

GK3000 Quick Setup Test Manual

Check whether the input and output power wiring is correct and whether the input voltage is correct.
It is recommended to connect the motor with no load for testing.



OUTPUT:
UW or UV or VW

Take the 3-phase 220V/50Hz 0.75kW asynchronous motor as an example to set the parameters:

Group P0, operation parameter group setting

- P0.00=0** (V/F control, used in occasions with low load, such as fans and pumps)
- P0.01=1** (digital setting frequency is given mode, power-off memory)
- P0.02=50** (running frequency setting--set according to actual needs)
- P0.03=0** (running command channel is selected as panel operation)
- P0.04=0** (running direction setting)
- P0.05=50** (maximum frequency setting)
- P0.06=50** (upper limit frequency setting)
- P0.07=0.00** (lower limit frequency setting, minimum operating frequency)
- P0.12=5** (acceleration time 5s)
- P0.13=5** (deceleration time 5s)

Group P8, motor parameter group setting

- P8.00=0** (select the motor type as ordinary asynchronous motor)
- P8.01=0.8** (motor rated power - set according to the motor nameplate)
- P8.02=220V** (motor rated voltage - set according to the motor nameplate)
- P8.03=3.45** (motor rated current - set according to the motor nameplate)
- P8.04=50** (motor rated frequency - set according to the motor nameplate)
- P8.05=1390** (motor rated speed--set according to the motor nameplate)

The above is a simple setting method, please refer to the complete instruction manual for detailed explanation.

If you connect a Single-phase motor, please make sure that the phase loss protection is off.

PA.13=0

External terminal control

Before operation, please ensure that the wiring is correct. The basic function parameters of group P0 have been set, and the motor parameters of group P8 have been set. (Refer to the Quick Setup Test Manual for the setting method)

Setting parameters P0 function parameter setting:

P0.01=0 (set frequency by panel potentiometer)

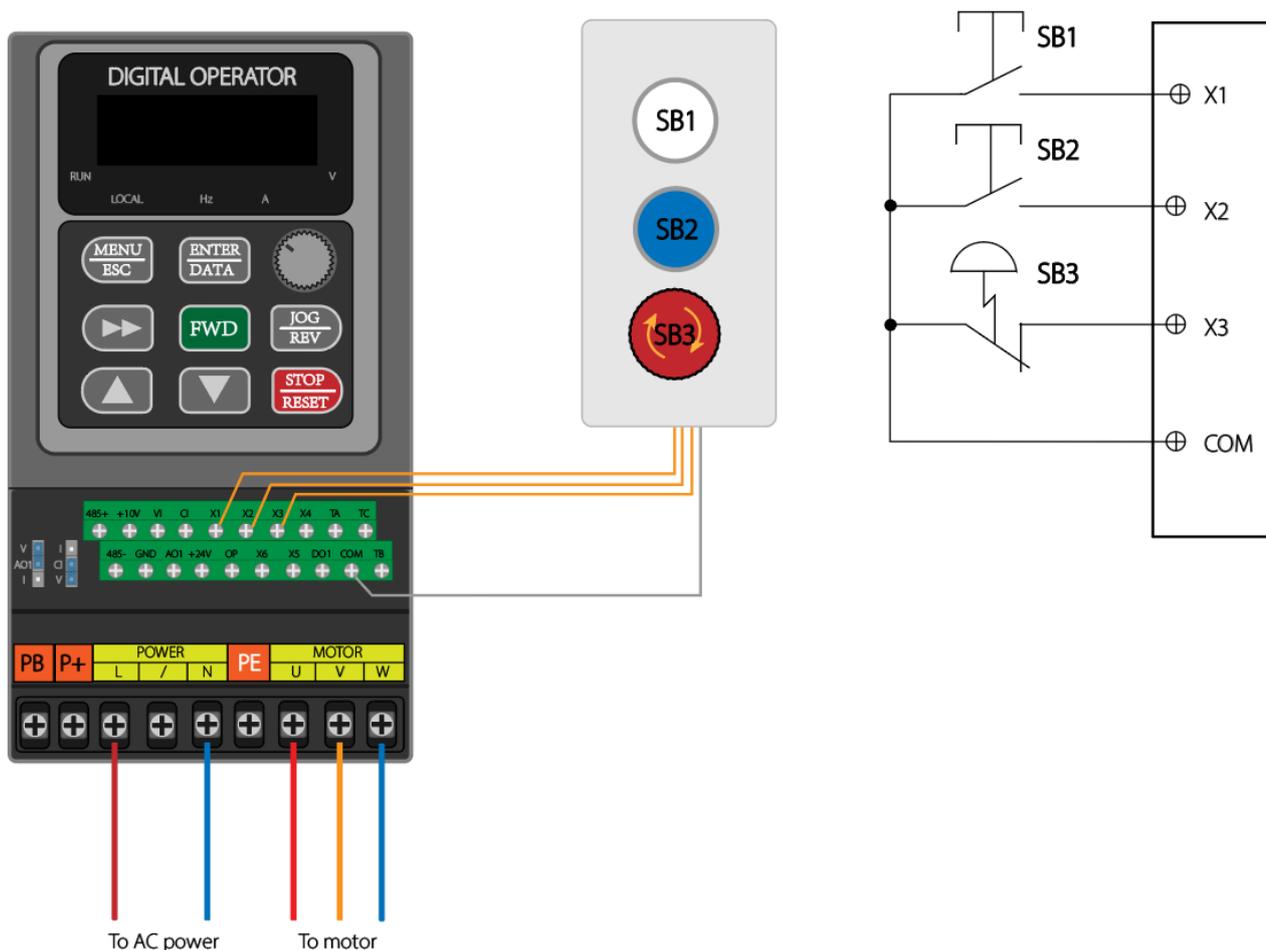
P0.03=1 (external terminal control)

