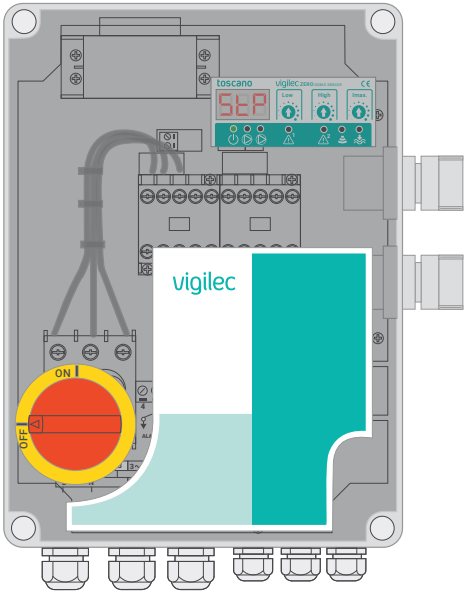
V2ZPS

Ed.4.26

USER MANUAL

EN

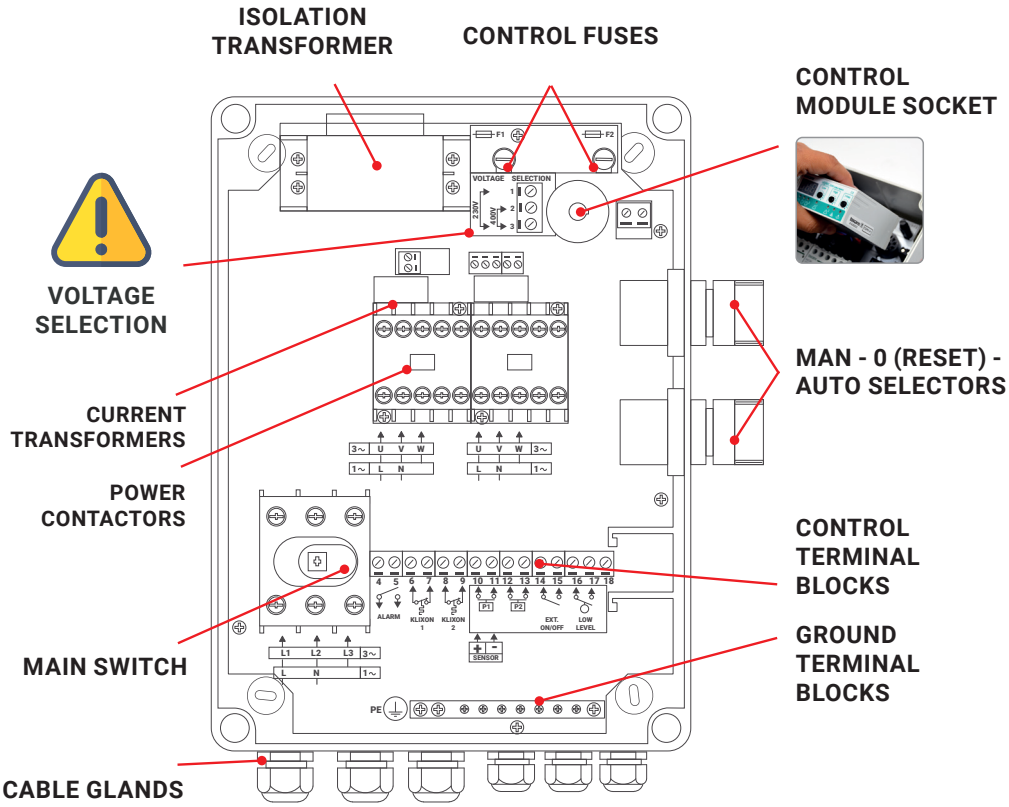
Vigilec zero press double sensor. Control and protection of two pumps.



