

## OPERATING INSTRUCTIONS

MATCH Comfort App

for Fanuc Industrie

DDOC01775

THE KNOW-HOW FACTORY

MATCH



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## 1 Supporting documents

### NOTICE



Read through the installation and operating instructions before installing or working with the product.

The installation and operating 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](http://www.zimmer-group.com).

- Installation and operating 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 installation and operating instructions, "product" refers to the product designation on the title page!

### 1.1 Notices and graphics in the installation and operating 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 for people or that may result in material or environmental damage. Ignoring these notices may result in slight, temporary injuries or damage to the product or to 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.

### NOTICE



General notices contain usage tips and valuable information, but no warnings of dangers to health.

### 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



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 installation and operating instructions.
- ▶ Operate the product only when it is in a technical condition that corresponds to the guaranteed parameters and operating conditions.
- ⇒ Zimmer 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 *iPendant* of the *R-30iB Plus* robot control system.

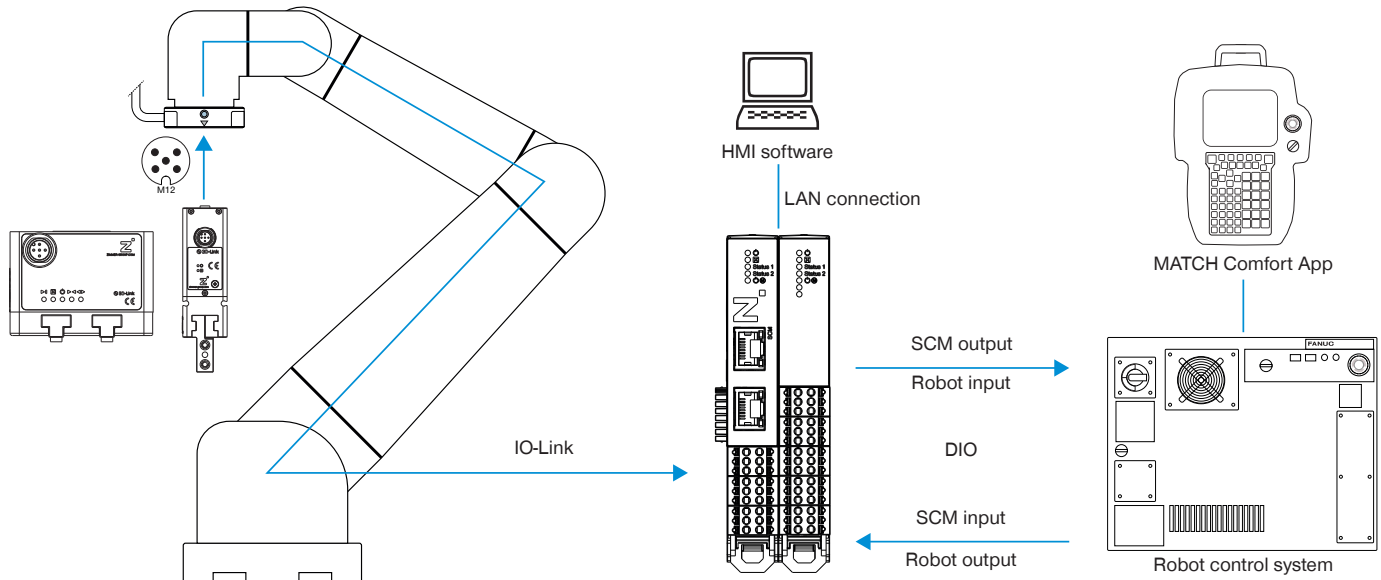
## 3 Personnel qualification

Installation, commissioning and maintenance may only be performed by trained specialists. These persons must have read and understood the installation and operating instructions in full.

## 4 Product description

The Smart Communication Module (SCM) is a gateway between the grippers and the robot control system. The SCM can be configured via the HMI software or MATCH Comfort App. The grippers can be controlled using the MATCH 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 GmbH as optional accessories.



## 5 Functional description

The MATCH Comfort App is used on the robot control panel to control grippers.

Depending on the configuration and the connection used, various robot jobs are available for interacting between robot inputs and robot outputs with the gripper.

The names of the dynamically generated robot jobs remain unchanged. The basic program does not have to be modified for configuration changes or redistribution of the robot inputs and robot outputs.

## 6 Accessories/scope of delivery

### INFORMATION



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

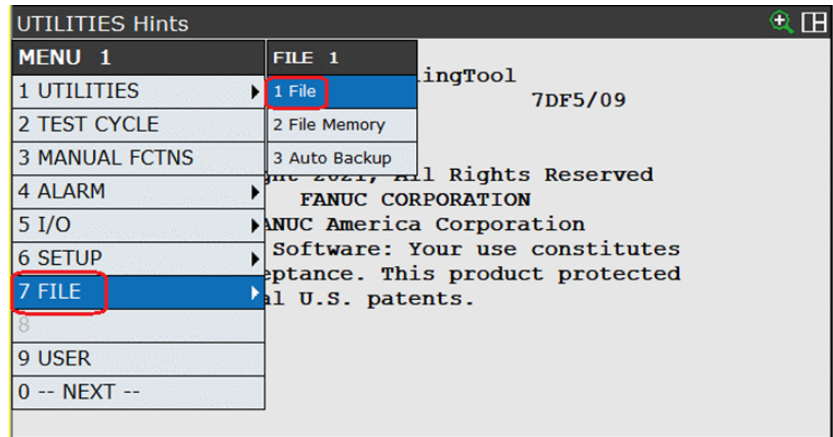
► For optional accessories and those included in the scope of delivery, refer to our website.

## 7 Installation

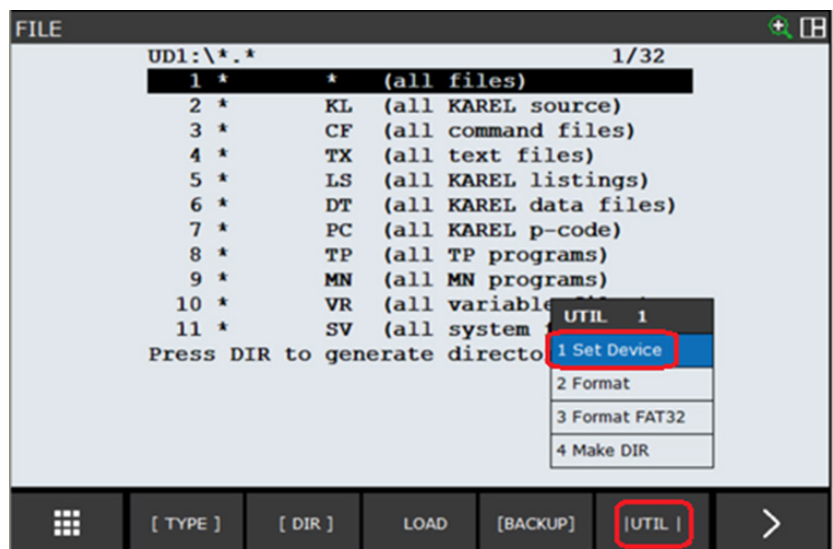
### 7.1 Installing the MATCH Comfort App

- Make sure that the robot control panel is already connected to the robot control system.
- Switch off the voltage supply on the robot tool I/O via the emergency stop button.
- Plug the USB memory stick with the installation files for the MATCH Comfort App into the robot control panel.

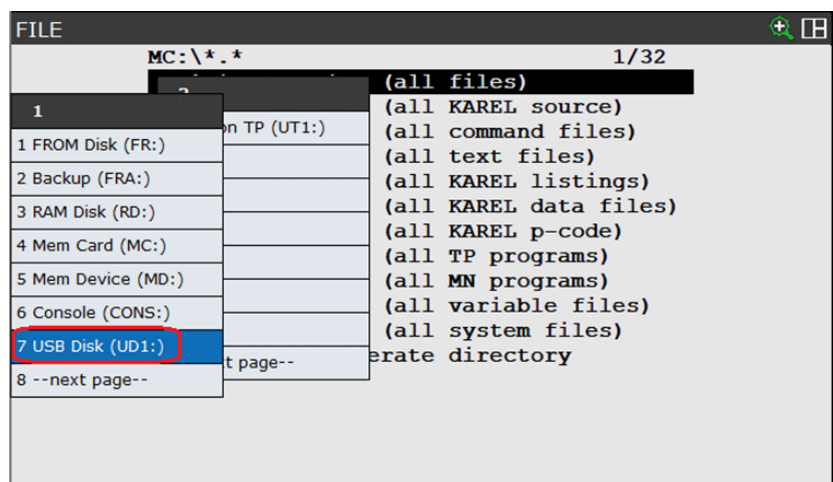
- Press the *MENU* button.
- Select the *FILE* menu.
- Press the *ENTER* button.
- In the *FILE* menu, select the *File* option.



- Press the *|UTIL|* button.
- In the *UTIL 1* menu, select the *Set Device* option.
- Press the *ENTER* button.

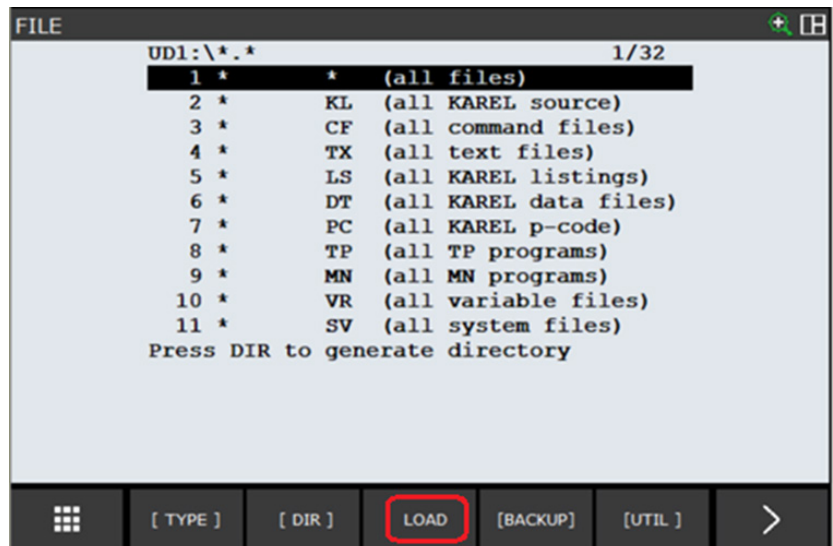


- In the *1* menu, select the *USB Disk (UD1:)* option.
- Press the *ENTER* button.



