



Servo-electric gripping module for Cobots

GRIPKIT EASY

August 2024



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1 Introduction

These instructions are part of the gripping module and describe its safe and proper use in all operating phases. They are exclusively valid for the gripping module GRIPKIT EASY and contain important information on installation, commissioning, maintenance and service.

1.1 Notation and symbols

For a better overview, the following symbols are used in these instructions:



Function or safety-relevant note. Non-observance may endanger the safety of personnel and plant, damage the device or impair the function of the device.



Additional information for a better understanding of the described facts.



Reference to further information.

1.2 Product description

The GRIPKIT CR EASY gripping module is a collaborative, servo-electric gripping module with innovative gripping force control and digital IO interface. Gripping parameters can be flexibly set and commands executed via the FLEXGRIP-interface, which can be activated with a license (OPT GKEASY MB). Access to various status values is possible as well.

Figure 1 and Figure 2 show the connections and components of a GRIPKIT EASY gripping module. The gripping module can be configured via the configuration tool “GRIPKIT Easy Configurator” available at www.weiss-robotics.com/gripkit-easy/.

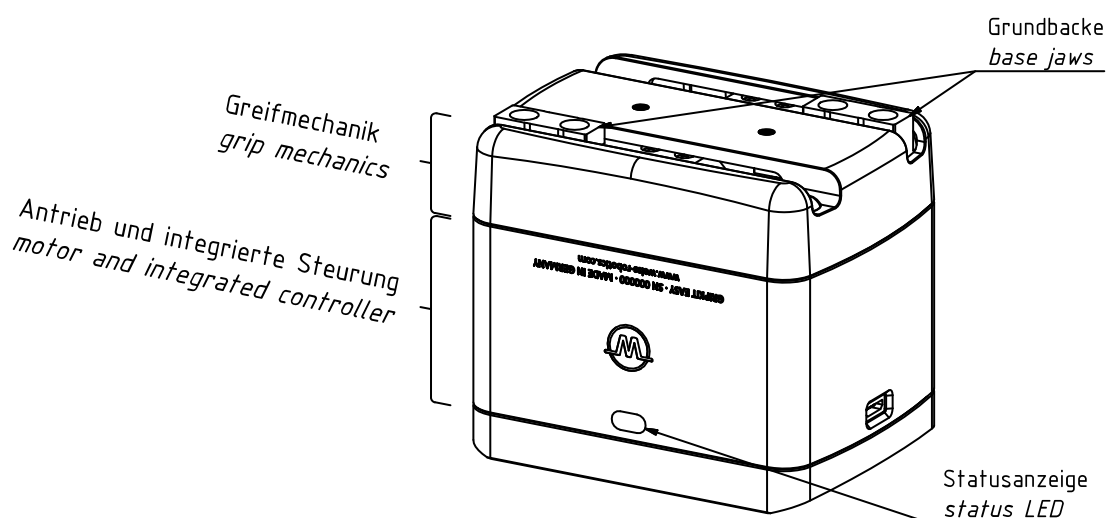


Figure 1: Components and connections of the gripping module (top view)

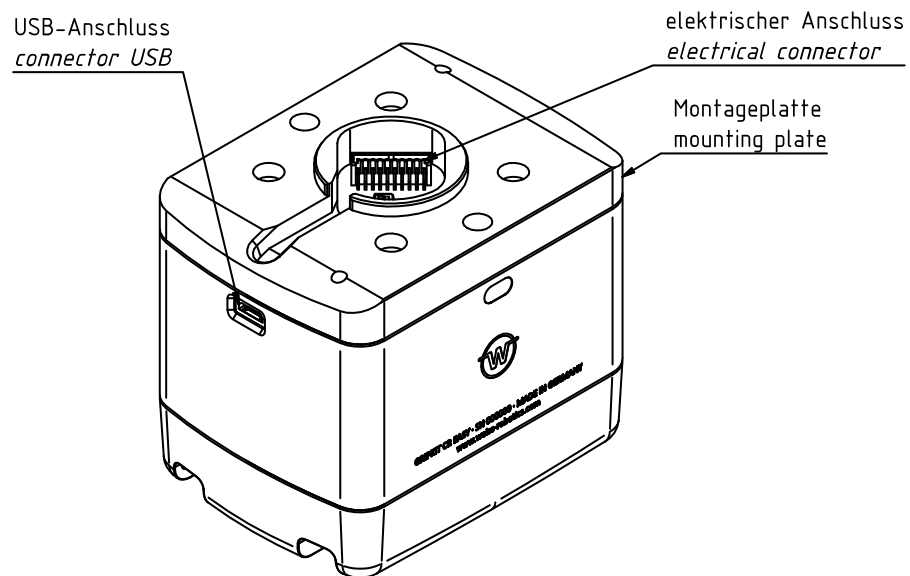


Figure 2: Components and connections of the gripping module (bottom view)

1.3 Related documents

Further documents for the operation of the gripping module are available for download on our website at www.weiss-robotics.com/gripkit-easy/.

For additional warranty information, please refer to our General Terms and Conditions, available at www.weiss-robotics.com/agb.

1.4 Target groups

The target group for these instructions are, on the one hand, plant manufacturers and operators who should keep this and other documents supplied accessible to personnel at all times and, in addition, encourage them to read and observe the safety and warning instructions in particular.

In addition, it is intended for qualified personnel and fitters who should read these instructions and observe and comply with the safety and warning instructions at all times.

2 Basic safety instructions

2.1 Intended use

The gripping module is designed for gripping and reliably holding workpieces or objects and is intended for installation in a machine. The requirements of the applicable directives as well as the assembly and operating instructions in this manual must be observed and complied with. The gripping module may only be used within the scope of its defined application parameters and only in industrial applications. Any other use or use beyond this is considered improper, e.g. if the gripping module is used as a pressing, cutting, lifting or punching tool or as a clamping device or guiding aid for tools. The manufacturer is not liable for any damage resulting from this.

2.2 Ambient and operating conditions

The gripping module may only be used within its defined application parameters. It must be ensured that the gripping module and the fingers are sufficiently dimensioned according to the application, and that the environment is clean and the ambient temperature corresponds to the specifications in the data sheet. Observe the maintenance instructions (see chapter 9). Furthermore, it must be ensured that the environment is free of splash water and vapors as well as abrasion or process dusts. Exceptions to this are gripping modules that are specially designed for dirty environments.

2.3 Product safety

The gripping module corresponds to the state of the art and the recognized safety rules at the time of delivery. However, hazards may emanate from it if, for example:

- the gripping module is not used as intended
- the gripping module is improperly mounted, modified or incorrectly maintained
- the EC Machinery Directive, the VDE Directives, the safety and accident prevention regulations applicable at the place of use or the safety and assembly instructions are not observed

2.3.1 Protective devices



Protective devices must be provided in accordance with the EC Machinery Directive.

2.3.2 Structural changes, additions and conversions

Additional holes, threads or attachments that are not offered as accessories by Weiss Robotics may only be attached after written approval by Weiss Robotics.

2.3.3 Special standards

The following standards are complied with:

- Radio interference voltage, interference field strength and radiation according to EN 61000-6-3
- Fast transients on signal and data lines according to EN 61000-4-4
- HF current injection on signal and data lines according to EN 61000-4-6
- RF irradiation according to EN 61000-4-3
- Interference emission according to EN 61000-6-4 Class A
- Magnetic field with power frequency according to EN 61000-4-8
- Discharge of static electricity according to EN 61000-4-2

2.4 Personnel qualification

Installation, initial startup, maintenance and repair of the gripping module may only be performed by trained specialists.

