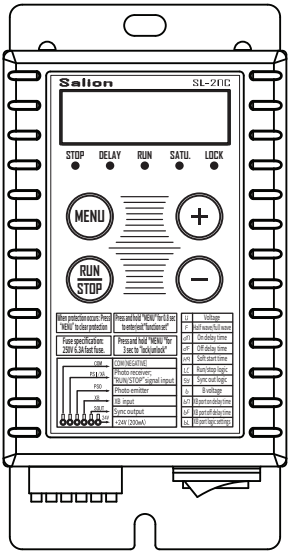
Digital display voltage stabilizing vibrating feeder controller



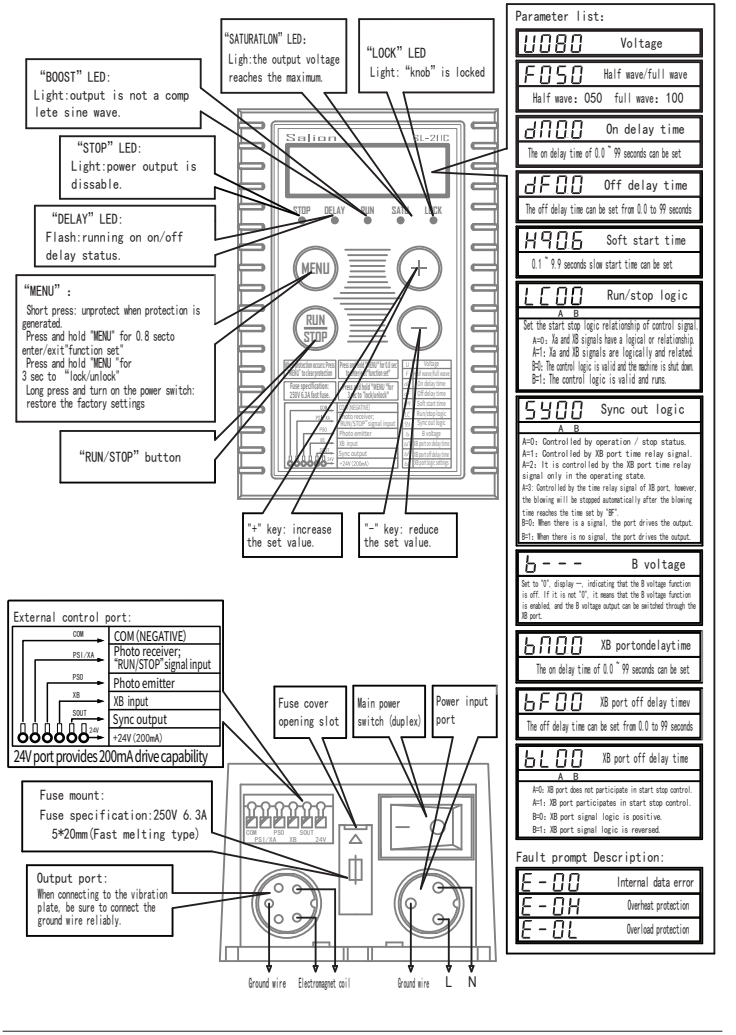
Product features:

1. Two sets of external control ports support photoelectric radiation switch and NPN two-wire and three wire sensor, with a variety of logic settings to realize multi track full shutdown and other functions.
2. A group of external control ports with time relay function can flexibly realize the control of blowing, alarm and shutdown through logic parameter setting.
3. Two sets of output voltage parameters can quickly switch the output voltage through the external control port to realize the non-stop control function of the end feeding speed and full deceleration of counting, weighing and other applications at low cost.
4. A set of synchronous output ports can directly drive the solenoid valve, which can be controlled by the operating state or the built-in time relay for blowing, alarm, shutdown and other control.
5. It has slow start, slow stop and slow change mechanism during output voltage switching. Ensure smooth feeding under various working conditions.
6. Excellent voltage stabilizing performance to ensure constant feeding speed in case of large fluctuation of grid voltage.
7. The algorithm is optimized especially for various power grid sudden interference in industrial occasions to minimize the abnormal jitter of feeding caused by sudden power grid interference in the feeding process.
8. It can output 24v200ma DC power supply to supply power to the sensor and solenoid valve.
9. Enclosed enclosure, suitable for harsh working environment.
10. It has overheating, overload and output short circuit protection.

