

SK系列内置式调速器

SK SERIES BUILT-IN SPEED CONTROLLER



● 特点Characteristics

- 采用 MCU 数字控制技术，功能丰富，性能优异。
 - 采用数显菜单式选项，修改设定方便快捷。
 - 可根据用户显示需要设定显示倍率，自动换算显示目标值。
 - 可实现缓慢加速、缓慢减速、快速停止、4 段速等复杂运动控制。
 - 可外接开关控制、0~10V 模拟量控制。
 - 模拟量控制可自动匹配最高转速，调节控制方便、安全。
 - 堵转保护功能，防止电机、调速器因堵转烧坏。
- (此功能可保护堵转过载，但无法保护非堵转过载)

- With MCU digital control technology, it has rich functions and excellent performance.
- Easy to change settings with digital menu options.
- The display magnification can be set according to the user's requirement, and the display target value can be automatically converted.
- Realize complex motion control such as slow acceleration, slow deceleration, fast stop, and 4-speed.
- External switch control, 0~10V analog control.
- The analog control can automatically match the maximum speed, and the control is convenient and safe.
- The stall protection function prevents the motor and drive from being burnt out due to blockage. (This function protects against stalled overload but does not protect against non-blocking overload)

● 型号阵列表Model array table

类别 category	电源电压 voltage	SF 系列面板式调速器 SF series panel drive		SK 系列内置式调速器 SK Series built-in drive	
		220V	110V	220V	110V
电机功率 Power					
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		

● 型号命名方法Model naming method

● 面板式 panel type

SF □ □ **E** □

① ② ③ ④

①	名称代号 Name code	面板式调速器 Panel drive
②	适用调速电机功率代号 Applicable speed motor Power code(W)	6W~200W
③	电压代号 Voltage code	E(单相 single phase220V) A(单相 single phase110V)
④	派升代号 Promotion code	

● 内置式 built-in

SK **200** **E** □

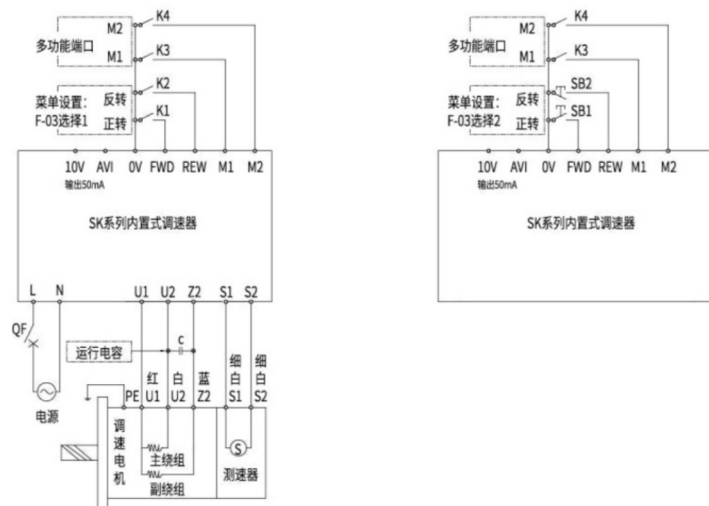
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● 性能参数表 Performance parameter table

型号 Model	SF □ □ E	SF □ □ A	SK200E	SK200A
安装方式 Install method	面板式 panel type		内置式 built-in	
电源电压 Voltage	单相 single phase 220V	单相 single phase 110V	单相 single phase 220V	单相 single phase 110V
电源频率 Power frequency	50/60HZ			
适用电机类型 Motor type	YT 系列调速电机 YT Series speed motor			
运行电容 Capacitor	内置（内置于驱动器内） built-in		外置（放置于电机外包装内，需用户自行连接） External (placed in the speed motor package, users need to connect themselves)	
运动控制功能 Motion control function	面板或外接开关运转控制、调速、缓慢加速、缓慢减速 Panel or external switch operation control, speed control, Slow acceleration, slow deceleration		外接开关运转控制、调速、缓慢加速、缓慢减速、快速 停止、4 段速 External switch operation control, speed control, Slow acceleration, slow deceleration, fast stop, 4 speed stage	
速度调节方式 Speed adjustment method	面板“▲”“▼”键；panel key 面板旋钮 panel knob		面板“▲”“▼”键；panel key 面板旋钮 panel knob； 0~10V 模拟量 Analog quantity	
调速范围 Speed range	90-3000r/min。（用户可根据电机极数、电源频率、使用需要设定） Users can set according to the number of motor poles, power frequency, and usage requirements)			
适用环境 Applicable environment	环境温度 Ambient temperature: -10℃ ~ +45℃（无结冰 No icing） 环境湿度 Ambient humidity: 85%以下（无结露）No condensation			

● SK系列面板式驱动器接线图 SK series panel drive diagram



● QF 断路器电流规格表 QF breaker current specification table

电源电压 Voltage	电机功率 power	QF 电流规格 QF current specification
220V	6 ~ 90W	1A
220V	200W	2A
110V	6 ~ 90W	2A
110V	200W	4A

电源电压必须与调速器电源电压规格一致。QF 为断路器在发生短路时保护调速器和调速电机。

The power voltage must match the speed controller's voltage specifications. QF is the circuit breaker which protect the speed controller and motor when a short circuit occurs.

