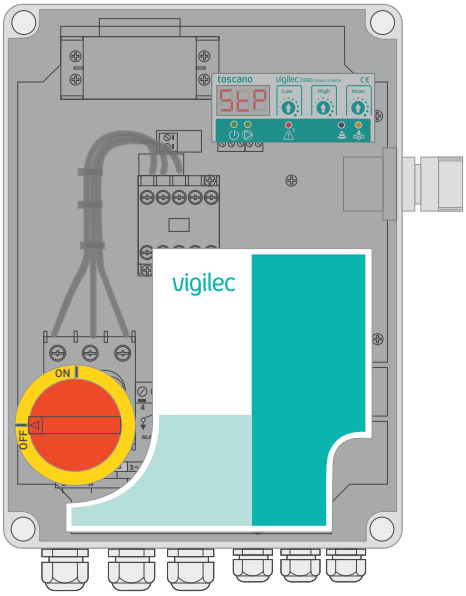
V1ZBS vigilec

Ed. 3.26

User manual

EN

Vigilec zero Drain sensor.



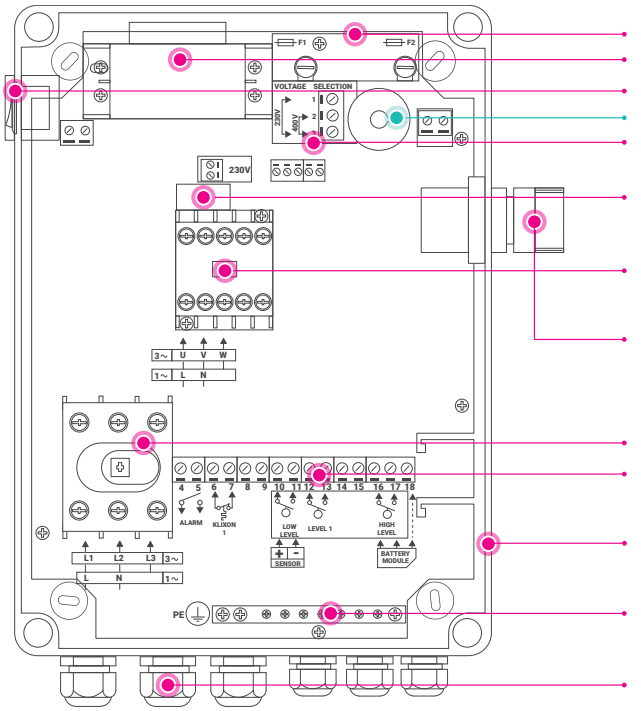
Warning

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.

toscano

1.Internal configuration V1ZBS

CONTROL MODULE SOCKET



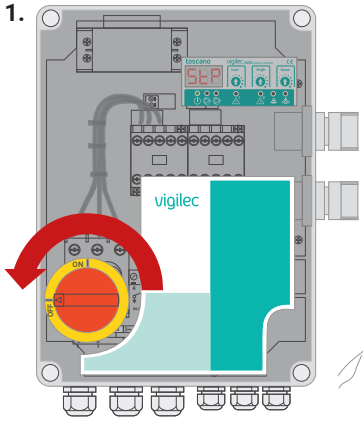
- Control fuses
- Isolation transformer
- Buzzer+ON/OFF switch
- Control module socket
- Voltage selection
- Current transformer
- Power contactor
- MAN - 0 (reset) - AUTO selector
- Main switch
- Control terminal blocks
- Protection IP65
- Ground terminal blocks
- Cable glands

1. Turn the main switch of the box to OFF and remove the cover.

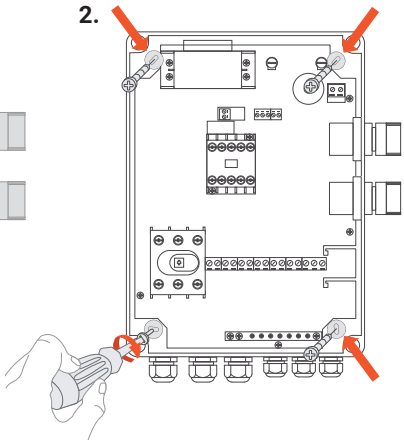
2. Screw the box to the wall through the opening as shown in the drawing.

