


# SF Series PANEL SPEED CONTROLLER MANUAL

Thank you for purchasing *Jssc Motor System* products. Please read this operating manual thoroughly before installing and operating the product.

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◆ Feature

- Using MCU digital control technology, abundant functions and excellent performance.
  - Using digital display of menu options, more convenient to modify and set.
  - Based on user's display requirement to set display ratio, automatic conversion and display target value.
  - Able to achieve slow acceleration and slow deceleration.
  - Able to achieve panel control and external switch control.
  - Panel knob automatic matching with the highest speed, more convenience and safety to adjust and control
  - Locked-rotor protection function, prevent motor and speed controller to be burn out for locked-rotor .  
(This function is to protect the overload by locked-rotor. but it can not protect the overload by unlocked-rotor)
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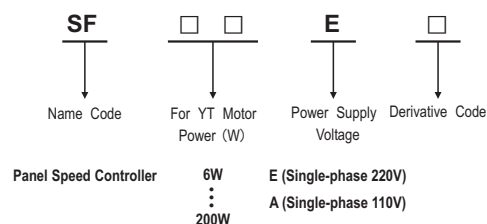


## ◆ Table of Model

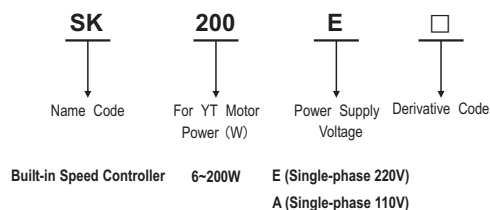
Sort <i>Voltage of Power</i>	SF Series Panel Speed Controller		SK Series Built-in Speed Controller	
	220V	110V	220V	110V
6W	SF06E	SF06A	SK200E	SK200A
15W	SF15E	SF15A		
25W	SF25E	SF25A		
40W	SF40E	SF40A		
60W	SF60E	SF60A		
90W	SF90E	SF90A		
120W	SF120E	SF120A		
200W	SF200E	SF200A		

## ◆ Naming Rules of Model

☐ Panel type



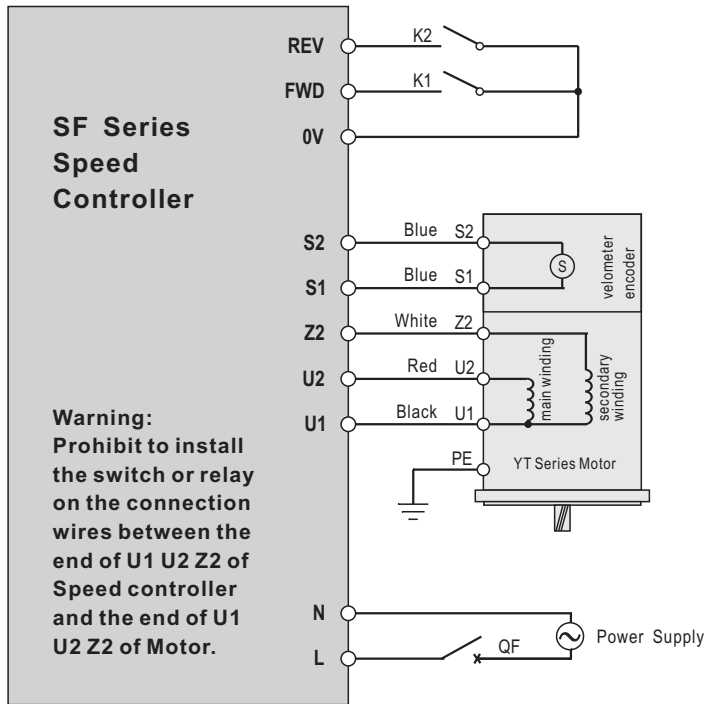
- Built-in type



## ◆ Specifications

Model	SF□□E	SF□□A	SK200E	SK200A
Installation Method	Panel		Built-in	
Supply Voltage	Single-phase 220V	Single-phase 110V	Single-phase 220V	Single-phase 110V
Supply Frequency	50 / 60 Hz			
Applicable motor type	YT Series Variable Speed Motor			
Operating Capacitor	Built-in (Built in Speed Controller)		Built-out (placed in YT series motor's package, need to users to connect)	
Motion control function	Panel or external switch motion control, speed adjust, slow acceleration, slow deceleration		External switch motion control, speed adjust, slow acceleration, slow deceleration, fast stop, 4 segments speed	
Speed Adjust Method	Panel "▲" 、 "▼" Key, Panel knob		Panel "▲" 、 "▼" Key, Panel knob, 0 - 10V Analog Voltage	
Speed Adjust Range	90 - 3000 r/min (Users can according to the motor's pole, power frequency, use requirement to set)			
Operating Ambient	Ambient Temperature: -10℃ - +45℃ (No Freezing) , Ambient Humidity: Less than 85% (No Condensation)			

# ◆ Connection Diagram of SF Series Panel Speed Controller



## ● Panel control

- 1) K1,K2 are not installed.
- 2) Menu settings ,  
Operation Control Mode F-03  
choose "1" or "4" operation  
panel control.

