(3) How to set the starting time when the pump is stopped because of water shortage? Press "SET" button for the third time after setting the stopping and starting pressure, then press "+" button to increase or "-" button to reduce automatic restarting time. The setting range is between 0-60 seconds and the default is 30s. When the parameter is set to 0, there is no water-shortage protection function .

(4) The pressure value is 0 and it shows "FAILURE"in the screen when it is in water shortage. In this case, the water pump will run at intervals of 8 seconds, 30 seconds and 1 hour continuously and then, the pump will check every hour.

(5) Press the "RUN" button, you can force the pump to start.

(6) If the controller is started and stopped more than 15 consecutive times and each time is not less than 30 seconds, "LEP" will be displayed to remind customers to check the pipeline for any leakage. but it will not affect the normal use, when it comes back to normal, the pressure value will be displayed.

No.5 Possible Problems

Problems	Reasons irrelevant to the controller	Reasons relevant to the controller
Pump doesn't start	1、Voltage is too low	1、The button is stuck.
	2、Something wrong with the pump	2、Damage of the controller
	3、Wrong connection of wires	
Pump doesn't stop	A lot of leakage in the pipe.	1、Damage of the controller
		2、Check valve is stuck
Pump works off and on	A small amount of leakage in the pipe.	Damage of the controller
Display of water shortage "FAILURE"	1、Damage of the pump	Damage of the controller
	2、Water shortage	
	3、The pump couldn't suck water in its first operation.	
	4、Leakage in pump inlet.	
Display of protection code "OTP"	The actual pressure of the pipe is more than 9.9 bar for 5 seconds.	1、Damage of the controller
		2、Damage of Pressure Sensor

No.6 Warnings

1、The cable connected to this controller must use a three-core cables that is connected to the ground and ensure the ground wire is connected properly.

2、If the product is damaged due to transportation or other reasons, do not connect it to the power.

3、Do not install in an environment with explosive gas. Otherwise, it may cause explosion.

4、During the installation or maintenance, power must be cut off beforehand. Otherwise, there is risk of electric shock.

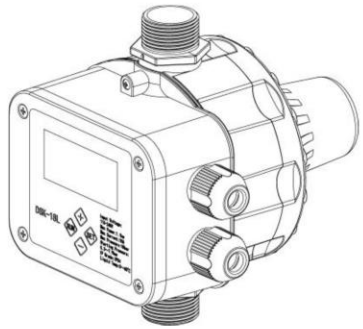
5、This automatic controllers for pump can not be used in the medical system or other systems to prevent serious injury or a large amount of property damage. To the maximum extent permitted by law, neither the manufacturer nor the distributor of the controller, at any time, is liable for any direct or indirect damages that may be caused by the controller or other reasons.

6、Manufacturers and distributors reserve all rights of the controller manual, including but not limited to, the copyright, rights of explanation and further modifications. This manual may change without prior notice.

Automatic Pressure Controller for Water Pump

Manual

(Please read the manual carefully before use)



Main technical parameters:

Input voltage: 100V---240V	Frequency: 50Hz/60Hz	Power: 1.1KW or 2.2KW
Rated current: 10A or 16A	Max. working Pressure: 10bar	Protection Grade: IP65
Pressure when the controller is down: 0.5-9.9bar	Starting Pressure: 0.3-7.9bar adjustable	
Max Ambient Temperature:60℃	Connection thread:G1"	
Function: stop the pump in the case of water shortage and automatically restart		

No.1: Product features

This automatic pressure controller is equipped with a built-in pressure sensor and it's controlled by the automatic pump of digital sensor technology. The data of real-time pressure changes and water consumption in pipelines is sent to the master chip and the pump will start or stop accordingly, so it can totally replace the traditional water supply system which consists of pressure switch, four-way valve, pressure tank, water-shortage protector, etc. This controller is well insulated. High-voltage parts with electricity are completely isolated with pipelines and the body box is highly sealed. All these make its use more safe and reliable. The integrated design enables you to save more time and money while installation.

Compared with traditional electric pressure controllers, this controller has following outstanding features:

1、Adopt the LCD display, real-time pressure in pipelines can be seen clearly.

2、Adopt the new technology of pressure-sensing which can replace the traditional switching technology.

3、Adopt the fully automatic control technology. It is compatible with water pump whose head is below 100 meters. It can automatically adjust the starting pressure without setting the starting pressure according to pressure in pipelines thus avoid problems caused by unmatched pressure with the pump.

4、This controller calculates the start-up time with a set percentage, which makes the range of starting pressure wider, so that the pump can be applied to more situations.

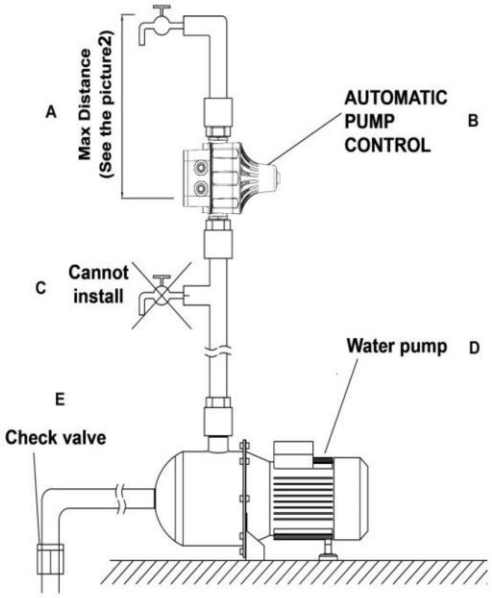
5. It has a function of forced start to avoid that the pump freeze to be stuck when the pump is out of use for a long time in winter.

6. It has the function of water-shortage protection and automatic restart.

7、Automatic start-up time can be adjusted, so that the pump has enough time to suck water.

