



COMMISSIONING INSTRUCTIONS

Comfort app
for ABB robots

DDOC2024

THE KNOW-HOW FACTORY

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1 Introduction

1.1 Supporting documents

NOTICE



Read through the instructions before installing or working with the product.

The instructions contain important notes for your personal safety. They must be read and understood by all persons who work with or handle the product during any phase of the product lifetime.



The documents listed below are available for download on our website www.zimmer-group.com.

- Instructions
 - Catalogs, drawings, CAD data, performance data
 - Information on accessories
 - Technical data sheets
 - General Terms and Conditions, including warranty information.
- ⇒ Only those documents currently available on the website are valid.

In these instructions, "product" refers to the product designation on the title page!

1.2 Notices and graphics in the instructions

DANGER



This notice warns of an imminent danger to the life and health of people. Ignoring these notices can lead to serious injury or even death.

- ▶ You absolutely must comply with the described measures for avoiding these dangers!
- ⇒ The warning symbols are assigned according to the type of danger.

WARNING



This notice warns of a situation that is potentially hazardous to personal health. Ignoring these notices can cause serious injury or damage to health.

- ▶ You absolutely must comply with the described measures for avoiding these dangers!
- ⇒ The warning symbols are assigned according to the type of danger.

CAUTION



This notice warns of a situation that is potentially hazardous to persons. Ignoring these notices can cause minor, reversible injuries.

- ▶ You absolutely must comply with the described measures for avoiding these dangers!
- ⇒ The warning symbols are assigned according to the type of danger.

NOTICE



This notice warns of possible material and environmental damage. Ignoring these notices can result in damage to the product or the environment.

- ▶ You absolutely must comply with the described measures for avoiding these dangers!
- ⇒ The warning symbols are assigned according to the type of danger.

INFORMATION



This category contains useful tips for handling the product efficiently. Failure to observe these tips will not result in damage to the product. This information does not include any information relevant to health or workplace safety.

2 Proper use

NOTICE



Material damage and malfunction in case of non-compliance

The product is only to be used in its original state with its original accessories, with no unauthorized changes and within the stipulated parameter limits and operating conditions.

Any other or secondary use is deemed improper.

- ▶ Operate the product only in compliance with the associated instructions.
- ▶ Operate the product only when it is in a technical condition that corresponds to the guaranteed parameters and operating conditions.
- ⇒ Zimmer Group GmbH shall accept no liability for any damage caused by improper use. The operator bears sole responsibility.

The product is intended for installation and operation on the robot control panel *FlexPendant* of the *OmniCore* robot control system provided.

3 Personnel qualification

WARNING



Inadequate qualification can cause injury and material damage

If inadequately qualified personnel perform work on the product, this can cause serious injuries and significant material damage.

- ▶ All work on the product must be performed by qualified personnel.
- ▶ Before working with the product, read the document in its entirety and make sure that you have understood everything.
- ▶ Observe country-specific accident prevention regulations and the general safety notices.

The following qualifications are a prerequisite for performing various work on the product.

3.1 Electricians

Electricians are able to perform work on electrical systems, can recognize and avoid possible dangers and know the relevant standards and provisions due to their technical training, knowledge and experience.

3.2 Specialists

Specialists are able to perform the assigned work, can recognize and avoid possible dangers and know the relevant standards and provisions due to their technical training, knowledge and experience.

3.3 Instructed personnel

Instructed personnel have been trained by the operating company on the tasks and possible dangers of improper behavior.

3.4 Service personnel

Service personnel are able to perform the assigned work and can recognize and avoid possible dangers due to their technical training, knowledge and experience.

3.5 Additional qualifications

Persons who work with the product must be familiar with the valid safety regulations and laws as well as the standards, guidelines and laws listed in this document.

Personnel who work with the product must have facility-issued authorization to commission, program, configure, operate, maintain and also decommission this product.

