

# SERVICE MANUAL

XLP 504 / XLP 506

Label printer





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# Please note

## GENERAL NOTES

### Validity of this manual and required compliance

#### Contents

The complete operating manual for the label printers XLP 504 and XLP 506 consists of the following parts:

Manual	Target group	Medium	Availability
Quick reference guide, Safety notes	Operating personnel	Printed	Delivery with the machine
User manual			
Service manual	Service personnel	PDF file	<a href="http://www.novexx.com">www.novexx.com</a>
Spare parts catalog			

This service manual refers exclusively to the machine types listed above. It is to be referred to for correct installation, set-up and adjustment of the label dispenser as well as for undertaking of repairs. In the description of repair, only the replacement of high-wear components is covered. If other components need to be replaced, e.g. after being damaged due to the effects of an external force, please consult the servicing technician at our sales partner.

#### Technical release

Technical release: 4/2018

Software version: 7.75

#### Liability

NOVEXX Solutions assumes no liability for damages resulting from improper adjustments or repairs of the machine. It is assumed that only knowledgeable and appropriately qualified persons are to perform installation, adjustment, or repairs.

#### Copyright

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## How information is represented

### Abbreviations of printer names

XLP 50x = XLP 504/XLP 506 (description counts for both printer types)

Text sections, which only count for one of the two printer types, are preceded by the printer name in brackets.

### Explanation of symbols

To enhance readability and make information easier to find, different types of information are identified:

→ Instruction with no order of tasks assigned

1. Numbered instructions introduced by preceding text
2. The specified order must be followed!

■■■ Special note for action that must be performed.

ⓘ Explanation of an error cause in the reference of error messages.

- Enumeration of features
- Other feature



The Experts symbol identifies activities that are reserved exclusively for qualified and specially trained personnel.



The information symbol identifies notes and recommendations as well as additional information.

### Notes about hazards and risks

Important instructions that must absolutely be followed are specially highlighted:



#### WARNING!

A warning symbol refers to risks that can result in severe or fatal injuries! The note contains safety measures to protect affected persons.

→ Instructions must be followed without exception.

#### CAUTION!

A caution symbol refers to risks that can result in property damage or personal injury (minor injuries). The note contains instructions for preventing damage.

→ Instructions must be followed without exception.

### Illustrations

Illustrations appear in the text where required. References to these illustrations are shown in [square brackets] containing the number of the illustrations. Uppercase letters after an illustration number, for example [12A], refer to the corresponding item within the illustration.

Normally the machine is shown as the right version. The left version is only shown if there is a need to make a distinction.

### Parameters

Parameters in the parameter menu are represented in the format Menu name > Parameter name in grey type.

## NOTES ABOUT SERVICE WORK

### Special key combinations

Access to some of the printer functions is reserved for specially authorised service technicians. Therefore, these functions are not otherwise accessible. In order to use these functions, the printer must be restarted while simultaneously pressing a special key combination for a few seconds.

Printer state	Key combination	Function
Startup <sup>a</sup>	1+3+4	Start without motion control, see chapter <a href="#">Start with deactivated motion control</a> on page 223
	3+4	<i>Enter access code after startup</i> , see chapter <a href="#">Access authoriz.</a> on page 136
	1+4	<i>Start bootloader</i> , see chapter <a href="#">Update by bootloader</a> on page 232
„Home“ screen	1+3+4	<i>Enter access code</i> , see chapter <a href="#">Access authoriz.</a> on page 136
	3+4	Measuring the label pitch automatically, see user manual, chapter „Operation“ > „Setting and monitoring the printer“ > „Settings in parameter menu“ > „Label pitch“
	2+3	Slow material feed
	1+2	Eject material (backwards)
Always	1+2+3+4	<i>DebugDump</i> , see chapter <a href="#">Reading out diagnostic data</a> on page 225
	1+2+3	Reset
	2+4	<i>Standalone mode</i> , see user manual, chapter „Special Applications“ > „Standalone Operation“

[Tab. 1] Special key combinations for authorised service technicians.

a) Keep the keys pressed, switch on the printer and wait until the printer type is displayed.

### Serial numbers

Some assemblies were subject to one or more constructive changes and can therefore be ordered in several versions. The spare parts catalog notes in those cases the serial number or the production month/year of the machine, which is required to be compatible with the respective assembly.

The serial number can be found on the rating plate of the machine as illustrated below [1].



[1] Rating plate of an XLP 504. The printer bears the serial number 106378.

## Factory Settings

At the factory, all of the parameters are set to device-specific default values. These factory settings can be restored at any time by executing System > Factory settings = „Factory defaults“.

Alternatively, the parameters can be set to customer settings instead of factory settings (System > Factory settings = „Custom defaults“). Precondition: The customer settings were stored before with System > Custom defaults.

## Servicing data

The “Service Status” printout lists the most important service data of the printer. Some of the counters contained therein, such as the meterage of the print head, are incremented automatically. Other counters, such as the number of print head replacements, must be manually incremented by the service technician. This is done by opening the corresponding parameter (Tab. 2).

►►► Reset all counters: Open Tools > Service > Serv. data reset.

Menu	Parameters	Run to
Tools > Service	Service done	Increase “Customer Service Deployments” counter
	Head exchange	Increase “Head Number” counter
	Roller exchange	Increase “Feed Roller Number” counter
	Cutter change	Increase “Cutter Number” counter
	Serv. data reset	Reset all counters to initial values

[Tab. 2] Those parameters increase the corresponding counters on the “Service Status” info printout.

