INSTALLATION AND OPERATING INSTRUCTIONS

2-jaw parallel gripper
GPP5000IL
3-jaw concentric gripper
GPD5000IL

DDOC00247

THE KNOW-HOW FACTORY

ZIMMER group

Glossary

Term	Explanation
ActualPosition	Value of the current jaw position [1/100 mm]
Adjust	Starts the travel routing stored in the product to teach the BasePosition and WorkPosition.
BasePosition	Outer jaw position Depending on the application, this can be the base position or the work position.
ControlWord	Activation of the product Only one bit is permitted to be active in the ControlWord. The value 0 is also permitted.
DeviceMode	Used to select gripping profiles as well as the additional help modes in the product.
Diagnosis	If an error occurs, outputs a diagnostic code that can be compared with the error list.
GND	Ground/earth
PositionTolerance	Tolerance range for TeachPosition The value of the parameter acts in both directions.
StatusWord	Summary of binary states of the product that can be returned as information to the control system.
Teach	Adoption of the ActualPosition as the TeachPosition
TeachPosition	Taught-in workpiece position
Traversing routine	Defined procedure for movement of the jaws
Travel path	Path on which the gripper jaws travel.
WorkpieceNo	Number of the selected workpiece recipe
WorkPosition	Inner jaw position Depending on the application, this can be the standby position or the work position.

Content

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.

- 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 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 Safety notices

CAUTION

Risk of injury and material damage in case of non-compliance

The product is state-of-the-art.

The following are examples of situations in which the product may cause a hazard:

- The product is not properly installed, used or maintained.
- The product is not used for its designated purpose.
- The locally applicable regulations, laws, directives or guidelines are not observed.

► The product may only be used in accordance with these installation and operating instructions and the product's technical data. Any changes or additions to the intended use of the product, as well as modifications to the product, such as those in the following examples, require the written permission of the manufacturer:

- Use of the product under extreme conditions, such as aggressive fluids or abrasive dusts
- Additional drilled holes or threads
⇨ Zimmer Group GmbH shall accept no liability for any damage caused by improper use. The operator bears sole responsibility.

► Make sure that the power supply is disconnected before you mount, adjust, modify, maintain or repair the product.

► Whenever work is carried out on the product, make sure that the product cannot be actuated by mistake.

► Perform maintenance tasks, renovation work or attachment work outside of the machine's danger zone when possible.

► Do not reach into the operational range of the product.

► Note that, due to the spring tension, you should exercise increased caution when uninstalling products with integrated springs.

► Observe the specified maintenance intervals and specifications regarding the quality of the operating material.

► When using the product under extreme conditions, adjust the maintenance interval according to the degree of contamination.

► Check the completeness and tightening torques of all mounting screws.

CAUTION

Notes and handling regulations for electrostatically sensitive components

Electrostatically sensitive components are individual components, integrated circuits or assemblies that can be damaged by electrostatic fields or electrostatic discharge.

► When handling electrostatic components, make sure that persons, the work area and packaging are all fully grounded.

► Touch electronic components only in appropriately identified areas with conductive flooring and only if:

- You are grounded by means of special bracelets.
- You wear shoes that are suitable and approved for the discharge of electrostatic charges.

► Do not bring electronic assemblies into contact with plastics and parts of clothing that have plastic content.

► Store electronic assemblies on conductive underlays only.

► Do not install electronic assemblies in the vicinity of data back-up devices or monitors (monitor distance > 100 mm).

► Perform measurements on electronic assemblies only if:

- The measuring instrument is grounded (e.g. via a ground conductor).
- The measuring head is momentarily discharged before measuring with a floating measuring instrument.

3   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 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 Group GmbH shall accept no liability for any damage caused by improper use. The operator bears sole responsibility.

- The product must always be mounted on materials that dissipate heat.
- The product is intended for industrial use.
- 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.
- The product is not suited for use in a potentially explosive atmosphere.

4   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.

4.1   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.

4.2   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.

4.3   Instructed personnel

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

4.4   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.

4.5   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.

5   Product description

5.1   Possible applications

Outside gripping

The product can be used for outside gripping.

MoveToWork command
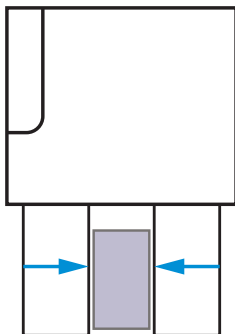
Inside gripping

The product can be used for inside gripping.

MoveToBase command
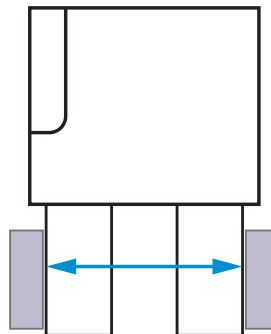
5.2   Type plate

A type plate is attached to the product.

⎯⎯⎯⎯⎯⎯⎯⎯⎯

01   Article number

02   Confirmation number
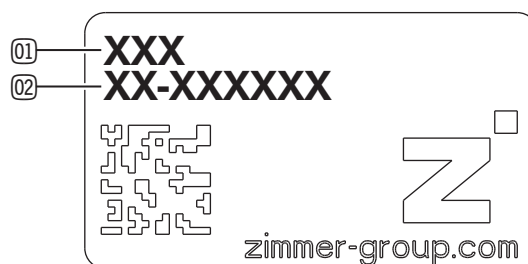
6 Functional description

The gripper jaws of the GEP5000 series are arranged parallel to each other on two opposing guide rails and can be moved relative to each other.

The gripper jaws of the GED5000 series are arranged on three guide rails offset to each other at a 120° angle.

The product has a double-acting pneumatic rotor cylinder.

The electrical connection controls a solenoid valve that directs the air flow from the corresponding direction to the piston.

The force of the piston is transferred to a wedge hook mechanism that sets the jaws in synchronized motion.

The spring used in the cylinder chamber acts as an energy accumulator and gripping force retention device.

The product can be easily integrated into available control systems and controlled via IO-Link.

The gripping force can be adapted optimally to the workpiece conditions via IO-Link.

6.1 LED status display
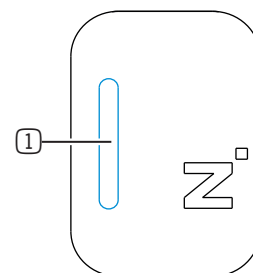
① Status display

6.1.1 Status display

Status	Meaning
🟢 LED lights up continuously green.	• The product is in the TeachPosition.
🔵 LED lights up continuously blue.	• The product is in the BasePosition or WorkPosition.
🟠 LED lights up continuously orange.	• The product is not in any of the following positions: BasePosition, WorkPosition, TeachPosition.
🔴 LED lights up continuously red.	• The product has a fault.
◉ LED flashes red.	• No IO-Link connection

6.2 Verified configuration examples

INFORMATION

► You can find the information in the technical data sheet on our website.

► Please contact Customer Service if you have any questions.

6.3 Gripping force retention

WARNING

Risk of injury caused by falling parts

Products with universal operation (N, S) do not have gripping force retention. In the event of energy loss, the gripping force is lost and the workpiece may also be lost.

► If possible, use form-fit gripper fingers.

► When using frictional fit gripper fingers, install a suitable gripping force retention.

► Make sure that no personnel are present underneath the product.

WARNING

Risk of injury caused by falling parts

In products with universal operation (N, S) and a pressure safety valve, the gripping force retention can become ineffective due to leakage in the event of a prolonged drop in pressure.

► Make sure that no personnel are present underneath the product.

INFORMATION

For products with an integrated spring, the spring ensures that the gripping force is retained in the event of a loss of pressure or voltage.

In products with a spring energy accumulator, there is fault exclusion for gripping force retention in accordance with standard EN ISO 13849-2.

► Note that products with universal operation (N, S) do not feature gripping force retention.