Attentions in operation:

1. Power supply voltage range: 85V~265V AC 50/60Hz, the input power supply voltage should not exceed 285V, otherwise it will cause irreparable damage.
2. In order to prevent accidental electric shock accidents, the grounding port of the power plug must be reliably connected, and the power supply needs to have overcurrent and leakage protection measures.
3. In order to ensure long-term stable operation, the controller should not be fix in a position where the vibration amplitude is too large.
4. The controller will generate heat when it works. To ensure long-term stable operation, the controller should be vertically installed in a ventilated place.
5. To ensure long-term stable operation, avoid any dust, liquid contact with the controller
6. The output port has a ground wire, and the vibration plate must be reliably connected to the ground wire.
7. It is strictly forbidden to use any way to cut off the input power and cut off the power output to control the run/stop of the vibration plate, which will seriously shorten the service life of the controller. The external run/stop control signal should be used for run/stop control.
8. The load current on the output port of the controller's 24V dc power supply cannot be greater than 200mA, otherwise it will lead to the disconnection the 24V power supply or the failure of saving parameter.
9. To prevent electric shock, it is strictly forbidden to pull out the power output port when the controller is powered on.
10. No connecting the power input cable and turning on the power switch of the controller before all wiring is completed, .

Operation panel and port introduction:



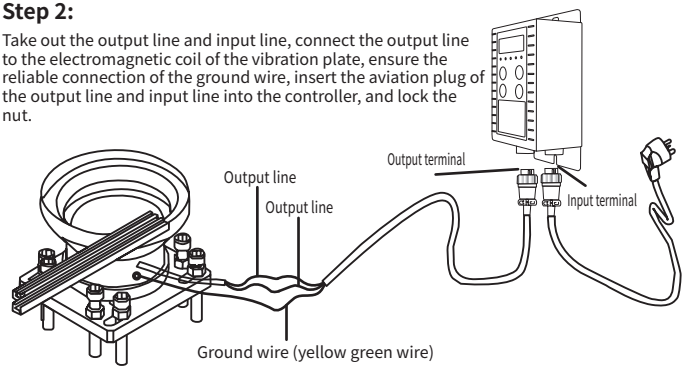
Quick installation and use guide:

Step 1:

Open the outer package of the controller, check the appearance and side mark model of the controller, and judge whether it is the required model.

Step 2:

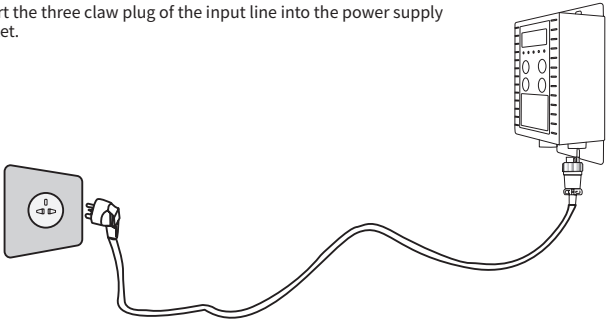
Take out the output line and input line, connect the output line to the electromagnetic coil of the vibration plate, ensure the reliable connection of the ground wire, insert the aviation plug of the output line and input line into the controller, and lock the nut.



- Make sure that the electromagnetic coil is connected to the two output pins, and the heat sink of the controller needs to be reliably grounded. Otherwise, the controller will be impacted by static electricity and controller failure may occur. The yellow and green ground wires shall be reliably connected. Failure to connect may lead to serious safety accidents!!!

