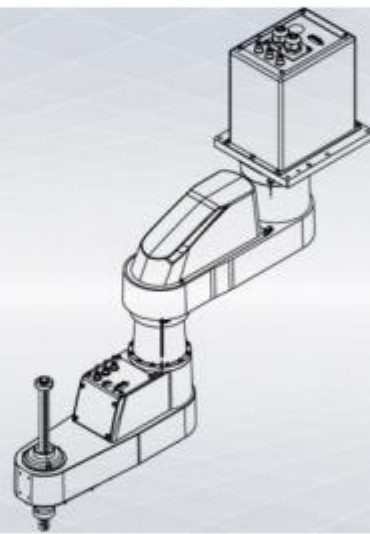


Python550F-D6 |

Quick Start Guide |



**TOUCH YOUR DREAMS
WITH ROBOT FINGERTIPS**

Preface

To ensure the proper operation of the product, please read this Guide carefully before operation. This Guide is applicable to the Python550F-D6. The robot control system consists of the electric control cabinet, body, vision system, Teach Pendant, industrial PC, low-voltage power supply, etc. The flexible operation and control of the robot is realized by multi-type module extension through Modbus TCP, and communication with industrial field equipment such as vision controller and HMI through EtherNET.

Target readers

Operators, robot programmers, maintenance personnel, technical support, and salesperson.

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1. Overview

1.1 Safety notice



Danger

- ◆ Failing to comply with product safety requirements may result in personal injury or death.
- ◆ This Guide only contains general instructions for the product. Please read the safety precautions in other manuals carefully before using the product.

- 1) Before installing, operating, and maintaining the equipment, please read and understand the safety precautions in the robot body and control cabinet manual.
- 2) To ensure personal and equipment safety, please follow all safety precautions stated on the equipment and in the manual when installing, operating, and maintaining the equipment.
- 3) Note that the contents marked with "Caution", "Warning", and "Danger" in this Guide do not represent all safety precautions that should be observed, but only serve as a supplement to safety precautions.
- 4) Use the equipment in an environment that meets the design specifications. Otherwise, it may cause failure. Any malfunction or component damage caused by failure to comply with relevant specifications is not within the scope of equipment quality assurance.
- 5) Our company will not bear any legal responsibility for personal safety accidents and property losses caused by improper operation of equipment.

1.2 Manual acquisition

This Guide is shipped with the product. If an electronic PDF file is required, you can obtain it through the salesperson or official website:

2. Unpacking and Handling

Preparation for unpacking: M10 hex wrench, adjustable wrench, scissors/utility knife (×1), and safety gloves (×1).

2.1 Unpacking procedures

Step 1: Remove the outer packaging.

Wear safety gloves, cut off the strap of the carton with scissors/utility knife, and remove the carton.

Tools: safety gloves and scissors/utility knife.



Caution

- ◆ Use scissors/utility knife to unpack for safety.
- ◆ Wear safety gloves to prevent scratches, as the cut strap has sharp corners.

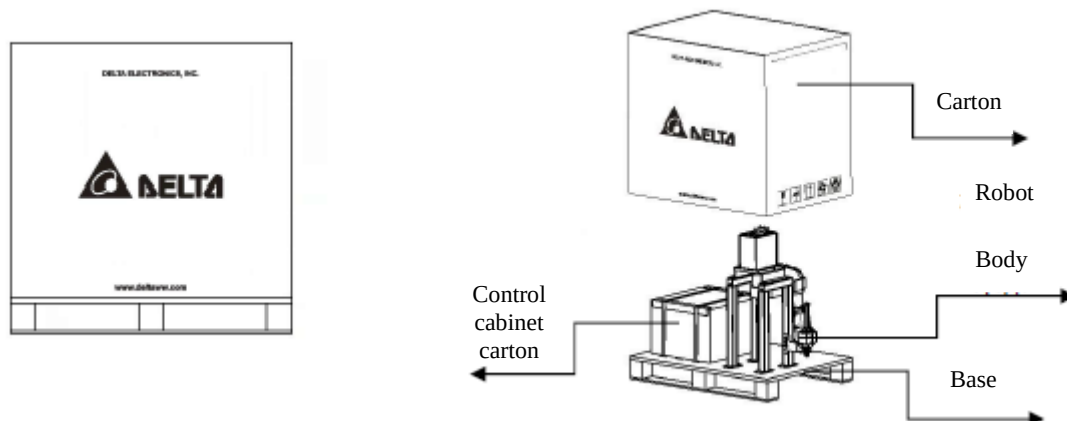


Figure 2-1 Diagram of outer packaging

Step 2: Remove the outer packaging of the control cabinet.

