

Formula

press



EN instructions manual



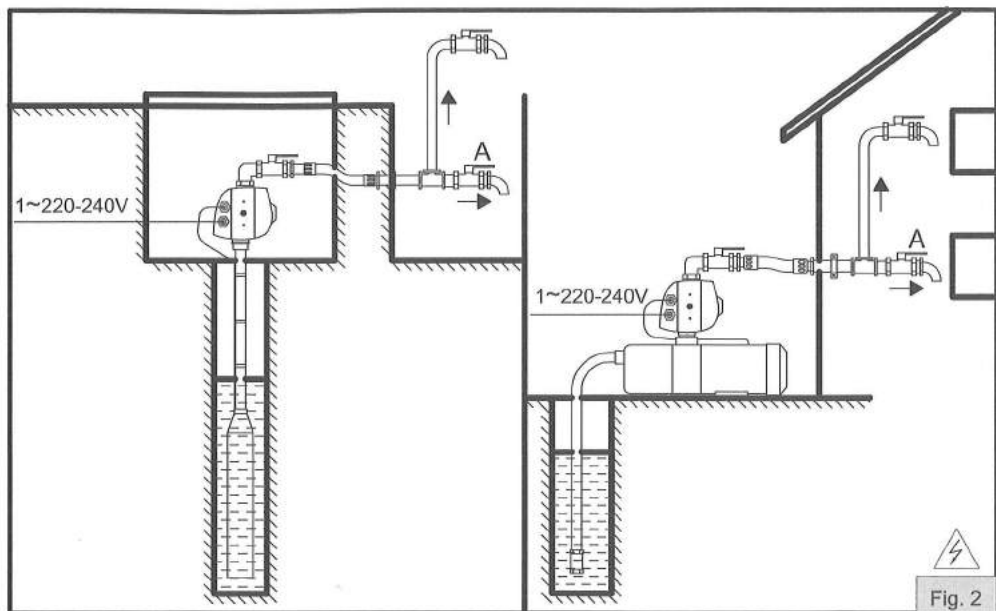


Fig. 2

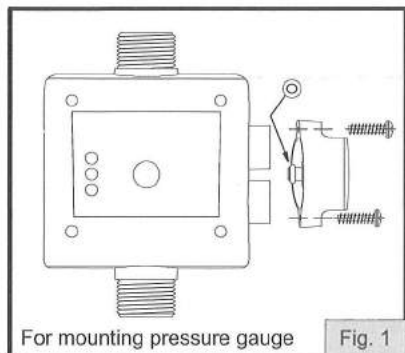


Fig. 1

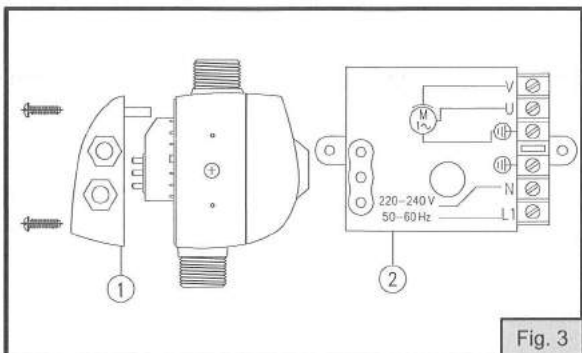


Fig. 3

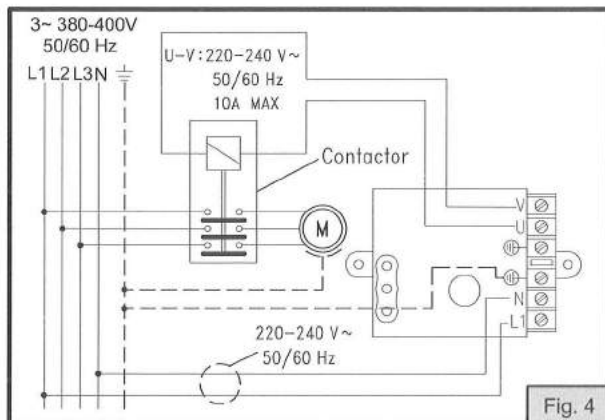


Fig. 4

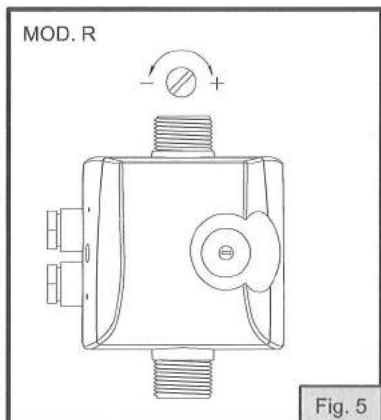


Fig. 5

ENGLISH

OPERATION

The electronic controller **Formula_{press}** orders the automatic start and stop of the water pump when opening and closing any tap or valve of the installation. When the water pump starts, it keeps running while exists any tap opened in the system, giving a constant flow and pressure to the network.

CLASSIFICATION AND TYPE

According to IEC 60730-1 and EN 60730-1 this unit is a control electronic device for pressure systems of independent assembly, action type 1B (micro disconnection). Operating value: flow 1.5 l/min. Degree of contamination 2 (clean environment). Impulse rating voltage: cat II / 2500V. Applied temperature for the ball pressure test: enclosure (75°C) and PCB (125°C).

WARNING: NOT TO APPROACH THE CHILDREN AND DISABLED PEOPLE FROM THE DEVICE DURING WORK WITHOUT THE PRESENCE OF AN ADULT.

CONSTRUCTION CHARACTERISTICS

- Inlet and outlet: male G1".
- Special non return valve which avoids surges.
- Safety system avoiding dry running operation.
- Automatic reset function.
- Pressure gauge (**optional**).
- Manual start switch (RESET).
- Tension led (POWER).
- Pump-working led (ON).
- Security system led (FAILURE).

TECHNICAL CHARACTERISTICS

- Voltage: ~220-240 V
- Max. intensity: 16(8)A
- Frequency: 50/60 Hz
- Protection: IP 65
- Max. temperature of water: 60° C
- Max. flow: 10.000 l/h
- Starting pressure: Mod. F10: 1 bar
Mod. F15: 1,5 bar
Mod. R: 1,5 -3,5 bar
- Max. pressure of use: 10 bar

! HYDRAULIC CONNECTION (FIG.2)

