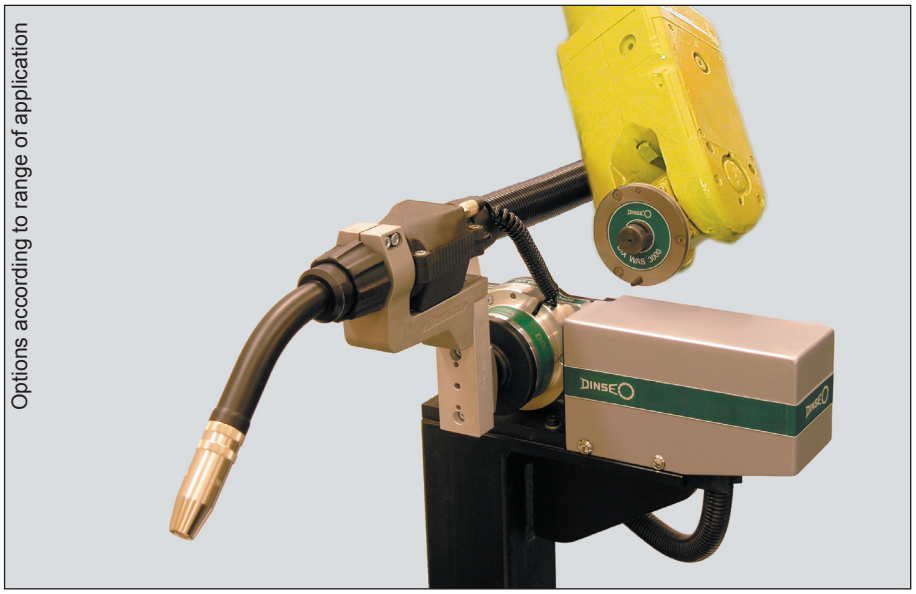
Operating Instructions

Safeguard for future use!



Sample of application

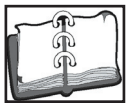
Tool storage system DIX WAS 100

Serial No.					

subject to change!

GB-WAS-100-BA/A08

DINSE G.m.b.H. • Tarpen 36 • D-22419 Hamburg • Phone: 040 - 658 75-0 • Fax: 040 - 658 75-200 • info@dinse-gmbh.com • www.dinse-gmbh.com



On all accounts read these operating instructions before commissioning to ensure safe use of your **DINSE** product. The owner must make these operating instructions available to the operator and ensure that the operator has read and understood them.

Preserve the operating instructions in a safe place for future reference. Display a note prominently in the working area specifying the place where the instructions are kept.

CE

These products comply with

73/ 23/ EEC	- Low voltage directive
89/336/ EEC	- Electromagnetic compatibility directive (EMC)

S

In compliance with IEC 60974, these products can be used in surroundings with increased levels of electrical danger.

Accident prevention regulations:

BGR 500	- Operating of equipment
Chapter 2.26	- Welding, cutting and related procedures
BGV A3	- Electrical plants and equipment
TRBS 2131	- Technical rules for operational saferty electrical hazards

subject to change!

GB-WAS-100-BA/A08

Table of contents

1. Introduction

You have purchased a quality product from **DINSE G.m.b.H.** Thank you for your confidence in our products.

This carefully manufactured product was monitored constantly during production. The functionality of each system is tested before and after assembly.

Tests during production, materials matched precisely together, and the use of special, high-grade manufacturing machines characterize our technically sophisticated welding accessories.

Contact us if you have any questions or requests as regards accessories and equipment. Our application engineers will be glad to assist you.

DINSE G.m.b.H.
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2. Safety

2.1 Signs used

All **DINSE**-products are equipped with safety devices. Our products have been designed to provide operational reliability in accordance with the state-of-the-art and applicable safety regulations. Any improper or unauthorised use can pose risks to:

- operator's body and life
- product and other property of the owner
- product's operating efficiency

Your safety is concerned!

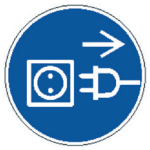
The following signs are used in these operating instructions:

ATTENTION!

Reference to potentially dangerous situations.
Non-observance can result in serious injuries!

Indication of possible danger to the eyes.
The operator must **on all accounts** wear **goggles** here!
Non-observance can result in serious eye injuries!

Warning - **Hand injuries!**
Non-observance can result in serious hand injuries.