8、Ensure safe use of the controller by starting protector when the water pressure is over max working pressure.

No.2 Installation Instructions



1、Before installation and use, you must read the manual carefully.

2、The controller must be installed by professionals and they must confirm whether the ground wire is well connected .

3、Before switching on the power, please make sure the input wire and pump wire is correctly connected.

4、This controller can only be used in clean water. Users should check the water quality of the pipe system before installation. Do not use it in the water with sand or ferrite.

5、If this controller is used in well water or pipelines without pressure, a check valve should be installed on the pump inlet.

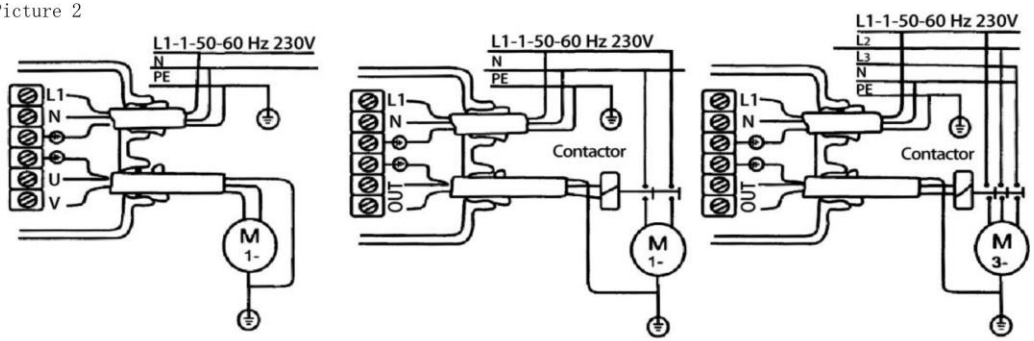
6、This controller can be installed directly on the pump or installed between the first tap of the pipe and the pump outlet. When the controller is not installed on the pump, do not install the tap between the controller and the pump.

7、The controller must be installed vertically and the water must flow in the same direction as indicated by the arrow on the controller.

8、Please refer to picture 1 for the specific installation. Please refer to picture 2 for wiring

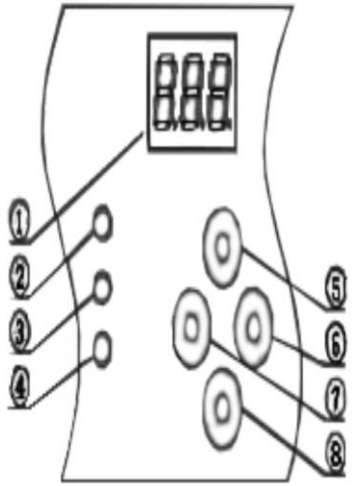
Wiring diagram of connection to single-phase 110V-120V and maximum power 0.75kw water pump.	Wiring diagram of connection to single-phase 110V-120V and maximum power 0.75kw water pump through the contactor.	Wiring diagram of connection to three-phase 380V water pump through the contactor.
Wiring diagram of connection to single-phase 220V-240V and maximum power 1.1 KW or 2.2 KW water pump.	Wiring diagram of connection to single-phase 220V-240Vand maximum power 1.1 KW or 2.2 KW water pump through the contactor.	Requirememts for the contactor, 220V-240V/110V-120V, minimum power 4KW or around 5.5HP.

Picture 2



No.3 Function Description

No.	Description	Function
1	Display Screen	1、“CURRENT PRESSURE: 0.0 bar” indicates real-time pressure.
		2、“SET STARTING PRESSURE:60%” indicates percentage, e.g.60%
		3、“SHORT RUNNING TIME: 30S” indicates the starting time after water
		4、“STOPPING PRESSURE: 0.0bar” indicates stopping pressure. (The controller with adjustable stopping pressure has this fonction).
2	“+”Button	increase parameters
3	“RUN”Start Button	When the pump stops, press this button to start manually.
		The longer you press the button, the longer the pump starts.
4	“SET”Button	1、set stopping pressure
		2、Set starting pressure
		3、Set automatic restart time when it's stopped because of water shortage
5	“-”Button	iDecrease parameters



No.4 Operation Instructions

1、 When the controller is in normal use, we can set the stopping pressure (The controller with adjustable stopping pressure has this fonction), starting pressure and the restart time after water shortage by pressing the "SET" button in turn.

2、 For different situations, customers can make the following settings:

(1) setting the stopping pressure: press firstly the "SET" button shortly, then press the "+" button to increase or press the "-" button to decrease the stopping pressure. The setting range is 0.5--9.8 bar. The factory default value is 5.0 bar.(The controller with adjustable stopping pressure has this fonction). In addition, when the stopping pressure setting is bigger than the maximum head of the pump itself, the stopping pressure is the maximum head of the pump. For example, if the maximum head of the pump is 3.0 bar, set the stopping pressure to 3.5 bar or more than 3.5 bar. When the tap is turned off and the pressure in the pipe reaches 3.0 bar, the pump stops. (The controller with adjustable stopping pressure has this fonction).

(2) Set the starting pressure value. This controller uses intelligent calculation method, it can calculate the starting pressure automatically according to the stopping pressure of the pipeline. Press the "SET" button secondly for another short time after the setting of stopping pressure and then, press "+" button to increase or "-" button to reduce the starting pressure (calculated in percentage). The setting range is between 30-80 and the default is 60. Press the "RUN" button or not press any button for 5S seconds can save the parameter. For example, when we turn off the tap, the stopping pressure is 3.0bar. Then its starting pressure = 3.0x60% = 1.8bar. Namely, when the pressure drops to 1.8bar, the pump starts. This intelligent design greatly saves customer's time and broadens the scope of application in different places.