Before proceeding with hydraulic connection it is essential to prime the pump correctly. The **Formula_{press}** should be installed in a vertical position, thus connecting the inlet opening (male 1") directly to the pump outlet; and the outlet (male 1") to the network. The following accessories are recommended: flexible with a disassembling link for network connection, protecting the set from possible flexion charges and vibrations, ball valve which permits the isolation of the pump from the installation a tap (A) on the same level as **Formula_{press}** (FIG. 1).

REMARKS

The water column between the pump and the highest point of use should not exceed 6 m for the **Formula_{press} Model F10** and the pump should supply a minimum pressure of 2 bar. For **Model F15** the highest point of use should not exceed 10 m and the pump should supply a minimum pressure of 2,5 bar. In case of using points until 20 m should be use the **Formula_{press} Model R**. The adjustment of starting pressure is made by a screw placed in the back of the **Formula_{press}** (FIG.5). Read the indicated pressure showed in the pressure gauge when the pump starts and perform on the screw according to the wished side.

EXAMPLE:

USING HEIGHT	PRESSURE ADJUSTED (ORIGIN)	MIN. PUMP PRESSURE
10 m	1.5 bar	2.5 bar
15 m	1.8 bar	3 bar
20 m	2.3 bar	4 bar

This operation only adjusts the starting pressure, not the operating pressure of the installation, which only depends on the pump features. It will be easier to proceed with the adjustment if the tap of the installation is opened, that will reduce the internal pressure of the **Formula_{press}**.

*These heights are between the device and the highest point of use. To work at more height, mount the device out of the pump at the desired position.