Note - always de-energize before opening!
(also applies to connected peripheral devices)

Technical information and tips

Observe the following **safety regulations**:

- The operator must integrate this product into a higher-level safety system, as the installation site needs to remain protected during a change of wearing parts or production processes.
- The DIX WAS 100 tool storage system must be used exclusively for tool changing within the range specified by its technical data.
- The specified operating pressure must not be exceeded.
- The DIX WAS 100 tool storage system is a stand-alone product which must only be operated with its housing closed.

- Do not reach into the input section of the storage station or tool holder.
- Before performing any adjustments, disconnect the supply of compressed air in order to de-pressurize the device.
- Additional attachments not offered as related accessories must only be installed with **DINSE**'s approval.
- The DIX WAS 100 tool storage system must not be operated in environments containing corrosive or aggressive vapours / liquids without **DINSE**'s prior approval.
- When deactivating the welding equipment, ensure that no handling device (for instance, robot) is positioned in the storage station.
- Before commissioning, check whether an adapter flange suitable for the robot has been installed.

2.3 Intended use

The DIX WAS 100 tool storage system is designed for a maximum rated voltage of 24 V. Before first use, make sure that the voltage supply meets this requirement!

For safety reasons, independent conversions and modifications of the tool storage system are not permissible.

2.4 Approved operators

The DIX WAS 100 tool storage system must only be operated by persons who have been trained by **DINSE G.m.b.H.** and are familiar with the relevant safety regulations!

2.5 Warranty claim

The suitability of the DIX WAS 100 tool storage system for certain applications must be determined by the manufacturer and does not fall under the manufacturer's product liability. The warranty claim is applicable only given:

- Intended use
- Proper operation
- Use of original **DINSE G.m.b.H.** components and spareparts
- Observance of the safety instructions

In general, repairs must be performed by **DINSE G.m.b.H.** or licenced electricians appointed by it.

If basic complaints arise during the guarantee period, the DIX WAS 100 tool storage system must be returned unmodified to **DINSE G.m.b.H.**.

Product liability and warranty lapse on unauthorised tampering!

2.6 Transportation and packaging

Although the DIX WAS 100 tool storage system is checked and packaged carefully before dispatch, damage during transport cannot be precluded.

Should a malfunction occur, contact the **DINSE G.m.b.H.** and send the complete DIX WAS 100 tool storage system to:

DINSE G.m.b.H.
Tarpen 36 • D-22419 Hamburg
Tel. 040-658 75-0 • Fax 040-658 75-200
info@dinse-gmbh.com
www.dinse-gmbh.com

Attaching a note describing a detected fault helps our service department ascertain the cause of the problem, thereby shortening the repair time considerably.

2.7 Recycling/disposal

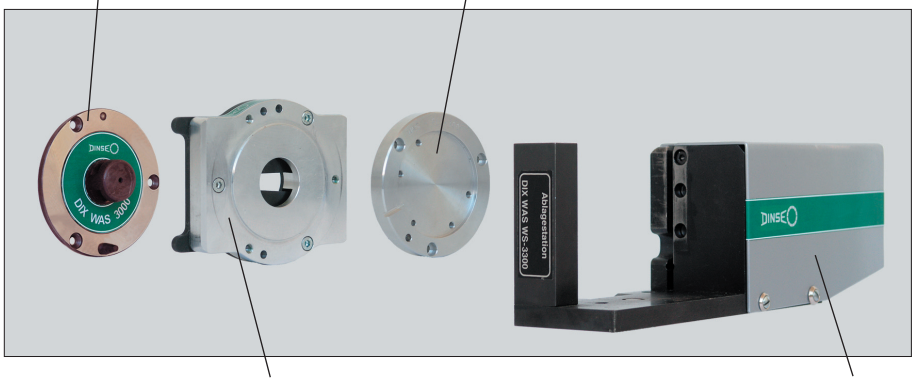
The DIX WAS 100 tool storage system is to be disposed of in accordance with local environmental stipulations.