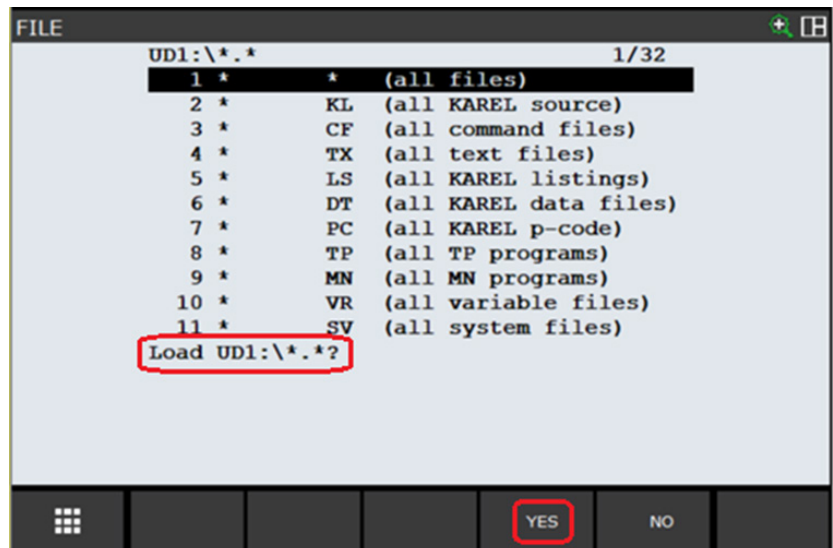
► Press the **LOAD** button.

⇒ The query *Load UD1:\\*.??* is displayed.



► In the prompt, click the **YES** button.

⇒ The data from the USB memory stick are loaded to the robot control panel.



► Press the **MENU** button.

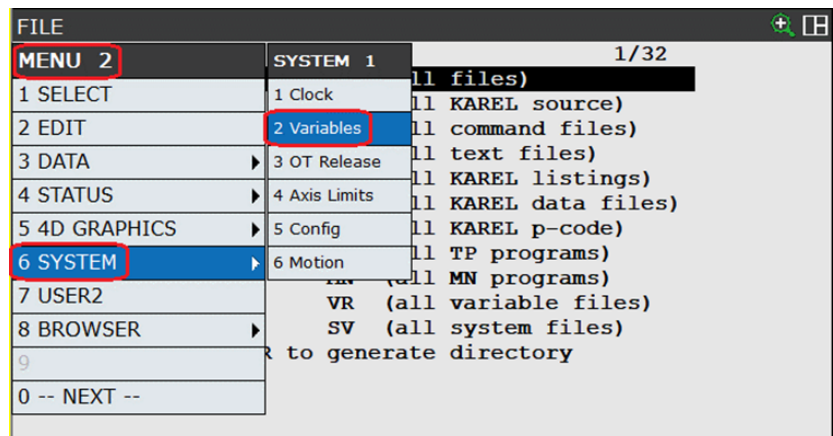
► In the **MENU 2** menu, select the – **NEXT** – option.

► Press the **ENTER** button.

► In the **MENU 2** menu, select the **SYSTEM** option.

► In the **SYSTEM 1** menu, select the **Variables** option.

► Press the **ENTER** button.





- Use the  $\uparrow$   $\downarrow$  buttons to navigate to the 749 \$TX\_SCREEN entry.
- Press the *ENTER* button.

SYSTEM Variables		749/836
747	\$TX	TX_T
748	\$TXRAM	TXRAM_T
749	\$TX_SCREEN	[10] of TXSCREEN_T
750	\$UALRM_MSG	[10] of STRING[29]
751	\$UALRM_SEV	[10] of BYTE
752	\$UD1_PATH	'C:\Users\Dell\Docu>
753	\$UD2_PATH	'C:\Users\Dell\Docu>
754	\$UECFG	UECFG_T
755	\$UEGRP	UEGRP_T
756	\$UI_BBL_NOTE	BBL_NT_WND_T
757	\$UI_CONFIG	UI_CONFIG_T

- Select the first entry.
- Press the *ENTER* button.

SYSTEM Variables		1/10
\$TX_SCREEN		
1	[1]	TXSCREEN_T
2	[2]	TXSCREEN_T
3	[3]	TXSCREEN_T
4	[4]	TXSCREEN_T
5	[5]	TXSCREEN_T
6	[6]	TXSCREEN_T
7	[7]	TXSCREEN_T
8	[8]	TXSCREEN_T
9	[9]	TXSCREEN_T
10	[10]	TXSCREEN_T

- Specify the values for the variables \$DESTINATION and \$SCREEN\_NAME:
  - \$TX\_SCREEN[1].\$DESTINATION: /FR/Z\_Comfort\_App.stm
  - \$TX\_SCREEN[1].\$SCREEN\_NAME: Z Comfort app

⇒ The installation is complete.

SYSTEM Variables		1/2
\$TX_SCREEN[1]		
1	\$DESTINATION	'/FR/Z_Comfort_App.>
2	\$SCREEN_NAME	'Z Comfort App'

- Switch off the power supply of the robot control system and robot control panel.
- After a few seconds, switch on the power supply of the robot control system and robot control panel again.
- Switch on the robot control system and robot control panel.

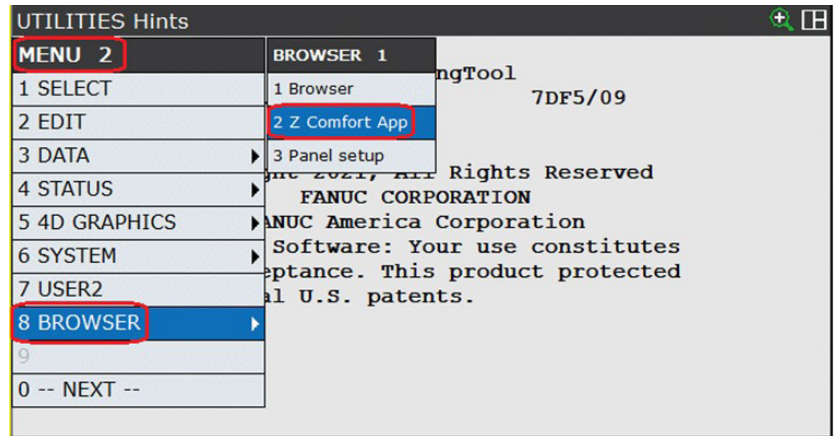
## 8 Commissioning

### NOTICE



- Switch on the robot so that you can use the MATCH comfort App.

- Press the *MENU* button.
- In the *MENU 2* menu, select the – *NEXT* – option.
- Press the *ENTER* button.
- In the *MENU 2* menu, select the *BROWSER* option.
- Press the *ENTER* button.
- In the *BROWSER 1* menu, select the *Z Comfort App* option.
- Press the *ENTER* button.

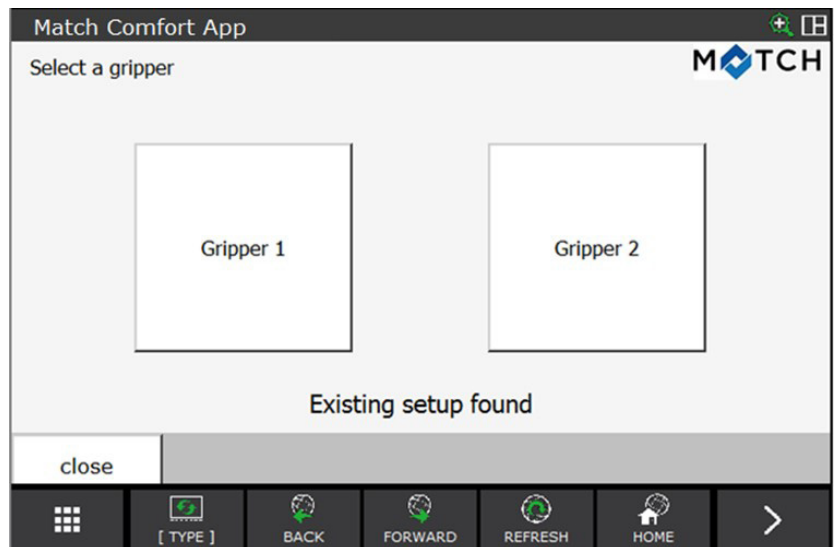


### 8.1 Existing setup found

The following screen is displayed only if an existing setup is found for two grippers.

This screen does not appear if the available setup is only found for one gripper. In this case, the next screen is shown right away.

- Click the button of the desired gripper.
- ⇒ The *Manual control* screen for the manual control is displayed.



In the *Manual control* screen, you can operate the gripper manually and display the status.

- Click the *view config* button.

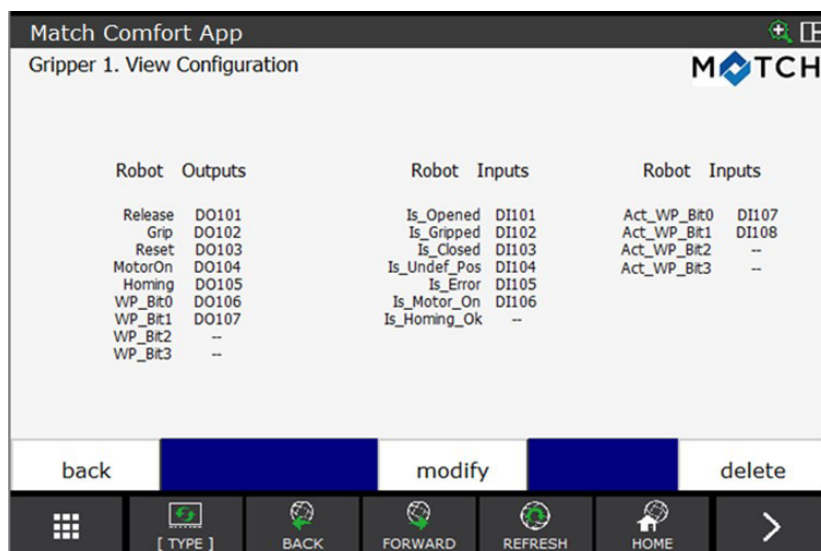


⇒ The *View Configuration* screen for editing the gripper configuration is displayed.

