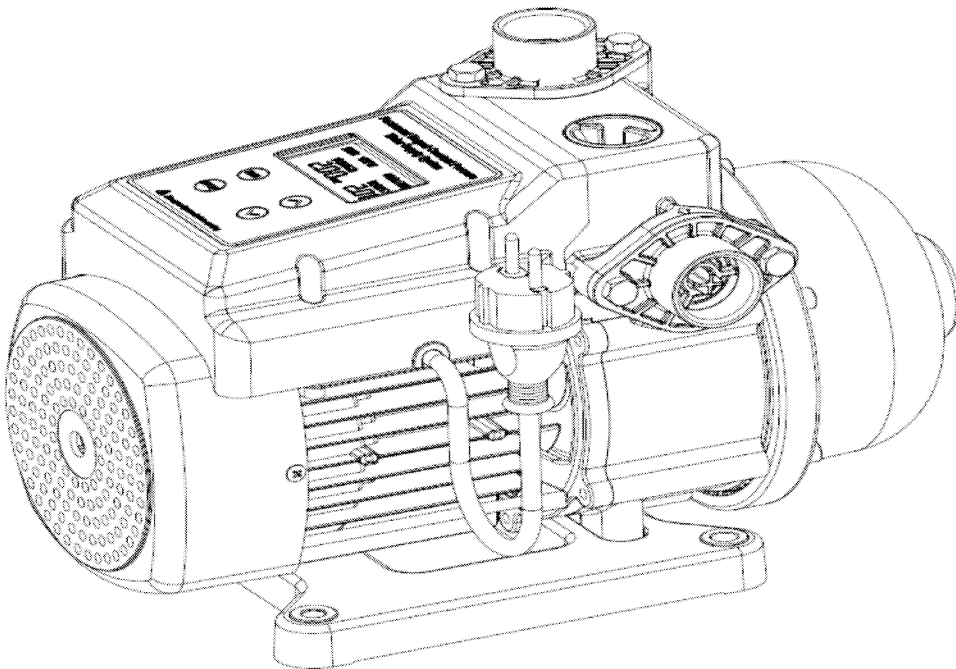


APM203 VSD BUDDY - VARIABLE SPEED PUMP

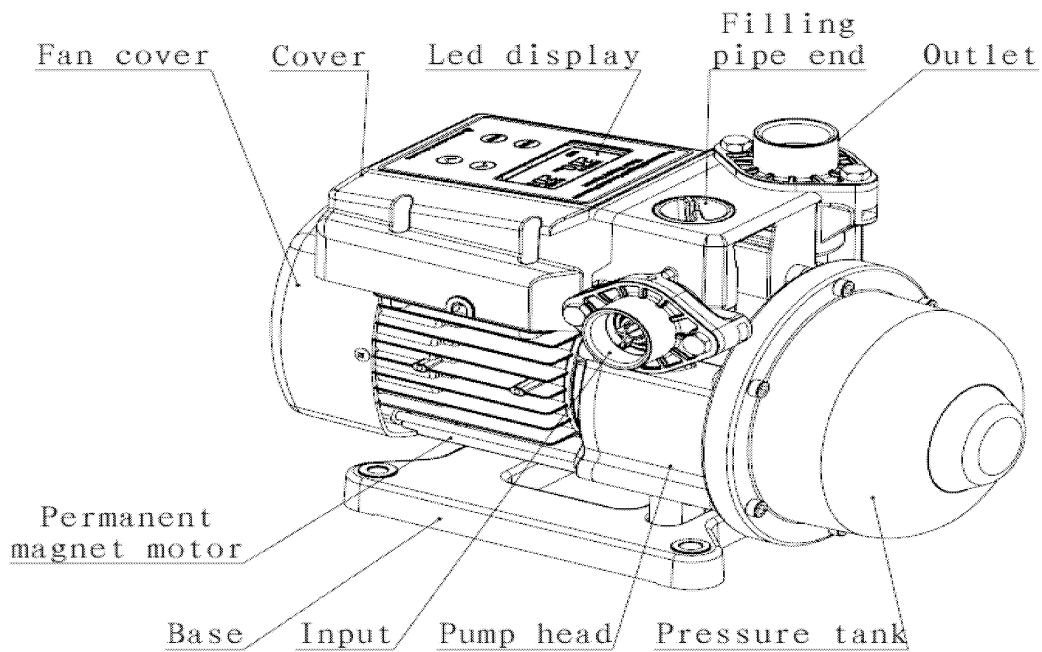


Before Installing And Use Please Read The Instruction Manual Carefully



General Description

APM203 VSD Buddy has been designed with the end user in mind. No more complicated menu's. Almost all programming is set up ready to go, all you have to do is plumb in the pump, prime, set the pressure and its ready to go. Ideal for home water boosting, irrigation and small industrial applications. Flow rate of up to 80 litres per min, vertical heads up to 50m (5 Bar). Built in dry run protection, pressure vessel and pressure transducer. Not self priming, needs to be flooded suction. Liquid temperature range from 0°C to + 60°C. Easy to read digital display. Built in non return valves. 1" BSP connections



CONTENTS

1. Safety and Notices

- 1.1 Notice for use
- 1.2 Product Examination

2. Product appearance, installation dimensions & technical parameters

- 2.1 Product appearance and installation dimensions
- 2.2 Instructions for installation and application

3. Performance curve

- 3.1 Performance curve, power curve
- 3.2 Product overview drawing

4. Installation, debugging and operation instructions

- 4.1 Operation and instruction
- 4.2 Checking before operating
- 4.3 Operating steps
- 4.4 Buttons and functional description

5. Fault Code Description

List of fault codes

6. Maintenance

General maintenance

7. Warranty

Warranty Information

1. Safety and Notices

1.1 Notice for use

Attention. The Attention sign indicates the procedures requiring your attention, otherwise you may cause damage to the pump or equipment connected to it.



The Danger Sign indicates the procedures requiring your attention, otherwise you may get an electrical shock



Damage of the product, personal injuries and other property loss caused by anyone who doesn't abide by the safety warnings and instructions in the manual, the manufacture do not assume any form of liability or joint and several liability, also the manufacture does not pay any compensation.

