



UNIVERSAL ROBOTS

Software Handbook

PolyScope X



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1. First Boot

Description

The first boot is the initial sequence of actions you can take with the robot after assembly. This initial sequence requires you to:

- Power on the robot
- Insert the serial number
- Initialize the robot arm
- Power down the robot



CAUTION

Failure to verify the payload and installation before starting up the robot arm can lead to injury to personnel and/or property damage.

- Always verify the actual payload and installation are correct before starting up the robot arm.



CAUTION

Incorrect payload and installation settings prevent the robot arm and Control Box functioning correctly.

- Always verify the payload and installation setting are correct.



NOTICE

Starting up the robot in lower temperatures can result in lower performance, or stops, due to temperature dependent oil and grease viscosity.

- Starting up the robot in low temperatures can require a warmup phase.

1.1. Powering On the Robot

To power on the robot Powering on the robot turns on the Control Box and loads the display on the TP screen.

1. Press the power button on the Teach Pendant to power on the robot.

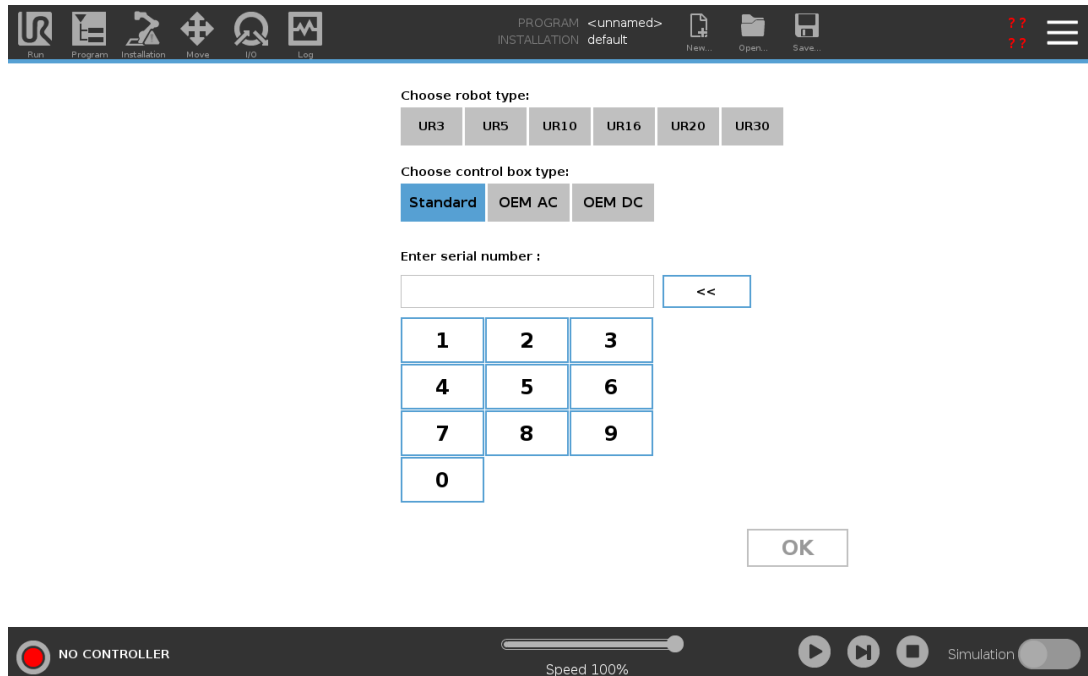
1.2. Inserting the Serial Number

To insert the serial number Installing your robot for the first time requires you to enter the serial number on the robot arm. This procedure is also required when you re-install the software, for example when you install a software update.



1. Select your Control Box.
2. Add the serial number as it is written on the robot arm.
3. Tap **OK** to end.

It can take a few minutes for the start screen to load.



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Select Control Box

Standard

OEM AC

OEM DC

Enter Serial Number

1	2	3	✕
4	5	6	
7	8	9	
0			↵

1.3. Starting the Robot Arm

To start the robot

Starting the robot arm disengages the braking system, allowing you to start moving the robot arm and to start using PolyScope.

1. In the bottom left of the screen, tap power button. The robot arm state is **Off**.
2. When the Initialize box displays, tap **Power On**. The robot arm state is **Booting**.
3. Tap **Unlock** to release the brakes.

Robot arm initialization is accompanied by sound and slight movements as the joint brakes are released.

The robot arm state is now **Active** and you can start to use the interface.

4. You can tap an **OFF** to turn off the robot arm.

When the robot arm state changes from **Idle** to **Normal**, sensor data is checked against the configured mounting of the robot arm.

If the mounting is verified, tap **START** to continue releasing all joint brakes, preparing the robot arm for operation.

1.4. Powering Down the Robot

To power down the robot arm



WARNING

Unexpected start-up and/or movement can lead to injury

- Power down the robot arm to prevent unexpected start-up during mounting and dismounting.

1. At the bottom left of the screen, tap the Initialize button to turn off the robot arm.
The button changes from green to red.
2. Press the power button on the Teach Pendant to turn off the Control Box.
3. If a Shutdown dialog box displays, tap **Power Off**.

At this point, you can continue to:

- Unplug the mains cable / power cord from the wall socket.
- Allow 30 seconds for the robot to discharge any stored energy.



1.5. Starting the Robot Arm



WARNING

Always verify the actual payload and installation are correct before starting up the robot arm. If these settings are incorrect, the robot arm and Control Box will not function correctly and may become dangerous to people or equipment.



CAUTION

Ensure the robot arm is not touching an object (e.g., a table) because a collision between the robot arm and an obstacle might damage a joint gearbox.

To start the robot:

- Tap the Robot State Off, followed by the START button with the green icon to start the initialization process. Then, the icon turns orange to indicate the power is on and in Idle.
- Tap the UNLOCK button with the orange icon to release the brakes.
- Tap the POWER OFF button with the red icon to power off the robot arm.

1.6. Safely Setting the Active Payload

Verify Installation

Before using PolyScope X, verify that the Robot Arm and Control Box are correctly installed.

1. On the Teach Pendant, press the emergency stop button.
2. On the screen, tap **OK** when the Robot Emergency Stop box appears.
3. On the Teach Pendant, press the power button and allow the system to start and load PolyScope X.
4. Tap the on-screen **Power** button at the bottom left of the screen.
5. Hold and twist the emergency stop button to unlock.
6. On the screen, verify the robot state is **Power off**.
7. Step outside the reach (workspace) of the robot arm.
8. Tap the on-screen **Power** button
9. On the Initialize popup, tap **Power** and allow robot state to change to **Locked**.
10. In the Active Payload, verify the payload mass.
You can also verify the mounting position is correct, in the Robot graphic.
11. Tap **UNLOCK** for the robot arm to release its brake system.