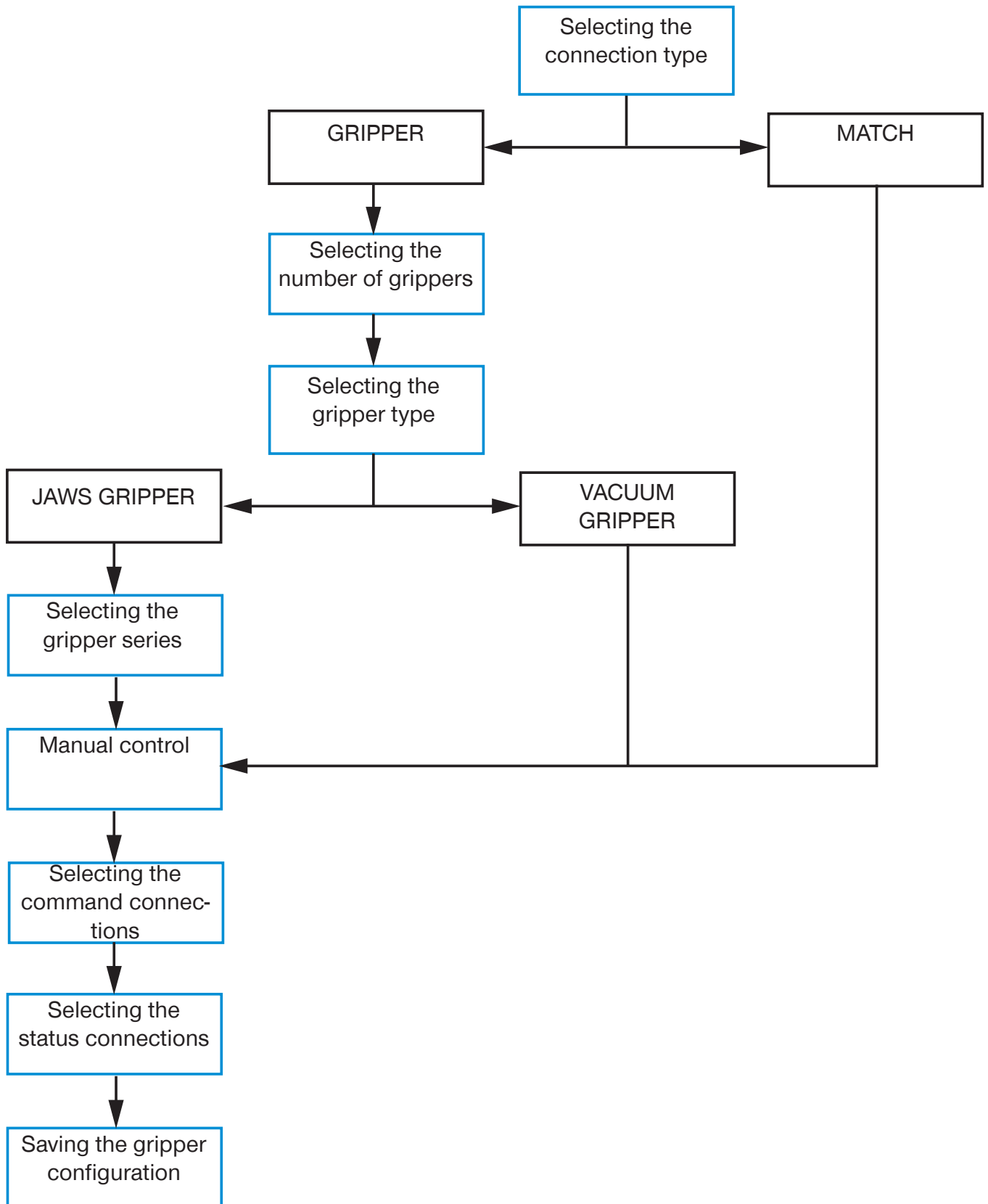
- Click the *delete* button.

⇒ The existing setup is deleted.

⇒ The screen sequence for configuring new grippers is displayed.

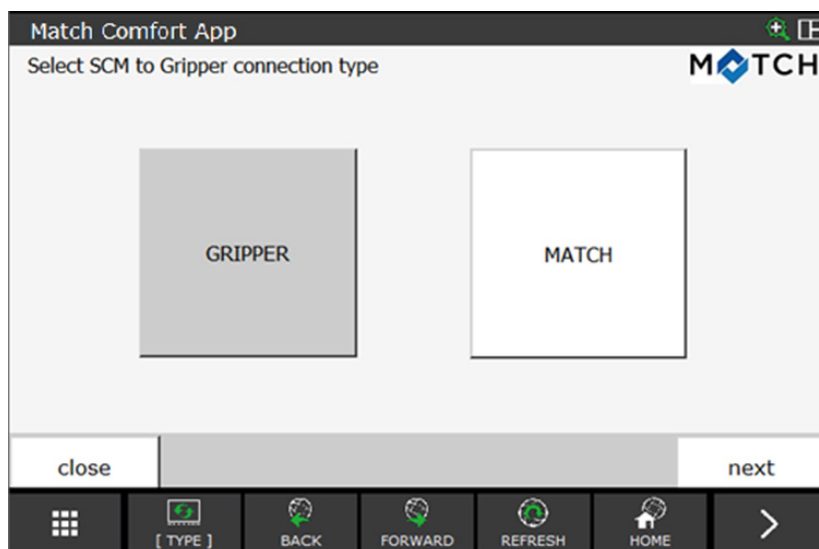


## 8.2 Creating a gripper configuration



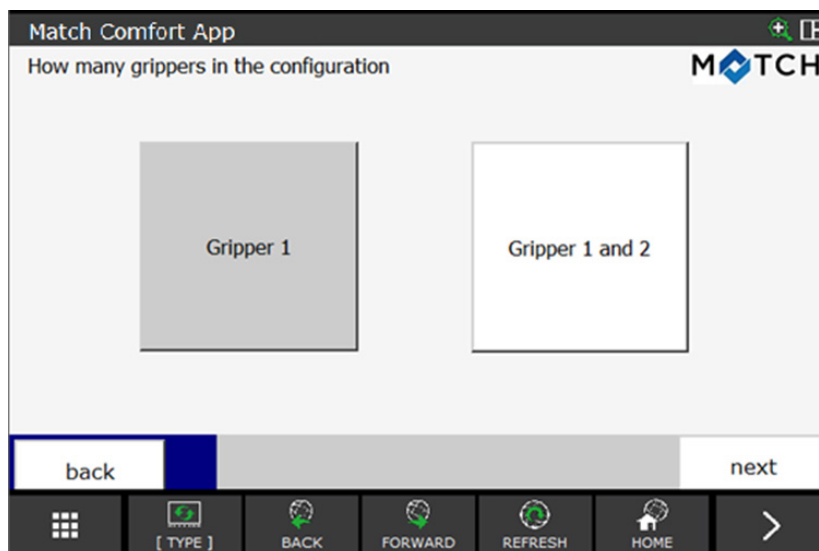
### 8.2.1 Selecting the connection type

- ▶ Click *GRIPPER* if you have connected a gripper.
- ▶ Click *MATCH* if you have connected a MATCH gripper.
- ▶ Click the *next* button.



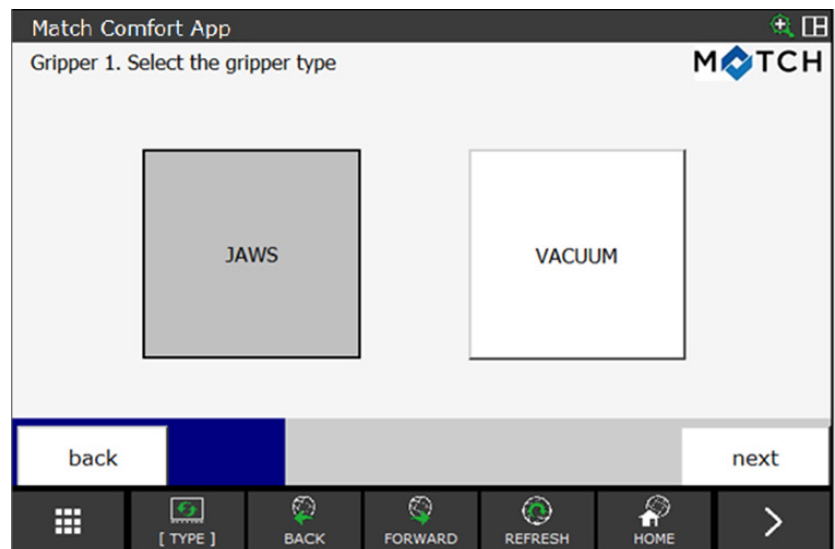
### 8.2.2 Selecting the number of grippers

- ▶ Click the desired number of grippers you want to have in your robot application.
- ▶ Click the *next* button.



### 8.2.3 Selecting the gripper type

- Click the desired gripper type.
- Click the *next* button.



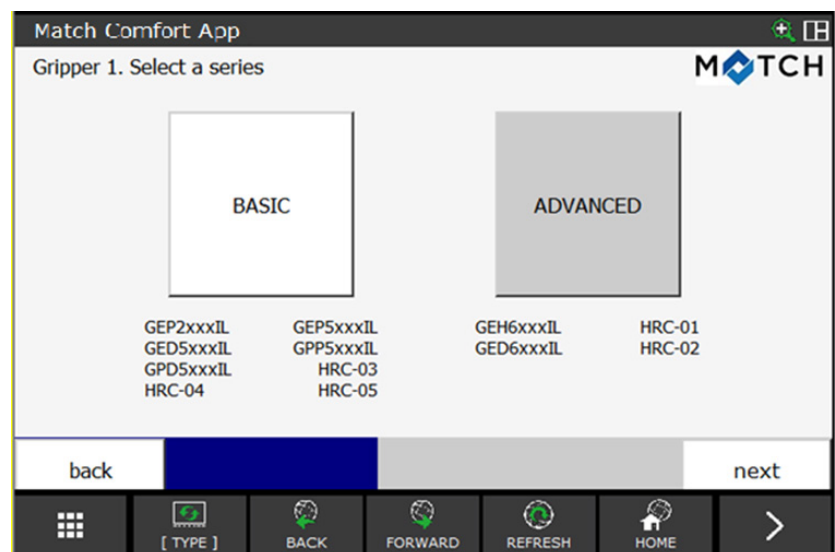
### 8.2.4 Selecting the gripper series

#### INFORMATION



*Basic* and *Advanced* designate different classes of grippers from Zimmer GmbH.

- Click the class of your gripper.
- Click the *next* button.



