Cause	Remedy
Motor support bearing temperature sensor fails.	• Check the temperature readings with the PC Tool Water Utility.

14.1.72 Code 180 (Signal fault, lower bearing temperature)

- Code 180 is shown on the display.
- Origin of the alert: IO 113.

Cause	Remedy
Motor main bearing temperature sensor fails.	• Check the temperature readings with the PC Tool Water Utility.

14.1.73 Code 181 (Signal fault, PTC sensor)

- Code 181 is shown on the display.
- Origin of the alert: IO 113.

Cause	Remedy
Signal fault occurs in the PTC input.	• Make sure that the two PTC wires from the pump are connected correctly to the terminals. • Make sure that the third PTC wire is left unconnected, if it is present. • Make sure that the PTC wires are not damaged. • Make sure that the PTC sensors within the pumps are not damaged. • Perform a test by disconnecting the PTC wires from the pump and shorting PTC1 terminal A and B and also PTC2 terminal A and B. Make sure that the error is eliminated. • Replace the product due to damaged PTC circuit. Contact Grundfos.

14.1.74 Code 186 (Power meter)

- Code 186 is shown on the display.
- Origin of the alert: CU 362 AI.

Cause	Remedy
Sensor signal fault.	• Check the sensor signal. • Replace the sensor.

14.1.75 Code 189 (Signal fault, level sensor)

- Code 189 is shown on the display.
- Origin of the alert: CU 362 AI.

Cause	Remedy
The level sensor is no longer sending an analogue signal.	• Check the sensor signal. • Replace the sensor.

14.1.76 Code 190 (Level)

- Code 190 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
Alarm level is reached.	• Check the reason for the pump cannot keep the level below the start levels.

14.1.77 Code 191 (High level)

- Code 191 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
The pump does not start on the defined level.	• Check and configure the sensor start level.
The pump is unable to remove the water.	• Contact Grundfos or an authorised service workshop.
The level sensor is defective and not reacting on level changes.	• Check the functionality of the level sensor.

14.1.78 Code 192 (Overflow)

- Code 192 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
Overflow level is reached.	• Check the reason for pumps cannot keep the level below the start levels.

14.1.79 Code 204 (Conflicting levels)

- Code 204 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
Inconsistency between the sensors.	• Check the placement of the float switches.

14.1.80 Code 205 (Inconsistency, float switch)

- Code 205 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
A float switch may be defective or stuck.	• Check the functionality of each float switch. • Check the placement of the float switches.

14.1.81 Code 206 (Water shortage, level 1)

- Code 206 is shown on the display.
- Origin of the alert: dosing pump.

Cause	Remedy
Pre-empty tank.	• Check the level in the pre-empty tank.

14.1.82 Code 208 (Cavitation)

- Code 208 is shown on the display.
- Origin of the alert: dosing pump.

Cause	Remedy
Cavitation in the dosing pump.	• Check the suction hose for blockage.

14.1.83 Code 210 (Pressure above maximum pressure)

- Code 210 is shown on the display.
- Origin of the alert: dosing pump.

Cause	Remedy
Overpressure in the dosing pump.	• Check the inlet line and open the isolating valve if necessary. • Reduce the suction lift. • Increase the inlet line diameter.

14.1.84 Code 211 (Pressure below minimum pressure)

- Code 211 is shown on the display.
- Origin of the alert: dosing pump.

Cause	Remedy
The pressure is low in the dosing pump.	• Check the discharge hose for blockage. • Check the flow direction of the valves (arrow) and correct them if necessary. • Reduce the backpressure. Enlarge the diameter of the outlet line.

14.1.85 Code 213 (VFD not ready)

- Code 213 is shown on the display.
- Origin of the alert: IO 351.

Cause	Remedy
Third-party VFD is not ready.	• Check third-party VFD local alarms.

14.1.86 Code 220 (Contactor feedback fault)

- Code 220 is shown on the display.
- Origin of the alert: CU 362 DI.

Cause	Remedy
The contactor has reached its maximum number of operating cycles and is worn out. **Alarm:** The contactor is worn out and the pump cannot start.	• Contact Grundfos.
The contactor is approaching its maximum number of operating cycles and must be replaced. **Warning:** The contactor is close to being worn out and the pump will be unable to start.	• Order a new unit to avoid downtime. Contact Grundfos.
No motor contactor feedback.	• Check motor contactor/coil.