4 Product description

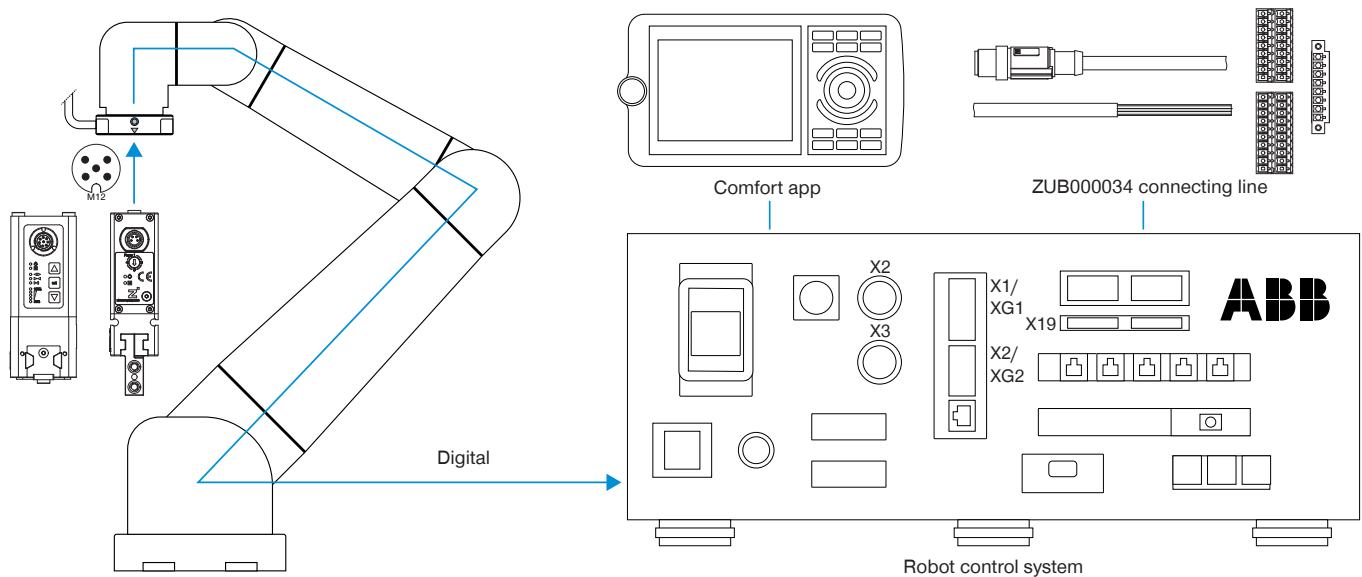
INFORMATION



The ZUB000034 connecting line is only available for the ABB GoFa series.

The grippers can be controlled using the Comfort app on the robot control panel.

The image shows a simplified view of the structure of the overall system. All parts for the electrical connection of a gripper with the robot are included or are available from Zimmer Group GmbH as optional accessories.



5 Functional description

The Comfort app is used on the robot control panel to control digital grippers.

The app allows you to control either one gripper or two grippers at the same time.

The names of the newly configured robot jobs remain unchanged. This means that the basic program does not have to be modified for configuration changes.

6 Accessories/scope of delivery

INFORMATION



If any accessories not sold or authorized by Zimmer Group GmbH are used, the function of the product cannot be guaranteed. Zimmer Group GmbH accessories are specifically tailored to the individual products.

► For optional accessories and those included in the scope of delivery, refer to our website.

7 Installation

7.1 Installing ZUB000034

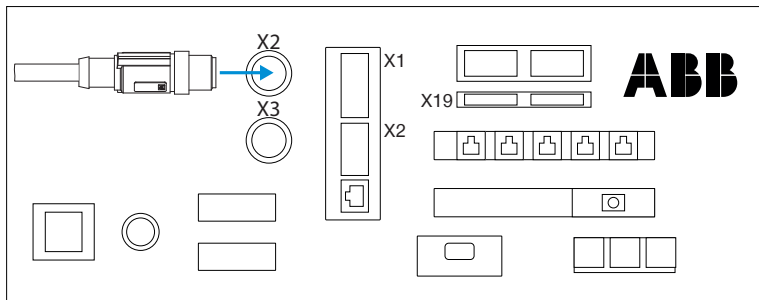
INFORMATION



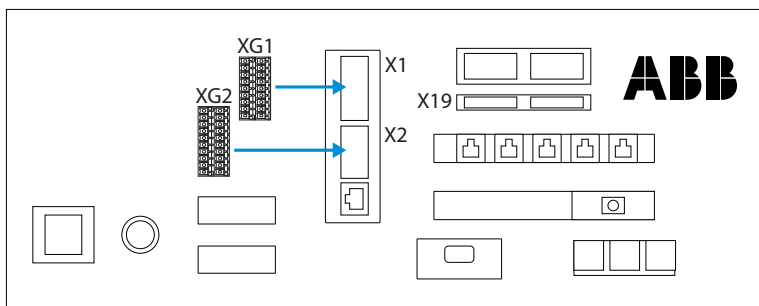
The ZUB000034 connecting line is only available for the ABB GoFa series.