OFF

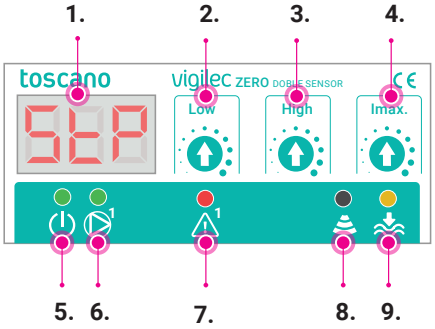
1.



2.



Control module



1. Display

2. Low level setting

3. High level setting

4. Overload setting

5. Power ON

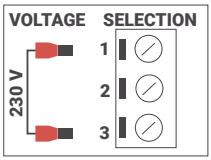
6. Pump ON

7. Pump overload / Phase loss

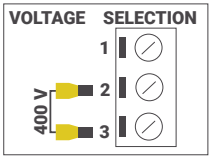
8. Infrared comunication

9. High level

Voltages selection



230 V



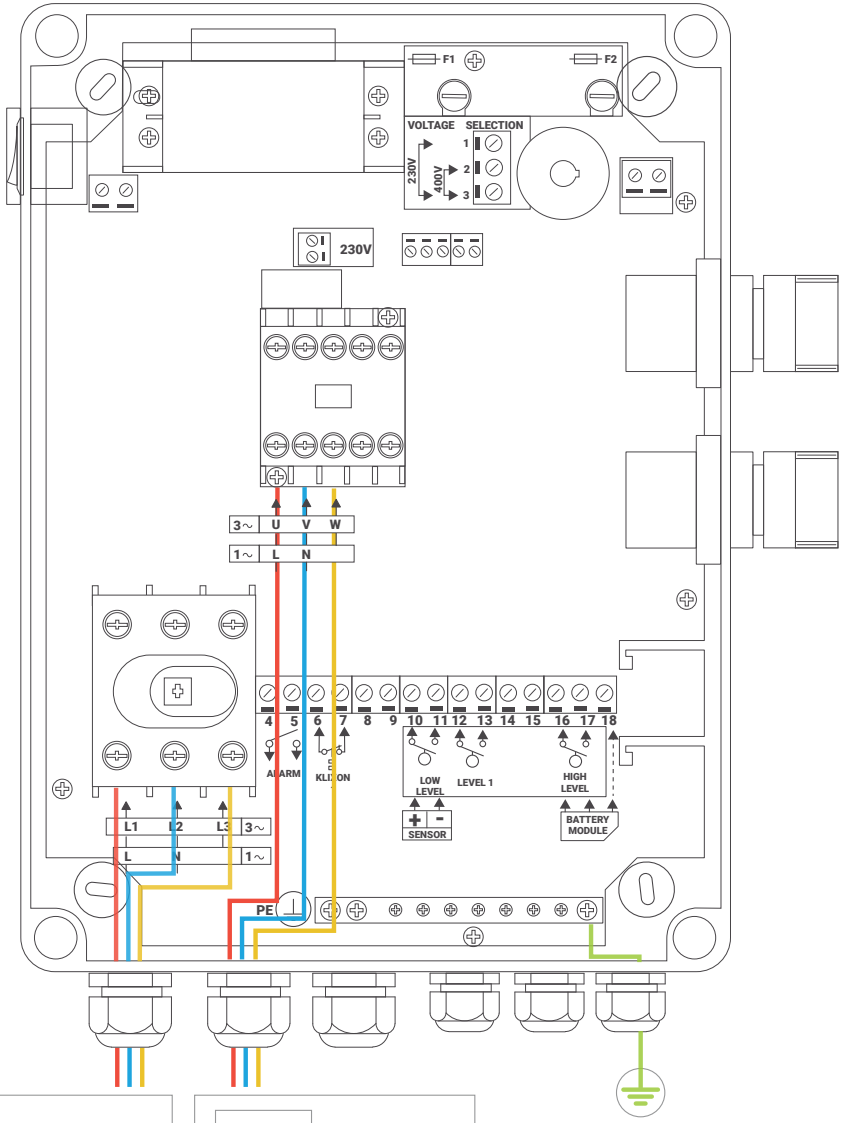
400 V



THE VOLTAGE SELECTION IS LOCATED JUST BELOW THE MODULE.