2. PolyScope X Overview

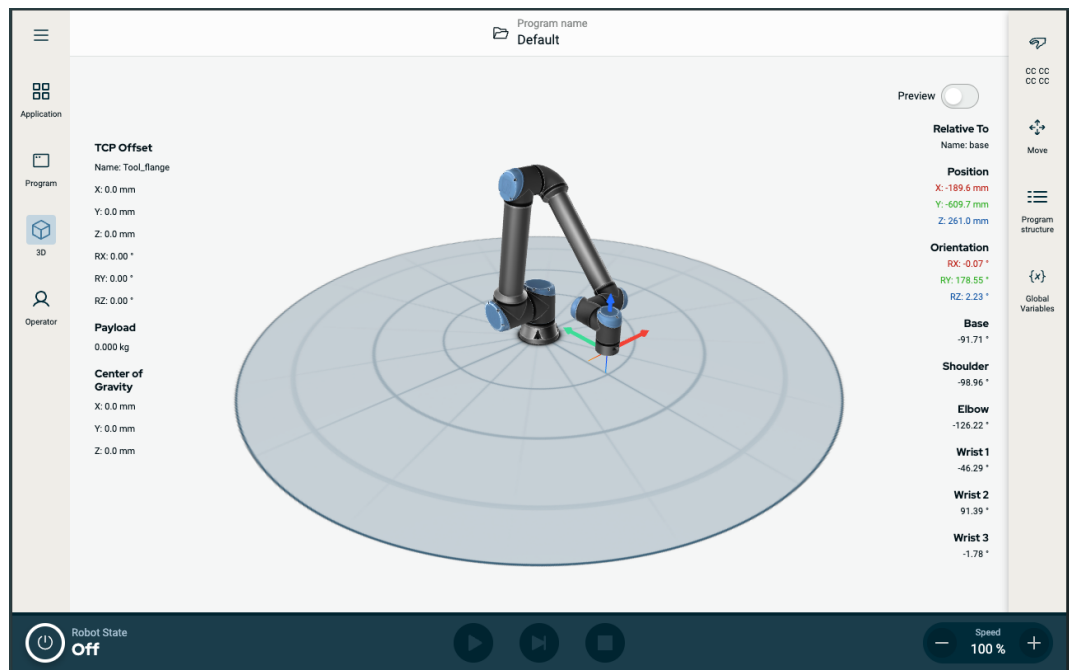
Overview

PolyScope X is the Graphical User Interface (GUI) installed on the Teach Pendant that operates the robot arm via a touch screen. The PolyScope X interface allows you to create, load and execute programs.

Screen Layout

The interface is divided as shown in the following illustration:

- **Header** - with button to load or create programs and access program modules.
- **Left Header** - with icons/tabs to select a main screen.
- **Right Header** - with icons/tabs to select a multitask screen.
- **Footer** - with buttons to control robot power and your loaded program.



Screen Combinations

The main screen and the multitask screen make up the operating screen combination for the robot.

The multitask screen is independent of the main screen, so you can do separate tasks. For example, you can configure a program in the main screen, while moving the robot arm in the multitask screen. You also can hide the multitask screen if it is not needed.

- **Main screen** - with fields and options to manage and monitor robot actions.
- **Multitask screen** - with fields and options often relating to the main screen.

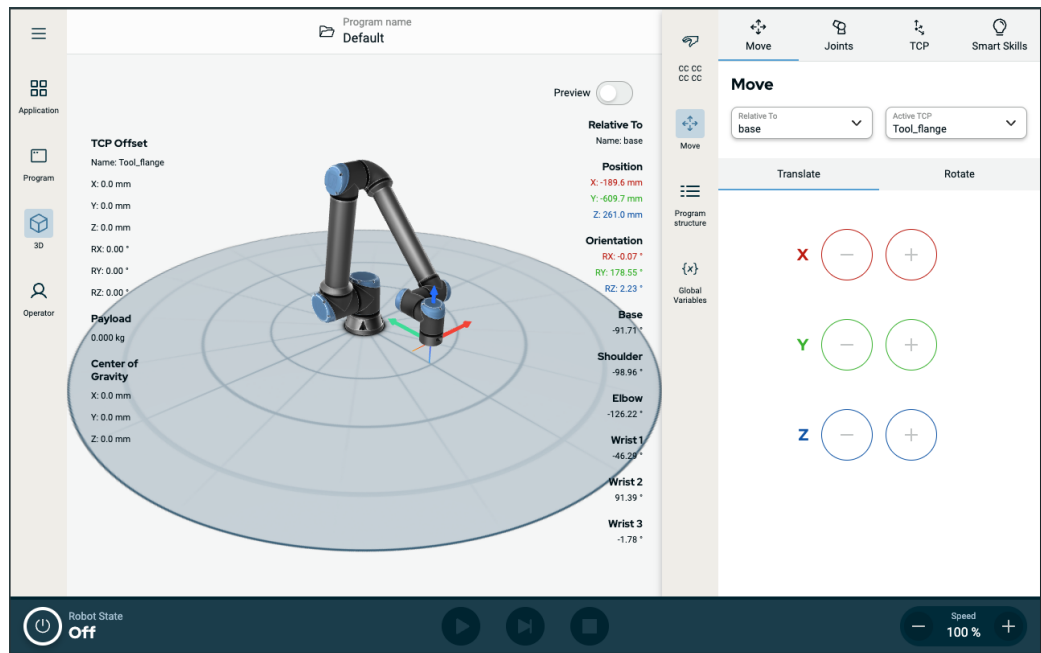


Figure 1.1: Main screen and multitask screen

To show/hide the multitask screen

1. In the right header, tap any icon to show the multitask screen.
The right header expands to the middle of the screen to accommodate the multitask screen.
2. Tap the currently selected icon in the right header to hide the multitask screen.

2.1. Touch Screen

Description

The Teach Pendant touch screen is optimised for use in industrial environments. Unlike consumer electronics, Teach Pendant touch screen sensitivity is, by design, more resistant to environmental factors such as:

- Water droplets and/or machine coolant droplets
- Radio wave emissions
- Other conducted noise from the operating environment

Using the Touch Screen









The touch sensitivity is designed to avoid false selections on Polyscope X, and to prevent unexpected motion of the robot.

For best results, use the tip of your finger to make a selection on the screen. In this manual, this is referred to as a "tap". A commercially available stylus may be used to make selections on the screen if desired. The following section lists and defines the icons/tabs and buttons in the Polyscope X interface.

The following section lists and defines the icons/tabs and buttons in the Polyscope X interface.

2.2. Icons

2.2.1. Left Header Icons

Icon	Title	Description
	Operator	A simple means of operating the robot using pre-written programs.
	Application	To configure the robot arm settings and external equipment, eg mounting and TCPs.
	Program	Modifies the current robot program.
	3D	Controls and/or regulates robot movement.
	More	Access to About information and Settings.
	About	Displays information about the robot.
	Settings	To configure settings about the software, eg language and units.
	Power	To power on or off the robot.



CCCC
CCCC

Safety Checksum

Displays the active safety checksum and detailed parameters, and change the operation mode.

2.2.2. Footer Buttons

Icon	Title	Description
		
	Initialize	<p>Manages the robot state. When RED, press it to make the robot operational.</p> <ul style="list-style-type: none">• Black, Power off. The robot arm is in a stopped state.• Orange, Idle. The robot arm is on, but not ready for normal operation.• Orange, Locked. The robot arm is locked.• Green, Normal. The robot arm is on and ready for normal operation.• Red, Error. The robot is in a fault state, such as e-stop.• Blue, Transition. The robot is changing state, such as brake releasing.
		
