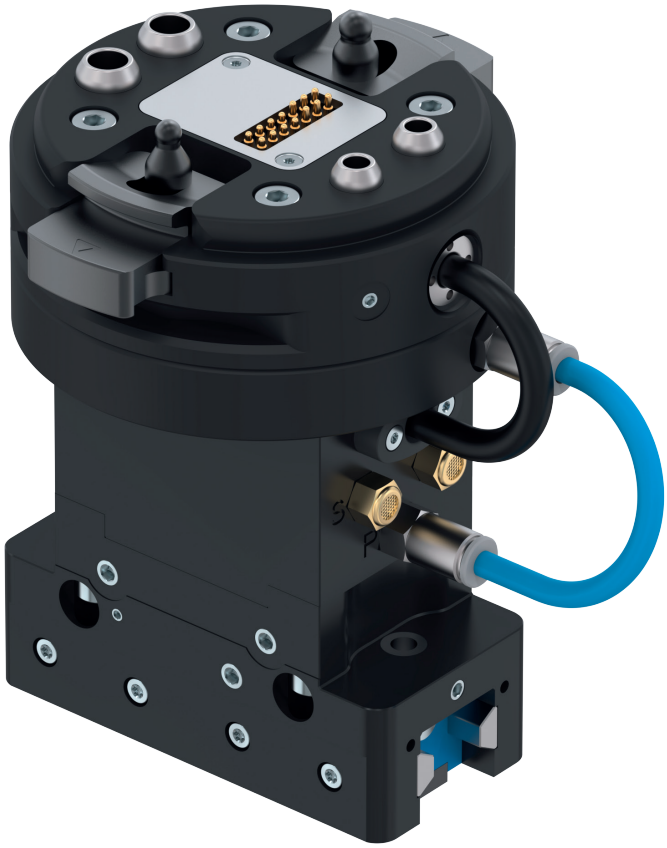


MATCH

INSTALLATION AND OPERATING INSTRUCTIONS

MATCH 2-jaw parallel gripper
LWR50L-24 series

MATCH 3-jaw concentric gripper
LWR50L-25 series

DDOC01073

THE KNOW-HOW FACTORY

ZIMMER group

Parameter explanation (glossary)

Parameter	Explanation
ActualPosition	Value of the current position of the product [1/100 mm]
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 word. 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.
Error	**Error**
GND	Abbreviation for ground connection
PositionTolerance	Tolerance range for TeachPosition The value of the parameter acts in both directions.
StatusWord	In its bits, returns the most important information about the status of the product to the control system.
Teach/Adjust	Programming/Adjusting With 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 to define the reachable end positions of the gripper jaws.
TeachPosition	Actual workpiece position
Travel path	Path on which the gripper jaws travel.
WorkpieceNo	Selection of the workpiece recipes stored in the product
WorkPosition	Inner jaw position Depending on the application, this can be the end position or the work position.

Zimmer GmbH • Im Salmenkopf 5 • 77866 Rheinau, Germany • +49 7844 9138 0 • www.zimmer-group.com

Content

1 Supporting documents 5
1.1 Notices and graphics in the installation and operating instructions 5

2 Safety notices 6

3 Proper use 8

4 Personnel qualification 8

5 Product description 9
5.1 Possible applications 10
5.2 Type plate 10
5.3 Product variants and compatibility 10

6 Functional description 11
6.1 LED status display 12
6.1.1 Status in LED display 12
6.2 Sensors 13
6.2.1 Wiring diagram sensor system 14
6.2.2 Adjust the sensors in the inspection position 14
6.2.3 Adjust the sensors in the storage position 14
6.3 Functional safety 15
6.4 Control 15
6.5 Gripping force retention 15
6.6 Verified configuration examples 16
6.7 Self-locking mechanism 16

7 Technical data 17

8 Accessories/scope of delivery 17

9 Transportation/storage/preservation 17

10 Installation 18
10.1 Installing the product 18
10.1.1 Installing the MATCH robot module and MATCH gripper 19
10.2 Installing the energy supply 20
10.3 Static charge 20
10.4 Heat dissipation 20
10.5 Installing accessories 20

11 Commissioning 21
11.5.1 Process data control system 21
11.1 IODD Import 22
11.2 Handshake Data Transfer Method 22
11.3 Parameters 23
11.3.1 ControlWord 23
11.3.2 DeviceMode 24
11.3.3 WorkpieceNo 25
11.3.4 PositionTolerance 26
11.3.5 TeachPosition 26
11.3.6 StatusWord 27
11.3.7 Diagnosis 28
11.3.8 ActualPosition 29
11.4 Easy Startup 29
11.5 Quickstart Basic Parameters 30
11.6 Starting the gripping movement 31
11.7 Repeated movements in the same direction 31
11.8 Recipe examples 32

DDOC01073 / - EN / 2022-07-20

11.8.1 Save recipe 32
11.8.2 Loading a recipe 33

12 Gripping force charts 33

13 Error diagnosis 34

14 Table with acyclic data (ISDU) 36

15 Maintenance 37

16 Decommissioning/disposal 37

17 RoHS declaration 38

18 REACH declaration 38

19 Declaration of Incorporation 39

20 Declaration of Conformity 40

Zimmer GmbH • Im Salmenkopf 5 • 77866 Rheinau, Germany • +49 7844 9138 0 • www.zimmer-group.com

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 for people or that may result in material or environmental damage. Ignoring these notices may result in slight, temporary injuries or damage to the product or to the environment.

► You absolutely must comply with the described measures for avoiding these dangers!

⇨ The warning symbols are assigned according to the type of danger.

NOTICE

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

INFORMATION

This category contains useful tips for handling the product efficiently. Failure to observe these tips will not result in damage to the product. This information does not include any information relevant to health or workplace safety.

2 Safety notices

CAUTION

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

Installation, commissioning, maintenance and repairs may only be performed by qualified specialists in accordance with these installation and operating instructions.

The product is state-of-the-art.

It is fitted to industrial machines and is used to hold, transport and store workpieces.

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 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.

CAUTION

The product is protected and features monitoring for the temperature and maximum duration of energization.

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

► Wear personal protective equipment.

Zimmer GmbH • Im Salmenkopf 5 • 77866 Rheinau, Germany • +49 7844 9138 0 • www.zimmer-group.com

WARNING

Health hazard due to magnetic field

► If you wear any electronic implants, do not enter the effective range of the magnetic field.

WARNING

Risk of injury caused by suspended loads

Improper handling of suspended loads can cause serious injury.

► Always keep an adequate safety distance from suspended loads.

► Never walk underneath a suspended load.

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

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 specifically for (cooperative/collaborative) use on robot systems and in combination with the MATCH quick-change system.

The product is designed exclusively for electric operation using a 24 V DC power supply.

The maximum operating pressure for pneumatic operation of the products is:

- 4 to 6 bar for spring variant NC, SC, NO, SO
- 3 to 8 bar for universal operation N, S

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.

Observance of the technical data and of the installation and operating instructions are part of proper use.

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.