Parameter	Without spring N, S	Status	With spring NC, NO, SC, SO	Status
• Pressure failure • Actuator voltage present • Without pressure safety valve	No gripping force present	🔴	Spring force present	🟠
• Pressure failure • Actuator voltage present • With pressure safety valve	Full gripping force present	🟢	Full gripping force present	🟢
• Operating pressure present • No actuator voltage • Without pressure safety valve	No gripping force present	🔴	Spring force present	🟠
• Operating pressure present • No actuator voltage • With pressure safety valve	No gripping force present	🔴	Spring force present	🟠

7   Technical data

> **INFORMATION**
>
> ► You can find the information in the technical data sheet on our website.
> This data varies within the series, depending on the specific design.

8   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.

9   Transportation/storage/preservation

► Transport and storage of the product must be done only with the original packaging.

► If the product has already been installed on the superordinate machine unit, care must be taken during transport to ensure that no unexpected movements can occur.

   ► Before commissioning the product and after transport, check all power and communication connections as well as all mechanical connections.

► If the product is stored for an extended period, the following points are to be observed:

   ► Keep the storage location as dust-free and dry as possible.

   ► Avoid temperature fluctuations.

   ► Avoid wind/drafts/water condensation formation.

   ► Pack the product and do not expose it to direct sunlight during storage.

► Clean all components. There must be no soiling left on the components.

► Visually inspect all components.

► Remove all foreign substances.

► Properly remove potential corrosion spots.

► Close off unused connections using pressure-resistant closures.

► Close electrical connections using suitable covers.

10 Installation

WARNING

⚠️ **Risk of injury due to uncontrolled movements**

Risk of injury in case of unexpected movement of the machine or system into which the product is to be installed.

► Switch off the energy supply of the machine before any work.

► Secure the power supply against being switched on unintentionally.

► Check the machine for any residual energy that may be present.

CAUTION

⚠️ **Risk of injury due to uncontrolled movements**

Risk of injury in the event of uncontrolled movement of the product when the power supply is connected.

► Switch off the power supply to the machine before carrying out any work.

► Secure the power supply against being switched on unintentionally.

► Check the machine for any residual energy that may be present.

Assembly requirements		
Permissible flatness tolerance [mm]	Mounting surface length [mm] ≤ 100	0.02
	Mounting surface length [mm] > 100	0.05
Strength class of the mounting screws	8.8	

INFORMATION

ℹ️ Further installation information:

• The mounting screws are not included in the scope of delivery.

► Install the product on an appropriate mounting surface in accordance with the flatness specifications.

► Make sure that the mounting piece is sufficiently rigid.

► Ensure the cleanliness of the connection surfaces.

► Please note the permitted tightening torques of the mounting screws at www.zimmer-group.com/en/td.

10.1 Installing GPP5000IL

The product can be installed from multiple sides.

► Insert the centering sleeves into the provided fits on the product.

► Position the product on the mounting piece using centering sleeves.

► Mount the product on the mounting piece using the appropriate mounting screws.
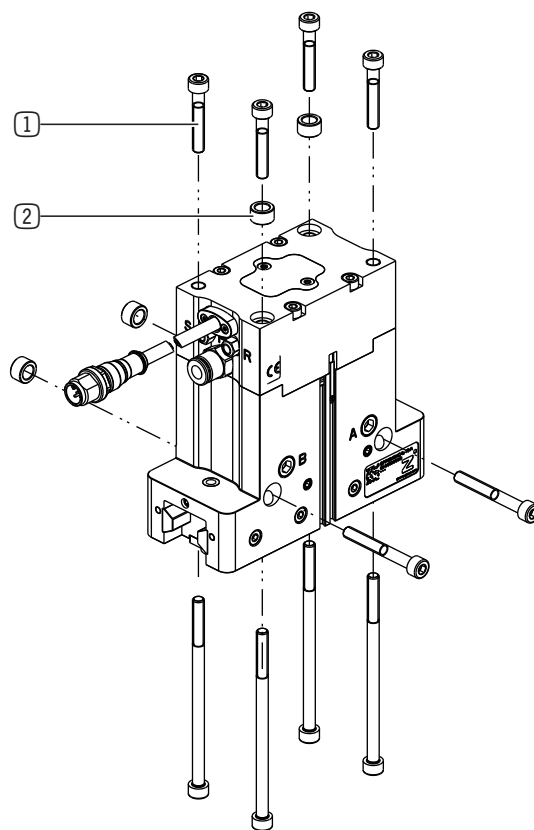
1 Mounting screw

2 Centering Disc

10.2 Installing GPD5000IL

The product can be installed from multiple sides.

► Insert the straight pins into the designated fits on the product.

► Position the product on the mounting piece with straight pins.

► Mount the product on the mounting piece using the appropriate mounting screws.
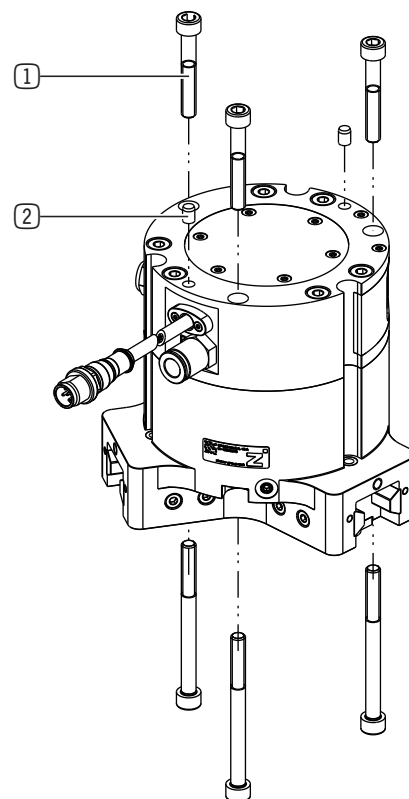
1 Mounting screw

2 Straight pins

10.3 Safe shutoff for products with IO-Link

CAUTION

Risk of injury in case of non-compliance

Without a pneumatic power supply, the gripping force of the product slowly diminishes depending on the weight of the object being gripped. The pressure loss is approx. 0.2 bar/h.

► Please note that a loss of compressed air can lead to uncontrolled movements or workpiece loss depending on the product variant and gripping direction.

► Secure the hazard points before entering the danger zone.

CAUTION

Risk of injury in case of non-compliance

Without an electrical power supply, the pneumatic power supply fails immediately and the system is vented.

► Please note that a loss of compressed air can lead to uncontrolled movements or workpiece loss depending on the product variant and gripping direction.

► Secure the hazard points before entering the danger zone.

CAUTION

Risk of injury in case of non-compliance

In addition to switching off the voltage supply, Zimmer Group GmbH also recommends switching off the compressed air supply with a secure valve.

There is no galvanic separation between the two voltage supplies sensor and actuator.

There is a low-voltage connection via the ground (GND) for specific installation sizes.

- This pertains to installation sizes GPP5006IL, GPP5008IL, GPP5010IL and GPD5006IL, GPD5008IL, GPD5010IL.

► Please note that complete gripping force retention is only present when the following requirements are met:

- The actuator voltage is maintained.
- The product is also operated via a pressure safety valve that maintains stable air pressure in the gripper.

► Please observe the table and notes in the "Gripping force retention" section.

INFORMATION

For safe shutoff for products with IO-Link, two contactors with one auxiliary contact each are switched in series. Here, the auxiliary contacts monitor the status of the contactors. If one contactor does not switch, the second contactor ensures safety. The malfunction can still be detected with the contacts.

Besides the actuator supply voltage, Zimmer Group GmbH also recommends switching off the compressed air supply.

