

Pump controller and protection for one pump
Multicontrol

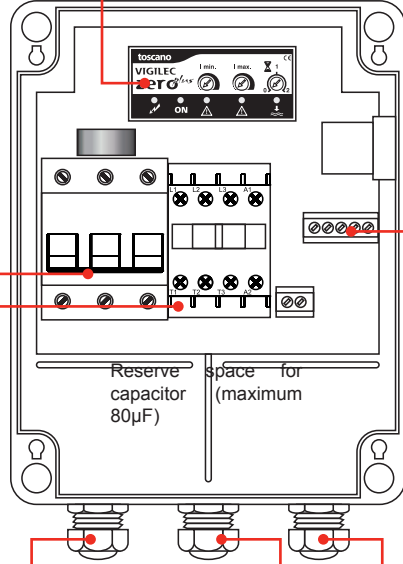
INSTALLATION AND OPERATION

Internal configuration

Control module

Circuit Breaker

Contactor



Reserve capacitor 80µF
space for (maximum)

MAN-0-AUT selector

- **MAN.** It makes the direct running of the pump. The control module is not needed in this mode. In this case, we will have no pump protection.
- **0.** Stops the pump. The start of the pump is not allowed in this mode. It also performs a reset of the device level, overload or underload alarm.
- **AUT.** The unit will work automatically according with the controls and protections provided.

Control terminal blocks

Main supply cable gland

Motor cable gland

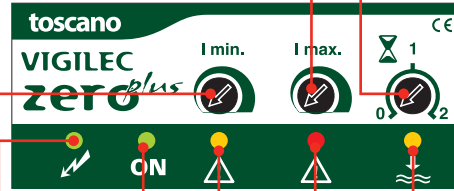
Control cable gland

Module status layout

UNDERLOAD adjustment

OVERLOAD adjustment

RE-START time adjustment (0-2 Hours)