Zimmer GmbH • Im Salmenkopf 5 • 77866 Rheinau, Germany • +49 7844 9138 0 • www.zimmer-group.com

5 Product description

CAUTION

Reduction of the gripping force can cause personal injury and material damage

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

Reduced gripping force can lead to personal injury or material damage, because the components that are being gripped can no longer be securely gripped and transported.

NOTICE

- ▶ Make sure that the setting of the gripping force and the selection of the gripper finger length are correct to prevent incorrect bracing of the gripper jaws.
- ⇨ An incorrect configuration or selection can lead to malfunction

The MATCH End-of-Arm Ecosystem is equipped with an extensive range of functions and universal communication interfaces. MATCH is compatible with all common lightweight robots. The system can be mounted on the robot flange and set up with a few manual adjustments.

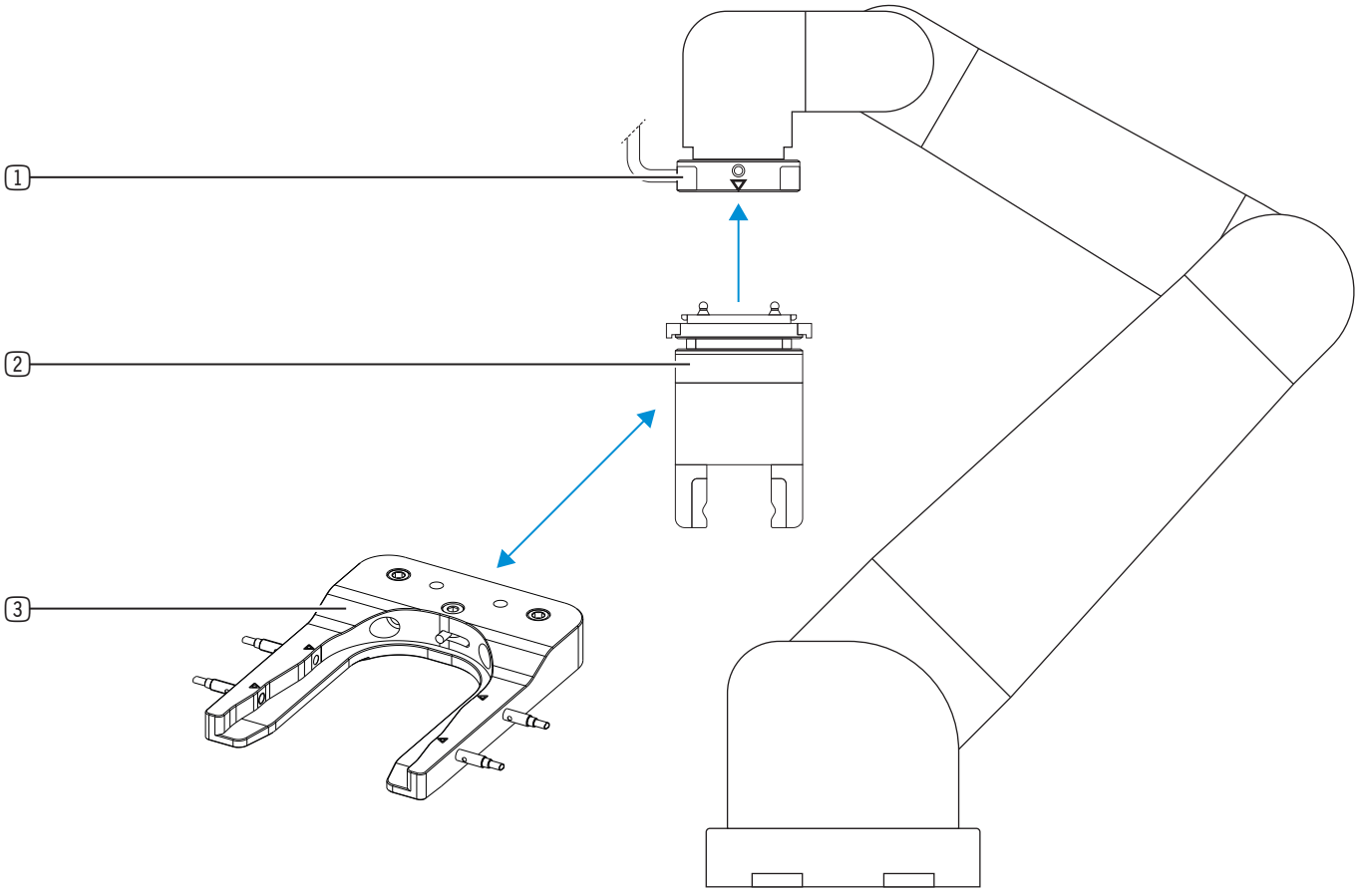
The product is a safe quick-change system (MATCH gripper).

The basic and proven safety principles from DIN EN 13849-1 can be complied with only if original parts from Zimmer GmbH are used.

The original parts from Zimmer GmbH required for the safety principles are:

1. MATCH robot module (LWR50F-XX)
2. MATCH gripper (LWR50L-XX)
3. MATCH storage station (ALWR1-50-A) (sensors optional)

For the overall safety of the function, all three components (MATCH robot module, MATCH gripper, and MATCH storage station) must be taken into account (see "Functional Safety" section).

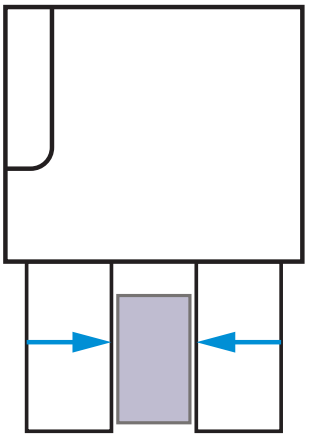


5.1 Possible applications

Outside gripping

The product can be used for outside gripping.

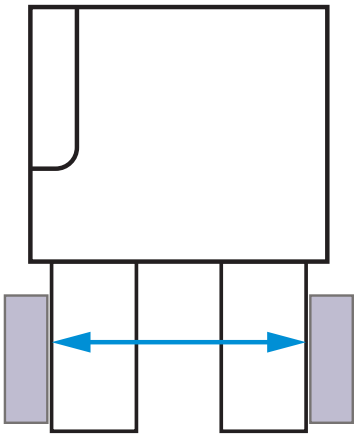
MoveToWork command



Inside gripping

The product can be used for inside gripping.

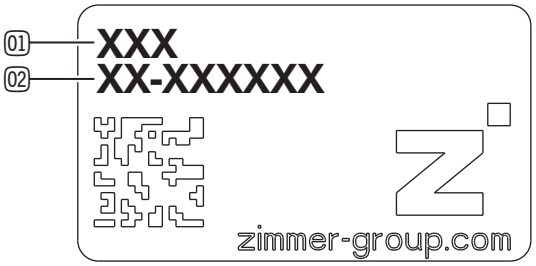
MoveToBase command



5.2 Type plate

A type plate is attached to the housing of the product.

The article number and confirmation number are shown on the type plate.



