DOBOT CR5 Robot Quick Start

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1. Security Precautions

DANGER

Robot is electrical equipment. Non-professional technicians cannot modify the wire, otherwise, it is vulnerable to injury the device or the person.

The following security rules should be followed when using the robot for industrial design and manufacture.

- You should comply with the local laws and regulations when operating the robot.
  The security precautions in this document are only supplemental to the local laws and regulations.
- The DANGER, WARNING, and NOTICE marks in this document are only supplemental to the security precautions.
- Please use the robot in the specified environment scope. If not, exceeding the specifications or load conditions will shorten the service life of the robot, even damage it.
- Before operating and maintaining the robot, the personnel responsible for the installation, operation and maintenance must be trained to understand the various security precautions and to master the correct methods of operation, and maintenance.
- Please ensure that the robot is operated under the security conditions and there is no harmful object around the robot.
- People cannot repair and disassemble the robot without professional training. If there is a problem with the robot, please contact Dobot technical support engineer in time.
- Please execute a daily inspection and regular maintenance, replace the defective parts in time, in order to keep the equipment in working order.
- Please comply with the relevant laws to deal with the product which is scrapped, and protect the environment.
- Before the operation, please wear protective clothing, such as antistatic uniform, protective gloves, and protective shoes.
- It is prohibited to modify or remove the nameplates, instructions, icons, and marks on the robot and the related equipment.
- Before operating the robot, please view and understand how to use the emergency stop switch for stopping the robot in an emergency.
- All the required cables must be connected before powering on the equipment.
- Be careful during the robot carrying or installing. Please follow the instructions on the packing box to put down the robot gently and place it correctly in direction of the arrow.
- Please use the matched cables when connecting a robot to internal or external equipment for personal security and equipment protection.
- Please do not plug or unplug the power cables or communication cables when equipment is normally operated.
- Turning on or off the power continually may result in that the performance of the main circuit components inside the controller is degraded. If turning on or off the power continually is required, please keep frequency less than once a minute.
- To reduce the risk of personal injury, please comply with local regulations with regard to the maximum weight one person is permitted to carry.
- Before the operation, please wear protective clothing, such as antistatic uniform, protective gloves, and protective shoes, remove conductive objects from your body, to avoid electric shock.
- Do not touch the terminal blocks or disassemble the equipment with the power ON. Otherwise, it may result in an electric shock.
- The equipment must be grounded properly at all times to avoid the risk of electric shock.
- Do not touch the terminal blocks or remove the interval circuit components in 10 minutes after the power is shut off, to avoid an electric shock since there is residual capacitance inside the controller.
- Even if the power switch of the controller is already in the OFF status, touching the terminal blocks or removing the interval circuit components is not allowed, to avoid an electric shock since there is residual capacitance inside the controller.
- Please do not reach out into the workspace of the robot when operating it, otherwise, it will be vulnerable to injury the device or the person.

2. Robot Installation and Connection

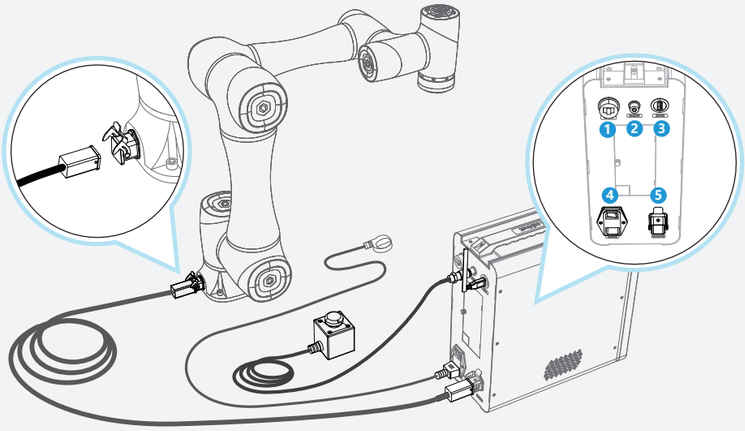
The stability of a robot depends on the installation. You can design the platform according to the size of the hole of the base and the real environment formounting a robot. The platform must not only bear the robot but also bear the dynamic force by the maximum acceleration.

NOTICE

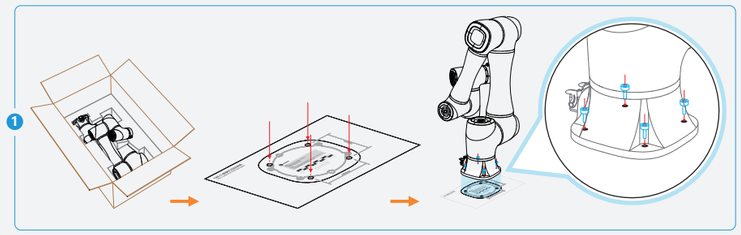
Design the platform according to the robot' s workspace, and ensure that the robot moves without interference.Keep the platform level which is used to mount a robot.