- 1) Cut off the strap of the control cabinet carton with scissors.
- 2) Move the control cabinet carton above the base to the open ground, paying attention to the orientation of the control cabinet.
- 3) Hold the bottom of the control cabinet carton and transport it to the target position.

Tools: scissors/utility knife.

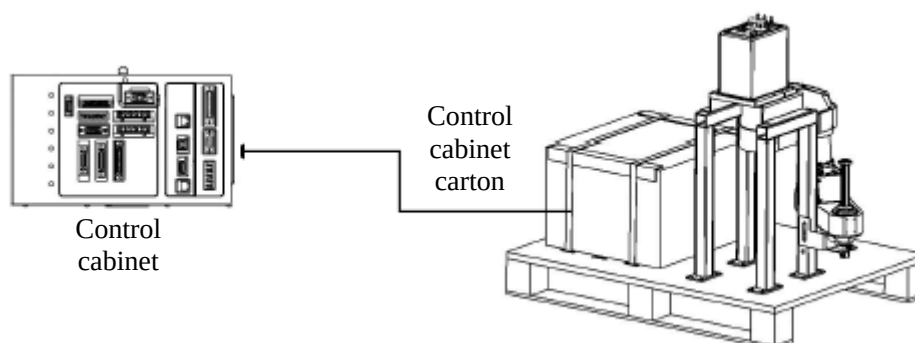


Figure 2-2 Removal of the control cabinet packaging

Step 3: Remove the bolts and screws of the fixing plate with a hex wrench.

Tools: M10 hex wrench, adjustable wrench, and M4 hex wrench.

Bolt and screw specifications: M10×55 (bolts), quantity: 2; M4×12 (screws), quantity: 2.

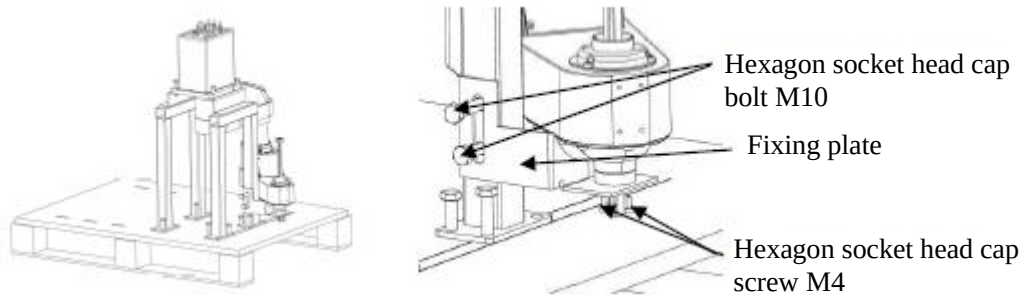


Figure 2-3 Removal of fixing plates



Caution

◆ When removing the bolts and screws of the fixing plate, hold the arm by one person, and remove the bolts and screw by the other person, to avoid personal injury or equipment damage caused by the equipment rotation when disassembling the fixing plate.

Step 4: Remove the fixing bolts of the robot body and the bracket with a hex wrench.

Tools: M6 hex wrench and adjustable wrench.

Bolt specification: M6×40

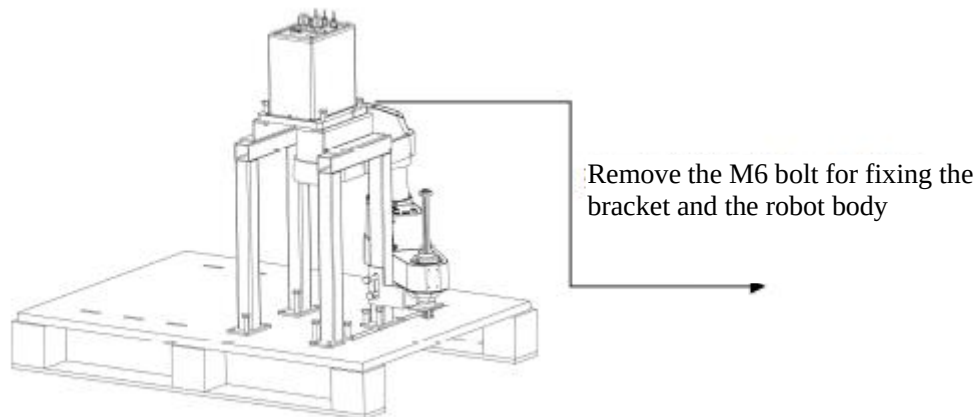


Figure 2-4 Removal of body fixing bolts

Step 5: Take out the robot body.

Take out the body from bottom to top in parallel to avoid the interference between the body and the bracket, and then transport it to the target position.