The following figure shows the example of a circuit through which the IO-Link master cannot conduct the actuator current of the product.
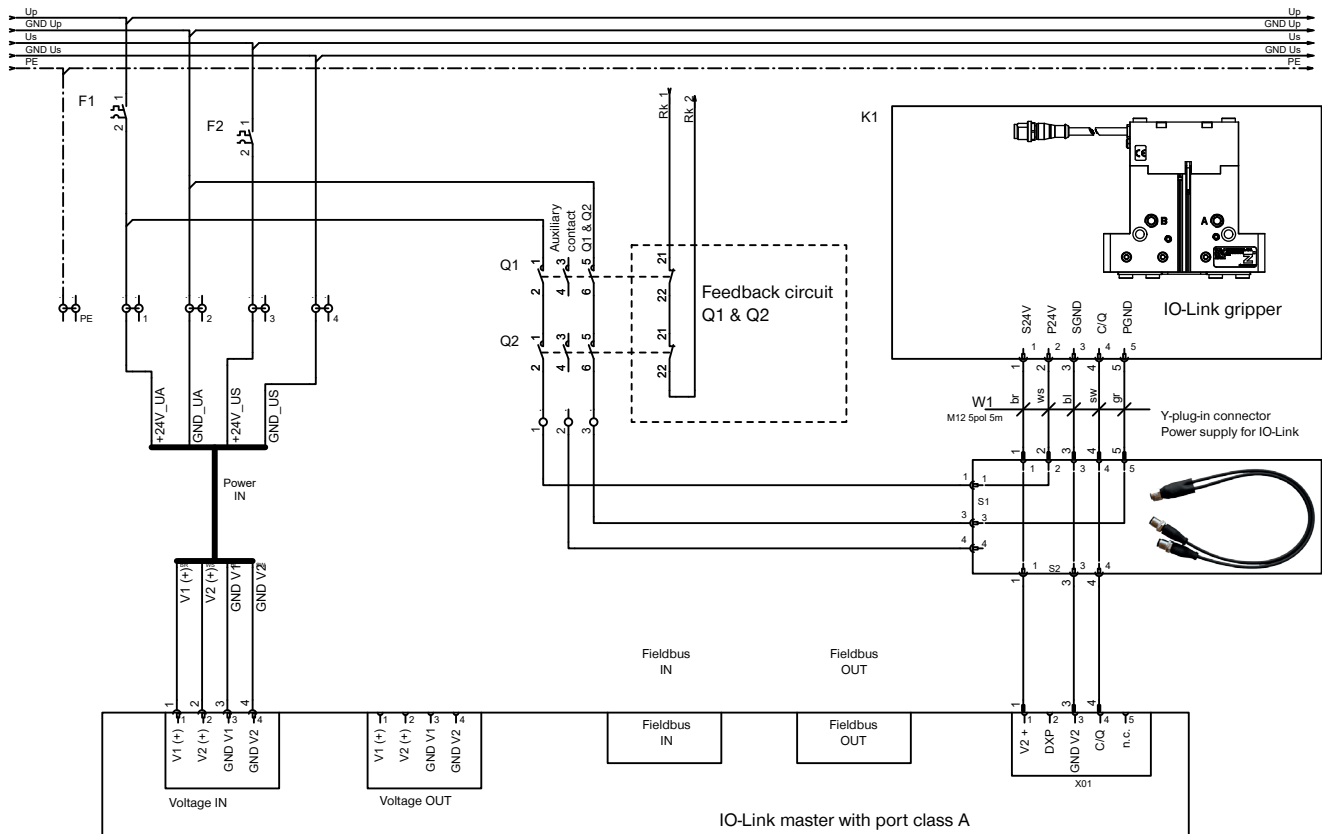
10.4 Installing the energy supply

10.4.1 Installing the pneumatic system

NOTICE

Non-compliance may result in material damage.

► Use connections R and S to divert the compressed air to prevent damage to the product from foreign substances or water.

⇨ Pneumatic connections A and B are sealed and may not be used.

► The authorized connections that are available can be found in the accessories list on our website. The necessary ordering information can also be found there.

► Use compressed air in accordance with DIN ISO 8573-1 [3:4:3].

NOTICE

Material damage due to contamination

► Replace the filters of connections R and S with exhaust hoses in dirty environments.

► Move the exhaust air outlet to a clean environment.

NOTICE

Non-compliance may result in material damage.

If the pressure at the sealing air connection is too high, the lubrication at the guide is reduced too quickly.

► Apply a maximum pressure of 0.5 bar to the sealing air connection.

INFORMATION

► Please note that the positioning of the pneumatic connections is different for the various installation sizes.

► Please note that connection S is not available for all installation sizes of the GPD5000IL series.

► Mount the screw fitting in the provided connection.
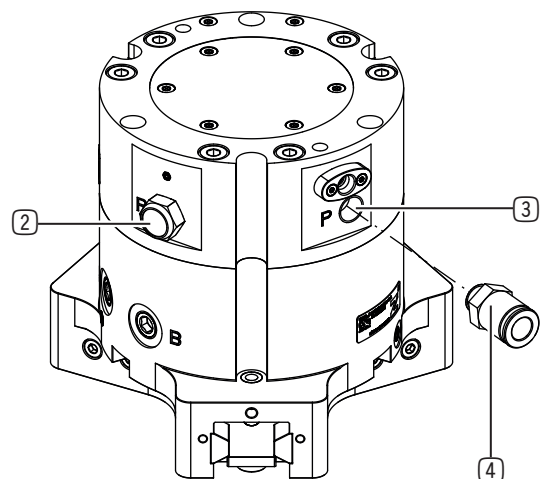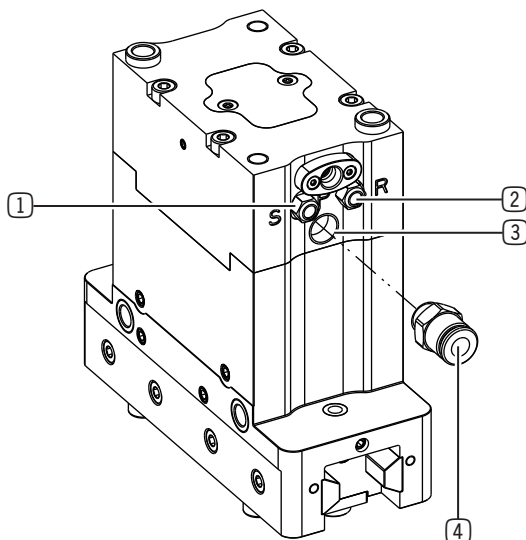
① Connection S: Exhaust air with mounted silencer

② Connection R: Exhaust air with mounted silencer

③ Connection P: Compressed air

④ Screw fitting

10.4.2 Installing the electrical system

► Connect the power supply cable to the control system of the product.
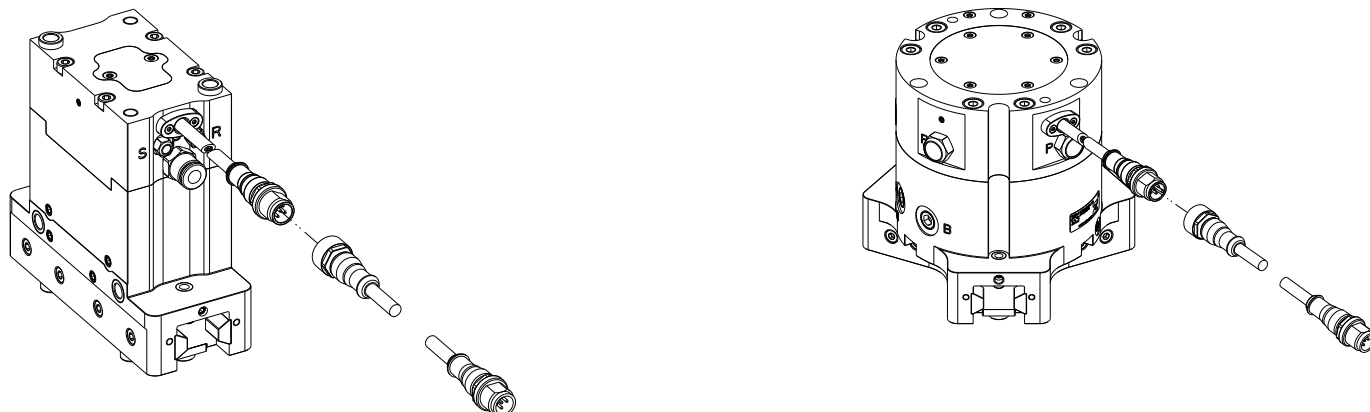
10.4.3 Pin assignment

INFORMATION

► Please note that only specific installation sizes have galvanic separation.