		
		
		
		
	Play	Starts the current loaded program.
	Step	Allows a program to be run single-stepped.
	Stop	Halts the current loaded program.
	Speed slider	Manages the robot state. When RED, press it to make the robot operational.

3. Robot Arm Basics

Robot Arm The Universal Robots robot arm is composed of tubes and joints. The coordinated motion of these tubes and joints, via PolyScope X software, moves the robot arm.

- **Base:** where the robot arm is mounted.
- **Shoulder** and **Elbow:** where the larger movements originate.
- **Wrist 1** and **Wrist 2:** where the finer movements originate.
- **Wrist 3:** where the tool attaches to the tool flange.

You can attach a tool to the flange at the end of Wrist 3. Moving the robot arm positions the tool.



CAUTION

You cannot position the tool directly above, or directly below the Base.

Teach Pendant The Teach Pendant, the touch screen that controls the robot, is optimised for use in industrial environments. Unlike consumer electronics, the Teach Pendant touch screen sensitivity is, by design, more resistant to environmental factors such as:

- Water droplets and/or machine coolant droplets
- Radio wave emissions
- other conducted noise from the operating environment

The touch sensitivity is designed to avoid false selections on the interface, and to prevent unexpected motion of the robot.

Using the screen For best results, use the tip of your finger to make a selection on the screen. In this manual, this is referred to as a "tap". A commercially available stylus may be used to make selections on the screen if desired.



4. Installing the Robot

Assembling the Robot Arm and Control Box

To start using PolyScope X, make sure your robot arm and Control Box are assembled and the power cable is plugged in.

If the robot is not assembled, you may need to assemble and mount the robot arm and Control Box.



WARNING

Tipping hazard. If the robot is not securely placed on a sturdy surface, the robot can fall over and cause injury.

To assemble and power-on the robot arm

1. Unpack the robot arm and the Control Box.
2. Mount the robot arm on a sturdy, vibration-free surface, using screws and a hex key (Allen wrench).
Mounting the robot may require two people.
3. Place the Control Box on its Foot.
4. Connect the robot cable to the robot arm and the Control Box.
5. Plug in the main/power cable of the control box.
6. Press the power button on the Teach Pendant to turn on the robot.

5. Safety

Warning



WARNING

Before you configure your robot safety settings, your integrator must conduct a risk assessment to guarantee the safety of personnel and equipment around the robot. A risk assessment is an evaluation of all work procedures throughout the robot lifetime, conducted in order to apply correct safety configuration settings. (See Hardware Installation Manual)

Safety Checksum

The Safety Checksum icon displays your applied robot safety configuration. The checksum changes if and only if the safety configuration is changed.

Safety Configuration



NOTICE

Safety Settings are password protected.

1. In the PolyScope X left header, tap the Application icon.
2. On the Workcell screen tap the Safety icon.
3. Observe that the Robot Limits screen displays, but settings are inaccessible.
4. Enter the safety password and tap UNLOCK to make settings accessible. Note: Once Safety settings are unlocked, all settings are now active.
5. Tap LOCK or navigate away from the Safety menu to lock all Safety item settings again.

Setting a Safety Password

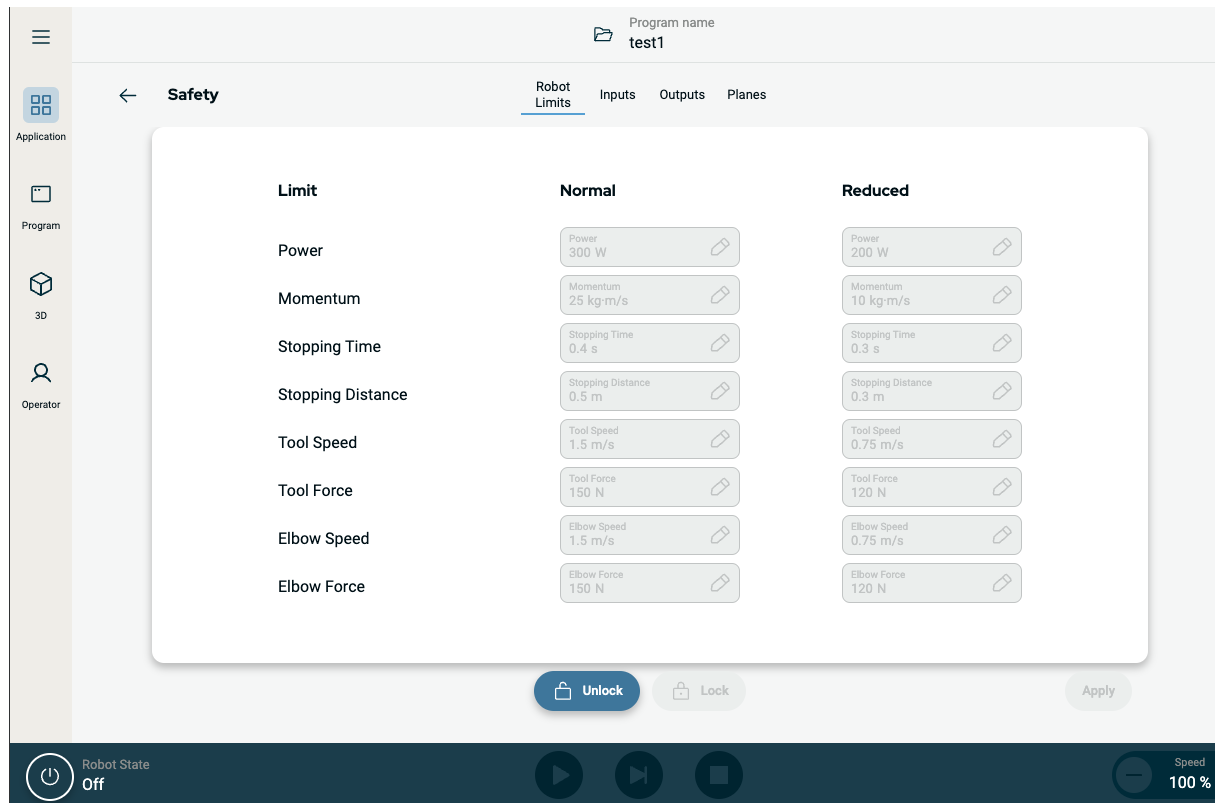
1. In your PolyScope X header left corner, tap the Hamburger menu and then tap Settings.
2. On the left of the screen, in the blue menu, tap Safety Password.
3. For Old Password, type the current Safety password.
4. For New Password, type a password.
5. For Repeat Password, type the same password and tap Change Password.
6. In the top right of the menu, press CLOSE to return to previous screen.

5.1. Safety Menu Settings

Here you can find descriptions of the safety settings in PolyScope X.

