Installation Guide: NexBot Vision 222-015 Teach Pendant with 10.1-inch Display

SKU: NXB-GEN-222-015 | Revision: 1.0 | Category: Controllers & Software > Teach Pendants & HMI > HMI Panels

DANGER: Disconnect all power sources before beginning installation. Follow lockout/tagout (LOTO) procedures per OSHA 1910.147.

1. Required Tools & Materials

- M4 Hex Driver
- Torque Screwdriver (1.5 Nm max)
- Anti-static Wrist Strap
- Digital Multimeter
- Cable Ties
- Side Cutters
- Drill with 4.5mm bit (for holder mounting)
- Bubble Level

2. Pre-Installation Checks

1. Verify the received product SKU is NXB-GEN-222-015 and inspect the teach pendant for any signs of shipping damage.
2. Ensure the main power to the robot controller is disconnected and a Lockout/Tagout (LOTO) procedure is in effect.
3. Confirm the teach pendant cable and controller port connectors are clean, dry, and free of any debris or bent pins.
4. Verify the mounting location for the pendant holder is secure, provides unobstructed access, and will not interfere with robot motion.
5. Check that the robot controller's firmware version is compatible with the NexBot Vision 222-015 teach pendant as per the system release notes.
6. Unpack the pendant on an ESD-safe surface to prevent electrostatic discharge damage to the internal electronics.

3. Installation Procedure

Step 1: Mount the Pendant Holder

Securely mount the provided pendant holder onto the robot controller cabinet or another rigid surface within the work cell. Use a level to ensure it is installed horizontally and fasten with appropriate M4 hardware.

> **Warning:** Ensure the mounting location does not expose the resting pendant to impact hazards from forklifts or other moving equipment.

Step 2: Connect Cable to Robot Controller

Carefully align the teach pendant cable connector with the designated HMI port on the robot controller. Push the connector in firmly until it is fully seated.

> **Warning:** Do not force the connection. If it does not seat easily, check for bent pins or debris in the connector.

Step 3: Secure the Controller-Side Connector

Tighten the two locking screws on the cable connector housing to secure it to the controller. Use a torque screwdriver set to a low value to avoid over-tightening and damaging the port.

Step 4: Route the Pendant Cable

Route the cable from the controller to the typical operating area, ensuring it is clear of pinch points, sharp edges, and robot axes. Use cable ties to secure the cable along designated cable trays, leaving enough slack for full operator movement.

> **Warning:** Improper cable routing can lead to premature wear, communication failures, or a snagging hazard.

Step 5: Connect Cable to Teach Pendant

Attach the other end of the cable to the connector port located at the base of the NexBot Vision 222-015 teach pendant. Ensure the connector is fully seated and the locking mechanism engages.

Step 6: Power On Robot Controller

Once all connections are secure, remove the LOTO device and restore main power to the robot controller. The teach pendant will power on automatically with the controller.

> **Warning:** Ensure all personnel are clear of the robot's work envelope before applying power.

Step 7: Verify Initial Boot Sequence

Observe the 10.1-inch display as the pendant boots. The NexBot Robotics logo should appear, followed by the main control interface. No critical errors should be displayed.

4. Post-Installation Verification

1. Confirm that the Emergency Stop button on the teach pendant is functional by pressing it and verifying that a safety fault is triggered on the controller.
2. Test the three-position enabling switch by gently squeezing it to the middle position to enable motor power, then releasing it to confirm motor power is disabled.
3. Verify all physical buttons and the joystick respond correctly within the user interface.
4. Check the touchscreen for accurate response by navigating through several different menus.
5. Perform a slow-speed manual jog of all robot axes to confirm proper communication and control.
6. Ensure the pendant's reported weight of 1.2 kg feels balanced and the ergonomic grips are comfortable for the operator.

Note: For technical support, contact your authorized service provider or visit *https://robotics.barca.group/support*.

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