## 8.2.5 Manual control

### NOTICE



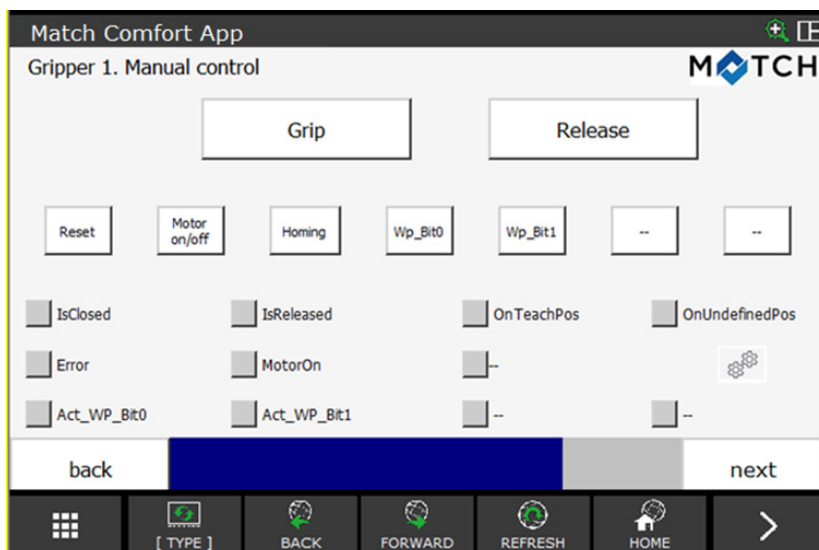
The prerequisite for the function test is that the wiring between the robot and SCM is present and that the robot, SCM and gripper are switched on.

You can test and operate the function of the gripper and view its status in the lower area of the screen.

#### Connection type: Gripper

You can test and operate the function of the gripper and view its status in the lower area of the screen.

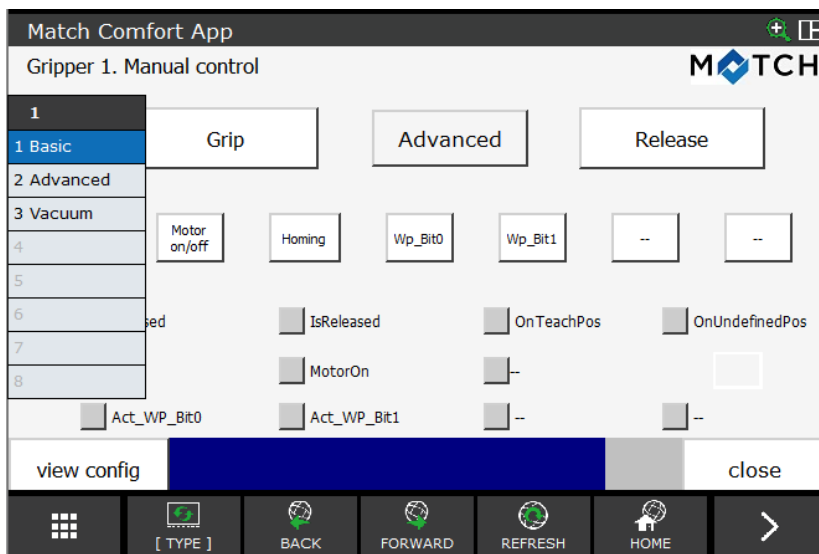
- Press the button to select command connections and status connections.



#### Connection type: MATCH

You can test and operate the function of the gripper and view its status in the lower area of the screen.

You can choose between the grippers in the drop-down menu.



- Click the *next* button.

## 8.2.6 Selecting the command connections

### NOTICE



The gripper wiring must match the gripper configuration done in the MATCH Comfort App.

### NOTICE



If this screen is displayed for the first time, a standard assignment is displayed.

► Complete the wiring precisely as shown on this screen.

To reset the values to the defaults, edit the values or return to the selection of the number of grippers (see the section "Selecting the number of grippers").

► Establish the correspondence of the robot output number with the digital input function of the SCM.

You can accept the default assignment or change it.

► Click the *next* button if you want to keep the default assignment.

#### Editing the command connection

► Click the button of the desired signal.

- e.g. Release

► Click the desired output.

- e.g. DO[107]

⇒ The output has been assigned to the signal.

⇒ The button of the signal is expanded by adding the output.

- e.g. Release (DO[107])

► Click the *Next* button.



### 8.2.7 Selecting the status connections

- Establish the correspondence of the robot input number with the digital input function of the SCM.

#### NOTICE



If this screen is displayed for the first time, a standard assignment is displayed.

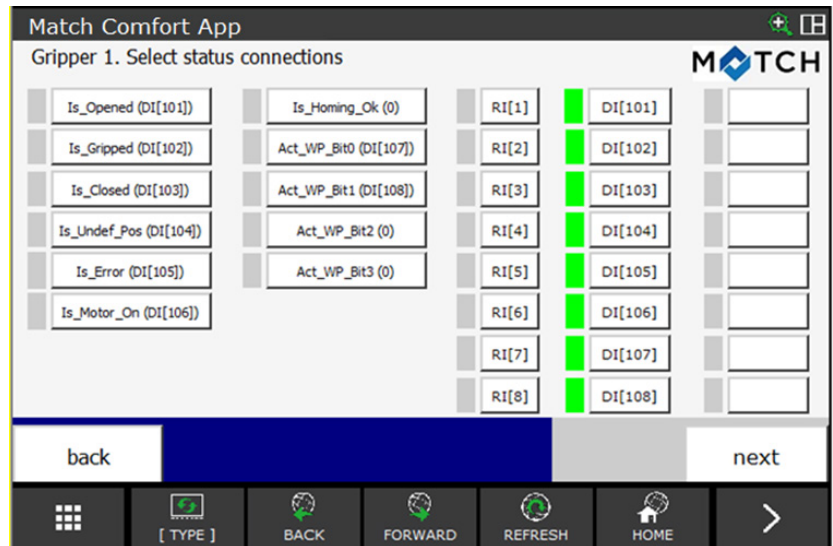
- Complete the wiring precisely as shown on this screen.

You can accept the default assignment or change it.

- Click the *next* button if you want to keep the default assignment.

#### Editing the status connections

- Click the button of the desired signal.
  - e.g. Is\_Closed
- Click the desired input.
  - e.g. DI[107]
- ⇒ The input has been assigned to the signal.
- ⇒ The button of the signal is expanded by adding the input.
  - e.g. Is\_Closed (DI[107])
- Press the *Next* button.



### 8.2.8 Saving the gripper configuration

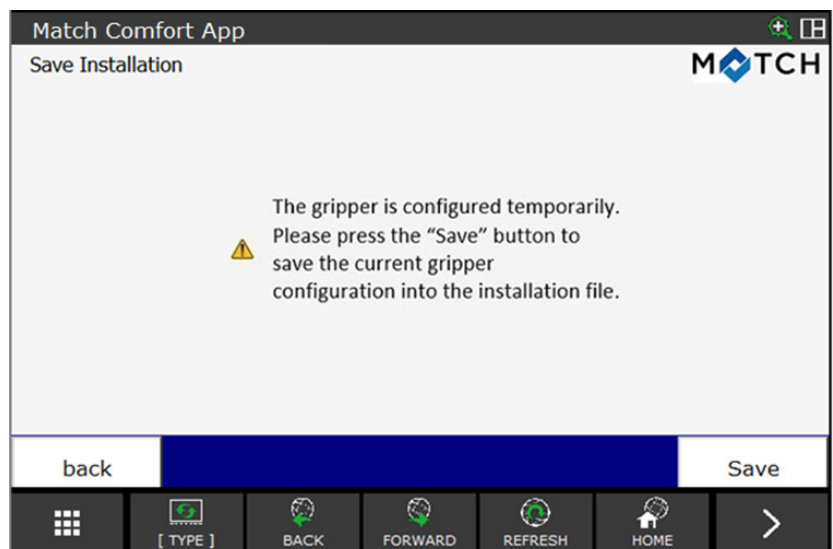
#### NOTICE



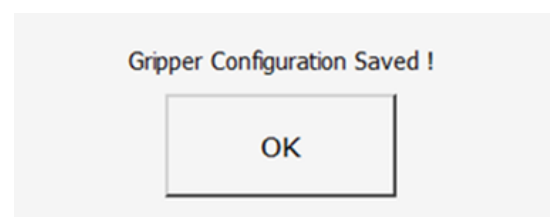
The settings are temporary.

- Save the settings to the installation file.

- In the prompt, click the *Save* button.
- ⇒ The gripper configuration has been stored.



- In the prompt, click the *Ok* button.
- ⇒ The gripper configuration is complete.
- ⇒ The function blocks/subprograms have been created and are available for programming.



## 9 Operation

### 9.1 Control principle of the gripper

- ▶ Prepare *Advanced* grippers for the control system:
  - ▶ If necessary, do a reference run (ZHOMING).
  - ▶ Check if the reference run was done (ZISHOMINGOK or ZISHOMINGSUCCESS).
  - ▶ Switch on the motor (ZMOTORON).
  - ▶ Check whether the motor is switched on (ZISMOTORON).
- ⇒ The gripper is prepared for the control system if no error is present (ZISERROR).
- ▶ Set a workpiece configured with the HMI software ZG\_IO\_LINK\_HMI (ZCHANGEWP(number)) if more than one workpiece is used.
- ▶ Check whether a workpiece has changed (Z\_ISWPCHANGED(number)).
- ▶ Grip (ZGRIP) or release (ZRELEASE) the workpiece.
- ▶ Check the position of the gripper jaw (ZISONTTEACHPOS, ZISOPENED, ZISCLOSED or ZISONUNDEFPOS).

### 9.2 Overview of generated robot jobs

After successful configuration of the grippers using the HMI software ZG\_IO\_LINK\_HMI, robot jobs for various functions are generated in the robot control panel. The robot jobs can be called up from user jobs. The following robot jobs can be created using the MATCH Comfort App.

Not all robot jobs are generated after successful configuration of the grippers. The job is created only if the corresponding command or status is wired and used by the equipped gripper(s).