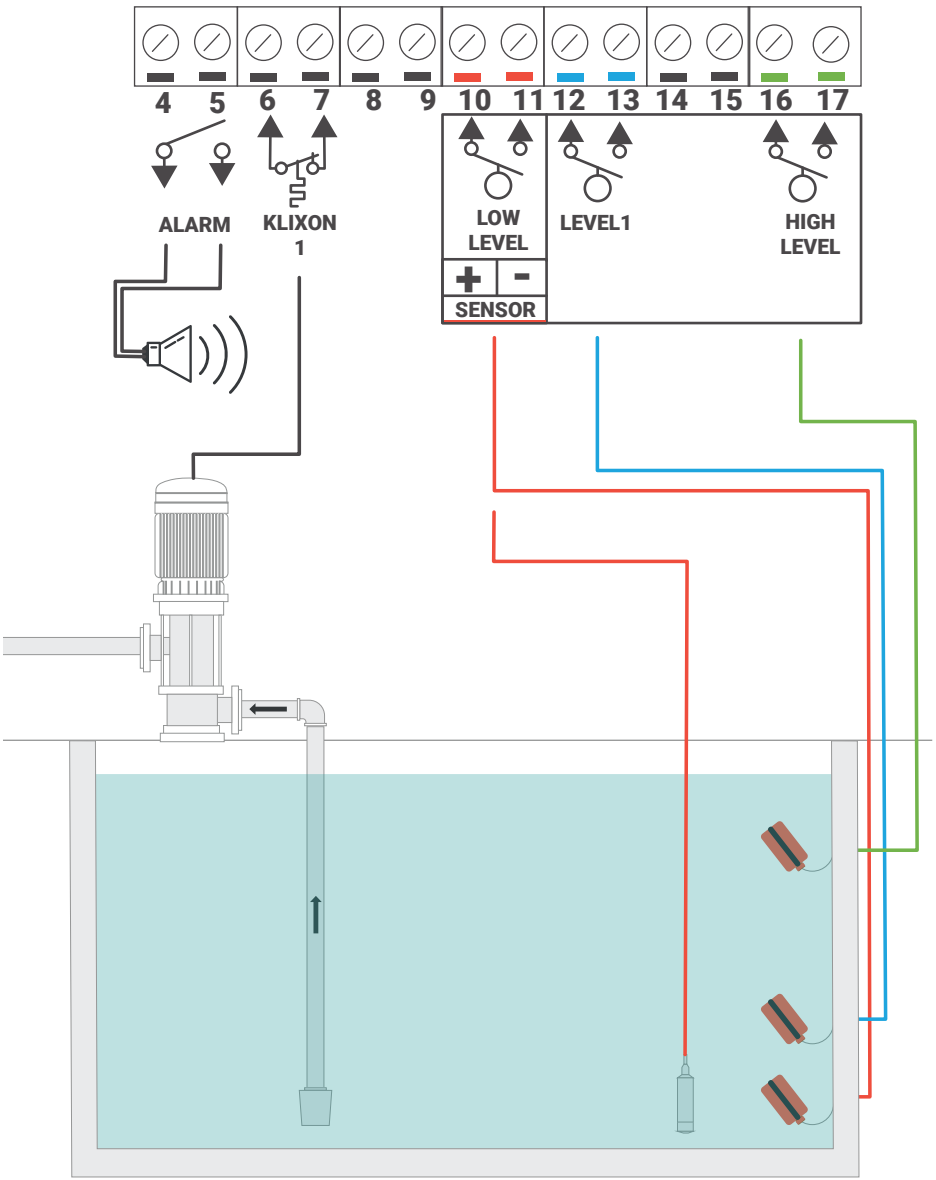
In order to access to the selection of the voltages, it is necessary to remove the control module as shown in the photo and then make the connections according to the voltage model that we have chosen.