14.1.87 Code 221 (Contactor feedback fault, mixer)

- Code 221 is shown on the display.
- Origin of the alert: CU 362 DI.

Cause	Remedy
Mixer contactor feedback fault.	• Check the mixer switch gear/relay. • Replace the mixer switch gear/relay.

14.1.88 Code 222 (Time for service, mixer)

- Code 222 is shown on the display.
- Origin of the alert: mixer.

Cause	Remedy
Service interval of the mixer is reached.	• User-defined service interval is reached. Arrange a preventive maintenance action on the mixer.

14.1.89 Code 223 (Max. starts/hour, mixer)

- Code 223 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
Maximum number of mixer starts is reached.	• Check the mixer settings.

14.1.90 Code 225 (GENIbus fault)

- Code 225 is shown on the display.
- Origin of the alert: IO 113/MP 204.

Cause	Remedy
The connection to GENIbus is missing.	• Check the connection cable of the GENIbus.
The pump module is defective.	• Contact Grundfos.

14.1.91 Code 226 (GENIbus fault)

- Code 226 is shown on the display.
- Origin of the alert: IO 351.

Cause	Remedy
The connection to GENIbus is missing.	• Check the GENI cable between CU 362 and IO 351. • Check the IO 351 GENI address.
The IO module is defective.	• Contact Grundfos.

14.1.92 Code 227 (Combi alarm)

- Code 227 is shown on the display.
  - Sub-alert code 1001: combi event 1.
  - Sub-alert code 1002: combi event 2.
  - Sub-alert code 1003: combi event 3.
  - Sub-alert code 1004: combi event 4.
- Origin of the alert: CU 362.

Cause	Remedy
Combi event alarm occurred.	• Check the reason for the user-defined combi alarm 1. • Check the reason for the user-defined combi alarm 2. • Check the reason for the user-defined combi alarm 3. • Check the reason for the user-defined combi alarm 4.

14.1.93 Code 228 (Other alarm)

- Code 228 is shown on the display.
- Origin of the alert: CU 362 DI.

Cause	Remedy
External flowmeter high flow alarm is active.	• Check the external flowmeter.

14.1.94 Code 229 (Water on floor)

- Code 229 is shown on the display.
- Origin of the alert: CU 362 DI.

Cause	Remedy
The sensor detects water on the pit floor.	• Check for leakage.

14.1.95 Code 231 (Ethernet: No IP address from DHCP server)

- Code 231 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
No IP address is assigned to the controller.	• Check the external router configuration.

14.1.96 Code 232 (Ethernet: Auto-disabled due to misuse)

- Code 232 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
Misuse of the Ethernet connection.	• Check the external router configuration.

14.1.97 Code 235 (Gas detected)

- Code 235 is shown on the display.
- Origin of the alert: CU 362 DI.

Cause	Remedy
Gas is detected.	• Check the status of the gas detector sensor.

14.1.98 Code 240 (Lubricate bearings (service information))

- Code 240 is shown on the display.
- Origin of the alert: CUE.

Cause	Remedy
CUE reported to lubricate bearings.	• Check the local alarms and instructions on the CUE.

14.1.99 Code 241 (Phase error)

- Code 241 is shown on the display.
- Origin of the alert: CU 362 DI/CUE.

Cause	Remedy
Phase failure is detected.	• Check all incoming phases.

14.1.100 Code 242 (Autom. motor model recogn. failed)

- Code 242 is shown on the display.
- Origin of the alert: CUE.

Cause	Remedy
Some errors are reported by CUE.	• Check CUE local HMI for fault description.

14.1.101 Code 243 (Motor relay manually operated)

- Code 243 is shown on the display.
- Origin of the alert: CU 362 DI.

Cause	Remedy
Motor relay is activated manually.	• Motor feedback reports that relay is activated manually. • Check the motor relay.

14.1.102 Code 245 (Latest runtime)

- Code 245 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
Alarm for the latest runtime is exceeded.	• Consider the settings. • Check the pump, valves or pipes for blockage.

14.1.103 Code 246 (User-defined relay output activated)

- Code 246 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
User-defined relay is activated.	• User-defined relay is activated remotely. Inquire the SCADA responsible.

14.1.104 Code 247 (Power on warning)

- Code 247 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
Power cycle in the system.	• Investigate the reason of the local power cycle.