4.Safety warning marks content

1. Please be sure to use correct selection of power. The APM203 VSD Buddy requires a 230v power supply. The APM203 comes complete with a 1.5m power cable and plug
2. Power must be OFF before installation and maintenance, ensure reliable grounding (earth) measures, otherwise do not use.
3. If the pump is not going to be used for a long time, please close the inlet pipe valve and turn off the power.
4. Do not install the product in wet area's or where the product can be regulary splashed with water
5. If the product has been stored for more than two years, boost the pressure slowly when the power is turned on.
6. Don't use wet hands to operate control panel,otherwise there is risk of electric shock
7. If the wire is aged or damaged, it must be replaced



Danger

1. Safety and Attentions

1. Installation and operator must comply with the local safety rules.
2. This product must be installed and maintained by a professional.
3. The user must confirm: installation and maintenance must be operated by professionals who have understood this manual.
4. If the motor runs hot or abnormal, close the inlet valve immediately, turn off the power supply and contact the dealer or service center



Attention

5. If you don't find the fault according to the fault finding, you should close the inlet valve immediately, cut off power supply, and contact the dealer or service center
6. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children.
7. If the supply cord is damaged, it must be replaced by the manufacturer, a service agent or similar qualified person
8. This product should be placed in dry and ventilated area
9. In the summer or if the environment temperature is high, pay attention to ventilation or pump could over heat and fail

1. Safety and Attentions

1.2 Product examination

Every product has been tested before leaving the factory, clients need to check the following after receiving the products :