Every person assigned by the operator to work on the gripping module must have read and understood the complete operating manual, in particular chapter 2 “Basic safety instructions”. This also applies to personnel who are only occasionally deployed, for example maintenance personnel.

2.5 Safety conscious work

Observe the safety and accident prevention regulations applicable at the place of use.



Do not move any parts by hand when the power supply is connected.



Do not reach into the open mechanics and the movement range of the gripping module.



Disconnect the power supply of the gripping module before carrying out any work.

2.6 Notes on special hazards



Risk of injury from falling and ejecting objects!

Provide guards to prevent falling or ejection of objects, for example, machined workpieces, tools, chips, fragments, waste.



Risk of injury due to unexpected movements of the machine/plant!

3 Warranty

The warranty period is 12 months from the date of delivery to the factory, assuming proper use in single-shift operation and observance of the prescribed maintenance and lubrication intervals or 30 million gripping cycles. Parts in contact with the workpiece and wear parts are not covered by the warranty. Please also refer to the General Terms and Conditions (GTC).

The gripping module is considered defective if its basic function, gripping, is no longer available.

4 Scope of delivery and accessories

The scope of delivery includes the parts listed in Table 1.

Table 1: Scope of delivery

Designation	Part number
Gripping module GRIPKIT EASY	5010018
Connecting cable Tool-IO, TYP A	5070018
USB cable, A male to Micro-B male (1.8 m)	4020023
GRIPKIT EASY accessory pack, incl. gripping fingers	5020066
Quick Start Guide GRIPKIT EASY	5080031
Safety instructions	5080032

The following accessories are available separately for the gripping module:

- Connection cables for the Tool-IO connector of other robot brands
- License key for FLEXGRIP interface (OPT-GKEASY-MB)



Accessories can be ordered separately.

Additional accessories can be found on our website at www.weiss-robotics.com.

5 Technical data

5.1 Mechanical nominal data



If the specified nominal data are exceeded, the gripping module may be damaged. In case of doubt, clarify your application with our technical sales department.

Table 2: Mechanical nominal data

Designation	Unit	Value
Total stroke	mm	30
Nominal gripping force (100%)	N	200
Recommended minimum gripping force (25%)	N	30
Max. relative finger speed	mm/s	180
Min. relative finger speed	mm/s	5
Dead weight	g	830
Workpiece weight (form closure/force closure)	g	4300/1000
Permissible finger length (L) ¹	mm	100
Permissible mass per finger	g	300
Protection class	-	IP 40
Ambient temperature	°C	5 to 50
Humidity	%	0 to 90, non-condensing
Mechanical repeatability	mm	±0,03
Resolution of the displacement encoder	mm	0,01
Mode of operation of the displacement encoder	-	Relative

¹ At nominal force; further details in chapter 5.1.1

5.1.1 Permissible finger length

The permissible finger length L corresponds to the distance between the screw-on surface of the base jaw and the effective gripping force application point, see Figure 3. Maximum values for L *can be* taken from the mechanical nominal data of the size used.



If the maximum finger length is exceeded, a reduction of the gripping force is mandatory. In addition, this can shorten the service life of the gripping module.

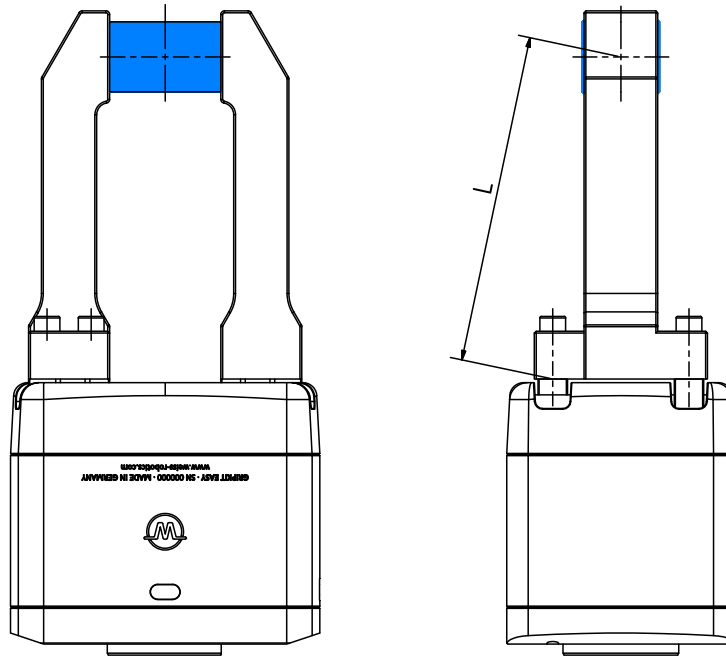


Figure 3: Determination of finger length L .

5.1.2 Gripping force and finger speed

The gripping force can be set as a percentage of the nominal gripping force. The recommended minimum gripping force is 25% of the nominal gripping force.

5.1.3 Cycle times

The following diagrams show the typical course of the gripping duration and the release duration for different gripping force settings.



The values shown indicate the typical duration from the processing of the command at the gripping module to the change of the gripping state. The actual duration varies depending on the gripping part (rigid or elastic), finger weight, grip height, etc. For a more precise estimation of the possible cycle times, tests must be carried out in individual cases.

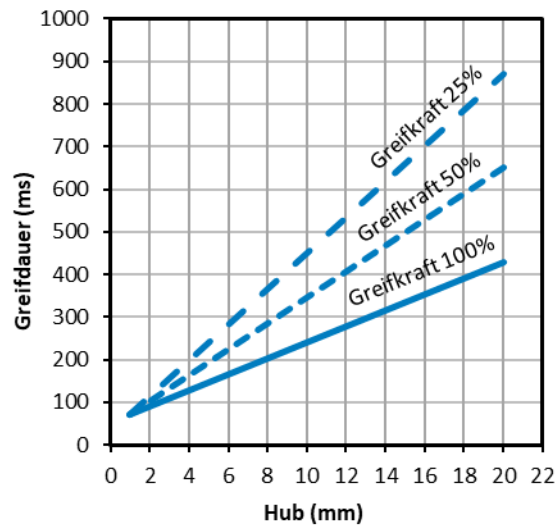


Figure 4: Gripping time as a function of stroke

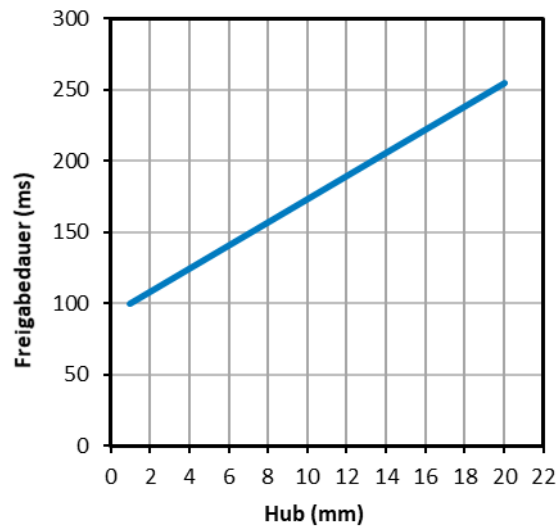


Figure 5: Release duration depending on stroke

5.1.4 Permissible finger loads

The following table shows the permissible static loads on the base jaw guide.