- ▶ Connect the connecting line to the robot control system.

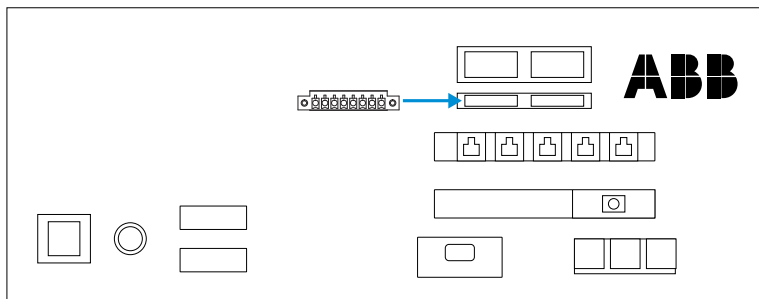
- ▶ Connect the male connector to connection X2.



- ▶ Connect plug-in connector XG1 to connection X1.
- ▶ Connect plug-in connector XG2 to connection X2.



- ▶ Connect the plug-in connector connected to XG1 and XG2 to connection X19.

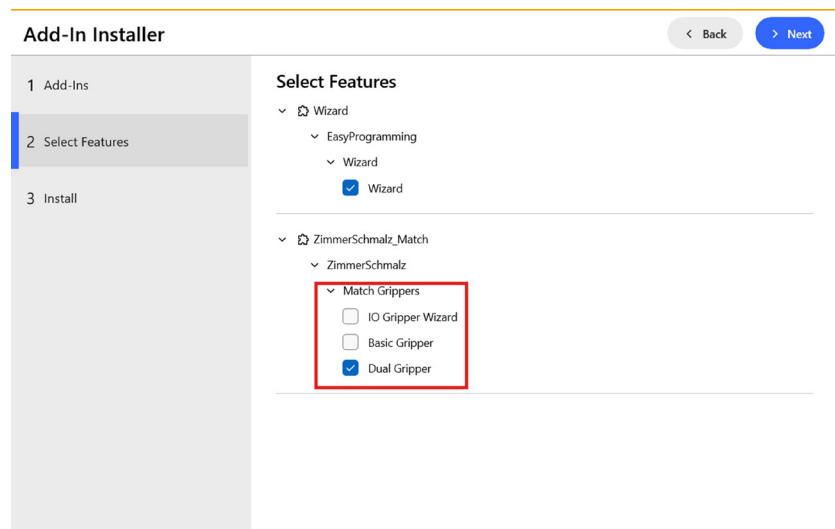


8 Installation

- ▶ Download the corresponding Additional Data Package (ADP) from our website to the USB memory stick.
- ▶ Plug the USB memory stick into the robot control panel.
- ▶ Press the *Controller software* tab in the start menu.
- ▶ Press the *Add-in Installer* button.
- ▶ Press the *+Add Add-In* button.
- ▶ Select the installation file.
- ⇒ The file will be shown in the *Add-Ins* area.
- ▶ Click the *next* button.

⇒ The display changes to the *Select Features* menu item.

