



INSTALLATION AND OPERATING INSTRUCTIONS

GEP2000 series
2-jaw parallel gripper
Robot-specific
electric
GEP2006IO-12-B-01
GEP2010IO-12-B-01

DDOC01113-01

THE KNOW-HOW FACTORY

Parameter explanation (glossary)

Parameters	Explanation
ControlWord	The product is controlled using the "ControlWord." The "ControlWord" is bit-exclusive, which means that only one bit at a time can be active in the "Word." The value "ZERO" is also permitted.
DeviceMode	The "DeviceMode" is used to select gripping profiles as well as the additional help modes in the product.
Workpiece No.	You can use this parameter to select or save the workpiece recipes stored in the product.
TeachPosition	The "TeachPosition" is the actual workpiece position.
WorkPosition	The "WorkPosition" is the inner jaw position of the product. Depending on the application, for example with internal grippers, this can also be the standby position.
GripForce	The "GripForce" parameter is used to configure the gripping force.
PositionTolerance	This is the tolerance window for the "TeachPosition," "BasePosition" and "WorkPosition." The value of the parameter acts in both directions.
BasePosition	The "BasePosition" is the outer "JawPosition." Depending on the gripper profile, this can also be a work position!
ShiftPosition	The "ShiftPosition" is a switching position between pre-positioning and gripper movement.
StatusWord	In its bits, the "StatusWord" returns the most important information about the status of the product to the control system.
Diagnosis	If an error should occur, the "Diagnosis" outputs a diagnostic code that can be compared with the error list.
ActualPosition	The value of the current position of the product [1/100 mm].
Error	Fault, error message
DIR	Direction/24 V cable connection – Depending on the product, this signal is used to move the product.
Teach/Adjust	Program/Configure Using this signal, depending on the gripper type, the current position of the gripper jaws can be taught in as the new workpiece position. "Adjust" is used as a command to define the reachable end positions of the gripper jaws.
GND	Abbreviation for ground connection
Offset	Correction value
Traversing routine	Defined procedure for movement of the gripper jaws
Travel path	Path on which the gripper jaws travel

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1 Supporting documents

NOTICE



Read through the installation and operating instructions carefully before installing 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 the product or have anything to do with the product during any phase



of the product life cycle.

The standardized installation and operating instructions (DDOC01113) contain all the information for commissioning the product.

Relevant and required information for your product can be found in both installation and operating instructions.

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

The individual hazard levels, notices and warnings are marked with signal words.

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 and workplace safety.

2 Safety notices

CAUTION



Risk of injury in the event of improper installation, commissioning or maintenance and improper use.

Non-compliance may result in severe injuries!

The safety instructions for the GEP2000 series can be found in Section 2 of the standardized installation and operating instructions (DDOC01113).

3 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 designed exclusively for electric operation using a 24 V DC power supply.

The product must always be mounted on materials that dissipate heat.

The product is to be used as intended in enclosed rooms for temporary gripping, handling and holding.

The product is not suitable for clamping workpieces during a machining process.

Direct contact with perishable goods/food is not permitted.

4 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.

5 Product description

INFORMATION



Information about the product description can be found in the standardized installation and operating instructions (DDOC01113) or on our website.

Zimmer Customer Service is available to provide you with assistance if you have any further questions.

6 Function

INFORMATION



Information about the function can be found in the standardized installation and operating instructions (DDOC01113) or on our website.

Zimmer Customer Service is available to provide you with assistance if you have any further questions.

7 Installation

INFORMATION



Information about the installation can be found in the standardized installation and operating instructions (DDOC01113) or on our website.

Zimmer Customer Service is available to provide you with assistance if you have any further questions.