Power connections

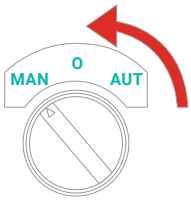


L N	U V W
230VAC (L-N)	230VAC (L-N)
L1 L2 L3	L N
400VAC (L1-L2-L3)	400VAC (L1-L2-L3)

Control connections



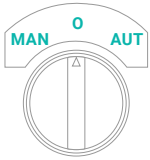
Selectors



Manual mode

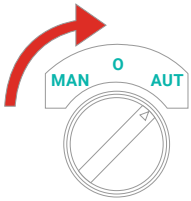
Pump started but not protected.

The display shows motor current and flashing LED overload.



OFF mode

Pump off, cannot perform any action.



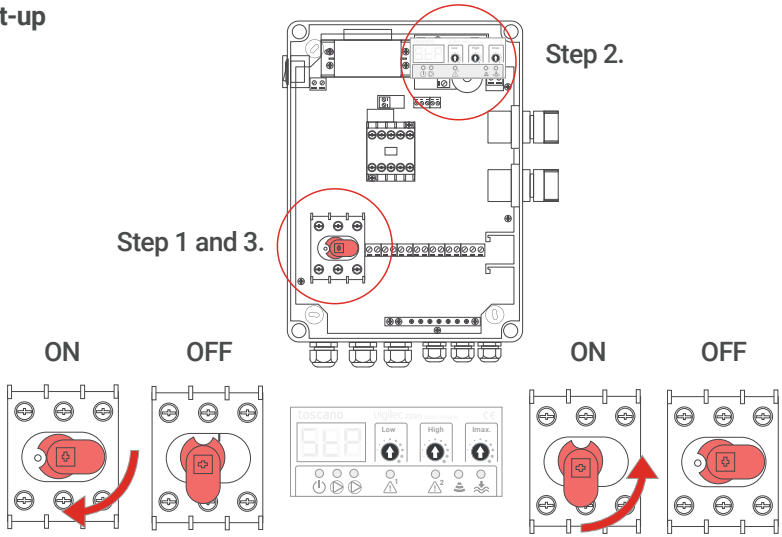
Automatic mode

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

Options:
- Level sensor (4-20mA)
- Level floatswitch



Set-up



Step 1.
Inside the unit, turn the main switch "OFF" so that the control module can be configured at a later time.

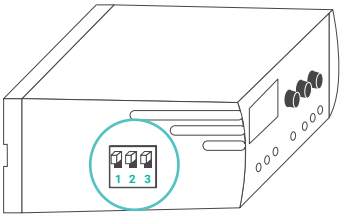
Step 2.
On the side of the module, we choose the control option that we are going to use and we configure the levels of pressure and intensity of the pump according to application.

Step 3.
We return to the "ON" position to close the main switch.

Selecting the control mode

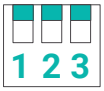
Three switches on the left side of the module must be used to select the control mode.





Option 1 . Floatswitch. Adjust to have only sensorless floatswitchs.

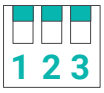




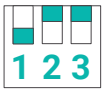
Sensor OFF

Option 2. Sensor .Adjust according to the maximum depth of the well.