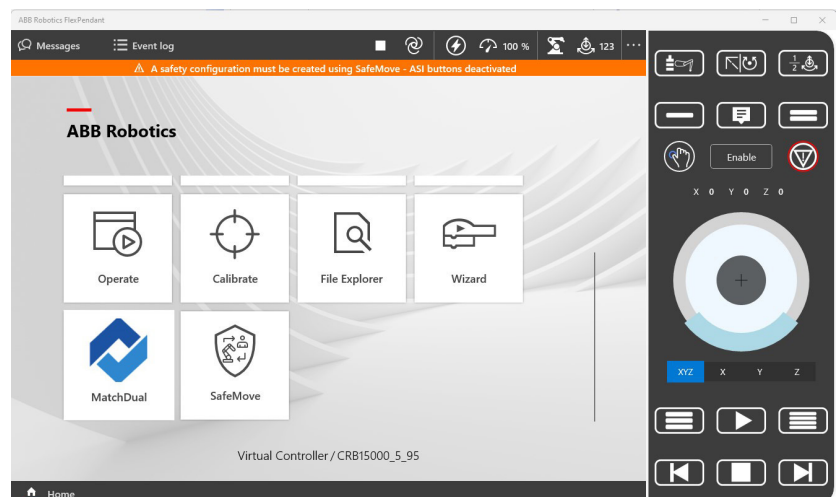
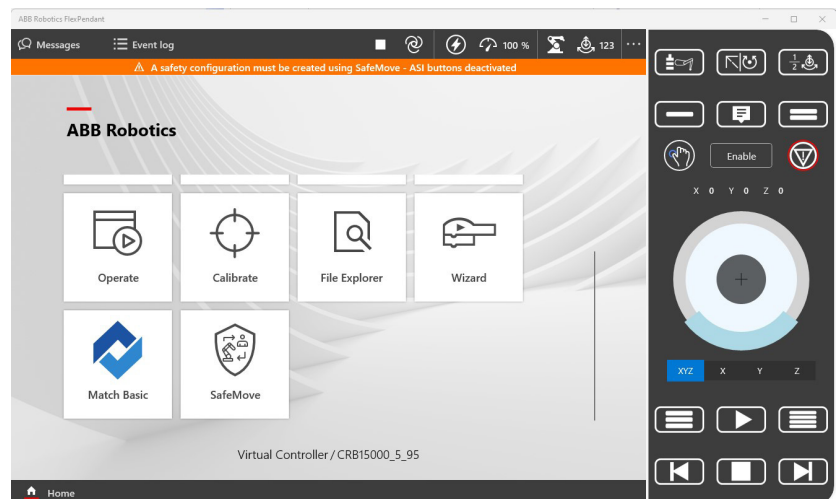
- ▶ Navigate to the *Match Grippers* level in the drop-down menu.
- ▶ Select the desired *Basic Gripper* or *Dual Gripper* mode in the window.
- ▶ Click the *next* button.
- ⇒ The display changes to the *Install* menu item.
- ▶ Press the *Apply* button.



⇒ The robot control panel performs a restart.

- ▶ After the restart, check whether the app has been installed correctly.

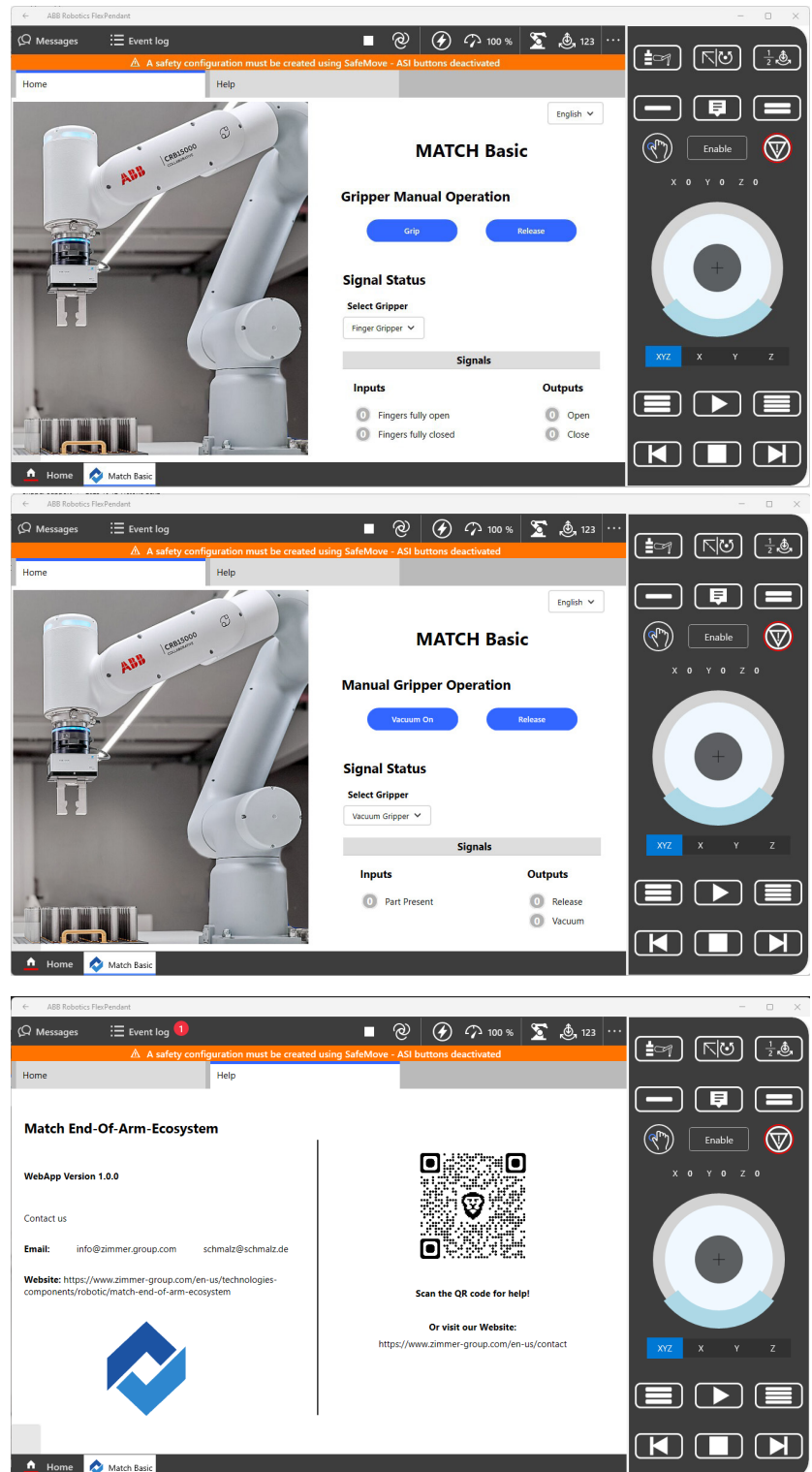
⇒ The app has been installed correctly if the *Match Basic* or *Match Dual* button appears in the start menu.