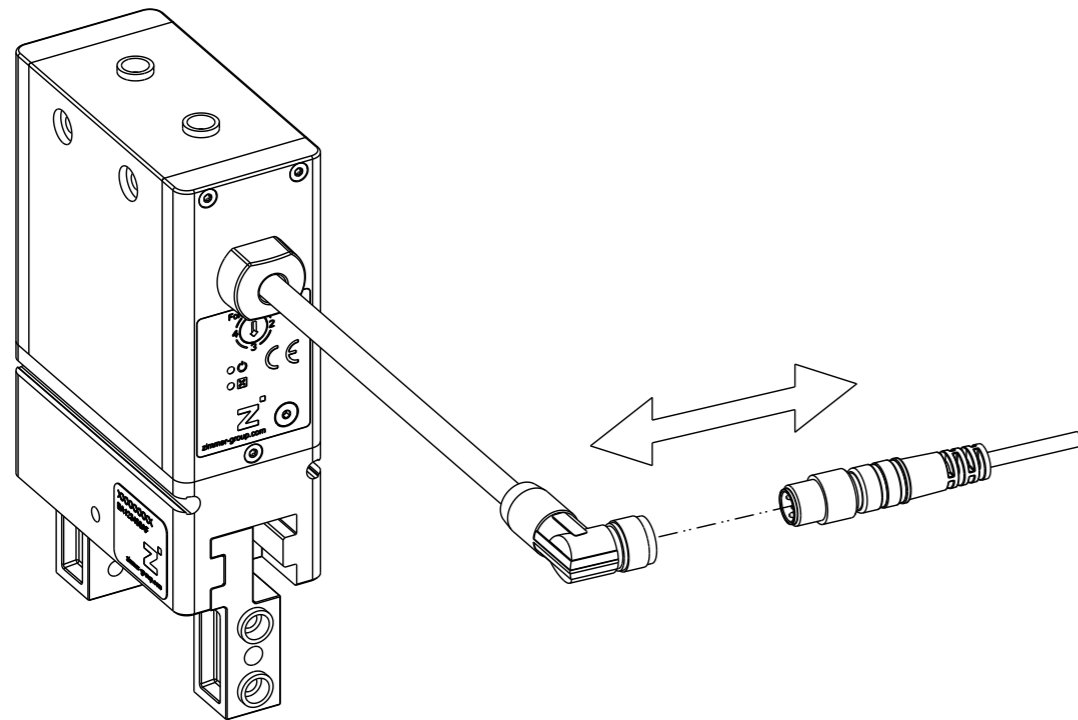
7.1 Installing the power supply

INFORMATION



The cables that are used by Zimmer GmbH feature a minimum bending radius of 10 x the outer diameter. This bending radius must not be undershot! Freely suspended cables must be secured to prevent excessive motion loads or pinching.

- ▶ Connect the supply cable to the product and the control system.
 - You can find the compatible power supply cable on our website at www.zimmer-group.com.



7.2 Installing the power supply "GEP2006IO-12-B-01/GEP2010IO-12-B-01"

7.2.1 Installing the wiring

NOTICE

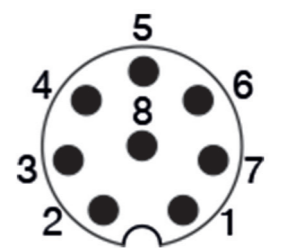


Non-compliance may result in material damage.

A correct pin assignment must be ensured.

⇒ The product may be ruined and malfunction.

PIN	Color	Function	Explanation
1	White	Analog output	0 to 10 V output
2	-	-	-
3	-	-	-
4	-	-	-
5	Gray	+ 24 V DC	+ 24 V DC supply voltage
6	Pink	Move command	Input, control input for inward move command
7	Blue	Move command	Input, control input for outward move command
8	Red	GND	0 V DC supply voltage



The following steps must be carried out for commissioning or installing the "GEP20xxIO-12-B-01" product:

- ▶ Connect the product to the voltage supply.
- ▶ Secure the voltage supply.
 - ⇒ A voltage supply between PIN 5 and PIN 8 is necessary for operation.
 - ⇒ A jaw movement is triggered by a voltage level between PIN 7 or PIN 6.

Control logic:

Movement	PIN 7 (open)	PIN 6 (close)
Product in rest mode	0	0
Open the product	1	0
Close the product	0	1

A movement in the desired direction occurs when the corresponding signal is at a high level. After a high level is detected, the gripper movement occurs until the gripping process ends.

It is important to ensure that the corresponding signal is reset after successful movement has taken place.

This must happen before a signal is carried out in the opposite direction.

Between withdrawing the signal and the next command, a pause time of 10 ms must be adhered to.

8 More information

INFORMATION



More information about the product can be found in the standardized installation and operating instructions (DDOC01113).

- Commissioning
- Operation
- Error diagnosis
- Maintenance
- Accessories/scope of delivery
- Transportation/storage/disposal
- Decommissioning/disposal
- RoHS Declaration/REACH Declaration

9 Declaration of Incorporation/Conformity

INFORMATION



The Declaration of Incorporation and Conformity can be found in the standardized installation and operating instructions (DDOC01113).

Zimmer Customer Service is available to provide you with assistance if you have any further questions.