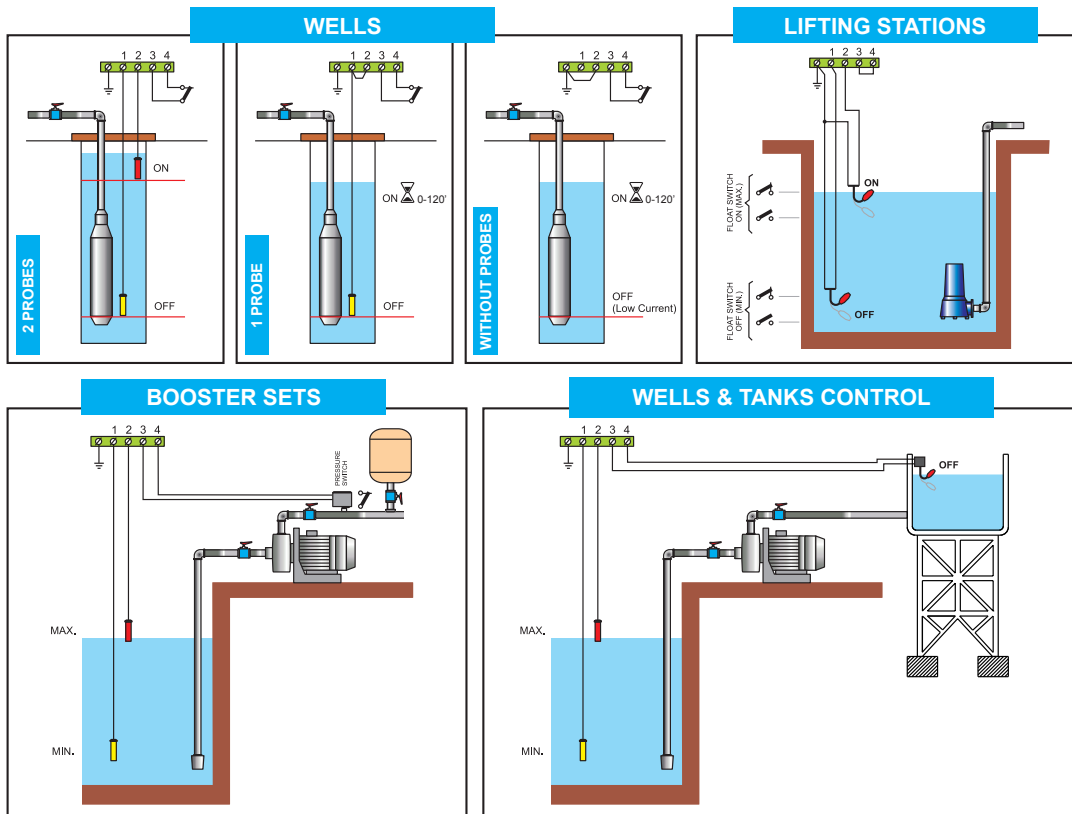
SUPPLY VOLTAGE LED

PUMP RUNNING LED

UNDERLOAD alarm LED

WATER LEVEL alarm LED

OVERLOAD alarm LED



Level probes

Wires must be isolated. The maximum length for probes wiring is 200 m and the minimum section is 0,5 mm².

A CORRECT GROUND CONNECTION is essential for the effective operation of the level control. It is recommended to connect the ground wire to any point of the pipe. A third probe submerged at the bottom of the recipient is required if the tank is insulated (concrete fiber, glass fiber and plastics in general).

Re-start time

During the re-start time the unit waits the recovery of the water level. The amber pilot light will flash.

If you don't want to wait the re-start time, move the operation selector to the position "0" and then to the position "AUTO".

In order to cancel the automatic re-start of the pump, adjust the knob to the minimum, selecting the value "0" (manual re-start).

WITHOUT PROBES Mode: If, while re-starting the pump after a first stop for underload, the minimum intensity adjusted is not reached yet, the unit will stop the pump and it will not carry out any further re-start.

Phase failure

In case of phase failure, the UNDERLOAD ALARM LED or the OVERLOAD ALARM LED might light up, depending on which phase is missing. Then the unit will stop the pump and it will not carry out any further re-start.

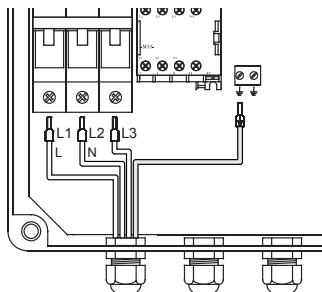
Furthermore, if the motor starts during the phase failure, the unit will not wait the initial inhibition time of 20 seconds (planned for the filling of the pipes).

Main supply

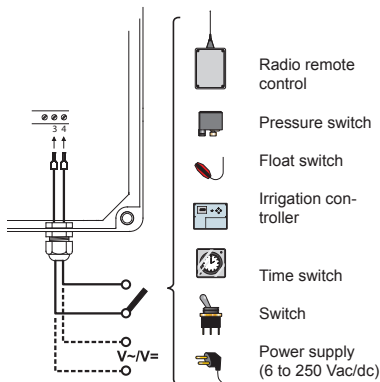
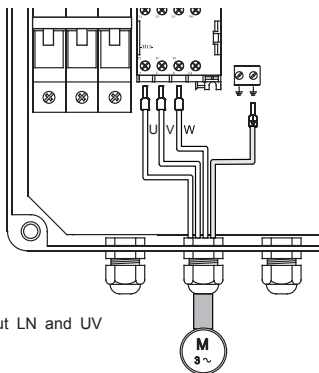
Motor

External On/Off

Check that the supply voltage corresponds to that shown in the control box (230 or 400 VAC depending on model)



In single-phase installations, connect the input LN and UV output.



The EXTERNAL ON/OFF ("3" y "4") terminal blocks can be connected to a remote control device like: radio control, pressure switch, float switch, irrigation controller, time switch or a power supply input from 6 to 250 Vac/dc.

A jumper must be placed over Terminal blocks "3" and "4" if not used.

Irrigation systems: we recommend to use the unit in 1 probe mode in applications with irrigation controller or other control devices.

OVERLOAD adjustment (maximum current)

To perform these adjustments the pump must be connected, the water level should be correct and the input EXTERNAL ON/OFF needs a jumper (N.C. contact).

1 Turn to right



2



3 Turn left until the warning light flashes



4 Turn right until the warning light switches off



If the warning light is still on, reset the unit...