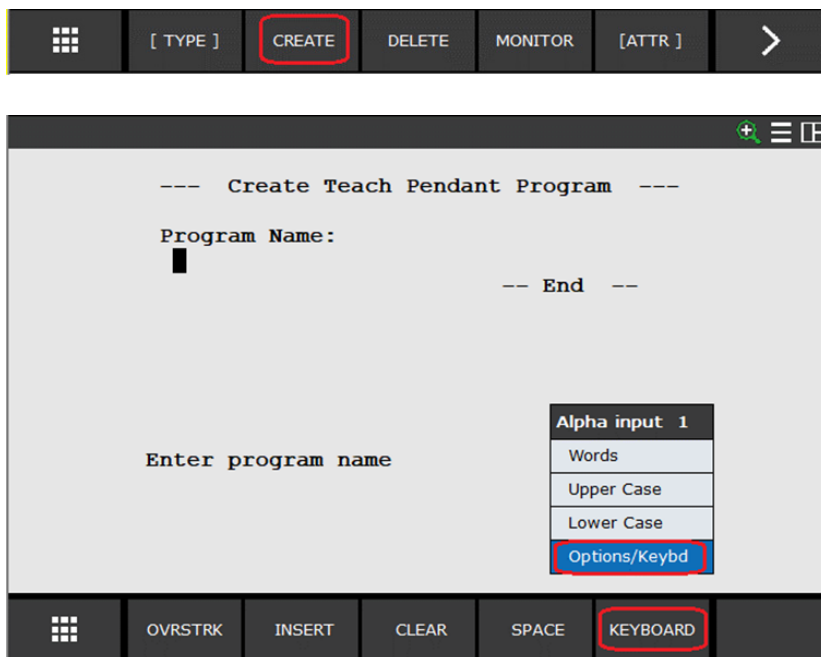
Generated robot job name	Parameter In	Parameter Out	Function
ZGRIP1 ZGRIP2	1: Address gripper 1 2: Address gripper 2	-	Gripping
ZRELEASE1 ZRELEASE2	1: Address gripper 1 2: Address gripper 2	-	Release
ZMOTORON1 ZMOTORON2	1: Address gripper 1 2: Address gripper 2	-	Switch on motor for <i>Advanced</i> grippers.
ZMOTOROFF1 ZMOTOROFF2	1: Address gripper 1 2: Address gripper 2	-	Switch off motor if gripper is present.
ZHOMING1 ZHOMING2	1: Address gripper 1 2: Address gripper 2	-	Perform reference run for <i>Advanced</i> grippers.
ZRESET1 ZRESET2	1: Address gripper 1 2: Address gripper 2	-	Reset if gripper is present.
ZCHANGEWP1 ZCHANGEWP2	WpNumber = workpiece number (1 to 15)	-	Set workpiece number (n) for use with SCM.
ZISWPCHANGED1 ZISWPCHANGED2	1: Address gripper 1 2: Address gripper 2	Register No. = 1, TRUE Workpiece number(s) activated = 2, FALSE Workpiece number(s) not activated = -1, if an error has occurred	Checks whether the workpiece number(s) is/are activated.
ZISOPENED1 ZISOPENED2	1: Address gripper 1 2: Address gripper 2	Register No. = 1, TRUE Gripper open = 2, FALSE Gripper closed = -1, if an error has occurred	Checks whether the gripper is open.

Generated robot job name	Parameter In	Parameter Out	Function
ZISCLOSED1 ZISCLOSED2	1: Address gripper 1 2: Address gripper 2	<i>Register No.</i> = 1, TRUE Gripper closed = 2, FALSE Gripper open = -1, if an error has occurred	Checks whether the gripper is closed.
ZISONTEACHPOS1 ZISONTEACHPOS2	1: Address gripper 1 2: Address gripper 2	<i>Register No.</i> = 1, TRUE Gripper at TeachPosition = 2, FALSE Gripper not at TeachPosition = -1, if an error has occurred	Checks whether the gripper is at the TeachPosition.
ZISONUNDEFPOS1 ZISONUNDEFPOS2	1: Address gripper 1 2: Address gripper 2	<i>Register No.</i> = 1, TRUE Gripper at UndefinedPosition = 2, FALSE Gripper not at UndefinedPosition = -1, if an error has occurred	Checks whether the gripper is at the UndefinedPosition.
ZISERROR1 ZISERROR2	1: Address gripper 1 2: Address gripper 2	<i>Register No.</i> = 1, TRUE Gripper in error state = 2, FALSE Gripper not in error state = -1, if an error has occurred	Checks whether the gripper is in error state.
ZISMOTORON1 ZISMOTORON2	1: Address gripper 1 2: Address gripper 2	<i>Register No.</i> = 1, TRUE Motor switched on = 2, FALSE Motor switched off = -1, if an error has occurred = -2, Basic Gripper runs command	Check whether the motor is switched on.
ZISHOMINGOK1 ZISHOMINGOK2	1: Address gripper 1 2: Address gripper 2	<i>Register No.</i> = 1, TRUE Referencing of gripper OK = 2, FALSE Referencing of gripper not OK = -1, if an error has occurred = -2, Basic Gripper runs command	Checks whether the referencing of the gripper is OK.
ZISHOMINGSUCCESS1 ZISHOMINGSUCCESS2	1: Address gripper 1 2: Address gripper 2	<i>Register No.</i> = 1, TRUE Referencing of gripper successful = 2, FALSE Referencing of gripper not successful = -1, if an error has occurred = -2, Basic Gripper runs command	Checks whether the referencing of the gripper is successful.
ZERRORWARNINGON1 ZERRORWARNINGON2	1: Address gripper 1 2: Address gripper 2	-	Enables Error/Warning for robot if gripper is present.
ZERRORWARNINGOFF1 ZERRORWARNINGOFF2	1: Address gripper 1 2: Address gripper 2	-	Disables Error/Warning for robot if gripper present.
ZISPARTDETACHED1 ZISPARTDETACHED2	1: Address gripper 1 2: Address gripper 2	<i>Register No.</i> = 1, TRUE Part detached from gripper = 2, FALSE Part not detached from gripper = -1, if an error has occurred	Checks whether the part is detached.
ZISPARTPRESENT1 ZISPARTPRESENT2	1: Address gripper 1 2: Address gripper 2	<i>Register No.</i> = 1, TRUE Part present on gripper = 2, FALSE Part not present on gripper = -1, if an error has occurred	Checks whether the part is present.

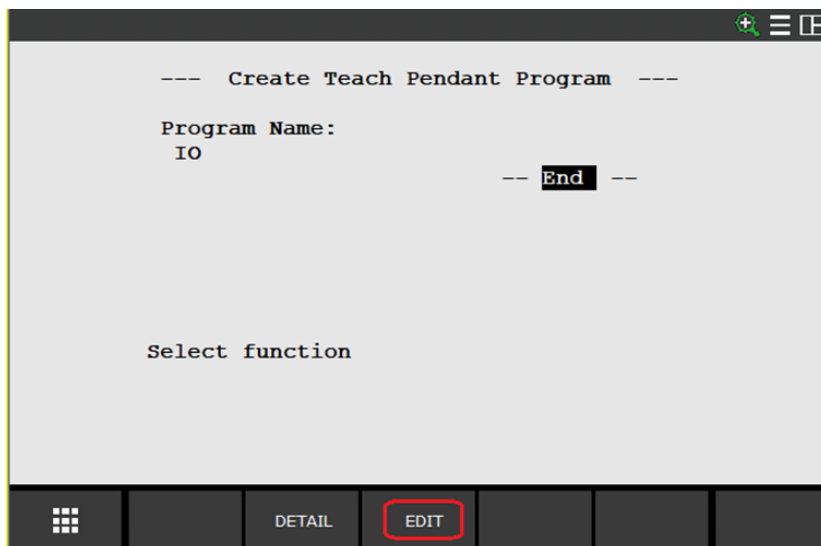
Generated robot job name	Parameter In	Parameter Out	Function
ZISREADY1 ZISREADY2	1: Address gripper 1 2: Address gripper 2	<i>Register No.</i> = 1, TRUE Gripper ready = 2, FALSE Gripper not ready = -1, if an error has occurred	Checks whether the gripper is ready.
ZMSTARTCHANGE1 ZMSTARTCHANGE2	1: Address gripper 1 2: Address gripper 2	-	Is output before the gripper is changed for <i>MATCH</i> .
ZISMCHGDONE1 ZISMCHGDONE2	1: Address gripper 1 2: Address gripper 2	<i>Register No.</i> = 1, TRUE Gripper connected successfully = 2, FALSE Gripper not connected successfully = -1, if an error has occurred	Checks whether the gripper has been connected successfully.

### 9.3 Creating programs

- ▶ Press the *EDIT* button.
- ▶ Press the *CREATE* button.
- ▶ In the *Alpha input 1* menu, select the *Options/Keybd* option.
- ▶ Press the *KEYBOARD* button.



- ▶ Enter a name for the program.
- ▶ Press the *EDIT* button.

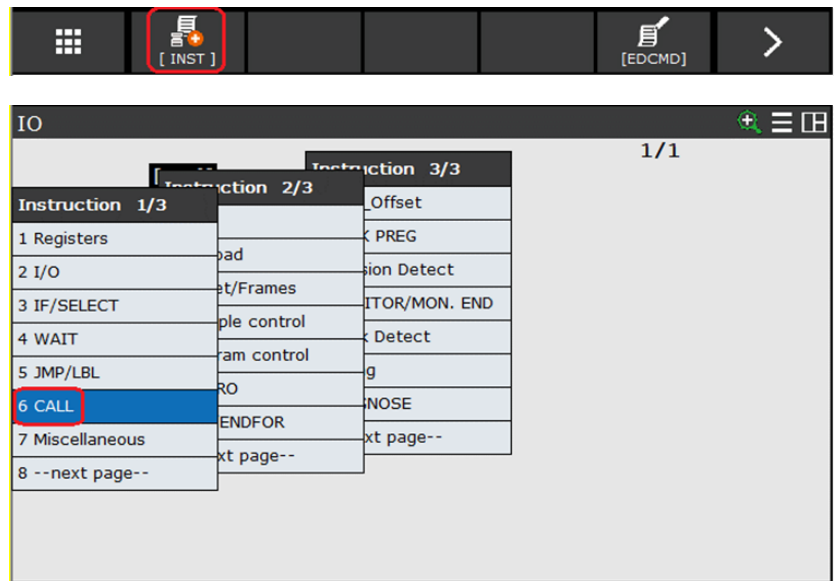


⇒ The program has been created.