● 运行电容 C 规格表 Operating capacitor C specification sheet

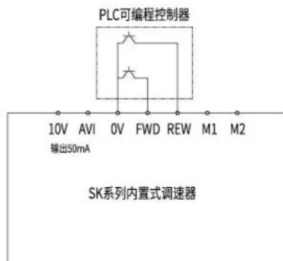
电源电压 Voltage	电机功率 power	
	220V	110V
6W	0.7μF/500V	2.5μF/250V
15W	1μF/500V	4μF/250V
25W	1.5μF/500V	6μF/250V
40W	2.5μF/500V	10μF/250V
60W	3μF/500V	14μF/250V
90W	5μF/500V	20μF/250V
120W	6μF/500V	24μF/250V
200W	10μF/500V	40μF/250V

注：运行电容按电机型号配，放置于调速电机包装内。

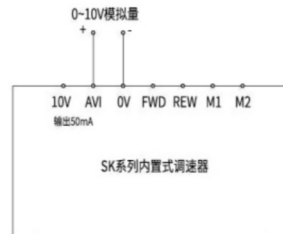
Note: The running capacitor is matched to the motor model and placed in the motor package.

● 10V 端口最大输出电流为 50mA. maximum output current is 50mA to 10V port

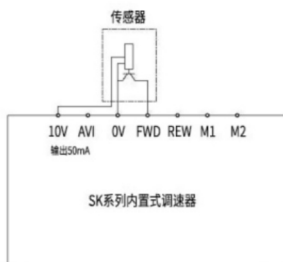
- 1) FWD、REV、M1、M2 控制端口采用 PLC 可编程控制器控制。
 - 2) PLC 输出方式: NPN 或漏型晶体管输出。
- 1) FWD, REV, M1, M2 control ports are controlled by PLC programmable controller.
 2) PLC output mode: NPN or sink transistor output.



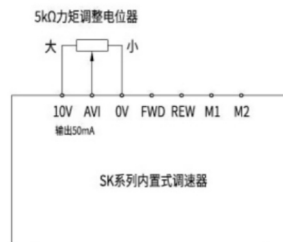
- 1) 采用外部 0~10V 模拟量控制电机速度。
 - 2) 菜单设置: F-06 设定值 3, 外部 0~10V 模拟量控制。
- 1) Control the motor speed with an external 0~10V analog quantity.
 2) Menu setting: F-06 set value 3, external 0~10V analog quantity control.



- 1) FWD、REV、M1、M2 控制端口采用接近开关、光电开关等传感器控制。
 - 2) 开关输出方式: 三线式 NPN 晶体管输出
- 1) FWD, REV, M1, M2 control ports are controlled by sensors such as proximity switches and photoelectric switches.
 2) Switch output mode: 3-wire NPN transistor output



- 1) 采用外部外接调速电位器控制电机速度。
 - 2) 菜单设置: F-06 设定值 3, 外部 0~10V 模拟量控制。
- 1) Use external speed potentiometer to control motor speed.
 2) Menu setting: F-06 set value 3, external 0~10V analog control.

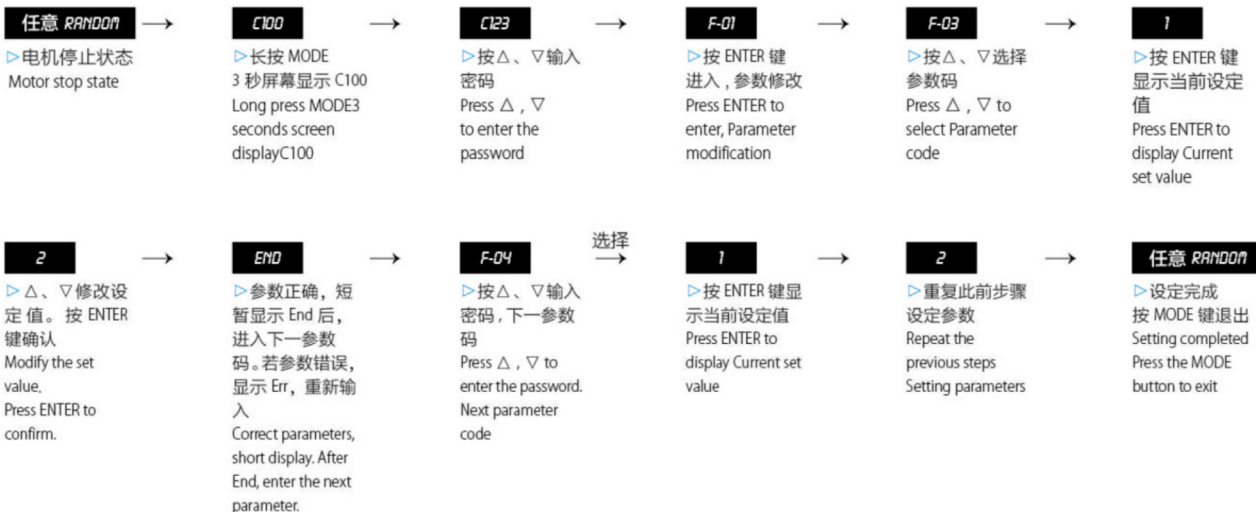


● SK系列内置式调速器菜单 SK series built-in speed controller menu

● 菜单修改 Menu modification

注意: 为保证安全, F-03、F-05、F-29 参数修改必须在电机停止状态下进行, 否则无法设置, 屏幕显示 Err。

Note: In order to ensure safety, the parameters off-03, F-05, F-29 must be modified while the motor is stopped. Otherwise, it cannot be set. The screen displays Err.