# FOR YOUR SAFETY

## Intended use

The label printers XLP 504 and XLP 506 are designed for printing label material, using the thermal or thermal transfer printing process. In addition, the dispenser version of the two printers can dispense self-adhesive labels and can rewind the remaining backing paper (or alternatively the complete label material). It is possible to use a wide range of label materials and thermal transfer ribbons. Label stock must be in roll shape or fan-folded. The label web can optionally be pulled-in from outside the printer through the slots in the rear side or bottom plate.

Observe the technical specifications of the printer, see [Technical data](#) on page 26. Any other type of or more extensive application will be considered *abnormal use*.

NOVEXX Solutions shall assume no liability for damage resulting from non-intended use of the machine.

## Safety notes

### Follow the instructions

Safe and efficient operation of the printer can only be guaranteed if you observe all necessary information.

- Before operating the printer, read the operating instructions and all other notes carefully.
- Observe the additional safety and warning notes on the printer.

### Qualifications required

- Trained staff is required for inserting and changing foils and material.
- Users need to be instructed in the use of the printer so they can work safely and independently.
- Users should be able to resolve minor operational issues and faults by themselves.
- At least two users should be instructed.

### Requirements for safe operation

- Only use the printer in enclosed areas with environmental conditions matching the values given in the technical specifications!
- Only operate the printer on a plane, solid support.
- Make sure that the power supply socket for the printer is readily accessible!
- Only trained and authorized personnel should operate the printer!
- During operation, the print head can become hot! Care should be taken when touching the print head!
- Do not make any modifications or any additional casing for the printer!
- Do not allow any liquids to enter into the printer!
- Repairs to the printer may only be performed by authorized specialists who are aware of the risks involved!
- Lay the power supply cable, data cables and compressed air hoses (if applicable) in a way that nobody can stumble over it.
- In case of emergency, switch off the printer and disconnect the power supply cable!
- Only use original accessories!

**Protection against injuries by electrical current**

- Only operate the printer using the system voltage indicated on the nameplate!
- Only connect the printer to a grounded power socket fitted to authorized standards!
- Connect only devices to the interfaces at the printer that fulfil SELV (safety extra-low voltage) circuit requirements according to EN 60950!

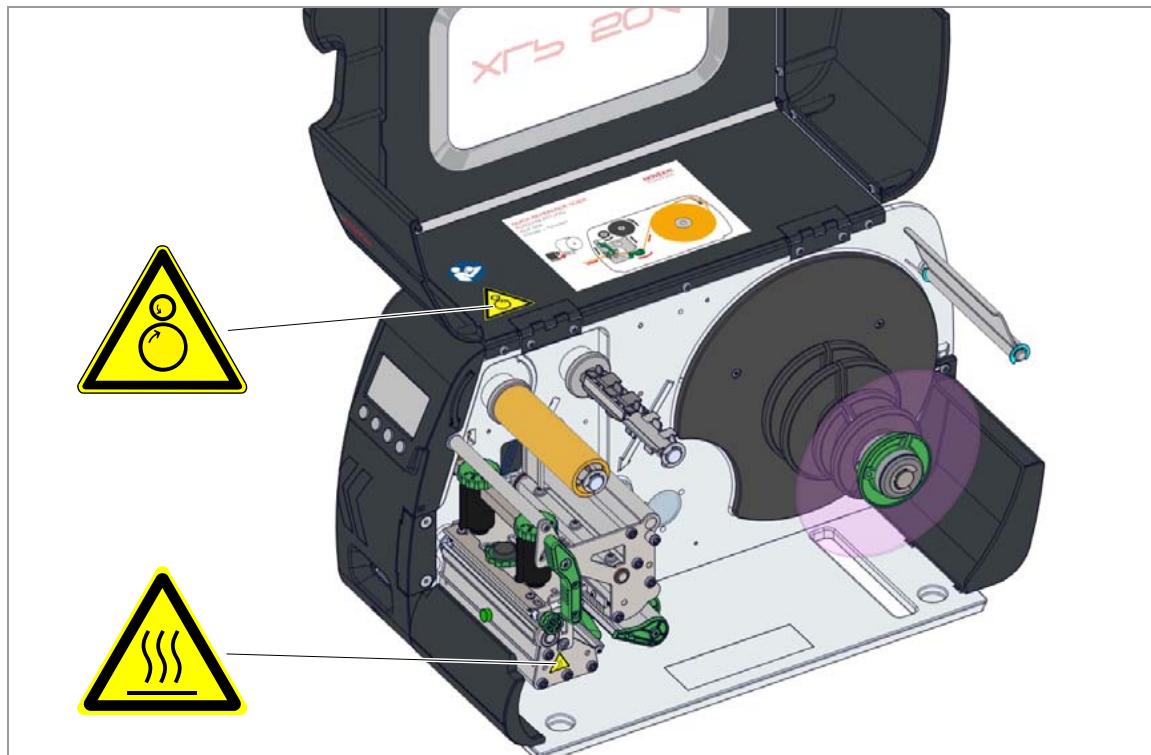
**Protection against injuries by mechanical action**

- Only operate the printer when the cover is closed!
- Don't wear *loose* long hair (if necessary, wear a hairnet).
- Keep loose jewellery, long sleeves, etc. away from rotating parts of the printer!

**Warning notes on the machine****CAUTION!**

Warning notes on the printer provide important information for the operating personnel.

- Do not remove warning notes.
- Replace missing or illegible warning notes.



[2] Warning notes on the XLP 504.

Warning note	Meaning	Article no.
	The 'Pinch point' warning note warns you of the danger posed by the machine's rotating parts; they can trap items and draw them in.	A5346
	The "Hot surface" symbol warns of a burn hazard if the surface is touched. Allow the device to cool off before touching it.	A5640
	The blue label 'Read manual' demands that operators read the user manual.	A5331

[Tab. 3] Meaning of the warning notes.