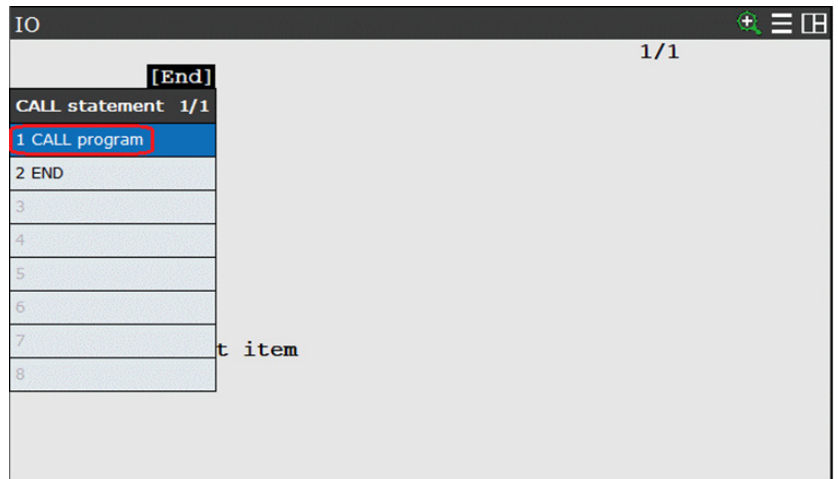


## 9.4 Adding commands to the program

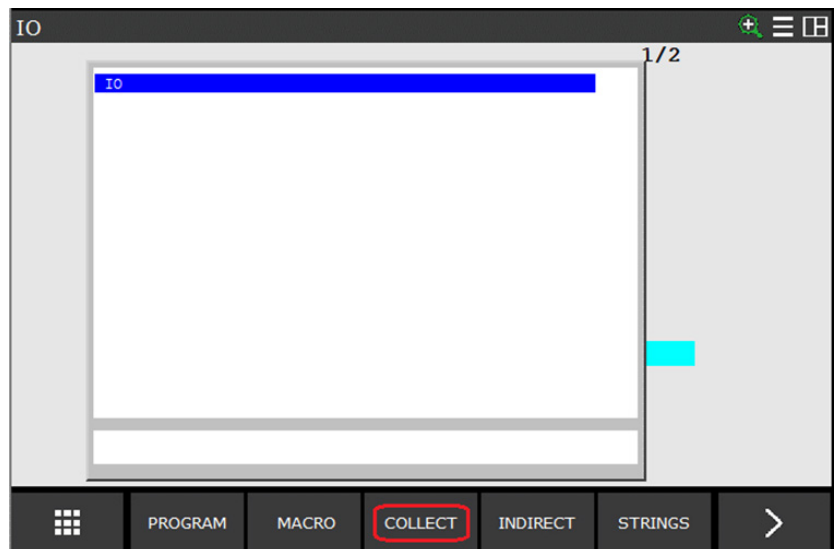
- ▶ Press the > button.
- ▶ Press the [INST] button.
- ▶ In the *Instruction 1/3* menu, press *CALL*.



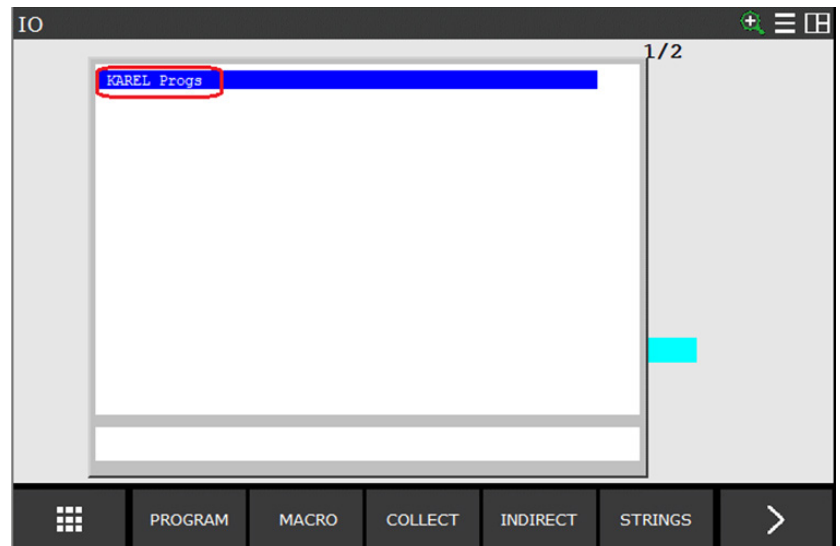
- ▶ In the *CALL statement 1/1* menu, select the *CALL program* option.
- ▶ Press the *ENTER* button.



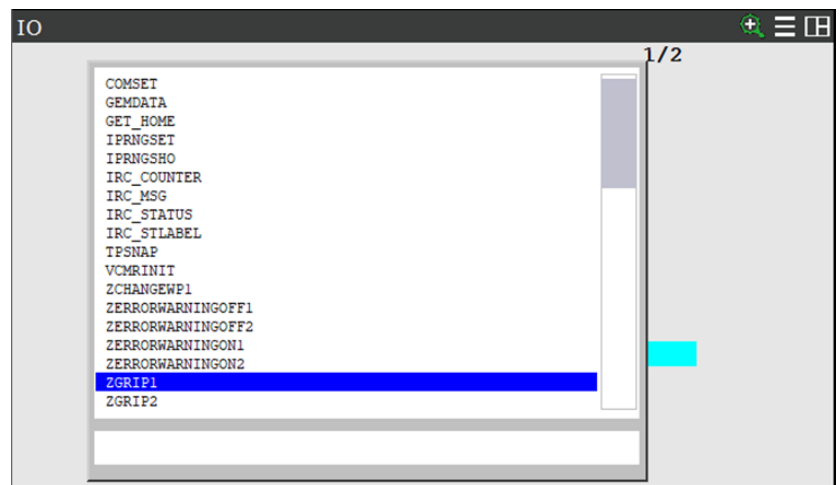
- ▶ Press the *COLLECT* button.



- ▶ Select *KAREL Progs.*
- ▶ Press the *ENTER* button.

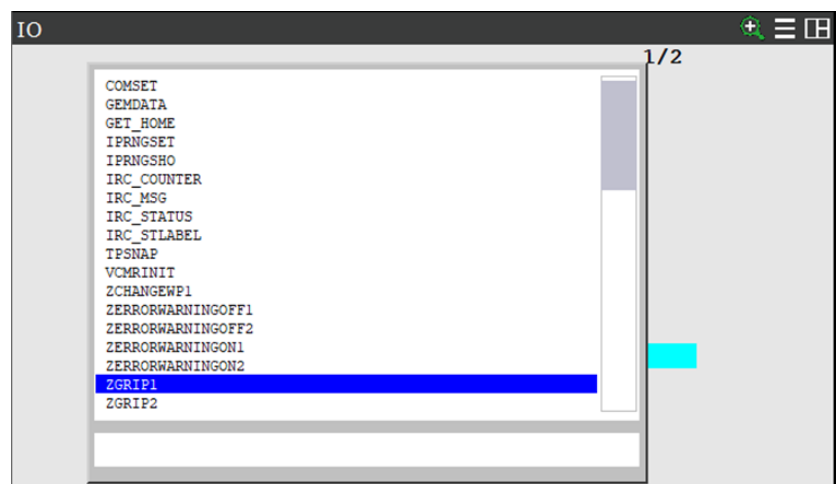


⇒ All KAREL Programs are listed.

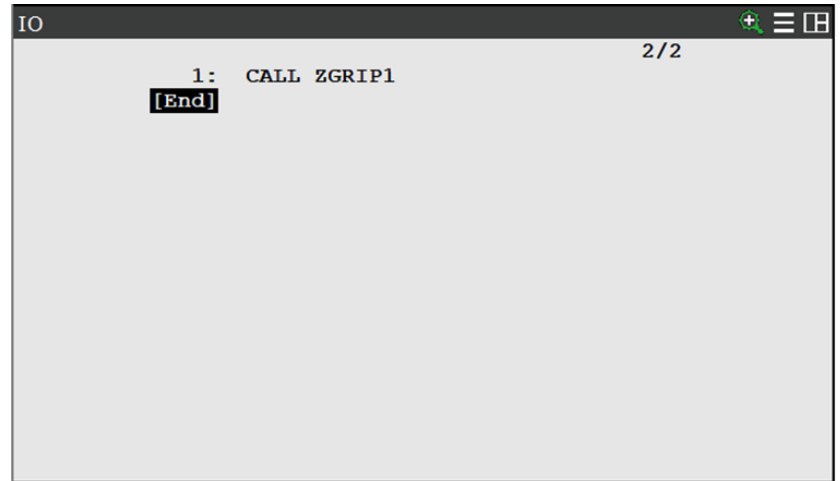


#### 9.4.1 ZGRIP1

- ▶ Select *ZGRIP1*.
- ▶ Press the *ENTER* button.

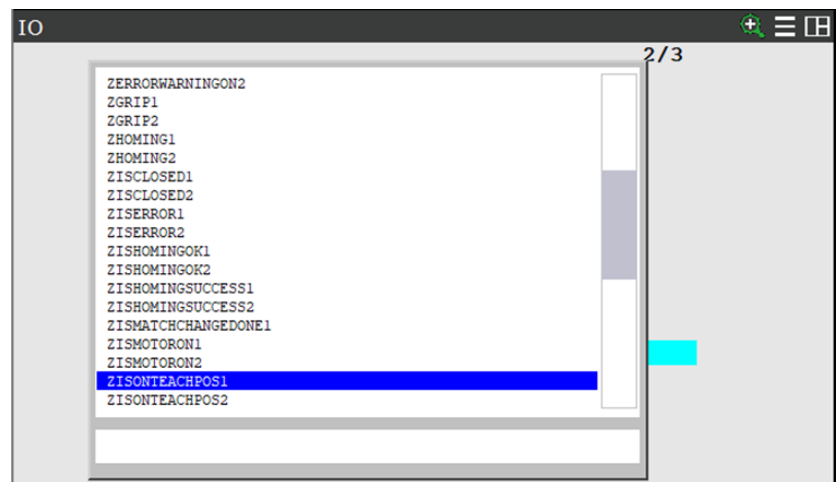


⇒ The command has been added to the program.

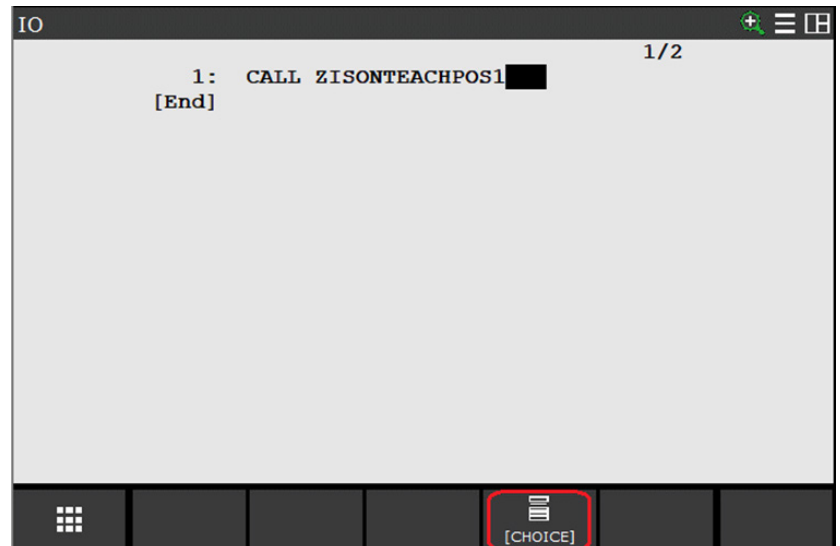


#### 9.4.2 ZISONTEACHPOS1

- ▶ Select *ZISONTEACHPOS1*.
- ▶ Press the *ENTER* button.