5.1.1. Robot Limits

Limits



Limit	Normal	Reduced
Power	300 W	200 W
Momentum	25 kg·m/s	10 kg·m/s
Stopping Time	0.4 s	0.3 s
Stopping Distance	0.5 m	0.3 m
Tool Speed	1.5 m/s	0.75 m/s
Tool Force	150 N	120 N
Elbow Speed	1.5 m/s	0.75 m/s
Elbow Force	150 N	120 N

Limit	Description
Power	limits maximum mechanical work produced by the robot in the environment. This limit considers the payload a part of the robot and not of the environment.
Momentum	limits maximum robot momentum.
Stopping Time	limits maximum time it takes the robot to stop e.g. when an emergency stop is activated
Stopping Distance	limits maximum distance the robot tool or elbow can travel while stopping.
Tool Speed	limits maximum robot tool speed.
Tool Force	limits the maximum force exerted by the robot tool in clamping situations
Elbow Speed	limits maximum robot elbow speed
Elbow Force	limits maximum force that the elbow exerts on the environment

Safety
Mode



NOTICE

Restricting stopping time and distance affect overall robot speed. For example, if stopping time is set to 300 ms, the maximum robot speed is limited allowing the robot to stop within 300 ms.



NOTICE

The tool speed and force are limited at the tool flange and the center of the two user-defined tool positions

Under normal conditions, i.e. when no Robot stop is in effect, the safety system operates in a Safety Mode associated with a set of safety limits ¹:

Safety mode	Effect
Normal	This configuration is active by default.
Reduced	This configuration activates when the Tool Center Point (TCP) is positioned beyond a Trigger Reduced mode plane, or when triggered using a configurable input.

¹Robot stop was previously known as "Protective stop" for Universal Robots.

5.1.2. Safety I/O Signals

Description

The I/O are divided between inputs and outputs and are paired up so that each function provides a Category 3 PLd capability.

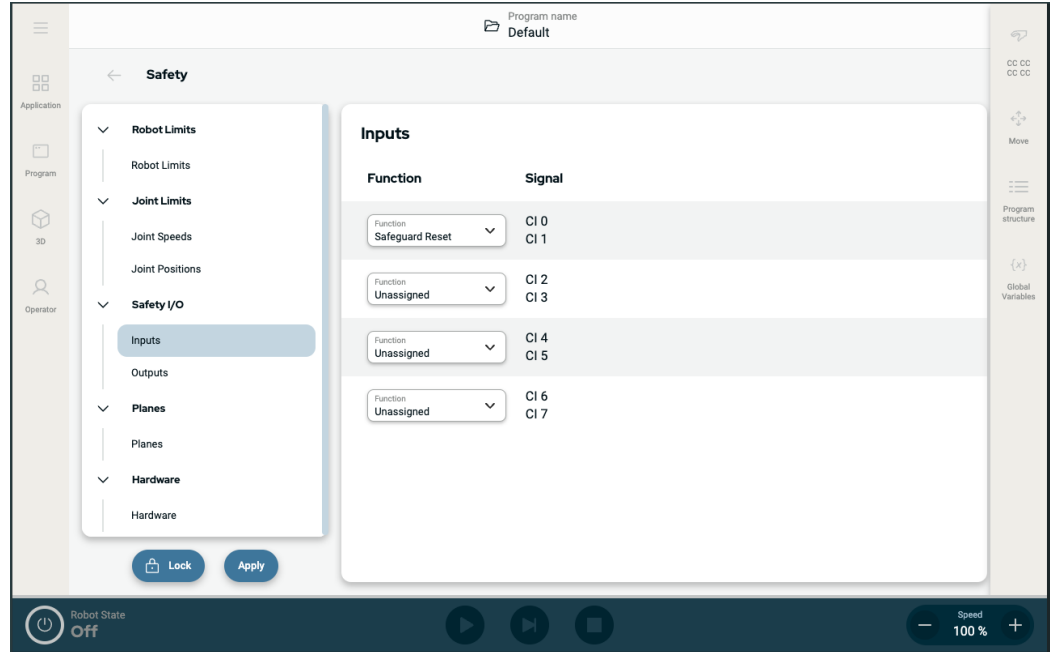
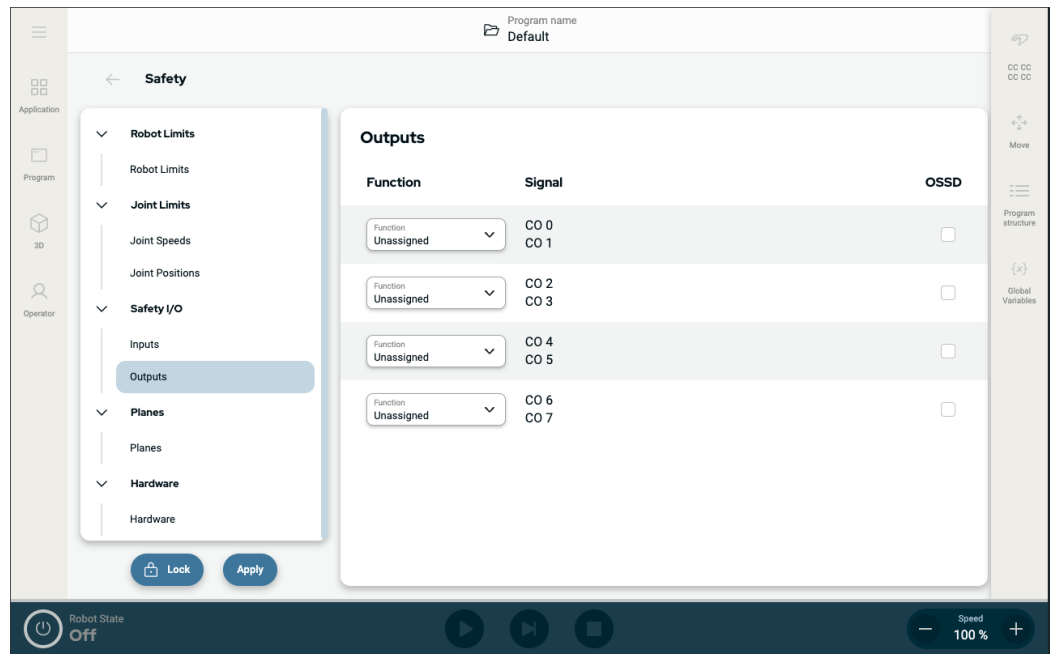


Figure 1.2: PolyScope X screen displaying the Input signals.



