

# Software Manual

## UR Cap

Plugin for Co-act EGP-C in variants URD / UREK



## Imprint

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### Technical changes:

We reserve the right to make alterations for the purpose of technical improvement.

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Your SCHUNK team

SCHUNK GmbH & Co. KG  
Spann- und Greiftechnik

Bahnhofstr. 106 – 134  
D-74348 Lauffen/Neckar

Tel. +49-7133-103-0  
Fax +49-7133-103-2399

info@de.schunk.com  
schunk.com

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## 1 General

### 1.1 About this manual

This manual contains information on the "UR Cap" software.

The software is used to easily integrate and control the following products in universal robot applications:

- Co-act EGP-C-UREK
- Co-act EGP-C-URID

Illustrations in this manual are provided for basic understanding and may differ from the actual product design.

In addition to these instructions, the documents listed under [Applicable documents](#) [► 4] are applicable.

### 1.2 Applicable documents

- Assembly and operating manual for the product \*

The documents marked with an asterisk (\*) can be downloaded on our homepage **schunk.com**

## 2 Description of software functions

The "Opens gripper" and "Closes gripper" functions and their configuration will be prepared. For the "UREK" variant, the light band can be controlled. The sensor system is not evaluated with this software.

### Function "Opens gripper"

When opening, the digital output "DO\_Close" is reset. After 15 ms the digital output "DO\_Open" is set. After the set waiting time has elapsed, the function is executed completely.

### Function "Closes gripper"

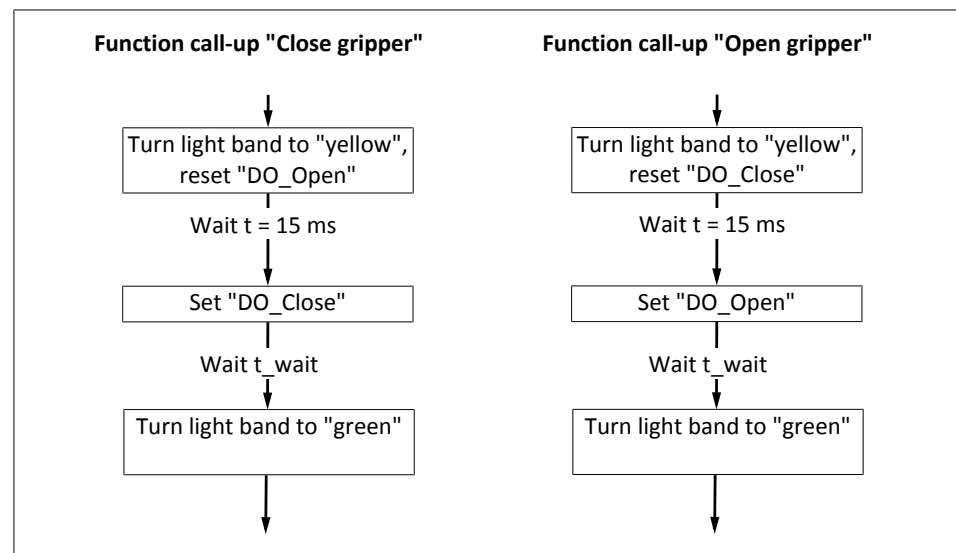
When closing, the digital output "DO\_Open" is reset. After 15 ms the digital output "DO\_Close" is set. After the set waiting time has elapsed, the function is executed completely.

### "Light band" function

In the variant with external wiring (UREK), a light band is installed. The light band is controlled based on the current product status. During the execution of a motion command and during the waiting time, the light band will illuminate in yellow. After completing the respective function, it will turn green again.

Note: The color change is achieved by switching two adjustable digital outputs.

### Flow chart



Flow chart for function "Opens gripper" / "Closes gripper"