14.1.105 Code 248 (Battery backup (UPS))

- Code 248 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
Battery/UPS fault in the system.	• Check the backup battery. • Replace the backup battery if necessary.

14.1.106 Code 249 (User-defined event 1)

- Code 249 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
User-defined fault 1 in the system.	• Check the reason for the user-defined fault 1.

14.1.107 Code 250 (User-defined event 2)

- Code 250 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
User-defined fault 2 in the system.	• Check the reason for the user-defined fault 2.

14.1.108 Code 251 (User-defined event 3)

- Code 251 is shown on the display.
- Origin of the alert: CU 362.

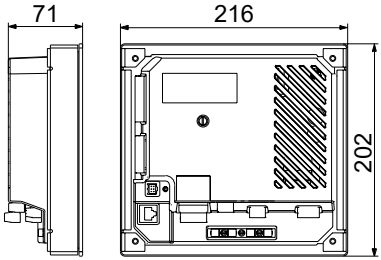
Cause	Remedy
User-defined fault 3 in the system.	• Check the reason for the user-defined fault 3.

14.1.109 Code 252 (User-defined event 4)

- Code 252 is shown on the display.
- Origin of the alert: CU 362.

Cause	Remedy
User-defined fault 4 in the system.	• Check the reason for the user-defined fault 4.

15. Dimensions



Dimensional sketch

Related information

5. Mechanical installation

16. Disposing of the product

This product or parts of it must be disposed of in an environmentally sound way.

1. Use the public or private waste collection service.
2. If this is not possible, contact the nearest Grundfos company or service workshop.

The crossed-out wheelie bin symbol on a product means that it must be disposed of separately from household waste. When a product marked with this symbol reaches its end of life, take it to a collection point designated by the local waste disposal authorities. The separate collection and recycling of such products will help protect the environment and human health.

See also end-of-life information at *www.grundfos.com/product-recycling*.

Appendix A

Appendix A

A.1.1. China RoHS, table C

产品中有害物质的名称及含量

部件名称	有害物质					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr6+)	多溴联苯 (PBB)	多溴联苯醚 (PBDE)
印刷电路板	X	O	O	O	O	O
紧固件	X	O	O	O	O	O

本表格依据 SJ/T 11364 的规定编制

O：表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。
X： 表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 该规定的限量要求。

该产品环保使用期限为 10 年，标识如左图所示。
此环保期限只适用于产品在安装与使用说明书中所规定的条件下工作

EU declaration of conformity

GB: EC/EU declaration of conformity

We, Grundfos, declare under our sole responsibility that the products CU323, CU352, CU354, CU362, CU372, to which the declaration below relates, are in conformity with the Council Directives listed below on the approximation of the laws of the EC/EU member states.

BG: Декларация за съответствие на ЕС/ЕО

Ние, Grundfos, декларираме с пълната си отговорност, че продуктите CU323, CU352, CU354, CU362, CU372, за които се отнася настоящата декларация, отговарят на следните директиви на Съвета за уеднаквяване на правните разпоредби на държавите-членки на ЕС/ЕО.

CZ: ES/EU prohlášení o shodě

My společnost Grundfos prohlašujeme na svou plnou odpovědnost, že výrobky CU323, CU352, CU354, CU362, CU372, YYY, na které se toto prohlášení vztahuje, jsou v souladu s níže uvedenými ustanoveními směrnice Rady pro sblížení právních předpisů členských států ES/EU.

DE: EG-/EU-Konformitätserklärung

Wir, Grundfos, erklären in alleiniger Verantwortung, dass das Produkt CU323, CU352, CU354, CU362, CU372, auf das sich diese Erklärung bezieht, mit den folgenden Richtlinien des Rates zur Angleichung der Rechtsvorschriften der EG-/EU-Mitgliedsstaaten übereinstimmt.

DK: EF/EU-overensstemmelseserklæring

Vi, Grundfos, erklærer under ansvar at produkterne CU323, CU352, CU354, CU362, CU372 som erklæringen nedenfor omhandler, er i overensstemmelse med Rådets direktiver der er nævnt nedenfor, om indbyrdes tilnærmelse til EF/EU-medlemsstaternes lovgivning.

