

ScanMaster M3

Quick use manual



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Whether it's high strength, high load, high degree of protection or perfect process control, the ScanMaster M3 has the perfect expansion performance meets your individual needs. The easy-to-use UI design makes it easy to use the automated merchandise package property collection system without training.

1 Introduction

1.1 Equipment performance

Model	ScanMaster M3
Weighing ranges	30kg/60kg
Weighing accuracy	10g/20g
Size range	20*20*20~600*600*600mm
Accuracy of measurement	±2mm (H) ±5mm (W & D)
Through the speed	3600 ea/h
Belt width (mm)	900
Equipment size (mm)	2430(W) X 2350(D) X 26000(H)
OS	Windows10
Display	21.5' LCD touch screen
Barcode scan	5 direction barcode acquisition through the visual system
Power	220V
Protection	IP54
Prompt	Sound and atmosphere lights

1.1.1 Industry leading product design

- Easy to integrate into the logistics conveyor system
- Modular design, according to the needs of the selection
- Measuring size by 3D scanning
- Can be combined with labeling machines, inkjet printers and automatic sorting devices
- Multiple real-time detection module display combinations

Advanced Features: Integrity check、Batch control (such as counting)、Statistical variables to achieve tolerance checking、Continuous error recognition、Output of multiple barcode data fusion (Such as consumable bar code, warehouse bar code, logistics number barcode) .

1.2 Option

- Equipment slope up to 20° weighing
- Start/stop process control
- Special size customization beyond modular size
- Special height
- Automatic dynamic compensation by recording function
- Automatic sorting device
- Parcel spacing device

1.3 Application scenario

- Length, width, height and weight data collection when the warehouse is in stock or shipped
- Integrity and quality inspection
- Identify products by scanning (barcode)
- Integrated into sorting application
- Integrated into the incoming production line (eg automated warehouse)
- Integrated into the parcel delivery system
- Large logistics sorting center

2 About device

The device contains the following units :

Conveyor unit

- Belt
- Light-sensitive
- Motor

Weighing system

- Integrated weighing system with belt

Visual system

- Five-sided scanning code vision system
- Three-dimensional vision system

Control cabinet

- Main switch
- Touch display
- Control unit and electrical unit
- interface
- Related documents, accessories list

2.1 Whole frame

Basic composition, Fig. 2.1:

- ① Belt output drive unit
- ② Control cabinet / touch operation
- ③ Belt input drive
- ④ Dynamic weighing unit
- ⑤ Vision unit



Fig. 2.1

2.2 Transport unit

A separate two-stage transport unit is connected to the weighing unit. Photoelectric sensors are mounted on the input transport unit and the weighing acquisition unit as signal inputs for weighing start, Make the whole device integration more intelligent.

2.3 Control cabinet

Control cabinet includes switch, touch display ,Electrical cabinet, Fig. 2.3

- ① Main switch
- ② Conveyor belt start switch
- ③ Conveyor stop switch
- ④ Automatic/manual mode switch
- ⑤ Emergency stop switch
- ⑥ Touch screen
- ⑦ Electrical cabinet

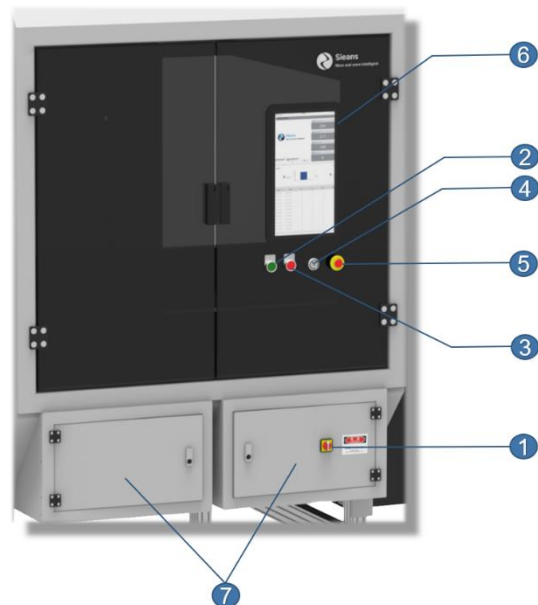


Fig. 2.3

2.4 Touch screen and operation panel

The display with operator panel is located on the plexiglass window above the control cabinet. Traceability query and all device operations are implemented here without any external input device.

2.5 Dynamic acquisition operation steps

The goods arrive at the acquisition system through a motor-driven conveyor.

The acquisition process is divided into four phases:

Stage1: The weighing unit is vacant and cannot be placed on the belt. The belt of the cargo has not been touched and the weighing unit.