# Technical Data

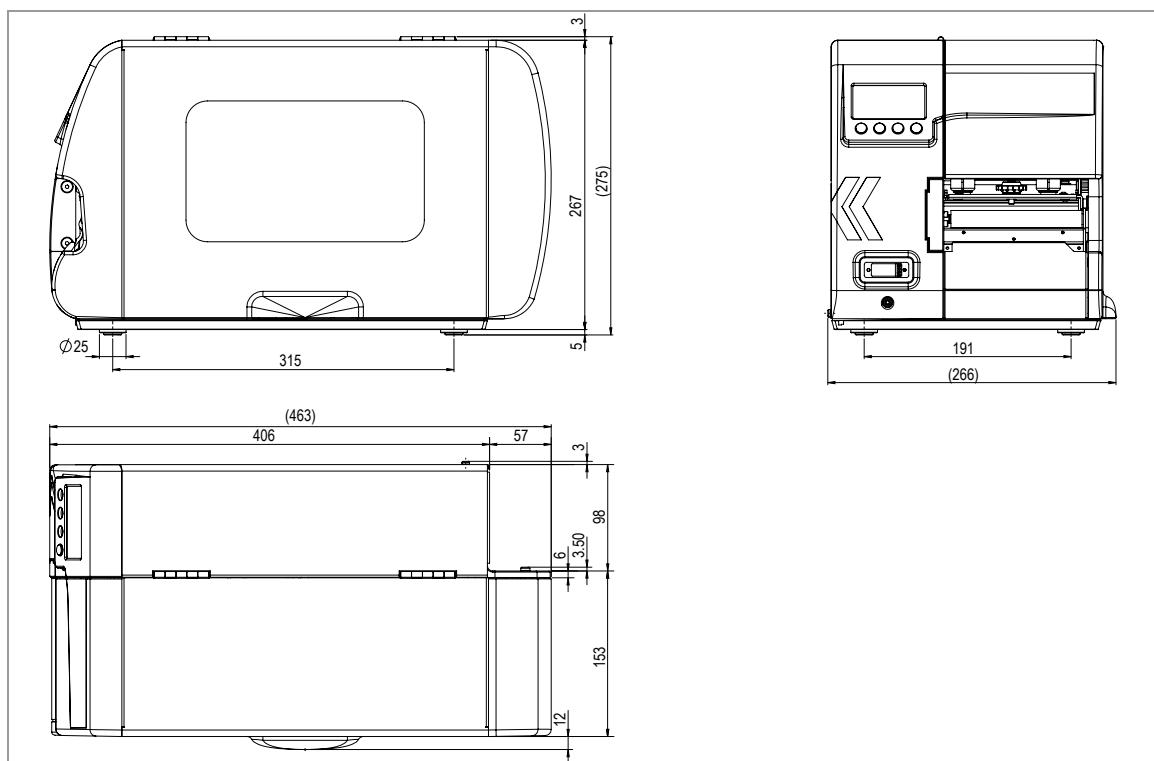
## TECHNICAL DATA

### Dimensions

#### Measures

(XLP 504) 275 x 266 x 463 mm (H x W x D)

(XLP 506) 275 x 336 x 463 mm (H x W x D)



[3] Dimensions of the XLP 504 (H=Height, W=Width, D=Depth).

### Weight

Printer	Weight
XLP 504 basic / peripheral	14.0 kg
XLP 504 basic dispenser / peripheral dispenser	14.7 kg
XLP 506 basic / peripheral	15.5 kg
XLP 506 basic dispenser / peripheral dispenser	16.5 kg

### Performance Data

#### Print head

- *Print Technology:* Thermodirect and thermotransfer printing
- *Print head Type:* „Flat Head“ Type (ceramic thin film flat head)

- Print head characteristics:

Printer	Resolution (Dot/mm)	Resolution (dpi)	Printspeed (mm/s)	Printspeed (inch/s)	Max. printwidth (mm)
XLP 504	8.0	203	50-254	2-10	104
	11.8	300	50-200	2-8	105.7
	23.6	600	50-150	2-6	105.6
XLP 506	8.0	203	50-200	2-8	168
	11.8	300	50-150	2-6	

**CAUTION!**

Hazard of malfunction of the power supply and restart of the printer (XLP 506).

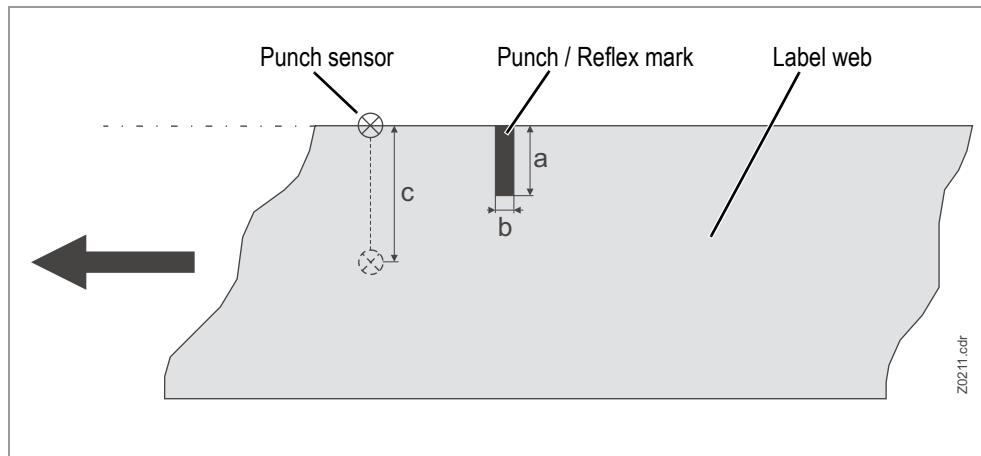
→ Take into account the limitations regarding print contrast and print width, see chapter **(XLP 506) Print width limitations** on page 20.