● SK 系列面板式驱动器菜单清单 SK series built-in driver menu list

参数码 Parameter code	参数功能 Parameter function	设定范围 setting area	功能说明 Function Description	出厂设定值 Factory setting	用户设定值 User setting
F-01	显示内容 Display content	1. 电机转速设定值 2. 倍率转速设定值 1. Motor speed setting 2. Rate of rotation setting	倍率转速设定值 = 电机转速设定值 × 倍率 Multiplying speed setting value = motor speed setting value × magnification	1	
F-02	倍率设定 Magnification setting	1.0~999.9	根据显示直观性需要设定, 显示目标值。 The target value is displayed according to the display intuitiveness setting.	1.0	
F-03	运转控制方式 Operation control method	1. 正转 / 反转 2. 正转 / 停止 1. Forward/reverse 2. Forward / stop	选择正转 / 反转, 电机由 K1、K2 开关控制。 选择正转 / 停止, 电机由 SB1、SB2 按钮控制。 Select forward/reverse, the motor is controlled by the K1 and K2 switches. Select forward/stop and the motor is controlled by the SB1 and SB2 buttons.	1	
F-04	旋转方式 Rotation mode	1. 允许正反转 2. 允许正转, 禁止反转 3. 允许反转, 禁止正转 1. Allow positive and negative reversal 2. Allow forward rotation, prohibit reverse rotation 3. Allow reverse, prohibit forward rotation	限制电机旋转方向, 防止设备故障或事故。当 F-03 选择 2 时, F-04 自动选择 2 且无法修改, 若需改变旋转方向可由 F-05 设定。 Limit the direction of motor rotation to prevent equipment failure or accidents. When F-03 selects 2, F-04 automatically selects 2 and cannot be modified. If you need to change the direction of motor rotation which can be set by F-05.	1	
F-05	旋转方向 Rotation direction	1. 不取反 2. 取反 1. Don't reverse 2. Invert	无需改变电机接线, 轻而易举改变电机转向, 使之与习惯成要求一致。 Easy to change the motor steering without changing the motor wiring. Make it consistent with the customary requirements.	1	
F-06	主速调整方式 Main speed adjustment method	1. 面板 ▲▼ 按键 2. 面板旋钮 3. 外部 0~10V 模拟量 1. Panel ▲▼ button 2. Panel knob 3. External 0~10V analog	1. 当任意闭合多功能端子 M1、M2 时, 电机运行段速, 主速调整无效。2. 面板旋钮、外部 0-10V 模拟量自动匹配 0~ 最高转速。3. 由于外接调速电位器连接于 0-10V 模拟量 AV 输入端故采用外接调速电位器调速时, 主速调整方式 F06 应选择 3。 1. When the multi-function terminals M1 and M2 are closed arbitrarily, the motor runs at the segment speed and the main speed adjustment is invalid. 2. Panel knob, external 0-10V analog automatically matches 0~ maximum speed. 3. Since the external speed potentiometer is connected to the 0-10V analog AV input terminal, the main speed adjustment mode F06 should be selected 3 When using external speed potentiometer to adjust speed.	1	
F-07	最高转速 Maximum speed	500~3000	限制电机最高转速, 可防止超速。发生损坏或事故。 Limit the maximum speed of the motor to prevent overspeed. Damage or accident has occurred.	1400	
F-08	最低转速 Minimum speed	90 ~ 1000	限制电机最低转速, 可防止电机由于运行于低速导致速度不稳定, 过热。过载。 Limiting the minimum motor speed can prevent the motor from being unstable due to running at low speed and overheating, overload.	90	
F-09	正转启动 加速时间 Forward rotation acceleration time	0.1~10.0 秒 0.1~10.0 seconds	时间长, 电机启动平缓, 启动时间长; 时间短, 电机启动快猛, 启动时间短。 Long time, motor starting level, long starting time. The time is short, the motor starts fast and the starting time is short.	1.0	
F-10	正转停止方式 Forward stop mode	1. 自由减速停止 2. 快速停止 3. 缓慢减速停止 1. Free deceleration stop 2. Quick stop 3. Slowly deceleration stop	1. 若选择自由减速停止, 电机停止较慢, 可选择快速停止, 改变 F-11 设定值, 改变快速停止快慢。2. 若选择自由减速停止, 电机停止较快, 可选择缓慢减速停止, 改变 F-12 设定值, 改变缓慢减速停止的快慢。1. If you choose free deceleration stop, the motor stops slowly, you can choose to stop quickly, change the F-11 setting value, change the fast stop speed. 2. If you choose free deceleration stop, the motor stops faster, you can choose slow deceleration stop, change the F-12 set value, change the speed of slow deceleration stop.	1	
F-11	正转停止时 快速停止强度 When the forward stop Quick stop strength	1~10	F-10 选择 2 时, 菜单有效, 数值越大, 停止越快。 When F-10 selects 2, the menu is valid. The larger the value, the faster the stop.	5	
F-12	正转停止时 缓慢减速时间 When the forward stop Slow deceleration time	0.1~10.0 秒 0.1~10.0 seconds	F-10 选择 3 时, 菜单有效, 数值越大, 停止越慢	1.0	
F-13	反转启动 加速时间 Reverse start acceleration time	0.1~10.0 秒 0.1~10.0 seconds	时间长, 电机启动平缓, 启动时间长。 时间短, 电机启动快猛, 启动时间短。 Long time, motor starting level, long starting time. The time is short, the motor starts fast and the starting time is short.	1.0	
F-14	反转停止方式 Reverse stop mode	1. 自由减速停止 2. 快速停止 3. 缓慢减速停止 1. Free deceleration stop 2. Quick stop 3. Slowly slow down and stop	1. 若选择自由减速停止, 电机停止较慢, 可选择快速停止, 改变 F-15 设定值, 改变快速停止快慢。2. 若选择自由减速停止, 电机停止较快, 可选择缓慢减速停止改变 F-16 设定值, 改变缓慢减速停止的快慢。1. If you choose free deceleration stop, the motor stops slowly, you can choose fast stop, change the F-15 setting value, change the fast stop speed. 2. If free deceleration stop is selected, the motor stops faster. You can select slow deceleration stop to change the F-16 set value and change the speed of slow deceleration stop.	1	