9 Operation

9.1 Basic Gripper

- ▶ Use the button to select the desired language if necessary.
- ▶ Select the corresponding gripper in the *Signal Status* area.
- ▶ To close the gripper, press the *Grip* button.
- ⇒ If this is a product without a sensor, a 1 will appear in the *Outputs* area when *closing*.
- ⇒ If this is a product with a sensor, a 1 will appear in both the *Outputs* area when *closing* and also in the *Inputs* area when *fingers are closed*.
- ▶ To open the gripper, press the *Release* button.
- ⇒ If this is a product without a sensor, a 1 will appear in the *Outputs* area when *opening*.
- ⇒ If this is a product with a sensor, a 1 will appear in both the *Outputs* area when *opening* and also in the *Inputs* area when *fingers are open*.
- ▶ If you have any questions about operation, click on the *Help* tab.
- ▶ Scan the QR code or follow the specified link.



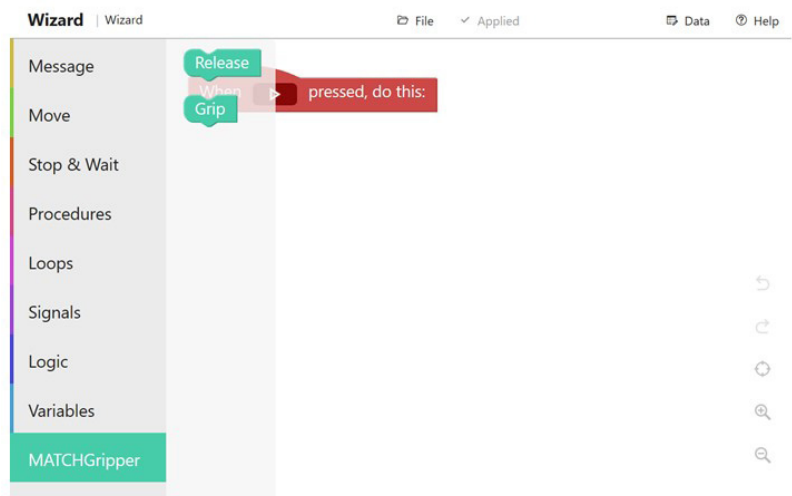
9.1.1 Wizard function blocks

Using the *Wizard function blocks*, the grippers can be programmed easily. The parameters can be configured using drop-down combo boxes.

- The gripper can be opened with the *Release* Wizard function block.
- The gripper can be closed with the *Grip* Wizard function block.

The *Signals* wizard can be used to check the *Inputs* and *Outputs* signals.