EE: EÜ/ELi vastavusdeklaratsioon

Meie, Grundfos, kinnitame ja kanname ainuisikulist vastutust selle eest, et tooted CU323, CU352, CU354, CU362, CU372, mille kohta allolev deklaratsioon käib, on kooskõlas Nõukogu Direktiividega, mis on nimetatud allpool vastavalt vastuvõetud õigusaktidele ühtlustamise kohta EÜ/ELi liikmesriikides.

ES: Declaración de conformidad de la CE/UE

Grundfos declara, bajo su exclusiva responsabilidad, que los productos a los que concierne la presente declaración, marcados con la denominación CU323, CU352, CU354, CU362, CU372, son conformes con las Directivas del Consejo que figuran a continuación, basadas en la aproximación de las legislaciones correspondientes de los Estados miembros de la CE/UE.

FI: EY/EU-vaatimustenmukaisuusvakuutus

Grundfos vakuuttaa omalla vastuullaan, että tuotteet CU323, CU352, CU354, CU362, CU372, joita tämä vakuutus koskee, ovat EY/EU:n jäsenvaltioiden lainsäädännön lähentämiseen tähtäävien Euroopan neuvoston direktiivien vaatimusten mukaisia seuraavasti.

FR : Déclaration de conformité CE/UE

Nous, Grundfos, déclarons sous notre entière responsabilité que les produits CU323, CU352, CU354, CU362, CU372 auxquels la déclaration ci-dessous fait référence, sont conformes aux directives du Conseil répertoriées ci-dessous, concernant le rapprochement des législations des États membres de la CE et de l'UE.

GR: Δήλωση συμμόρφωσης ΕΚ/ΕΕ

Εμείς, η Grundfos, δηλώνουμε με αποκλειστικά δική μας ευθύνη ότι τα προϊόντα CU323, CU352, CU354, CU362, CU372, στα οποία αναφέρεται η παρακάτω δήλωση, συμμορφώνονται με τις παρακάτω Οδηγίες του Συμβουλίου περί προσέγγισης των νομοθεσιών των κρατών μελών της ΕΚ/ΕΕ.

HR: EC/EU deklaracija sukladnosti

Mi, Grundfos, izjavljujemo s punom odgovornošću da su proizvodi CU323, CU352, CU354, CU362, CU372 na koja se izjava odnosi u nastavku, u skladu s direktivama Vijeća dolje navedene o usklađivanju zakona država članica EZ-a/EU-a.

HU: EC/EU megfelelőségi nyilatkozat

Mi, a Grundfos vállalat, teljes felelősséggel kijelentjük, hogy a(z) CU323, CU352, CU354, CU362, CU372 termékek, amelyre az alábbi nyilatkozat vonatkozik, megfelelnek az Európai Közösség/Európai Unió tagállamainak jogi irányelveit összehangoló tanács alábbi előírásainak.

IT: Dichiarazione di conformità CE/UE

Grundfos dichiara sotto la sua esclusiva responsabilità che i prodotti CU323, CU352, CU354, CU362, CU372, ai quali si riferisce questa dichiarazione, sono conformi alle seguenti direttive del Consiglio riguardanti il riavvicinamento delle legislazioni degli Stati membri CE/UE.

LT: EB/ES atitikties deklaracija

Mes, „Grundfos“, su visa atsakomybe pareiškiame, kad produktai CU323, CU352, CU354, CU362, CU372, kuriems skirta ši deklaracija, atitinka toliau nurodytas Tarybos Direktyvas dėl EB/ES šalių narių įstatymų suderinimo.

LV: EK/ES atbilstības deklarācija

Uzņēmums Grundfos ar pilnu atbildību paziņo, ka produkti CU323, CU352, CU354, CU362, CU372, uz kuriem attiecas tālāk redzamā deklarācija, atbilst tālāk norādītajām Padomes direktīvām par EK/ES dalībvalstu normatīvo aktu tuvināšanu.

NL: EG/EU-conformiteitsverklaring

Wij, Grundfos, verklaren geheel onder eigen verantwoordelijkheid dat de producten CU323, CU352, CU354, CU362, CU372, waarop de onderstaande verklaring betrekking heeft, in overeenstemming zijn met de onderstaande Richtlijnen van de Raad inzake de onderlinge aanpassing van de wetgeving van de EG-/EU-lidstaten.

PL: Deklaracja zgodności WE/UE

Firma Grundfos oświadcza z pełną odpowiedzialnością, że jej produkty CU323, CU352, CU354, CU362, CU372, których dotyczy niniejsza deklaracja, są zgodne z następującymi dyrektywami Rady w sprawie zbliżenia przepisów prawnych państw członkowskich WE/UE.