参数码 Parameter code	参数功能 Parameter function	设定范围 setting area	功能说明 Function Description	出厂设定值 Factory setting	用户设定值 User setting
F-15	反转停止时 快速停止强度 Reverse stop Quick stop strength	1~10	F-14 选择 2 时, 菜单有效, 数值越大, 停止越快。 When F-14 selects 2, the menu is valid. The larger the value, the faster the stop.	5	
F-16	反转停止时 缓慢减速时间 Reverse stop Slow deceleration time	0.1 ~ 10.0 秒 seconds	F-14 选择 3 时, 菜单有效, 数值越大, 停止越慢。 When F-14 selects 3, the menu is valid. The larger the value, the slower the stop.	1.0	
F-17	第一段速 First speed	最低转速 ~ 最高转速 Minimum speed ~ maximum speed	闭合 M1, 电机以第一段速运转。 Closing M1, the motor runs at the first speed.	500	
F-18	第二段速 Second speed	最低转速 ~ 最高转速 Minimum speed ~ maximum speed	闭合 M2, 电机以第二段速运转。 When M2 is closed, the motor runs at the second speed.	700	
F-19	第三段速 Third speed	最低转速 ~ 最高转速 Minimum speed ~ maximum speed	闭合 M1+M2, 电机以第三段速运转。 When M1+M2 is closed, the motor runs at the third speed.	900	
F-29	恢复出厂设定 Restore factory settings	1. 不恢复 2. 恢复出厂设置 1. Not recovering 2. Restore factory settings		1	
F-30	程序版本 Program Version	代码 + 版本 Code + version		02.**	

故障报警 Er-1: 1) 过载堵转。

2) 调速器与电机或运行电容的连接异常。

故障处理方式: 1) 检查、排除故障。

2) 重新上电解除报警。

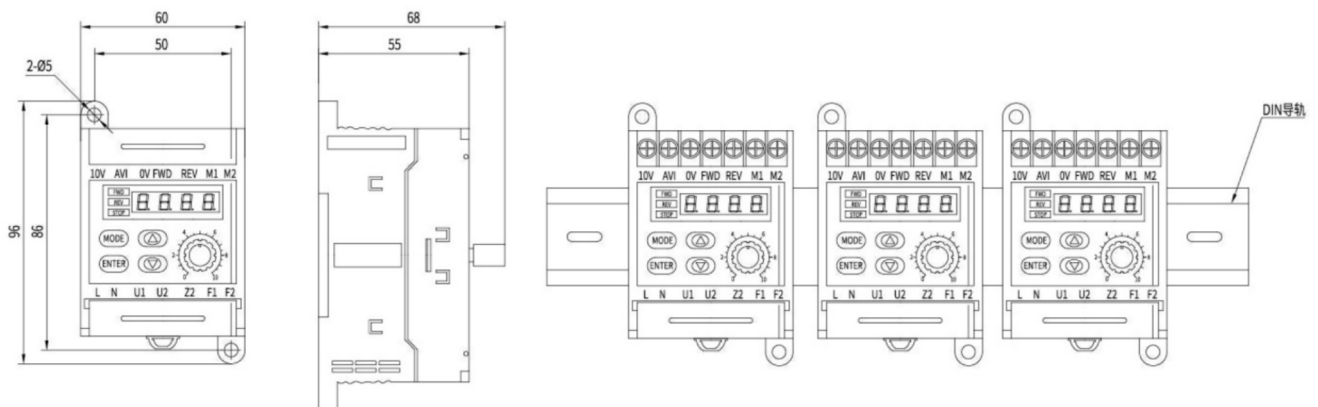
Fault alarm Er-1: 1) Overload blocked.

2) The connection between the governor and the motor or running capacitor is abnormal.

Troubleshooting: 1) Check and troubleshoot.

2) Re-power on to cancel the alarm.

● SK系列内置式调速器外形及安装图 SK series panel governor shape and installation diagram



● 使用须知 Terms and Conditions

● 请勿在爆炸性环境、易燃性气体环境、腐蚀性环境以及容易沾上水的场所或可燃物周围使用。

● 避免连续振动、过度冲击。

● 电机在正常运转状态下, 有时电机外壳表面的温度可能会超过 70°C。

因此在可能触及电机的使用环境下请加贴右圈所示的警告标志。

● 请务必将接地端子接地。

● 安装、连接、检查等作业须由专业技术人员进行。

● Do not use in a fragile environment, an easy-to-existing gas environment, a corrosive environment, or a place where it is easy to get water or a bakeable object.

● avoid continuous vibration. Excessive impact.

● When the motor is in normal operation, sometimes the temperature of the motor casing surface may exceed 70 °C.

Therefore, please put the general sign shown on the right circle in the environment where the motor may be touched.

● Be sure to ground the ground terminal.

● Installation, connection, inspection, etc. must be carried out by professional technicians.

SKB系列内置式驱动器

SKB SERIES BUILT-IN DRIVER



● 特点 Characteristics

- 采用 MCU 数字控制技术，功能丰富，性能优异。
- 采用数显菜单式选项，修改设定方便快捷。
- 可根据用户显示需要设定显示倍率，自动换算显示目标值。
- 可实现缓慢加速、缓慢减速、4 段速、刹车制动停止等复杂运动控制。
- 可外接开关控制、0~10V 模拟量控制。
- 模拟量控制可自动匹配最高转速，调节控制方便、安全。
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(此功能可保护堵转过载，但无法保护非堵转过载)

- With MCU digital control technology, it has rich functions and excellent performance.
- Easy to change settings with digital menu options
- The display magnification can be set according to the user's requirement, and the display target value can be automatically converted .
- Can realize complex motion control such as slow acceleration, slow deceleration, 4-speed, and brake stop.
- External switch control, 0~10V analog control.
- The analog control can automatically match the maximum speed, and the control is convenient and safe.
- The stall protection function prevents the motor and drive from being burnt out due to blockage.
(This function protects against stalled overload but does not protect against non-blocking overload)

● 型号列表 Model array table

类别 category	SF 系列面板式调速器 SF series panel drive		SK 系列内置式调速器 SK Series built-in drive	
	220V	110V	220V	110V
电机功率 Power				
15W	SFB15E	SFB15A	SKB200E	SKB200A
25W	SFB25E	SFB25A		
40W	SFB40E	SFB40A		
60W	SFB60E	SFB60A		
90W	SFB90E	SFB90A		
120W	SFB120E	SFB120A		
200W	SFB200E	SFB200A		