... and repeat step 4 by turning the knob a bit more to the right



UNDERLOAD adjustment (minimum current)

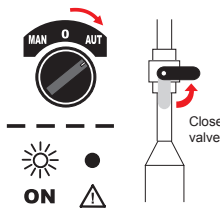
Pilots status:

Light on Flashing Light off

1 Turn to left



2



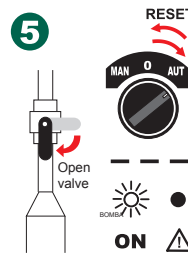
3 Turn right until the warning light starts flashing



4 When the pilot lights up...



5



Troubleshooting

Problem	Cause	Solution
<ul style="list-style-type: none"> The unit doesn't work and the power-on light is off, even after connecting the supply voltage and selecting "AUTO" mode. 	<ul style="list-style-type: none"> Wrong input connection. Phase failure. Over-voltage supply. 	<ul style="list-style-type: none"> Connect accurately. Check the three phases. Verify and measure the supply voltage.
<ul style="list-style-type: none"> Pump OVERLOAD alarm trips. 	<ul style="list-style-type: none"> Excessive motor consumption. Low overcurrent adjustment. Input phase failure. 	<ul style="list-style-type: none"> Verify the pump. The pump motor is overloaded. Check the motor consumption and adjust the current. Check the three supply phases.
<ul style="list-style-type: none"> Pump UNDERLOAD alarm trips. 	<ul style="list-style-type: none"> Low current consumption <1,5 A. Input phase failure. Motor not connected. 	<ul style="list-style-type: none"> Check the pump (no water in suction, stuck pipe, etc...). Check the three supply phases. Connect the motor.
<ul style="list-style-type: none"> The pump doesn't re-start. 	<ul style="list-style-type: none"> Re-start time is set to "0". 	<ul style="list-style-type: none"> Adjust the re-start time.
<ul style="list-style-type: none"> The pump starts & stops on the minimum level probe (2 probes mode). 	<ul style="list-style-type: none"> Maximum and minimum level probes inverted. 	<ul style="list-style-type: none"> Place the probes in the correct position.
<ul style="list-style-type: none"> Level control doesn't work correctly. 	<ul style="list-style-type: none"> Incorrect ground connection. Damaged wires. 	<ul style="list-style-type: none"> Check the ground connection. Check the integrity of the wires.
<ul style="list-style-type: none"> The pump doesn't start, low level light is off, External ON/OFF is not being used. 	<ul style="list-style-type: none"> External ON/OFF is open circuit. 	<ul style="list-style-type: none"> Place a jumper over the External ON/OFF terminal blocks.
<ul style="list-style-type: none"> The pump doesn't start, low level light is off, External ON/OFF is not being used. 	<ul style="list-style-type: none"> External ON/OFF is open or no supply voltage is applied. 	<ul style="list-style-type: none"> Check the external remote control.
<ul style="list-style-type: none"> The circuit breaker trips on start-up. 	<ul style="list-style-type: none"> Excessive current consumption. 	<ul style="list-style-type: none"> Verify the pump and its wiring.
<ul style="list-style-type: none"> The pump doesn't stop with External ON/OFF or level control. 	<ul style="list-style-type: none"> "MANUAL" mode selected. 	<ul style="list-style-type: none"> Select the "AUTO" mode.

Specifications

Supply voltage	Single voltage 230 or 400 V~ (according to the model) -20% +30%
Power	10 CV (7,5 kW) at 400 V~
Overload/Underload adjustment	1,5 - 18 A (alarm trip in 7 sec.) Re-start time: 0-2 Hours
Probes: Supply voltage/Sensitivity	24 V~ / 9 Kohm. (protected against storms transient). Wire distance: 200 m. max. Min. section 0,5 mm.
Remote for EXTERNAL ON/OFF connection	Contact or voltage 6 to 250 V~/V=
Terminal blocks wiring size	10 mm ² (power) 4 mm ² (control)
Protection	Overload, Underload, Phase failure, Pump wiring failure + Wrong control wiring
Size/Weight/Protect./Temp.	230 (high) x 180 (width) x 125 (deep) /1820 g / IP56 / -10 + 55°C



EC DECLARATION OF COMPLIANCE WITH THE "LOW VOLTAGE" & "ELECTROMAGNETIC COMPATIBILITY" DIRECTIVES.

TOSCANO LINEA ELECTRONICA, S.L. declares that the equipment described in this manual complies with the provisions of the modified "LOW VOLTAGE" directive (Directive DC 2004/108/CE) and with the modified "ELECTROMAGNETIC COMPATIBILITY" directive (Directive DC 2006/95/CE) and with national legislation based upon them. It also complies with the provisions of the following European standards and draft standards:

NF EN 60.439-1 / EN 50.081-1 / EN 50.082-2.

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