P3.00=1 (X1 terminal function is defined as FWD forward function) self-reset button, normally open contact.

P3.01=2 (X2 terminal function is defined as REV reverse function) self-reset button, normally open contact.

P3.02=3 (X3 is three-wire control mode reset/stop) self-locking button, normally closed contact

P3.14=2 (3-wire control mode 1)



Operation logic explanation:

Press SB1 (self-reset button), the motor starts forward.

Press SB3 (self-locking emergency stop button), the motor stops.

Press SB2 (self-reset button), the motor reverses and starts.

Potentiometer control/0-10V control (VI port)

Before operation, please ensure that the wiring is correct. The basic function parameters of group P0 have been set, and the motor parameters of group P8 have been set. (Refer to the Quick Setup Test Manual for the setting method)

P0.01=2 (VI analog given port takes effect, 0-10V voltage is used as frequency source)

P0.03=1 (terminal run command channel)

P0.24=002 (VI analog setting)

P2.43=0 (lower limit of input voltage protection value) D0 alarm setting range, can be ignored.

P2.44=10 (upper limit of input voltage protection value) D0 alarm setting range, can be ignored.

P3.00=1 (X1 terminal function is defined as FWD forward function) self-reset button.

P3.01=2 (X2 terminal function is defined as REV reverse function) self-reset button.

P3.02=3 (X3 is three-wire control mode reset/stop) self-locking button, normally closed contact.