● 型号命名方法 Model naming method

● 面板式 panel type

SFB **E**

① ② ③ ④

①	名称代号 Name code	面板式调速器 Panel drive
②	适用调速电机功率代号 Applicable speed motor Power code(W)	15W~200W
③	电压代号 Voltage code	E(单相 single phase220V) A(单相 single phase110V)
④	派升代号 Promotion code	

● 内置式 built-in

SKB **200** **E**

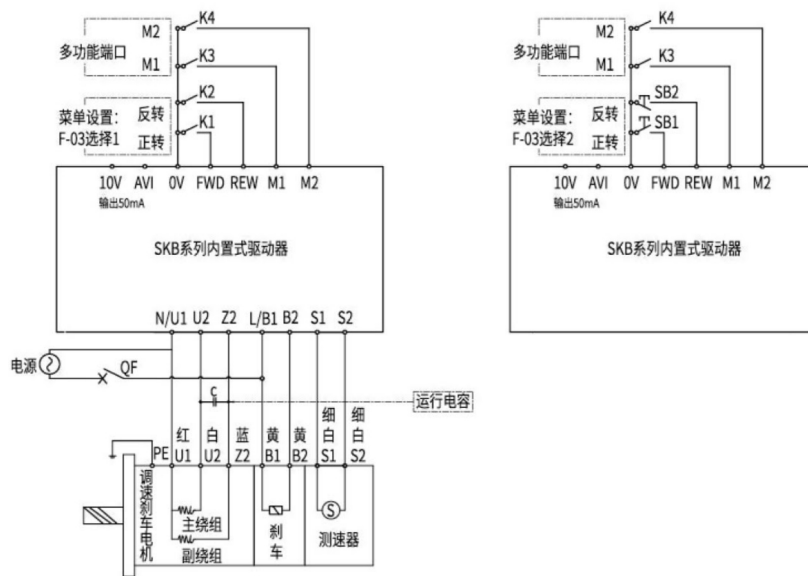
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● 性能参数表 Performance parameter table

型号 Model	SFB □ □ E	SFB □ □ A	SKB200E	SKB200A
安装方式 Install method	面板式 panel type		内置式 built-in	
电源电压 Voltage	单相 single phase 220V	单相 single phase 110V	单相 single phase 220V	单相 single phase 110V
电源频率 Power frequency	50/60HZ			
适用电机类型 Motor type	YF 系列调速电机 YF Series speed motor			
运行电容 Capacitor	内置（内置于驱动器内）built-in		外置（放置于电机外包装内，需用户自行连接） External (placed in the speed motor package, users need to connect themselves)	
运动控制功能 Motion control function	面板或外接开关运转控制，调速，缓慢加速，缓慢减速 Panel or external switch operation control, speed control, Slow acceleration, slow deceleration		外接开关运转控制，调速，缓慢加速，缓慢减速，快速停止，4 段速 External switch operation control, speed control, slow acceleration, slow deceleration, fast stop, 4 speed stage	
速度调节方式 Speed adjustment method	面板“▲”“▼”键；panel key 面板旋钮 panel knob		面板“▲”“▼”键；panel key 面板旋钮 panel knob； 0~10V 模拟量 Analog quantity	
调速范围 Speed range	90-3000r/min。（用户可根据电机极数、电源频率、使用需要设定） Users can set according to the number of motor poles, power frequency, and usage requirements)			
适用环境 Applicable environment	环境温度 Ambient temperature: -10℃ ~ +45℃（无结冰 No icing） 环境湿度 Ambient humidity: 85%以下（无结露）No condensation			

● SKB系列面板式驱动器接线图 SKB series panel drive diagram



● QF 断路器电流规格表 QF breaker current specification table

电源电压 Voltage	电机功率 power	QF 电流规格 QF current specification
220V	15 ~ 90W	1A
220V	120 ~ 200W	2A
110V	15 ~ 90W	2A
110V	120 ~ 200W	4A

电源电压必须与调速器电源电压规格一致。QF 为断路器在发生短路时保护调速器和调速电机

The power voltage must match the speed controller's voltage specifications. QF is the circuit breaker which protect the speed controller and motor when a short circuit occurs.

● 运行电容 C 规格表 Operating capacitor C specification sheet

电源电压 Voltage 电机功率 power	220V	110V
	15W	1μF/500V
25W	1.5μF/500V	6μF/250V
40W	2.5μF/500V	10μF/250V
60W	3.5μF/500V	14μF/250V
90W	5μF/500V	20μF/250V
120W	6μF/500V	24μF/250V
200W	10μF/500V	40μF/250V

注：运行电容按电机型号配，放置于调速电机包装内。

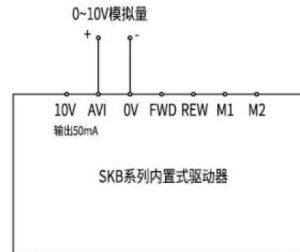
Note: The running capacitor is matched to the motor model and placed in the motor package.

● 10V 端口最大输出电流为 50mA. maximum output current is 50mA to 10V port

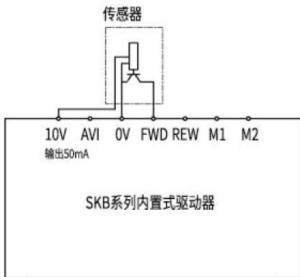
- 1) FWD、REV、M1、M2 控制端口采用 PLC 可编程控制器控制。
 - 2) PLC 输出方式: NPN 或漏型晶体管输出。
- 1) FWD, REV, M1, M2 control ports are controlled by PLC programmable controller.
- 2) PLC output mode: NPN or sink transistor output.