### 3 Installing UR Cap

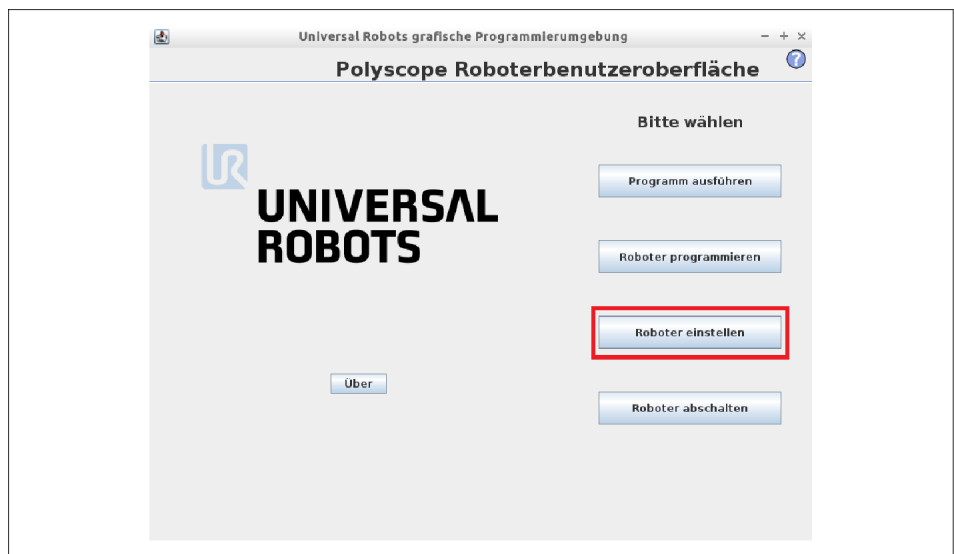
#### NOTE

To install the software, use the enclosed USB stick.  
If no USB- stick is provided, download the "UR Cap" software from the website [www.universal-robots.com/plus/](http://www.universal-robots.com/plus/) and save to a USB stick.

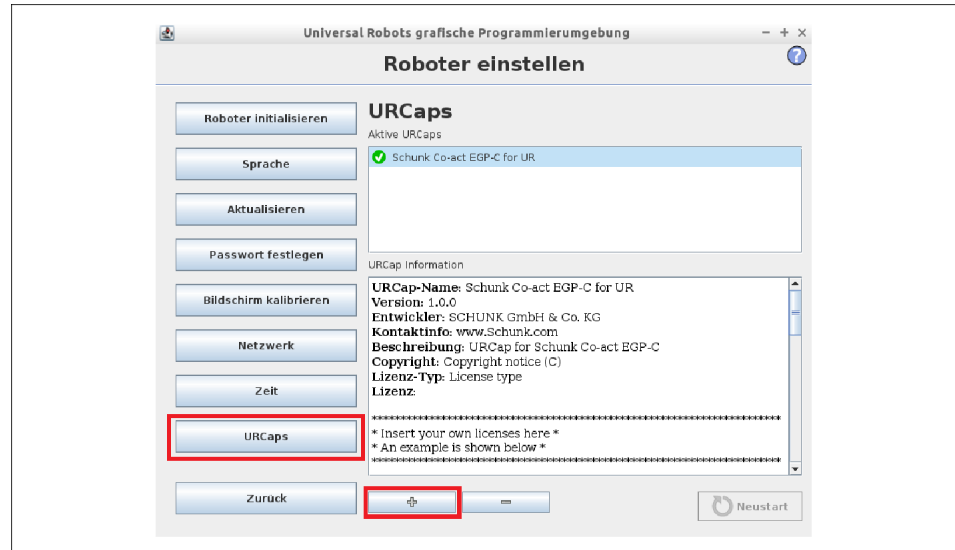
- Connect the USB stick to the control unit. The USB interface is located at the back of the control panel.



- Start the control unit and select the "Adjust robot" button.



- Press the "URCaps" button.
  - ✓ The Explorer window on the right displays the UR Cap contained on the USB stick.
- Select UR Cap "Schunk Co-act EGP-C for UR" and add using "+".
- Press the "Restart" button, to connect the installation.