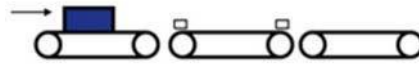


Fig. 2.4 Stage1

Stage2: After the goods arrive at the weighing unit, the equipment starts to load. Scanning, 3D measurement and weighing measurement are started after the front end of the cargo touches the signal of light perception 1.



Fig. 2.5 Stage2

Stage3: The goods are completely placed on the belt. When the front end of the cargo touches the signal of light perception 2, the acquisition process ends. Once the data is merged, it will be saved in the ScanMaster M3 native storage or uploaded to the designated WMS.



Fig. 2.6 Stage3

Stage4: After the goods that have completed the property collection leave the belt, the equipment begins to collect the attributes of the next cargo.



Fig. 2.9 Stage4

If a package does not have enough spacing from the previous package, it will result in incorrect package measurement.

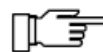
The necessary conditions for dynamic 3D size, weight and barcode to be correctly collected: The package must be measured separately on the weighing belt and should not be subject to vibration and shock. The goods are packed in good condition and neat, and the center of gravity of the collection and measurement process is stable and cannot be moved. The weighing belt must be level and move smoothly during the ingress and egress of the goods. The device has two operating modes to choose from: "Automatic" and "Manual". In manual mode, the goods can pass directly through the device without triggering the automatic acquisition process.

2.6 Equipment environment

The equipment can be used for the collection of properties of goods on the assembly line in the industrial, logistics and commercial sectors. The goods need to be packaged intact.



Not suitable for special environments where explosion protection is required.



For your safety, please contact the company before reassembling and modifying the equipment. If you need to repair equipment, be sure to use factory original spare parts. Our company will not bear any financial compensation and legal liability if the customer fails to use the product according to the product's own parameter standards or causes improper damage.

2.7 Operating environment description

In the course of actual use, if you encounter any problems or need any help, please contact SIEANS Customer Service.

Temperature----The permissible ambient temperature values are already on the nameplate.

Installation area----No vibration, Ground vibration on site can affect the accuracy of the measurement. Avoid vibrations near the equipment during field use (eg heavy forklift activities).

Installing the ground----The mounting surface must be level, shockproof, vibration free, and free from strong winds.

Tune to level---- In order to ensure the accuracy of the dynamic scale, the weighing device must be level. Tilting of the device will affect the accuracy of the weighing.

Air circulation---- In order to prevent the equipment from overheating, the equipment must be placed in a place with good air circulation during operation.

Device modification settings

Prior written consent from SIEANS is required.

2.8 Warranty description

Installation---- Operation, such as commissioning and equipment initialization, must be carried out by SIEANS customer service, professional technicians or third parties authorized by the company. Due to improper use of the customer or other irresistible factors, the product is not covered by the warranty of SIEANS.:

- Non-compliance with operating practices;
- Operation and use not required by technical data ;
- Unauthorized installation ;
- Customer's unauthorized electrical installation;
- Device structure modification;
- Unauthorized removal of equipment seals;
- Wrong programming and operation;
- Lost backup;
- Natural wear;
- Improper use of the touch screen (such as pressing with sharp or sharp objects);
- Use an unsuitable cleaner;

Product defects and damage caused by unauthorized personnel of SIEANS are not covered by the warranty. Product defects and damage caused by the use of non-SIEANS original parts are not covered by the warranty. If you have any questions or need any parts and technical information during the warranty period, please contact your SIEANS representative.



If you have reset or modified your device or program, try running again to test that the device is functioning properly under the new settings. This helps to avoid erroneous results.



If necessary, you can accept another product use training.

2.9 Product collection and environmental protection

Please observe the laws and regulations and environmental protection regulations of your home country and local Kunming.

3 Safe use instructions

3.1 Operator qualification

Equipment can only be trained by personnel trained in the product according to the specifications of use. The operator must have read and understood the safety instructions and operating instructions and are familiar with the safety features of the equipment.



Only qualified trainers or SIEANS service technicians can open the equipment components.

Although the equipment itself includes all necessary safety components, ignoring safety instructions and requirements can result in operator injury or property damage.

3.2 Safety protection components and devices

Before the equipment starts running, it must be ensured that all safety components and devices are working properly. These components and devices cannot be modified or removed without authorization.

3.2.1 Power plug

- Use the power plug to connect the power supply as a standard configuration to power the device, or unplug the power supply if necessary. Note:
 - The device has been powered off and the power plug must be disconnected;
 - Customer site outlets must be easily accessible;
- Power connection using a power plug
The operator is responsible for ensuring that the power connections and power connectors meet national safety standards.