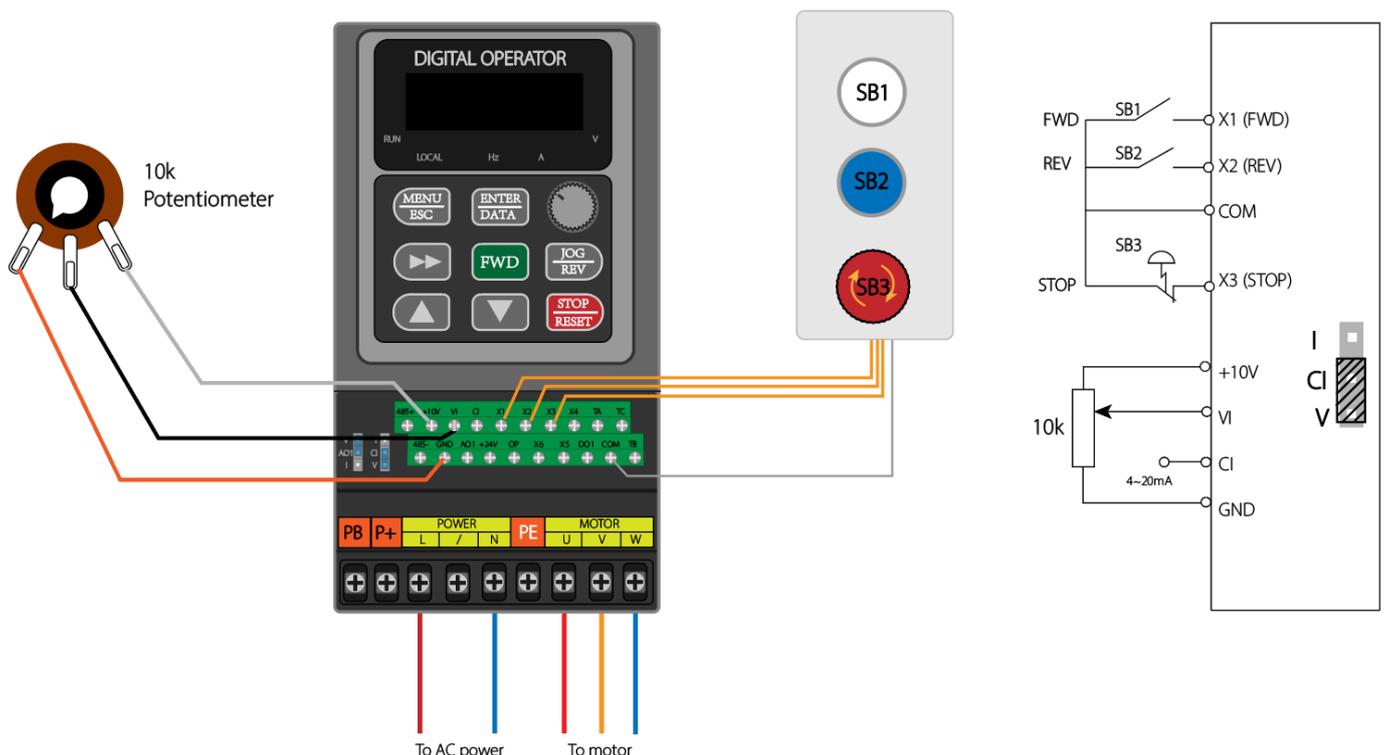
P3.16=0 (VI input minimum value 0V)

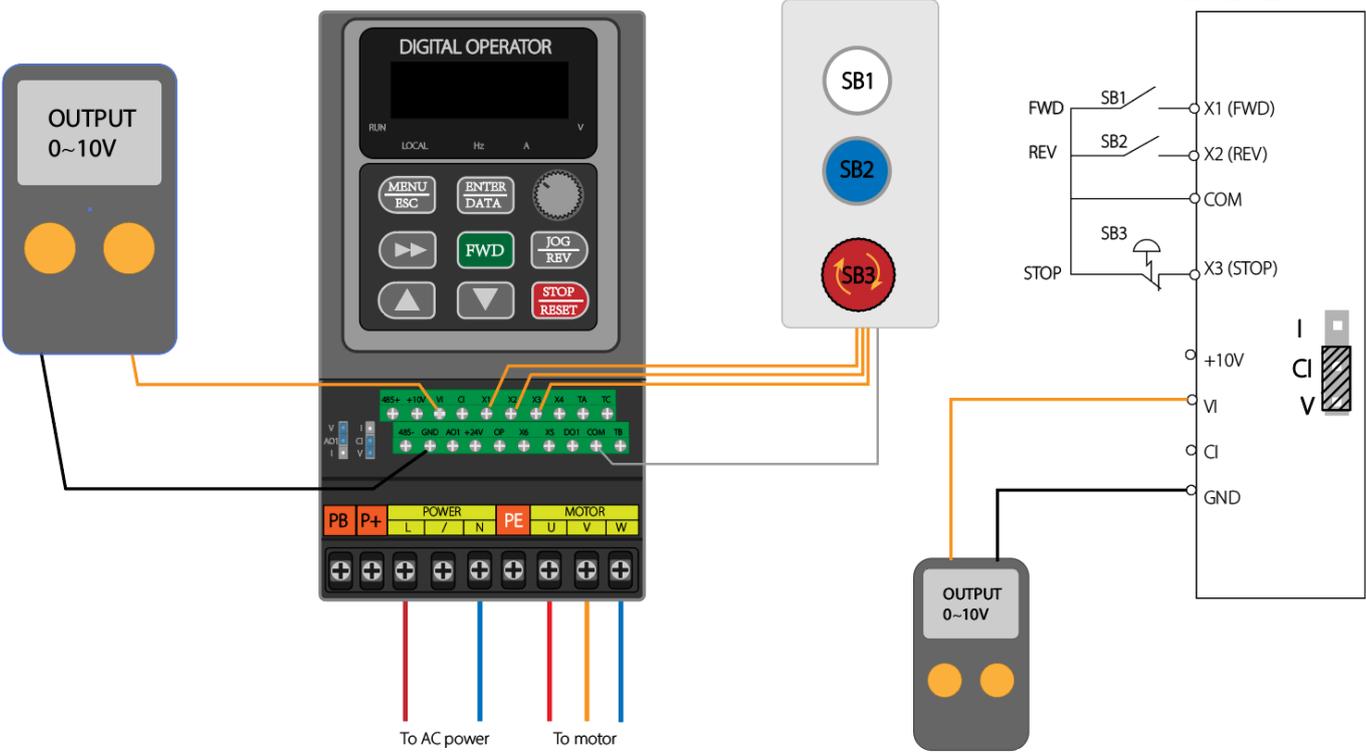
P3.17=0.0 (VI minimum input corresponds to 0%)