**Label sensor**

Sensor type	Setting range (Size c)	Punch length (Size b)	Punch width (Size a)
Transmission sensor (Standard)	0–60 mm	0.8–14 mm	min. 4 mm
Reflex-sensor (optional)	6–66 mm	4 mm (recommended)	12 mm (recommended)

[Tab. 4] Required punch measures.

► The dark/light change at the reflex sensor is taken as the *label beginning* (= end of the reflex mark)



[4] Measures and setting range of the punch / reflex mark.

**Max. print length**

The maximum print length depends on the following:

- Print head resolution
- Firmware version
- Memory allocation (see info printout „Memory Status“)

**Zero line**

Offset of the material zero line to the print zero line: 1 mm (what means that a stripe of 1 mm width at the inner label margin is unprintable)

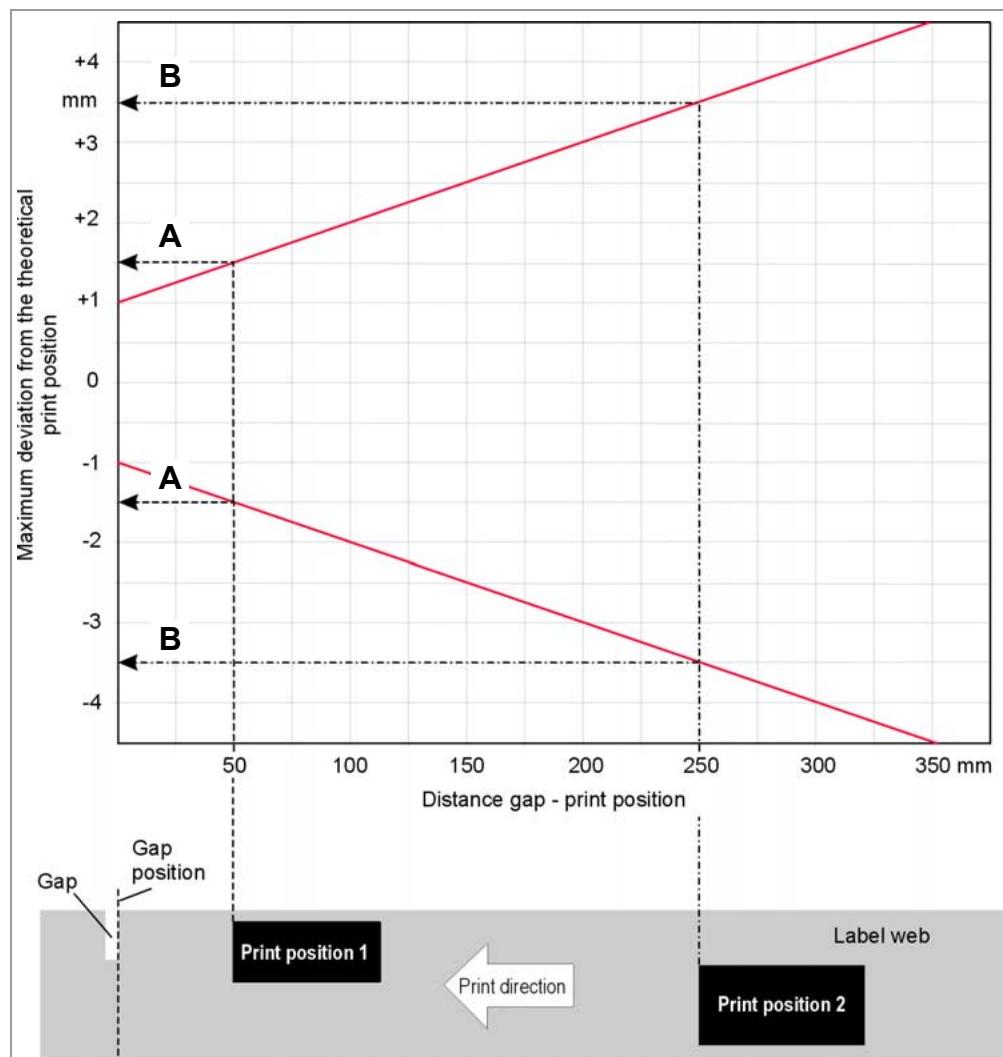
## Fonts

- 17 Fixsize fonts , including OCR-A and OCR-B
- 3 scalable fonts (Speedo fonts)
- Truetype fonts are supported (also Unicode)
- Optionally can Truetype, Speedo and Fixsize fonts be stored on SD card

## Modifying Fonts

- Up to factor 8 scaling in x/y direction
- Rotation by 0, 90, 180 and 270 degrees

## Impression accuracy



[5] The impression accuracy depends on the print position on the label: the longer the distance to the gap is, the lower is the impression accuracy. The maximum impression accuracy is at the gap position with +/- 1 mm.

## Reading examples:

A: Print positioin 1 is located 50 mm behind the gap position. The maximum possible deflection from the theoretical print position is +/- 1.5 mm.

B: Print positioin 1 is located 250 mm behind the gap position. The maximum possible deflection from the theoretical print position is +/- 3.5 mm.

► Those values are empirical for typical applications with common label stock / foil combinations. Since the deflection of the print position strongly depends on the applied label stock / foil combination, it can turn out higher if unfavorable combinations are used.