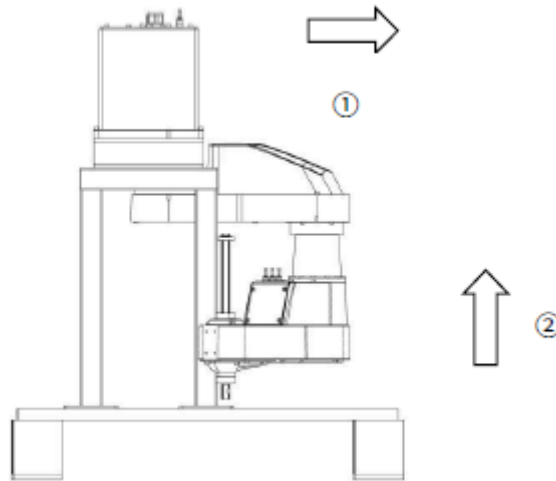


Figure 2-5 Removal of the robot body

**Caution**

- ◆ If repackaging is required, please follow the above steps in reverse order. Wear safety gloves to prevent scratches and operate carefully to prevent damage to the equipment.
- ◆ Take out the equipment carefully to avoid bumping.

2.2 Handling procedures

Prepare safety gloves, safety shoes, forklift, etc., before handling, and keep at least two people ready.

**Caution**

- ◆ Wear safety shoes and gloves for handling.
- ◆ Hold it firmly before handling to prevent the equipment from slipping or any damage.

2.2.1 Handling of the control cabinet and Teach Pendant

The handling personnel can carry the Teach Pendant and control cabinet with both hands.

2.2.2 Handling of the robot body

- 1) Handle the robot body in a proper state.

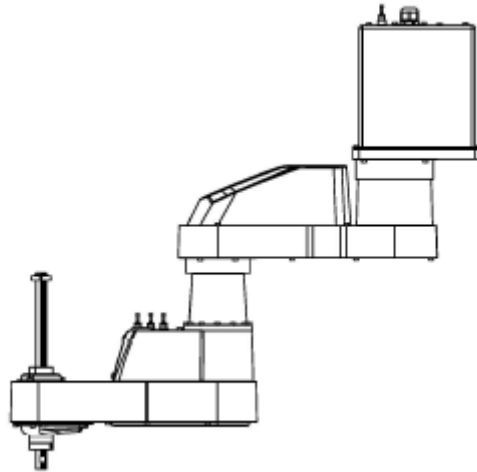


Figure 2-6 State of the robot body

- 2) Disconnect the power supply of all devices.
- 3) Disconnect the power cable and signal cable connected to the control cabinet.
- 4) Remove the base fixing screws and then the robot from the base.
- 5) Secure the robot to the handling tool.

◆ Manual handling

For manual handling, secure the robot to the handling tool or hold the shaded portion (base bottom and big arm) with your hands. Be sure to handle it by two or more people.

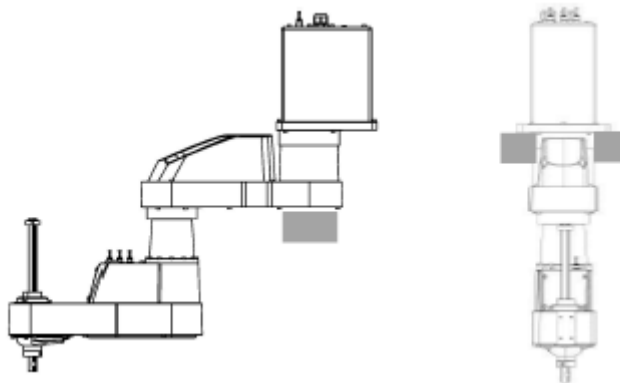


Figure 2-7 Manual handling position

◆ Forklift handling

For forklift handling, secure the robot on the delivery pallet or bottom plate with sufficient load capacity, fix it with screws, insert the fork into the bottom plate, and handle it together with the robot. Be careful not to trip or skew during handling, and transport it slowly.

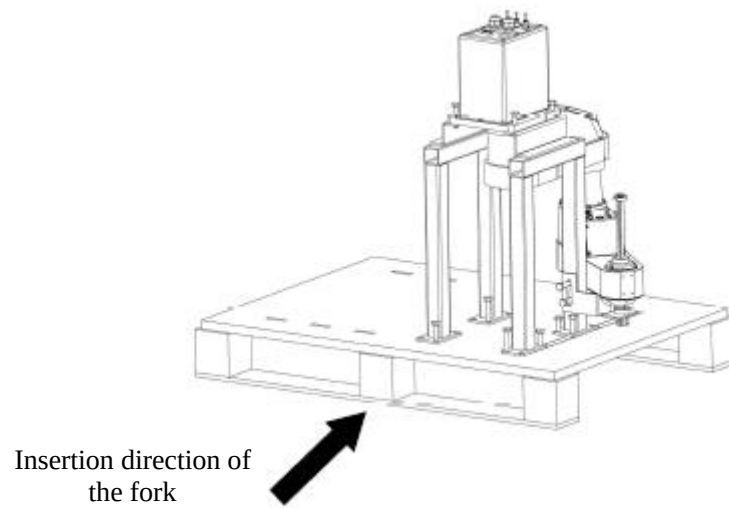


Figure 2-8 Diagram of forklift handling direction

3. Fixing

Before fixing the product, check the product size and ensure enough space. Please refer to the manual of each product for the installation size.