PT: Declaração de conformidade CE/UE

A Grundfos declara sob sua única responsabilidade que os produtos CU323, CU352, CU354, CU362, CU372, aos quais diz respeito a declaração abaixo, estão em conformidade com as Diretivas do Conselho sobre a aproximação das legislações dos Estados Membros da CE/UE.

RO: Declarație de conformitate CE/UE

Subscrisa, Grundfos, declară pe propria răspundere că produsele CU323, CU352, CU354, CU362, CU372, la care se referă declarația de mai jos, sunt în conformitate cu Directivele Consiliului enumerate mai jos privind apropierea legislațiilor statelor membre CE/UE.

SR: EZ/EU deklaracija o usklađenosti

Mi, Grundfos, izjavljujemo na našu isključivu odgovornost da su proizvodi CU323, CU352, CU354, CU362, CU372, na koje se dole navedena deklaracija odnosi, u skladu sa dole navedenim Direktivama Saveta o usklađivanju zakona zemalja članica EZ/EU.

RU: Декларация о соответствии нормам ЕЭС/ЕС

Мы, компания Grundfos, со всей ответственностью заявляем, что изделия CU323, CU352, CU354, CU362, CU372, к которым относится нижеприведённая декларация, соответствуют нижеприведённым Директивам Совета Евросоюза о тождественности законов стран-членов ЕЭС/ЕС.

SE: EG/EU-försäkran om överensstämmelse

Vi, Grundfos, försäkrar under ansvar att produkterna CU323, CU352, CU354, CU362, CU372, som omfattas av nedanstående försäkran, är i överensstämmelse med de rådsdirektiv om inbördes närmande till EG/EU-medlemsstaternas lagstiftning som listas nedan.

SI: Izjava o skladnosti ES/EU

V Grundfosu s polno odgovornostjo izjavljamo, da so izdelki CU323, CU352, CU354, CU362, CU372, na katere se spodnja izjava nanaša, v skladu s spodnjimi direktivami Sveta o približevanju zakonodaje za izenačevanje pravnih predpisov držav članic EZ/EU.

SK: ES/EÚ vyhlásenie o zhode

My, spoločnosť Grundfos, vyhlasujeme na svoju plnú zodpovednosť, že produkty CU323, CU352, CU354, CU362, CU372, na ktoré sa vyhlásenie uvedené nižšie vzťahuje, sú v súlade s ustanoveniami nižšie uvedených smerníc Rady pre zblíženie právnych predpisov členských štátov ES/EÚ.

TR: AT/AB uygunluk beyanı

Grundfos olarak, aşağıdaki bildirim konusu olan CU323, CU352, CU354, CU362, CU372 ürünlerinin, AT/AB üye ülkelerinin direktiflerinin yakınlaştırılmasıyla ilgili aşağıdaki Konsey Direktifleriyle uyumlu olduğunu ve bununla ilgili olarak tüm sorumluluğun bize ait olduğunu beyan ederiz.

UA: Декларація відповідності директивам ЕС/ЕU

Ми, компанія Grundfos, під нашу одноосібну відповідальність заявляємо, що вироби CU323, CU352, CU354, CU362, CU372, до яких відноситься нижченаведена декларація, відповідають директивам Ради, переліченим нижче, щодо тотожності законів країн-членів ЄС.

CN:欧共体/欧盟符合性声明

我们，格兰富，在我们的全权责任下声明，产品 CU323, CU352, CU354, CU362, CU372，即本声明所指之产品，符合欧共体/欧盟使其成员国法律趋于一致的以下理事会指令。

JP:EC/EU 適合宣言

グルンドフォスは、その単独責任の下に、製品 CU323, CU352, CU354, CU362, CU372 が EC/EU 加盟諸国の法規に関連する、以下の理事会指令に適合していることを宣言します。

KO: EC/EU 적합성 선언

Grundfos는 아래의 선언과 관련된 CU323, CU352, CU354, CU362, CU372 제품이 EC/EU 회원국 법률에 기반하여 아래의 이사회 지침을 준수함을 단독 책임 하에 선언합니다.

BS: EC/EU izjava o usaglašenosti

Mi, Grundfos, izjavljujemo pod isključivom odgovornošću da su proizvodi CU323, CU352, CU354, CU362, CU372, na koje se odnosi izjava u nastavku, u skladu sa dolje navedenim direktivama Savjeta o usklađivanju zakona država članica EZ/EU.