3.2.2 Main switch

The main switch is located on the right control cabinet. Fig. 3.1

Please turn off the switch in the following cases:

- In case of emergency;
- When doing cleaning and maintenance work.



Fig. 3.1

DANGER



When the main switch is turned off or the emergency stop button is pressed, the voltage rises and the motor is dangerous!

- Before you switch the cabinet, do any work, the device needs to be disconnected from the power supply!
- Only qualified and trained personnel or SIEANS service personnel are allowed to operate the control cabinet.

3.3 Related identifier

Please pay attention to the relevant signs to avoid damage to equipment or individuals.



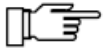
No pedaling sign



Direction of movement

4 Device installation

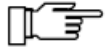
Equipment installation, initialization and commissioning as well as operational instructions, cleaning and maintenance are the responsibility of SIEANS customer service or technical personnel.



- The equipment is installed in an easy to operate, maintain and clean location and working environment.
 - The customer-selected inverter needs to match the technical parameters of the motor and other components. The installation process is subject to national and local laws and regulations and industry standards. The parameters on the motor nameplate must be set in the frequency converter.
-

5 Equipment operation

5.1 Boot



- The device needs to be turned on for 5 minutes before running, in order to adapt the device to the working environment and reach the working temperature. If you run too early, the accuracy of the device's weighing may be affected.
 - If you need to use the device after turning it off, you need to wait at least 10 seconds to ensure that the device is completely turned off and then switch.
-

Check before starting up:

- The device is properly installed and connected.
- Suitable working conditions and operating conditions.
- There is no storage on the conveyor belt.
- The emergency stop switch on the device has been unlocked.

Step 1: Turn the main switch clockwise.

Step 2: Observe the screen and enter the UI main interface and click the conveyor line start switch, The ScanMaster M3 will be in working order. (Before entering the UI and the conveyor line mode switch selects the automatic mode, click the conveyor line start button, the device will alarm)

5.2 Shut down

Step 1: Close the software. (Refer to Chapter 6, ScanMaster M3 UI)

Step 2: After confirming that the screen is off, turn the main switch counterclockwise.

6 ScanMaster M3 UI

6.1 Homepage

- ① Bar code display
- ② Barcode label photo
- ③ Product attribute display area
- ④ Real-time data monitoring
- ⑤ Real-time communication monitoring
- ⑥ Custom display module
(User management information /
network information /
warehouse information switching)
- ⑦ Custom display module
(Equipment information /
carrier express waybill
information switching)

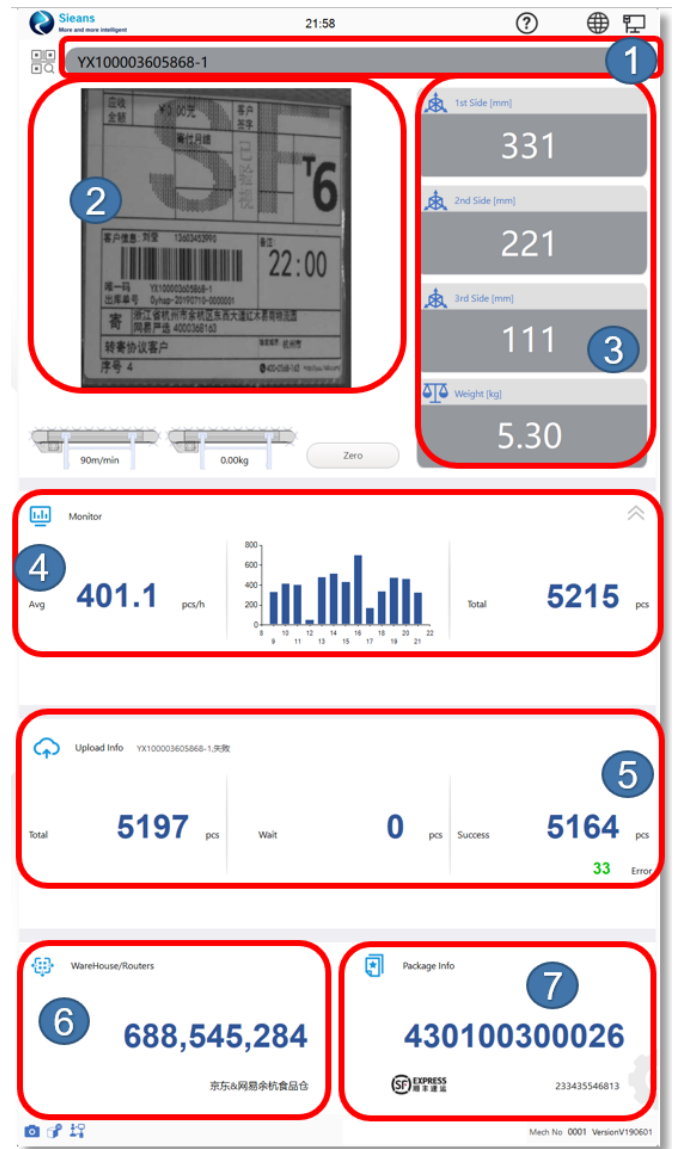


Fig. 6.1

6.2 Homepage button

- Help documentation, and remote technical support.
- Light/dark theme replacement.
- Simplified Chinese/Traditional Chinese/English Language Switching.
- Real-time monitoring interface / nearly 20 acquisition data interface switching.