- This pertains to installation sizes GPP5013IL, GPP5016IL, GPP5025IL and GPD5013IL, GPD5016IL, GPD5025IL.

There is a low-voltage connection via the ground (GND) for specific installation sizes.

- This pertains to installation sizes GPP5006IL, GPP5008IL, GPP5010IL and GPD5006IL, GPD5008IL, GPD5010IL.

An optional B12 Y-plug-in connector allows electrical isolation from the perspective of the IO-Link master.

Pin	Color	Function	Explanation	Plug, M12
1	Brown	24 V DC sensor	24 V DC supply voltage for IO-Link communication	
2	White	PWR actuator	24 V DC supply voltage for actuator	
3	Blue	GND sensor	0 V DC supply voltage for IO-Link communication	
4	Black	C/Q	IO-Link communication	
5	Gray	GND actuator	0 V DC supply voltage for actuator	

► Connect the product to the IO-Link master.

► Reconnect the voltage supply.

⇨ For Port Class A, an additional power supply is required via a Y-plug-in connector.

10.4.4 Pin assignment of the Y plug-in connector

① Socket

② Plug 1

③ Plug 2
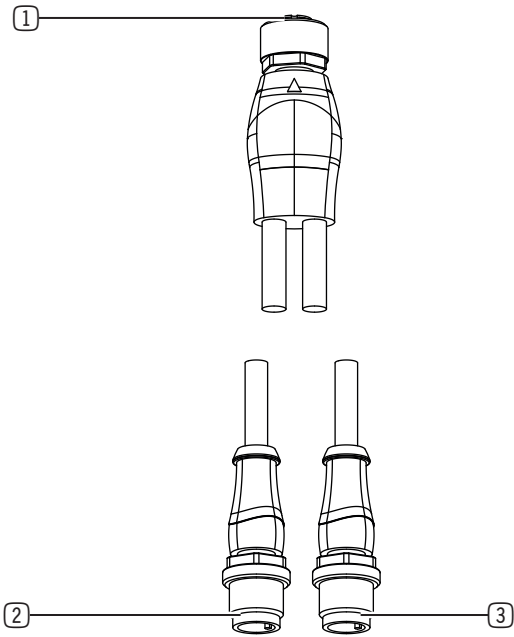
Pin	Color	Function	Explanation	Socket, M12
1	Brown	24 V DC sensor	24 V DC supply voltage for IO-Link communication	
2	White	PWR actuator	24 V DC supply voltage for actuator	
3	Blue	GND sensor	0 V DC supply voltage for IO-Link communication	
4	Black	C/Q	IO-Link communication	
5	Gray	GND actuator	0 V DC supply voltage for actuator	

Pin	Color	Function	Explanation	Plug 1, M12
1	Brown	PWR actuator	24 V DC supply voltage for actuator	
3	Blue	GND actuator	0 V DC supply voltage for actuator	
4	Black	-	-	

Pin	Color	Function	Explanation	Plug 2, M12
1	Brown	24 V DC sensor	24 V DC supply voltage for IO-Link communication	
3	Blue	GND sensor	0 V DC supply voltage for IO-Link communication	
4	Black	C/Q	IO-Link communication	

10.5 Installing the sensors

NOTICE

Material damage caused by magnetic influences

► Note that switching point shifts may occur if the sensors are exposed to an additional, external magnetic field.

► Do not attach magnets or components with ferromagnetic properties in the vicinity of components that may be affected by them.

INFORMATION

Integrated position sensing is available in the housing for specific product variants.

- This pertains to installation sizes GPP5013IL, GPP5016IL, GPP5025IL and GPD5013IL, GPD5016IL, GPD5025IL.

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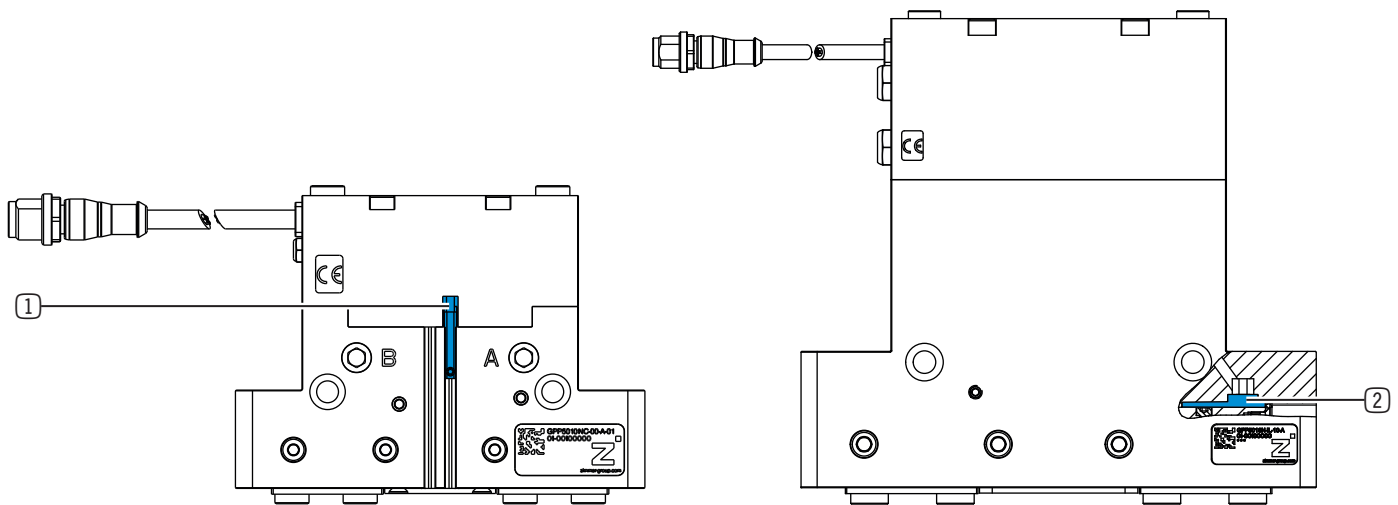
① Sensor

② Magnetic strip

10.6 Static charge

NOTICE

Material damage from static charge

The movement of the gripper jaws can lead to low electrostatic voltages. These charges cannot be dissipated if the product is mounted on an insulating surface and if discharge is not possible through the workpiece.

► Please note that ESD-sensitive parts can be damaged if they come into contact with the product.

► Ground the product for applications that require high EMC resistance.

10.7 Heat dissipation

NOTICE

Material damage from overheating of the product

If the product is operated under a very high ambient temperature or with fast clock cycles on an ongoing basis, this can reduce its service life.

► If the product is exposed to high ambient temperatures, always install it on heat-conducting materials.

► Reduce the load with increasing temperature.

10.8 Installing accessories

NOTICE
Non-compliance may result in material damage.
► Before installing an accessory, make sure it is suitable for use with the selected variant.
► You can find information on our website.
► Please contact Customer Service if you have any questions.

11 Commissioning

WARNING

Suspended loads can cause injury

Falling loads can cause severe injuries.

► Always keep an adequate safety distance from suspended loads.

► Do not stand or walk underneath suspended loads.

CAUTION

Reduction of the gripping force can cause injury and material damage

When flexible components are gripped, the gripping force of the product is reduced.

Reduced gripping force can cause injuries or material damage because the components can no longer be securely gripped and transported.

► Do not stand or walk underneath suspended loads.

CAUTION

Risk of injury and material damage in case of non-compliance

The product can overheat when the current feed duration is too long.

The product has a fuse to protect it from destruction.

► Observe the recommended cooling temperature in accordance with EN ISO 13732-1.