Warning

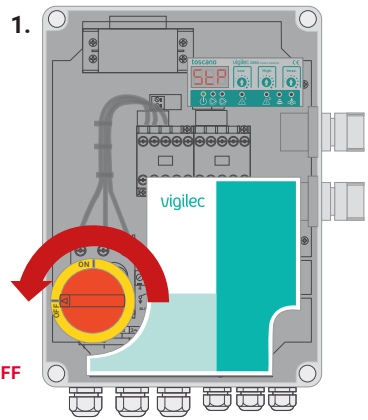
CAUTION! Before making any adjustments, it is essential to connect the motor to the equipment to avoid unintentional tripping of the underload protection (minimum load 0.5A). We recomend to follow all procedure and safety instructions approved in your area operating with equipment connected to the electrical power supply. Important safety information is detailed hereafter. For safe installation and operation of this equipment, be sure to read and understand all cautions and warnings. ⚠ **WARNING:** Before installing, operating, servicing, or testing this equipment, read and understand the contents of this manual. Improper operation, handling, or maintenance could result in death, serious personal injury, and equipment damage. ⚠ **WARNING:** This equipment is not designed to safeguard human lives. Follow all locally approved safety procedures and practices installing or operating this equipment. Failure doing so could result in death, serious personal injury, and equipment damage. ⚠ **WARNING:** Dangerous voltages. Contact with electrical current will cause serious personal injury or death. Follow all locally approved safety procedures when working near high voltage lines and equipment ⚠ **WARNING:** This equipment requires periodic inspection and maintenance to ensure proper operation. If not properly maintained, it may fail to operate properly. Incorrect operation could cause damage to the equipment and possibly result in personal injury. ⚠ **WARNING:** All connections must be made by a qualified person in charge. There is a risk of electric shock if this warning is not heeded. ⚠ **WARNING:** Additional protection of the pump motor may be added when necessary in the installation. ⚠ **WARNING:** Power input and lighting output require appropriate fuses.

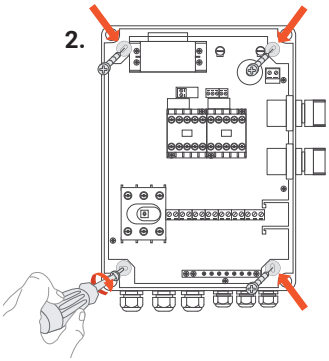
1. Internal configuration V2ZPS.



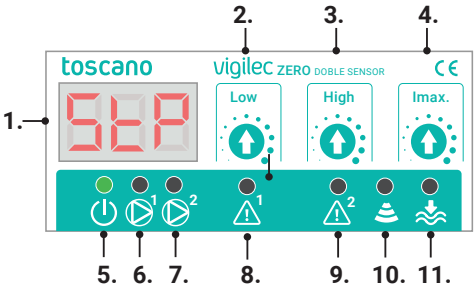
1. We turn the box roulette to OFF and remove the lid.