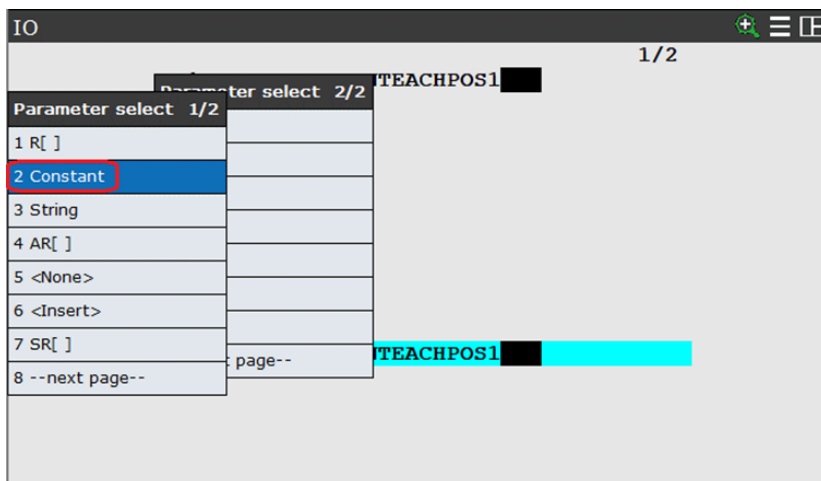


- ▶ Press the *[CHOICE]* button.





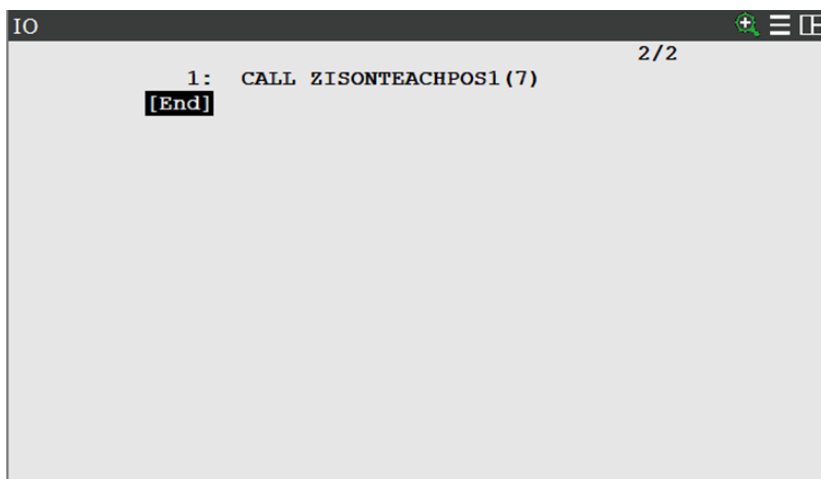
- In the *Parameter select 1/2* menu, select the *Constant* option.
- Press the *ENTER* button.



- Press the button of the desired register number.
  - Button 7 = register R7
- Press the *ENTER* button.



- ⇒ The command has been added to the program.



## 9.5 Creating programs via text input

You can write the program for gripping a workpiece yourself.

If you are only using one gripper, this program contains the instruction for changing the workpiece number.

In this example, line 1 describes the instruction for selecting workpiece number 2.

Lines 2 to 6 check the workpiece number. As soon as the correct workpiece number is returned, the gripping process defined in line 7 starts.

Lines 8 to 12 are run through until the gripper jaws have reached the TeachPosition.

```

1: CALL ZCHANGEWP1(2)
2: R[4]=2
3: LBL[1]
4: CALL ZISWPCHANGED1(2,4)
5: WAIT .10(sec)
6: IF R[4]<>1, JMP LBL[1]
7: CALL ZGRIP1
8: R[4]=2
9: LBL[2]
10: CALL ZISONTEACHPOS1(4)
11: WAIT .10(sec)
12: IF R[4]<>1, JMP LBL[2]
[End]

```

These instruction sets can be converted into separate programs. These programs can be accessed for the gripping process.

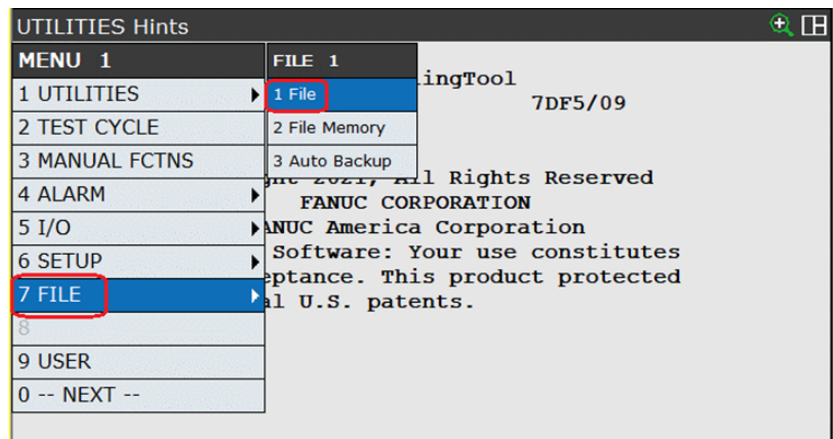
### INFORMATION



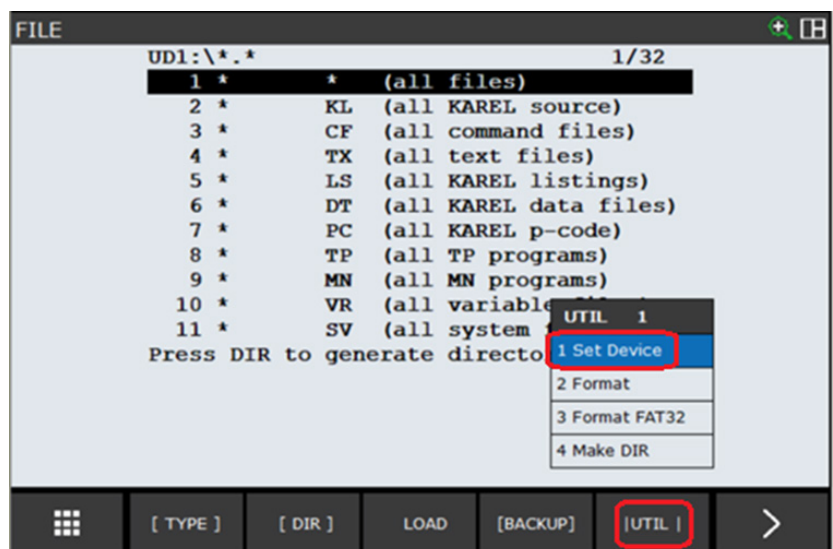
The timeout can also be programmed while taking into consideration the realistic values for the gripping and releasing time.

## 10 Uninstalling the MATCH Comfort app

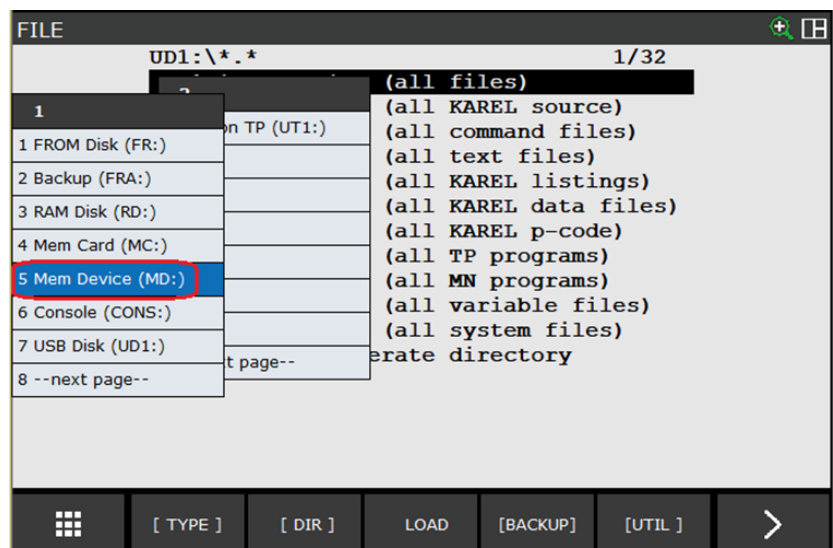
- ▶ Press the *MENU* button.
- ▶ Select the *FILE* menu.
- ▶ Press the *ENTER* button.
- ▶ In the *FILE* menu, select the *File* option.



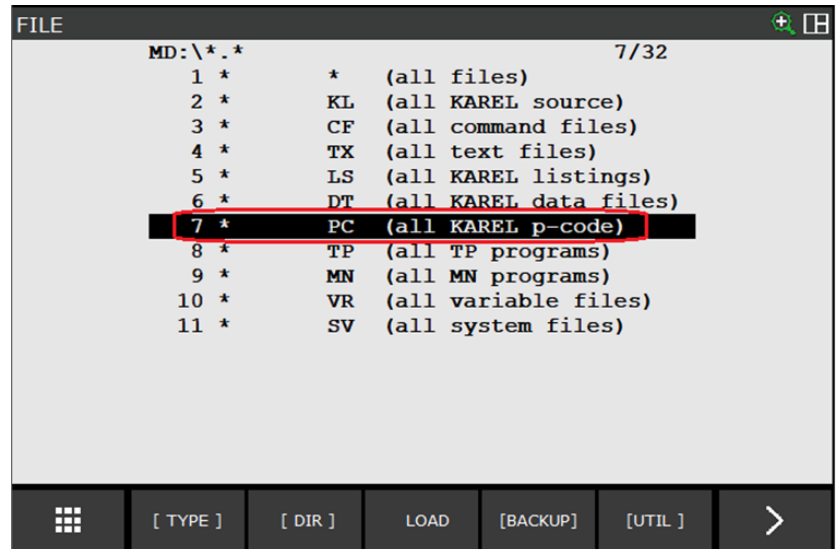
- ▶ Press the *|UTIL|* button.
- ▶ In the *UTIL 1* menu, select the *Set Device* option.
- ▶ Press the *ENTER* button.



