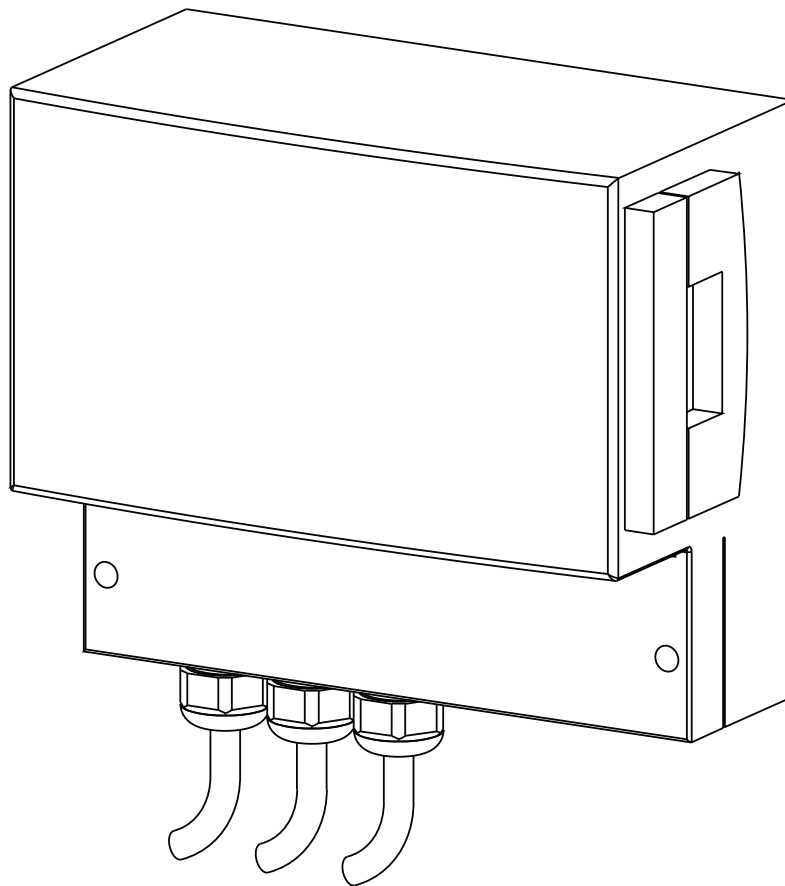


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**Control Panel Type ABS CP 151 - 254**

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**Control Panel Type ABS CP**

151                      153                      253                      254

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## 1 General

Controllers for use with pneumatic level sensing.

### 1.1 Control unit

Part no.	Description	Rated voltage V	Dimensions in mm		
			H	W	D
15207080	CP 151	230/1/50	185	235	115
15207075	CP 153	230/3/50	185	235	115
15207070	CP 153	400/3/50	185	235	115
15207060	CP 253	400/3/50	185	235	115
15207062	CP 254	400/3/50	185	235	115

## 2 Safety

The general and specific health and safety hints are described in detail in the separate booklet "Safety Instructions for Sulzer Products Type ABS". If anything is not clear or you have any questions as to safety make certain to contact the manufacturer Sulzer.

## 3 Transport



During transport the unit should not be dropped or thrown.

## 4 Design of the control panel.

The pump controllers are supplied in plastic enclosure of protection type IP54.