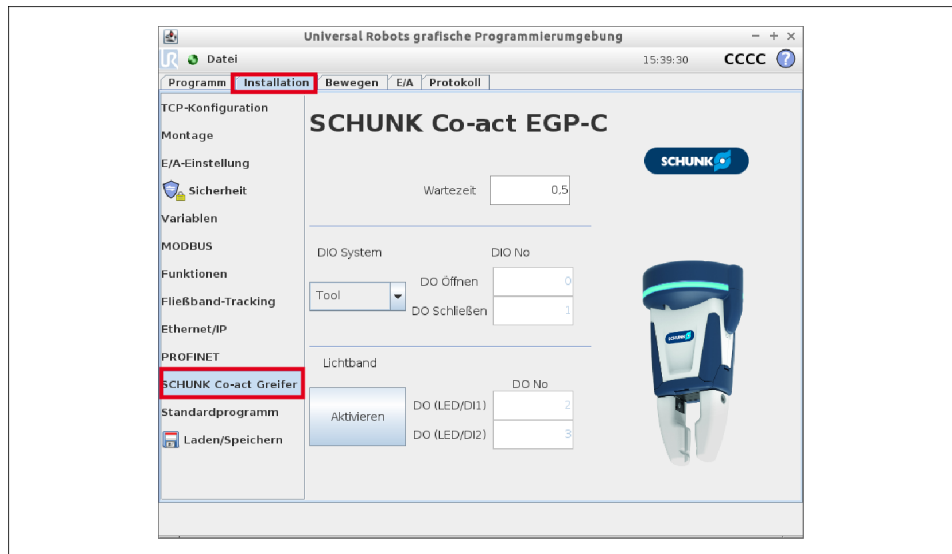


## 4 Configuring UR Cap

The following settings may be adjusted:

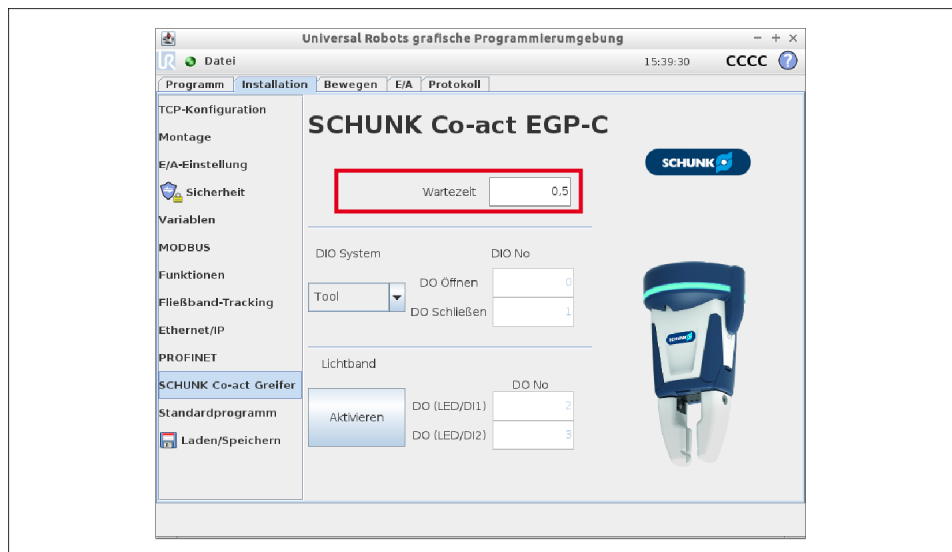
- Wait time between commands
- Addresses for the digital outputs
- Light band (optional)
- Tool output voltage (optional)

➤ In the "Installation" tab, press the "SCHUNK Co-act Gripper" button.



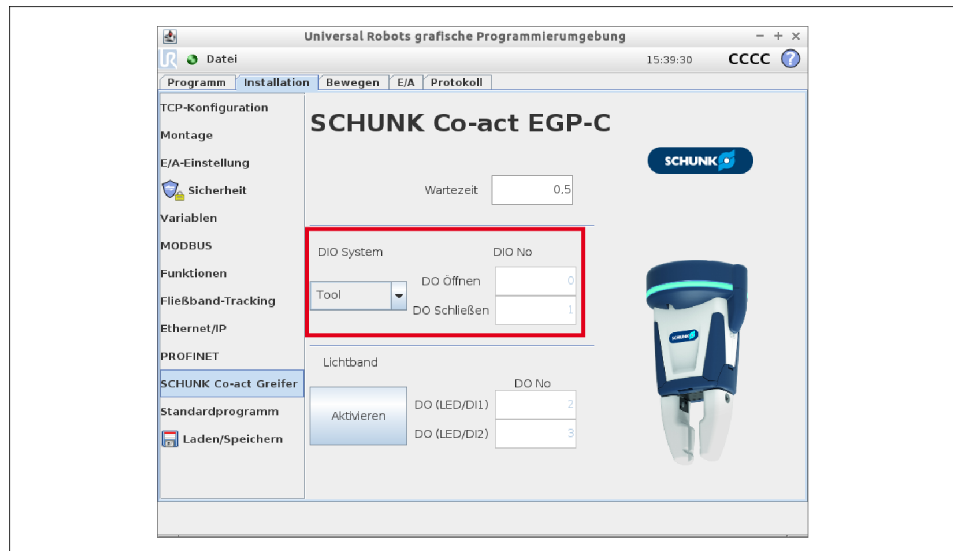
➤ Enter the wait time at "Wait Time".