2. Screw the box to the wall through the opening as shown in the drawing.





2. Control module.



1. Digital display L30

2. Low pressure setting

3. High pressure setting

4. Overload setting

5. Voltage presence

6. Pump 1 running

7. Pump 2 running H42

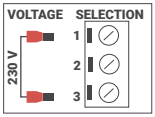
8. Pump 1 overload / phase failure S9R

9. Pump 2 overload / phase failure

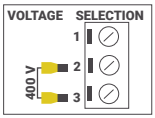
10. Infrared communication

11. Low level

3. Voltage selection



230 V

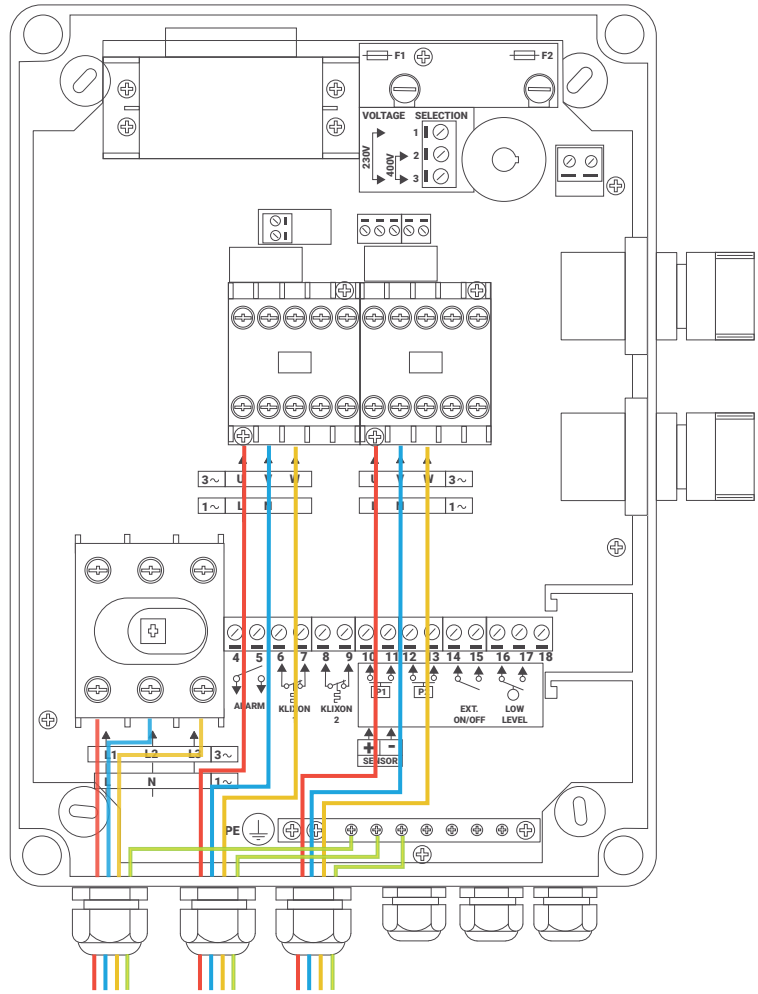


400 V



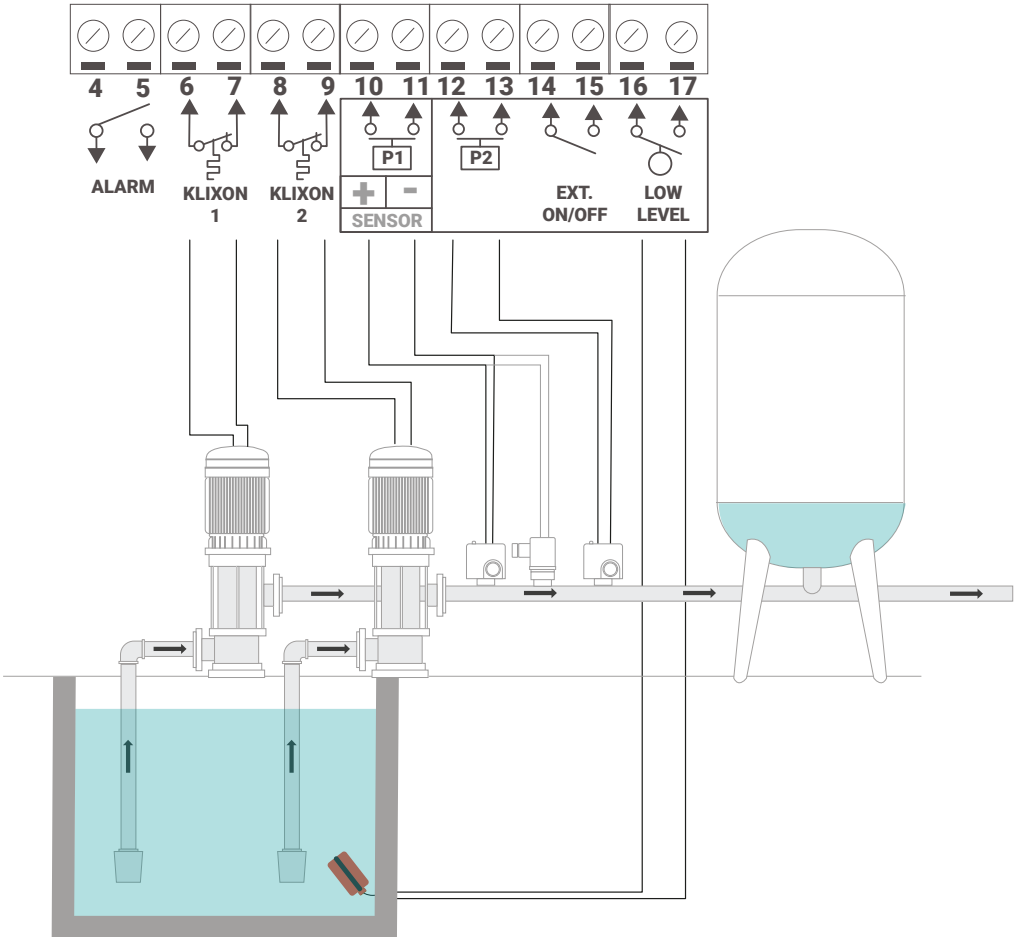
To access the selection of the voltages, it is necessary to remove 1 the module as shown in the photo and then make the connections according to the model of voltage we have chosen.

