

# Intelligent Pressure Controller

Installation of intelligent controller makes ordinary pump intelligent, simpler and more advanced



**Multi-frequency**

50/60 HZ available



**Wide Voltage**

Range 90-265V



**Wide Power**

Range 0.1-2.2kw Motor



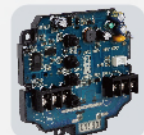
**Energy Saving**



**Waterproof**

## Working Principle

- Auto start the pump either by pressure lower than Starting pressure or by flow switch open. when starting the pump, it allows 3'20" self-priming time to prime the pump in case. (timing can be modified before ex-works)
- Stop the pump automatically by flow switch closed. Stop the pump in the case of water shortage. it will continuous running 3'20", then will stop the pump.
- Able to adjust the starting pressure easily by +, - button, to suit different working circumstance



PCN-2200(A)

PCN-2200A, With 1L built-in Tank, for pressure buffer  
"A" means intelligence



PCN-2200(M)

"M" means start pressure can be adjusted manually

## Features

- With built-in pressure sensor & flow switch & non-return valve
- Starting Pressure: **0-10bar (adjustable)**
- Max. Rated Current: **10A, up to 2.2KW motor**
- Max. Allowable Pressure: **15bar**
- Wide Voltage Range: **90-260V**
- Frequency: **50/60Hz**
- Max. Ambient Temp.: **40°C**
- Max Liquid Temperature: **80°C**
- Protection Degree: **IP65 (PCB with anti-humidity epoxy resin)**
- **Energy Saving**
- Joint Screw: **G1" male**
- Able for horizontal installation.



# Intelligent Pressure Controller

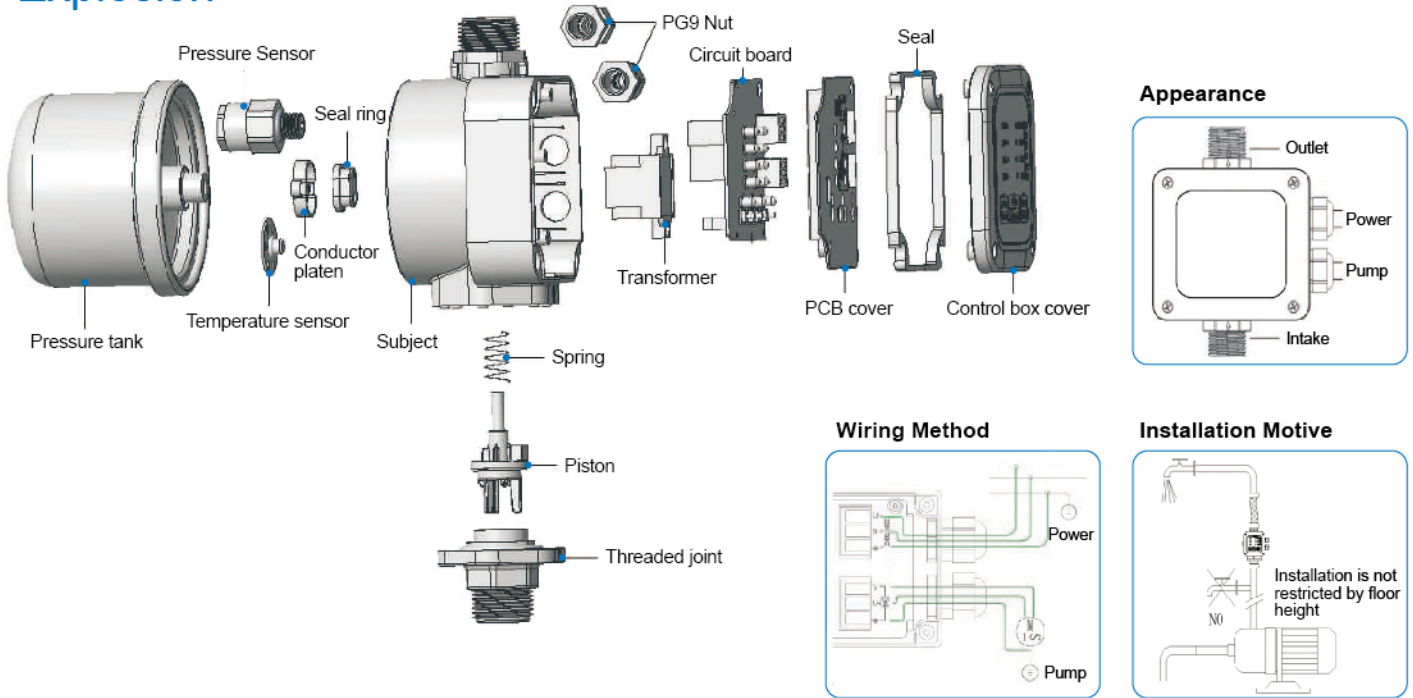
**Stream<sup>®</sup>**  
Sign of Quality