Table 3: Static guide loads

Last	Unit	Value
C_0	N	1890
T_x	Nm	6,9
T_y	Nm	26,0
T_z	Nm	23,6

In the case of superimposed forces and moments, the load carrying capacity of the guide must be recalculated according to equation (12)

$$\frac{M_x}{T_x} + \frac{M_y}{T_y} + \frac{M_z}{T_z} + \frac{F_z}{C_0} \leq 1,0 \quad (12)$$

Here, C_0 and T are the permissible guide loads according to Table 3 and M is the sum of all moments occurring at each base jaw (gripping, weight, inertia and process forces) in the application. The moments are plotted in Figure 6.

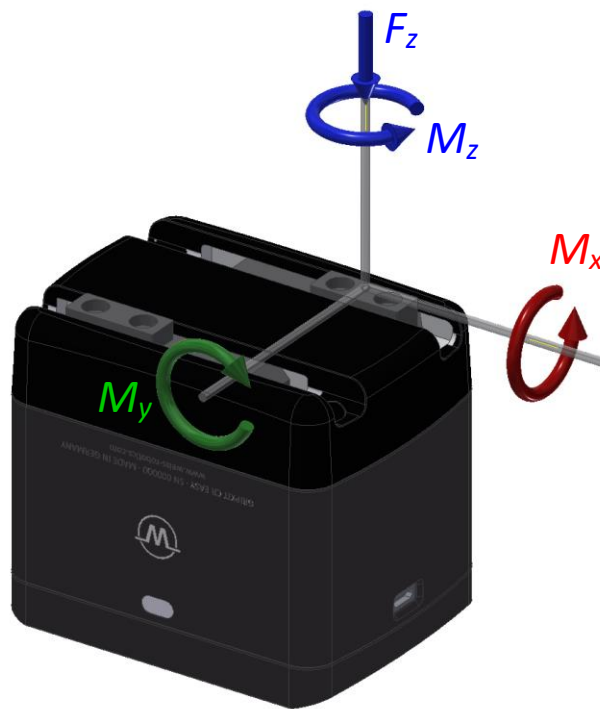


Figure 6: Finger loads

5.2 Electrical nominal data



If the specified nominal data are exceeded, the gripping module may be damaged. In case of doubt, clarify your application with our technical sales department.

Table 4: Nominal electrical data

Designation	Unit	Value
Supply voltage	V	20 up to 28
Typ. current consumption (state INACTIVE)	mA	60
Typ. current consumption (HOLDING state, 100% gripping force)	mA	300

Max. current consumption (moving, peak current)	mA	500
<u>Digital inputs</u>		
Max. Signal voltage (active high)	V	30
Min. signal voltage (active low)	V	0
<u>Digital outputs</u>		
Signal voltage (signal "HIGH")	V	24
Signal voltage (signal "LOW")	V	0
Max. Signal current	mA	100

Table 5: Electrical ratings of the USB port

Designation	Unit	Value
Supply voltage	V	5
Type. Current consumption	mA	50

Table 6: Electrical ratings of the FLEXGRIP interface

Designation	Unit	Value
Termination of RS485 lines (switchable)	Ohm	120
Standard baud rate	Baud	115200
Number of data bits	-	8
Number of stop bits	-	1
Parity	-	none
Maximum number of gripping modules on the bus	-	4



When using the FLEXGRIP interface, termination may only be activated on the gripping module that has the longest cable length to the robot. It may be activated on a maximum of one gripping module.

5.2.1 Electrical interface

The gripping module has a ten-pin PCB terminal for electrical contacting. It is attached to the underside of the flange and shown in Figure 7. The pin assignment is listed in Table 7.

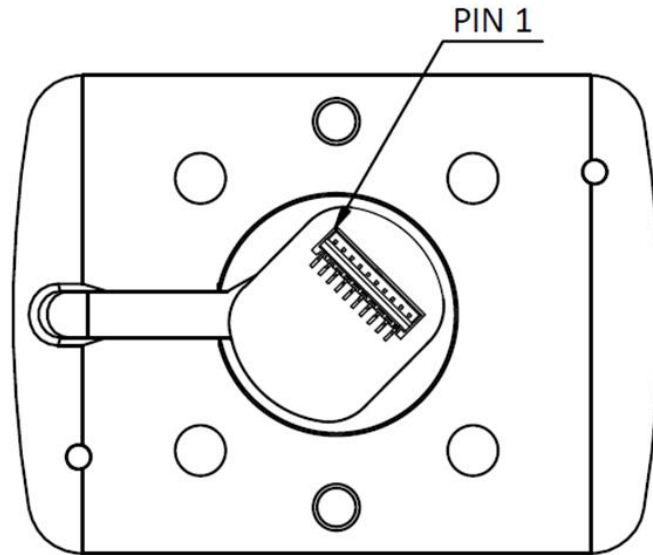


Figure 7: Connection terminal on the underside of the flange

Table 7: Terminal assignment

Pin	Function
1	Not connected
2	IN 1
3	IN 0
4	RS485-B (inverted)
5	RS485-A (non-inverted)
6	GND
7	+24 V/1.5 A IN
8	Not connected
9	OUT 1
10	OUT 0

5.2.2 Switching signals of the digital inputs

The IN 0 and IN 1 inputs of the gripping module support two different modes:

NPN/PNP compatible (**standard**)

This mode supports both NPN and PNP outputs. The passive state is detected when the gripping module input is not actively driven (inactive). The active state is detected when the input is actively driven either with 0 V (NPN, "sinking") or with 24 V (PNP, "sourcing").

Push/Pull compatible

This mode supports push/pull outputs. The input detects an active state when a 24 V level is present and an inactive state when no level is present.

Configuration is done via the GRIPKIT Configurator Tool. The function of the inputs is listed in Table 8.

Table 8: Function of inputs IN 0 and IN 1

Input	Signal Inactive	Signal Active
IN 0	Gripper deactivated	Gripper activated
IN 1	Release workpiece ²	Grip workpiece ²



The digital inputs are only active if "Digital I/O" is selected as the interface.

5.2.3 Switching signals of the digital outputs

The gripping module signals the current gripping state via the digital outputs. The outputs are designed as push-pull circuit. Table 9 shows the coding of the state.

Table 9: Coding of the gripping state via the digital outputs

State OUT 1	State OUT 0	Gripping state
0 V	0 V	Gripper deactivated or error present (IDLE, ERROR)
0 V	24 V	Workpiece released (RELEASED)
24 V	0 V	No workpiece detected (NO PART)
24 V	24 V	Workpiece gripped (HOLDING)



The digital outputs only indicate the gripping status if "Digital I/O" is selected as the interface.

² The preconfigured grip parameters are used. See chapter 7.

5.2.4 FLEXGRIP interface

Using the optionally unlockable FLEXGRIP interface, the gripping module can be parameterized and flexibly controlled directly via the cobot using Modbus RTU.



The FLEXGRIP interface is only active if a valid license key has been installed on the gripping module and the interface has been selected in the GRIPKIT Configurator Tool.

5.2.5 Fusible link to protect against increased gripping force

The gripping module is equipped with a fuse to protect the operator from impermissibly high gripping forces. This fuse is a safety-related component and must not be replaced or modified under any circumstances.