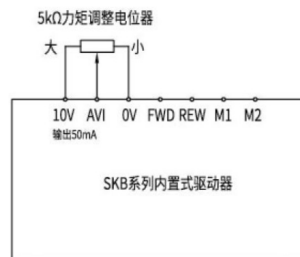
- 1) 采用外部 0~10V 模拟量控制电机速度。
 - 2) 菜单设置: F-06 设定值 3, 外部 0~10V 模拟量控制。
- 1) Control the motor speed with an external 0~10V analog quantity.
- 2) Menu setting: F-06 set value 3, external 0~10V analog quantity control.



- 1) FWD、REV、M1、M2 控制端口采用接近开关、光电开关等传感器控制。
 - 2) 开关输出方式: 三线式 NPN 晶体管输出
- 1) FWD, REV, M1, M2 control ports are controlled by sensors such as proximity switches and photoelectric switches.
- 2) Switch output mode: 3-wire NPN transistor output



- 1) 采用外部外接调速电位器控制电机速度。
 - 2) 菜单设置: F-06 设定值 3, 外部 0~10V 模拟量控制。
- 1) Use external speed potentiometer to control motor speed.
- 2) Menu setting: F-06 set value 3, external 0~10V analog control.

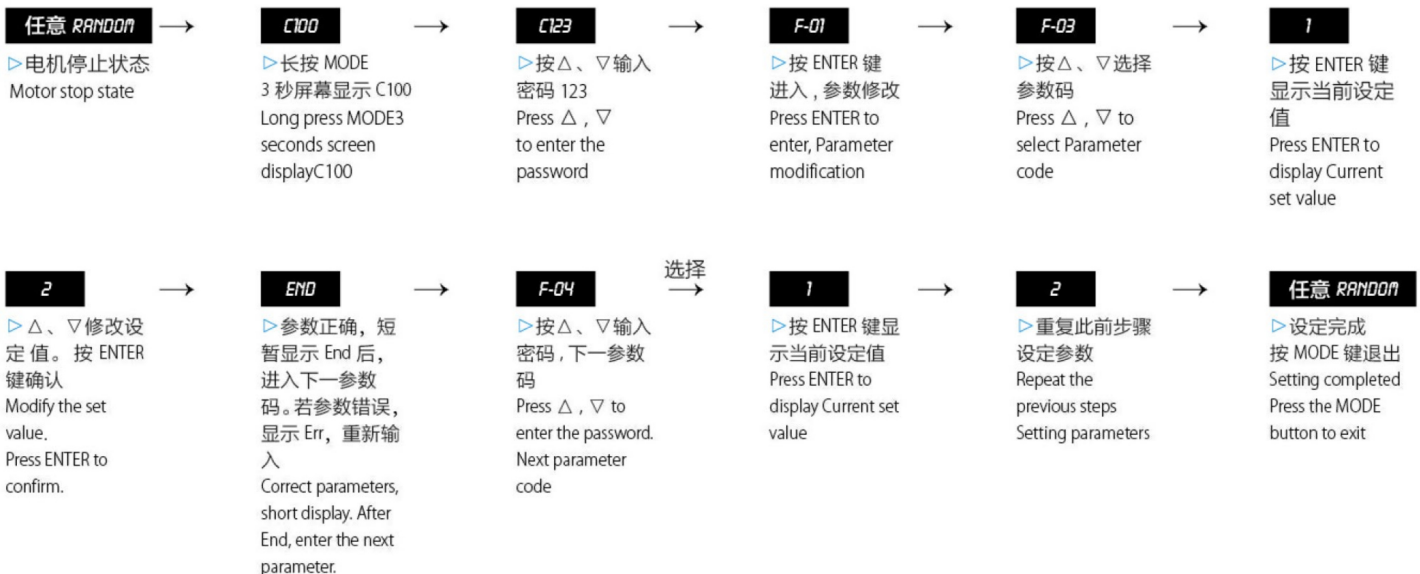


● SKB系列内置式调速器菜单 SKB series built-in speed controller menu

● 菜单修改 Menu modification

注意: 为保证安全, F-03、F-05、F-29 参数修改必须在电机停止状态下进行, 否则无法设置, 屏幕显示 Err。

Note: In order to ensure safety, the parameters off-03, F-05, F-29 must be modified while the motor is stopped. Otherwise, it cannot be set. The screen displays Err.