01 Article number

02 Confirmation number

5.3 Product variants and compatibility

In the LWR50L-24 and LWR50L-25 series, the following grippers are installed:

Product	Gripper
LWR50L-24-00001-A	GPP5006N-IL-10-A
LWR50L-24-00002-A	GPP5006NC-IL-10-A
LWR50L-24-00003-A	GPP5006NO-IL-10-A
LWR50L-24-00004-A	GPP5006S-IL-10-A
LWR50L-24-00005-A	GPP5006SC-IL-10-A
LWR50L-24-00006-A	GPP5006SO-IL-10-A
LWR50L-25-00001-A	GPD5006N-IL-10-A
LWR50L-25-00002-A	GPD5006NC-IL-10-A
LWR50L-25-00003-A	GPD5006NO-IL-10-A
LWR50L-25-00004-A	GPD5006S-IL-10-A
LWR50L-25-00005-A	GPD5006SC-IL-10-A
LWR50L-25-00006-A	GPD5006SO-IL-10-A

INFORMATION

- ▶ You can find information about product variants and their compatibility on our website.
- ▶ Please contact Zimmer Customer Service if you have any questions.

6 Functional description

The gripper jaws of the LWR50L-24 series are arranged parallel to each other on two opposing guide rails and can be moved relative to each other.

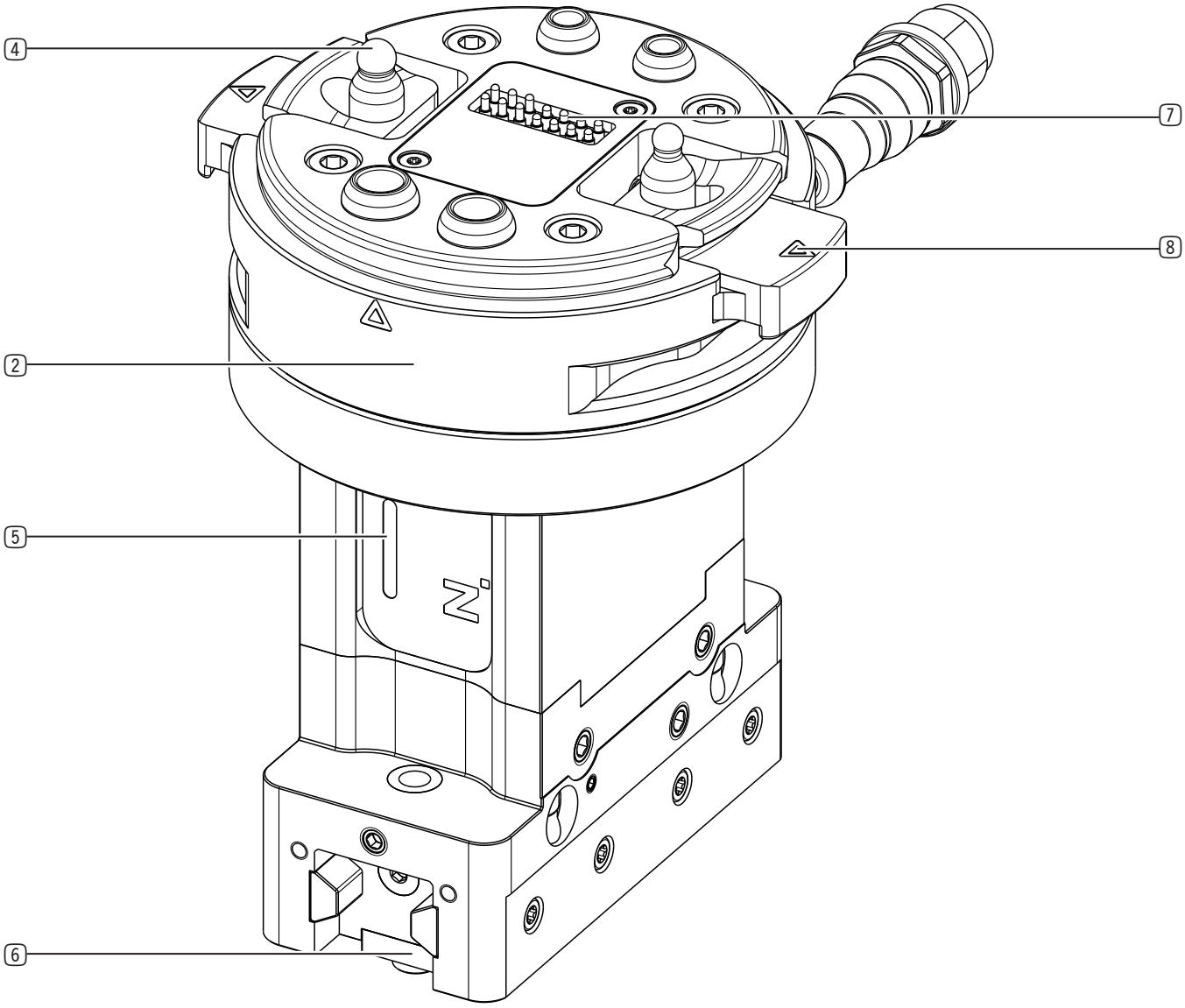
The gripper jaws of the LWR50L-25 series are arranged on three guide rails offset to each other at a 120° angle.

They are driven by compressed air. Here, an internal pneumatic piston is moved and its stroke movement is redirected to the jaws via a gate.

Despite its small installation space, the product is suited for gripping a wide range of form-fit and frictional fit parts.

The product can be easily integrated into the existing control system.

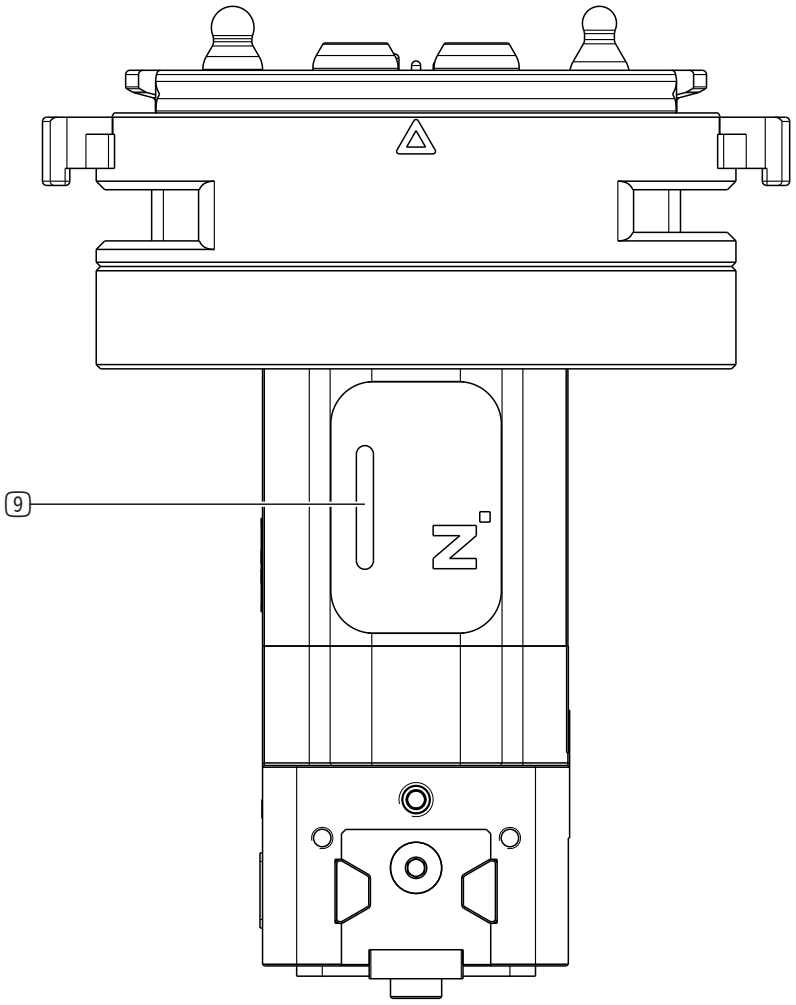
The product is equipped with a hot-plug function, which allows for the replacement of an MATCH gripper while electrically live.