If the fuse has tripped, the gripping module must be sent to WEISS ROBOTICS for repair.

6 Assembly instruction



Only use the screws and dowel pins supplied to mount the gripping module.

6.1 Finger assembly

The assembly of the fingers is shown in Figure 8:

1. Insert the dowel pins (5) into the finger element (4) and position it on the finger element (6).
2. Screw both finger elements (4) and (6) tight with the screw (3).
3. Insert the centering sleeves (2) into the assembled finger.
4. Screw the assembled finger tight to the base jaw of the gripping module (1) with the screws (3).

The following table lists all the screws, centering pins and centering sleeves recommended for assembly. Please note that the fingers are delivered pre-assembled.

Table 10: Components for finger assembly

Position	Number	Designation
2	4	Centering sleeve 6 h6 x 5,5
3	6	Screw ISO 4762 M4 x 12
4	2	Finger element BE 20-020
5	4	Dowel pin ISO 2338 – 4 m6 x 10
6	2	Finger element FT 20-CR



During assembly, also observe the robot-specific mechanical properties of the tool flange.

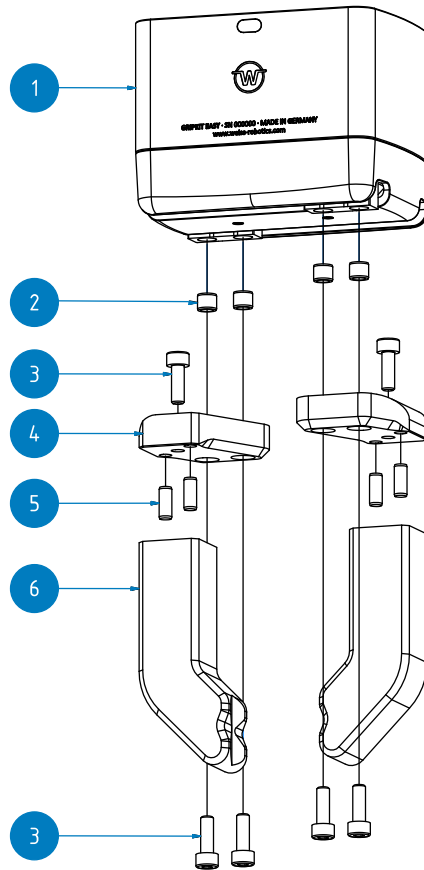


Figure 8: Assembly of the fingers

6.2 Assembly of the gripping module onto robot flange

The assembly of the gripping module onto robot flange is shown in Figure 9:

1. Insert the enclosed cable (7) into the flange (10). Make sure the cable is compatible with Your robot.
2. Insert the two dowel pins (11) into the flange (10).
3. Insert the dowel pin (9) into the flange (10) and position it on the robot (8).
4. Screw the flange (10) onto the robot (8) using the screws (12).
5. Screw the gripping module (1) onto the flange (10) using the screws (13).
6. Connect the connection cable (7) to the robot (8).

The following table lists all the screws, centering pins and centering sleeves recommended for assembly.

Table 11: Components for mounting the gripping module on the robot flange

Position	Number	Designation
9	1	Dowel pin ISO 2338 B - 6h8 x 10
11	2	Dowel pin ISO 2338 - 4 h8 x 8

12	4	Screw ISO 4762 M6 x 10
13	2	Screw ISO 4762 M4 x 45

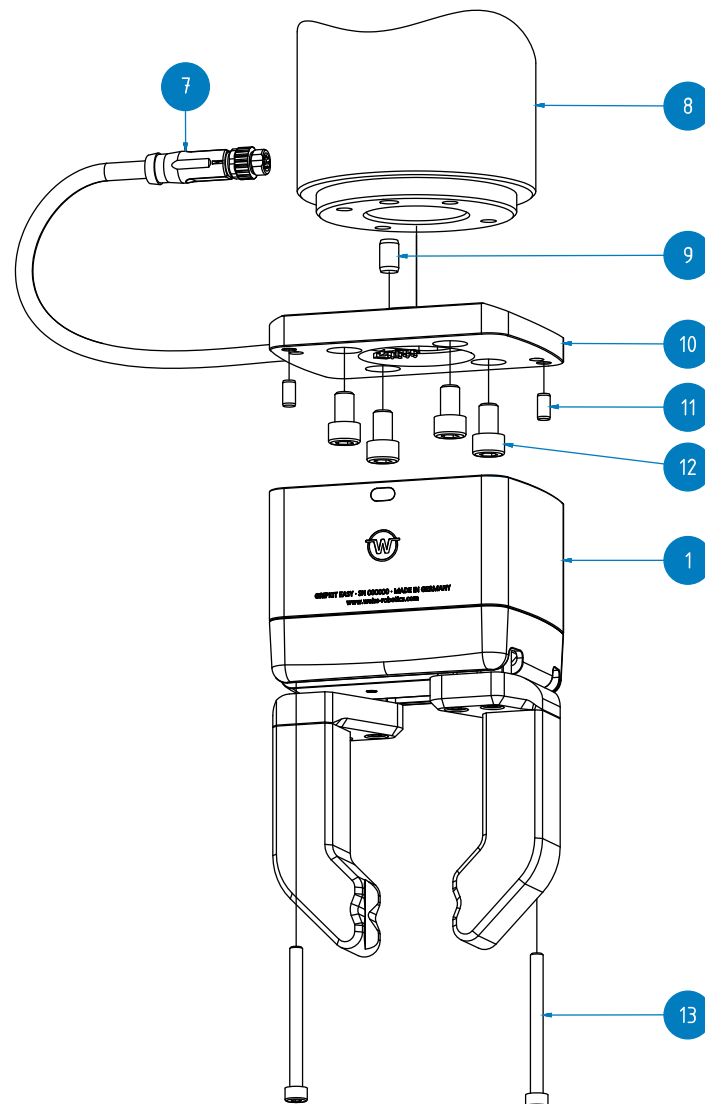


Figure 9: Assembly of the gripping module of the gripping module onto robot flange

6.3 Assembly of the gripping module on the Double flange



Double flange can be ordered separately.

Additional accessories can be found on our website at www.weiss-robotics.com.

The assembly of the gripping module on the double flange is shown in Figure 10:

1. Insert three dowel pins (14) into the base plate of the double flange (15). Position these on the robot (8) and screw them tight with the screws (16).
2. Position the triangular part of the double flange (17) on the base plate (15) and screw them tight with the screws (18).

3. Insert the two dowel pins (11) into the flange (10).
4. Insert the dowel pin (9) into the flange (10), position it on the triangular part (17) and screw it tight with the screws (12).
5. Screw the gripping module (1) onto the flange (10) with the screws (13).
6. Connect the cable (7) to the robot (8). Make sure the cable is compatible with Your robot.

The following table lists all the screws, dowel pins and centering sleeves recommended for assembly.