● SKB 系列面板式驱动器菜单清单 SKB series built-in driver menu list

参数码 Parameter code	参数功能 Parameter function	设定范围 setting area	功能说明 Function Description	出厂设定值 Factory setting	用户设定值 User setting
F-01	显示内容 Display content	1. 电机转速设定值 2. 倍率转速设定值 1. Motor speed setting 2. Rate of rotation setting	倍率转速设定值 = 电机转速设定值 ÷ 倍率 Multiplying speed setting value = motor speed setting value ÷ magnification	1	
F-02	倍率设定 Magnification setting	1.0 ~ 999.9	根据显示直观性需要设定, 显示目标值。 The target value is displayed according to the display intuitiveness setting.	1	
F-03	运转控制方式 Operation control method	1. 正转 / 反转 2. 正转 / 停止 1. Forward/reverse 2. Forward / stop	选择正转 / 反转, 电机由 K1、K2 开关控制。 选择正转 / 停止, 电机由 SB1、SB2 按钮控制。 Select forward/reverse, the motor is controlled by the K1 and K2 switches. Select forward/stop and the motor is controlled by the SB1 and SB2 buttons.	1	
F-04	旋转方式 Rotation mode	1. 允许正反转 2. 允许正转, 禁止反转 3. 允许反转, 禁止正转 1. Allow positive and negative reversal 2. Allow forward rotation, prohibit reverse rotation 3. Allow reverse, prohibit forward rotation	限制电机旋转方向, 防止设备故障或事故。当 F-03 选择 2 时 F-04 自动选择 2 且无法修改, 若需改变旋转方向可由 F-05 设定。 Limit the direction of motor rotation to prevent equipment failure or accidents. When F-03 selects 2, F-04 automatically selects 2 and cannot be modified. If you need to change the direction of motor rotation which can be set by F-05.	1	
F-05	旋转方向 Rotation direction	1. 不取反 2. 取反 1. Don't reverse 2. Invert	无需改变电机接线, 轻而易举改变电机转向, 使之与习惯成要求一致。 Easy to change the motor steering without changing the motor wiring. Make it consistent with the customary requirements.	1	
F-06	主速调整方式 Main speed adjustment method	1. 面板 ▲▼ 按键 2. 面板旋钮 3. 外部 0~10V 模拟量 1. Panel ▲▼ button 2. Panel knob 3. External 0~10V analog	1. 当任意闭合多功能端子 M1、M2 时, 电机运行方式为段速, 主速调整无效。2. 面板旋钮、外部 0-10V 模拟量自动匹配 0~ 最高转速。3. 由于外接调速电位器连接于 0-10V 模拟量 AV1 输入端, 故采用外接调速电位器调速时, 主速调整方式 F06 应选择 3。 1. When the multi-function terminals M1 and M2 are closed arbitrarily, the motor runs at the segment speed and the main speed adjustment is invalid. 2. Panel knob, external 0-10V analog automatically matches 0~ maximum speed. 3. Since the external speed potentiometer is connected to the 0-10V analog AV input terminal, the main speed adjustment mode F06 should be selected 3 When using external speed potentiometer to adjust speed.	1	
F-07	最高转速 Maximum speed	500 ~ 3000	限制电机最高转速, 可防止超速, 发生损坏或事故。 Limit the maximum speed of the motor to prevent overspeed. Damage or accident has occurred.	1400	
F-08	最低转速 Minimum speed	90 ~ 1000	限制电机最低转速, 可防止电机由于运行于低速导致速度不稳定, 过热, 过载。 Limiting the minimum motor speed can prevent the motor from being unstable due to running at low speed and overheating, overload.	120	
F-09	停止方式控制 Stop mode control	1. 由 F-12、F-17 菜单控制 2. 由 M2 多功能端子控制 1. Controlled by F-12, F-17 menu 2. Controlled by M2 multi-function terminal	F-09 选择 2 时, 刹车制动, 由 M2 多功能端子控制, 菜单 F-12、F-13、F-17、F-18 无效, M2 多功能端子多段速功能无效。电机停止时, 若 M2 不闭合, 则电机以自由减速方式停止。When F-09 selects 2, the brake is controlled by M2 multi-function terminal, menus F-12, F-13, F-17, F-18 are invalid, and M2 multi-function terminal multi-speed function is invalid. When the motor stops, if M2 does not close, the motor will stop in free deceleration mode.	1	
F-10	正转启动时解除失电电磁制动器后电机延迟启动时间 Forward rotation start is the motor delay start time after the de-energized electromagnetic brake is released.	0.0~2.0 秒 0.0~2.0 seconds	一般该值取 0, 仅特殊应用需让电机延后启动才要改变设定值 Generally, the value is 0. Only the special application needs to delay the start of the motor to change the set value. to change the F-16 set value and change the speed of slow deceleration stop.	0.0	
F-11	正转启动加速时间 Forward rotation acceleration time	0.1~10.0 秒 0.1~10.0 seconds	时间长, 电机启动平缓, 启动时间长。 时间短, 电机启动快猛, 启动时间短。 Long time, motor starting level, long starting time. The time is short, the motor starts fast and the starting time is short.	1.0	
F-12	正转停止方式 Forward stop mode	1. 刹车制动停止 2. 自由减速停止 3. 缓慢减速停止 1. Brake brake stop 2. Free deceleration stop 3. Slowly slow down and stop	当选择失电电磁制动器停止时, 电机将迅速停止并制动。若选择自由减速停止时, 电机停止太快, 可选择缓慢减速停止 When the de-energized electromagnetic brake is selected to stop, the motor will quickly stop and brake. If you choose free deceleration stop, the motor stops too fast, you can choose slow deceleration stop	1	
F-13	正转停止时失电电磁制动器制动延时时间 De-powered electromagnetic braker delay time when forward rotation stops	0.0~5.0 秒 0.0~5.0 seconds	F-12 选择 1 时, 菜单有效, 电机停止时在此设定时间内, 先以自由减速方式减速有再制动。 When F-12 is selected 1, the menu is valid. When the motor stops, within this set time, first decelerate in the free deceleration mode and then brake again.	0.0	