## Applications

Widely workable with different type of pump, including deep well submersible pump for self-priming, and also automatically sense the max. pressure of pump, and then to set by certain percentage of max. pressure as "Starting" pressure automatically. No manual setting of starting pressure in Auto Mode.



## Explosion



## Technical parameter

Model	Power kW	Voltage (v)	Max.current (A)	Frequency (Hz)	Pcs/Carton	Outer box size (mm)1pcs	Outer box size (mm)12pcs	G.W. (kg)
PCN-2200(AS)	0.1-2.2	90-260V	10	50/60	12	198x135x190	418x408x395	1.4
PCN-2200(M)	0.1-2.2	90-260V	10	50/60	12	198x135x112	418x408x238	0.72

# PK



**PCN-2200AS/M**



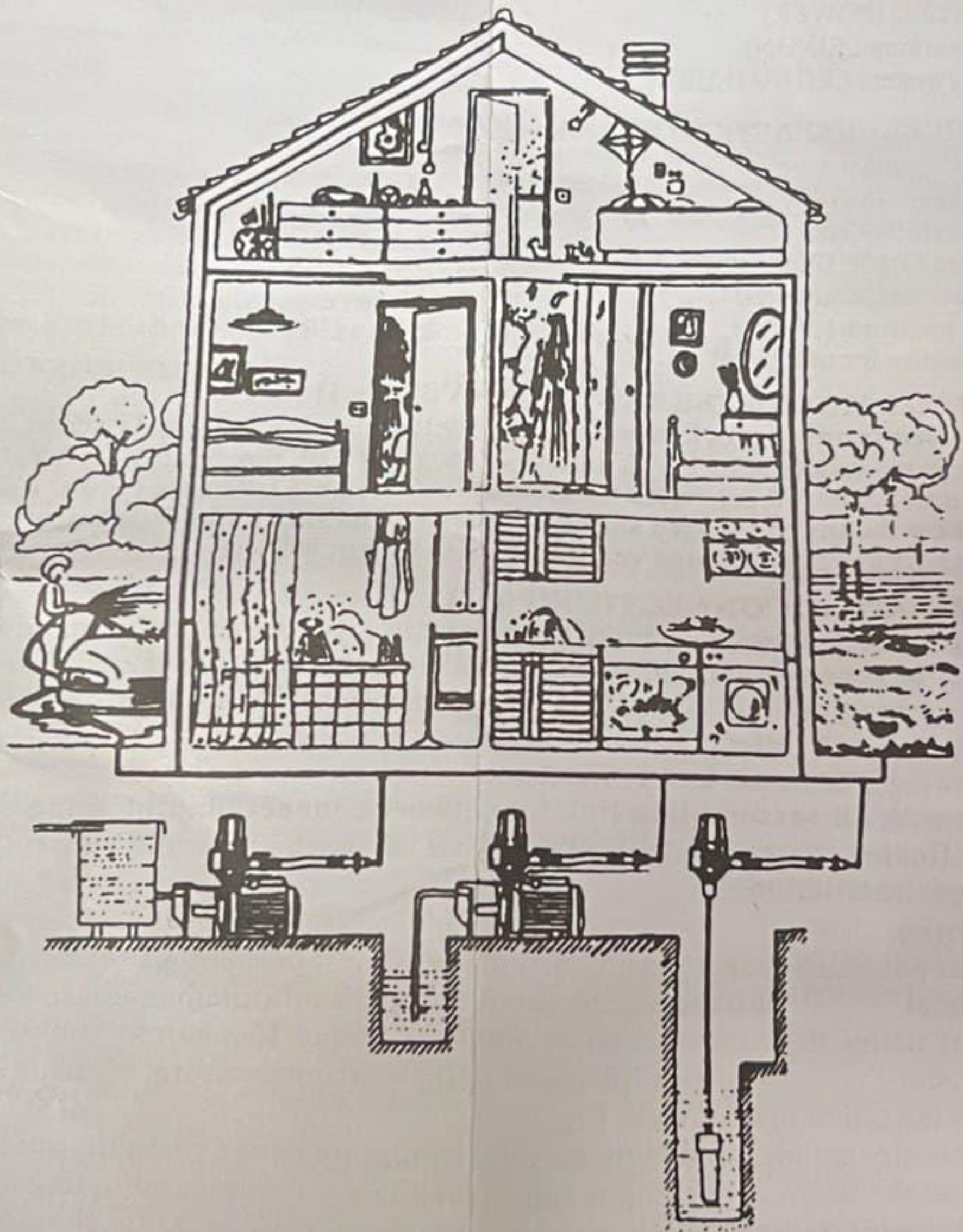