Input Signals

The inputs are described in the tables below:

Emergency Stop Button	Performs a Stop Category 1 (IEC 60204-1) informing other machines using the System Stop output if that output is defined. A stop is initiated in anything connected to the output.
Robot Emergency Stop	Performs a Stop Category 1 (IEC 60204-1) via Control Box input, informing other machines using the System Emergency Stop Output if that output is defined.
External Emergency Stop	Performs a Stop Category 1 (IEC 60204-1) on robot only.
Reduced	<p>All safety limits can be applied while the robot is using a Normal configuration, or a Reduced configuration.</p> <p>When configured, a low signal sent to the inputs causes the safety system to transition to the reduced configuration. The robot arm decelerates to satisfy the reduced parameters.</p> <p>The safety system guarantees the robot is within reduced limits less than 0.5s after the input is triggered. If the robot arm continues to violate any of the reduced limits, a Stop Category 0 is triggered. Trigger planes can also cause a transition to the reduced configuration. The safety system transitions to the normal configuration in the same way.</p>

**Input
Signals**

The inputs are described in the table below

Operational Mode	When an external mode selection is used it switches between Automatic Mode and Manual Mode . The robot is in Automatic mode when input is <i>low</i> and Manual mode when the input is <i>high</i> .
Safeguard Reset	Returns from the Safeguard Stop state, when a rising edge on the Safeguard Reset input occurs. When a Safeguard Stop occurs, this input ensures that the Safeguard Stop state continues until a reset is triggered.
Safeguard	A stop triggered by a safeguard input. Performs a Stop Category 2 (IEC 60204-1) in all modes, when triggered by a Safeguard.
Automatic Mode Safeguard Stop	Performs a Stop Category 2 (IEC 60204-1) in Automatic mode ONLY. Automatic Mode Safeguard Stop can only be selected when a Three-Position Enabling Device is configured and installed.
Automatic Mode Safeguard Reset	Returns from the Automatic Mode Safeguard Stop state when a rising edge on the Automatic Mode Safeguard Reset input occurs.
Freedrive on robot	You can configure the Freedrive input to enable and use Freedrive without pressing the Freedrive button on a standard TP, or without having to press-and-hold any of the buttons on the 3PE TP in the light-press position.

**WARNING**

When the default Safeguard Reset is disabled, an automatic reset happens when the safeguard no longer triggers a stop.

This can happen if a person passes through the field of the safeguard.

If a person is not detected by the safeguard and the person is exposed to hazards, automatic reset is forbidden by standards.

- Use the external reset to ensure resetting only when a person is not exposed to hazards.

**WARNING**

When Automatic Mode Safeguard stop is enabled, a safeguard Stop is not triggered in Manual Mode.

Output Signals

All safety outputs go low in the event of a safety system violation or fault. This means the System Stop output initiates a stop even when an E-stop is not triggered. You can use the following Safety functions output signals. All signals return to low when the state which triggered the high signal has ended:

¹ System Stop	Signal is <i>Low</i> when the safety system has been triggered into a stopped state including by the Robot Emergency Stop input or the Emergency Stop Button. To avoid deadlocks, if the Emergency Stopped state is triggered by the System Stop input, low signal will not be given.
Robot Moving	Signal is <i>Low</i> if the robot is moving, otherwise high.
Robot Not Stopping	Signal is <i>High</i> when the robot is stopped or in the process of stopping due to an emergency stop or safeguard stop. Otherwise it will be logic low.
Reduced	Signal is <i>Low</i> when reduced parameters are active or if the safety input is configured with a reduced input and the signal is currently low. Otherwise the signal is high.
Not Reduced	This is the inverse of Reduced, defined above.
3-Position Enabling Device	In Manual Mode, an external 3-Position Enabling Device must be pressed and held in the center-on position to move the robot. If you are using a built-in 3-Position Enabling Device, the button must be pressed and held in the mid position to move the robot.
Safe Home	Signal is <i>High</i> if the robot arm is stopped and is located in the configured Safe Home Position. Otherwise, the signal is <i>Low</i> . This is often used when UR robots are integrated with mobile robots.



NOTICE

Any external machinery receiving its Emergency Stop state from the robot through the System Stop output must comply with ISO 13850. This is particularly necessary in setups where the Robot Emergency Stop input is connected to an external Emergency Stop device. In such cases, the System Stop output becomes high when the external Emergency Stop device is released. This implies that the emergency stop state at the external machinery will be reset with no manual action needed from the robot's operator. Hence, to comply with safety standards, the external machinery must require manual action in order to resume.

¹System Stop was previously known as "System Emergency Stop" for Universal Robots robots. PolyScope can display "System Emergency Stop".

5.1.3. Safety Planes

Description

Safety planes restrict robot workspace, the tool and the elbow.



WARNING

Defining safety planes only limits the defined Tool spheres and elbow, not the overall limit for the robot arm.
Defining safety planes does not guarantee that other parts of the robot arm will obey this type of restriction.

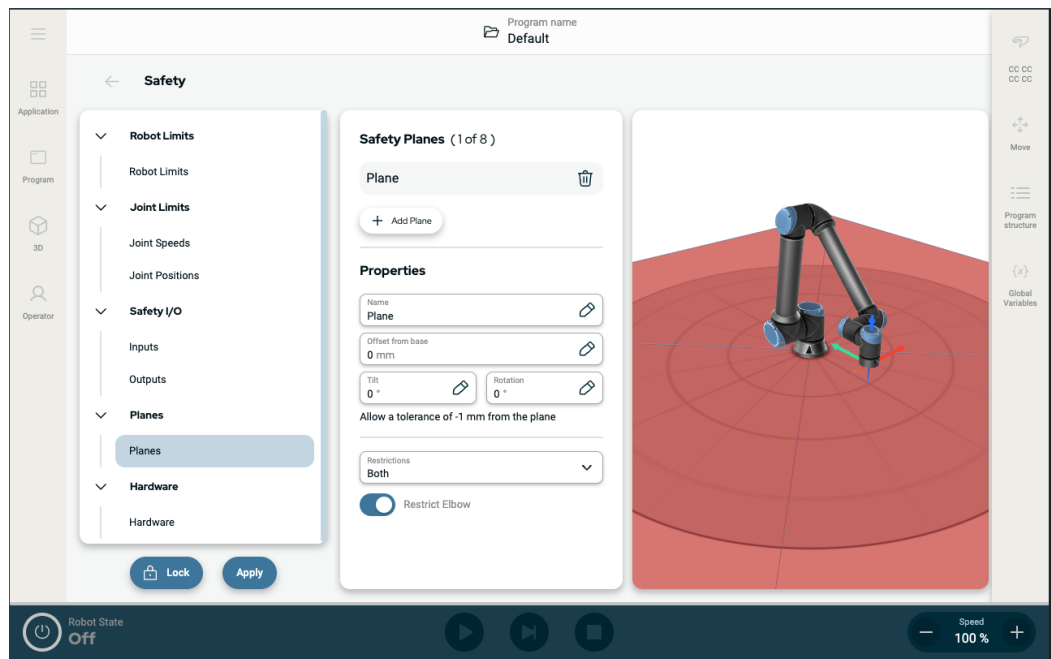


Figure 1.3: PolyScope X screen displaying safety planes.

Configuring a Safety Plane

You can configure safety planes with the properties listed below:

- **Name** This is the name used to identify the safety plane.
- **Offset from base** This is the height of the plane from the base, measured in the -Y direction.
- **Tilt** This is the tilt of the plane, measured from the power cord.
- **Rotation** This is the rotation of the plane, measured clockwise.