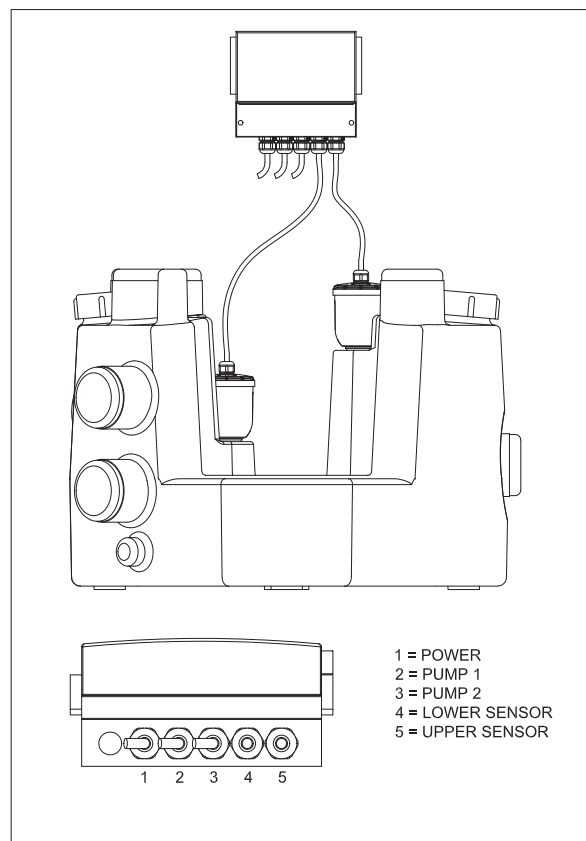


Figure 1: Switch box wiring Sanimat 1002

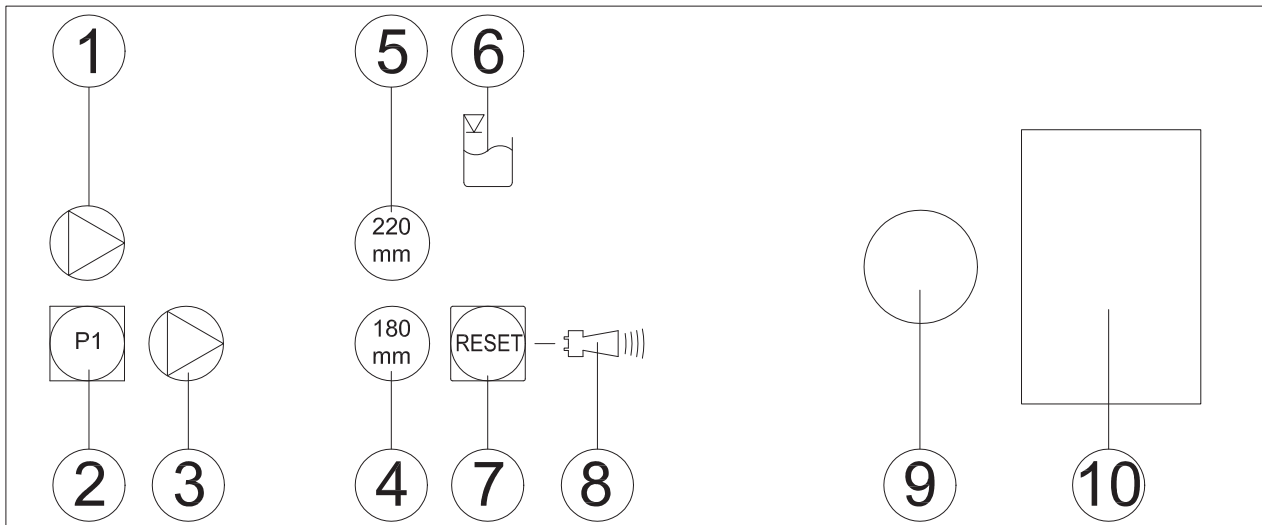
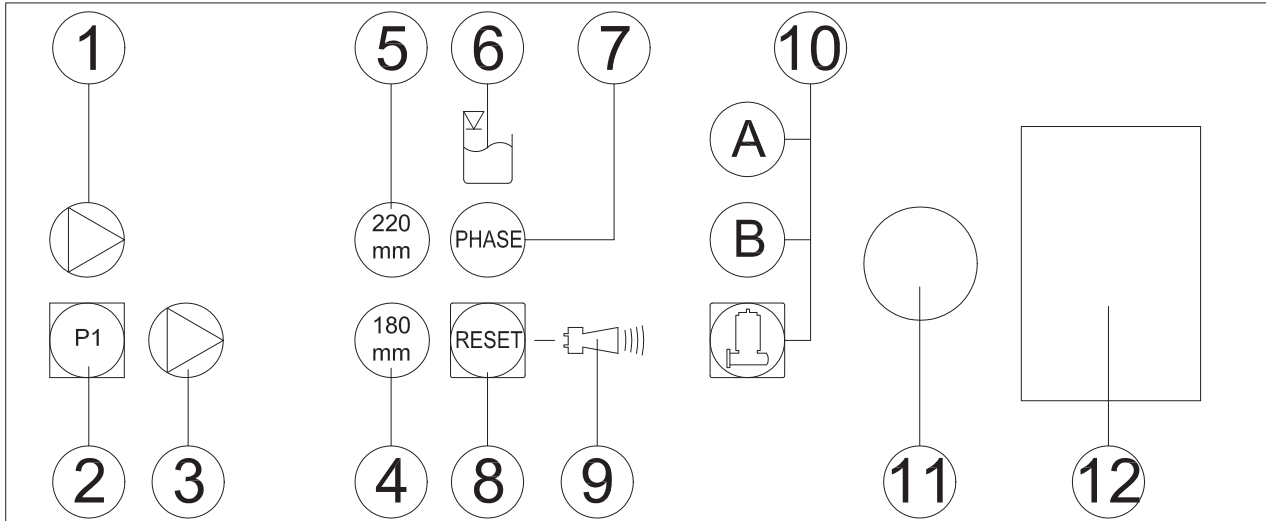