2 MATCH gripper
4 Rotation prevention/torque absorption
5 LED display
6 Gripper jaw
7 Signal transmission
8 Locking

6.1 LED status display

9 Status display



6.1.1 Status in LED display

Status		Function
●●	Green LED lights up continuously.	• The product is in the TeachPosition.
●○	Green LED flashes every second.	• Currently not assigned.
●●	Blue LED lights up continuously.	• The product is in the BasePosition or WorkPosition.
●○	Blue LED flashes every second.	• Currently not assigned.
●●	Red LED lights up continuously.	• The product has a fault.
●○	Red LED flashes every second.	• No connection to the IO-Link.
●●	Orange LED lights up continuously.	• The product is not in any defined position.
●○	Orange LED flashes every second.	• Currently not assigned.

Zimmer GmbH • Im Salmenkopf 5 • 77866 Rheinau, Germany • +49 7844 9138 0 • www.zimmer-group.com

6.2 Sensors

Example image of a combination consisting of a MATCH robot module, MATCH gripper, and MATCH storage station.

Check up to two sensors in the storage position to see whether the MATCH gripper is present in the MATCH storage station.

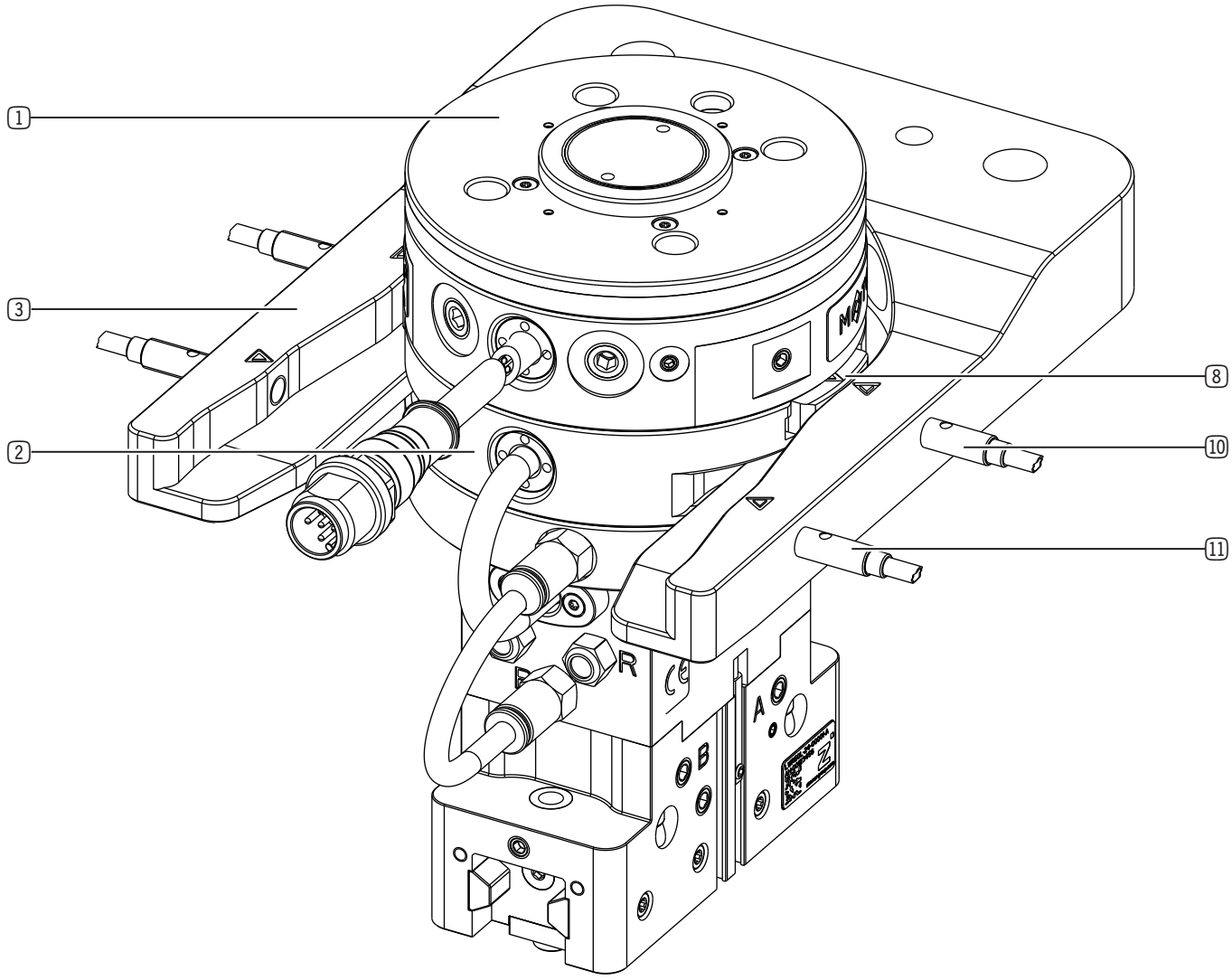
Then move the MATCH robot module onto the MATCH gripper from above. The centering pins of the MATCH gripper help in insertion.

The robot, along with the MATCH robot module and MATCH gripper, moves to the inspection position sensors in the MATCH storage station.

The two sensors in the inspection position (test channel) respond if the lockings are extended and make contact in the MATCH robot module.

When the MATCH robot module and MATCH gripper are joined, the internal spring-pin contacts for signal transmission are contacted.

Then the Connect LED changes color from red to green and a Connect signal (depending on the variant) is passed to the higher-level control system.