P3.18=10.00 (VI input maximum 10V)

P3.19=100.00 (VI input maximum input corresponds to 100%)

When it is found that it is always running at low frequency, please check the wiring of the potentiometer, try to exchange the wiring position of VI and GND, or the wiring position of +10V and GND.





0-10V control (CI port)

Before operation, please ensure that the wiring is correct, the basic function parameters of group P0 have been set, and the motor parameters of group P8 have been set. (Refer to the Quick Setup Test Manual for the setting method)

The left jumper plug CI needs to be connected to V.

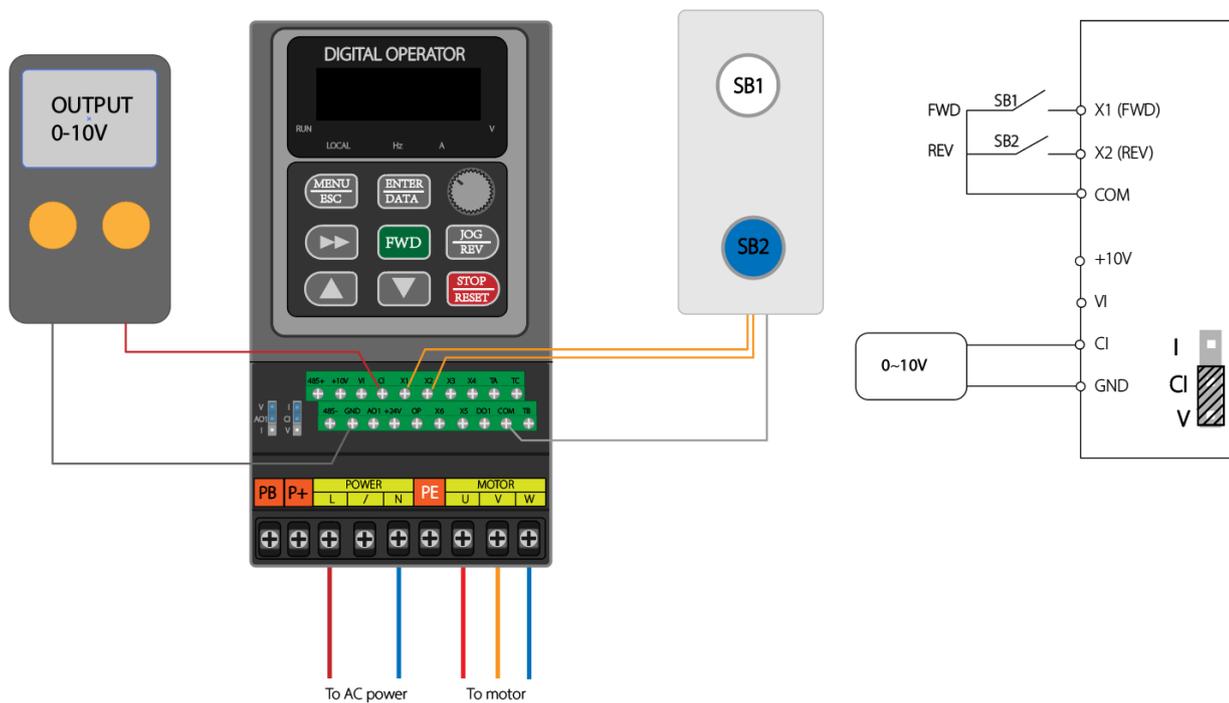
P0.01=3 (CI analog given port takes effect)

P3.21=0 (CI minimum input voltage 0V)

P3.22=0 (the minimum CI corresponds to 0%)

P3.23=10 (CI maximum voltage input 10V)

P3.24=100 (the maximum CI corresponds to 100%)



4-20mA control (CI port)

Before operation, please ensure that the wiring is correct, the basic function parameters of group P0 have been set, and the motor parameters of group P8 have been set. (Refer to the Quick Setup Test Manual for the setting method)

The left jumper plug CI needs to be connected with I

(When the analog input is current input, 1mA current is equivalent to 0.5V voltage. Therefore, the parameter of converting 4-20mA into voltage should be 2~10V.)

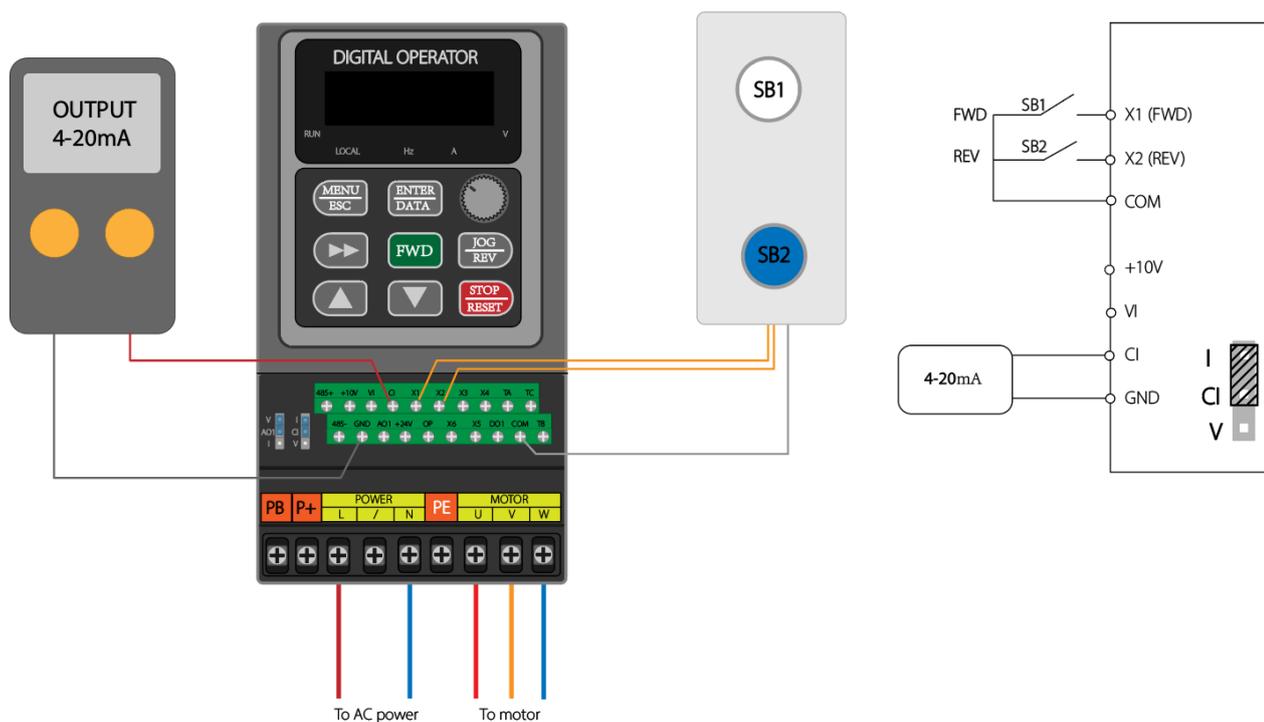
P0.01=3 (CI analog given port takes effect)

P3.21=2 (CI minimum input voltage 0V)

P3.22=0 (the minimum CI corresponds to 0%)

P3.23=10 (CI maximum voltage input 10V)

P3.24=100 (the maximum CI corresponds to 100%)



Multi-function terminal application, multi-speed operation

Before operation, please ensure that the wiring is correct, the basic function parameters of group P0 have been set, and the motor parameters of group P8 have been set. (Refer to the Quick Setup Test Manual for the setting method)

P0.01=6 (multi-speed given frequency)

P3.00=1 (X1 function is defined as FWD)

P3.01=2 (X2 function is defined as REV)

P3.02=3 (X3 is defined as three-wire emergency stop/reset)

P3.03=12 (X4 is defined as multi-stage speed control terminal 1)

P3.04=13 (X5 is defined as multi-stage speed control terminal 2)

P3.05=14 (X6 is defined as multi-stage speed control terminal 3)

Pb group

Pb.00=15Hz (multi-segment frequency 0)

Pb.01=20Hz (multi-segment frequency 1)

Pb.02=25Hz (multi-segment frequency 2)

Pb.03=30Hz (multi-segment frequency 3)

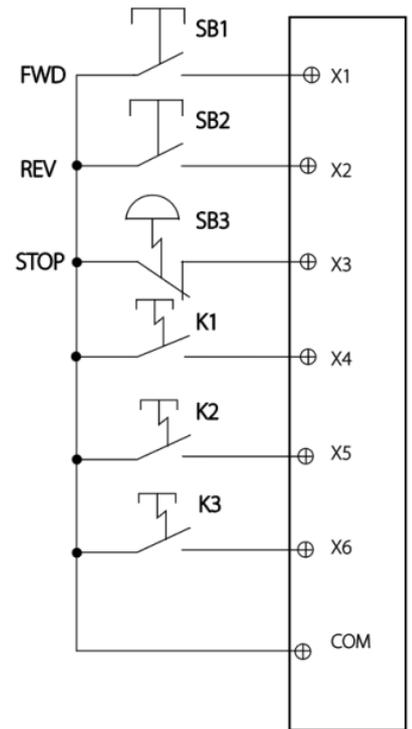
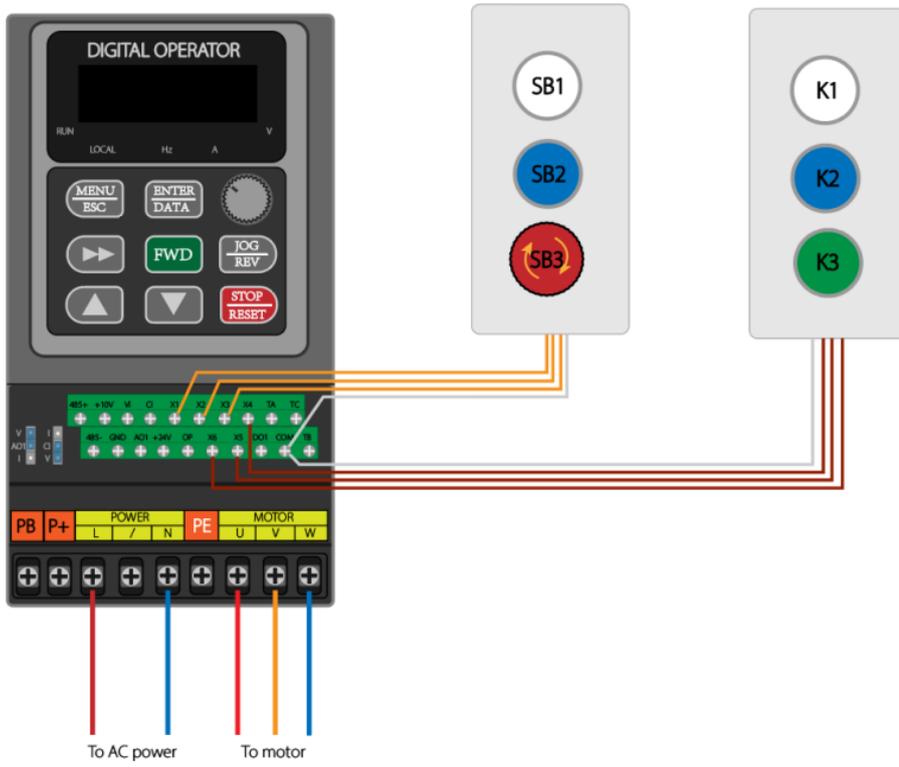
Pb.04=35Hz (multi-segment frequency 4)

Pb.05=40Hz (multi-segment frequency 5)

Pb.06=45Hz (multi-segment frequency 6)

Pb.07=50Hz (multi-segment frequency 7)

K3 (X6)	K2 (X5)	K1 (X4)	Set Frequency (Hz)	Code
OFF	OFF	OFF	15	Pb.00
OFF	OFF	ON	20	Pb.01
OFF	ON	OFF	25	Pb.02
OFF	ON	ON	30	Pb.03
ON	OFF	OFF	35	Pb.04
ON	OFF	ON	40	Pb.05
ON	ON	OFF	45	Pb.06
ON	ON	ON	50	Pb.07



Constant pressure water supply system

Take the 4-20mA pressure sensor access system as an example.

Before operation, please ensure that the wiring is correct, the basic function parameters of group P0 have been set, and the motor parameters of group P8 have been set. (Refer to the Quick Setup Test Manual for the setting method)

The left jumper plug CI needs to be connected with I

(When the analog input is current input, 1mA current is equivalent to 0.5V voltage. Therefore, the voltage parameter converted from 4-20mA should be 2~10V)

P0.01=10 (Constant pressure water supply parameter setting)

P0.03=0 (Operation panel running frequency channel)

P3.21=2 (CI minimum input voltage 2V)

P3.22=0 (CI minimum corresponds to 0%)

P3.23=10 (CI maximum voltage input 10V)

P3.24=100 (CI maximum corresponds to 100%)

P4.02=43 (Alarm lower limit pressure output)

P6.00=0 (PID given channel selection)

P6.01=50 (PID digital setting)

P6.02=1 (PID feedback channel, CI)

P6.05=5 (Proportional gain KP1)

P6.30=0.7 (Given pressure)

P6.31=1 (Maximum pressure value)

P6.32=0.005 (Minimum pressure value)

P6.33=0.09 (Alarm pressure value, upper limit, to determine whether the pipe network is clogged)

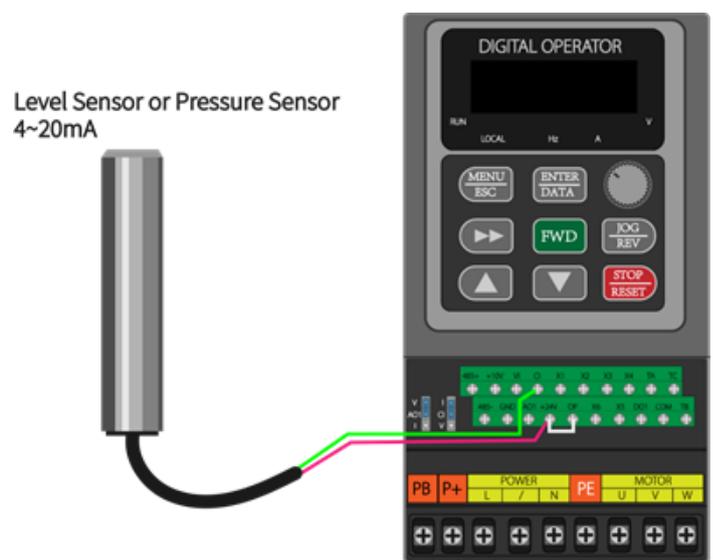
P6.34=0.01 (Alarm pressure value, lower limit, to determine whether the network is short of water)

P6.35=0.015 (Wake-up pressure value, when the water consumption increases and the network pressure is less than this value, it enters the working state, at this time the VFD runs at full frequency)

P6.36=5 (Duration of operation at wake-up pressure level, full frequency)

P6.37=0.06 (Sleep pressure parity value, when the network pressure is greater than this value, the frequency is gradually reduced to the sleep frequency)

P6.38=10 (Duration of sleep pressure level, the time for which the network pressure is continuously maintained at the sleep pressure level)



P6.39=25 (Sleep frequency, frequency of operation before entering hibernation)

P6.40=10 (sleep frequency continuous time, sleep frequency run time)

P6.41=00 (Awakening sleep pressure is actual pressure, sleep frequency condition in effect)

Therefore, after the pressure drops to the wake level, the VFD runs at a higher sleep frequency (or at full frequency). After reaching the sleep pressure, the frequency is higher than the sleep frequency, gradually decreases and runs for a period of time (P6.38), then runs at the sleep frequency (P6.39) for a period of time (P6.40), and finally enters sleep. When the pressure value drops to the awakening position, repeat the action.