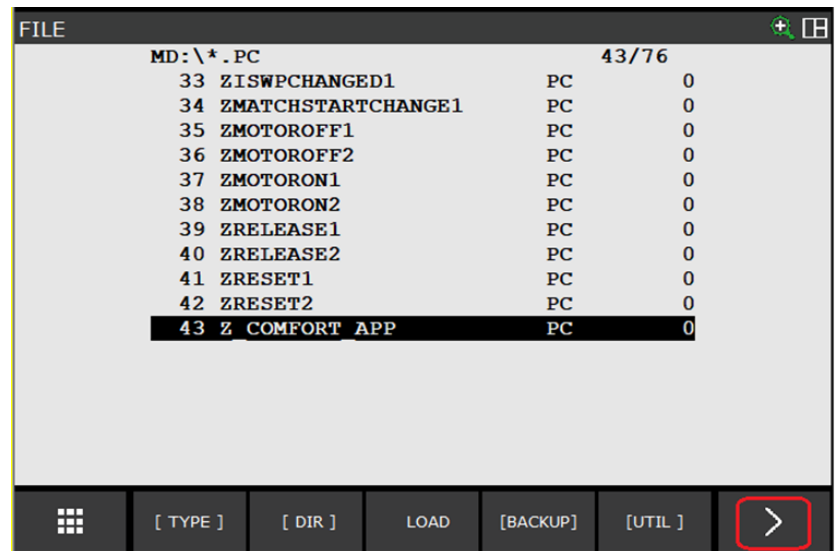
- ▶ In the *1* menu, select the *Mem Disk (MD:)* option.
  - ▶ Press the *ENTER* button.
- ⇒ The folder *MD:\\*.\** is listed.



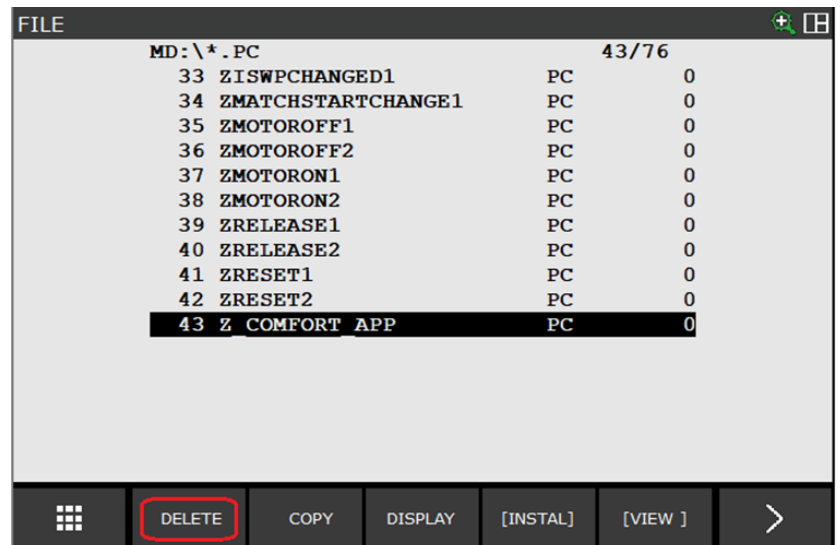
- Navigate to the *PC* entry.
- Press the *ENTER* button.



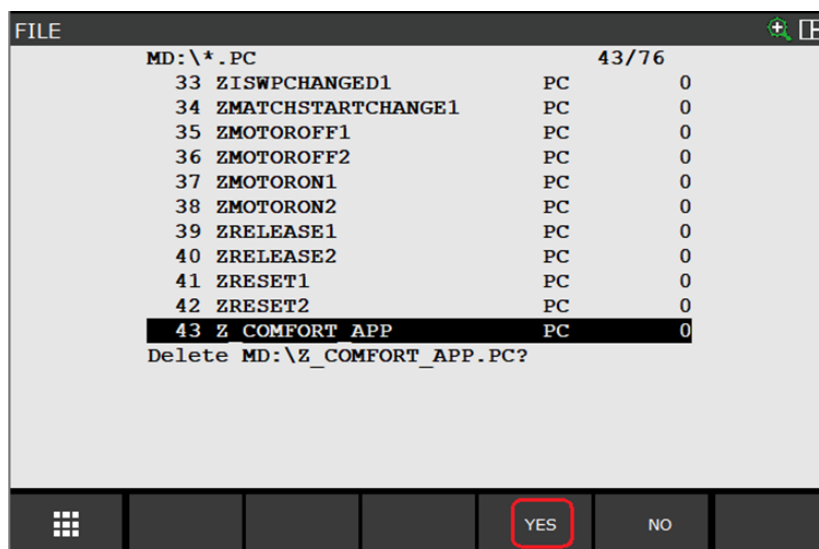
- Navigate to the *Z\_COMFORT\_APP* entry.
- Press the *>* button.



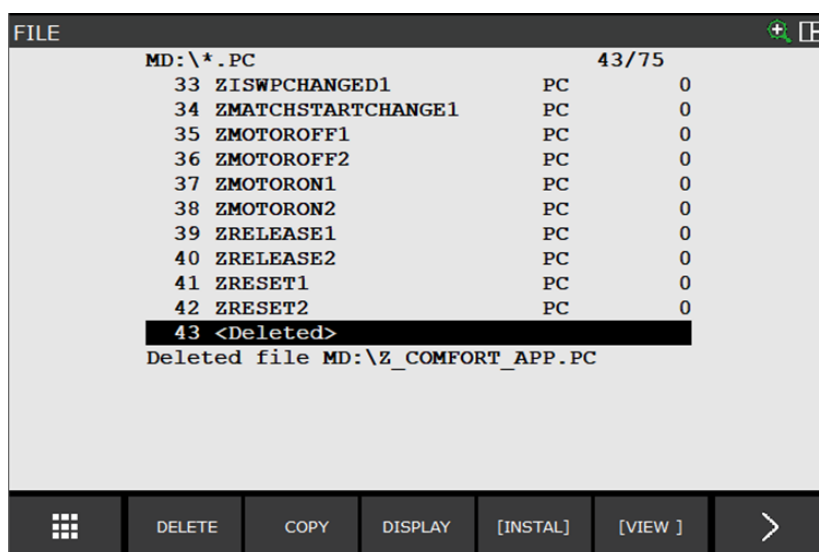
- Press the *DELETE* button.



► Press the YES button.



⇒ Uninstallation is complete.



► Also delete the following files from the folder *MD:\\*.PC*:

- ZCHANGEWP1.PC
- ZERRORWARNINGOFF1.PC
- ZERRORWARNINGOFF2.PC
- ZERRORWARNINGON1.PC
- ZERRORWARNINGON2.PC
- ZGRIP1.PC
- ZGRIP2.PC
- ZHOMING1.PC
- ZHOMING2.PC
- ZISCLOSED1.PC
- ZISCLOSED2.PC
- ZISERROR1.PC
- ZISERROR2.PC
- ZISHOMINGOK1.PC
- ZISHOMINGOK2.PC
- ZISHOMINGSUCCESS1.PC
- ZISHOMINGSUCCESS2.PC
- ZISMATCHCHANGEDONE1.PC
- ZISMOTORON1.PC
- ZISMOTORON2.PC
- ZISONTEACHPOS1.PC
- ZISONTEACHPOS2.PC
- ZISONUNDEFPOS1.PC
- ZISONUNDEFPOS2.PC
- ZISOPENED1.PC
- ZISOPENED2.PC
- ZISPARTDETACHED1.PC
- ZISPARTDETACHED2.PC
- ZISPARTPRESENT1.PC
- ZISPARTPRESENT2.PC
- ZISREADY1.PC
- ZISREADY2.PC
- ZISWPCHANGED1.PC
- ZMATCHSTARTCHANGE1.PC
- ZMOTOROFF1.PC
- ZMOTOROFF2.PC
- ZMOTORON1.PC
- ZMOTORON2.PC
- ZRELEASE1.PC
- ZRELEASE2.PC
- ZRESET1.PC
- ZRESET2.PC
- Z\_VAR.PC

► Also delete the following files from the folder *MD:\\*.VR*:

- ZCHANGEWP1.VR
- ZERRORWARNINGOFF1.VR
- ZERRORWARNINGOFF2.VR
- ZERRORWARNINGON1.VR
- ZERRORWARNINGON2.VR
- ZGRIP1.VR
- ZGRIP2.VR
- ZHOMING1.VR
- ZHOMING2.VR
- ZISCLOSED1.VR
- ZISCLOSED2.VR
- ZISERROR1.VR
- ZISERROR2.VR
- ZISHOMINGOK1.VR
- ZISHOMINGOK2.VR
- ZISHOMINGSUCCESS1.VR
- ZISHOMINGSUCCESS2.VR
- ZISMATCHCHANGEDONE1.VR
- ZISMOTORON1.VR
- ZISMOTORON2.VR
- ZISONTEACHPOS1.VR
- ZISONTEACHPOS2.VR
- ZISONUNDEFPOS1.VR
- ZISONUNDEFPOS2.VR
- ZISOPENED1.VR
- ZISOPENED2.VR
- ZISPARTDETACHED1.VR
- ZISPARTDETACHED2.VR
- ZISPARTPRESENT1.VR
- ZISPARTPRESENT2.VR
- ZISREADY1.VR
- ZISREADY2.VR
- ZISWPCHANGED1.VR
- ZMATCHSTARTCHANGE1.VR
- ZMOTOROFF1.VR
- ZMOTOROFF2.VR
- ZMOTORON1.VR
- ZMOTORON2.VR
- ZRELEASE1.VR
- ZRELEASE2.VR
- ZRESET1.VR
- ZRESET2.VR
- Z\_VAR.VR

► Also delete the following files from the folder *MD:\\*.STM*:

- CMD1GRADVANCED.STM
- CMD1GRBASIC.STM
- CMD1GRVACUUM.STM
- CMD2GRADVANCED.STM
- CMD2GRBASIC.STM
- CMD2GRVACUUM.STM
- CONFIG.STM
- CONFIGMODIFY.STM
- CONNTYPE.STM
- CONNTYPEGRIPPER.STM
- CONNTYPEMATCH.STM
- GRIPPERQUANTITY.STM
- GRIPPERQUANTITY1.STM
- GRIPPERQUANTITY2.STM
- GRPTYPE.STM
- GRPTYPEJAWS.STM
- GRPTYPEVACUUM.STM
- MAINFORM.STM
- MANUALDELETEQUERY.STM
- MANUALGRIPPERCONTROLS.STM
- MANUALMATCH.STM
- MANUALMATCHDELETEQUERY.STM
- MANUALMODIFYQUERY.STM
- OKBOX.STM
- SAVE.STM
- SELECTSERIES.STM
- SELECTSERIESADVANCED.STM
- SELECTSERIESBASIC.STM
- STAT1GRADVANCED.STM
- STAT1GRBASIC.STM
- STAT1GRVACUUM.STM
- STAT2GRADVANCED.STM
- STAT2GRBASIC.STM
- STAT2GRVACUUM.STM
- Z\_COMFORT\_APP.STM

► Also delete the following files from the folder *MD:\\*.JPG*:

- LOGO\_WHITESMOKE.JPG
- SAVE.JPG
- SETUP2.JPG
- SETUPNIL.JPG

► Also delete the file *MD:\ZIMMERCONFIGDATA.TXT*.

## 11 Error diagnosis

### INFORMATION



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