3. Technical data

Fixture mandrel (robot sided)	**DIX WAS KD 3100**
Weight	300 g
Dimensions	ø 100mm
Tool holder (tool sided)	**DIX WAS WT 3200**
Weight	700 g
Dimensions	130/100/21 (L/B/H in mm)
Safety unit	Integrated springs provide self-lock on a loss of energy.
SAS-Flange (tool sided)	**DIX WAS FL 100**
Weight	230 g
Dimensions	ø 100/13.5 mm
Storage station	**DIX WAS WS 3300**
Weight	4.0 kg
Dimensions	310/70/102 (L/B/H in mm)
Monitoring	Reed contacts
Control	24 V = / 2 W
Compressed air	6 bar max.
Ambient temperature	
- during operation	- 10° C to + 40° C
- during transport and storage	- 10° C to + 55° C

Fixture mandrel
DIX WAS KD 3100

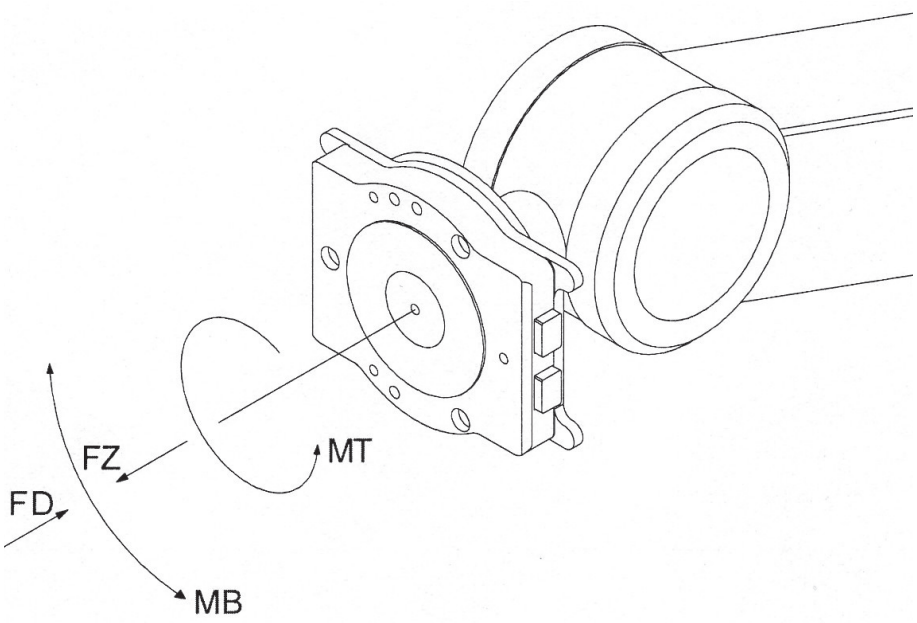
SAS-Flange
DIX WAS FL 100



Tool holder
DIX WAS WT 3200

Storage station
DIX WAS WS 3300

Max. load on the connection between the tool holder and fixture mandrel.



Bending moment	MB max.	150	Nm
Torsional moment	MT max.	100	Nm
Tensile force	FZ max.	1300	N
Compressive force	FD max.	1700	N
Payload		300	N

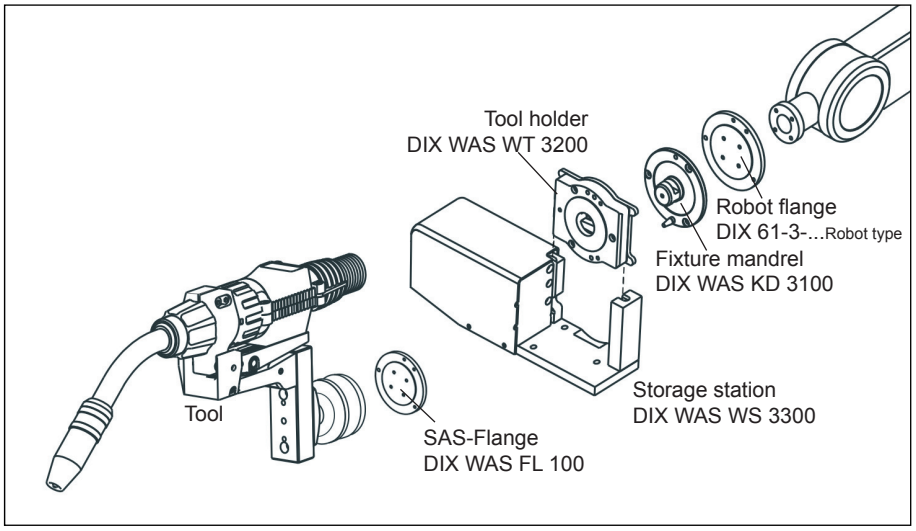
ACHTUNG !

Observe the load value for the last robot axle!
The weight is composed of the following components:
Robot flange, fixture mandrel, tool holder, SAS-flange and tool.

4. Commissioning

4.1 Elements

The DIX WAS 100 tool storage system consists of a robot-sided fixture mandrel, a tool holder, SAS-flange (tool sided) and a storage station. The robot flange needs to be ordered separately.