Note: The "Wait Time" variable indicates the time in seconds that the robot waits after executing the commands "Opens gripper" or "Closes gripper" until a new command may be executed.





- In the drop-down menu, select the "Tool" terminal for URD or the "Controller" terminal for UREK.
  - ✓ *When selecting "Tool":* The corresponding digital output is automatically selected.
- *When selecting "Controller":* In the input fields "DO\_Open" and "DO\_Close", enter the digital outputs to which the gripper is connected on the control side.



### Configuring the light band (for variant with external cabling (UREK))

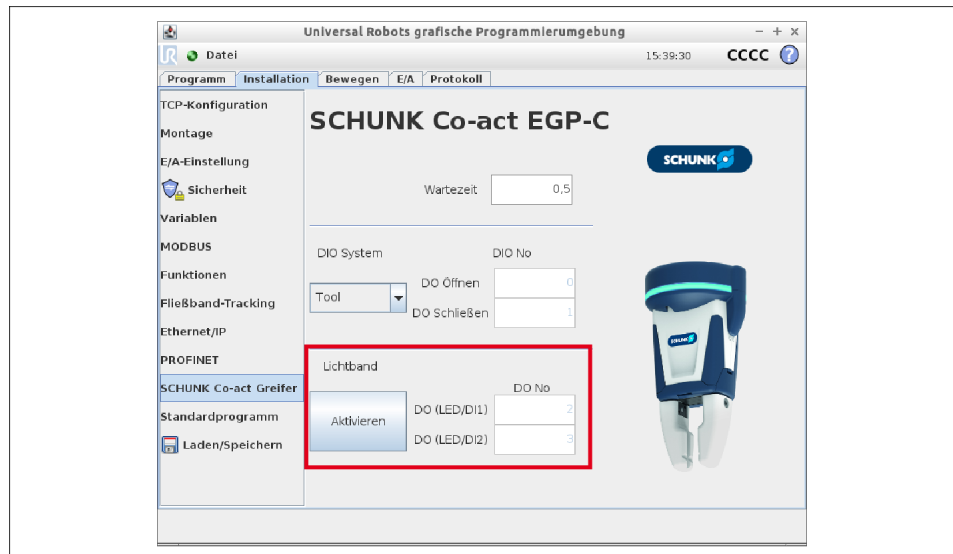
#### NOTE

- For the variant with an electrical tool interface (URD), **no** light band is available.
- In the variant with external wiring (UREK), a light band is installed. If the light band is connected, it can be switched on and configured. Connection is only possible at the robot's control unit.

- Press the "Enable Light band" button to use the light band.
  - ✓ The "DO\_Green" and "DO\_Yellow" fields are active.
- Enter the address for the digital outputs in the "DO\_Green" and "DO\_Yellow" input fields.

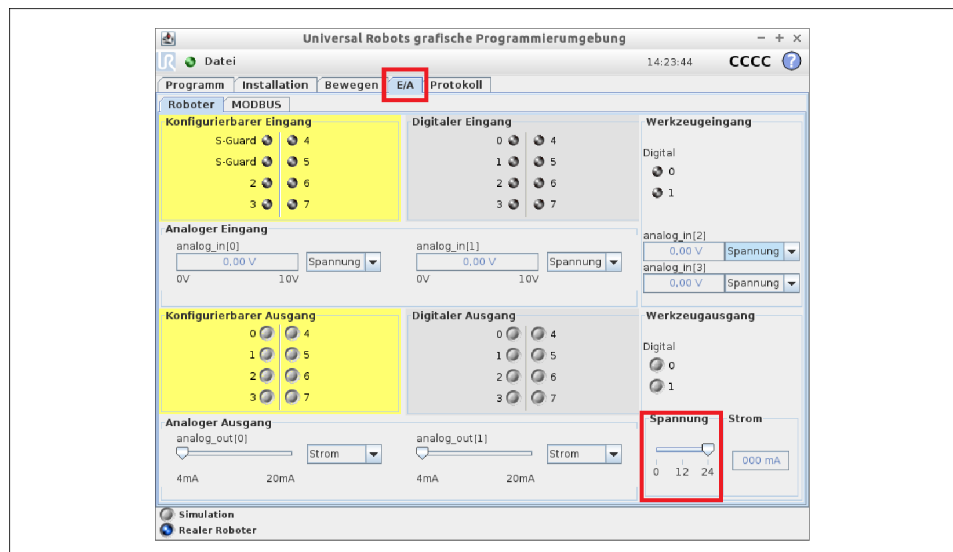
### NOTE

If the light band is deactivated, the digital outputs are not used in the program.