1 MATCH robot module for quick-change system

2 MATCH gripper with quick-change system

3 MATCH storage station

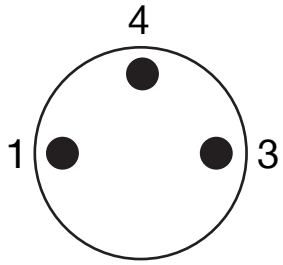
8 Locking

10 Sensor in storage position (MATCH gripper present)

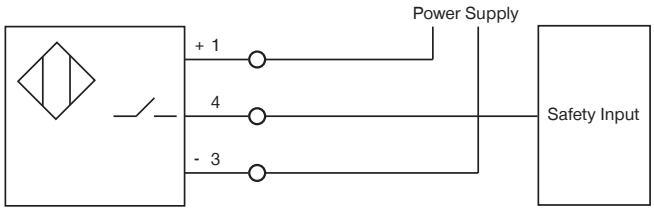
11 Sensor in inspection position (test channel, locking extended)

6.2.1 Wiring diagram sensor system

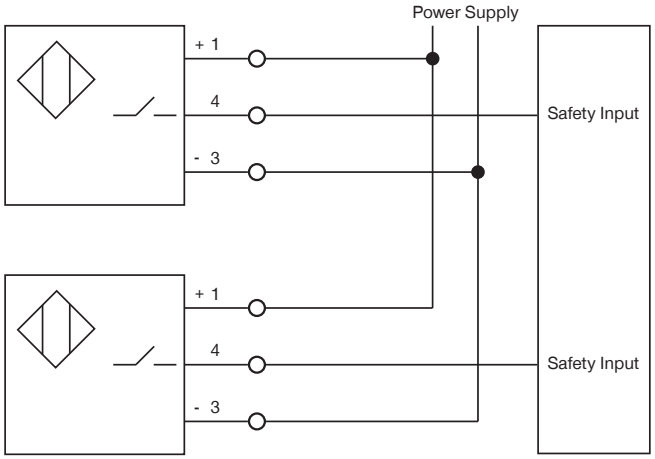
Sensor plug connection M8 3-pin:



Graphical symbol for sensor in storage position



2 sensors in inspection position connected in series

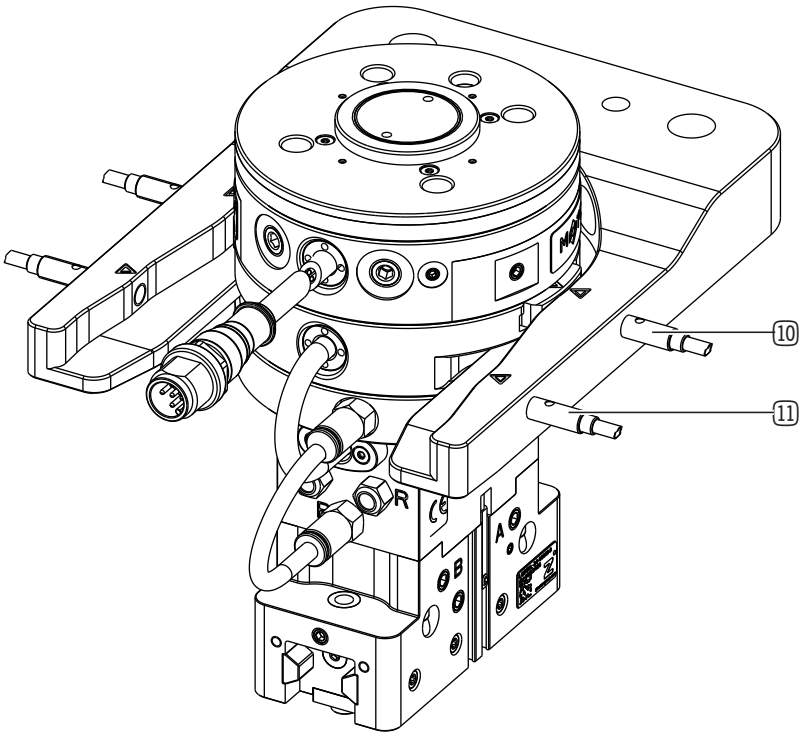


6.2.2 Adjust the sensors in the inspection position

- ▶ Bring the markings on the locking elements of the MATCH gripper to the position of the front markings of the MATCH storage station.
- ▶ Turn in the sensors until they emit a signal.
- ▶ Fasten the sensors at this position.
- ▶ Coat the sensors with sealing lacquer.

6.2.3 Adjust the sensors in the storage position

- ▶ Position an MATCH gripper in the MATCH storage station.
- ▶ Turn in the sensors until they emit a signal.
- ▶ Coat the sensors with sealing lacquer.



[10] Sensor in storage position (MATCH gripper with quick-change system present)

[11] Sensor in inspection position (test channel, locking extended)

Zimmer GmbH • Im Salmenkopf 5 • 77866 Rheinau, Germany • +49 7844 9138 0 • www.zimmer-group.com

6.3 Functional safety

For the overall safety of the function, all three components (MATCH robot module, MATCH gripper and MATCH storage station) must be taken into account.

The safety function that ensures secure locking between the MATCH robot module and MATCH gripper of the product is implemented via two redundant action channels that consist of a mechanical locking and springs.

Technical supplementary safety measures (sensors) provide a high degree of diagnostic coverage. The product can thus be classified into control category 3 in accordance with Chapter 6.2.6 of DIN EN ISO 13849-1. According to Figure 5, Chapter 4.5.4 of the specified standard, the PL d can be achieved with this product.

Fault elimination in accordance with DIN EN ISO 13849-2, Annex A, Table A2 and A3 for the helical compression springs used can be given.

6.4 Control

INFORMATION

- ▶ You can find the information in the technical data sheet on our website.
- ▶ Please contact Zimmer Customer Service if you have any questions.

6.5 Gripping force retention

INFORMATION

For products with integrated springs, the springs help retain the gripping force in the event of a loss of pressure or voltage.

- ▶ Note that products with universal operation (N, S) do not feature gripping force retention.
- ▶ Please contact Zimmer Customer Service if you have any questions.

Parameter	GPP5000IL/GPD5000IL series			
	Without spring N/S		With spring NC/NO/SC/SO	
• 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	

6.6 Verified configuration examples

INFORMATION

- ▶ You can find the information in the technical data sheet on our website.
- ▶ Please contact Zimmer Customer Service if you have any questions.

6.7 Self-locking mechanism

INFORMATION

The product (connection between MATCH robot module and MATCH gripper) has a mechanical self-locking mechanism to ensure that the workpiece remains held by the product in the event of a power supply failure such as an emergency stop.

- ▶ Please contact Zimmer Customer Service if you have any questions.

Zimmer GmbH • Im Salmenkopf 5 • 77866 Rheinau, Germany • +49 7844 9138 0 • www.zimmer-group.com

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.

► Please contact Zimmer Customer Service if you have any questions.

8 Accessories/scope of delivery

INFORMATION

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

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

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/observe and adhere to the temperature range.

  ► Avoid wind/drafts/water condensation formation.

  ► Cover the product with a weatherproof, tear-resistant foil to prevent dust.

  ► 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 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.

WARNING

Risk of injury from crushing

Removing the cover of the wedge hook transmission results in a crushing hazard between the gripper jaws. Crushing injuries can result from the gripping process.