Figure 2: Operating elements CP 151

- 1. PUMP ON indicator (green)
- 2. HAND (AUTO) button
- 3. Pump alarm indicator (red)
- 4. 180 mm inlet indicator
- 5. 220 mm inlet indicator
- 6. High-level alarm indicator
- 7. Alarm reset button
- 8. Common alarm indicator
- 9. Acoustic alarm
- 10. Backup battery compartment

Fault Key					
LED	①	③	⑥	④ ⑤	⑧
High-level			ON		BLINK
Sensor error				BLINK	ON
Max. duty	ON	BLINK			BLINK
Motor protector		ON			BLINK

Figure 3: Fault key CP 151



1122/01

Figure 4: Operating elements CP 153

- |                               |  |
|-------------------------------|--|
| 1. PUMP ON indicator (green)  | 8. Alarm reset button                              |
| 2. HAND (AUTO) button         | 9. Common alarm indicator                          |
| 3. Pump alarm indicator (red) | 10. Program selection: A = D-motor, B = D/HD-motor |
| 4. 180 mm inlet indicator     | 11. Acoustic alarm                                 |
| 5. 220 mm inlet indicator     | 12. Backup battery compartment                     |
| 6. High-level alarm indicator |  |
| 7. Phase fault indicator      |  |

Fault Key						
LED	①	③	⑥	⑦	④ ⑤	⑨
High-level			ON			BLINK
Sensor error					BLINK	ON
Phase order				ON		BLINK
Phase missing				BLINK		BLINK
Max. duty	ON	BLINK				BLINK
Motor protector		ON				BLINK