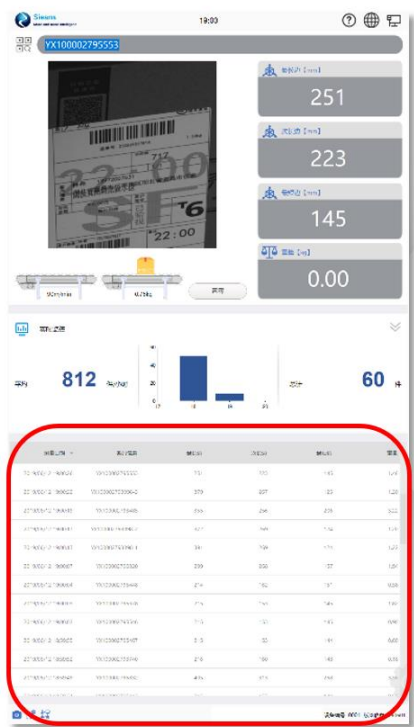


Fig. 6.2



The weight is forced to zero.

System settings button.

6.2.1 System shutdown

Step 1: Click  System settings button.

Step 2: Click  "shut down" tab.

Step 3: Click  "Turn off" tab, Wait for the main switch to turn off

after the display is completely turned off.

6.2.2 Configuring device parameters

Dangerous operation



Please backup before changing the configuration.

Untrained personnel, please do not modify the device parameters in the UI to avoid abnormal operation of the device.

7 Maintenance

Health and equipment conditions are subject to regular inspection, maintenance and maintenance by maintenance personnel.



Before cleaning, maintenance and maintenance work, be sure to turn off the switch to cut off the main power!

Caveat

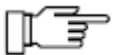


Self-starting component

Some components can be automatically run and stopped while the device is running automatically. In this case, it may cause injury and damage to property.

- Wear close-fitting clothes.
- Do not wear long strips or string-shaped ornaments such as necklaces and ties.
- Keep your hands and fingers away from moving parts.
- Always turn off the main switch and turn off the main power before the equipment is serviced.
- Press the emergency stop button before servicing the unit.

7.1 Clean



It is forbidden to use corrosive cleaning agents. When cleaning the room, cover the device with a cover.

Caveat



Indoor power supply and main power supply line

Short circuit or electric shock may cause injury or death.

- Do not use high pressure water to clean the equipment!
-

When cleaning, it is forbidden to use the following items:

- Sharp hard object
- Water or steam spraying equipment
- Compressed air
- Harmful body or cleaning agent containing dissolved ingredients

7.2 Maintenance policy

For the market application environment, it is recommended that the device user purchase maintenance. Our company's after-sales service provides professional and targeted feasibility programs.

7.2.1 Conveyor belt

Daily maintenance is essential to ensure a longer life of the conveyor belt and motor:

- Conveyor belt must run horizontally. If the motor and the transmission gear are tilted, the frictional resistance increases, which may cause the motor to be overloaded. The tension in the lateral running of the conveyor belt becomes large, resulting in a shortened life of the motor and the conveyor belt.
- The drive belt must not be pulled too tightly. If the belt is subjected to too much tension, it may cause the motor to be overloaded.
- The conveyor belt should not be too loose. If the tension on the conveyor belt is too small, it may cause rails.

How to determine the belt tension:

- Conveyor movement deviation position
- Conveyor belt wear
- The belt sounds loud or murmurous during operation
- The equipment was commissioned for ten minutes after each adjustment of the belt tension. Check gear and belt temperatures at temperatures not higher than 50 degrees. If it is higher than this temperature, please adjust it in time.

8 Equipment maintenance

Equipment functionality and performance depend on constant inspection, maintenance, and repair.



When cleaning and maintenance work other than the control cabinet, turn off the main switch and unplug the power.

CAUTION



Please observe the following code of conduct to avoid personal injury or any property damage.

- When the device is empty, do not place anything on the conveyor. Do not pile on the conveyor belt.
 - Don't climb the equipment.
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