► Wear suitable protective equipment.

NOTICE

Malfunction in case of non-compliance

► Note the correct setting of the gripping force and the selection of the gripper finger length to prevent the gripper jaws from tensioning.

11.1 Process data

There is an option to control the product only with the process data that is transmitted in each cycle.

Process data output	Data type
ControlWord	UINT16
DeviceMode	UINT8
WorkpieceNo	UINT8
TeachPosition	UINT16
Reserve	UINT8
PositionTolerance	UINT8
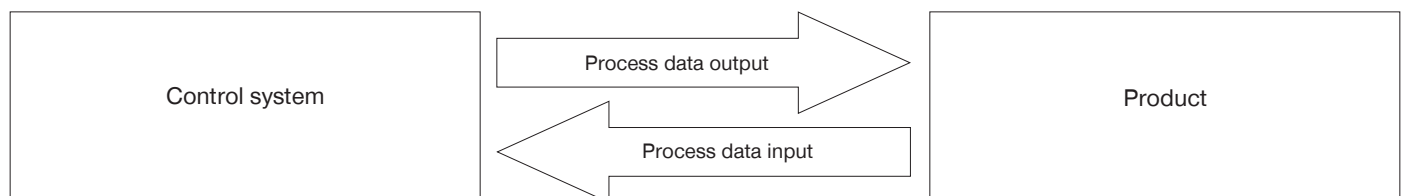
Process data input	Data type
StatusWord	UINT16
Diagnosis	UINT16
ActualPosition	UINT16

11.2 IODD Import

The product is controlled via IO-Link by means of the cyclical process data as well as the acyclic service data with a min. cycle time of 2.5 ms.

► You must check the process data.

► Import the IODD (device description) into the control system.

    ► Go to our website.

    ► Select the desired product.

    ► Download the corresponding .zip file via the Downloads section under IODD.

As soon as the hardware configuration is complete and the IO-Link connection to the product is established, data will be displayed in the process input data.

Some control systems demand a byte swap to bring this process data into a logical sequence.

► Look at bit 6 (GripperPLCActive) in the StatusWord to determine whether a byte swap is necessary.

    ► Determine whether bit 6 is active in the first or second byte of the StatusWord.

        ⇨ Bit 6 is active in the first byte: The bytes already have the correct sequence.

            ► Continue with the commissioning.

        ⇨ Bit 6 is active in the second byte:

            ► Apply a byte swap (see the section "StatusWord").

11.3 Data transmission via handshake

The transfer of process data to the product takes place with what is referred to as a handshake. All process data described in the following sections must be transferred with the handshake.

► Send the ControlWord = 0x0001 to the product.

⇨ The data transfer was started.

► Check the response of the product by using StatusWord.12 = TRUE (data transfer OK).

► Send the ControlWord = 0x0000 to stop the data transfer.

⇨ The data transfer is complete when the product sends back StatusWord.12 = DataTransferOK = FALSE.

► For examples, refer to the "Quickstart Basic Parameters" section.

11.4 Parameters

11.4.1 ControlWord

NOTICE

Malfunction in case of non-compliance

For ControlWord, only one single bit or the value 0 may be set at a time.

► Only use the values listed in the following table.

Parameter	Decimal value	Hexadecimal value
DataTransfer	1	0x0001
WritePDU	2	0x0002
Teach	8	0x0008
Adjust	128	0x0080
MoveToBase	256	0x0100
MoveToWork	512	0x0200
ErrorReset	32768	0x8000

Data type	UINT16
Permission	Write
Transfer	Cyclical
Value range	0 - 65535

	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
Byte 1	ErrorReset	-	-	-	-	-	MoveToWork	MoveToBase
	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Byte 2	Adjust	-	-	-	Teach	ResetDirectionFlag	WritePDU	DataTransfer

Bit 0: DataTransfer

Setting this bit causes the product to acquire the data transmitted in the process data ("WorkpieceNo" = 0) or the data stored in the workpiece data ("WorkpieceNo" = 1 to 32) as the active data set.

Bit 1: WritePDU

Setting this bit tells the product that the current process data should be written to the selected tool recipe.

Bit 2: ResetDirectionFlag

Setting this bit tells the product that the direction flag needs to be reset. This makes a repeated movement to a position possible. This is logical during a switchover of workpiece recipes.

Bit 3: Teach

Setting this bit tells the product that the current position should be saved as the TeachPosition in the selected WorkpieceNo. This only works if there is no "0" that is transmitted in the workpiece number.

Bit 7: Adjust

Setting this bit causes a readjustment of the jaw end positions if no other bit is set in the control word.

Bit 8: MoveToBase

Setting this bit tells the product to move toward the BasePosition.

Bit 9: MoveToWork

Setting this bit tells the product to move toward the WorkPosition.

Bit 15: ErrorReset

This bit can be used to acknowledge all errors that can be reset (see the section "Error diagnosis").

11.4.2 DeviceMode

INFORMATION
DeviceMode can be used to select the universal operation travel mode. The transmitted process data must be acquired using ControlWord 0x0001.

DeviceMode	Function
2	Shut off the valves
100	Universal mode
109	Ignore position error

Data type	UINT8
Permission	Write
Transfer	Cyclical
Value range	0 to 255

11.4.3 WorkpieceNo

The workpiece number is used for selecting the previously stored workpiece data, as well as for selecting the WorkpieceNo data record in which the current process data is stored.

WorkpieceNo enables individual workpieces to be taught in to the product very quickly if the recipes are not managed on the control system.

INFORMATION
By setting bit 2, the process data and set gripping force can be stored.
Example:
In order to use the data stored in workpiece data set 3, WorkpieceNo 3 must be transmitted in the process data.

INFORMATION
► You can find example codes in the sections "Quickstart Basic Parameters" and "Recipe Examples".

Data type	UINT8
Permission	Write
Transfer	Cyclical
Value range	0 - 32

Index	Name	Data type	Permission	Values	Description
0x0800 to 0x081F (2048 to 2079)	Workpiece number	-	-	1 to 32	Every index contains subindices.

Subindex	Name	Data type	Permission	Values	Description
1	DeviceMode	UINT8	Read	100, 109	Value = 100, universal operation with inside or outside gripping Value = 109, ignore position error
2	TeachPosition	UINT16	Read	0 to max. stroke	This value can be used to change the workpiece position via the cyclical data. Example: TeachPosition = 2010 corresponds to a stroke of 20.10 mm.
3	PositionTolerance	UINT8	Read	0 to 255	This value defines the tolerance for the set TeachPosition.

At a value > 0, the corresponding workpiece recipe is loaded in the product.

11.4.4 TeachPosition

The TeachPosition notifies the product of the expected position of the workpiece.

The PositionTolerance defines the tolerance range around the TeachPosition.

The StatusWord notifies the control system of whether the correct workpiece has been gripped.

If the jaws are within the tolerance range in the vicinity of the TeachPosition, bit 9 is set in the StatusWord.

With the position measuring system, it is possible to achieve a TeachPosition accuracy of ± 0.05 mm.

► Use the following values:

Product	Stroke per gripper jaw	BasePosition	WorkPosition	TeachPosition
GPP5006IL, GPD5006IL	6	0	1200	0 to max. 1200
GPP5008IL, GPD5008IL	8	0	1600	0 to max. 1600
GPP5010IL, GPD5010IL	10	0	2000	0 to max. 2000
GPP5013IL, GPD5013IL	13	0	2600	0 to max. 2600
GPP5016IL, GPD5016IL	16	0	3200	0 to max. 3200
GPP5025IL, GPD5025IL	25	0	5000	0 to max. 5000

Example:

For GPP5006IL, this results in a total stroke of 12 mm with a resolution of 1/100 mm.

This gives a value of 1200 for the WorkPosition and a value range of 0 - 1200 for the TeachPosition.

Data type	UINT16
Permission	Write
Transfer	Cyclical
Value range	0 to max. jaw stroke of the product [0,01 mm]

11.4.5 PositionTolerance

The TeachPosition notifies the product of the expected position of the workpiece.