Table 12: Components for mounting the gripping module on the Double flange

Position	Number	Designation
9	1	Dowel pin ISO 2338 B - 6h8 x 10
11	2	Dowel pin ISO 2338 - 4 h8 x 8
12	4	Screw ISO 4762 M6 x 10
13	2	Screw ISO 4762 M4 x 45
14	3	Dowel pin ISO 2338 B - 6h8 x 8
16	4	Screw ISO 4762 M6 x 10
18	4	Screw ISO 4762 M6 x 20

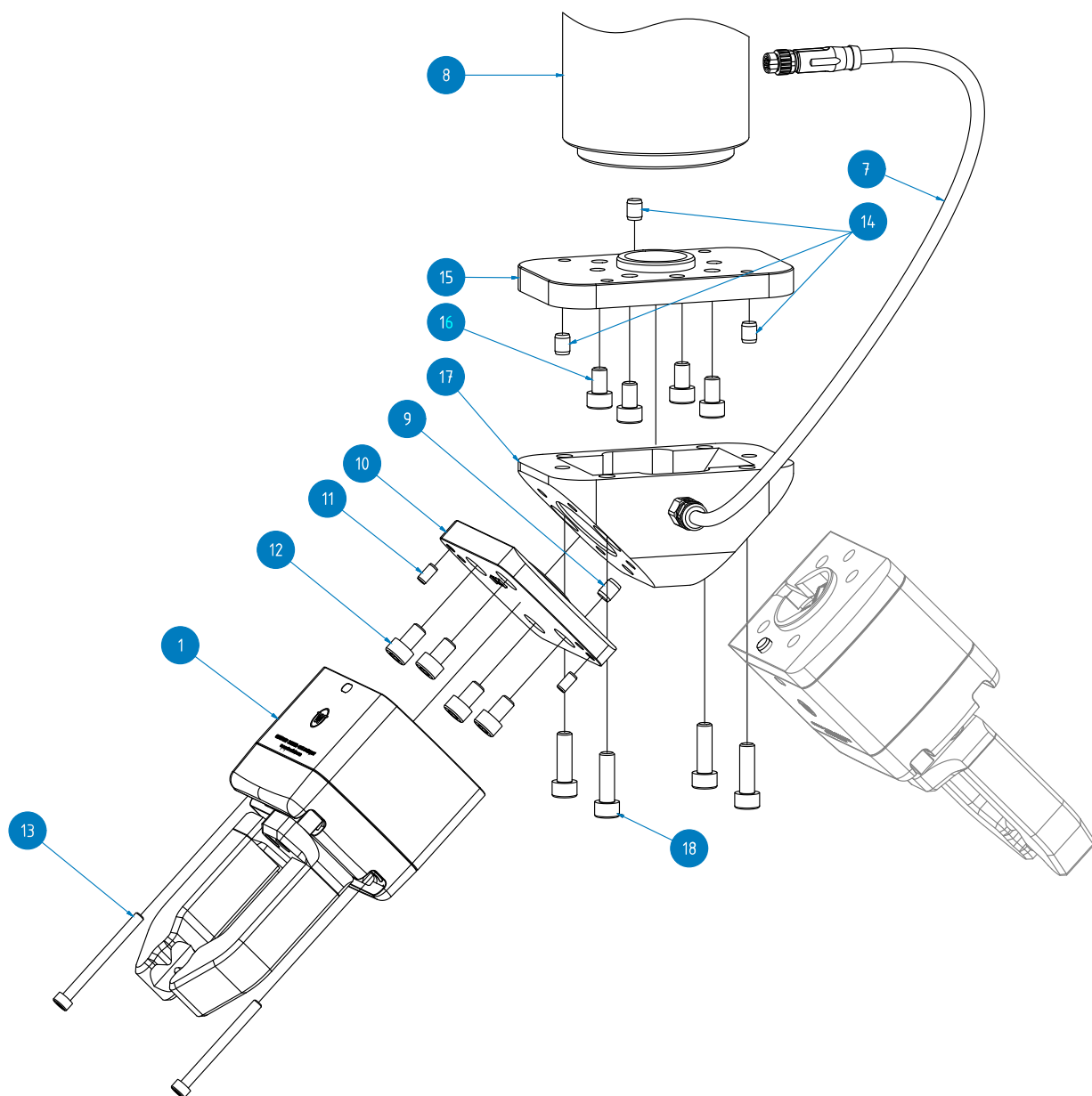


Figure 10: Assembly of the gripping module on the Double flange

7 Configuration of the gripping module

To configure your gripping module, you need the "GRIPKIT Configurator" program and a computer with Windows 10 or newer. The program is available for download at www.weiss-robotics.com/gripkit-easy/. Follow the installation instructions and then open it.

Connect the gripping module to your computer using the included USB cable (A plug to Micro-B plug). The gripping module is also powered externally during configuration. To do this, the connection cable must be connected to the robot and its voltage output must be activated.

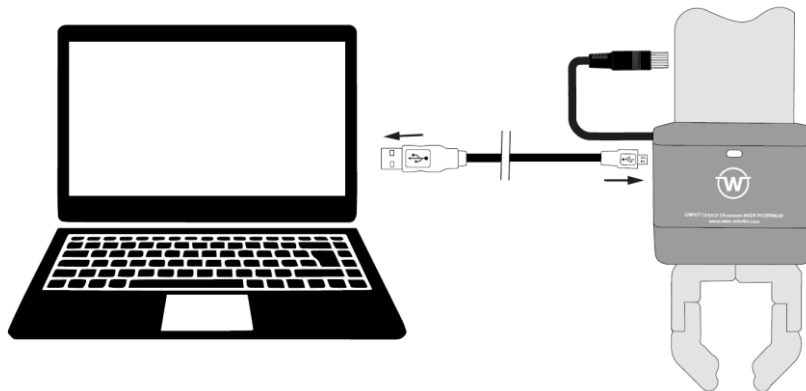


Figure 11: Connecting the gripping module for configuration



Make sure that during configuration the gripping module does not pose any danger due to careless gripping or release.

Now start the "GRIPKIT Configurator" program. Once the gripper is connected to the PC, it shows up as a Virtual COM-Port. Connect to the gripper by selecting the appropriate COM port and by clicking on the "CONNECT" button.