### Image formats

BMP, PCX, JPEG, TIFF, GIF, Easy Plug logos

### Bar codes

Codabar	Code 128 A, B, C
Code 128	Code 128 UPS
Code 128 pharmacy	ITF
Code 2/5 matrix	MSI
Code 2/5 interleaved	EAN 8
Code 2/5 5-line	EAN 13 add-on 2
Code 2/5 interleaved ratio 1:3	EAN 13 add-on 5
Code 2/5 matrix ratio 1:2,5	EAN 128
Code 2/5 matrix ratio 1:3	Postcode (guide and identity code)
Code 39	UPC A
Code 39 extended	UPC E
Code 39 ratio 2,5:1	Code 93
Code 39 ratio 3:1	

All bar codes scalable in 30 different width and in the height.

### 2-dimensional bar codes

Data Matrix Code (code according to ECC200)
Maxi Code
PDF 417
Codable block F
Code 49
QR matrix code

### GS1 Databar & CC bar codes

Reduced Space Symbology (GS1 Databar) and Composite Component (CC) bar codes:

GS1 Databar-14	UPC-A + CC-A/CC-B
GS1 Databar-14 truncated	UPC-E + CC-A/CC-B
GS1 Databar-14 stacked	EAN 13 + CC-A/CC-B
GS1 Databar-14 stacked omnidirectional	EAN 8 + CC-A/CC-B
GS1 Databar limited	UCC/EAN 128 + CC-A/CC-B
GS1 Databar expanded	UCC/EAN 128 + CC-C

### Printer emulation

Easy Plug

## Label Stock

### Material Types

Thermodirect material, thermotransfer material, synthetic ribbons: PE, PP, PVC, PA in rolls or fan-folded.

### Material Thickness

- *Self-adhesive labels:* 60 - 160 g/m<sup>2</sup>
- *Cardboard labels:* (XLP 504) max. 240 g/m<sup>2</sup>; (XLP 506) max. 190 g/m<sup>2</sup>

### Material Width

Printer type	Material width
XLP 504	15 - 120 mm
XLP 504 dispenser	30 - 110 mm <sup>a</sup>
XLP 506	50-185 mm
XLP 506 dispenser	50-170 mm <sup>a)</sup>

[Tab. 5] Overview material width.

- a) The material passage width is limited by the dispensing sensor, which is mounted at the side. If a dispensing edge without a sensor is applied (foot switch operation), the passage width is as large as at the standard printer.

### Label Length

Printer	Min. length	Max. length
XLP 50x	5 mm	max. print width <sup>a</sup>
XLP 50x dispenser	30 mm <sup>b</sup>	200 mm
XLP 504 dispenser (With optional label sensor for short labels)	5 mm	200 mm

[Tab. 6] Overview label length.

- a) See [Max. print length](#) □ on page 15.  
 b) (XLP 504) For label length less than 35 mm, the optional label sensor for short labels is recommended

### Gap size

Gap size between the labels on the backing material:

- min.: 1.0 mm
- max.: Label length -15 mm

### Label Roll

- *Winding Direction:* Labels facing inward or outward, internal rewinder: labels facing outwards
- *Roll diameter:*

Roll / Conditions	Roll Ø
Label roll for normal printing operation	max. 210 mm
Label roll for dispensing operation (with 100 mm core-Ø)	max. 190 mm
Take-up roll for winding/dispenser operation	max. 120 mm

[Tab. 7] Diameter of material and winding roll

- *Core diameter:* 38.1 mm (1.5“), 76.2 mm (3“) oder 101.6 mm(4“); cores with 76.2 (3“) or 101.6 mm (4“) can be applied with the core adapter supplied with the printer.

## Thermotransfer Ribbon

### Ribbon Roll

- *Winding Direction:* Colour-side rolled inwards or outwards
- *Roll dimensions:*

External Ø	max. 80 mm <sup>a</sup>
Core Ø	25 mm (1")
Width <sup>b</sup>	(XLP 504) 25-110 mm (XLP 506) 54-172 mm

- a) Corresponds for example to 450 m standard ribbon type Novexx 4903  
 b) Generally counts: The thermal transfer ribbon must overlap the label 2 mm on each side.  
 For labels width > max. print width count the foil width: (XLP 504)  
 110 mm, (XLP 506) 172 mm.

## Connections, device data

Protection class	I
Mains Voltage	100-240 V (AC)
Mains Frequency	60/50 Hz
Power Consumption	Max. 320 W In standby mode depending on the equipment 30-40 W
Current Consumption	3.0-1.5 A

## Interfaces

RS-232	Baud: 1200-115200, 8-bit; suitable connection cord: 1:1 D-Sub 9 extension lead (connector-jack)
RS-422/485	On optional I/O board, D-Sub 15, Baud: 1200-115200, 8-bit
Ethernet	10/100 Base T with TCP/IP, LPD, RawIP printing, DHCP, HTTPD, FTPD, SNMP
USB (V1.1)	USB-A host port, USB-B device port, Transmission rate 12 Mbps
Signal interface	On optional I/O board, D-Sub 15

## Electronic Configuration

CPU	32 bit (NetLogic)
RAM	64 MB SDRAM
ROM	4 MB Flash
Memory card	SD
Realtime-clock	Present
Control Panel	4 buttons LCD graphics display with 128x64 pixels, illuminated

## Specifications for dispenser

Speed, while the rewinding-Ø is calculated:	75 mm/s (3"/s)
Speed, while the material is fed back:	75 mm/s (3"/s)
Distance dispensing edge - print zero line:	25 mm
Distance punch sensor - print zero line:	71 mm
Max. admissible outer diameter of the rewound backing paper roll:	120 mm

## Ambient Conditions

Installation location	<ul style="list-style-type: none"> <li>• Inside buildings</li> <li>• Protected from wind and spray water</li> <li>• Dry</li> <li>• Not in areas with potentially explosive atmosphere</li> </ul>
Operating Temperature	5 to 35°C
Storage Temperature	-4 to 60°C
Relative Humidity	35-75 % (non-condensing)
Protection category	IP 21
Noise	< 70dB(A)
Sea level	Operation to max. 2000 m above sea level

## Certificates and Markings

CE, TÜV-Mark, cTÜV<sub>US</sub>-Mark, FCC, EAC, CCC

The regulation EN 55032 demands for class A devices the following text to be printed in the manual:

„WARNING: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.“

## (XLP 506) Print width limitations

If the max. values given in the following tables are exceeded, malfunction of the power supply will be most probably the consequence, followed by a restart of the printer.