The PositionTolerance defines the tolerance range around the TeachPosition.

They are used to configure the position tolerance with a resolution of 0.01 mm.

Thus, the value range of 0 to 255 can be used to set a maximum tolerance of 2.55 mm in both directions.

Data type	UINT8
Permission	Write
Transfer	Cyclical
Value range	0 to 255

11.4.6 StatusWord

Data type	UINT16
Permission	Read
Transfer	Cyclical
Value range	0 - 65535

	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
Byte 1	Error	ControlWord 0x0200	ControlWord 0x0100	DataTransferOK	UndefinedPosition	WorkPosition	TeachPosition	BasePosition
	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Byte 0	-	Gripper-PLCActive	-	-	-	-	-	-

Bit 6: GripperPLCActive

Active as soon as the product has booted up after the cold boot. This bit can be used to verify a "byte swap."

Bit 8: BasePosition

Active if the product is set to BasePosition.

Bit 9: TeachPosition

Active if the product is set to TeachPosition.

Bit 10: WorkPosition

Active if the product is set to WorkPosition.

Bit 11: UndefinedPosition

Active if the product is not set to TeachPosition, WorkPosition or BasePosition.

Bit 12: DataTransferOK

This bit is used for data transmission with the handshake. Active as soon as the product has taken over the data with the parameter ControlWord 1 (decimal).

Bit 13: ControlWord 0x0100

This bit is a direction flag. Active if the last motion task was carried out toward BasePosition.

Bit 14: ControlWord 0x0200

This bit is a direction flag. Active if the last motion task was carried out toward WorkPosition.

Bit 15: Error

Active if the product has an active error. The error message can be determined using Diagnosis.

11.4.6.1 Acknowledging an error

If the product has a fault, the error bit is set in the StatusWord.

► Acknowledge the error by sending ControlWord 0x8000.

NOTICE

Malfunction in case of non-compliance

Not all errors can be reset. For some errors, such as *maximum permissible temperature exceeded*, the error message is not reset after acknowledgment.

► In this case, wait until correct values are sent to the product.

INFORMATION

► Use StatusWord to verify correct gripping.

► The TeachPosition tolerance can be adjusted in another process parameter.

► Observe the tolerances and fluctuations around the exact value of the actual position during programming the position query.

11.4.7 Diagnosis

The value returned in Diagnosis corresponds to the error code (see "Error Diagnosis" section).

Data type	UINT16
Permission	Read
Transfer	Cyclical
Value range	0 - 65535

11.4.8 ActualPosition

ActualPosition is the current position of the gripper jaws.

The value is specified with a resolution of 0.01 mm.

The values can move between the BasePosition (minimum values) and the WorkPosition (maximum values).

With the position measuring system, it is possible to achieve a position accuracy of ± 0.05 mm.

Product	BasePosition	WorkPosition
GPP5006IL, GPD5006IL	0	1200
GPP5008IL, GPD5008IL	0	1600
GPP5010IL, GPD5010IL	0	2000
GPP5013IL, GPD5013IL	0	2600
GPP5016IL, GPD5016IL	0	3200
GPP5025IL, GPD5025IL	0	5000

Data type	UINT16
Permission	Read
Transfer	Cyclical
Value range	0 to max. jaw stroke of the product

INFORMATION

- ► Use the StatusWord to check whether a workpiece has been gripped correctly.
- • The position measurement resolution is 0.01 mm.
- • The position measurement accuracy is 0.05 mm.
- ► During commissioning, be aware of fluctuations around the exact value if you use ActualPosition to detect the workpiece.
- ► Please note that the ActualPosition can be influenced depending on the orientation of the product to the earth's magnetic field.

11.5 Sensing the end position

WARNING

⚠️ **Risk of injury due to uncontrolled movements**
- ► Before setting the bit, check whether the movement range of the product is clear.
- ⇨ Setting a bit immediately triggers movement.

Two bits in the StatusWord parameter give feedback about the end positions.

- The bit is set in StatusWord = 768 when the BasePosition is reached.
- The bit is set in StatusWord = 1024 when the WorkPosition is reached.

If necessary, the end positions can be reset with automated travel routing for special gripper jaws. The WorkPosition and/or BasePosition is re-referenced by this.

- ► Set the Adjust bit to a min. of 2 s in ControlWord = 2048.
- ► Make sure that no additional bit is set in the ControlWord.
- ► Make sure that the bit is not returned before the end of the travel routing.
- ⇨ Otherwise, the process must be repeated because the end positions were not correctly determined.

11.6 Easy Startup

Describes the process from switching on the product to the initial movement.

- ► Connect the product according to its assignment diagram.
- ⇨ The product reports the process parameters StatusWord, Diagnosis and ActualPosition immediately after the internal controller is booted up.
- ⇨ As soon as the PLCActive bit is registered in the StatusWord, the communication process can start.
- ► Transmit the process parameters to move the gripper jaws.
  - DeviceMode
  - WorkpieceNo
  - PositionTolerance
- ► Transmit the parameters to the product with a handshake.

Example parameters		
Parameter	Value	Unit
DeviceMode	100	Decimal value
WorkpieceNo	0	Decimal value
PositionTolerance	20	0.01 mm

INFORMATION

ℹ️ ► You can find example codes in the sections "Quickstart Basic Parameters" and "Recipe Examples".

11.7 Quickstart Basic Parameters

In the following example, you see the first initialization of the product and the transmission of the process parameters.

```
// Initialization of the product,
// Initial move command
// = EasyStartUp Example

IF bStart = TRUE THEN
        iStep              := 10;
END_IF

CASE iStep OF

10:
    IF StatusWord.6 THEN              // Query for PLCActive bit in the StatusWord
        ControlWord        := 1;      // Sends the DataTransfer bit in the ControlWord for initialization
        iStep              := 20;     // Jump to the next step
    END_IF

20:
    IF StatusWord.12 THEN             // Query for DataTransferOK bit in the StatusWord
        ControlWord        := 0;      // Reset of the initialization
        iStep              := 30;     // Jump to the next step
    END_IF

30:
    IF NOT StatusWord.12 THEN
        DeviceMode         := 100;    // Command to select the universal mode
        ControlWord        := 1;      // Data transfer to the product
        iStep              := 40;     // Jump to the next step
    END_IF

40:
    IF StatusWord.12 THEN             // Query for DataTransferOK bit in the StatusWord
        ControlWord        := 0;      // Reset of the ControlWord
        iStep              := 50;     // Jump to the next step
    END_IF

50:
    IF NOT StatusWord.12 THEN         // Query for DataTransferOK bit in the StatusWord
        ControlWord        := 512;    // Handshake is completed,
                                      // Product moves to WorkPosition (0x0200 or 512(decimal) = MoveToWork)
        iStep              := 100;
    END_IF

100:
        ;                             // Continue with the program

END_CASE
```

11.8 Starting the gripper jaw movement

► Send ControlWord 0x0200 so that the jaws move toward the WorkPosition.

⇨ The jaws move toward the inside.

► Send ControlWord 0x0100 so that the jaws move toward the BasePosition.

⇨ The jaws move toward the outside.

- The motion task must be pending for as long as it takes until the desired position is reached.
- The current motion task is canceled as a result of a new handshake.

⇨ When the jaws reach the corresponding position, this is displayed in the StatusWord as follows:

- The jaws are in the BasePosition: StatusWord.8 = TRUE
- The jaws are in the TeachPosition: StatusWord.9 = TRUE
- The jaws are in the WorkPosition: StatusWord.10 = TRUE

11.9 Repeated movements in the same direction

The StatusWord includes two static flag bits, each of which is set in alternation when the product moves in one direction. This prevents uncontrolled movements of the product in case of faulty data transmission.

Depending on the location of the positions, it is possible that the product may move multiple times in the same direction. For this purpose, the direction flags must be reset.