You can configure each plane with the restrictions listed below:

- **Normal** When the safety system is in Normal mode, a normal plane is active and it acts as a strict limit on the position.
- **Reduced** When the safety system is in Reduced mode, a reduced mode plane is active and it acts as a strict limit on the position.
- **Both** When the safety system is either in Normal or Reduced mode, a normal and reduced mode plane is active and acts as a strict limit on the position.
- **Trigger Reduced Mode** The safety plane causes the safety system to switch to Reduced mode if the robot Tool or Elbow is positioned beyond it.

Elbow Joint Restriction

You can prevent the robot elbow joint from passing through any of your defined planes.

Disable Restrict Elbow for elbow to pass through planes.

6. Application Tab

The Application tab allows you to configure the settings which affect the overall performance of the robot and PolyScope X.

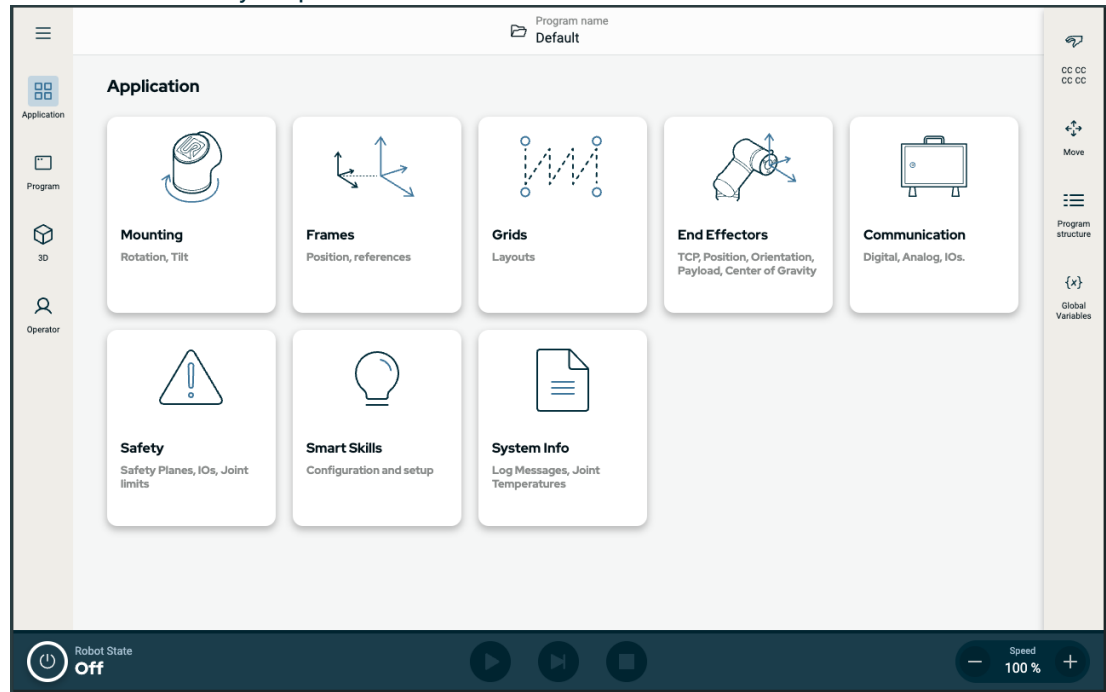


Figure 1.4: Application screen displaying application buttons.

Use the Application tab to access to the following configuration screens:

- Mounting
- Frames
- Grids
- End Effectors
- Communication
- Safety
- Smart Skills
- System Info

6.1. Communication

Description

The Communication screen allows you to monitor and set the live I/O signals from/to the robot control box. The screen displays the current state of the I/O, including during program execution. If anything is changed during program execution, the program stops. At program stop, all output signals retain their states. The Communication screen updates at 10Hz, so very fast signals may not display properly. You can reserve configurable I/Os for special safety settings defined in [5.1.2 Safety I/O Signals on page 20](#). Those which are reserved will have the name of the safety function in place of the default or user defined name. Configurable outputs reserved for safety settings cannot be selected, they are displayed as LEDs only.

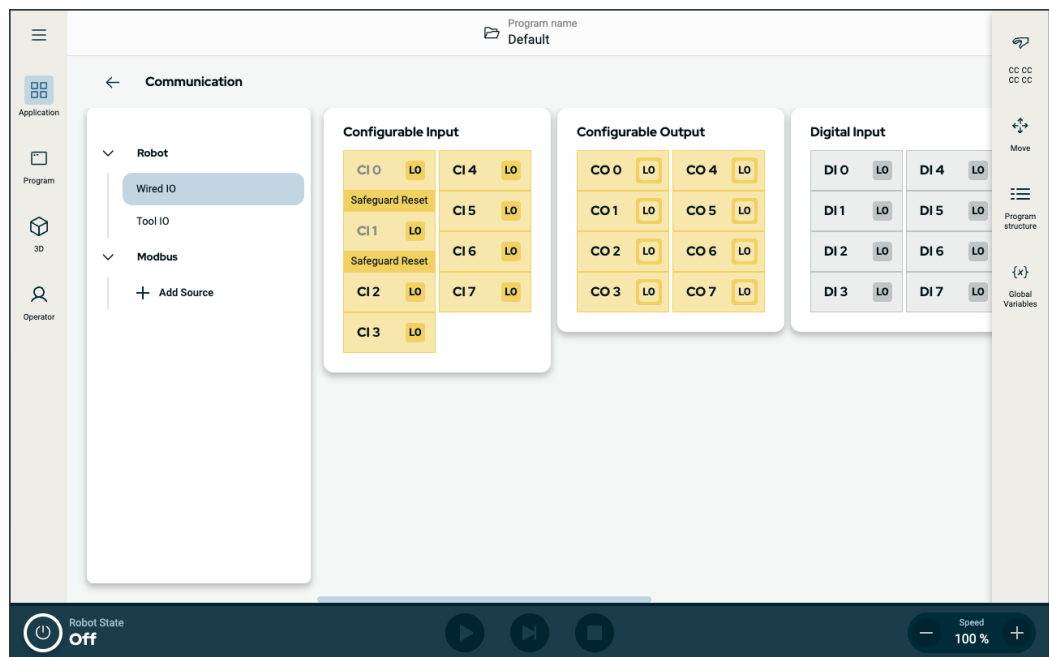


Figure 1.5: Communication screen displaying I/Os.