### 203 dpi printhead

Print speed		Limitations
mm/s	Inch/s	
51	2	Max. admissible print contrast: 120%
76/102	3/4	Max. admissible print contrast at print width > 100 mm: 110% Max. admissible print width at print contrast > 110%: 100 mm
127/152	5/6	Max. admissible print contrast at print width > 75 mm: 85% Max. admissible print width at print contrast > 85%: 75 mm
178/203	7/8	Max. admissible print contrast at print width > 55 mm: 67% Max. admissible print width at print contrast > 67%: 55 mm

[Tab. 8] XLP 506: Print width limitations for 203 dpi printheads.

**300 dpi printhead**

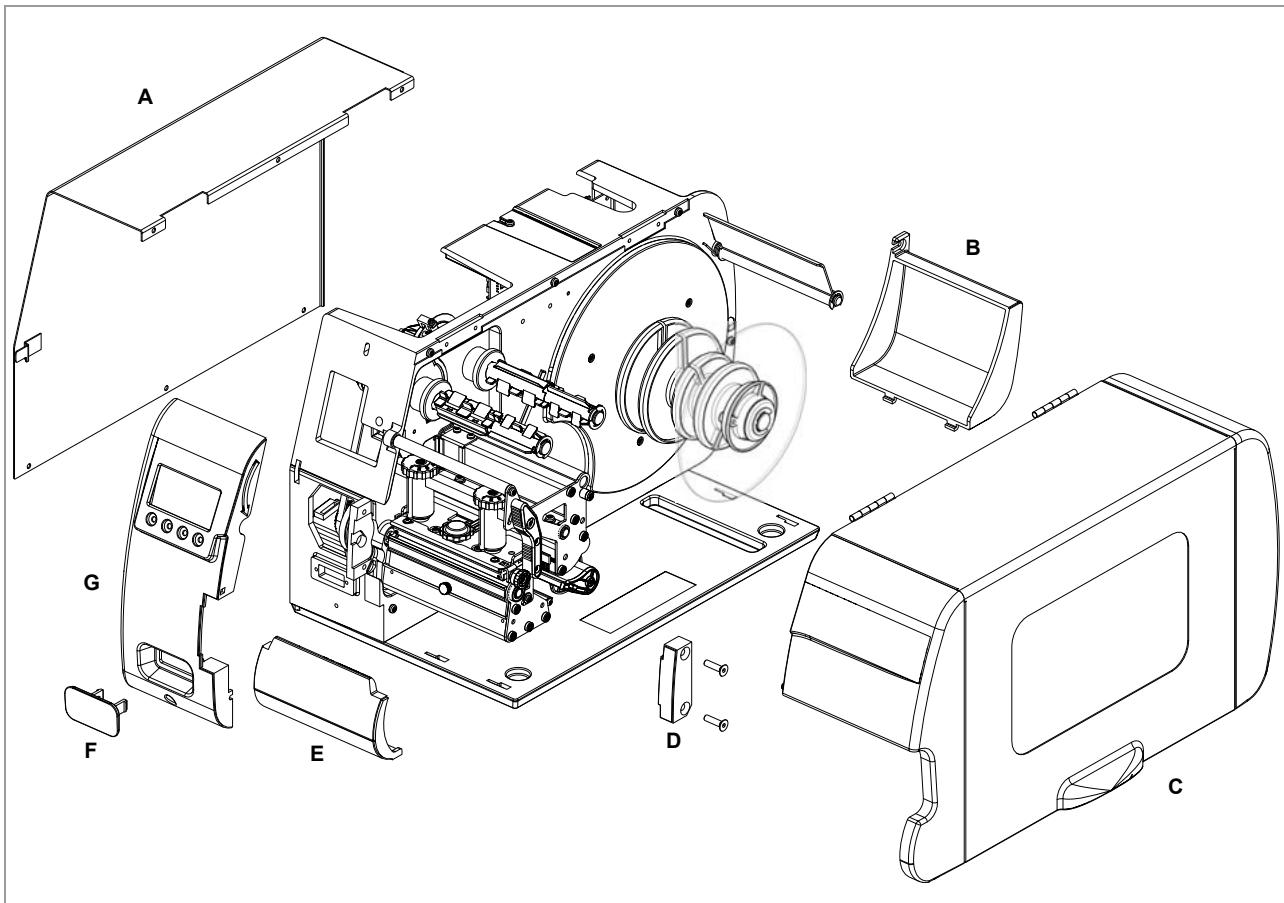
Print speed		Limitations
mm/s	Inch/s	
51/76	2/3	Max. admissible print contrast: 120%
102	4	Max. admissible print contrast at print width > 100 mm: 105% Max. admissible print width at print contrast > 105%: 100 mm
127	5	Max. admissible print contrast at print width > 75 mm: 88% Max. admissible print width at print contrast > 88%: 75 mm
152	6	Max. admissible print contrast at print width > 65 mm: 74% Max. admissible print width at print contrast > 74%: 65 mm

[Tab. 9] XLP 506: Print width limitations for 300 dpi printheads.