**Traditional Controller**

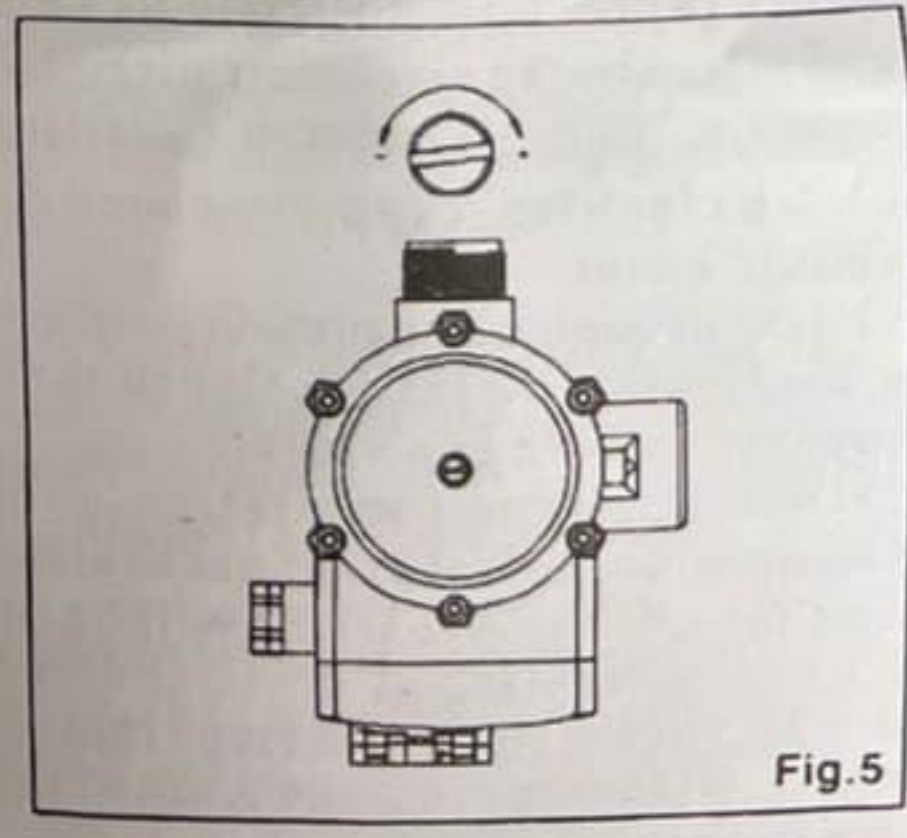
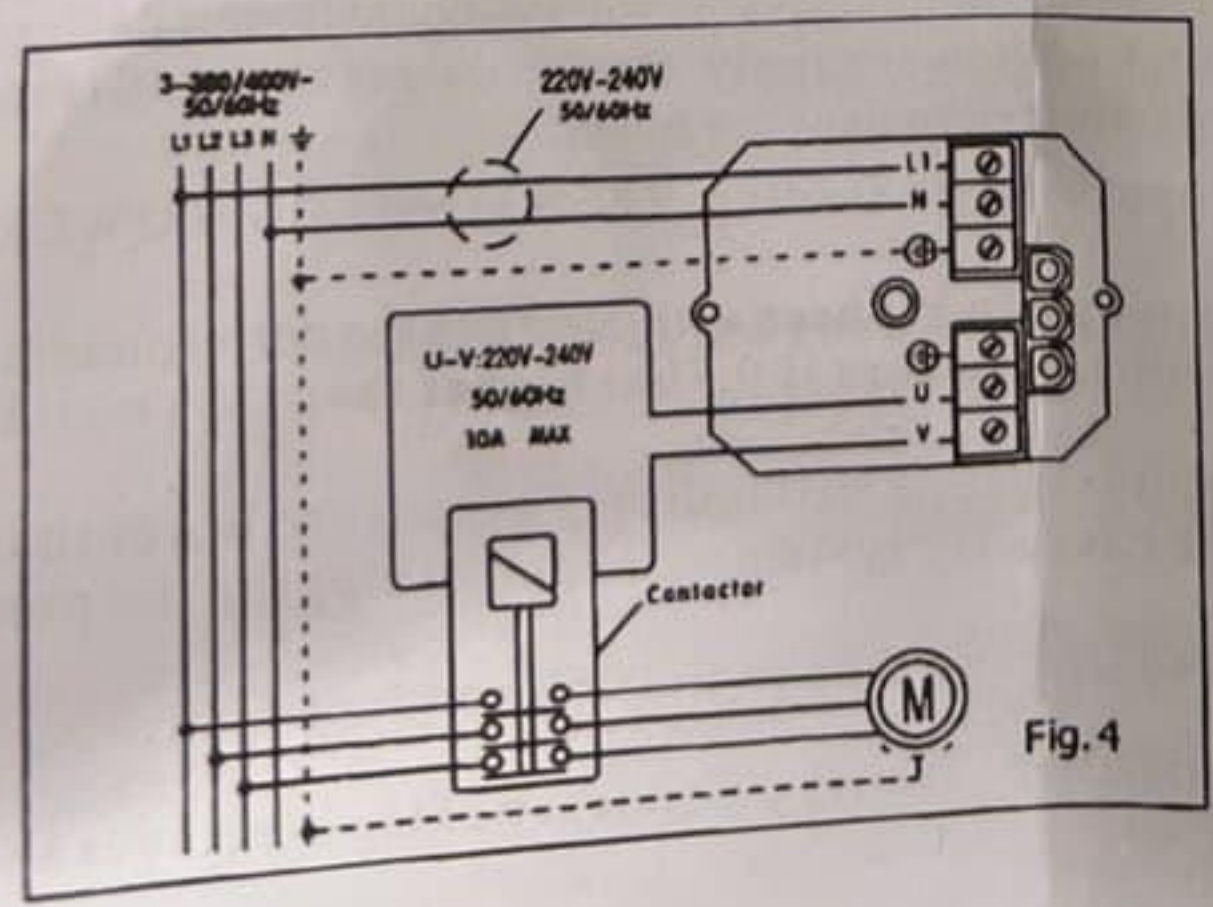
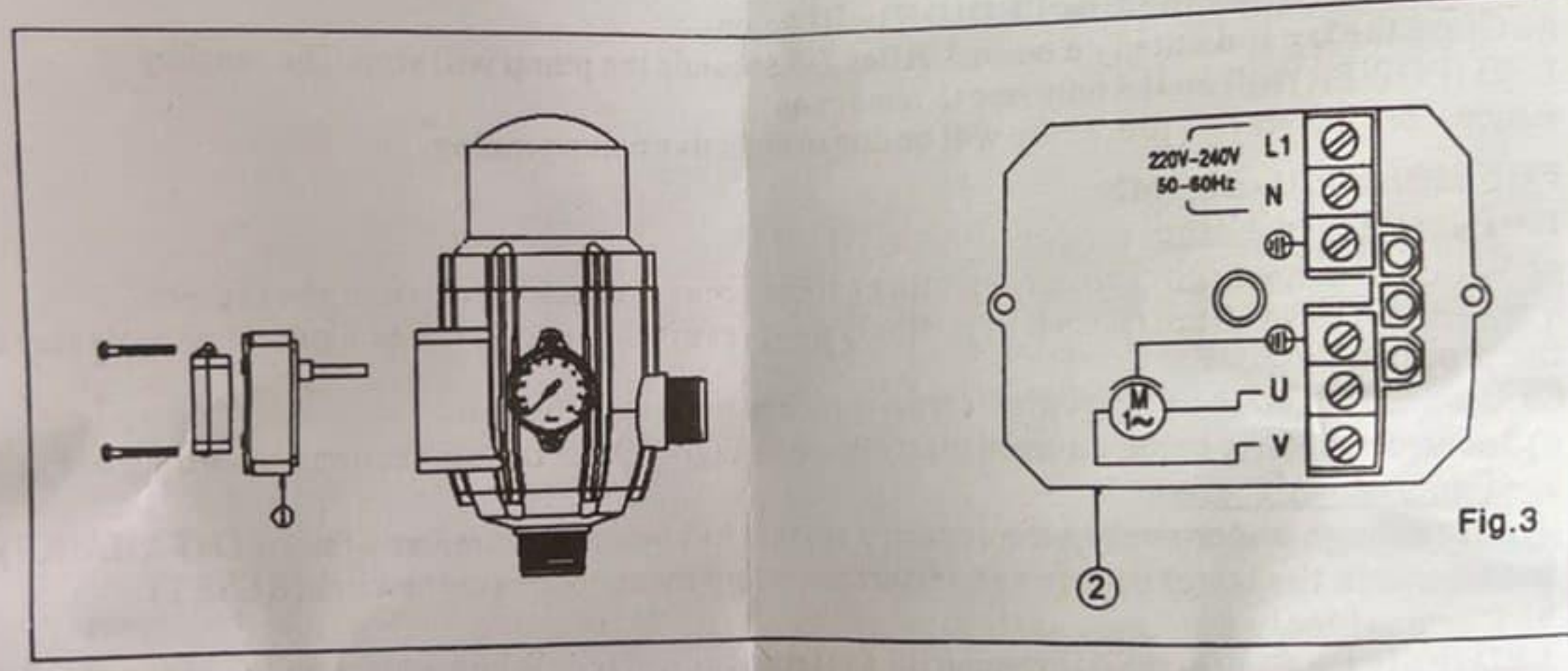
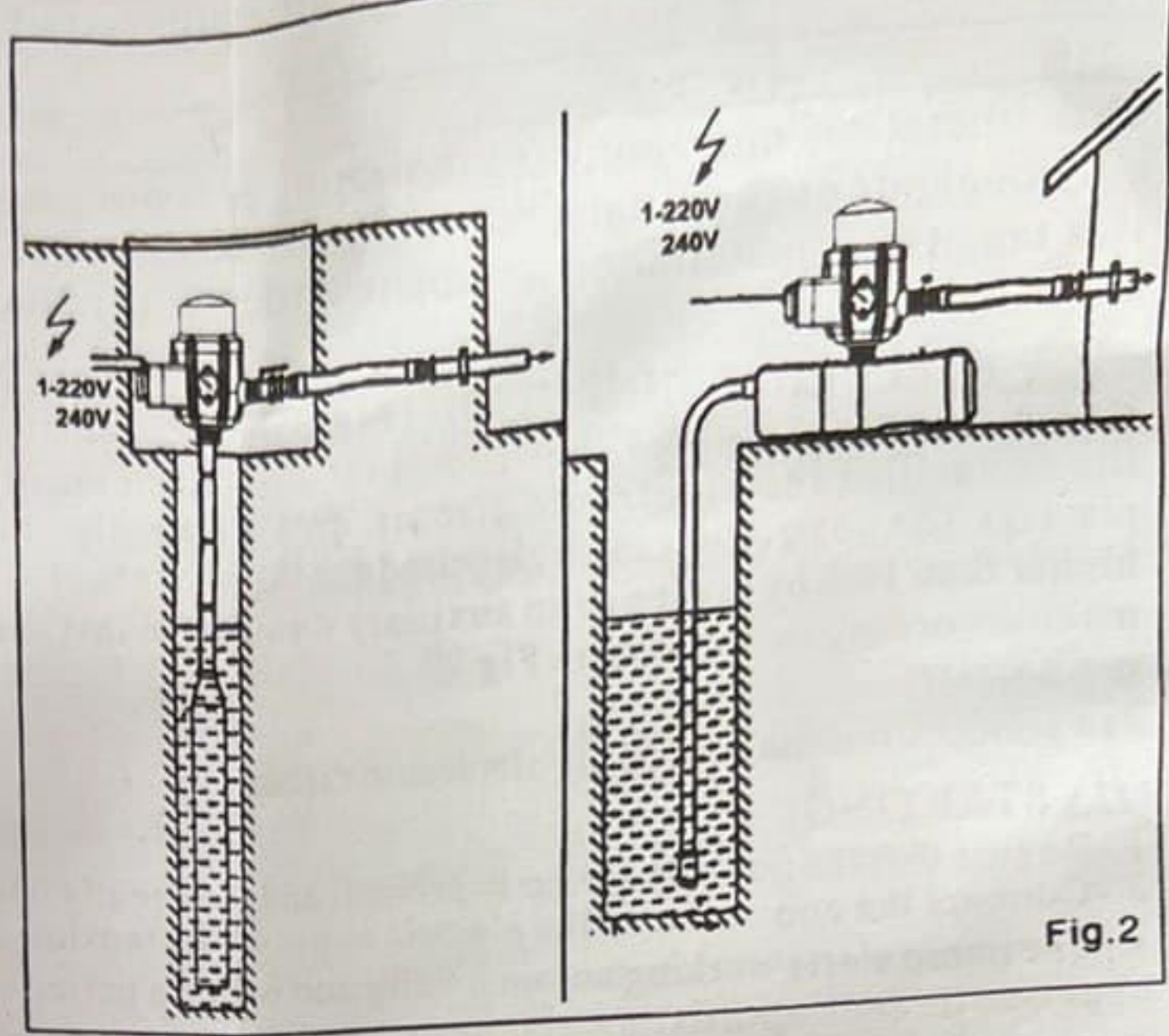
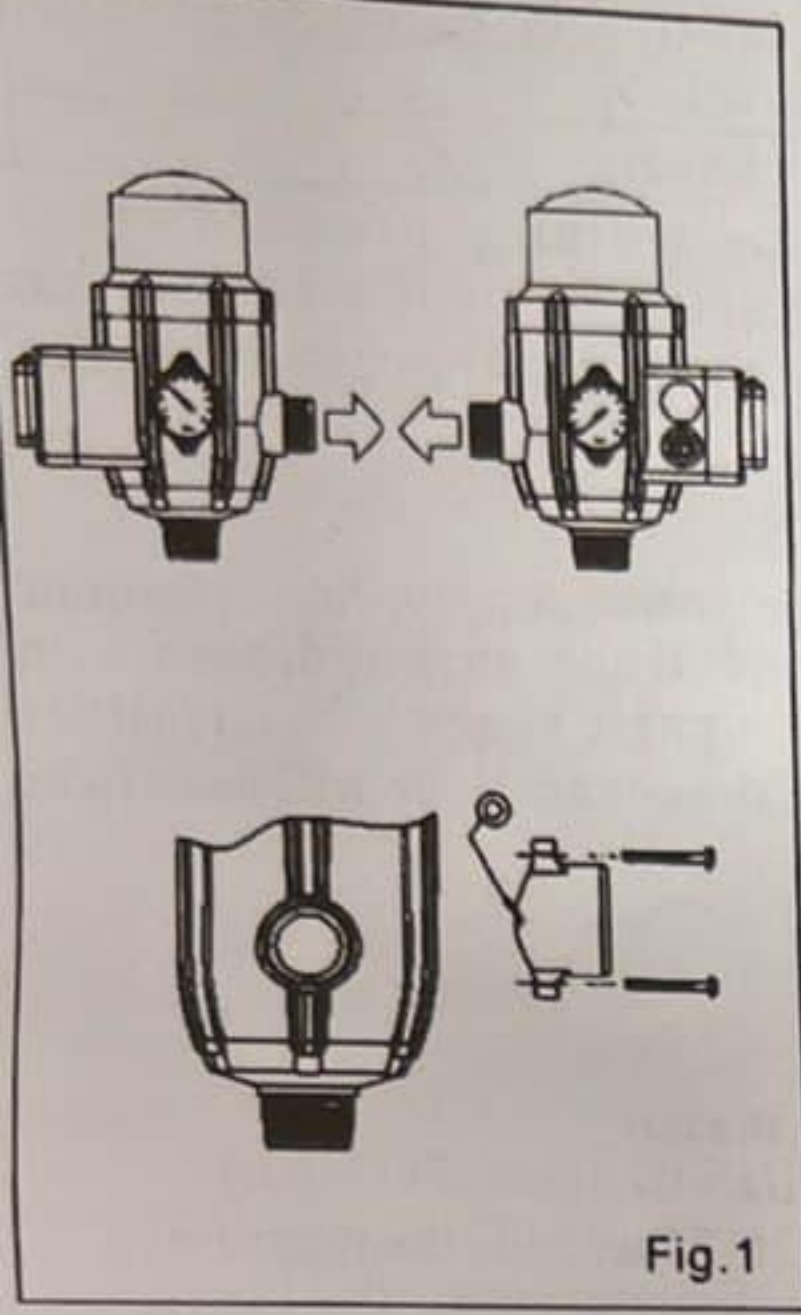
Starting Pressure	<b>0-10bar (adjustable)</b>	1.5bar or 2.2bar
Max Rated Current	<b>10A, from 0.1KW-2.2KW Motor</b>	10A, from 0.37KW-1.1KW Motor
Max Allowable Pressure	<b>15bar</b>	10bar
Rated Voltage	<b>90-260V</b>	110V or 220V
Max Liquid Temperature	<b>80°C</b>	60°C
Waterproof	<b>YES</b>	NO
Energy Saving	<b>Digital Power Chip, very low standby power consumption, less than 5W per day</b>	traditional resistance power, over 30W per day
Heat of Controller	<b>35°C</b>	60°C