6.2. Profinet

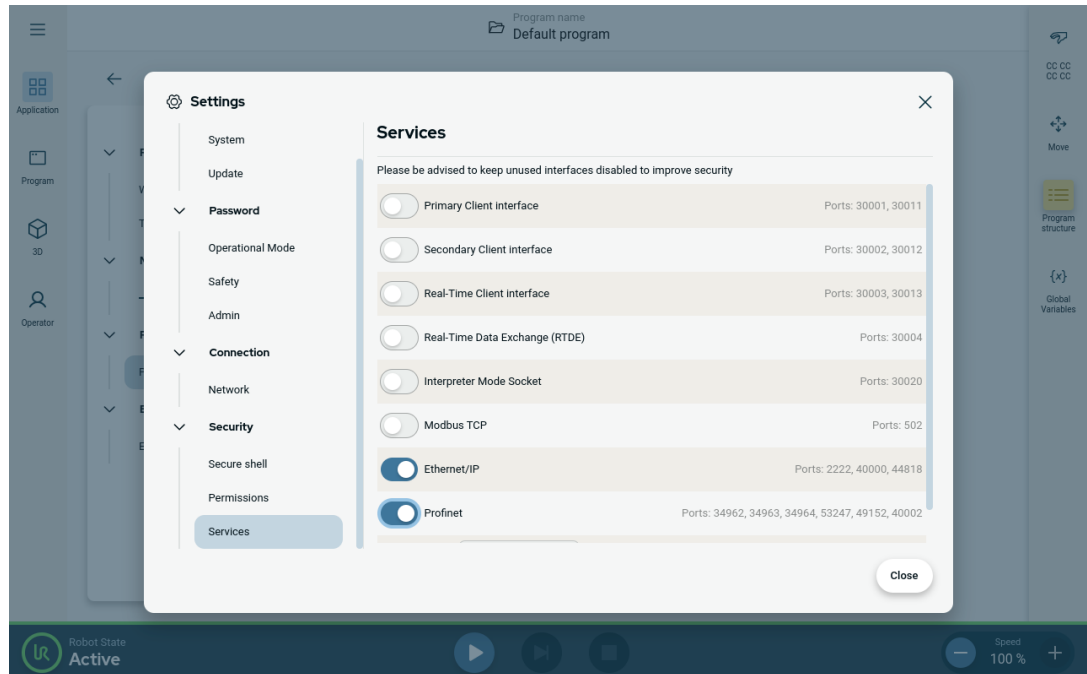
Description

The PROFINET network protocol enables or disables the connection of the robot to an industrial PROFINET IO-Controller. If the connection is enabled, you can select the action that occurs when a program loses PROFINET IO-Controller connection.

Enable Profinet

This is how you enable to Profinet function in PolyScope X.

1. In the top right of the screen, tap the Hamburger menu and then tap Settings.
2. In the menu on the left, under Security, tap Services.
3. Tap the Profinet button to switch Profinet on.



Using
Profinet

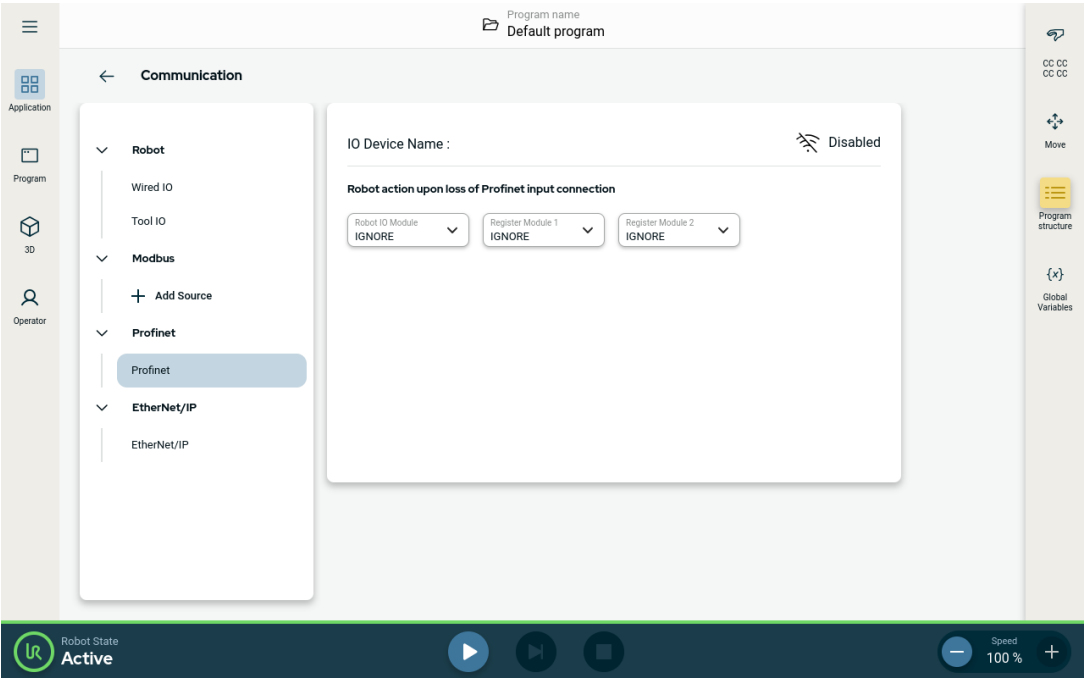
Find the profinet functions in PolyScope X:

In the PolyScope X left header.

1. Tap the Application icon.
2. Select Profinet from the left menu.

Select the relevant action from the list:

Ignore	PolyScope X ignores the loss of Profinet connection, and the program continues to run.
Pause	PolyScope X pauses the current program. The program resumes from where it stopped.
Stop	PolyScope X stops the current program.



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6.3. Ethernet/IP

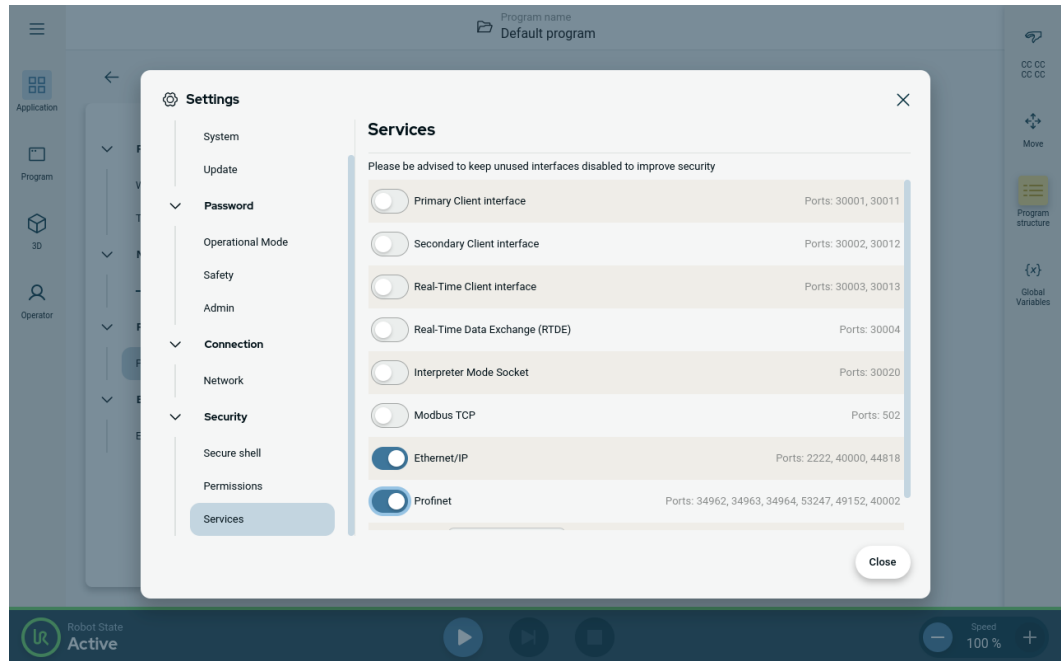
Description

EtherNet/IP is a network protocol that enables the connection of the robot to an industrial Ethernet/IP scanner device. If the connection is enabled, you can select the action that occurs when a program loses Ethernet/IP scanner device connection.