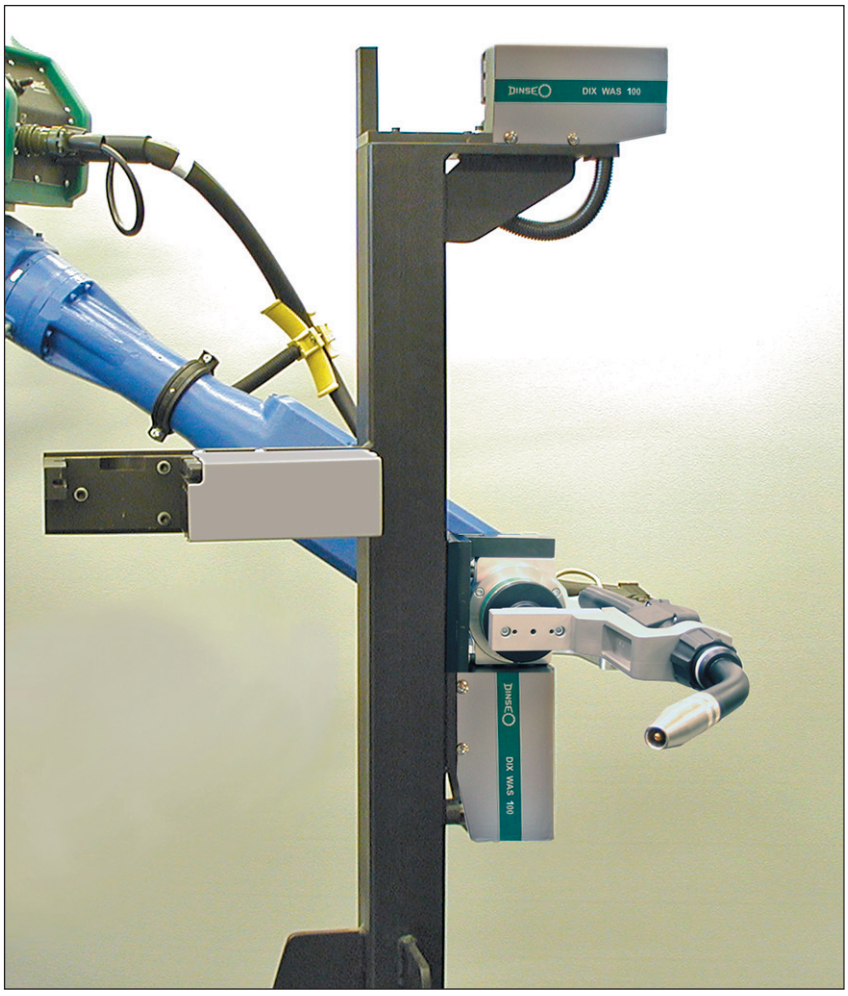


- High system availability
- Ideal possibilities of interchange, operation and maintenance of diverse handling tools exist during production.
- Self-lock on a loss of energy.
- No energy is required from the robot.
- External actuation via a pneumatic connection.
- The clamping system is monitored by reed contacts.
- Positive locking.
- The storage station is insensitive to soiling.

The DIX WAS 100 tool storage system can be installed in any position. Three M6 screws are used to fasten the tool storage system to a vibration-free base or the optionally available assembly stand.

ATTENTION!

Ensure that the DIX WAS 100 tool storage system remains de-pressurized and de-energized until installation is complete!



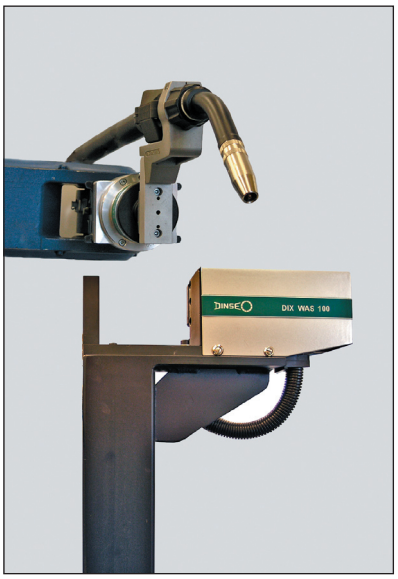
Examples of position-independent installation.