ID: Deklarasi kesesuaian Komunitas Eropa/Uni Eropa

Kami, Grundfos, menyatakan dengan tanggung jawab kami sendiri bahwa produk CU323, CU352, CU354, CU362, CU372, yang berkaitan dengan pernyataan ini, sesuai dengan Petunjuk Dewan berikut ini serta sedapat mungkin sesuai dengan hukum negara-negara anggota Komunitas Eropa/Uni Eropa.

KZ: Сәйкестік жөніндегі ЕҚ/ЕО декларациясы

Біз, Grundfos, ЕҚ/ЕО мүше елдерінің заңдарына жақын төменде көрсетілген Кеңес директиваларына сәйкес төмендегі декларацияға қатысты CU323, CU352, CU354, CU362, CU372 өнімдері біздің жеке жауапкершілігімізде екенін мәлімдейміз.

MK: Изјава за сообразност на ЕЗ/ЕУ

Ние, Grundfos, изјавуваме под целосна одговорност дека производите CU323, CU352, CU354, CU362, CU372, на кои се однесува долунаведената изјава, се во согласност со овие директиви на Советот за приближување на законите на земјите-членки на ЕЗ/ЕУ.

MY: Perisytiharan keakuran EC/EU

Kami, Grundfos, mengisytiharkan di bawah tanggungjawab kami semata-mata bahawa produk CU323, CU352, CU354, CU362, CU372, yang berkaitan dengan perisytiharan di bawah, adalah selaras dengan Perintah Majlis yang disenaraikan di bawah ini tentang penghampiran undang-undang negara ahli EC/EU.

NO: Samsvarsærklæring for EF/EU

Vi, Grundfos, erklærer under vårt eneansvar at produktene CU323, CU352, CU354, CU362, CU372, som denne erklæringen gjelder, er i samsvar med Det europeiske råds direktiver om tilnærming av forordninger i EF-/EU-landene.

AR: إقرار مطابقة EC/EU

نقر نحن، جروندفوس، بمقتضى مسؤوليتنا الفردية بأن المنتجات CU323, CU352, CU354, CU362, CU372 التي يختص بها الإقرار أدناه تكون مطابقة لتوجيهات المجلس المذكورة أدناه بشأن التقريب بين قوانين الدول أعضاء المجموعة الأوروبية/الاتحاد الأوروبي (EC/EU).

TH: คำประกาศความสอดคล้องตามมาตรฐาน EC/EU

เราในนามกรุนด์ฟอส ขอประกาศภายใต้ความรับผิดชอบของเราแต่เพียงผู้เดียวว่าผลิตภัณฑ์ CU323, CU352, CU354, CU362, CU372 ซึ่งเกี่ยวข้องกับคำประกาศนี้มีความสอดคล้องกับระเบียบคำสั่งตามรายการด้านล่างนี้ของสภาวิชาชีพว่าด้วยค่าประมาณตามกฎหมายของรัฐที่เป็นสมาชิก EC/EU

TW：EC/EU 合格聲明

葛蘭富根據我們唯一的責任，茲聲明與以下聲明相關之 CU323, CU352, CU354, CU362, CU372 產品，符合下列近似 EC/EU 會員國法律之議會指令。

VI: Tuyên bố tuân thủ EC/EU

Chúng tôi, Grundfos, tuyên bố trong phạm vi trách nhiệm duy nhất của mình rằng các sản phẩm CU323, CU352, CU354, CU362, CU372 mà tuyên bố dưới đây có liên quan, tuân thủ các Chỉ thị Hội đồng sau về việc áp dụng luật pháp của các nước thành viên EC/EU.

AL: Deklarata e konformitetit e EC/BE

Ne, Grundfos, deklarojmë vetëm nën përgjegjësinë tonë se produktet CU323, CU352, CU354, CU362, CU372, me të cilat lidhet kjo deklaratë, janë në pajtueshmëri me direktivat e Këshillit të renditura më poshtë për përafrimin e ligjeve të shteteve anëtare të BE-së.