### Adjusting the tool output voltage (for the variant with an electrical tool interface (URD))

- Select the "E/A" tab.
- Set the voltage of the tool output to 24V.

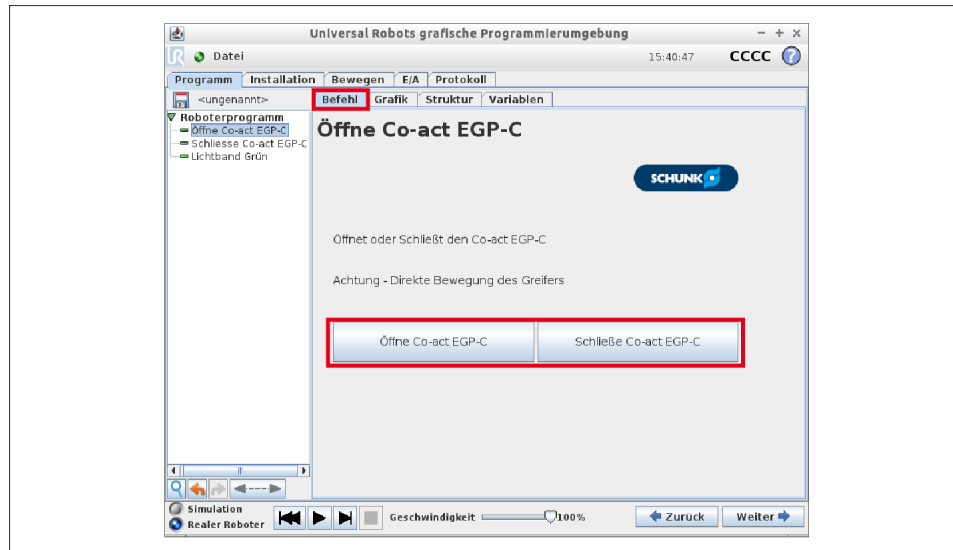


## 5 Performing the manual gripping function

For direct control of the gripper, one of the two functions "Opens gripper" or "Closes gripper" may be selected.

- Select the "Program – Command" tab.
- Press the "Open Co-act EGP" or "Close Co-act EGP" button.
- ✓ The selected function will be performed.

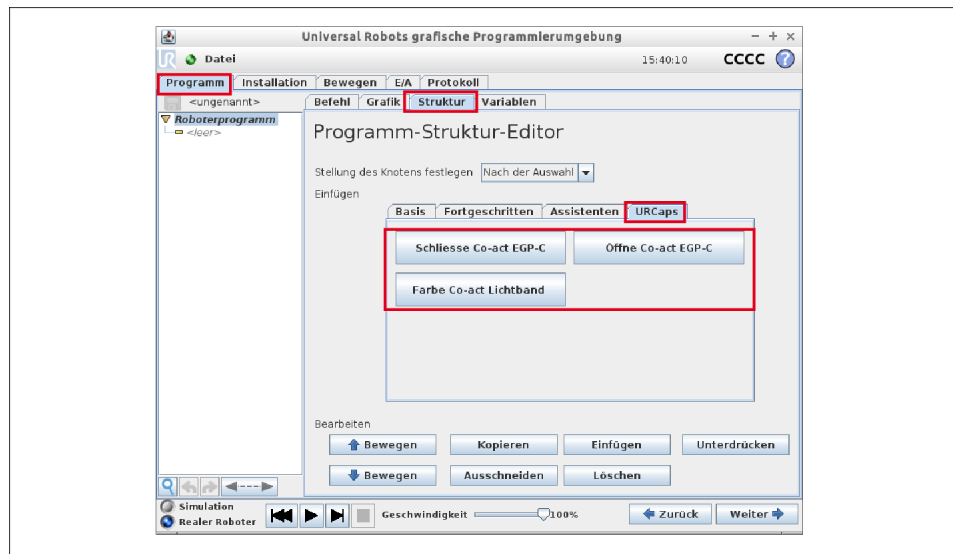
**WARNING! Do not handle or interfere with moving parts.**