► Send the ControlWord = 0x0004 to delete the direction flags.

⇨ The direction flags are reset when the product answers with StatusWord.13 AND 14 = FALSE.

Program example for repeated movements in the same direction:

```
// Multiple movement in one direction in Structured Text (ST)
// The product is not capable of accepting multiple move commands in the same direction.
// That is why the direction flag has to be reset in the StatusWord.
// In this example, all process parameters are already correctly transferred.
// The previous move command toward the WorkPosition could not be executed
// because the product is being blocked by a workpiece.
// After the workpiece is removed, the direction flag is reset
// and the move command is restarted.

IF bReset = TRUE THEN
        iStep               := 10;
END_IF

CASE iStep OF

10:
    IF Diagnose = 16#307 THEN           // Move command could not be executed.
        iStep               := 20;      // Jump to the error step
                                        // to reset the direction flag
    END_IF

20:
        ControlWord         := 4;       // Reset the direction flags
                                        // (ResetDirectionFlag bit = TRUE in the ControlWord)
        iStep               := 30;      // Jump to the next step

30:
    IF NOT StatusWord.13 AND NOT        // Query whether both direction flags
    StatusWord.14 THEN                  // (Bit ControlWord 0x0100 AND
                                        // ControlWord 0x0200 = FALSE in ControlWord)
        ControlWord         := 512;     // Moves back toward WorkPosition
        iStep               := 100;
    END_IF;

100:
        ;                               // Continue with the program

END_CASE
```

11.10 Recipe examples

11.10.1 Save recipe

The following example code shows how process parameters can be stored in the internal workpiece recipe.

```
// Store tool workpiece recipes in Structured Text (ST)

IF bStart = TRUE THEN
        iStep                := 10;
END_IF

CASE iStep OF

10:

        DeviceMode        := 100;    // Assignment of desired process parameters
        WorkpieceNo       := 3;      // Recipe is to be stored as the third workpiece recipe
        PositionTolerance := 50;
        Reserve           := 0;
        TeachPosition     := 500;
        iStep             := 20;     // Jump to the next step

20:
        ControlWord       := 1;      // Begins with the handshake
        iStep             := 30;     // Jump to the next step

30:
    IF StatusWord.12 THEN                    // Queries the bit DataTransferOK=TRUE from StatusWord,
                                             // Response of the product to transferred data
        ControlWord       := 0;      // Reset the ControlWord
        iStep             := 40;     // Jump to the next step
    END_IF;

40:
    IF NOT StatusWord.12 THEN                // Query for completion of the data transfer,
                                             // DataTransferOK = FALSE
        ControlWord       := 2;      // Handshake is completed,
                                             // storage starts here via the WritePDU bit in the ControlWord
        iStep             := 50;     // Jump to the next step
    END_IF;

50:
    IF StatusWord.12 THEN                    // Queries the DataTransferOK = TRUE bit from StatusWord
        ControlWord       := 0;      // Reset the ControlWord
        iStep             := 60;     // Jump to the next step
    END_IF;

60:
    IF NOT StatusWord.12 THEN                // Query for completion of the data transfer,
                                             // DataTransferOK = FALSE
        iStep             := 0;      // Storage is completed
    END_IF;

END_CASE
```

11.10.2 Loading a recipe

The following example code shows how process parameters can be loaded to the internal workpiece recipe.

```
// Load workpiece recipes in Structured Text (ST)

IF bLoad = TRUE THEN
        iStep               := 10;
END_IF

CASE iStep OF

10:
        WorkpieceNo         := 3;            // Load third workpiece recipe
        iStep               := 20;           // Jump to the next step

20:
        ControlWord         := 1;            // Begins with the handshake
        iStep               := 30;           // Jump to the next step

30:
    IF StatusWord.12 THEN                    // Queries the bit DataTransferOK=TRUE from StatusWord,
                                             // Response of the product to transferred data
        ControlWord         := 0;            // Reset the ControlWord
        iStep               := 40;           // Jump to the next step
    END_IF;

40:
    IF NOT StatusWord.12 THEN                // Query for completion of the data transfer,
                                             // DataTransferOK = FALSE
        iStep               := 0;            //Handshake is completed,
                                             // Parameters from the third recipe have been taken over into the current process parameters.
    END_IF;

END_CASE
```

12 Gripping force charts

INFORMATION
► You can find information on our website. ► Please contact Customer Service if you have any questions.

13 Error diagnosis

Error code	Error	Possible cause	Measure
0x0000	Device is ready for operation.	-	-
0x0100	Actuator power supply is not present or is too low	• Actuator power supply is not connected • Actuator power supply is not sufficient • Cable break	▶ Check the actuator power supply.
0x0101	Temperature above maximum permitted temperature.	• Ambient temperature is too high • Overload of the product	▶ Provide sufficient ventilation/cooling/connection. ▶ Check the ease of movement of the product with the power connected by moving it manually.
0x0102	Temperature is below minimum permitted temperature.	• Ambient temperature is too low	▶ Provide an adequate operating temperature.
0x0104	Pressure below minimum permitted operating pressure	• Operating pressure too low • Pressure supply not connected	▶ Check the pneumatic connections.
0x0105	Pressure above maximum permitted operating pressure	• Operating pressure too high.	▶ Check the pneumatic connections. ▶ Install a pressure reducer.
0x0300	ControlWord is not plausible.	• Multiple bits were set in the ControlWord.	▶ In the ControlWord, check that only one bit is set.
0x0301	Position implausible	• Transmitted TeachPosition is not plausible.	▶ Check the transmitted process data.
0x0304	PositionTolerance is not plausible.	• Transmitted PositionTolerance is not plausible.	▶ Check the transmitted process data.
0x0306	DeviceMode is not plausible.	• Transmitted DeviceMode is not plausible.	▶ Check the transmitted process data.

0x0307	Motion task cannot be executed.	• Multiple motion tasks in the same direction.
		• Move command transmitted despite existing error.
			▶ Reset the direction flag.
			  • through move command in the opposite direction
			  • through error reset
			  • through reset direction flag
			▶ Send the move command again.

0x0308	WorkpieceNo cannot be selected.	• Transmitted workpiece number is outside the permitted range.	▶ Check the transmitted process data. ▶ Apply the process data via a handshake.
0x0309	TeachPosition was changed.	• Modified process data were not taken over.	▶ Apply the process data via a handshake.
0x030F	TeachTolerance was changed.	• Modified process data were not taken over.	▶ Apply the process data via a handshake.
0x0310	DeviceMode was changed.	• Modified process data were not taken over.	▶ Apply the process data via a handshake.
0x0311	WorkpieceNo was changed.	• Modified process data were not taken over.	▶ Apply the process data via a handshake.
0x0312	Initial state after gripper restart	• Modified process data were not taken over.	▶ Apply the process data via a handshake.

Error code	Error	Possible cause	Measure
0x0404	Gripper jaw hall sensor error	• Position sensor error	► Check whether the sensor is being influenced by an external magnetic field.
			► Check whether the required distance between the sensor and ferromagnetic materials is maintained.
			► Please contact Customer Service.

14 Table with acyclic data (ISDU)

INFORMATION

IO-Link distinguishes between cyclical process data (PDU) and acyclic data (ISDU).

Access to acyclic data is not arranged very conveniently for all control system and IO-Link master combinations. For this reason, the product can be used without acyclic data. This makes it as easy as possible to control the product.

► Please contact Customer Service if you have any questions.