# Service Mechanics

## HOUSING COMPONENTS

### Overview



[6] Housing components of the XLP 50x:

- A Rear hood
- B Rear bottom housing
- C Front hood
- D Flange cover
- E Front bottom housing
- F Plug cover
- G Front left housing

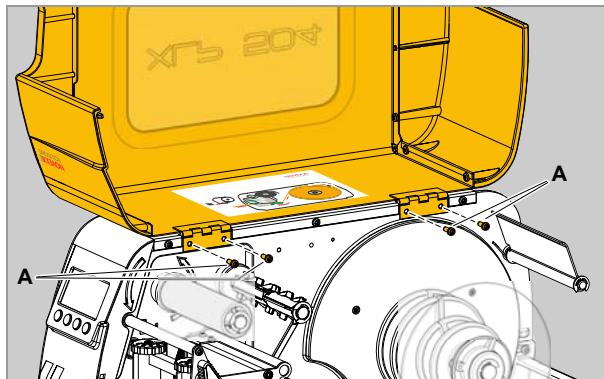
## Front hood

### Tools

Torx screwdriver, size 20

### Removing

1. Remove the 4 bolts [7A].  
➡ Hold the front hood while doing so.
2. Remove the front hood.  
Perform the installation in the reverse order to the removal.



[7] The front hood is fixed with 4 bolts (A).

## Rear hood

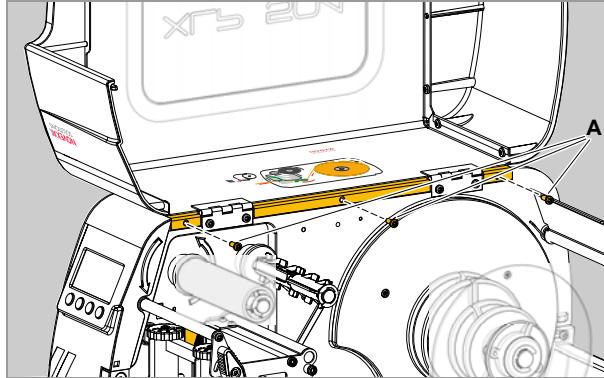
### Tools

Torx screwdriver, size 20

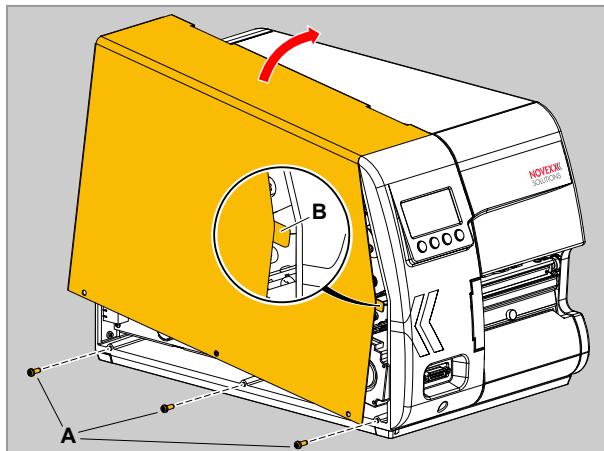
### Removing

1. Open the front hood.
2. Remove the three bolts [8A] on the inside.
3. Close the front hood.
4. Remove the three bolts [9A] on the outside.
5. Remove the rear hood [9].  
➡ First lift the rear hood from the rear end until the catch [9B] is free.

Perform the installation in the reverse order to the removal.



[8] The rear hood is attached on the inside with 3 bolts (A).



[9] Removing the rear hood.

## Front left housing

### Tools

- Torx screwdriver, size 20
- Open-ended spanner, size 7

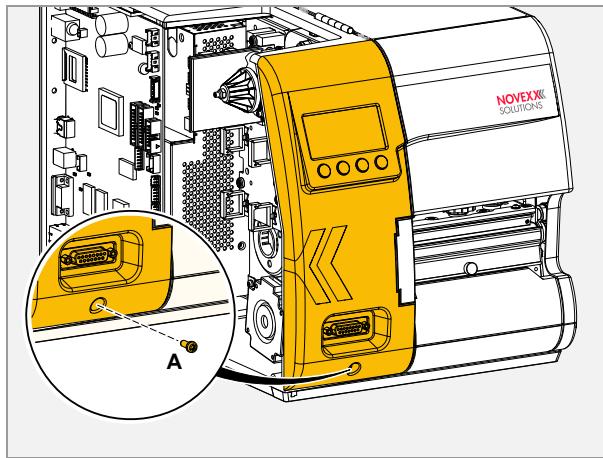
### Removing

1. Remove the rear hood.  
See chapter [Rear hood](#) on page 23.
2. If any: Unplug the connector of the option from the D-Sub connector.
3. Remove the bolt [10A].
4. Screw off the nut. Remove the retaining ring and the washer [11A].
5. Carefully lift the housing. Unplug the connector [11B] from the control panel board. Remove the housing.

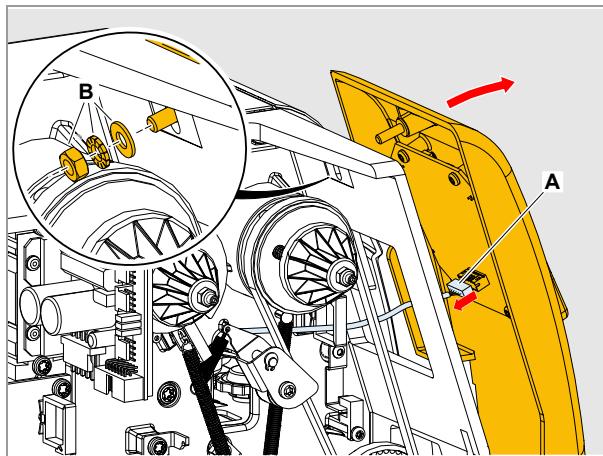
### Installation

Perform the installation in the reverse order to the removal. Note the following:

- Plug in the connector again before assembling.  
→ Assembly sequence at stud bolt: Base plate - washer – retaining ring - nut.