4. Power connections.

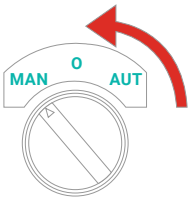


L N PE	L N PE
230VAC (L-N)	230VAC (L-N)
L1 L2 L3 PE	U V W PE
400VAC (L1-L2-L3)	400VAC (L1-L2-L3)

5. Control connections.



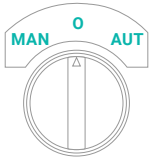
6. Selectors.



Manual mode

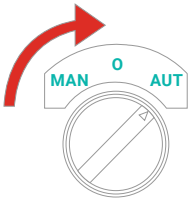
Pump started but not protected.

The display shows motor current and flashing LED Warning 1.



Off Mode

Pump off, can't perform any action.



Automatic mode

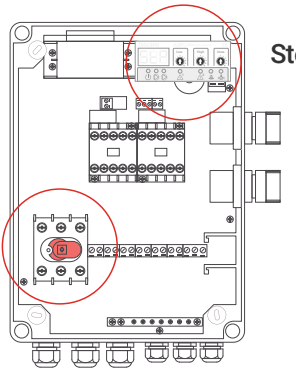
The pump operates according to the programmed configuration with the chosen option.

Options:
Pressure switch
Pressure sensor (4-20mA 10 Bar)
Low level buoy.

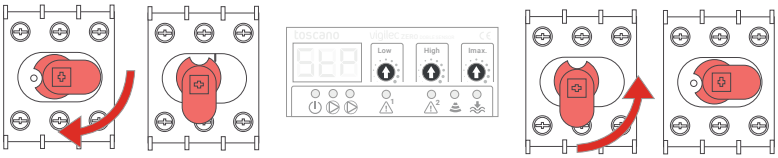


7. Module Startup.

Step 1 and 3.



Step 2.



Step 1.

Inside the device there is a lever that has to be turned downwards in order to be able to configure the control module later.

Step 2.

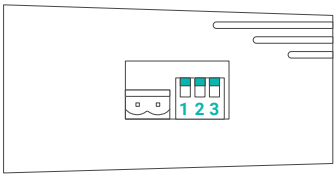
In the side of the module, we choose the control option that we are going to use and we configure the levels of pressure and intensity of the pump according to our interest.

Step 3.

We go back to the lever and turn it up to close the device.

8. Control mode selection.

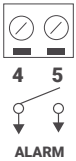


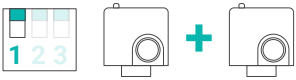


Lateral module

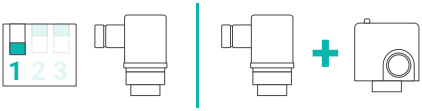


Connection for alarm. Plugs for connecting terminals 4 and 5 (alarm).





Opction 1. Two pressure switches. Two pressure switches. Cannot be adjusted in the module.



Option 2. One sensor only. A pressure sensor and a pressure switch. It can be adjusted in the module.



