

Infeed/Outfeed Conveyor Manual



■ Introduction:

Southern machinery to provide you with electronic equipment!

This manual provides users with installation, operation, fault diagnosis and elimination of abnormal and daily maintenance related matters, in order to ensure the correct installation and operation of this equipment, please read this manual carefully before use, and please keep the machine and by the user.

■ The scope of application

Conveyor is widely used in the production line of PCB board transmission, inspection, testing, buffering and other functions. It is one of the main devices that connect and buffer between two devices.

It can be connected to two separate devices, can also be used in groups or sub groups, it can deal with technical parameters specified in the specification of the PCB board.

■ Main function description

The conveyor has IO signal interface, which can be connected with upper and lower equipment. Photoelectric switches are set at the head and tail.

When there is no board on the conveyor, it will give the front-end equipment a board signal immediately. When the board reaches the front light sensing position, the conveyor belt will

start to run. When the board completely enters the front light sense, disconnect the signal of the required board of the machine. When the board is transported to the rear light sensing position and the rear equipment does not need the board temporarily, the belt will stop rotating. At this time, a board signal will be sent to the rear device, and the PCB board will wait on the conveyor. When the rear equipment needs a board, the rear machine will send a on-off signal to the machine. When the motor of the machine drives to the light sense after the board is completely out, the motor of the machine stops. If there is a board on the converter, the front-end equipment will stop working until there is a space on the shuttle, and the front-end equipment can start automatically.

■ Transmission principle

1. The belts on the guide rails on both sides of the conveyor are driven by an AC motor. The start and stop of the motor are controlled by the signal of the supply and demand board of the upper and lower equipment and the light detection signal of the equipment.
2. The guide rail is divided into moving guide rail and fixed guide rail. The width of moving guide rail is adjusted by two precision screw rods linked with each other.

■ Technical parameters

1. Guide rail length: 1000mm (can be customized according to customer requirements).
2. Width range of guide rail adjustment: 20-400mm
3. Delivery speed: 0-2m / min.
4. PCB board height from the ground: 900 ± 20
5. Drive motor: 1 set of 15W speed regulating motor
6. Working voltage: 110 VAC, 50 Hz
7. The power consumption is about 40W.
8. Total weight of equipment: 70kg.

■ Machine features

1. It is controlled by the board, and the action program can be based on the requirements of customers.
2. Both ends are light sensitive.
3. It has SMEMA signal interface.

4. The width of guide rail can be adjusted from 20mm to 400mm
5. Steel frame structure, strong and durable, and can be mechanically connected with the upper and lower equipment connecting plate.
6. Special guide rail aluminum profile, beautiful appearance.
7. The light sensing position can be set at will.
8. Accessories such as fluorescent lamp, computer bracket and PCB sample holder can be configured according to actual needs.

■ Installation and operation instructions

1. Install the conveyer between the front and rear equipment, and the guide rail must be aligned with the front and rear equipment, and the width should be the same.
2. Connect the conveyer with the front and rear equipment reliably with the connecting board.
3. Connect the cable with the front and rear equipment.
4. Connect and ground the anti-static wire reliably.
5. Plug in the power supply: 110 V, 50 Hz.
6. Turn on the power switch.
7. Adjust the width between guide rails to make the processed PCB pass smoothly.

■ Troubleshooting

1. When the conveyor cannot operate.
 - a. Check whether the power switch is turned on.
 - b. Check whether the indicator light is on.
 - c. Check whether the fuse is blown.
 - d. Check whether the connecting cables are connected reliably.
 - e. Whether the front and rear devices have interlocking signals.
 - f. Whether the front light sense is blocked by obstacles.

2. When the stop position is not correct.
 - a. Check whether the guide rail is too narrow and there is jamming.
 - b. Check that the procedure is correct.
 - c. Check whether the light sense position is correct.

■ **Maintenance**

If the product is rectangular, it can only be equipped with rectangular parts.

2. There should be no dust or oil stain on the light sense, and it should be cleaned regularly.
3. Do not pull the connecting wires and cables.
4. When moving, the guide rail can not be stressed, and the force must be applied on the frame.
5. The belt pulley, mandrel, chain, sprocket and adjusting screw rod should be lubricated with a small amount of grease every 30-50 days.
6. It is necessary to avoid the temperature difference change of conveyer caused by sudden heat and sudden cooling.
7. In the long-term work, the connecting screws may be loose, so it is necessary to check and lock the screws regularly.

■ **Circuit diagram**



