



**Standard inverter control panel
(Duplex-pumps operation)**



**HMI inverter control panel
(Duplex-pumps operation)**



**(Optional) Inverter control panel
(Quadruple-pumps operation)**

Applications

- Water supply for apartments, households, residential buildings and villas.
- Water supply for public facilities, parks, motels, hotels, restaurants, schools, hairdressing salons.
- Water supply for factories, IC manufacturers, industrial precision equipments.
- Water supply for car wash, tap water pressurize station, reverse osmosis and construction zone.
- It can be used for single or multiple pumps operation.



Circulation pump



*Simplex operation
inverter booster system*



*Duplex operation
inverter booster system*



*Multiple-pumps inverter
booster system*

Product Features

- We can custom made control panel with different schemes for different environments.
- It saves electricity and energy. The motor will change rotational speed depend on the water usage by the users.
- Customers can change pump performance by adjusting different pressure, capacity and temperature with PLC function.
- Customers can add PID algorithm function which will improve system operation stability.
- We can provide monitor port which can organize operation and monitor interface according to customer demands.
- We provide RS485 communication interface. Output signal 0~10V or 4~30mA. Continuous variable controller.

Specifications

- Casing material: SS400, stainless steel.
- Single layer and double layer types can be chosen by customer demands.
- Inverter conforms to UL and CE certificates.
- IP protection class: Ip54



**Standard inverter control panel
(Simplex-pump operation)**

▲ Duplex operation inverter control panel Introduction

Standard Panel

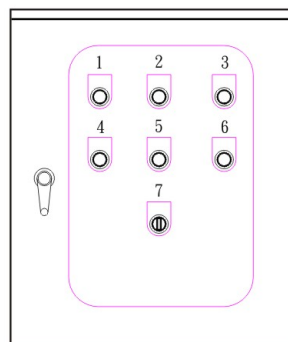
● Panel Outline



Single layer door inverter control panel(duplex-pumps operation)



Double-layer door inverter control panel(duplex-pumps operation)

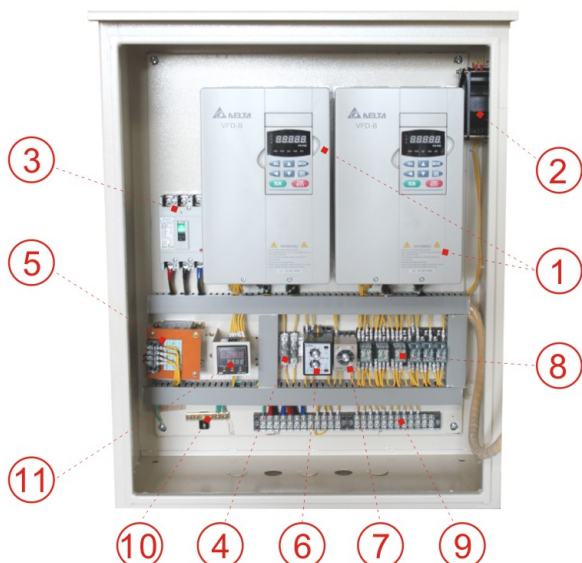


NO.	Name
1	No.1 running(Red)
2	Power(White)
3	No.2 running(Red)
4	No.1 failure(Yellow)
5	No.1 Auto/Stop/Man.
6	No. 2 failure
7	No.2 Auto/Stop/Man.

● Dimensions

Classification		Power (HP)	SIZE (UNIT:MM)			Material
			W	H	D	
220V/380V	Single inverter	1 ~ 3	450	750	250	iron
		5 ~ 15	550	950	300	iron
	Double inverter	1 ~ 3	550	600	250	iron
		5 ~ 15	600	800	280	iron

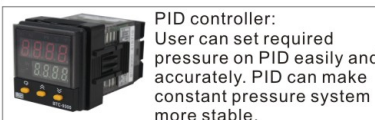
● Inside configuration



NO.	Name
1	Inverter(VFD)
2	Fan
3	No fuse breaker
4	Fuse
5	Transformer
6	Double timer relay
7	Timer relay
8	Auxiliary relay
9	Terminal block
10	Ground wire base
11	PID Controller

Remarks:

- Standard type: Single gate, outdoor type panel. The panel casing is made of SS400.
- Stainless steel SUS304 panel casing, dual gates panel are available upon customer's request.
- Earth leakage circuit breaker, PLC are optional upon request.



Human machine interface inverter Panel

Panel outline



Inside configuration



NO.	Name
1	Fan
2	Inverter
3	PLC
4	Terminal block
5	Auxiliary relay
6	Fuse
7	Magnetic switch
8	Switch
9	Ground wire base
10	Transformer
11	No fuse breaker
12	H.M.I.

Remarks:

- Standard type: Double-layer door, outdoor type panel. The panel casing is made of Ss400.
- Stainless steel SUS304 panel casing is available upon request.

Classification		POWER (HP)	SIZE (UNIT:MM)			Material
			W	H	D	
220V/ 380V	Single inverter	1 ~ 3	450	750	250	iron
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Accessories

Earth leakage circuit breaker

- Protection for electric leakage/ overload/short circuit.
- It adopts SHIHLIN brand or other approved equivalent brands.
- It adopts CNS5422 specifications.
- Electric leakage can be shown by mechanical button.
- Rated voltage common type. Its range is from 110~440V(Below 480V).



PID controller

(Process/Temperature Controller)

- It has fast sampling function(It will sample once per 200msec). It has anti-electro magnetic interference ability. It can control inverter driven motor to change pump system pressure.
- Fuzzy artificial intelligence+PID computer control.
- High precision: Input 18-BIT analog to digital and output 15-BIT digital to analog.
- Automatic algorithm adjustment, system abnormal alarm and HEATER disconnected alarm.



Programmable Logic Controller, PLC

(Programmable Logic Controller, PLC)

PLC is an electrical computing control system. Its framework has the characteristics of simplify save program and easy expansion design. It provides sequence/position control and timing input/output control commands which are widely used in automation control industry.

- It has build in 3 communication ports: 1 for RS-232 and 2 for RS-485. Each one can operate independently.
- Max. expansion up to 10 digit: 256 digit input+16 digit output or 256 digit output+ 16 digit input.
- DVP-EX2 mainframe has build in 12-bit analog resolution of 4AD/2DA. It also provides 14-bit analog resolution for users.
- It has build in 8 digit input(2 digit 100khz, 6 digit 10khz) which supports U/D、U/D Dir and A/B counter mode.
- Newly add more special commands: closed loop、benchmarking、blanking in、instant speed and (S-Curve) acceleration & deceleration functions.
- Emerging industry applications: Aim for solar power energy industry specially design for its own commands and functions.
- Inverter easy commands: Upright、reverse、stop、run...etc.
- Password protection functions: Sub-program password、subscriber identifier、attempt frequency limitation.
- It can perform high efficiency commands.

(Adopts Delta PLC)