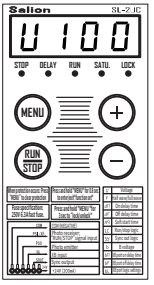
Step 3:

Insert the three claw plug of the input line into the power supply socket.



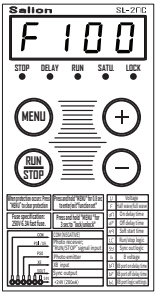
Step 4:

Turn on the power switch of the controller and adjust the output voltage "U" to 80 ~ 100



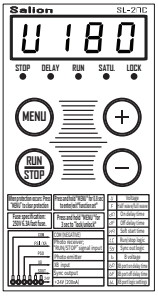
Step 5:

Long press the setting for 0.8 seconds to enter "F" to adjust the half wave / full wave state; Switch to a state suitable for the vibrating plate.



Step 6:

Long press to set the return voltage adjustment function for 0.8 seconds to adjust to the best feeding speed.

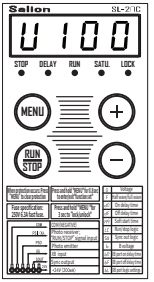


- In order to achieve the best working state, please adjust this parameter to make the vibrating body work at the appropriate speed.

Parameter setting:

U (output voltage):

By default, the panel displays "U", indicating that it is in the output voltage setting state. At this time, it can be set through the "+" and "-" keys. The setting range is 0 ~ 250V in steps of 1V.



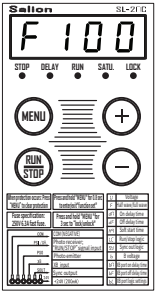
Tips:

1、when the output voltage is set high, if the "excitation" indicator on the panel is on, it indicates that the current output is in the excitation state, the output voltage waveform is not a complete sine wave, and the anti beat frequency ability will be affected.

2、when the output voltage is set high, if the "saturation" indicator on the panel is on, it indicates that the current output voltage has reached the limit and the voltage stabilizing capacity will be affected.

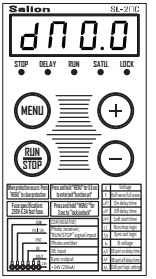
F (half wave / full wave):

Long press the setting for 0.8 seconds to enter the function menu to adjust the "F" half wave / full wave state.



dn (on delay time):

Long press "Settings" for 0.8 seconds to enter the function settings, press "Settings" to select the function parameters until the panel displays "dn", then press "+" or "-" to set, setting range: 0.0-99 seconds, step by 0.1 seconds.

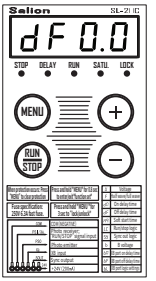


Tips:

1、In the running state (the running light is on), when the signal of the external start-stop or photoelectric sensor port meets the starting conditions, it will take "start delay time" to start the output, while the "delay light" of the panel will blink.
2、For stop conditions, see the description of LC (start-stop logic).

dF (Off Delay Time):

Long press "Settings" for 0.8 seconds to enter the function settings, press "Settings" to select the function parameters until the panel displays "dF", then press "+" or "-" to set, setting range: 0.0-99 seconds, step by 0.1 seconds.

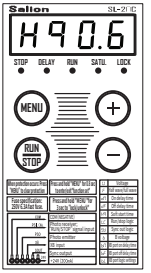


Tips:

1、In the running state (the running light is on), when the signal of the external start-stop or photoelectric sensor port meets the stop condition, the output will stop after the "off delay time", while the "delay light" of the panel will blink.
2、For stop conditions, see the description of LC (start-stop logic).

Hq (slow start time):

Long press "Settings" for 0.8 seconds to enter the function settings, select the function parameters until the panel displays "Hq", then press the "+" or "-" key to set, setting range: 0.1-9.9 seconds, step by 0.1 seconds.