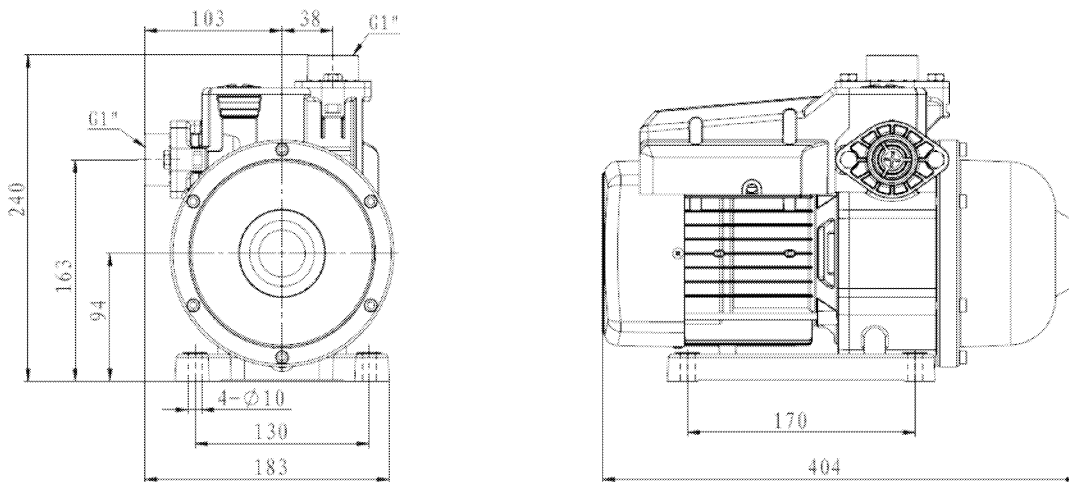
1. Make sure the model and type is what you have ordered
2. Whether the product has received damage in transport, if it has please do not turn the power on unless it is safe to do so

1.3 The use of environmental considerations

The installation environment of variable frequency pumps water supply system has a direct impact on the function and service life, so the installation environment meet the following conditions:

- products can be used in indoor environment
- environment temperature: $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$
- installation environment must not be wet or damp. Must have good ventilation
- stay away from radioactive material and fuel
- avoid electro-magnetic interference → to prevent dust, lint and metal filings into the pump
- to prevent dust, lint and metal filings into the pump

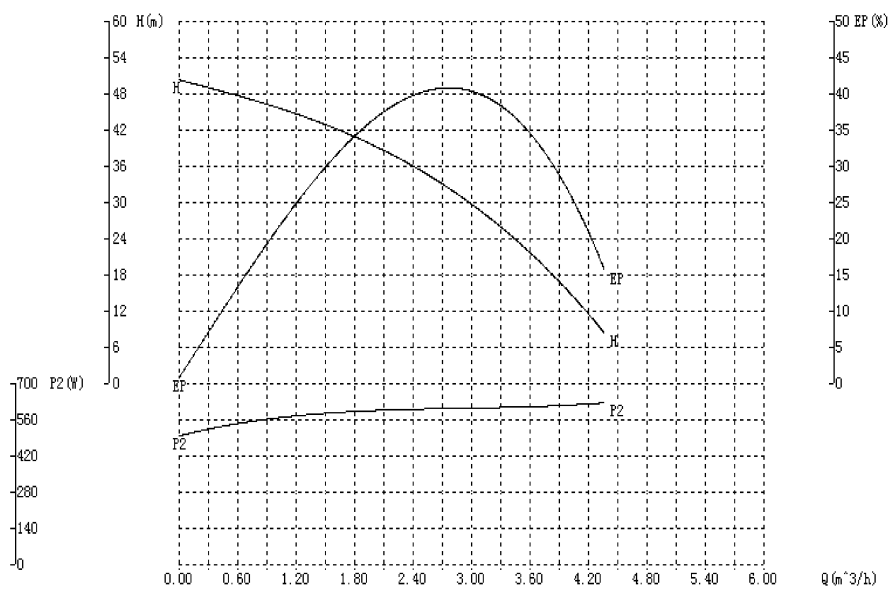
2. Product appearance, instructions for installation and application