Power of YT Series Motor must be consistent with speed controller applicable motor 's.

## ● External switch control

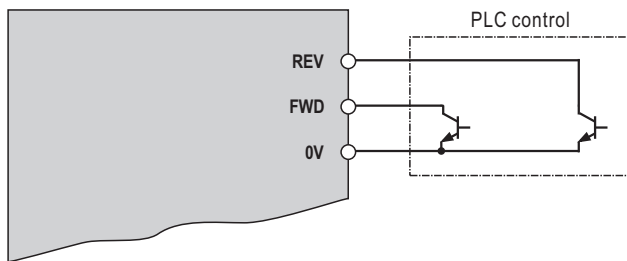
- 1) external switch K1,K2 must be installed.
- 2) Menu settings ,  
Operation Control Mode F-03  
choose "2" or "3" External  
switch control.

Attention:  
Please check if the power of Speed Controller's model label is consistent with the power of motor.

## ● Table of QF's Current specification

Power Voltage	Motor's Power	QF's Current
220V	6~90W	1A
220V	120~200W	2A
110V	6~90W	2A
110V	120~200W	4A

Power supply voltage must be consistent with Speed Controller 's power Voltage. QF for circuit breaker, in case of short circuit, it can protect Speed Controller and YT Series Motor.

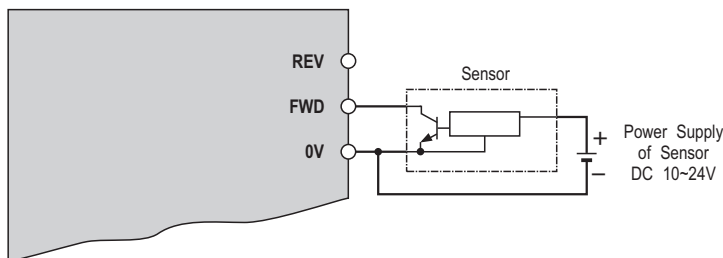


## ● FWD, REV use PLC control.

PLC output mode:  
NPN or Leakage transistor output.

## ● Menu settings ,

Operation Control Mode F-03  
choose "2" or "3" External  
switch control.



## ● FWD, REV use proximity switch , photoelectric switch etc. sensor control.

Switch output mode:  
Three line type NPN transistor output.

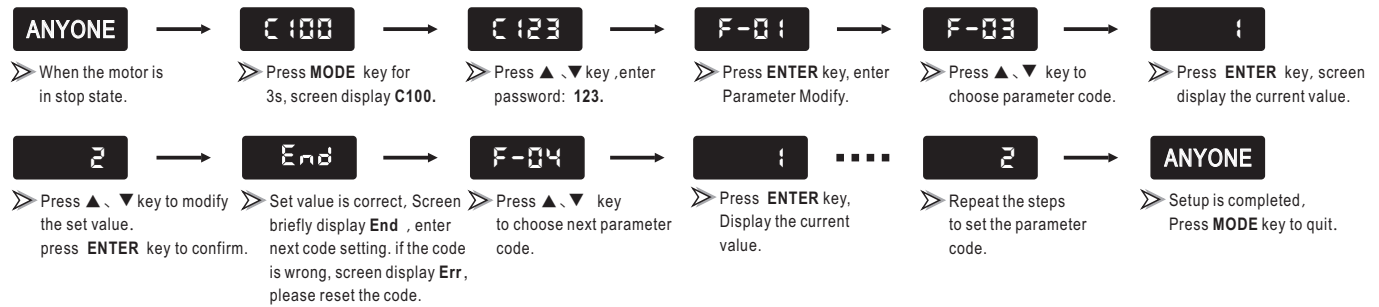
## ● Menu settings ,

Operation Control Mode F-03  
choose "2" or "3" External  
switch control.

## ◆ Menu of SF Series Panel Speed Controller

### ● Menu Settings:

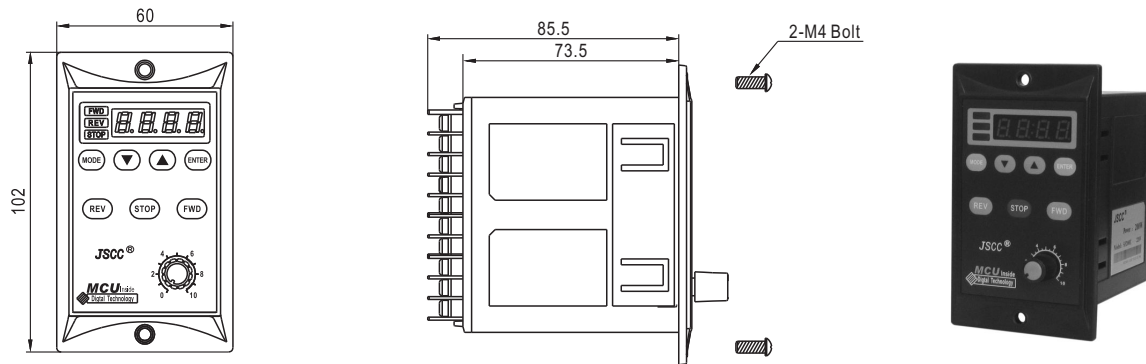
Notice: For keeping safe, please modify the parameter F-05,F-29 when the motor is in stop state, otherwise you can not set the parameter, and the screen display 'Err'.