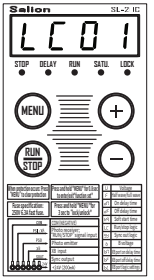


Tips:

1、When the controller starts the output, the output voltage will gradually (at the speed of the slow start time) increase linearly from 0V to the set output voltage to eliminate the impact on the vibration disc and prevent the workpiece from dropping.

LC (start-stop control):

Long press "Settings" for 0.8 seconds to enter the function settings, select the function parameters, until the panel displays "LC", then press "+" or "-" key to set, setting range: 00~11.

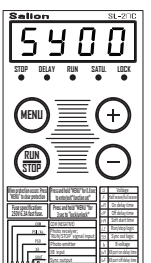


Tips:

A=0：Xa and XB signals have a logical or relationship.
A=1：Xa and XB signals are logically and related.
B=0：The control logic is valid and the machine is shut down.
B=1：The control logic is valid and runs.

Sy (synchronous output logic setting):

Long press "Settings" for 0.8 seconds to enter the function settings, select the function parameters, until the panel displays "Sy", then press "+" and "-" keys to set, setting range: 00~31.

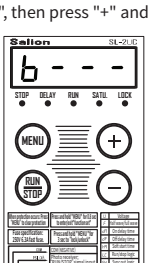


Tips:

A=0: Controlled by operation / stop status.
A=1: Controlled by XB port time relay signal.
A=2: It is controlled by the XB port time relay signal only in the operating state.
A=3: Controlled by the time relay signal of XB port, however,the blowing will be stopped automatically after the blowing time reaches the time set by "BF".
B=0: When there is a signal, the port drives the output.
B=1: When there is no signal, the port drives the output.

b (B voltage):

Long press "Settings" for 0.8 seconds to enter the function settings, select the function parameters until the panel displays "b", then press "+" and "-" keys to set, the range of settings is 0~250v

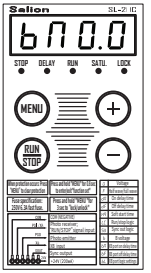


Tips:

Set to "0", display --, indicating that the B voltage function is off. If it is not "0", it means that the B voltage function is enabled, and the B voltage output can be switched through the XB port.

bn (XB port on delay time):

Long press "Settings" for 0.8 seconds to enter functional settings, short press "Settings" to select functional parameters until the panel displays "bn", then press "+" or "-" to set, setting range: 0.0-99 seconds, step by 0.1 seconds.

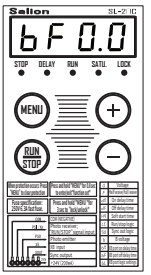


Tips:

1、In the running state (the running light is on), when the external start-stop of the XB port or the signal of the photoelectric sensor port meets the starting conditions, it will take "open delay time" to start the output, while the "delay light" of the panel will blink.
2、See the description of "bL (XB Port Logical Settings)" for operating conditions.

bF (XB port shutdown delay):

Long press "Settings" for 0.8 seconds to enter the function settings, press "Settings" to select the function parameters until the panel displays "bF", then press "+" or "-" to set, setting range: 0.0-99 seconds, step by 0.1 seconds.

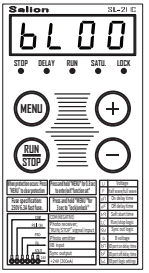


Tips:

1. In the running state (the running light is on), when the signal of the start-stop or photoelectric sensor port outside the XB port meets the shutdown condition, the shutdown output needs to be started after the "shutdown delay time". At the same time, the "delay light" of the panel blinks.
2. See the description of "bL (XB port logic)" for operating conditions.

bL (XB port logic settings):

Long press "setting" for 0.8 seconds to enter the function setting, and short press "setting" to select the function parameters until "BL" is displayed on the panel. At this time, press "+" or "-" to set. The setting range is 00 ~ 11.



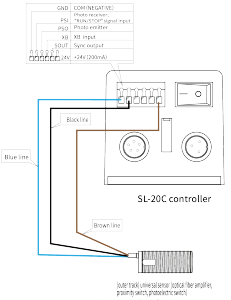
Tips:

A=0：XB port does not participate in start stop control.
A=1：XB port participates in start stop control.
B=0：XB port signal logic is positive.
B=1：XB port signal logic is reversed.