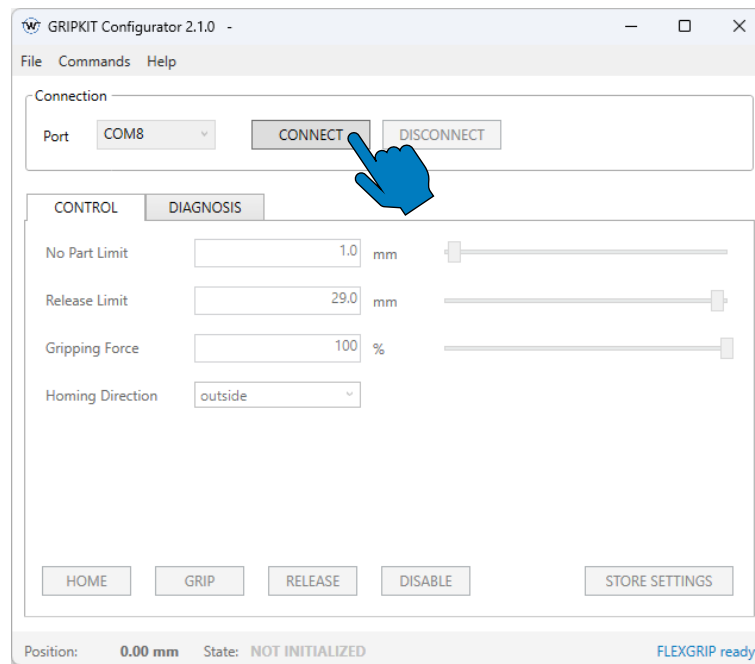


Figure 12: Connect to the gripper

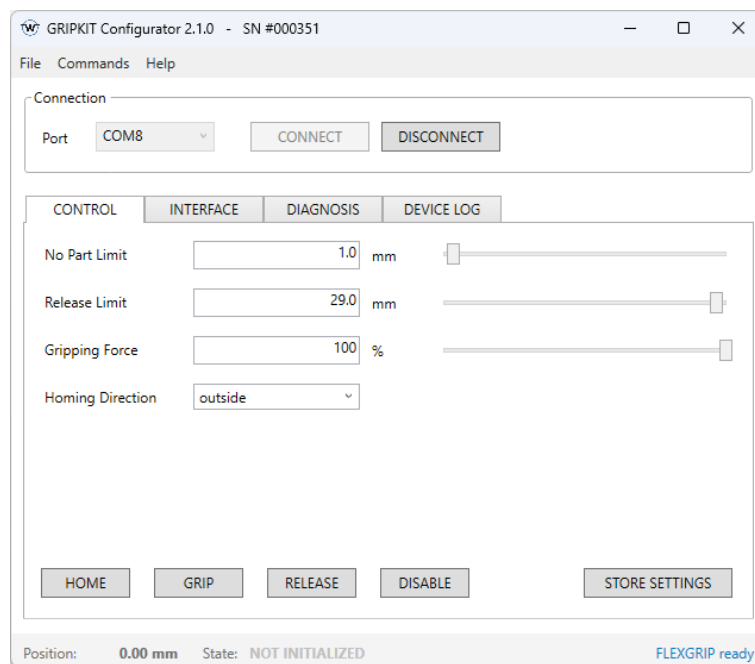


Figure 13: Connection established

7.1 Configuration of the interface

The control interface is configured via the "INTERFACE" tab. The gripping module supports the following interfaces:

Digital I/O, compatible with PNP/NPN outputs (standard)

This is the default factory setting. This configuration is compatible with the Tool-IO outputs of most cobots, including (but not limited to) Universal Robots, Kassow and Fanuc CRX.



Try this configuration first (toggle the outputs of the robot and view result on the GRIPKIT Configurator's "DIAGNOSTICS" tab), if you are unsure which of the both Digital I/O standards to choose.

Digital I/O, compatible with push/pull outputs

This configuration supports robots whose outputs are alternately connected to either ground or 24V ("push/pull").

FLEXGRIP data interface

When using the FLEXGRIP data interface, the gripping module activates a data connection to the robot and can be flexibly parameterised and controlled via this. FLEXGRIP (orderable option OPT-GKEASY-MB) is activated via the "INTERFACE" tab. Once the licence has been activated, the text "FLEXGRIP ready" appears in the status bar of the window.

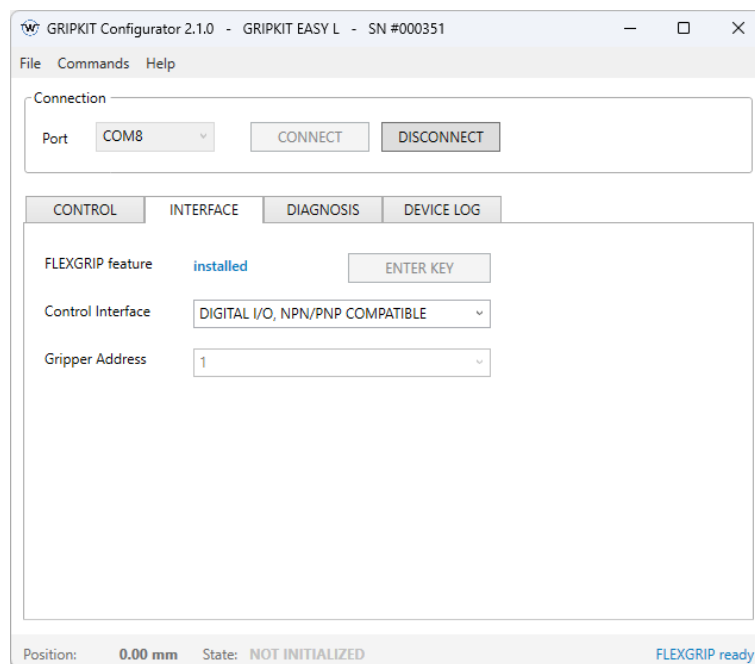


Figure 14: Selecting the interface



The FLEXGRIP interface can only be configured and used with an activated licence (OPT-GKEASY-MB). Contact our technical sales department for more information.

If the FLEXGRIP interface is activated, you must also set the gripper address via which the plug-in should reach the gripping module on the robot controller. If you are operating several gripping modules on one controller, you must set a unique address for each gripping module.



Double assignment of the gripper address on the bus is not permitted and can lead to unexpected behaviour!

Table 13: Settings for the FLEXGRIP interface

Parameter	Value range	Default value
Gripper address	1 – 4	1

7.2 Configuration of the gripping parameters (control via digital I/Os)

If the gripping module is controlled via its digital inputs, fixed parameters are used for gripping and releasing workpieces.

7.2.1 Referencing

The gripping module must be referenced after switching on before executing gripping and release commands for the first time. To do this, click on the “HOME” button. Depending on the grip parameters set, referencing is performed inwards (option “Inside” activated) or outwards (option “Outside” activated). After successful referencing, the state changes to IDLE.



The referencing direction must be set depending on the screwed-on fingers and should be carried out in the direction in which the higher repeat accuracy is required during positioning.

7.2.2 Parameterization of a grip

By adjusting the sliders or entering the values in the input fields, you can set the grip parameters. With a click on the “STORE SETTINGS” button, the parameters are stored non-volatile on the gripping module.

A grip consists of a position window with the limit values “Release Limit” and “No Part Limit”. When releasing, the gripper jaws are moved up to the Release Limit, the gripping state changes to RELEASED then. During gripping, the gripper jaws are moved up to a maximum of the “No Part Limit”. If a component is gripped and held before this, the gripping state changes to HOLDING. If no component is gripped up to the “No Part Limit”, the status changes to NO PART.

You can use the “GRIP” and “RELEASE” keys to test the currently set parameters.

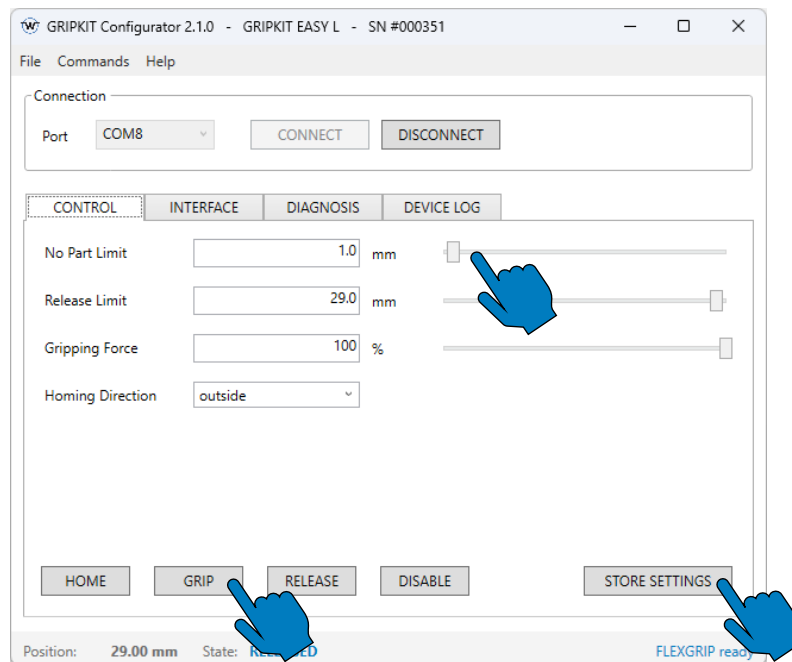


Figure 15: Configuration and test of the gripping parameters

Gripping direction

The gripping direction is determined by the relation of the position limit values to each other. If the “No Part Limit” limit value is greater than the “Release Limit”, an inside grip is executed, but if the “Release Limit” limit value is greater than the “No Part Limit”, an outside grip is executed.