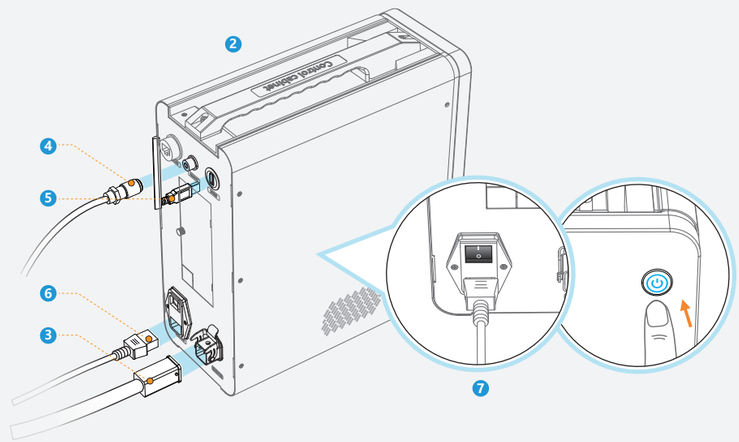
The connection diagram is shown below.

1 Ethernet Interface 2 Emergency Stop Switch Interface 3 WIFI Module Interface 4 Power Interface
5 Heavy-duty connector Interface



1. Take the robot from package box, fix the base of robot on a platform with four M8 screws.
2. Put controller on solid and level ground.
3. Connecting controller and robot by heavy duty cable.
   Connect controller and robot by heavy-duty cable. After plugging the heavy cable into the heavy-duty connector interface of the controller, please fasten the heavy-duty connector.
4. Connecting Emergency Stop Switch. Plug emergency stop switch cable into controller, when connecting them, you need to align the red dot on the connector with the red dot on the interface.
5. Connecting WIFI module
   Plug WIFI module into USB interface.
6. Plug power cable into controller.
7. Press the power switch after supplying power,and then press the round switch on the front of controller.
   Blue LED shines for a long time indicates that controller is powered on.





3. Software Description

NO.	Description
1	Click this button to go back to the previous page
2	Connection button When device and robot arm are connected to network, click the button to connect the device to robot arm
3	Manual mode : You can jog robot arm, program or set parameters, etc Auto mode : You can monitor motion tracks, I/O ports, debug program, etc
4	Alarm log : You can click it to check alarm log
5	Manager App login personnel are divided into observer, operator, programmer and manager, different personnel can operate different functions, including the most authority of the management, can operate all functions
6	Monitoring module shortcuts
7	Robot enable button ON: The icon is green when robot motor is in the enabled status OFF: The icon is red when robot motor is in the disabled status

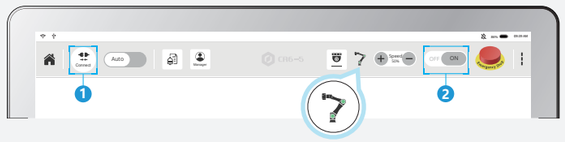
NO.	Description
8	Emergency stop switch Emergency stop switch can be pressed when robot arm is in short of time during operation, to control servo drive power off and robot arm stop urgently
9	Jogging robot Click this button to expand the jogging page, you can jogging the robot.
10	Monitoring module Programming modules are mainly used for editing and running programs
11	Programming module You can view the status of robot arm, set the output of I/O ; set the end parameters of robot arm and other functions
12	Setting Set the related parameters of robot arm, including motion parameters, coordinate system settings, calibration, etc
13	Craft Support Drag teach and Vision, etc

4. Debugging System

Open App to search and connect WIFI after powering controller for 1 minute.

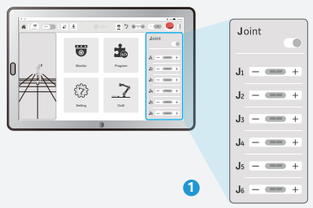
1. WIFI name is Dobot_WIFI_XXXX, of which XXXX is the ID of robot on the base of robot. the password is 1234567890. Select the corresponding WIFI, click the Connect button to connect the controller and software.
2. Set the button ON/OFF to ON, and then the arrester will be unlocked, the robot icon turns green, indicating that robot enables successfully. At the same time you can jog robot.

NOTICE For your safety, please keep away from the robot when enabling it.
please make sure there is no barrier in the working range when enable the robot.



5. Removing Robot Limitation

1. Make robot in manual mode and enable it. The factory joint coordinates are about (83,0,-157,154,-39,0) , if the coordinates are too different, please contact technical support for help.
2. Jog J3 at the positive direction to -90°; and jog J4 at the negative direction to 0°; and then jog J5 at the positive direction to 90°. As shown below.



NOTICE
For your safety, please keep away from the robot when enabling it.

3. **You can use script demo in APP to control robot after removing limitation.**

NOTE For the details about more functions, please refer to **CR6-5 Robot System User Guide**
Which you can get from our official website www. dobot.cc.