- DO1 = Close
- DO2 = Open
- DI1 = Fingers open
- DI2 = Fingers closed



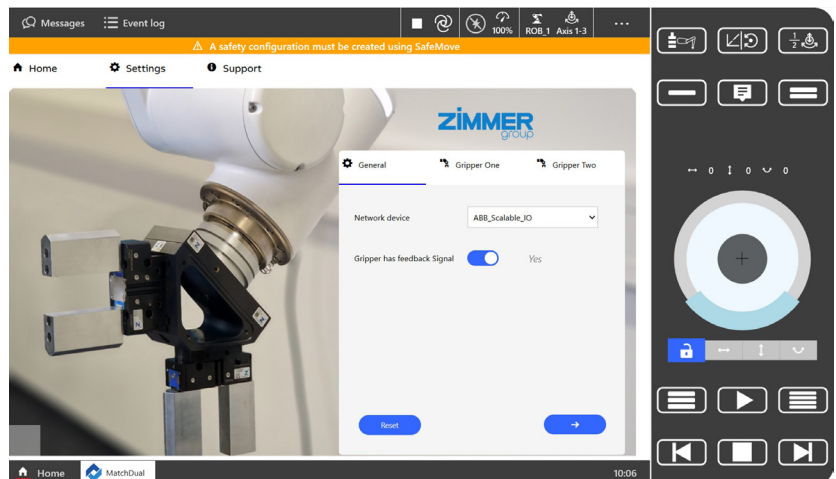
INFORMATION



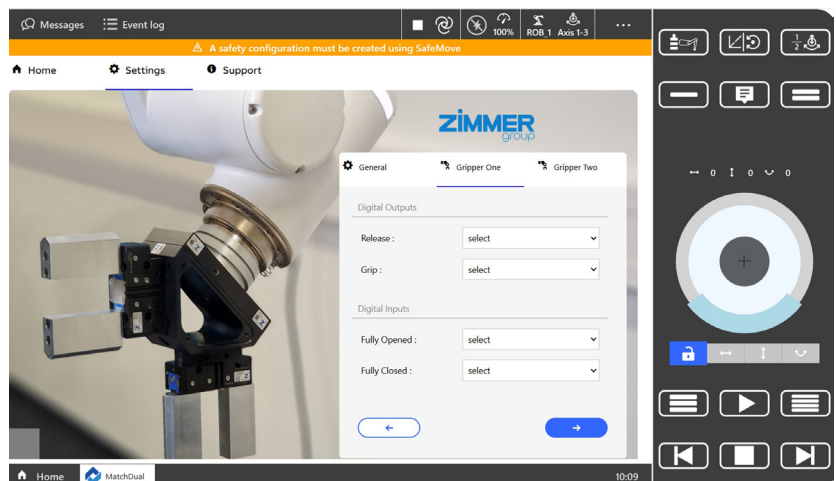
- For more information about *Wizard function blocks*, refer to the manufacturer documentation.

9.2 Dual Gripper

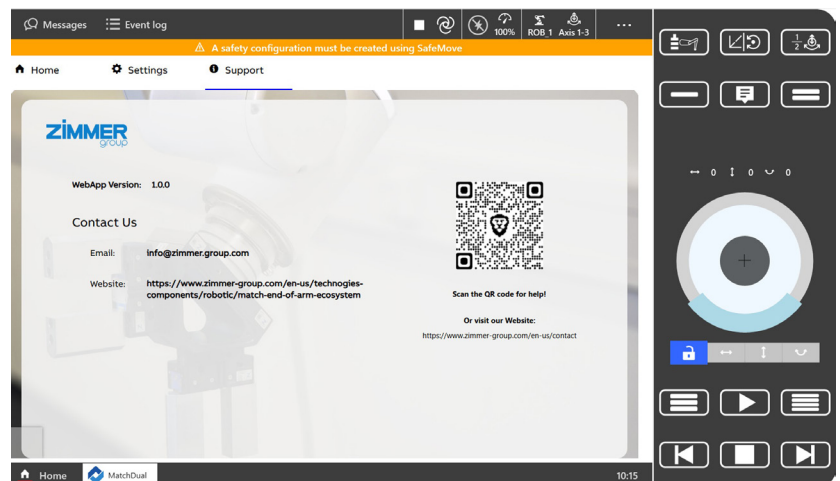
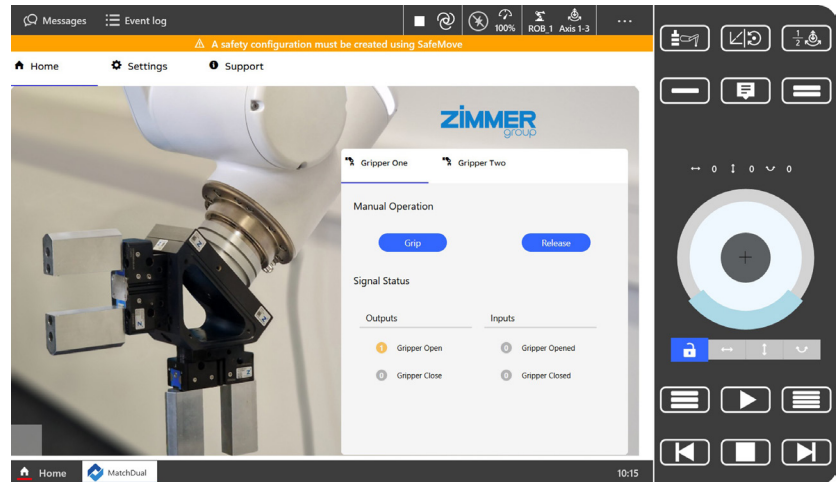
- Click the *Settings* tab.
- Click the *General* button in the context menu.
- Select the desired IO device under *Network Device*.
- Activate the *Gripper has feedback signal* checkbox to receive feedback from the sensor.