When gripping and releasing, electric gripping modules stop at the positions “No Part Limit” or “Release Limit”.

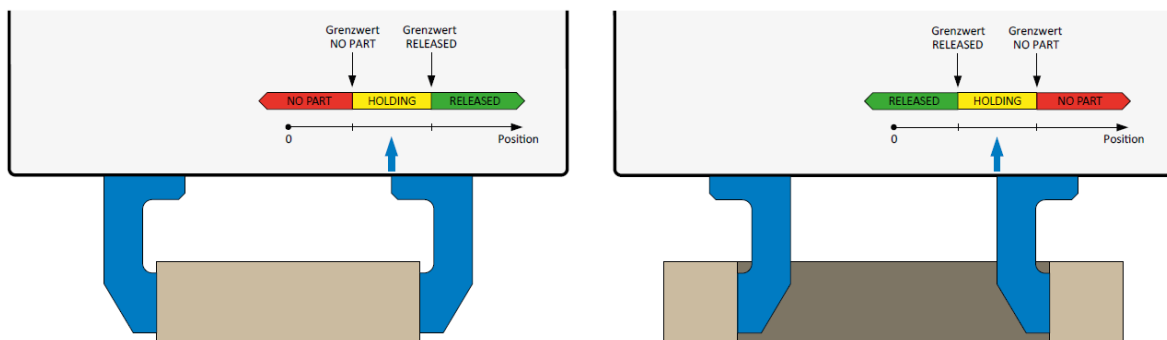


Figure 16: Outer grip and inner grip

Gripping force

GRIPKIT EASY has an integrated gripping force control. The gripping force can be specified as a percentage depending on the nominal gripping force of the gripping module.

7.3 Diagnostic data

Under the “Diagnostics” tab, you will find the firmware version used, a temperature display and warnings about the status of the gripping module.

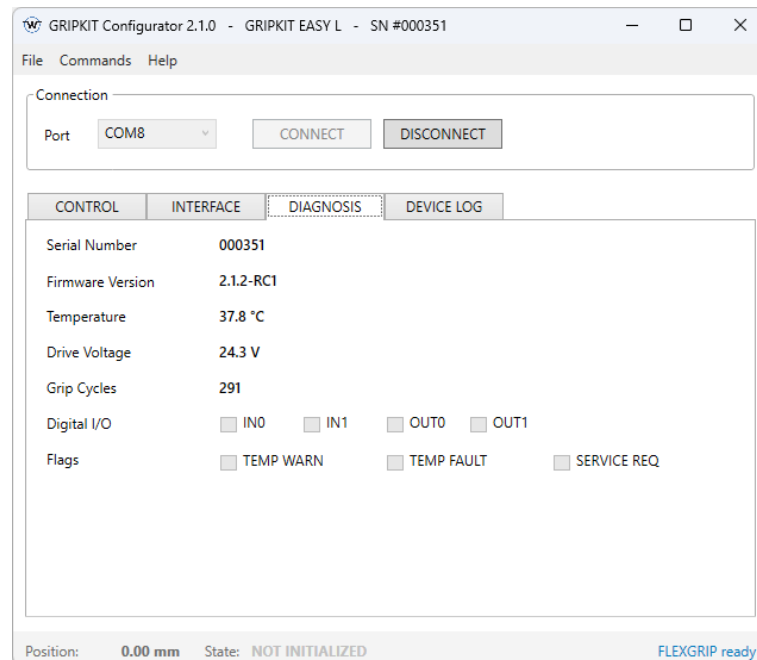


Figure 17: Diagnostic data



If you detect a problem with your gripping module, first connect it to a computer and read out the diagnostic data using the "GRIPKIT Configurator".

The system messages can be accessed via the "DEVICE LOG" tab. They are reloaded every second by the gripping module and displayed in tabular form.

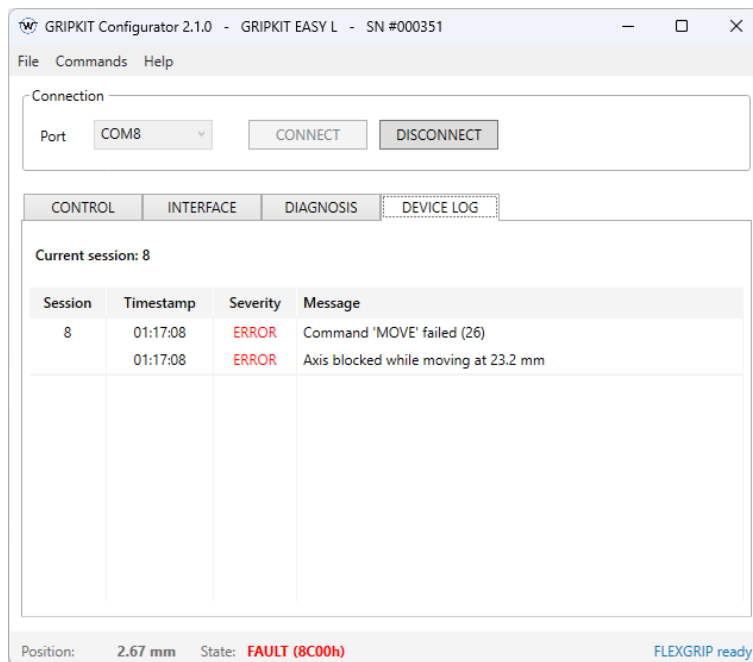


Figure 18: System messages

7.4 Display of the Operating State

The gripping module has a multicolored status display on the side. The current operational status is indicated through the color of the display light (see Table 14).

Table 14: Display color

Display	Meaning
White	Gripping state is NOT INITIALIZED or DISABLED
Blue	Gripping state is NO PART, RELEASED or OPERATING
Green	Gripping state is HOLDING
Red	ERROR
Flashing	USB-connection is active
Flashing red - green	"FIND ME" mode is active

8 Create applications

The gripping module is used in a robot program according to the instructions of the plug-in software available for the robot used.

9 Maintenance and cleaning

Clean the gripping module at regular intervals with a dry cloth to remove all dirt and, depending on the area of application, any chips. These typically also accumulate underneath the protective cover. Remove the protective cover as shown in Figure 19 to clean the motion apparatus of the gripping module with a brush.