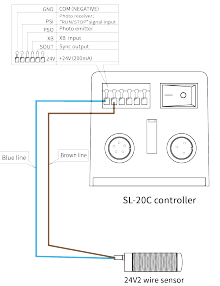
Panel lock:

Long press "set" for 3 seconds, except for "run / stop", the operation of other functions is locked, and the "lock" led on the panel is on. Long press "set" for 3 seconds again to unlock. When operating the setting in the locked state, the "lock" led on the panel will flash to indicate that it is in the locked state.

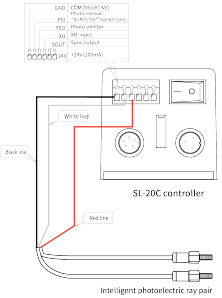
20C external start stop control port wiring:



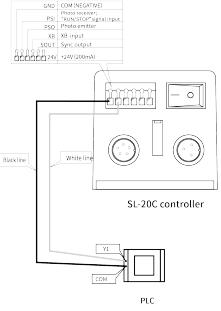
SL-20C Detected material full and shut down (universal sensor)



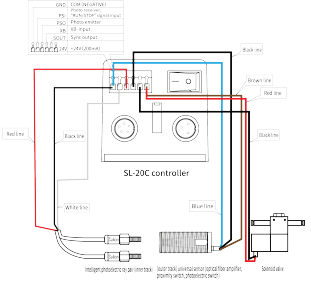
SL-20C Detected material full and shut down (two-wire universal sensor)



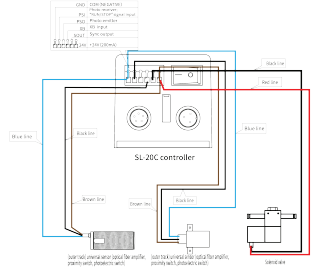
SL-20c Detected material full and shut down
(Pair ray)



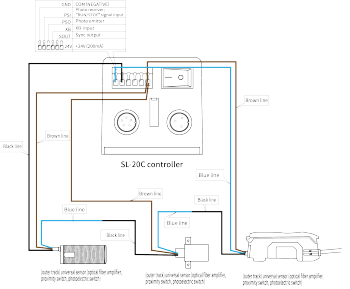
SL-20C PLC wiring



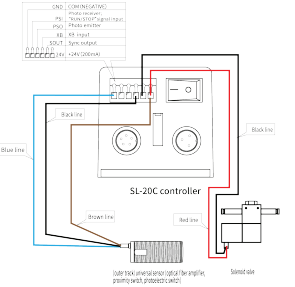
SL-20C Double track detection material is full and stop
(add general sensor to ray)



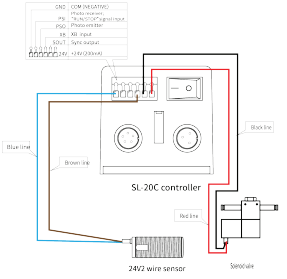
SL-20C Double track detection material is full and stop
(2 universal sensors)



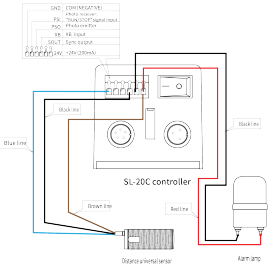
SL-20C 3 Track detection material is full and stop



SL-20C Detect that the material is stuck and blow air (3 lines)