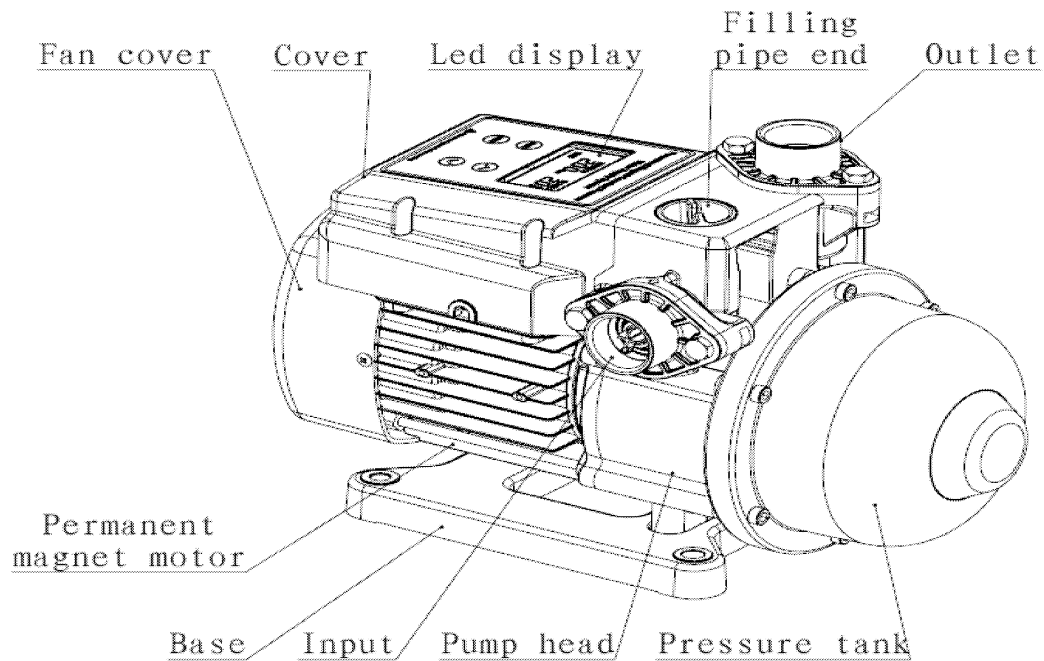
2. Instructions for installation and application

1. The pump should be secured to a base (unit / floor)
2. Try to use flexible hose connectors for inlet and outlet to avoid stress on the connections
3. The inlet pressure value at the inlet of the product shall not be higher than 3 bar
4. This product shall not be used for pumping anything other than water
5. It shall not be used for medical treatment, emergency relief and other places that may endanger the safety of life or property

3.1 Performance curve diagram



3.2 Product Overview



4. Installation And Operating Instruction

4.1 Operation and instruction

4.2 Checking before operating

1. Check whether the input power and environment are in conformity with the product usage condition.
2. Check whether the product is firmly installed on a secure base
3. Please loosen the water filling bung screw before turning on the power supply. Fill the pump body with water and replace the filler bung

4.3 Operating steps

1. Connect the power supply. The current pressure display reads "0.0" bar.
2. Open the outlet valve, press the "RUN" button to start the pump.
3. Under any operating conditions, pressing the "STOP" button stops the pump.
4. By pressing the arrow up or arrow down button, you can adjust the set value of the working pressure. Press arrow up button to increase the set pressure value, this increases at 0.1bar at a time. Press arrow down button to decrease the set pressure. Holding the arrow up or down button to increase/decrease, rapidly increases or lowers the pressure. Close the outlet valve and follow the next step.
5. Open the tap after setting the pressure above in step 4. The inverter will control the pump according to the water using status. (example, if you have opened the outlet valve a little, the pump will come on slowly and continue until it has reached the set pressure. If you have opened the valve fully the pump will come on slow then to full speed, then slowing down when it nears and reaches the set pressure).

4. Installation and Operating Instructions

4.4 Buttons and functional description

Diagram		Key function and display description.	
	NO.	NAME	Description
	1	Stop button	The pump can be stopped manually, press this button to exit the lack of water state
	2	Run button	The pump can be started manually, press this button to re-start the lack of water state (when initially priming this may take a few attempts to get the water running through). Do not continually press this if lack of water state keeps coming up, investigate why water is not going through the pump - Is there enough water in the pump body (Prime using the filler bung).
	3	Working state	Indicates that the motor is in working state.
	4	Actual pressure	Display the actual pressure value of the current pipe network.
	5	input power	Displays the current actual input
	6	Motor speed	Displays the current actual motor speed value.
	7	Set pressure	Displays the current set of pressure values, unit :bar. Indicates that the motor is in shutdown state. The factory default setting value is 3 bar.
	8	shut down state	Indicates that the motor is in shutdown state.
	9	Increase button	press the button one time can increase 0.1bar, long time press can increase rapidly
	10	Decrease button	press the button one time it will reduce the pressure by 0.1bar. A long time press can reduce the pressure rapidly