Figure 5: Fault key CP 153

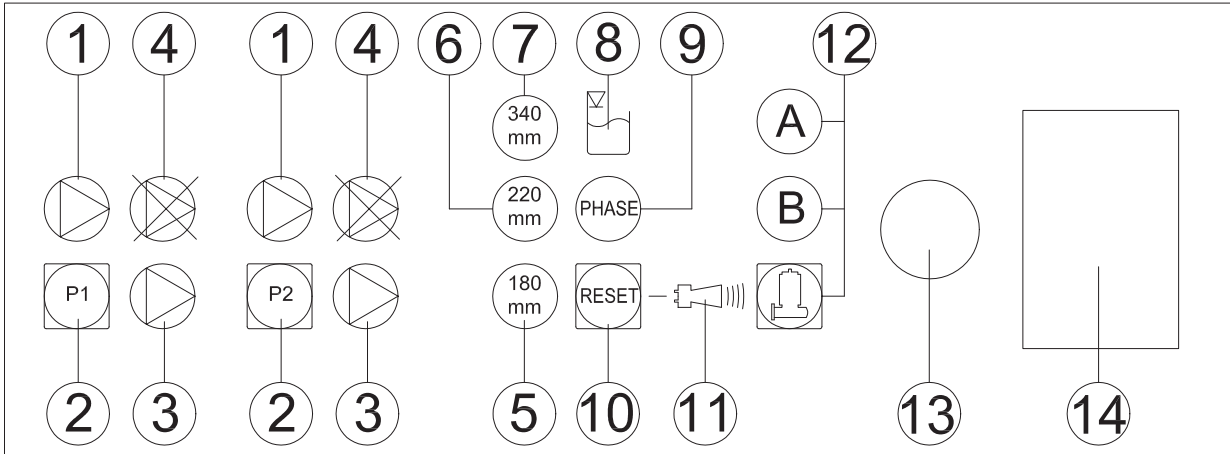


Figure 6: Operating elements CP 253

- |                               |  |
|-------------------------------|--|
| 1. PUMP ON indicator (green)  | 8. High-level alarm indicator                      |
| 2. HAND (AUTO) button         | 9. Phase fault indicator                           |
| 3. Pump alarm indicator (red) | 10. Alarm reset button                             |
| 4. MOTOR OFF                  | 11. Common alarm indicator                         |
| 5. 180 mm inlet indicator     | 12. Program selection: A = D-motor, B = D/HD-motor |
| 6. 220 mm inlet indicator     | 13. Acoustic alarm                                 |
| 7. 340 mm inlet indicator     | 14. Backup battery compartment                     |

Fault Key						
LED	①	③	⑧	⑨	⑤ ⑥ ⑦	⑪
High-level			ON			BLINK
Sensor error					BLINK	ON
Phase order				ON		BLINK
Phase missing				BLINK		ON
Max. duty	ON	BLINK				BLINK
Motor protector		ON				BLINK