3.1 Fixing of the control cabinet

In the standard installation position, keep the mounting surface stable and flat, without tipping or deformation.

3.2 Fixing of the base



Caution

- ◆ Do not conduct equipment installation, wiring, maintenance, and inspection, or part replacement by non-professional personnel.
- ◆ Install safety fences on the system. Otherwise, it may cause serious safety accidents.
- ◆ When installing the system, do not interfere with surrounding buildings, structural parts, or equipment. Otherwise, serious injury or major damage may occur.
- ◆ Fix the robot body before turning on the power supply or operating system. Otherwise, it may cause body tipping, resulting in serious injury or major damage.



Caution

- ◆ Do not modify the equipment.
- ◆ Do not install the equipment in places with a strong electric field or strong electromagnetic interference.
- ◆ Remove the mounting screws of the robot body and hold the robot body to prevent it from tipping.

1) Secure the base to the platform with four screws. Use six M6 bolts of grade 10.9 or 12.9 specified in GB/T 3098.1, with a tightening torque of 12 Nm.

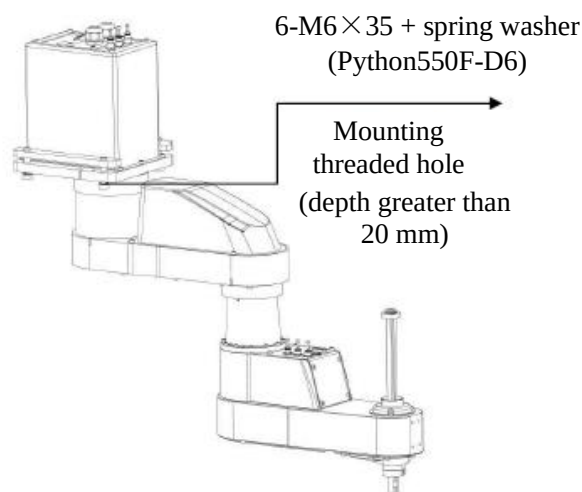


Figure 3-1 Diagram of base installation

4. Connection



Figure 4-1 Typical system application wiring diagram of Python550F-D6

4.1 Grounding requirements



Warning

- ◆ To prevent electric shock, ground the robot and control cabinet.

To improve the anti-interference ability of the system, ensure that the robot body is reliably grounded, and the incoming terminal of the body base is equipped with a grounding rod.

4.2 Power connection



Warning

- ◆ Do not operate by non-professional personnel, instead by qualified personnel.
- ◆ To prevent electric shock, ground the control cabinet after cutting off the power supply to the control cabinet.
- ◆ Connect the power cable to the plug that complies with local safety specifications or disconnected devices, instead of the factory power supply.



Figure 4-2 Power connection diagram of Python550F-D6

**Danger**

◆ Please be sure to follow the order of PE/N/L when connecting the power cord to avoid electric shock caused by wrong connection and short circuit.

4.3 Power and encoder cable connection

The product is equipped with the encoder and power cables to be connected to the robot body. Please connect according to the figure below.



Figure 4-3 Encoder/Power cable connection diagram of Python550F-D6

**Caution**

◆ When connecting the encoder and power cables of the control cabinet to the body, do not make mistakes. Otherwise, the robot system may fail to operate normally, and serious safety accidents may occur.

4.5 User wiring/air tube

4.5.1 User wiring

The robot has a dedicated signal line defined by the user and supports a 15-PIN connector. The signal definition of the connecting line on the robot arm side corresponds to the signal definition of the connector on the base side. The user only needs to make and define the DB15 connectors on the body side and the base side, and connect them to the corresponding position.



- ◆ One set of male and female DB15 connectors are provided in equipment accessories.

4.5.2 User air tube

Max. operating pressure	Quantity	Specification (outer diameter×inner diameter)
0.59MPa(6kgf/cm ²)	3	Φ4mmxΦ2.5mm



- ◆ Both ends of the air tube are attached with quick couplings according to the outer diameter.

☎ Technical services

RobotPhoenix LLC is willing to provide information on the robot operation and troubleshooting and offer detailed consultations. If your robot malfunctions during operation, please contact our service center immediately and provide as detailed information about the robot as possible, and then we will provide you with a timely solution.

☎ Contact information

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