5. Fault code description

NO.	Code	Fault Code
1	LU	The network voltage is below 120V.
2	OU	The network voltage is over 260V
3	OLP	Motor with short circuit or over-current problems
4	OLD	Exceed the set current or load power
5	EH	Motor is seized
6	EP	Power Supply Issue
7	LP	Water shortage
8	OS	Sensor has failed or the sensor is not detected.
9	OC	Temperature is higher than the set protection temperature.
10	OCP	system pressure is higher than the maximum range of the sensor.
11	EAA	The code displayed when communication failure between drive plate and drive plate
12	LL	The code displayed when the system continues to operate for more than 4 hours

6. Maintenance

5.1 Notices for the product & Maintenance

1. Maintenance needs to be carried out by qualified personnel or service centre
2. The pump has built in non return valves. One on the inlet and one on the outlet
3. The small pressure vessel on the front of the pump needs to be maintained at 1.5 bar. Check periodically the pressure (to get an accurate reading the system must not be pressurised) Remove the black cap and by using a tyre pressure gauge check the pressure. Add more pressure if necessary.
4. Ensure there is enough ventilation measures in summer. Do not expose to direct sunlight or rain
5. If the pump is not going to be used in a long period, please turn off the power, open the outlet valve and drain the system, releasing as much water in the pump body as possible

7. WARRANTY

Conditions of Warranty Terms

Products are covered by Warranty relating to manufacturing defect or failing and/or those of the material used. The components subject to fair wear and tear, such as bearings, seal housing bushes, seals and o rings are not covered under the manufactures warranty.

The Warranty right starts from the date of sale and must be certified by the sale's receipt and is covered for 12 months (1 Year) from sale against fault of manufacture.

The warranty is not accepted in case of:

Failures due to wrong treatment or operation.

Failures due to wrong implementation or storage.

Failure due to wrong hydraulic or electrical connections or installations.

Failures due to by a lack of an adequate protection.

Failures to reasons of force of nature or other uncontrollable factors.

Failures due to abrasive, or corrosive liquids or different from those allowed.

The use of the item beyond the limits indicated on the plate or in wrong conditions.

Failures due to lack of maintenance.

Failures due to incorrect user's actions.

Failure due to wear and tear in certain applications.

In case of pumps the warranty is void if they have not been installed with accurate motor over load protection.

The Warranty consists of repair or replacement by the service centre or supplier at their discretion for the defective pump or parts.

The Warranty is a return to base warranty. Faulty or defective pumps will need to be inspected at the service centre or supplier before repair or replacement is issued.

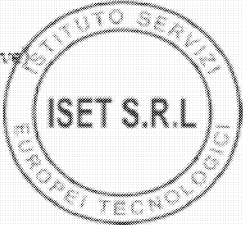
Pumps found to be not covered under warranty will be assessed and quoted for

Declaration Of Conformity

EN - Directives - Harmonised standards

Low Voltage Directive 2014/35/EU, Electromagnetic Compatibility 2014/30/EU
EN 60335-1:2012+A11:2014+A13:2017+A1:2019+A14:2019+A2:2019,
EN 60335-2-41:2003+A1:2004+A2:2010, EN 62233:2008+AC:2008,
EN 60034-1:2010+AC:2010, EN 55014-1:2017, EN 55014-2:2015,
EN IEC 61000-3-2:2019, EN 61000-3-3:2013+A1:2019

NOTE: This document is not referred to any evaluation that could be considered as included in the scope of the activities covered by the standard BS EN ISO/IEC 17065:2012 or European Regulation 765/2008

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SIGNATURE: <i>Xiao Ming</i> (On behalf of the Legal representative)	



ONLY FOR EU COUNTRIES Do not dispose of electric tools together with household waste material! In observance of European Directive 2002/96/EC on waste electrical and electronic equipment and its implementation in accordance with national law, electric tools that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility