WANSHSIN®

MULTI-FUNCTION SPEED CONTROLLER
INSTALLATION INSTRUCTION
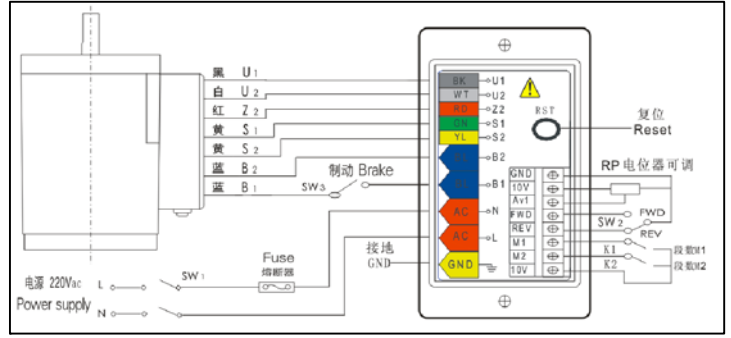
Digital Display Single Phase WX-K Series

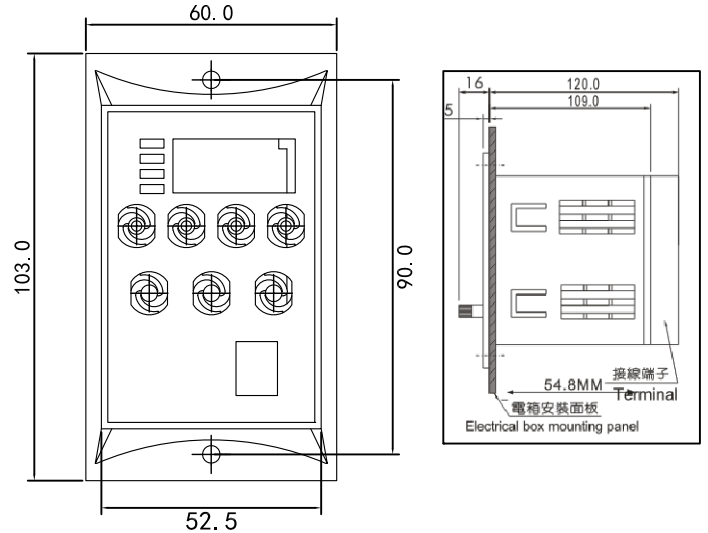

FEATURES:

★ MCU digital control technology, rich function,excellent performance.

★ Digital display menu which is more convenient for parameter setting.
★ It can show the RPM and RATION.Automatic conversion of realistic target value.
★ It can achieve slow acceleration, slow deceleration, 4 stage speed, the electromagnetic brake stop and other complex motion control.
★ The motor rotation direction can be controlled by the digital display speed controller,external connector terminal PLC control and 0-10V analog potentiometer adjustable.It is more convenient and safe.
★ It will be protected automatically if the motor is blocked off and cannot work. (This function can protect locked-rotor and overload .Locked-rotor with non-overload cannot be protected.)
★ With 0-10v analog output.
★ RST-reset button function, short press reset button with clear ER-1 wrong alarm,long press reset button 3-5s reset to leave factory setting.
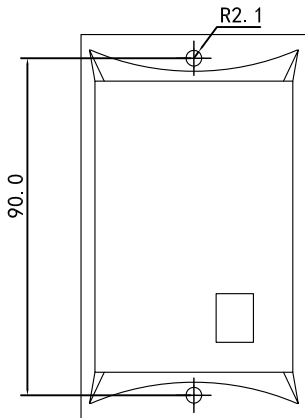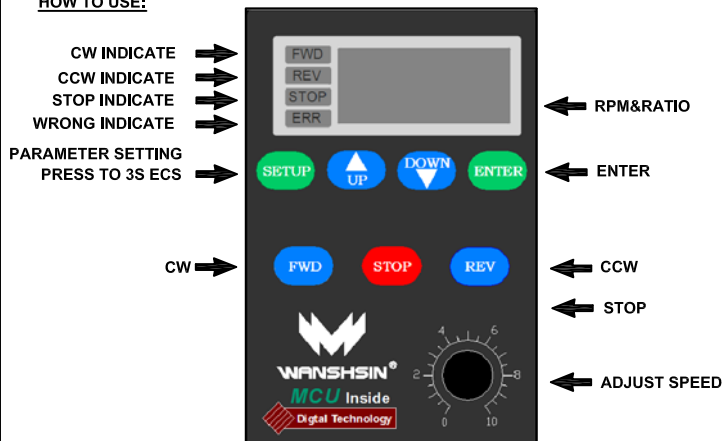
1

DRAWING OF THE SPEED CONTROLLER:

INSTALLATION AND PROCESSING DIAGRAM OF SPEED CONTROL PANEL:

2

OPENED DIMENSIONS:

HOW TO USE:

CW INDICATE
CCW INDICATE
STOP INDICATE
WRONG INDICATE
PARAMETER SETTING PRESS TO 3S ECS
CW

RPM&RATIO
ENTER
CCW
STOP
ADJUST SPEED

Pay attention: It will work under the digital display speed controller control mode. Please make the operation control mode to the digital display speed controller control mode.

3

HOW TO USE PARAMETER SETTING:

1,When the motor stops working,please press"SETUP" over 3 seconds,It will say "H100".
2,Press"p/UP " and "p/DOWN" will make the "H100" to "H123",Then press"ENTER", It will says"P-01".
3,Press"p/UP " and "p/DOWN" to make the mode you want(such as "P-06").Then Press "ENTER".
4,Press"p/UP " and "p/DOWN" to make the parameters as you want(such as to make"1"to"2"),then press"ENTER".
5,If It says"END",It means It has been saved after the adjustment.It will go to the next part automatically.If it says"Err",it means the parameter is wrong.please reset it.
6,If all the parameter Is finished ,please press"ENTER", then you will be out of the setting up menu.It Is before,the setting up states.

PARAMETER DESCRIPTION:

Code	Function	Setting Range	Factory Default
P-01	Display Contents	1.Motor speed setting value 2.Rate setting value	1
P-02	Rate Setting	1.0~999.9	1.0
P-03	Operation Control mode	1.Operation panel button control,no memory 2.External switch control,panel stop botton is Invalid 3.External switch control,panel stop button is valid 4.operation panel button control,with memory	1
P-04	Rotation Mode	1.Allow foreward&reverse 2.Allow foreward,forbid reverse 3.Allow reverse,forbid foreward	1
P-05	Direction of Rotation	1.without reverse 2.with reverse	1
P-06	Speed Regulation Mode	1.Panel Button 2.Panel Rotation 3.External 0-10v Analog quantity	1
P-07	Maximum speed of the motor	500~3000	1400
P-08	Minimum speed	90~1000	120
P-09	Foreward Start Acceleration time	0.1~10.0sec.	1.0
P-10	Foreward Stop Mode	1.Free deceleration stop 2.Slow deceleration stop	1

4

PARAMETER DESCRIPTION:

Code	Function	Setting Range	Factory Default
P-11	Foreward turn stop deceleration time	0.1-10.0Sec	1.0
P-12	Reverse start acceleration time	0.1-10.0Sec	1.0
P-13	Reversal stop mode	1.Free deceleration stop 2.Slow deceleration stop	1
P-14	Reversal stop deceleration time	0.1-10.0Sec	1.0
P-15	Fault restart time	1-30Sec	10
P-16	Fault restart times	0-5Times	3
P-17	I Stage Speed	Adjustable between maximum Speed and minimum speed	500
P-18	II Stage Speed	Adjustable between maximum Speed and minimum speed	700
P-19	III Stage Speed	Adjustable between maximum Speed and minimum speed	900
P-20	Relay Function	1.Operating instructions 2.Abnormal alarm 3.Reach the specified speed	1
P-21 TO P-28 are factory retention parameter			
P-29	Restore factory settings	1.Not Restore 2.Reset to default	1

DETAILED DESCRIPTION OF PARAMETER

P-01	Display Contents	1.Motor speed setting value 2.Reset setting value	1

Rate setting value = motor speed setting value ÷ rate

P-02	Rate Setting	1.0-999.9	1.0

ACCORDING TO THE DISPLAY INTUITIVE TO SET,DISPLAY TARGET VALUE

P-03	Operation Control Mode	1.Operation panel button control,no memory 2.External switch control,panel stop button is invalid 3.External switch control,panel stop button is valid 4.Operation panel button control, with memory	1

Choose "1" Operation panel button control,no memory.First turn off the power supply,then turn on the power supply, the motor with stopped status.
Choose "4"Operation panel button control, with memory.First turn off the power supply,then turn on the power supply,the speed governor has memory of the status which before turn off the power,If turn off the foreward of the motor, then when the power is turned on, the motor start foreward at once, if you select this function, please pay attention to safety.

Choose External switch control, FWD&REV buttons connect with external swith K1&k2 to control motor,K1,K2 can connect with PLC to control motor directly.

Choose "3"External switch control,panel stop button is valid.When the external switch K1,K2 on work status, you can choose "Stop"button on the panel to stop the motor.

Choose "2"External switch control,panel stop button is valid.you must disconnect the K1,K2 switches, the motor will be stopped.

PARAMETER DESCRIPTION:

P-04	Rotation Mode	1.Allow foreward & reverse 2.Allow foreward,forbid reverse 3.Allow reverse,forbid foreward	1

TO AVOID EQUIPMENT FAILURE OR ACCIDENT,WE LIMITED THE ROTATION DIRECTION OF MOTOR

P-05	Direction of Rotation	1.Without reverse 2.with reverse	1

NO NEED CHANGE THE MOTOR WIRING ,THE ROTATION DIRECTION OF MOTOR CAN BE ADJUSTABLE.

P-06	Speed Regulation Mode	1.Panel ▲▼ Button 2.Panel Rotation 3.External 0-10V Analog quantity	1

Choose "1",click ▲▼ button to adjust speed between maximum speed to minimum speed
Choose "2",use rotary button on the panel to adjust motor speed.It can adjust the speed from 0 to Maximum speed.External connect potentiometer with 0-10V Analog AVI input port,the main speed regulation mode p-06 should choose"3".

P-07	Maximum speed of the motor	500-3000	1400

LIMITING THE MAXIMUM SPEED OF MOTOR, IT CAN PRETENT OVERSPEEDING

DETAILED DESCRIPTION OF PARAMETER

P-08	Minimum speed	90-1000	120

LIMITING THE MAXIMUM SPEED OF MOTOR, IT CAN PRETENT SPEED INSTABILTY,OVERHERAT, OVERLOAD ETC.WHICH CAUSED BY ULTRA LOW SPEED OF MOTOR.

P-09	Foreward Start Acceleration time	0.1-10.0sec.	1.0

THE LONGER OF ACCELERATION TIME,MORE GENTLE THE MOTOR START.IFTHE MOTOR START IN LONG TIME, THE ACCELERATION TIME WILL BE SHORT,IF THE MOTOR START FAST AND IN BIG MOVEMENT, THE START TIME WILL BE SHORT.

P-10	Foreward Stop Mode	1.Free deceleration stop 2.Slow deceleration stop	1

DETAILED DESCRIPTION OF PARAMETER

CHOOSE FREE DECELERATION STOP,IF MOTOR STOP TIME IS TOO SHORT, YOU CAN CHOOSE SLOW DECELERATION STOP AND CHANGE P-11 SETTING VALUE, IT CAN CHANGE MOTOR SLOW DECELERATION STOP TIME, THUS IT CAN CHANGE MOTOR STOP TIME.

P-11	Foreward turn stop deceleration time	0.1-10.0Sec.	1.0

ONLY P-10 CHOOSE "2",THIS CODE CAN BE WORK.

P-12	Reverse start acceleration time	0.1-10.0Sec.	1.0

THE LONGER OF ACCELERATION TIME , MORE GENTLE THE MOTOR START. IF THE MOTOR START IN LONG TIME ,THE ACCELERATION TIME WILL BE SHORT, IF THE MOTOR SLOW DECELERATION STOP TIME, THUS IT CAN CHANGE MOTOR STOP TIME.

P-13	Reversal stop mode	1.Free deceleration stop 2.Slow deceleration stop	1

CHOOSE FREE DECELERATION STOP,IF MOTOR STOP TIME IS TOO SHORT, YOU CAN CHOOSE SLOW DECELERATION STOP AND CHANGE P-11 SETTING VALUE, IT CAN CHANGE MOTOR SLOW DECELERATION STOP TIME, THUS IT CAN CHANGE MOTOR STOP TIME.

P-14	Reverse start acceleration time	0.1-10.0Sec.	1.0

ONLY P-13 CHOOSE "2",THIS CODE CAN BE WORK.

DETAILED DESCRIPTION OF PARAMETER

P-15	Fault restart time	1-30Sec.	10

IF MOTOR WITH FAULT,THE SPEED CONTROLLER WILL BE RESTART AUTOMATIC, RESTART TIME IS 1-30SEC.

P-16	Fault restart time	0-5 Times	3

WHEN THE SPEED CONTROLLER FAULT OCCURS TO THE SETTING DEFAULT, THE SPEED CONTROLLER WILL NOT RESTART ANY MORE, YOU CAN SETTING THE RESTART TIMES WHEN THE POWER OFF.

P-17	I Stage Speed	Adjustable between maximum speed and minimum speed	500
P-18	II Stage Speed	Adjustable between maximum speed and minimum speed	700
P-19	III Stage Speed	Adjustable between maximum speed and minimum speed	900

ACCORDING TO THE STAGE OF MOTOR,SETTING THE MOTOR SPEED WITHIN THE ALLOWABLE RANGE.

P-20	Relay Function	1.Operating instructions 2.Abnormal alarm 3.Reach the specified speed	1

**CHOOSE "1" ,FAULT OCCURS WHEN MOTOR START, RELAY CLOSE.
CHOOSE "2", FAULT OCCURS WHEN MOTOR WORK, RELAY CLOSE.
CHOOSE "3", FAULT OCCURS WHEN MOTOR SPEED REACH REACH SPECIFIED SPEED, RELAY CLOSE.**

P-29	Restore factory settings	1.Not Restore 2.Reset to default	1

CHOOSE "2",SYSTEM WILL RECOVERY ALL THE MODIFIED PARAMETERS BACK TO FACTORY DEFAULT.

TROUBLE SHOOTING:

Failure Phenomenon	Possible Problem	Handle Method
Without Power Supply	1.Power cable is not connected	1.Inspect power cable and power supply socket 2.Contact with local distributor
Display Er-1	1.Overlaod or locked -rotor 2.Disconnect between speed controller and Motor	1.Inspect if motor overload or defective 2.Short press RST button with clear ER-1 wrong,long press RST button 3-5s reset to leave factory setting.