INSTALLATION & INSTRUCTION  
MANUAL FOR AUTOMATIC  
CONTROLLER OF WATER PUMP

*Stream*<sup>®</sup>

*Sign of Quality*





## OPERATION

The electronic controller orders the automatic start and stop of the water pump when opening or closing any tap or valve of the system. The controller can keep a constant pressure and water flow in the system as long as any tap in the system is open during the pump's operation.

## CAUTION!

The electronic controller can be used either for drinking water or non-drinking water system. In installations where both types of water are present, make sure that drinking water is not mixed with non-drinking one.

## CONSTRUCTION CHARACTERISTICS

- Inlet: male 1"
- Outlet: male 1"
- Special non return valve to avoid surges
- Security system avoiding the possibility for the machine to work without water
- Pressure gauge
- Manual start switch(RESET)
- Tension LED (POWER)
- Pump-working LED(ON)
- Security system LED (FAILURE)

## TECHNICAL CHARACTERISTICS

Voltage: ~ 220/240 V  
Max. current: 10(6)A  
Frequency: 50/60HZ  
Protection Grade: IP65  
Max. water temperature: 60°C  
Starting pressure: 1.5-3bar  
Max. pressure for use: 10bar

### ! INSTALLATION OF THE PRESSURE GAUGE(Fig.1)

The pressure gauge is provided with an O-ring, two fixing screws and a screw cap.

The pressure gauge can be mounted on any side of the controller by introducing the cylindrical connector with the O-ring into the hole in the body of the device and fixing it by means of the two supplied screws. The screw-tap is to be located on the opposite side's pressure gauge vent (without O-ring or teflon).

### ! HYDRAULIC CONNECTION(Fig.2)

Before proceeding with hydraulic connection, it is essential to prime the pump correctly. The controller should be installed always in a vertical position, thus connecting the inlet opening (male 1") directly to the pump outlet and the lateral outlet (male 1") to the network. Avoid outlet non-return valves.

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 installation.

## ATTENTION:

The water column between the pump and the highest point of use shall not exceed 15 m for model  and the pumps should supply a minimum pressure of 2.5bar.

If case of using the control in points between 15 and 30m height you are suggested to use model

The adjustment of the starting pressure is made by the screw placed in the top of the control ( 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 ( Pressure adjusting must be performed by professional ). As per standards the starting pressure should be 0.2 bar higher than the manometric one , and the pump will have to give at least a pressure

0.8 bar higher than the adjusted one, Example:

USING HEIGHT	OPERATING PRESSURE ADJUSTMENT	MINIMUM PUMP PRESSURE
20m	2.2bar	3bar
25m	2.7bar	3.5bar

This operation only adjusts the starting pressure, not the working pressure which only depends on the pump feature. It will be easier to proceed with the adjustment if a tap of the installation is opened, that will reduce the internal pressure of the control.

### ELECTRIC CONNECTION (Fig.3)

Check the power supply to be ~ 220/240 V, First disconnect the power supply, then dismount the cover ① of the electronic circuit and make the connections as per diagram on plate ②. The controller can be also used for three-phase or single-phase pumps with intensities higher than 10A by means of an auxiliary contact. In this case, the connections will have to be made according the scheme in Fig. ④

### WARNING

Bad connections may spoil the electronic circuit.

### STARTING:

- 1.-Be sure that the pump is correctly primed, and then gently open the tap.
  - 2.-Connect the controller to the electric supply. The tension LED will light (POWER)
  - 3.-The pump starts working automatically and within a period of 20-25seconds the pressure gauge will reach approximately 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 7-9 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 defective pump priming.

### POSSIBLE PROBLEMS

#### 1.- Pump doesn't stop:

- a). Water leakage higher than 1.2l/min at some point---check the system, the tap, etc.
- b). Manual start switch (RESET) is blocked---press it for several times. Consult your dealer if the problem persists.
- c). Breakdown on the electronic board---proceed to its substitution
- d). Incorrect electric connection on electronic board ②---check the connections according to Fig.3.

#### 2.- Pump doesn't start:

- a). Not enough water supply, the security system has been activated and the LED (FAILURE) is on---check the water supply and restart the pump through the reset switch(RESET).
- b). Pump is blocked:  
LED (FAILURE) is on and the security system is activated. When we act on the manual start switch (RESET) the LED (ON) is activated but the pump doesn't work---consult your dealer.
- c). Failure in the electronic circuit---switch off power supply, wait a few seconds and turn it on again. If the pump doesn't start immediately then replace the circuit.
- d). No 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 is 0.8bar higher than the starting pressure of the controller.
- f). Air in the pump aspiration---the pressure gauge will indicate a pressure lower than the nominal or constant oscillations. The security system will act by stopping the pump and the LED (FAILURE) will be on.

Check the sealing of the connections and O-ring of the aspiration conduct.

#### 3.- The pump starts and stops repeatedly:

- a). Small leakage in some point of the installation---verify possible tap of tank leakages and repair them.