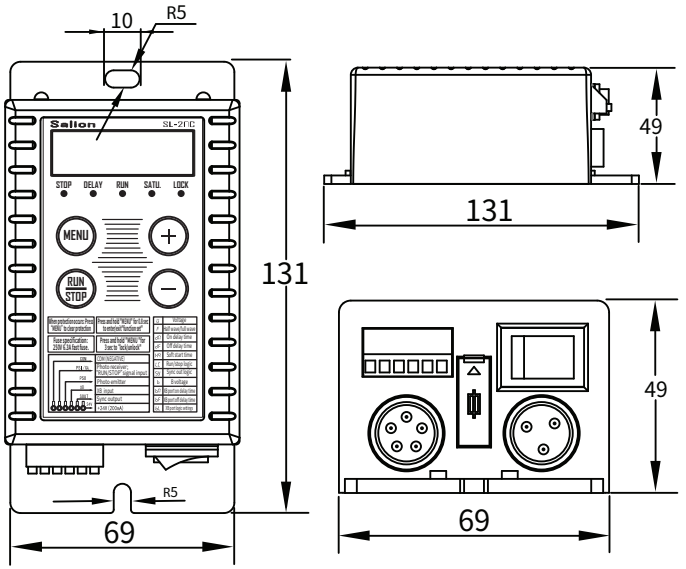
SL-20C Detect that the material is stuck and blow air (2 lines)



SL-20C Material empty alarm

Installation Dimension:

Company:mm

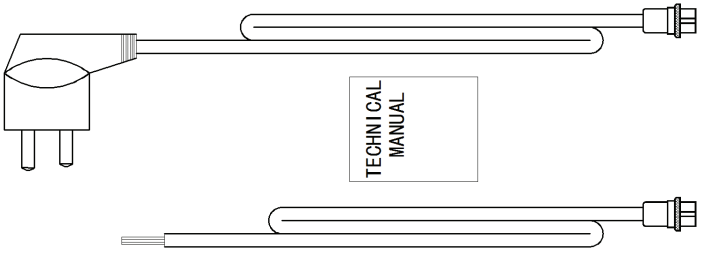


Troubleshooting:

No Display	Verify that the power is on and check that the fuse is intact. (Fuse specification: 250V6.3A fast melt 5*20mm)
EC-00	Data error. After turning off the total power supply, long press the settings and turn on the total power supply, the controller returns to factory state.
EC-0H	Overheat protection. Install the controller in the ventilation area. If possible, mount on a metal table to help dissipate heat.
EC-0L	Overload protection. Check: whether the gap between the solenoid coil and the armature is too large, and whether the power of the vibration disc matches the controller.
Unable to store data after power failure	After adjusting the data, you can store the data by manually turning off the red power switch under the controller and then turning it on.
Controller power indicator is still blinking after power failure	Power control is to control start-up and stop by solid state relay and replace with normal relay.
Vibrating disc has no or weak vibration	Check that the output line is properly and reliably connected to the vibration disc; Whether the voltage setting is too small, find a suitable voltage for the speed of the vibrating disc by adjusting the output voltage of U080; Whether the frequency setting deviates from the resonance point of the vibrating disc or not, press the middle setting for 0.8 seconds to adjust the half-wave to the appropriate frequency point of the vibrating disc.
Controller lock light is always on and keys are not responding	Long press the middle setting for 3 seconds and wait until the lock light goes out.
On the controller, the stop light is always on, after pressing the Run/Hibernate key, the green light is on or not (the stop light is always on)	Remove the sensor, long press the middle setting for 0.8 seconds, enter the function settings, short press the settings, find the LC00 menu, set the logical relationship (for example, if it was LC01, change back to LC00).
Why can't I connect the solenoids I bought myself?	Check whether the solenoid is 24V and has power over 5W. Our output port power can only drive 5W. If it exceeds 5W, it is recommended to replace the solenoid valve with power under 5W.

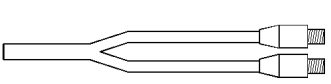
Standard accessories:

Power plug, output cable wire, specifications



Optional accessories:

1.Photoelectric sensor 2 potentiometer voltage regulating module



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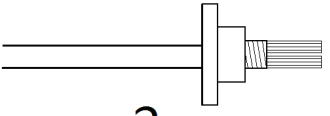

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