

Parameter setup instructions

1. The pump must be idle before entering the parameter fields (if in operation, manually stop the pump by pressing **STOP** button), then you can enter parameter setting mode.
2. To enter the parameter mode. Press the **▲** and **▼** at same time and hold for 3 seconds, the drive will enter parameter setting mode automatically.
3. After entering the parameters menu, press the **▲** button, the parameter number will increase accordingly. Press the **▼** button, the parameter number will decrease, press the **RUN** button and the corresponding parameter number will be set. For example, the first time using the function of setting parameter, digital screen will display F001. If you need to modify this parameter, simply press the **RUN** button, at the same time the digital screen will display 0.3. If you need to increase this setting, please press **▲** button. Every press of the button will increase setting by 0.1. Alternatively, every press of the **▼** button will decrease the setting by 0.1. After the setting a parameter by pressing the **RUN** button, press the **▲** button to return to the selection of parameter field. If you do not need to modify the data of F001, simply press the **RUN** button to progress to the next parameter field, choose the field that you need to modify. Operation method as detailed above.
4. If no buttons are pressed for 5 seconds, the controller will return to previous screen automatically. When checking the data or selecting the parameter data fields, if no buttons are pressed for 5secs the controller will return to the start screen. After setting if you wait for 5 seconds, the controller will exit parameters setting mode.
5. While the pump is working, press the **▲** and **▼** buttons and hold for 3 seconds, the controller will enter the parameter query mode automatically this is where you can check the system feedback during operation. Operating functions that can be viewed are fields F007—F009, choose the parameter number and press **RUN** to check the operation.

Function of parameter setting:

Press the **▲** and **▼** key at the same time and hold for 3 seconds to enter the parameter setting mode, press the **RUN** key to confirm and save the changes.

- F001: Starting pressure differential setting. Adjusting range: 0.1 – 2 bar, default 0.3 bar. This is the restart pressure value (start differential) set after the pump has reached shut off (set pressure) automatic stop. When the system pressure drops below the set pressure by the set differential the pump will automatically start. This allows you to ensure that the system has seamless constant pressure.
- F002: Parameter setting no water protection pressure value. Adjusting range: 0bar to 0.9bar less than the set pressure, for example, if you need to set the protection shut off pressure set at 1 bar, you need to set it at 0.9bar. Default 0.1bar, water shortage protection function failure when set to 0.
- F003: Parameter setting of water shortage time. Adjusting range: 0 – 60seconds, default 30seconds, to activate water shortage protection. There is a factory set time to automatically restart the pump after a loss of prime event: factory set to restart after 8s, 1min, 10mins, 30mins, 1h, 2h, then every 2h thereafter, until the set pressure is reached.
- F004: Carrier frequency parameter setting. Options: 8 KHZ or 16KHZ, default 8 KHZ.
- F005: ACC/DCC time setting range: 1 – 50 hundreds of millisecond (0.1 – 5 seconds), default 2 hundreds of

milliseconds. Adjusting the parameter can improve the problem of pressure rising too fast or slow causing the pump to run on or cycle.

- F006: Allowable pressure error fluctuation value. Setting range: 1bar, default 0.1 bar. Adjusting the parameters can effectively improve the problem of large pressure fluctuations in constant pressure applications; it also can assist when the pump can't stop because of small leaks in the pipework.
- F007: Checking the current output frequency value.
- F008: Checking the present output current value.
- F009: Checking the current busbar voltage value.
- F010: Restores the factory default settings. Press the  and  key to switch between 0 and 1. The default factory setting is 1. Any parameter change will cause the value turn to 0 automatically. Change the parameter setting to 1 and press  button to restore the default factory settings.
- F011: Stop frequency parameter setting. the adjusting range is 20—45hz, adjusting this parameter can effectively solve the problem of pipeline leakage and pump won't shut off, but please pay attention, if this parameter create an error, it may cause the pump to stop during the normal operation, resulting in the pump frequently starting and stopping, the factory default value is 25hz. If the pump is start/stop frequently, adjusting this parameter should solve the problem of pipeline leakage causing the pump cycle. In general, we do not suggest adjusting this parameter over 30 Hz.

Display code for protecting function

- Over temperature protection will show "OC" when the thermal protection temperature is reached.
- Over current Overload protection will show "OLD" when the present setting exceed the current value or the load power.
- Output short circuit protection will show "OLP" when there is an electrical short circuit.
- Under voltage protection will show "LU" when the voltage is lower than 150V.
- Over voltage protection will show "OU" when the voltage is higher than 280V.
- Over flow protection will show "OCP" when the pressure from the pipe is higher than the sensor maximum range.
- Open phase protection show "OP" when the input of three phase power, open phase fault occurs.
- Show "OS" when pressure sensor damaged or not connected.