Figure 7: Fault key CP 253

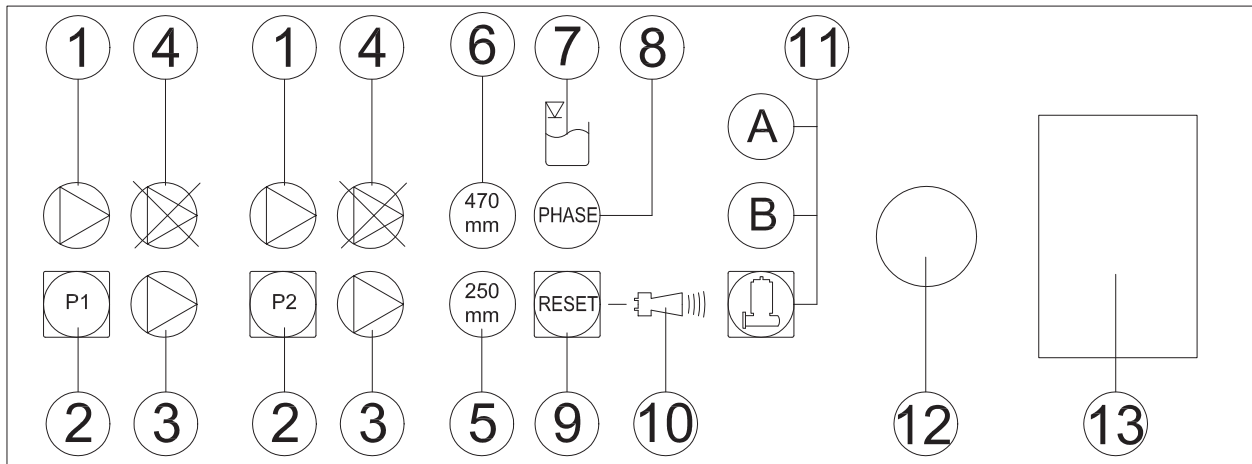


Figure 8: Operating elements CP 254

- |                               |   |
|-------------------------------|---|
| 1. PUMP ON indicator (green)  | 8. Phase fault indicator                          |
| 2. HAND (AUTO) button         | 9. Alarm reset button                             |
| 3. Pump alarm indicator (red) | 10. Common alarm indicator                        |
| 4. MOTOR OFF                  | 11. Program selection: A = HD-motor, B = XD-motor |
| 5. 250 mm inlet indicator     | 12. Acoustic alarm                                |
| 6. 470 mm inlet indicator     | 13. Backup battery compartment                    |
| 7. High-level alarm indicator |   |

Fault Key						
LED	①	③	⑦	⑧	⑤ ⑥	⑩
High-level			ON			BLINK
Sensor error					BLINK	ON
Phase order				ON		BLINK
Phase missing				BLINK		ON
Max. duty	ON	BLINK				BLINK
Motor protector		ON				BLINK

Figure 9: Fault key CP 254

## 4.1 Description of the indicating and operating elements of the control panel.

### 4.1.1 PUMP ON indicator

The PUMP ON indicator (green) will light when the pump is running.

### 4.1.2 HAND/OFF/AUTO button

When the hand/auto button is pressed the pump will run. The pump on indicator will light.

When the button is released the pump is in automatic mode. In automatic mode the pump is controlled by the pneumatic level sensor. In addition the pump controller is programmed to activate the pump every 24 hours regardless of water level.

### 4.1.3 Pump alarm indicator

The pump alarm indicator (red) will light when there is a pump fault.

### 4.1.4 MOTOR OFF (Pump Automatic Function Disabled)

This indicator illuminates if the pump's automatic function is disabled. The automatic function is disabled by pressing the reset button and either pump 1 or pump 2 button together. To re-enable the automatic function repeat the procedure.

### 4.1.5 Inlet indicators

If the 180 mm tank inlet port is used, press and hold the reset button for 5 seconds until the 180 mm light activates (180 mm is set at the manufacturer).

If the 220 mm tank inlet port is used, press and hold the reset button for 5 seconds until the 220 mm light activates.

If the 340 mm tank inlet port is used, press and hold the reset button for 5 seconds repeatedly until the 340 mm inlet light activates.

If the 250 mm tank inlet port is used, press and hold the reset button for 5 seconds until the 250 mm light activates (250 mm is set at the manufacturer).

If the 470 mm tank inlet port is used press and hold the reset button for 5 seconds until the 470 mm light activates.

### 4.1.6 High-level alarm indicator

The high level alarm indicator will light when the water level in the lifting station is too high.

### 4.1.7 Phase fault indicator

The phase fault indicator will light when there is a fault with the three phase power supply (not for CP151).

### 4.1.8 Alarm reset button

The alarm reset button is used to reset the control panel when a fault is indicated.

If the fault remains the common alarm indicator will stop flashing and will permanently illuminate

If this happens, contact your local Sulzer service center.

### 4.1.9 Common alarm indicator

The common alarm indicator will flash (Red) when a new alarm occurs.

### 4.1.10 Program selection

Press  and  to change program.

### 4.1.11 Acoustic alarm

The acoustic alarm will sound when a fault occurs.

### 4.1.12 Backup battery

In the case of loss of power to the control panel the 9V PP3 NiMH backup battery will activate the alarm (not included).



Risk of explosion if battery is incorrectly replaced.



## 5 Installing the control panel

### 5.1 Electrical connection.



Isolate at mains before opening the control panel.

Before starting up the unit, a qualified person should check that all necessary electrical protective devices are present. Earthing, neutral line, earth leakage circuit breaker, etc. must comply with the regulations of your local electricity board and a qualified person should check that they are functioning correctly.

**ATTENTION** *The power supply system on site must comply with VDE or other local regulations with regard to cross-sectional area and maximum voltage drop. The voltage stated on the nameplate of the pump must correspond to that of the mains*

The power supply cable must be protected by an adequately dimensioned slow-blow fuse corresponding to the rated power of the pump

### 5.2 Mounting of the control panel

**ATTENTION** *The control panel should be fitted above possible flood level in a well ventilated room and in an easily accessible position. Protection Class of the control unit is IP 54.*

The control panel should be secured at all fixing points. The fixing holes are accessible after unscrewing the lower housing cover.

**ATTENTION** *Do not drill through the housing of the control panel itself.*

## 6 Commissioning



The safety hints in the previous sections must be observed!

Before commissioning the unit should be checked and a functional test carried out. Particular attention should be paid to the following:

- Have the electrical connections been carried out in accordance with regulations?
- Is the direction of rotation correct - even if run via an emergency generator?
- Has the venting of the collection tank been installed in accordance with regulations?

**ATTENTION** *After the control panel has been commissioned, the unit is run in AUTOMATIC mode.*

## 7 Maintenance



Before commencing any maintenance work the unit should be completely disconnected from the mains by a qualified person and care should be taken that it cannot be inadvertently switched back on.



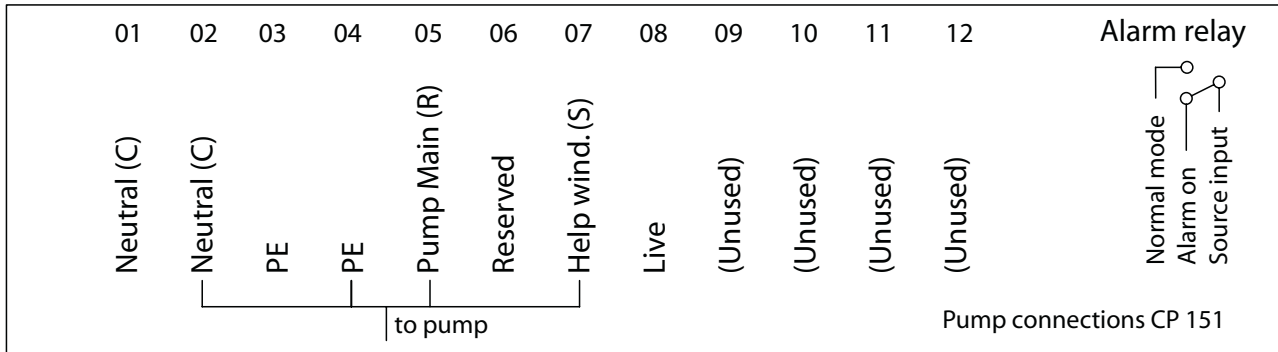
When carrying out any repair or maintenance work, the safety regulations covering work in enclosed areas of sewage installations as well as good general technical practices should be followed.

**NOTE** *The maintenance hints given here are not designed for “do-it-yourself” repairs as special technical knowledge is required.*

**NOTE** *A maintenance contract with our Service Department will guarantee you the best technical service under all circumstances.*