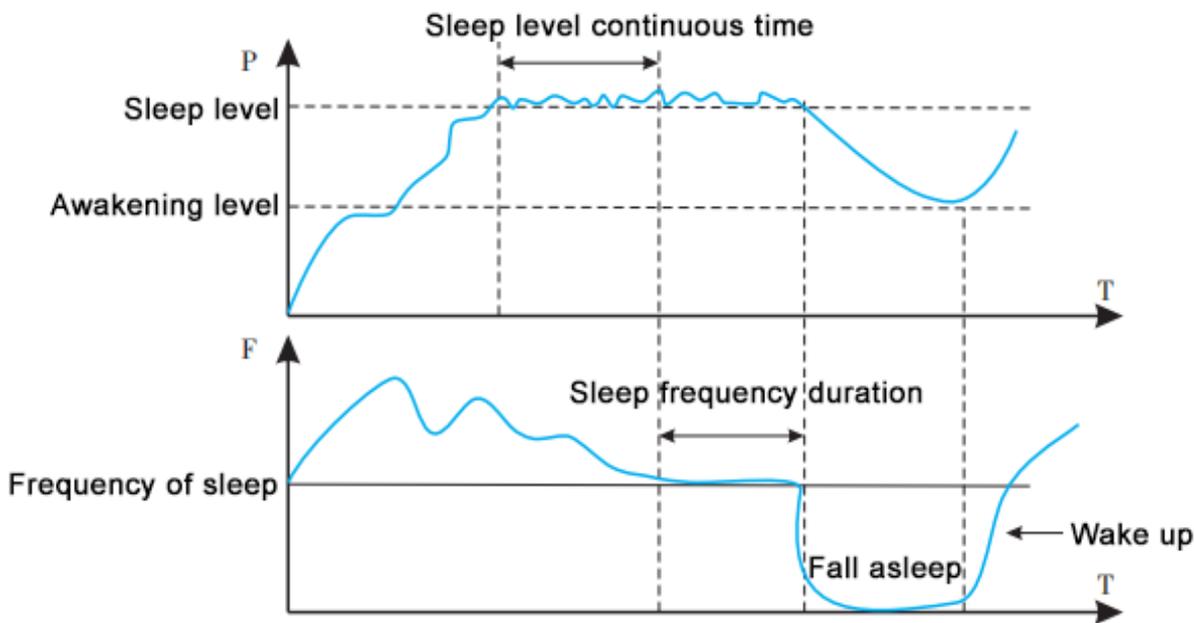


Figure 6- -32 Schematic diagram of sleep awakening

Take 3-phase 220V/50Hz0.75kW asynchronous motor as an example to set parameters:

P0 group, operation parameter group setting

P0.00=0 (V/F control, used in occasions with low load, such as fans and pumps)

P0.01=1 (digital setting frequency is given mode, power-off memory)

P0.02=50 (operation frequency setting--set according to actual needs)

P0.03=0 (operation command channel selection is panel operation)

P0.04=0 (operation direction setting)

P0.05=400 (maximum frequency setting)

P0.06=400 (upper limit frequency setting)

P0.07=0.00 (lower limit frequency setting, minimum operating frequency)

P0.12=20 (acceleration time 20s)

P0.13=20 (deceleration time 20s)

P0.21=1 (frequency command resolution 0.1Hz)

P8 group, motor parameter group setting, set according to the motor nameplate.

Modbus-RTU control

P0.01=9 (RS485 interface takes effect)

P0.03=2 (serial port running command takes effect)

P0.05=60 (maximum frequency, this frequency can be input manually or written by command 06)

PC.00=5 (9600BPS, =6 19200, =7 38400)

PC.01=3 (no checksum)

PC.02=1 (station number, =0 broadcast address)

PC.03=2 (0-20ms response delay)

PC.04=0 (serial port timeout is invalid, 0.1~60.0s)

PC.05=1 (standard Modbus protocol)

Executable code 03 read, 06 write (not save), 07 write (save)

Example address, the following are **0x** hexadecimal

0x5000 address is the running speed percentage storage area, (read/write)

(Decimal, it needs to be converted to hexadecimal and written into VFD. The maximum value corresponds to the percentage of the maximum operating frequency of the VFD, such as 5000=50.00% of the maximum speed.)

5000 speed percentage (Read/Write)

5001 running frequency (Read only)

5002 bus voltage (Read only)

5003 output voltage (Read only)

5004 output current (Read only)

5005 output power (Read only)

Control command address area 0x6000

Command code

Forward 0001

Reverse 0002

FWD Jog 0003

REV Jog 0004

Free stop 0005

Deceleration stop 0006

Fault reset 0007

Function code address 0xF0~0xFF/ can also be written.

For example, to query P0.03 of P0 group, the query address is 0xF003.

Query P6 group P6.10, the query address is 0xF60A.

Write frequency 60.00Hz into **P0.05**:

01 06 **F0 05** 17 70 -- -- (-- is checkcode)

Write output frequency percentage 100.00% into 0x5000

01 06 50 00 27 10 -- -- (-- is checkcode)

Write forward run

01 06 60 00 00 01 -- -- (-- is checkcode)

Read output current

01 03 50 04 00 01 -- -- (-- is checkcode)