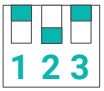
Sensor OFF



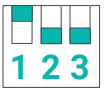
1,0 = One meter



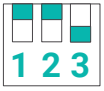
1,5 = One and a half meters



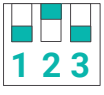
2,0 = Two meters



2,5 = Two and a half meters



3,0 = Three meters

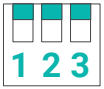


4,0 = Four meters

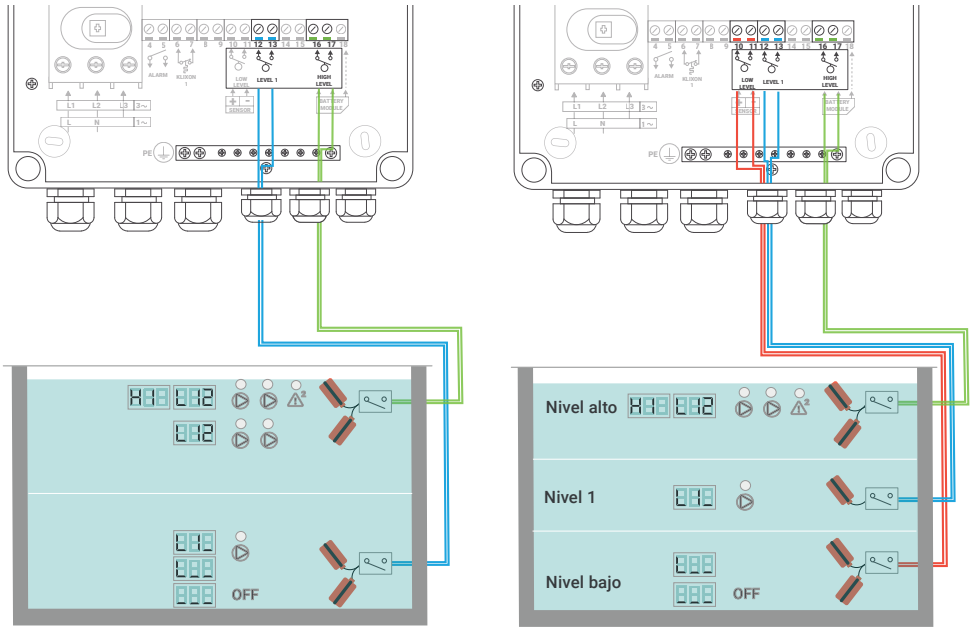


5,0 = Five meters

Example of functioning with floatswitchs



Sensor OFF





High water level. The alarm is activated.



Pump 1 activated.



Low level water

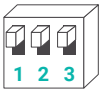


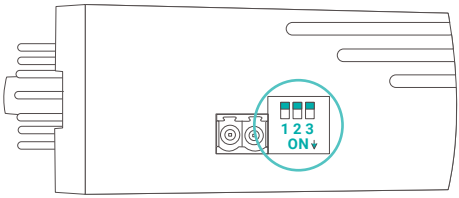
OFF = Correct water level, pumps off.

Example of functioning with hydrostatic level sensor 4-20mA

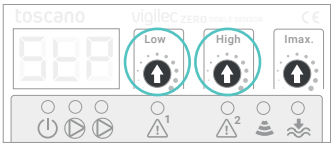


Step 1: Select well depth. To do this, use the three switches on the left side of the module.

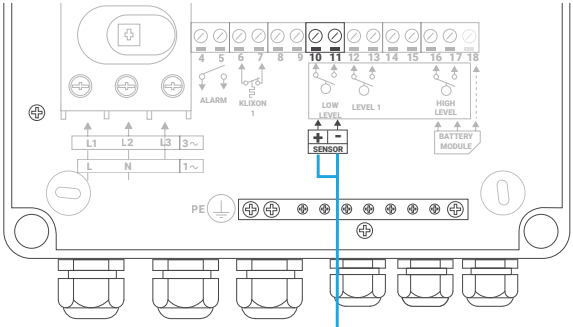




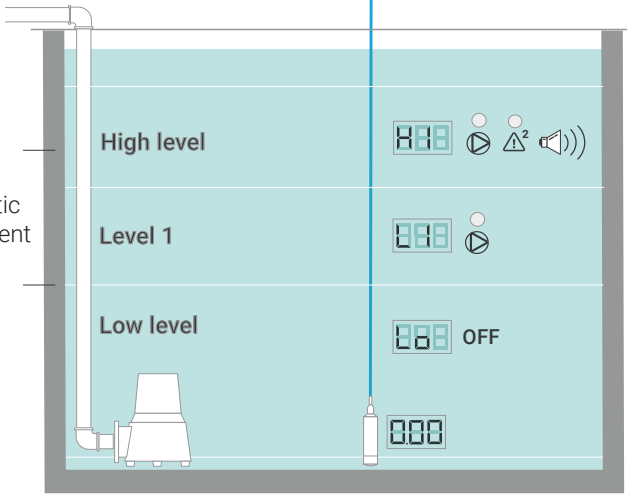
Step 2: Adjust low level (minimum 10cm).
Step 3: Adjust high level (minimum 20cm).



Step 4: The intermediate levels (high and low) are automatically adjusted.