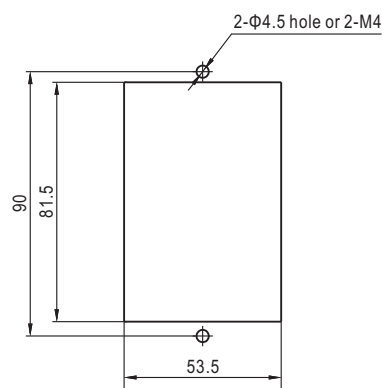
### ● Menu list of SF Series Panel Speed Controller

Parameter code	Parameter function	Setting range	Function description	Factory set value	User set value
F-01	Display content	1. Motor speed setting value 2. Range speed setting value	Range speed setting value = Motor speed setting value / range	1	
F-02	Set range	1.0 ~ 999.9	According the intuitive requirement to display target value.	1.0	
F-03	Operation control mode	1. operation panel control, without memory. 2. external switch, STOP key on panel is invalid. 3. external switch, STOP key on panel is valid. 4. operation panel control, with memory.	Choose "1", operation panel control, the Speed Controller can not record the station before the power was off. when the Speed Controller shut on again, the motor is STOP station. Choose "4", operation panel control, the Speed Controller can record the station before the power was off. when the Speed Controller shut on again, the motor is last station before power off. E.G. the motor is FWD station before power off, after power on, the motor is still FWD station. Choose external switch control, the FWD, REV external switch K1, K2 control motor.	1	
F-04	Rotate mode	1. Allow Forward & Reversal 2. Allow Forward, Prohibit Reversal 3. Allow Reversal, Prohibit Forward	To limit motor rotation direction, prevent equipment failure or accident.	1	
F-05	Direction of Rotation	1. not to change to opposite direction 2. change to opposite direction	Easy to change the motor rotation direction, not to change the motor's wiring, make it consistent with the habits or requirements	1	
F-06	Speed adjust mode	1. Panel <b>▲</b> <b>▼</b> key 2. Panel knob	Press <b>▲</b> <b>▼</b> key to adjust the motor speed during Min. to Max. speed, the panel knob automatically match 0~Max. speed.	1	
F-07	Max. speed	500 ~ 3000	Limit the maximum speed of motor to prevent speeding, damage or accident occurs.	1400	
F-08	Min. speed	90 ~ 1000	Limit the minimum speed of motor to prevent overheated and overload, because of the speed instability by the motor running at low speed.	90	
F-09	Forward-start Acceleration time	0.1~10.0s	For a long time, the motor starts slowly, starting time is long. For a short time, the motor starts fast, starting time is short.	1.0	
F-10	Forward stop mode	1. Free deceleration stop 2. Slow deceleration stop	When choosing free deceleration stop, motor stop faster. When choosing slow deceleration stop, change F - 11 set value to Affect the speed of slow deceleration stop.	1	
F-11	Forward stop, slow deceleration time	0.1~10.0s	F-10 choose 2 , menu is valid.	1.0	
F-12	Reversal-start Acceleration time	0.1~10.0s	For a long time, the motor starts slowly, starting time is long. For a short time, the motor starts fast, starting time is short.	1.0	
F-13	Reversal stop mode	1. Free deceleration stop 2. Slow deceleration stop	When choosing free deceleration stop, motor stop faster. When choosing slow deceleration stop, change F - 14 set value to Affect the speed of slow deceleration stop.	1	
F-14	Reversal stop, slow deceleration time	0.1~10.0s	F-13 choose 2 , menu is valid.	1.0	
F-29	To recover factory set	1. no recovery 2. to recover factory set		1	
F-30	Program version	Code +Version		01.**	
Fault alarm Er-1: 1) Overload locked-rotor 2) the connection of the speed controller with the motor is abnormal.			Fault processing method: 1) check and debugging. 2) To power on remove alarm.		

◆ Appearance / Installation Dimensions of SF Series Panel Speed Controller  
(unit: mm)



Slotting Dimensions for Control Panel (unit: mm)



◆ Precautions

- Do not use in a place where there is flammable gas and/or corrosive gas.
- Avoid continuous vibration, over impact.
- The motor case temperature can exceed 70°C (depending on operation conditions). In case the motor is accessible during operation, please attach the following warning label so that it is clearly visible.
- Please connect the grounding terminal with the ground point of the equipment.
- Installation, connection and inspection must be performed by a qualified installer.



Warning label

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