B1 = 2 sec. / B2 = 1sec



B1 = 30 sec. / B2 = 5sec



B1 = 60 sec. / B2 = 10sec

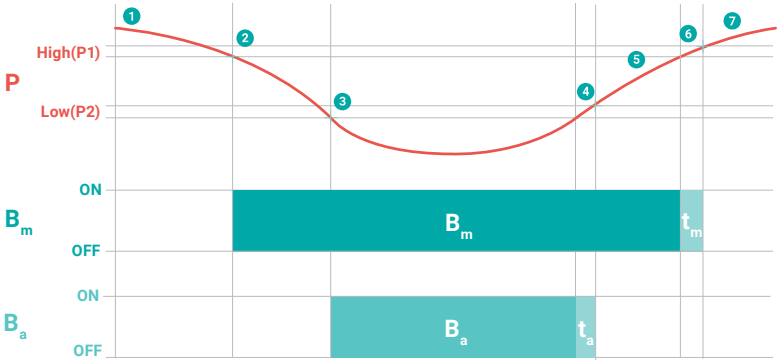


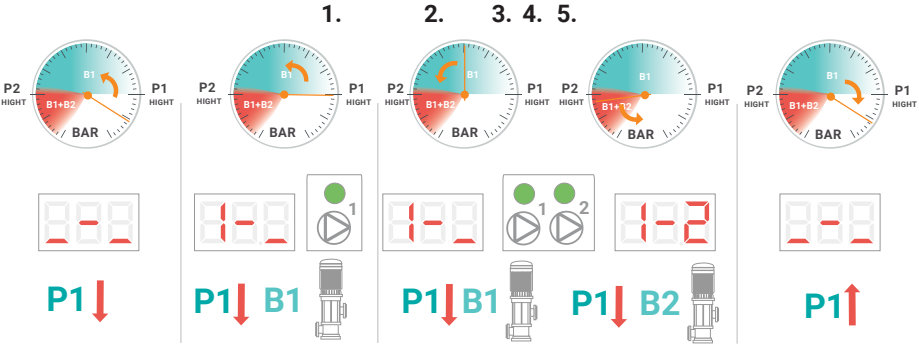
B1 = 180 sec. / B2 = 30sec

9. Example of operation with pressure switch.



t= Time
B= Pump
P= Pressure





The pump pressure starts to drop.

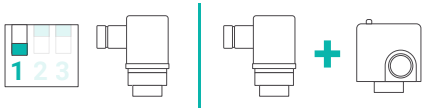
1. B1.Main pump is switched on.

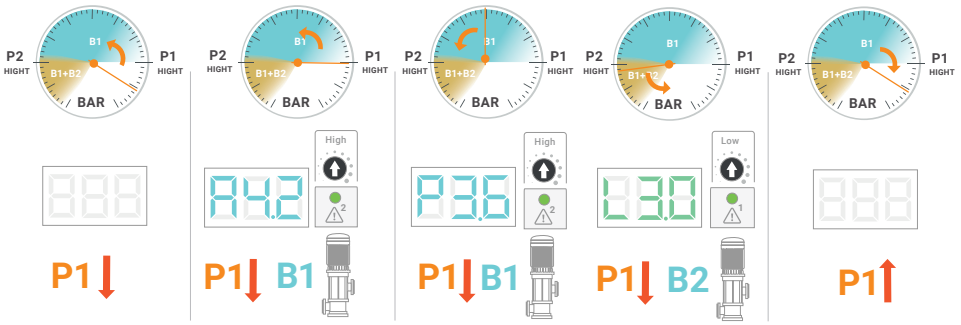
2. The pressure continues to drop and B1+B2 (Main Pump + Auxiliary Pump Start) lights up.
3. T. Time that auxiliary pump remains on.

4. The pressure starts to stabilise and B2 goes off. B1 remains on (main pump).
5. T. Time main pump remains on.

B1 shuts down and the pump pressure continues to rise until it returns to its normal state.

10. Example of operation with pressure sensor 4-20mA.





The pump pressure starts to drop.