Sensor measures well depth



Automatic adjustment

the alarm is triggered

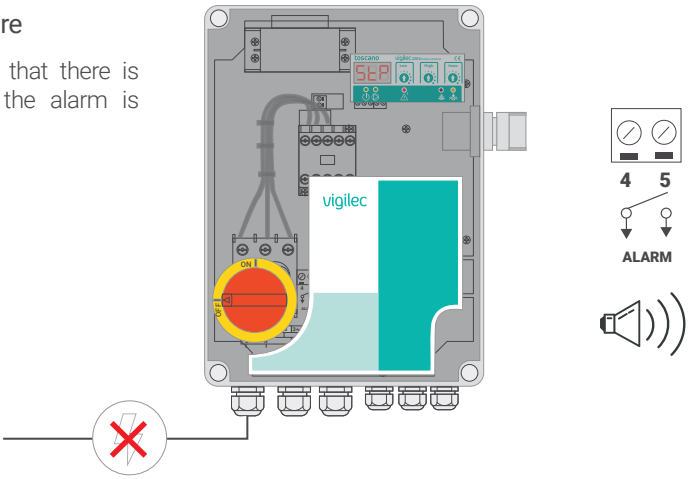


the alarm is switched off

Alarms

Power failure

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



Alarm messages

If any fault is detected in the pump or if 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

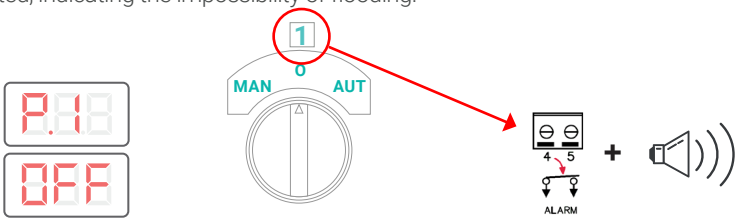


I motor >

I motor < 0,5 A

Pump alarm off

If the pump is deactivated (0) leaving no possibility of starting the drain, the alarm output will be activated, indicating the impossibility of flooding.



Sensor failure (4-20 mA hydrostatic level sensor)

If the sensor is above 20 mA or below 4 mA with the pump running, the sensor error is detected, the pump is turned off and the equipment activates the alarm signal.



Anti-blocking protection. (Preventive rotor blocking system)

Every 23 hours the pump is operated for 1 second, thus avoiding possible faults after long periods of inactivity.

Other functions - Additional options

Main switch, bimetallic overload relay or phase sequence relay.

Technical characteristics

Supply voltage	230 VAC I/III or 400 VAC III (selectable) -20 %...+30 % - 50/60 Hz
Control Transformer	230-400 VAC / 24 VAC, primary fuse: 0,2 A (F1), secondary fuse: 0,8 A (F2)
Pump intensity range	1...12 A (V1ZBS) / 5...16 A (V1ZBS-E) / 5...22 A (V1ZBS-F) - AC3
Overload Adjustment (Imax)	1,1...13 A (V1ZBS) / 5,1...30 A (V1ZBS-E/F) / alarm triggered in 7 seconds
Control mode	Floatswitchs and/or hydrostatic level sensor 4-20 mA or conductive probe (+optional module)
Control input voltage	24 VDC (floatswitchs)
Sensor Power Voltage 4-20mA	24 VDC
Sensor range	1 m, 1,5 m, 2 m, 2,5 m, 3 m, 4 m o 5 m (selectable)
Sensor fault detection	Open circuit and short circuit
Low Level Adjustment	10 cm...sensor range
High Level Adjustment	Low level + 10 cm...sensor range
Level 1 Adjustment	1/3 automatic start (high level - low level)
Terminal wiring cross-section	10 mm² (alimentation) 4 mm² (control)
Protections	Pump overload, phase failure and overheating (Klixon contacts)
Alarm contact	5 A 250 VAC
Activation of the alarm contact	Overload, phase failure, sensor failure, high level, no pumps in AUTO, power failure.
Acoustic alarm	12 VDC - 90 dB
Recorded Information (PUMPCHECK)	Module identification number, restart counter, pump running hours, pump starts, pump alarms, intensity of last alarm trip.
Size / Weight / IP / Temperature	300 (a) x 220 (l) x 120 (p) mm / 3550 g / IP65 / -10ºC...+55ºC
Cable gland configuration	1xM25 (alimentation) / 2xM20 (motors) / 6xM16 (control)

For other needs please contact our Sales Department. **ventas@toscano.es**

Notes

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Notes

Cod. 50024109. Ed. 3.26