- Low Voltage Directive (2014/35/EU).
  Standard used:
  EN 61010-1:2010 + A1:2019
- EMC Directive (2014/30/EU).
  Standard used:
  EN 61326-1:2013
- RoHS Directive (2011/65/EU and 2015/863/EU).
  Standard used:
  EN IEC 63000:2018

This EC/EU declaration of conformity is only valid when published as part of the Grundfos installation and operating instructions (publication number 96842987, 96932409 and 97775216).

Bjerringbro, 30th June 2022

Joachim Krogshave
Head of PD CBS

Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro, Denmark
www.grundfos.com

Manufacturer and person empowered to sign the EU declaration of conformity.

UK declaration of conformity

UK declaration of conformity

We, Grundfos, declare under our sole responsibility that the products to which the declaration below relates, are in conformity with UK regulations, standards and specifications to which conformity is declared, as listed below:

Valid for products:

CU323
CU352
CU354
CU362
CU372

- Electrical Equipment (Safety) Regulations 2016
  Standards used:
  EN 61010-1:2010 + A1:2019
- Electromagnetic Compatibility Regulations 2016
  Standards used:
  EN 61326-1:2013
- The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2019
  Standards used:
  EN IEC 63000:2018

This UK declaration of conformity is only valid when accompanying Grundfos instructions (publication number 96842987, 96932409 and 97775216).

Bjerringbro, 30th June 2022

Joachim Krogshave
Head of PD CBS

Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro, Denmark
www.grundfos.com

Manufacturer and person empowered to sign the UK declaration of conformity.
10000340638

Ukrainian declaration of conformity

GB: Ukrainian declaration of conformity

We, Grundfos, declare under our sole responsibility that the products to which the declaration below relates, are in conformity with Ukrainian resolutions, standards and specifications to which conformity is declared, as listed below:

Valid for Grundfos products:

CU323, CU352, CU354, CU362, CU372

Resolution No. 1067, 2015 - Technical Regulation of Low Voltage Electrical Equipment

Resolution No. 533, 2018 - Amendments to some provisions

Standards used:

ДСТУ EN 61010-1:2014 + A1:2019

Resolution No. 1077, 2015 - Technical Regulations on Electromagnetic Compatibility

Resolution No. 533, 2018 - Amendments to some provisions

Standards used:

ДСТУ EN 61326-1:2016

Resolution No. 139, 2017 - Technical Regulations on Use of Certain Hazardous Substances in Electrical and Electronic Equipment

Standards used:

ДСТУ EN IEC 63000:2020

Importer address:

LLC Grundfos Ukraine, Business Center Europe

103, Stolychne Shose, UA-03026 Kyiv, Ukraine

Phone: (+380) 44 237 0400

Email: ukraine@grundfos.com

This Ukrainian declaration of conformity is only valid when accompanying Grundfos instructions.

UA: Українська декларація відповідності

Ми, Grundfos, заявляємо про свою виключну відповідальність за те, що продукція, до якої відноситься ця декларація, відповідає вимогам українським постановам, стандартам та технічним умовам, щодо яких заявлена відповідність, як зазначено нижче:

Дійсно для продуктів Grundfos:

CU323, CU352, CU354, CU362, CU372

Постанова № 1067 від 2015 р., Технічний регламент низьковольтного електричного обладнання

Постанова № 533 від 2018 р., Про внесення змін до деяких положень

Застосовані стандарти:

ДСТУ EN 61010-1:2014 + A1:2019

Постанова № 1077 від 2015 р., Технічний регламент з електромагнітної сумісності обладнання

Постанова № 533 від 2018 р., Про внесення змін до деяких положень

Застосовані стандарти:

ДСТУ EN 61326-1:2016

Постанова № 139 від 2017 р., Технічний регламент обмеження використання деяких небезпечних речовин в електричному та електронному обладнанні

Застосовані стандарти:

ДСТУ EN IEC 63000:2020

Адреса імпортера:

ТОВ "Грундфос Україна", Бізнес Центр "Європа"

Столичне шосе, 103, м. Київ, 03026, Україна

Телефон: (+380) 44 237 0400

Ел. пошта: ukraine@grundfos.com

Ця українська декларація відповідності дійсна лише за наявності інструкцій Grundfos.

Bjerringbro, 30-06-2022

Joachim Krogshave
Head of PD CBS

Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro, Denmark
www.grundfos.com

GB: Manufacturer and person empowered to sign the Ukrainian declaration of conformity
UA: Виробник та особа, уповноважена підписати українську декларацію відповідності
10000442097

EAC

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