- ▶ Make sure that there are no parts of the body in the range of movement of the product!
- ▶ Only permit installation, maintenance and servicing work to be carried out by trained personnel.
- ▶ Do installation, maintenance and servicing work in manual jog mode only.

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.

NOTICE

- ▶ Installation may only be carried out by qualified personnel in accordance with these installation and operating instructions.
- ▶ Switch off the power supply before any assembly, installation or maintenance work.

10.1 Installing the product

INFORMATION

- ▶ For information, refer to the installation and operating instructions of the MATCH robot module on our website.
  - LWR50F

Fasten the product on the MATCH robot module. No assembly work is necessary for the product. The end effector is already connected to the loose part.

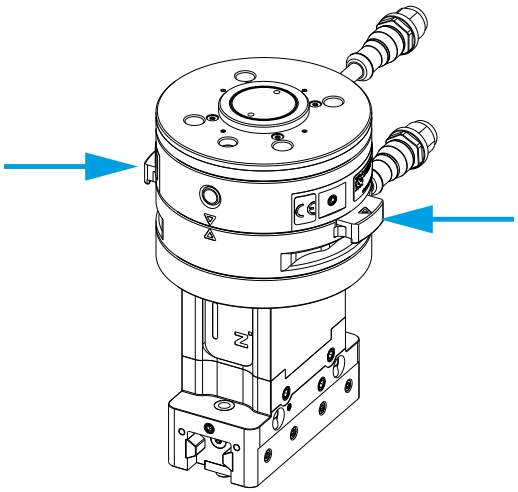
Zimmer GmbH • Im Salmenkopf 5 • 77866 Rheinau, Germany • +49 7844 9138 0 • www.zimmer-group.com

10.1.1 Installing the MATCH robot module and MATCH gripper

Example image of a combination consisting of a MATCH robot module, MATCH gripper, and MATCH storage station.

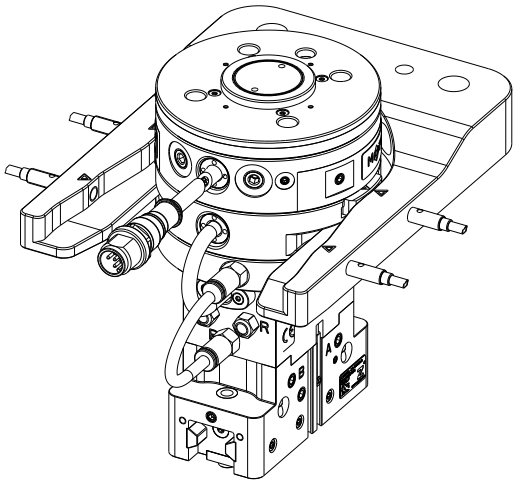
Manual exchange:

The MATCH gripper can be installed on the MATCH robot module and locked manually.



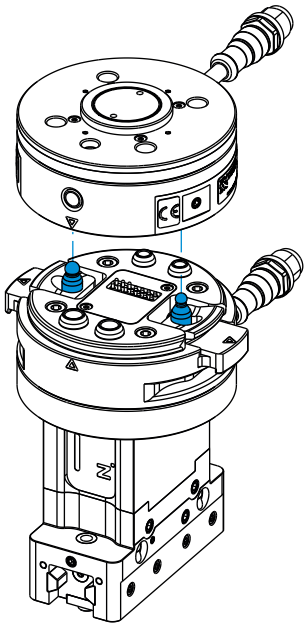
Automatic exchange:

The MATCH robot module is moved to the MATCH gripper in the MATCH storage station and locked by means of the MATCH storage station (see "Sensors" section).



Rotation prevention:

The design rules out incorrect joining, as the MATCH gripper is equipped with two different bolts.



10.2 Installing the energy supply

NOTICE

Installation of voltage supply is done internally. This means that the MATCH gripper is equipped with internal contacts. These contacts transmit all signals.

► The contacts of the energy supply must be dry, clean and undamaged at all times.

⇨ Damage to the contacts can result in malfunction of the product.

10.3 Static charge

CAUTION

Non-compliance may result in material damage.

Grounding the product is recommended if ESD sensitive parts come into contact with the product.

Grounding is also recommended in applications that require high EMC shielding.

The movement of the gripper jaws creates low voltages as a result of static charging. These charges cannot be dissipated if the product is mounted on an insulating surface and if discharge is also not possible through the workpiece.

10.4 Heat dissipation

In the event of high ambient temperatures, the product must be installed on heat-dissipating materials.

If the product is operated under very high ambient temperatures and with fast clock cycles on an ongoing basis, this might reduce its service life.

INFORMATION

⇨ The cycle time must therefore be reduced as the temperature increases.

10.5 Installing accessories

NOTICE

Before installing an accessory, make sure it is suitable for use with the selected variant.

► You can find information on our website.

► Please contact Zimmer Customer Service if you have any questions.

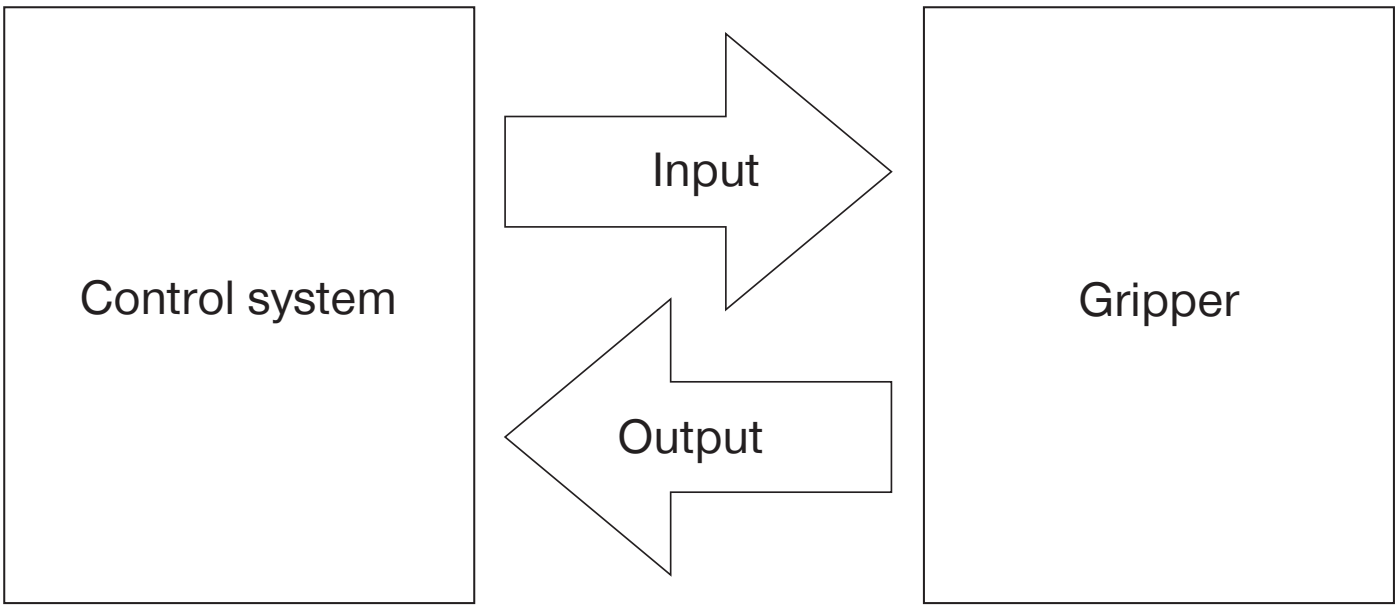
Zimmer GmbH • Im Salmenkopf 5 • 77866 Rheinau, Germany • +49 7844 9138 0 • www.zimmer-group.com

11 Commissioning

11.5.1 Process data control system

There is an option to control the product only with the process data that is transmitted in each cycle.
Outputs: Process data from the IO-Link master to the product!