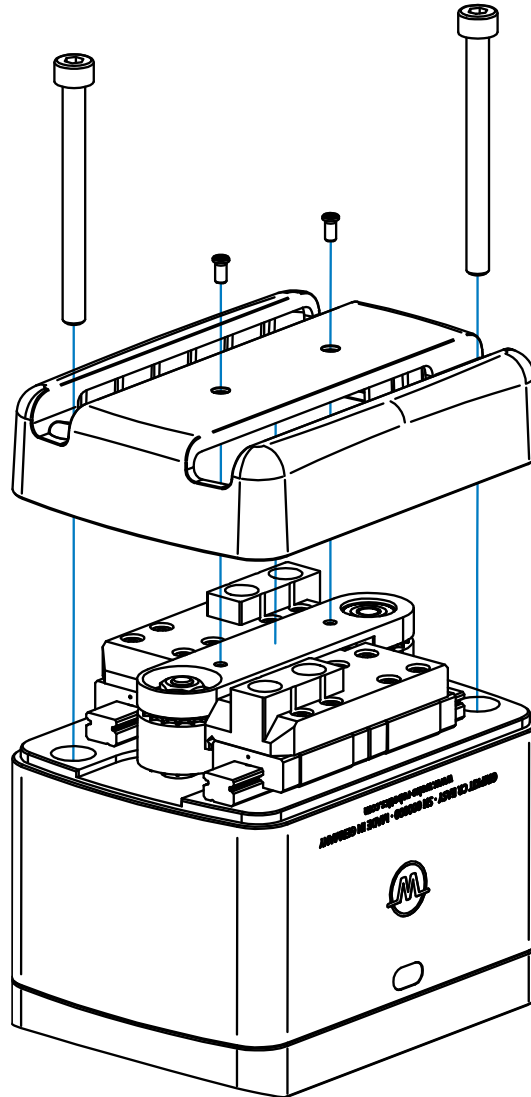


Figure 19: Removing the protective cover



The gripping module is adjusted at the factory. Base jaws and belts must not be disassembled!

9.1 Adjustment of the maintenance interval

The maintenance intervals must be adapted to the ambient and operating conditions. The following factors must be taken into account:

- Increased operating temperatures
- Condensation and condensation water effects
- High vibration stress
- Use in vacuum
- Highly dynamic operation
- Influence of foreign substances (e.g. vapors, acids, etc.)



The guideways are lubricated for life. In individual cases, relubrication may be necessary. Contact our technical sales department for assistance.

10 Troubleshooting

10.1 Gripping module shows error code



If in doubt, always contact technical support in the event of malfunctions or displayed error codes in order to avoid damage to the gripping module and installation!

Table 15: Error codes, their cause and remedy

Error code	Cause and remedy
5000h	Error on the control electronics <ul style="list-style-type: none">• Contact technical support
5011h	Error in the configuration memory <ul style="list-style-type: none">• Disconnect the gripper from the power supply for a short time• Contact technical support if the error persists
8C000h	Command could not be executed <ul style="list-style-type: none">• System log provides further information• Contact technical support
8CA5h	Internal software error <ul style="list-style-type: none">• Disconnect the gripper from the power supply for a short time• Contact technical support if the error persists
8CB2h	Error in the configuration memory

	<ul style="list-style-type: none"> • Disconnect the gripper from the power supply for a short time • Contact technical support if the error persists
8CC0h	Overcurrent fault <ul style="list-style-type: none"> • Check the cable connections for short circuits
8CC1h	Error on the control electronics <ul style="list-style-type: none"> • Contact technical support
8CC2h	Supply voltage error <ul style="list-style-type: none"> • Check that the supply voltage meets the requirements • Check the cable connections
8CC3h	Error on the control electronics <ul style="list-style-type: none"> • Disconnect the gripper from the supply voltage for a short time • Contact technical support if the error persists

10.2 Base jaws do not move

Table 16: Possible sources of error when the base jaws are stuck

Possible cause	Remedy
Operating voltage too low or power supply insufficient	<ul style="list-style-type: none"> • Check power supply • Check whether power supply meets the requirements according to chapter Electrical nominal data 5.2
Cable connection interrupted	<ul style="list-style-type: none"> • Check connection line
IO configuration of the robot faulty	<ul style="list-style-type: none"> • Check IO configuration of the robot
Component failure, e.g. due to overload	<ul style="list-style-type: none"> • Send the gripping module with a repair order to WEISS ROBOTICS. • Ensure that the gripping module is only used within the scope of its defined application parameters.
Fuse has tripped	<ul style="list-style-type: none"> • Send the gripping module with a repair order to WEISS ROBOTICS.

10.3 Gripping module stops abruptly or does not travel the entire stroke

Table 17: Possible sources of error in abnormal motion behavior

Possible cause	Remedy
Faulty parameterization	<ul style="list-style-type: none">• Check parameterization with the “GRIPKIT Easy Configurator”
Power supply interrupted	<ul style="list-style-type: none">• Check power supply
Foreign parts in the motion system or module dirty	<ul style="list-style-type: none">• Check the mobility with the gripping module switched off by moving the fingers by hand.• Remove foreign objects. Check for damage to the gripping module!• Perform maintenance and cleaning (see chapter 9)

10.4 Gripping module does not communicate via FLEXGRIP interface

Table 18: Possible sources of error in communication of the FLEXGRIP interface

Possible cause	Remedy
Incorrect parameterization	<ul style="list-style-type: none">• Check parameterization using the “GRIPKIT Easy Configurator”
Power supply interrupted	<ul style="list-style-type: none">• Check power supply
Incorrect termination	<ul style="list-style-type: none">• Check termination of all connected gripping modules and the counterpart

10.5 Gripping module does not respond to commands from the digital inputs

Table 19: Possible sources of error in case of problems with the IO interface

Possible cause	Remedy
Incorrect wiring or settings in the robot	<ul style="list-style-type: none">• Check robot output settings
FLEXGRIP interface active	<ul style="list-style-type: none">• If the FLEXGRIP interface is active, no commands can be processed via the IO interface. Restart the gripper by briefly disconnecting it from the supply voltage

11 EC Declaration of Incorporation

In the sense of the EC Machinery Directive 2006/42/EC, Annex II B

Manufacturer Weiss Robotics GmbH & Co KG
Karl-Heinrich-Käferle-Str. 8
D-71640 Ludwigsburg

Distributor Weiss Robotics GmbH & Co KG
Karl-Heinrich-Käferle-Str. 8
D-71640 Ludwigsburg

We hereby declare that the following product:

Product name	Servo-electric gripping module
Type designation	GRIPKIT EASY
Part numbers	5010018

complies with the applicable essential requirements of the **Machinery Directive (2006/42/EC)**.

The partly completed machinery must not be put into service until it has been established that the machine into which the partly completed machinery is to be incorporated complies with the provisions of the Machinery Directive (2006/42/EC).

Applied harmonized standards, in particular:

EN ISO 12100-1	Safety of machinery - Basic concepts, general principles for design, Part 1: Basic terminology, methodology
EN ISO 12100-2	Safety of machinery - Basic concepts, general principles for design, Part 2: Technical principles and specifications

The manufacturer undertakes to submit the special technical documents relating to the partly completed machinery to national authorities on request. The special technical documents belonging to the partly completed machinery according to Annex VII Part B have been prepared.

Responsible for documentation: Dr. -Ing. Karsten Weiß, Tel.: +49(0)7141/94702-0

Place, Date/Signature: Ludwigsburg, February 18, 2020



Signatory details Weiss Robotics GmbH & Co KG

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