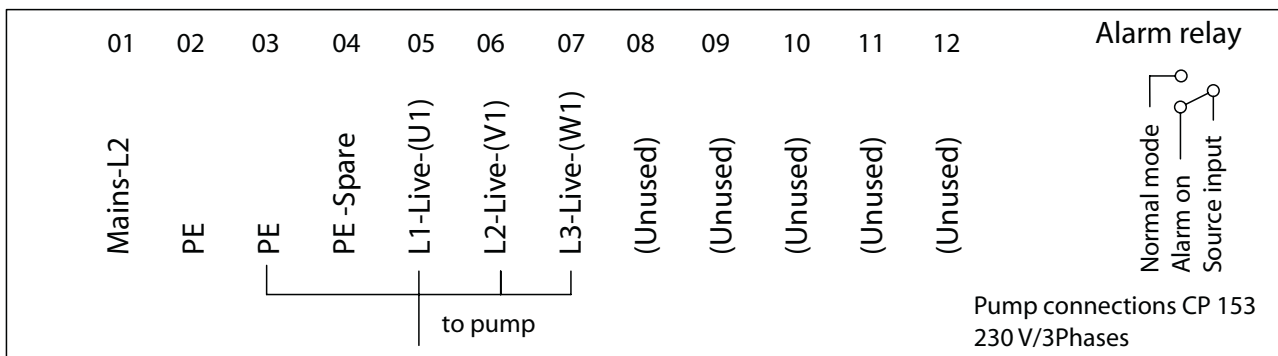
## 8 Appendix

### 8.1 Connection diagrams



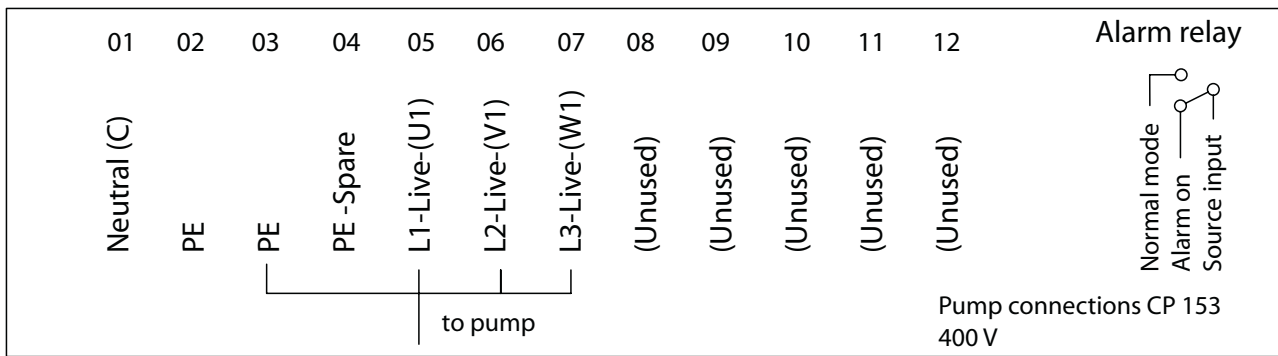
1125-01

Figure 10: Pump connections CP 151



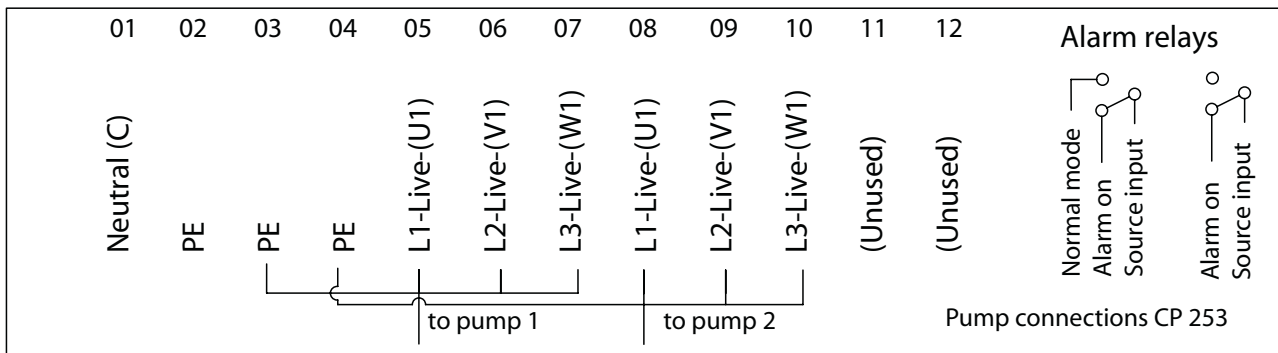
1124-01-230V

Figure 11: Pump connections CP 153 (230 V - three phase)



1124-01-400V

Figure 12: Pump connections CP 153 (400 V)



1128-00

Figure 13: Pump connections CP 253 & CP 254