Name	Data type
ControlWord	UINT16
DeviceMode	UINT8
WorkpieceNo	UINT8
TeachPosition	UINT16
Reserve	UINT8
PositionTolerance	UINT8



Name	Data type
StatusWord	UINT16
Diagnosis	UINT16
ActualPosition	UINT16

11.1 IODD Import

⇨ 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, refer to the "StatusWord" section.

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

- ► Go to our website.
- ► Select the desired product.
- ► Download the corresponding .zip file via the Download IODD link.
- ⇨ You will need the .zip file for import into the control system.

INFORMATION

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

► It is mandatory to verify the process data!

11.2 Handshake Data Transfer Method

The handshake method makes it possible to transfer the process data about the product. 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 Statusbit 12 = TRUE (data transfer OK).

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

⇨ The data transmission is complete when the product sends back Statusbit 12 = DataTransferOK = FALSE.

INFORMATION

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

Zimmer GmbH • Im Salmenkopf 5 • 77866 Rheinau, Germany • +49 7844 9138 0 • www.zimmer-group.com

11.3 Parameters

11.3.1 ControlWord

NOTICE

In the ControlWord parameter, only one single bit or the value 0 may be set at a time. Only the values listed in the following table are valid.

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

Name	ControlWord
Data format	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	ResetDirec-tionFlag	WritePDU	DataTransfer

Bit 0: DataTransfer

When this bit is set, the product accepts the data transferred in the process data.

Bit 1: WritePDU

Setting this bit tells the product that it should write the current process data to the selected workpiece 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 to save the current position 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. Whether an error can be reset is shown in the "Error Diagnosis" section.

11.3.2 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

Name	DeviceMode
Data format	UINT8
Permission	Write
Transfer	Cyclical
Value range	0 ... 256

Zimmer GmbH • Im Salmenkopf 5 • 77866 Rheinau, Germany • +49 7844 9138 0 • www.zimmer-group.com

11.3.3 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

For example codes, refer to the "Quickstart Basic Parameters" and "Recipe Examples" sections.

Name	WorkpieceNo
Data format	UINT8
Permission	Write
Transfer	Cyclical
Value range	0 ... 32

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

Subindex	Name	Data format	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 ... 255	This value defines the tolerance for the set Teach-Position.

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

INFORMATION

By setting bit 2, the process data and set gripping force can be stored. The WorkpieceNo data set enables individual workpieces to be taught in to the product very quickly.

Example:

In order to use the data stored in workpiece data set 3, WorkpieceNo 3 must be transmitted in the process data.

11.3.4 PositionTolerance

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.

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.

Name	WorkpieceNo
Data format	UINT8
Permission	Write
Transfer	Cyclical
Value range	0 ... 255

11.3.5 TeachPosition

TeachPosition is used to tell the product at which position the workpiece is expected. The PositionTolerance functions around this position. Thus, the product can distinguish whether a correct or incorrect workpiece has been gripped. Confirmation that the correct workpiece has been gripped is communicated to the control system via StatusWord. If the detection is correct, the Teach bit is set, thereby giving the user the option to monitor this work step.

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

► Use the following values:

Product	BasePosition	WorkPosition	TeachPosition
LWR50L-24 series	0	1200	0 to max. 1200
LWR50L-25 series	0	1200	0 to max. 1200

Name	TeachPosition
Data format	UINT16
Permission	Write
Transfer	Cyclical
Value range	0 to max. jaw stroke of the product [1/100 mm]

Zimmer GmbH • Im Salmenkopf 5 • 77866 Rheinau, Germany • +49 7844 9138 0 • www.zimmer-group.com

11.3.6 StatusWord

StatusWord structure:

	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
Byte 1	Error	ControlWord 0x0200	ControlWord 0x0100	DataTransferOK	Undefined-Position	WorkPo-sition	TeachPo-sition	BasePo-sition
	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 using the handshake. Active as soon as the product has taken over the data using 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.

Name	StatusWord
Data format	UINT16
Permission	Read
Transfer	Cyclical
Value range	0 ... 65535

11.3.6.1 Acknowledging an error

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

► Reset the fault by sending ControlWord = 0x8000 back.

NOTICE

Not all errors can be reset. For some errors, the error message is not reset after acknowledgment.
In this case, wait until correct values are sent to the product.
Example: Overheating error

INFORMATION

► Use StatusWord to verify correct gripping.
► The TeachPosition tolerance can be adjusted in another process parameter.
► For sensing the correct position via the ACTUAL position, the tolerances and fluctuations of the value must be observed during programming.

11.3.7 Diagnosis

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

Name	Diagnosis
Data format	UINT16
Permission	Read
Transfer	Cyclical
Value range	0 ... 65535

Zimmer GmbH • Im Salmenkopf 5 • 77866 Rheinau, Germany • +49 7844 9138 0 • www.zimmer-group.com

11.3.8 ActualPosition

ActualPosition corresponds to the current position of the gripper jaws relative to the full stroke.
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
LWR50L-24 series	0	2000
LWR50L-25 series	0	2000

Name	ActualPosition
Data format	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.

11.4 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 product.
- DeviceMode
- WorkpieceNo.
- PositionTolerance

▶ Transmit the parameters to the product with a handshake.

INFORMATION

▶ For information and an example code for the handshake, refer to the "Quickstart Basic Parameters" and "Recipe Examples" sections.

