

SmartCart 4.0 Safety Guidelines

Safety precautions in a robot's working environment serve to protect the human operators as well as the robot and related equipment. Always use caution when working with the SmartCart 4.0 system to avoid personal injury and damage to the equipment.

Be sure to adhere to the following safety guidelines:

- Ensure that all components and modules are mounted securely.
- All hardware installations are to be performed by or under the supervision of the laboratory instructor or the system manager.
- All wiring connections are to be performed by or under the supervision of the laboratory instructor or system manager. Do not approach or touch any electrical components or wiring without the permission of the system integrator and your instructor. Do not open the I/O box.
- Ensure that the power supply unit (I/O box) is connected to a rated power supply.
- Do not touch or tamper with the rotary table or conveyor motors, especially when the motors are in motion.
- Make sure hands, hair, and clothing are securely away from the working area of any devices. If you have long hair, tie it back so that it does not get caught in any of the SmartCart devices. Avoid wearing hanging jewelry and loose-fitting clothing.
- Ensure that the laser safety sentinel system is operational before running any robot programs (job playback).
- Keep at least 2 meters (6 ft) away from the robot when it is running (playback mode).
- When the robot is running, be ready to press the programming pendant's emergency stop button in the event that something unexpected happens.
- Jog the manipulator at slow or inching speed when its gripper is near other objects. Do not program the arm to travel at high speeds.
- When jogging the robot, be wary of the peripheral devices in the work cell, especially the vision sensor and its fixture.
- To immediately halt all system operation, press the programming pendant's emergency stop button and power OFF the I/O box.
- Maintain a clean work area at all times. Keep food and drink away from the work area.
- Read all directions before starting a task.
- It is recommended to read all of the relevant automation manufacturer's documentation before operating any hardware, using software, or performing any integration tasks.
- If you are unsure of how a certain system works, talk to your instructor before operating the related equipment.