## 6 Inserting the gripping function into the program code

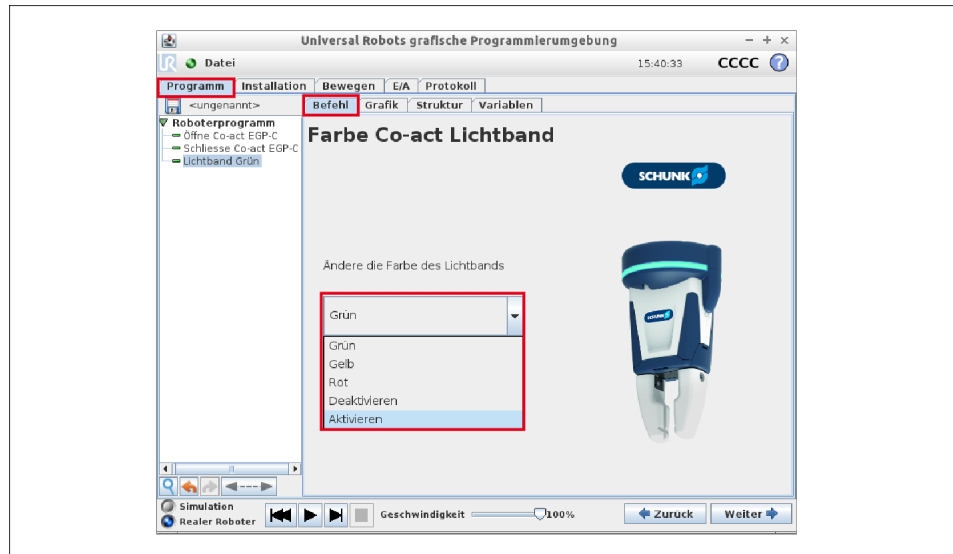
The functions "Opens gripper" and "Closes gripper" may be inserted into the program code.

- Select the "Program – Structure – URCaps" tab.
- Select the desired position in the robot program.
- Press the "Open Co-act gripper" or "Close Co-act gripper" button.
- Press the "Insert" button.
- ✓ The selected function will be inserted into the program code.



## 7 Inserting the light band into the program code

The function "Light band" may be inserted into the program code.

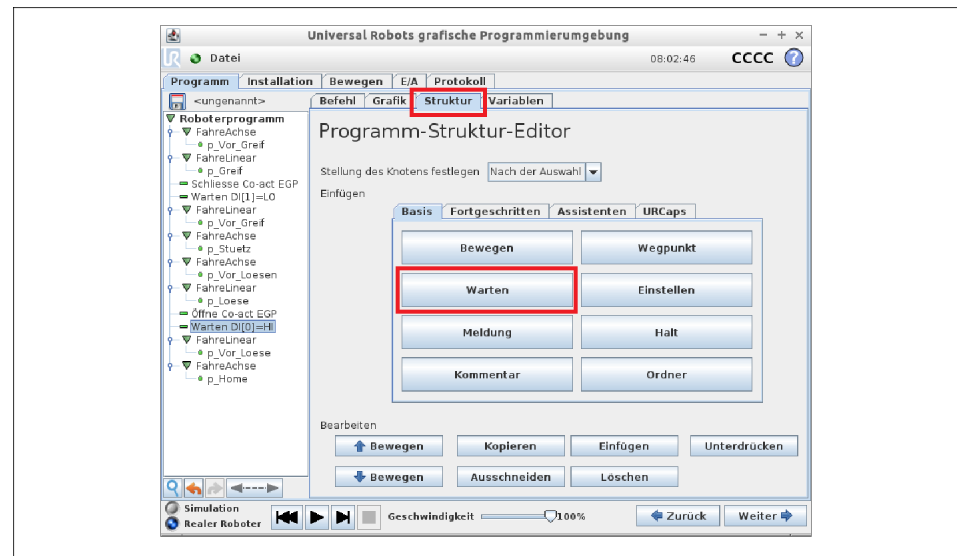


- Select the "Program – Command".
- Select the desired position in the robot program.
- In the drop-down menu, select the colour of the light band or the "Activate" or "Deactivate" function.  
 "Deactivate" switches off the light band and the colour change of the gripper functions.  
 "Activate" switches the light band to green and switches on the colour change of the gripper functions.
- ✓ The function "Light band" will be inserted into the program code.

## 8 Inserting sensor monitoring into the program code

The sensors may be monitored using a "wait" command.

- Select the "Program – Structure – Basic" tab.
- Select the desired position after a gripping command in the robot program.
- Press the "Wait" and "Insert" buttons.
- ✓ The selected "Waiting" function will be inserted into the program code and still needs to be configured.



### Configuring

- Select the "Command" tab.
- Select the previously inserted "Wait" function in the robot program.
- Activate the "Wait for digital input" button.
- In the drop-down menu, select the address of the digital input and set the desired status to "High".