1. B1.Main pump is on

2. The pressure continues to drop and B1+B2 (Main Pump + Auxiliary Pump Start) lights up.

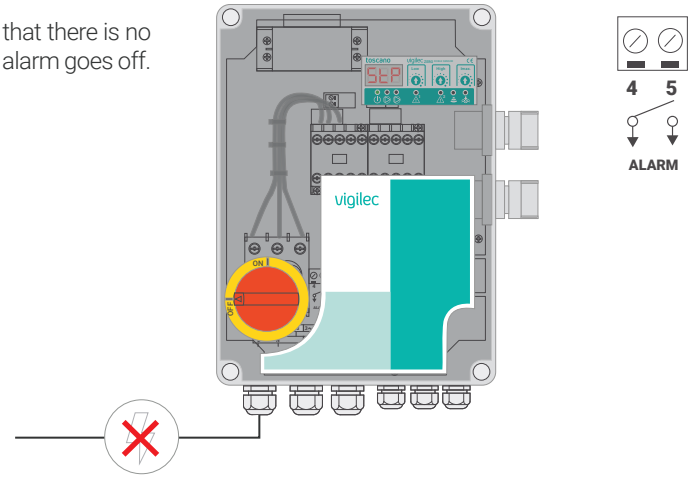
4. The pressure starts to stabilize and B2 goes off. B1 remains on (main pump).

B1 shuts down and the pump pressure continues to rise until it returns to its normal state.

11. Alarms

Power failure

If it detects that there is no current, the alarm goes off.



Alarm messages

If any fault is detected in the pump or any of the cables are not properly connected, the pump is switched off and messages appear warning of overload or underload.



Phase failure



Pump failure



I motor >

I motor < 0,5A

Air deprivation detection

If the pump tries to start more than ten consecutive times in less than three minutes and fails to start, an error is detected and the alarm is activated.



Sensor failure 4-20mA

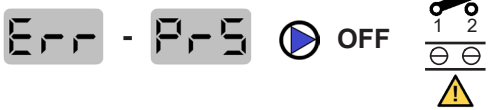
If the sensor is above 20mA or below 4mA with the pump started, an error is detected and the pump is turned off.





Sensor pressure error 4-20mA

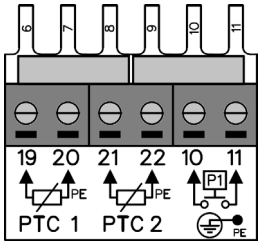
If the pressure is more than 60s below 20% with the pump on, it detects error and shuts off.



12. Other functions - Additional options.

1. Alternating pumps with delayed start and stop.
2. Automatic switching of pumps in case of failure or deactivation of one of them.
3. Additional options: main switch, bimetallic overload relay or phase sequence relay.

13. Optional modules for direct installation on the control terminals.



Motor protection PTC

~~Klixon~~

PTC thermistor



14. Technical characteristics.

Supply voltage	230Vac I/III or 400Vac III (selectable) -20%...+30% - 50/60Hz
Control transformer	230-400Vac / 24Vac, primary fuse: 0.2A (F1), secondary fuse: 0.8A (F2)
Pump current range	1...12A (V2ZPS) / 5...16A (V2ZPS-E) / 5...22A (V2ZPS-F) - AC3
Overload setting (Imax)	1.1...13A (V2ZPS) / 5.1...30A (V2ZPS-E/F) / alarm trip in 7 seconds
Control mode	Pressure switches or 4-20mA pressure sensor
Control input voltage	24Vdc (pressure switches, low level float switch and external ON/OFF control)
4-20mA sensor supply voltage	24Vdc
Sensor range	10 Bar
Sensor failure detection	Open circuit and short circuit
Low pressure setting	0.1...9.8 Bar
High pressure setting	0.3...10 Bar
Minimum distance between PHi and PLo	0.2 Bar
Terminal blocks wiring size	10mm² (power supply) 4mm² (control)
Protections	Overload, phase failure and pump overheating (Klixon contacts)
Alarm contact	5A 250Vac
Alarm contact activation	Overload, phase failure, sensor failure, power supply failure, air error and pressure error.
Recorded information (PUMP-CHECK)	Module identification number, counters resets, pump operation hours, pumps starts, pumps alarms and last alarm tripping current.
Size/Weight/IP/Temperature	300 (h) x 220 (w) x 120 (d) mm / 3550g / IP65 / -10º...+55º C
Cable gland configuration	1xM25 (main supply) / 2xM20 (motors) / 6xM16 (controls)

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