- Click on the *Gripper One* or *Gripper Two* button in the context menu.
- ⇒ The context menu is opened.
- Perform the following steps for the respective gripper.
- Under *Digital Outputs*, select the desired output in the *Release* and *Grip* drop-down menus.
- Under *Digital Inputs*, select the desired input in the *Fully Opened* and *Fully Closed* drop-down menus.



- ▶ Click the *Home* tab.
- ▶ Perform the following steps for the respective gripper.
 - ⇒ If this involves a product without a sensor, a 1 appears in the *Outputs* area under *Gripper Close*.
 - ⇒ If this involves a product with a sensor, a 1 appears both in the *Outputs* area for *Gripper Close* and in the *Inputs* area for *Gripper Closed*.
- ▶ To open the gripper, press the *Release* button.
 - ⇒ If this involves a product without a sensor, a 1 appears in the *Outputs* area under *Gripper Open*.
 - ⇒ If this involves a product with a sensor, a 1 appears both in the *Outputs* area for *Gripper Open* and in the *Inputs* area for *Gripper Opened*.
- ▶ If you have any questions about operation, press on the *Support* tab.
- ▶ Scan the QR code or follow the specified link.

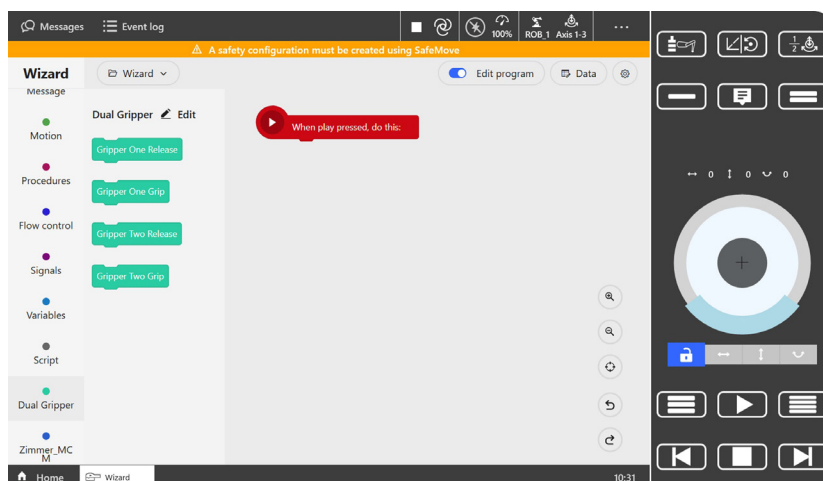


9.2.1 Wizard function blocks

The two grippers can be easily programmed using the *Wizard function blocks*. The parameters can be configured using drop-down combo boxes.

- The gripper can be opened with the *Release* Wizard function block.
- The gripper can be closed with the *Grip* Wizard function block.

The *Signals* wizard can be used to check the *Inputs* and *Outputs* signals.



10 Error diagnosis

INFORMATION



- More information can be found in the instructions of the gripper.
- Please contact Customer Service if you have any questions.