11.5 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
        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
```


Zimmer GmbH • Im Salmenkopf 5 • 77866 Rheinau, Germany • +49 7844 9138 0 • www.zimmer-group.com

11.6 Starting the gripping movement

► Send ControlWord 0x0200 so that the product moves towards the WorkPosition.
⇨ The gripper jaws move towards the inside.
► Send ControlWord 0x0100 so that the product moves towards the BasePosition.
⇨ The gripper jaws move towards 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 product reaches the corresponding position, this is displayed in the StatusWord as follows:
- The product is at the BasePosition: StatusWord bit 8 = TRUE
- The product is at the TeachPosition: StatusWord bit 9 = TRUE
- The product is at the WorkPosition: StatusWord bit 10 = TRUE

11.7 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 status bit 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 StatusWord13 AND NOT         // Query whether both direction flags
    StatusWord14 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
```

11.8 Recipe examples

11.8.1 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 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
```

11.8.2 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 Zimmer 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 sufficient.	▶ Check the actuator power supply.
0x0101	Temperature above maximum permitted temperature.	• Ambient temperature is too high. • Overload of the products.	▶ Provide sufficient ventilation/ cooling/connection. ▶ Check that the product moves freely.
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 pressure supply.
0x0105	Pressure above maximum permitted operating pressure.	• Operating pressure too high.	⇨ Check the pressure supply. ⇨ 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. • Permissible range, depending on installation size: Jaw stroke x 200 Example: GEP2016 with jaw stroke of approx. 16.1 mm results in a value of 3220.
0x0304	PositionTolerance is not plausible.	• Transmitted PositionTol-erance 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.

Zimmer GmbH • Im Salmenkopf 5 • 77866 Rheinau, Germany • +49 7844 9138 0 • www.zimmer-group.com

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 Zimmer 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 Zimmer Customer Service if you have any questions.

Index	Name	Data format	Access rights	Values	Description
0x0040 (64)	StatusWord	UINT16	Read	0 ... 65535	Reflection of the process data
0x0041 (65)	Diagnosis	UINT16	Read	0 ... 65535	Reflection of the process data
0x0042 (66)	Cycle counter	UINT32	Read	0 ... 4294967295	Current numbers of cycles
0x0043 (67)	Temperature	UINT16	Read	0 ... 100 °C	Current temperature
0x0044 (68)	ControlWord	UINT16	Read	0 ... 65535	Reflection of the process data
0x0045 (69)	Error code	STRING	Read	1 ... 32	Current error code
0x0046 (70)	Error counter	UINT32	Read	0 ... 4294967295	Current error counter
0x0047 (71)	Operating Time	UINT32	Read	0 ... 4294967295	Current operating time
0x0100 (256)	Actual position	UINT16	Read	0 to max. jaw stroke of the product	Reflection of the process data
0x0101 (257)	TeachPosition	UINT16	Read	0 to max. jaw stroke of the product	Reflection of the process data
0x0102 (258)	WorkpieceNo	UINT8	Read	0 ... 32	Reflection of the process data
0x0103 (259)	DeviceMode	UINT8	Read	1 ... 95	Reflection of the process data
0x0104 (260)	PositionTolerance	UINT8	Read	0 ... 255	Reflection of the process data
0x0110 (272)	Actual Pressure	UINT8	Read	0 to 255	Reflection of the process data
0x0111 (273)	Low Pressure Error Threshold	UINT8	Read/write	0 to 255	Lower pressure error threshold
0x0112 (274)	High Pressure Error Threshold	UINT16	Read/write	0 ... 255	Upper pressure error threshold
0x0113 275)	Pressure-Hys-teresis	UINT8	Read/write	0 to 255	Pressure error hysteresis
0x0114 (276) Subindex 1 to 4	BasePosition/ WorkPosition switching thresholds	UINT16 (4)	Read/write	0 ... 65535	Tolerance window for BasePosition (outside/inside) and WorkPosition (inside/outside)
0x0115 (277)	Movement Threshold	UINT16	Read/write	0 ... 65535	Movement threshold
0x0118 (280)	Hall Error Threshold	UINT16	Read/write	0 to 5	Hall error threshold

Zimmer GmbH • Im Salmenkopf 5 • 77866 Rheinau, Germany • +49 7844 9138 0 • www.zimmer-group.com

15 Maintenance

WARNING

Risk of injury from crushing

Removing the cover of the wedge hook transmission results in a crushing hazard between the gripper jaws. Crushing injuries can result from the gripping process.

- ► Make sure that there are no parts of the body in the range of movement of the product!
- ► Only permit installation, maintenance and servicing work to be carried out by trained personnel.
- ► Do installation, maintenance and servicing work in manual jog mode only.

CAUTION

Material damage resulting from blowing out with compressed air

Blowing out the product with compressed air can cause malfunctions and pose a risk of accidents.

- ► Never purge the product with compressed air.

CAUTION

Material damage caused by liquid and solvent-based cleaners

Liquid and solvent-based cleaning agents can cause malfunctions and pose a risk of accidents.

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

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

Maintenance-free operation of the MATCH gripper for quick-change system is guaranteed for up to **100,000 change cycles** (hot plug).

The maintenance interval may be shortened under the following circumstances:

- Dirty environment
- Improper use and use that does not comply with the power specifications.
- Ambient temperature is too high.

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

► Have maintenance work be performed by Zimmer Customer Service whenever possible.

⇨ Dismantling and reassembling the product without authorization may result in complications, as special installation equipment is required in some cases. Zimmer 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 GmbH
Im Salmenkopf
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:	MATCH 2-jaw parallel gripper/MATCH 3-jaw concentric gripper
Type designation:	LWR50L-24 series LWR50L-25 series

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

Michael Hoch	Rheinau, Germany, 2022-05-17	
Authorized representative for the compilation of relevant technical documents	(Place and date of issuance)	Martin Zimmer (Legally binding signature) Managing Partner

18 REACH declaration

In terms of the EC Regulation 1907/2006

Name and address of the manufacturer:

Zimmer GmbH
Im Salmenkopf
77866 Rheinau, Germany
+49 7844 9138 0
info@zimmer-group.com
www.zimmer-group.com

REACH stands for **R**egistration, **E**valuation, **A**uthorisation and Restriction of **Ch**emicals.

A full declaration of REACH can be obtained from the manufacturer due to the duty to notify in accordance with Art. 33 of the REACH regulation (“Duty to communicate information on substances in articles”).

Michael Hoch	Rheinau, Germany, 2022-05-17	
Authorized representative for the compilation of relevant technical documents	(Place and date of issuance)	Martin Zimmer (Legally binding signature) Managing Partner

19 Declaration of Incorporation

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

Name and address of the manufacturer:

Zimmer GmbH
Im Salmenkopf
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:	MATCH 2-jaw parallel gripper/MATCH 3-jaw concentric gripper
Type designation:	LWR50L-24 series LWR50L-25 series

conform 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.

Basic health and safety requirements:

No. 1.1.2, No. 1.1.3, No. 1.1.5, No. 1.3.2, No. 1.3.4, No. 1.3.7, No. 1.3.9, No. 1.5.1, No. 1.5.2, No. 1.5.3, No. 1.5.4, No. 1.6.4, No. 1.7.1, No. 1.7.4

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, 2022-05-17	
Authorized representative for the compilation of relevant technical documents	(Place and date of issuance)	Martin Zimmer (Legally binding signature) Managing Partner

20 Declaration of Conformity

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

Name and address of the manufacturer:

Zimmer GmbH
Im Salmenkopf
77866 Rheinau, Germany
+49 7844 9138 0
info@zimmer-group.com
www.zimmer-group.com

We hereby declare that the products described below

Product designation:	MATCH 2-jaw parallel gripper/MATCH 3-jaw concentric gripper
Type designation:	LWR50L-24 series LWR50L-25 series

conform 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, 2022-05-17	
Authorized representative for the compilation of relevant technical documents	(Place and date of issuance)	Martin Zimmer (Legally binding signature) Managing Partner