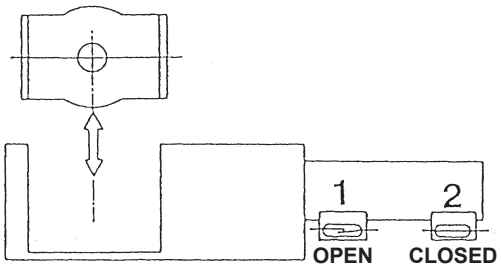
4.3 Control

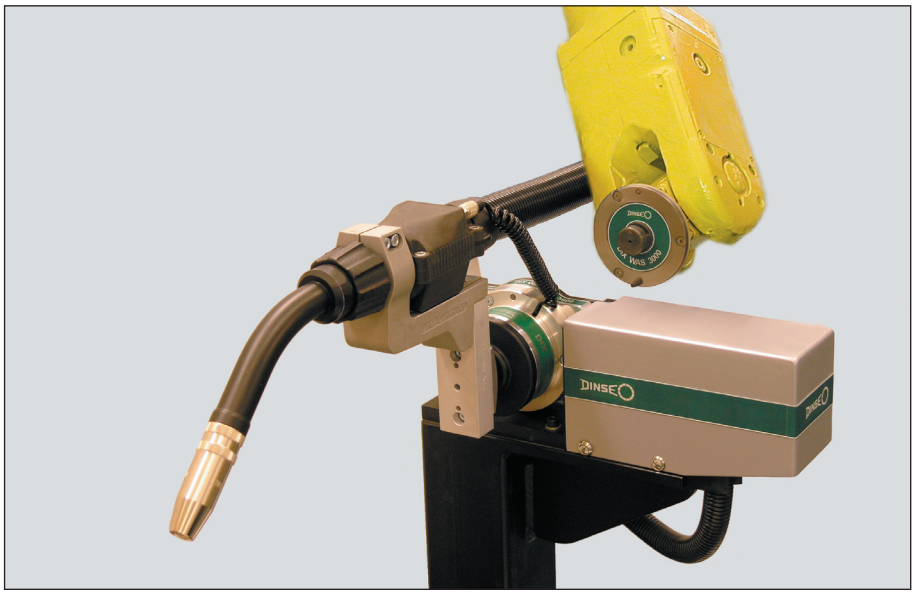
Control is performed via the solenoid valve:

Contact 1 "OPEN";
Contact 2 "CLOSED".

The tool holder can be removed.

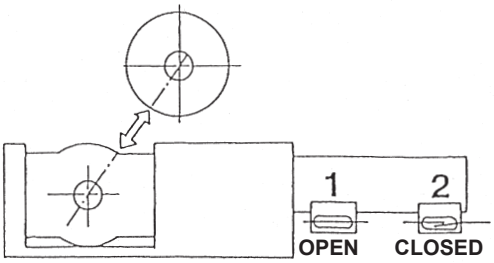






Contact 1 "CLOSED";
Contact 2 "OPEN".

The fixture mandrel can be retracted and extended.



The DIX WAS 100 tool storage system is almost completely maintenance free due to a use of high-grade components.

Conduct regular inspections to guarantee problem-free operation. The frequency of inspection and maintenance depends on the conditions under which the tool storage system is operated. Each user must accordingly define a separate maintenance schedule.

Before performing any inspection or maintenance, on all accounts de-energize the device and disconnect the supply of compressed air! - Ensure that nobody turns on the voltage supply while maintenance is in progress!

To guarantee trouble-free function, the following tasks must be carried out at regular intervals:

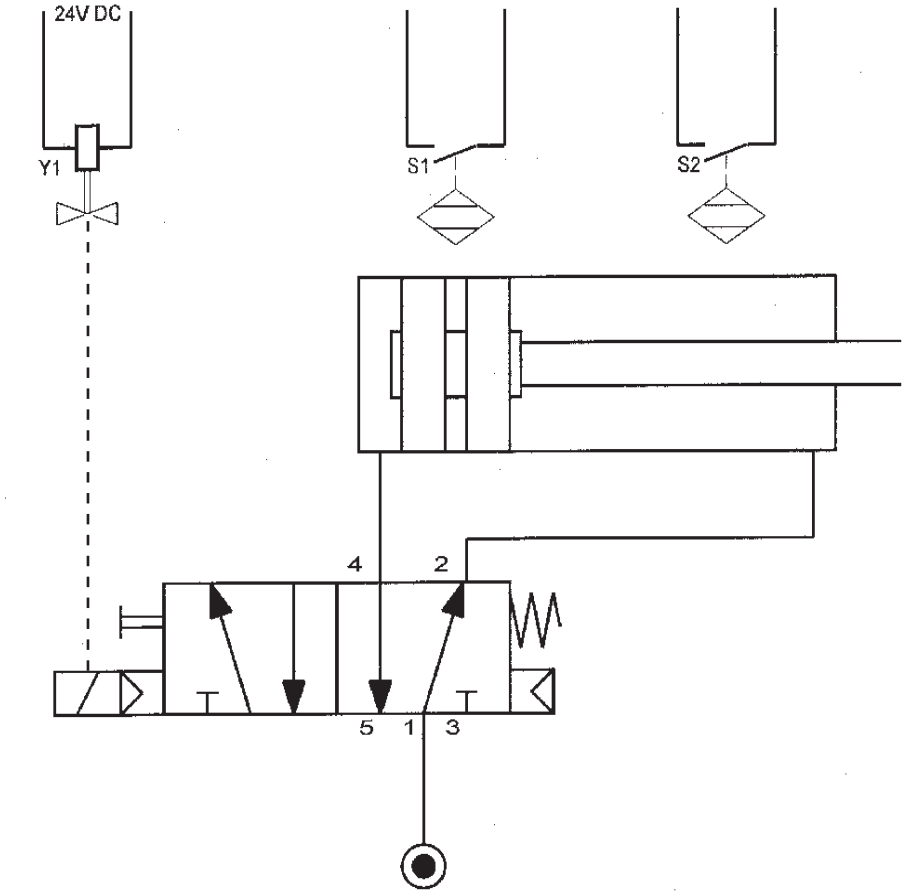
- General visual check of the tool storage system for signs of damage or wear.
- Check that all removable connections are properly fitted.
- The device can be operated without a compressed air oiler.
- Re-lubrication after 100.000 cycles.
- Visual check of connection lines for signs of damage.
- Observe the maintenance instructions for peripheral units.
- **Use only original components and spare parts from DINSE G.m.b.H. !**

6. Checklist

All products are subjected to strict control during and after production. If something should nevertheless malfunction, check with the following list. If the specified measures do not achieve success, please contact **DINSE G.m.b.H.** for your own safety.

Complaints	Required causes	Repair
Robot does not move to "IN" or "OUT" position	Limit switch (reed contact) - No signal	Check the voltage supply
Solenoid valve does not respond	No voltage supply	Check 24 V=
	Solenoid valve does not return to zero setting on deactivation of the voltage supply	Solenoid valve is defective and needs to be replaced
Storage station does not respond	Defective air hose	Test/renew

7. Pneumatic and wiring diagram



INFO

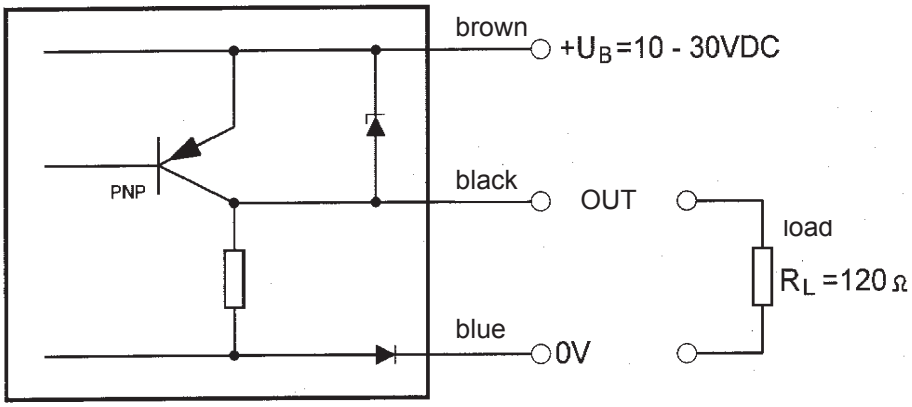
Please note that repairs are generally carried out only by **DINSE G.m.b.H** or licenced electricians appointed by DINSE.

Manual changer
DIX WAS HW 3400

The manual changer is used to manually interchange the tool holder on the fixture mandrel.

Inductive proximity switch
DIX WAS WS 3307

Function: Tool identification in the storage station



Attention! Frontside must not damaged

Output current, max.	200 mA
Current consumption	< 10 mA
Operating voltage U_B	10...30 V DC
Switching interval	1.5 mm
Permissible residual ripple, max.	20% U_B
Hysteresis (type)	< 5% S_n
Ambient temperature	
- during operation	- 10° C to + 40° C
- during transport and storage	- 10° C to + 55° C
Temperature drift	< 10% S_n