INFORMATION

► Note that the acyclic data with the following parameters correspond to the reflection of the process data:
- StatusWord, Diagnosis, ControlWord, ActualPosition, TeachPosition, WorkpieceNo, DeviceMode, PositionTolerance

Index	Name	Data type	Access rights	Values
0x0040 (64)	StatusWord	UINT16	Read	0 - 65535
Description				
Read out the StatusWord				
0x0041 (65)	Diagnosis	UINT16	Read	0 - 65535
Description				
Read out of the diagnostic code				
0x0042 (66)	Cycle counter	UINT32	Read	0 to 4294967295
Description				
Read out of the total number of cycles				
0x0043 (67)	Temperature	UINT16	Read	0 to 100 °C
Description				
Current temperature				
0x0044 (68)	ControlWord	UINT16	Read	0 - 65535
Description				
Read out of the ControlWord				
0x0045 (69)	Error code	STRING	Read	1 to 32
Description				
Read out of the current error state				
0x0046 (70)	Error counter	UINT32	Read	0 to 4294967295
Description				
Read out of the number of errors since the restart				
0x0047 (71)	Operating Time	UINT32	Read	0 to 4294967295 s
Description				
Read-out of the current operating time				
0x0100 (256)	ActualPosition	UINT16	Read	0 to max. jaw stroke of the product [0,01 mm]
Description				
Read out the current position of the gripper jaws				
0x0101 (257)	TeachPosition	UINT16	Read	0 to max. jaw stroke of the product [0,01 mm]
Description				
Read out of the current transmitted TeachPosition				
0x0102 (258)	WorkpieceNo	UINT8	Delivery condition	0 - 32
Description				
Read out of the transmitted workpiece number				

Index	Name	Data type	Access rights	Values
0x0103 (259)	DeviceMode	UINT8	Read	1–103
	Description			
	Read out of the transmitted travel mode			
0x0104 (260)	PositionTolerance	UINT8	Read	0 to 255
	Description			
	Read out of the transmitted tolerance of the TeachPosition			
0x0110 (272)	Actual Pressure	UINT8	Read	0 to 255 [0.1 bar]
	Description			
	Read-out of the current operating pressure.			
0x0111 (273)	Low Pressure Error Threshold	UINT8	Read/write	0 to 255 [0.1 bar]
	Description			
	Specification of the lower pressure error threshold for output of a diagnostic message.			
0x0112 (274)	High Pressure Error Threshold	UINT16	Read/write	0 to 255 [0.1 bar]
	Description			
	Specification of the upper pressure error threshold for output of a diagnostic message.			
0x0113 (275)	Pressure-Hysteresis	UINT8	Read/write	0 to 255 [0.1 bar]
	Description			
	Specification of the hysteresis range of the lower and upper pressure error thresholds.			
0x0114 (276) Subindex 1 to 4	BasePosition/WorkPosition switching thresholds	UINT16 (4)	Read/write	0 - 65535
	Description			
	Specification of the tolerance window for BasePosition (outside/inside) and WorkPosition (inside/outside).			
0x0115 (277)	Movement Threshold	UINT16	Read/write	0 to 1000
	Description			
	Specification of the threshold for motion detection. • Position change of the ActualPosition within the cycle time > threshold value. ⇨ Movement is detected. ⇨ No status change of the position bits (bit 8 to bit 11) takes place in StatusWord.			
0x0118 (280)	Hall Error Threshold	UINT16	Read/write	0 to 500 [0.01 mm]
	Description			
	Specification of the threshold for triggering error code 0x404.			

15 Maintenance

NOTICE

Material damage resulting from blowing out with compressed air

Blowing out the product with compressed air can cause malfunctions.

► Never purge the product with compressed air.

NOTICE

Material damage caused by unsuitable cleaning materials

Liquid and solvent-based cleaning agents can cause malfunctions.

► Do not clean the product with any cleaning agents that are liquid or contain solvents.

NOTICE

Contamination of the environment due to escaping lubricants

Lubricants can escape through moving machine parts. This can lead to contamination of the machine, the workpiece and the environment.

► Remove leaking lubricant immediately and thoroughly.

Maintenance-free operation of the product is guaranteed for up to **30 million cycles**.

► Note that the product could become damaged under the following circumstances:
- Operation with impermissible compressed air
- Dirty environment
- Improper use and use that does not comply with the performance data
- Permissible temperature range not observed

► Even though the product is maintenance-free as mentioned above, perform a regular visual inspection to check for any damage or contamination.

► Have maintenance work that requires disassembly of the product performed by customer service only.

⇨ Dismantling and reassembling the product without authorization may result in complications, as special installation equipment is required in some cases. Zimmer Group GmbH accepts no liability for any resulting malfunctions or damage.

16 Decommissioning/disposal

INFORMATION

When the product reaches the end of its operational phase, it can be completely disassembled and disposed of.

► Disconnect the product completely from the power supply.

► Dispose of the components properly according to the material groups.

► Comply with the locally applicable environmental and disposal regulations.

---

17 RoHS declaration

in terms of the EU Regulation 2011/65/EU

Name and address of the manufacturer:

Zimmer Group GmbH

📍 Am Glockenloch 2
77866 Rheinau, Germany

📞 +49 7844 9138 0

✉ info@zimmer-group.com

🖥 www.zimmer-group.com

We hereby declare that the incomplete machine described below

Product designation: 2-jaw parallel gripper, 3-jaw concentric gripper

Type designation: GPP5000IL, GPD5000IL

conforms to the requirements of the directive in its design and the version we put on the market.

Michael Hoch	Rheinau, Germany, 2020-03-31	Martin Zimmer
Authorized representative for the compilation of relevant technical documents	(Place and date of issuance)	(Legally binding signature) Managing Partner

18 Declaration of Incorporation

In terms of the EU Machinery Directive 2006/42/EC (Annex II 1 B)

Name and address of the manufacturer:

Zimmer Group GmbH

📍 Am Glockenloch 2
   77866 Rheinau, Germany

📞 +49 7844 9138 0

✉ info@zimmer-group.com

🖥 www.zimmer-group.com

We hereby declare that the incomplete machine described below

Product designation:	2-jaw parallel gripper, 3-jaw concentric gripper
Type designation:	GPP5000IL, GPD5000IL

conforms to the requirements of the Machinery Directive, 2006/42/EC, Article 2g, Annex VII, b – Annex II, b, in its design and the version we put on the market.

We hereby confirm that all the relevant basic health and safety requirements for the product have been observed and implemented.

A full list of applied standards can be obtained from the manufacturer.

We also declare that the specific technical documents were produced in accordance with Annex VII Part B of this Directive. We undertake to provide the market supervisory bodies with electronic versions of special documents for the incomplete machine through our documentation department, should they have reason to request them.

The incomplete machine may only be commissioned if it has been ascertained, if applicable, that the machine or system in which the incomplete machine is to be installed satisfies the requirements of Directive 2006/42/EC on Machinery and an EC Declaration of Conformity has been drawn up in accordance with Annex II 1 A.

Kurt Ross	Rheinau, Germany, 2020-04-30	Martin Zimmer
Authorized representative for the compilation of relevant technical documents	(Place and date of issuance)	(Legally binding signature) Managing Partner

19 Declaration of Conformity

As defined by the EC Directive 2014/30/EU on electromagnetic compatibility

Name and address of the manufacturer:

Zimmer Group GmbH

📍 Am Glockenloch 2

77866 Rheinau, Germany

📞 +49 7844 9138 0

✉ info@zimmer-group.com

🖥 www.zimmer-group.com

We hereby declare that the product described below

Product designation: 2-jaw parallel gripper, 3-jaw concentric gripper

Type designation: GPP5000IL, GPD5000IL

conforms to the requirements of the Electromagnetic Compatibility Directive 2014/30/EU in its design and the version we put on the market.

The following harmonized standards have been used:

DIN EN ISO 12100	Safety of machinery - General principles for design - Risk assessment and risk reduction
DIN EN 61000-6-3	EMC Generic standard, Emission standard for residential, commercial and light-industrial
DIN EN 61000-6-2	EMC Generic standard, Emission standard for industrial environments
DIN EN 61000-6-4	EMC Generic standard, Immunity for industrial environments

A full list of applied standards can be obtained from the manufacturer.

Kurt Ross	Rheinau, Germany, 2020-04-30	
Authorized representative for the compilation of relevant technical documents	(Place and date of issuance)	Martin Zimmer (Legally binding signature) Managing Partner