Enable Ethernet/IP

This is how you enable to Ethernet/IP function in PolyScope X.

1. In the top right of the screen, tap the Hamburger menu and then tap Settings.
2. In the menu on the left, under Security, tap Services.
3. Tap the Profinet button to switch Profinet on.



Using Ethernet/IP

Find the Ethernet/IP functions in PolyScope X:

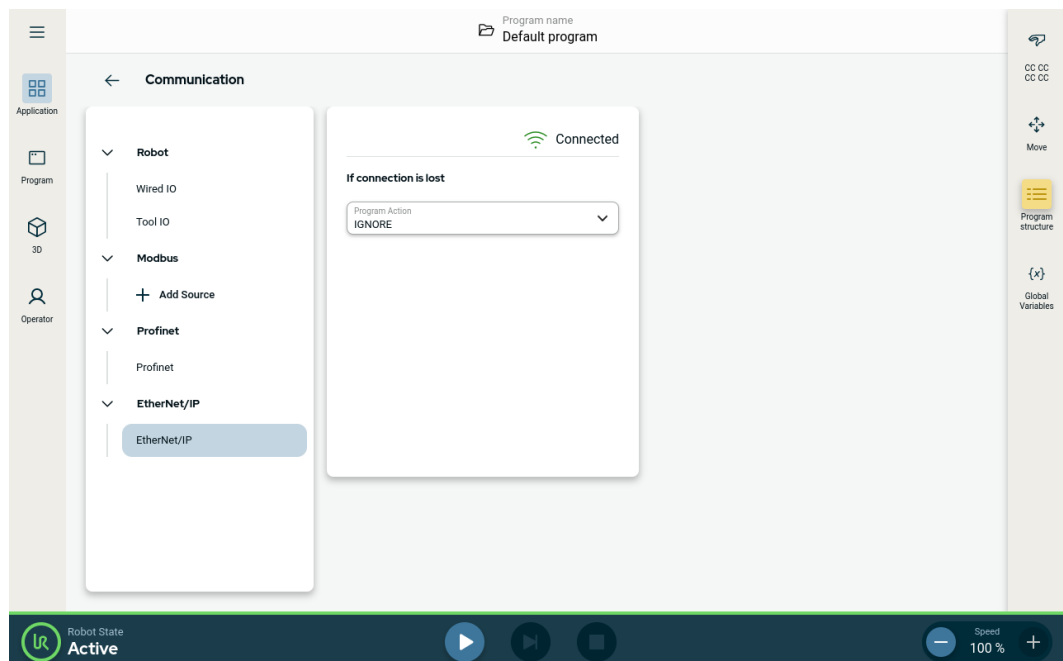
In the PolyScope X left header.

1. Tap the Application icon.
2. Select the relevant action from the list.

Ignore PolyScope X ignores the loss of EtherNet/IP connection, and the program continues to run.

Pause PolyScope X pauses the current program. The program resumes from where it stopped.

Stop PolyScope X stops the current program.



In the upper right corner of this screen, you can see the Ethernet/IP status.

Connected The robot is connected to the Ethernet/IP Scanner Device.

No Scanner Ethernet/IP is running, but no device is connected to the robot via Ethernet/IP.

Disabled Ethernet/IP is not enabled.



7. Settings

7.1. Admin Password

Description

All options under Security are protected by an Admin password. The Admin password protected screens are locked by a transparent overlay rendering the settings unavailable. Accessing the Security allows you to configure the settings in the following:

- Secure Shell
- Permissions
- Services

The settings can only be modified by designated administrator/s.

Unlocking any one of the options under Security, also unlocks the other options until you exit the Settings menu.

To set the Admin password

Before you can use the Admin password to unlock protected screens, you have to change the default password.

1. Access the Hamburger menu and select **Settings**
2. Under Password, tap **Admin**.
3. Change the current Admin password to a new one.
 - If this is the first time, change the default Admin password from "easybot" to a new password. The new password must be at least 8 characters long.
4. Use the new password to unlock the Settings menu and access the options under Security.

To exit the Settings menu

When one of the Security options is unlocked, the Close button in the bottom right of the Settings menu changes. The Close button is replaced by the Lock and Close button indicating security is unlocked.

1. On the Settings menu locate and tap the **Lock and Close** button.

7.2. Secure Shell (SSH) Access

Description

You can manage remote access to the robot using Secure shell (SSH). The Secure shell security settings screen allows administrators to enable or disable SSH access to the robot.

To enable/disable SSH	<ol style="list-style-type: none"> 1. Access the Hamburger menu and select Settings. 2. Under Security, tap Secure shell. 3. Slide the Enable SSH Access to the on position. <p>To the far right of the Enable SSH Access toggle button, the screen shows the port used for SSH communication.</p>
SSH Authentication	<p>Authentication can occur with a password and/or with a pre-shared, authorized key. Security keys can be added by tapping the Add Key button and selecting a security key file. Available keys are listed together. Use the trash icon to remove a selected key from the list.</p>

7.3. Permissions

Description	<p>Access to the Networking, URCap Management and Updating PolyScope X screens is restricted by default, to prevent unauthorized changes to the system. You can change the permission settings to allow access to these screens. An Admin password is required to access Permissions.</p>
To access Permissions	<ol style="list-style-type: none"> 1. Access the Hamburger menu and select Settings. 2. Navigate to Security and tap Permissions.
Additional system permissions	<p>You can also lock a few important screens/functionalities with the Admin password. On the Permissions screen in Security section in the Settings menu, it is possible to specify which additional screens are to be protected by the Admin password and which screens are available to all users. The following screens/functionalities can optionally be locked:</p> <ul style="list-style-type: none"> • Network settings • Update settings • URCaps section in the System Manager
To enable/disable system permissions	<ol style="list-style-type: none"> 1. Access Permission as previously described. The protected screens are listed under Permissions. 2. For the desired screen, slide the On/Off toggle switch to the On position to enable it. 3. To disable the desired screen, slide the On/Off toggle switch to the Off position. <p>The screen locks again once the toggle is in the Off position.</p>



7.4. Services

Description

Services allow administrators to enable or disable remote access to the standard UR services running on the robot, such as Primary/Secondary Client interfaces, PROFINET, Ethernet/IP, ROS2, etc.

Use the Service screen to restrict remote access to the robot by only allowing external access to the services on the robot which the specific robot application is actually using. All services are disabled by default to provide maximum security. The communication ports for each service are to right of the On/Off toggle button in the list of services.

Enabling ROS2

When the ROS2 service is enabled on this screen, you can specify the ROS Domain ID (values 0-9). After changing the Domain ID, the system restarts to apply the change.

Software Name: PolyScope X
Software Version: 10.8
Document Version: 10.11.11