参数码 Parameter code	参数功能 Parameter function	设定范围 setting area	功能说明 Function Description	出厂设定值 Factory setting	用户设定值 User setting
F-14	正转停止时 缓慢减速时间 When the forward stop Slow deceleration time	0.1~10.0 秒 0.1~10.0 seconds	F-12 选择 3 时,菜单有效,数值越大,停止越慢。 When F-12 selects 3, the menu is valid. The larger the value, the slower the stop.	1.0	
F15	反转启动时解除失电 电磁制动器后电机延 迟启动时间 Delayed start time of the motor after the de- energized electromagnetic brake is released during reverse start	0.0~2.0 秒 0.0~2.0 seconds	一般该值取 0, 仅特殊应用需让电机延后启动才要改变设定值 Generally, the value is 0. Only the special application needs to delay the start of the motor to change the set value.	0.0	
F16	反转启动加速时间 Reverse start acceleration time	0.1~10.0 秒 0.1~10.0 seconds	时间长,电机启动平缓,启动时间长。 时间短,电机启动快猛,启动时间短。 Long time, motor starting level, long starting time. The time is short, the motor starts fast and the starting time is short.	1.0	
F17	反转停止方式 Reverse stop mode	1. 刹车制动停止 2. 自由减速停止 3. 缓慢减速停止 1. Brake brake stop 2. Free deceleration stop 3. Slowly slow down and stop	当选择失电电磁制动停止时,电机将迅速停止并制动。若选择自由减速停止时,电 机停止太快,可选择缓慢减速停止 When the de-energized electromagnetic brake is selected to stop, the motor will quickly stop and brake. If you choose free deceleration stop, the motor stops too fast, you can choose slow deceleration stop	1	
F18	反转停止时失电电磁 制动器制动延时时间 power failure electromagnetic brake delay time when reverse rotation	0.1~10.0 秒 0.1~10.0 seconds	F-17 选择 1 时,菜单有效,电机停止时,在此设定时间内,先以自由减速方式减速后 再制动。 When F-17 is selected 1, the menu is valid. When the motor stops, during this set time, first decelerate in the free deceleration mode and then brake.	0.0	
F-19	反转停止时 缓慢减速时间 Reverse stop Slow deceleration time	0.1~10.0 秒 0.1~10.0 seconds	F-17 选择 3 时,菜单有效,数值越大,停止越慢。 When F-14 selects 3, the menu is valid. The larger the value, the slower the stop.	1.0	
F-20	第一段速 First speed	最低转速 ~ 最高转速 Minimum speed ~ maximum speed	闭合 M1,电机以第一段速运转。 Closing M1, the motor runs at the first speed.	500	
F-21	第二段速 Second speed	最低转速 ~ 最高转速 Minimum speed ~ maximum speed	闭合 M2,电机以第二段速运转,与 F-09 设置有关。 Closing M2, the motor runs at the second speed, which is related to the F-09 setting.	700	
F-22	第三段速 Third speed	最低转速 ~ 最高转速 Minimum speed ~ maximum speed	闭合 M1+M2,电机以第三段速运转,与 F-09 设置有关。 Close M1+M2, the motor runs at the third speed, which is related to the F-09 setting.	900	
F-29	恢复出厂设定 Restore factory settings	1. 不恢复 2. 恢复出厂设置 1. Not recovering 2. Restore factory settings		1	
F-30	程序版本 Program Version	代码 + 版本 Code + version		04.**	

故障报警 Er-1: 1) 过载堵转。

2) 调速器与电机或运行电容的连接异常。

故障处理方式: 1) 检查、排除故障。

2) 重新上电解除报警。

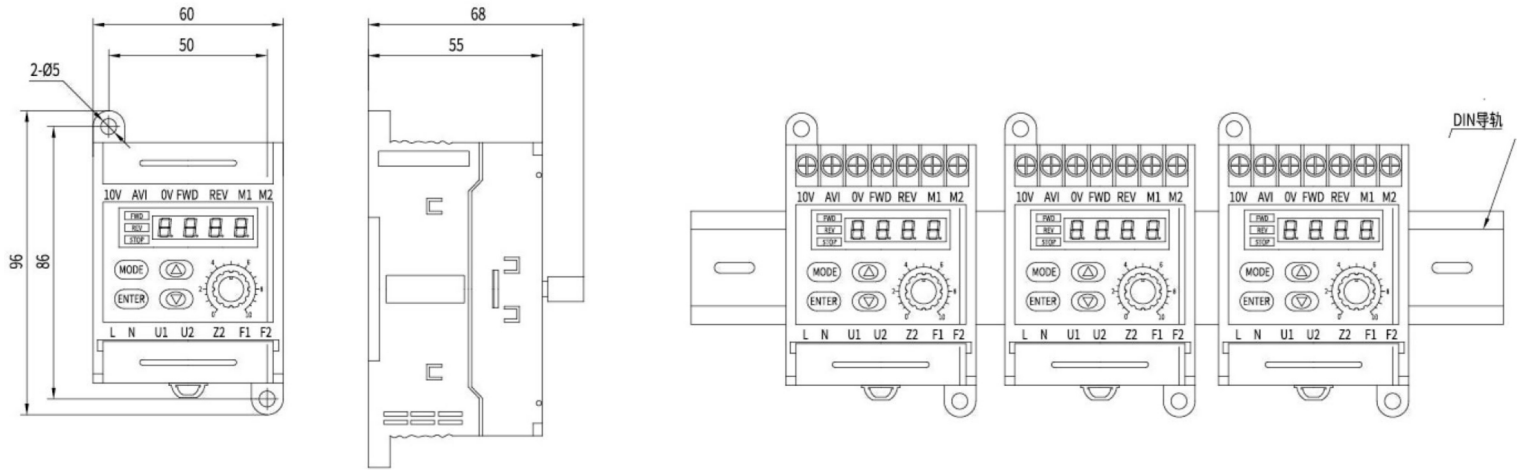
Fault alarm Er-1: 1) Overload blocked.

2) The connection between the governor and the motor or running capacitor is abnormal.

Troubleshooting: 1) Check and troubleshoot.

2) Re-power on to cancel the alarm.

● SK系列内置式调速器外形及安装图 SK series panel governor shape and installation diagram



● 使用须知 Terms and Conditions

- 请勿在爆炸性环境、易燃性气体环境、腐蚀性环境以及容易沾上水的场所或可燃物周围使用。
- 避免连续振动、过度冲击。
- 电机在正常运转状态下，有时电机外壳表面的温度可能会超过 70℃。

因此在可能触及电机的使用环境下请加贴右圈所示的警告标志。

- 请务必将接地端子接地。
 - 安装、连接、检查等作业须由专业技术人员进行。
 - Do not use in a fragile environment, an easy-to-existing gas environment, a corrosive environment, or a place where it is easy to get water or a bakeable object.
 - avoid continuous vibration. Excessive impact.
 - When the motor is in normal operation, sometimes the temperature of the motor casing surface may exceed 70 °C.
- Therefore, please put the general sign shown on the right circle in the environment where the motor may be touched.
- Be sure to ground the ground terminal.
 - Installation, connection, inspection, etc. must be carried out by professional technicians.