ELECTRIC CONNECTION (FIG.3)

Check the power supply to be ~220-240 V. Dismount the cover of the electronic circuit and make the connections as per diagram on plate 2. The **Formula_{press}** can also be used for 3-phase or single-phase pumps with intensities higher than 10 A, by means of an auxiliary contact (minimum contacts capacity of 4 kW or 5.5 HP coil 220V). In this case the connections will have to be made according to scheme in **WARNING: Bad connections may spoil the electronic circuit.**

AUTOMATIC RESET FUNCTION

If the device goes into failure mode, this function will execute a series of automatic starts to attempt to restore operation without any manual intervention via the RESET button. The system operates as follows: The appliance is in failure mode due to water failure, for example; after 5 minutes in this condition the system will do a 25-second RESET, attempting to prime the pump. If the system is able to prime the pump, the failure will disappear and the pump will be ready to operate without any problems. However, if the failure persists, the system will do another RESET after 30 minutes, and will continue in this manner systematically every 30 minutes for 24 hours. If the failure still persists after all these attempts, the system will remain in this condition until the problem has been resolved by manual intervention.



! STARTING

- 1.- Be sure that the pump is correctly primed, then gently open one tap of the installation.
- 2.- Conect the **Formula_{press}** to electric supply, the tensionled will lit (POWER).
- 3.- The pump starts working automatically and within a period of 20-25 seconds the pressure will reach aproximately, the maximum pressure provided by the pump. During its working the corresponding led (ON) will be on.
- 4.- Close the tap indicated on point 1. After 10-12 seconds, the pump will stop. The tension led (POWER) will be the only one to remain on. Any problem after this procedure will be due to a defective pump priming.

POSSIBLE PROBLEMS

1.- PUMP DOES NOT STOP:

- A) Water leak higher than 1 l/min. at some point: check that all the used taps are closed.
- B) Breakdown on the electronic card: proceed to its substitution.
- C) Incorrect electric connection: verify the connections according to FIG.3.

2.- PUMP DOES NOT START:

- A) The pump is not primed; the protection against dry running operation has stepped in and the FAILURE led is on: prime the water pipe, drain the system water by opening tap (A) on the same level as **Formula_{press}** to decrease the pressure of the water column over it (FIG.2), and check by pressing the manual start button (RESET).
- B) Pump is blocked: led (FAILURE) is on, the security system is activated. When we act on the manual start switch (RESET) the led (ON) is activated but the pump does not work: contact with your dealer.
- C) Failure in the electronic circuit: switch off the pump from the power supply, wait a few seconds and turn it on again, the pump should start, if it does not start then replace the electronic circuit.
- D) Not electrical supply: check the proper electric feeding. The tension led (POWER) should be on.
- E) Not enough pump pressure: the security system has been activated and the corresponding led (FAILURE) is on. Check that the pump pressure was at least 1 bar higher than the starting pressure for the model F, and for the model R follow the table in HYDRAULIC CONNECTION.
- F) Air in the pump aspiration: Pressure lower than the nominal or constants oscillations. The security system will act by stopping the pump, the LED (FAILURE) will be on. Check the sealing of the connections and the O-ring of the aspiration conduct.

3.- PUMP STARTS AND STOPS REPEATEDLY:

Small leak in some point of the installation: Verify possible taps or WC tank leaks and repair them.



! INSTALLATION OF THE PRESSURE GAUGE (FIG.1) (OPTIONAL)

The pressure gauge has an O-ring and two fixing screws. The pressure gauge must be mounted in the side with the three holes, one big central hole and two more little for fixing the gauge by means of the two supplied screws. Previously you should remove the screw located in the central hole and then introduce the cylindrical connector of the pressure gauge. Then fix the pressure gauge with the two screws supplied with it.

EC STAMMENT OF COMPLIANCE

SEA LAND S.R.L. states, on our's own responsibility, that all materials herewith related comply withthe following European standards:

- Directive 2006/95/CE: Low tension electric material.
- Directive 2004/108/CE: Electromagnetic compatibility.
- Directive 2011/65/UE: on the restriction of the use of certain hazardous substances in electrical and electronic equipment.
- Directive 2012/19/EU: on waste electrical and electronic equipment (WEEE)

Product's name: FORMULA PRESS

As per the European Standards: EN-61000-6-2, EN-61000-6-3, EN-60730-1, EN-60730-2-6.

Product Manager
Enrico Romanato