[10] Fixing bolt at the front left housing with (here with D-Sub connector).



[11] Loosen the fastening (A) and the connector (B).

## Bottom housing sections front/rear side

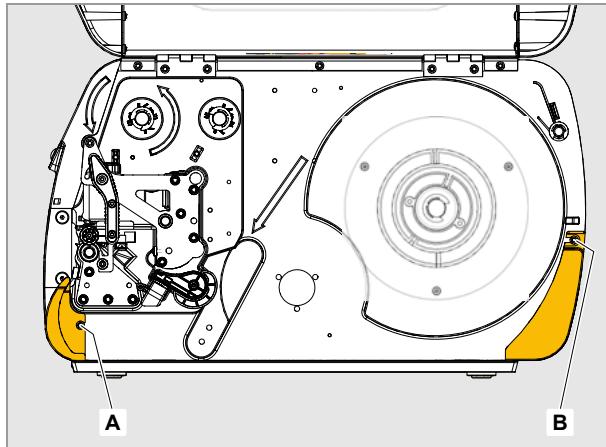
### Tools

Torx screwdriver, size 15

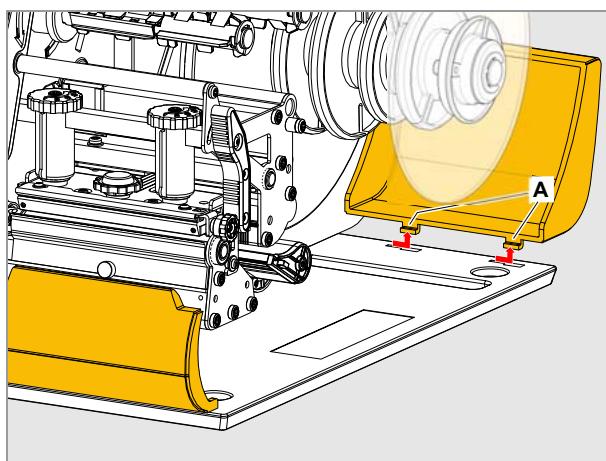
### Removing

1. Remove screw [12A] respectively [12B] at the relevant housing section.
  2. Lightly pull the housing section outwards and carefully lift it upwards [13A].
- ➡ The two plastic catches [13A] per housing section reach into the openings on the printer baseplate! Do not break off the catches!

Perform the installation in the reverse order to the removal.



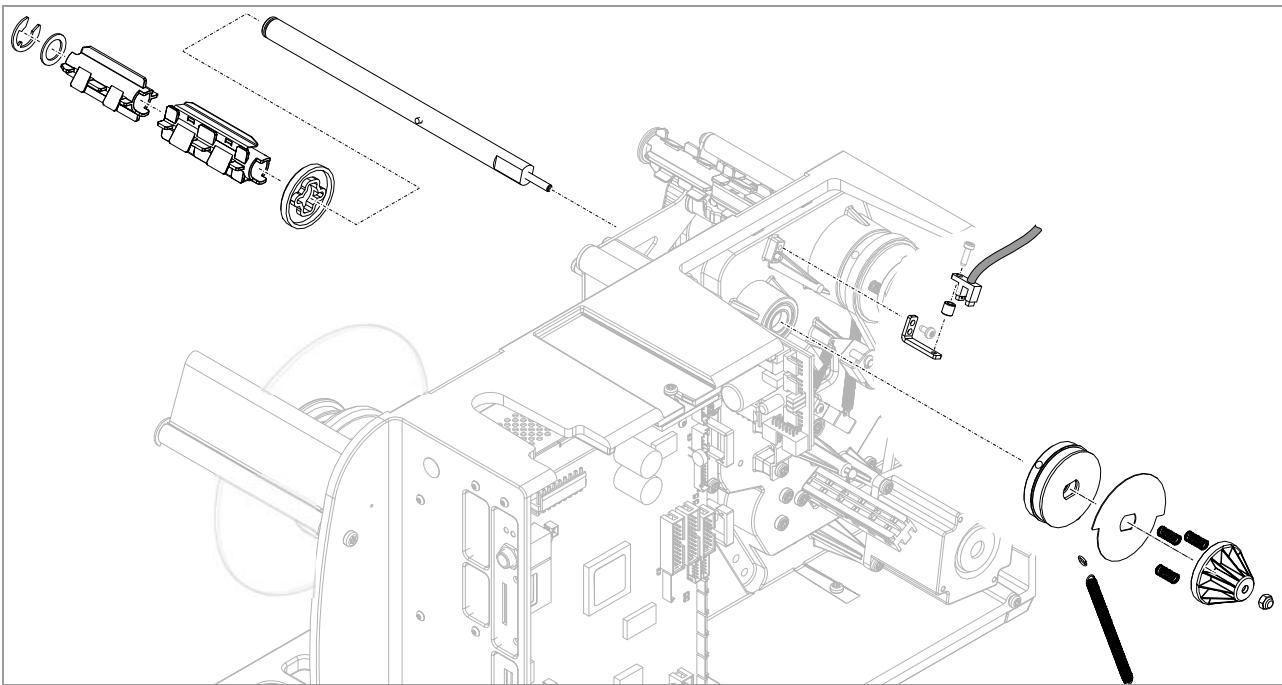
[12] Fixing screws of the bottom housing parts.



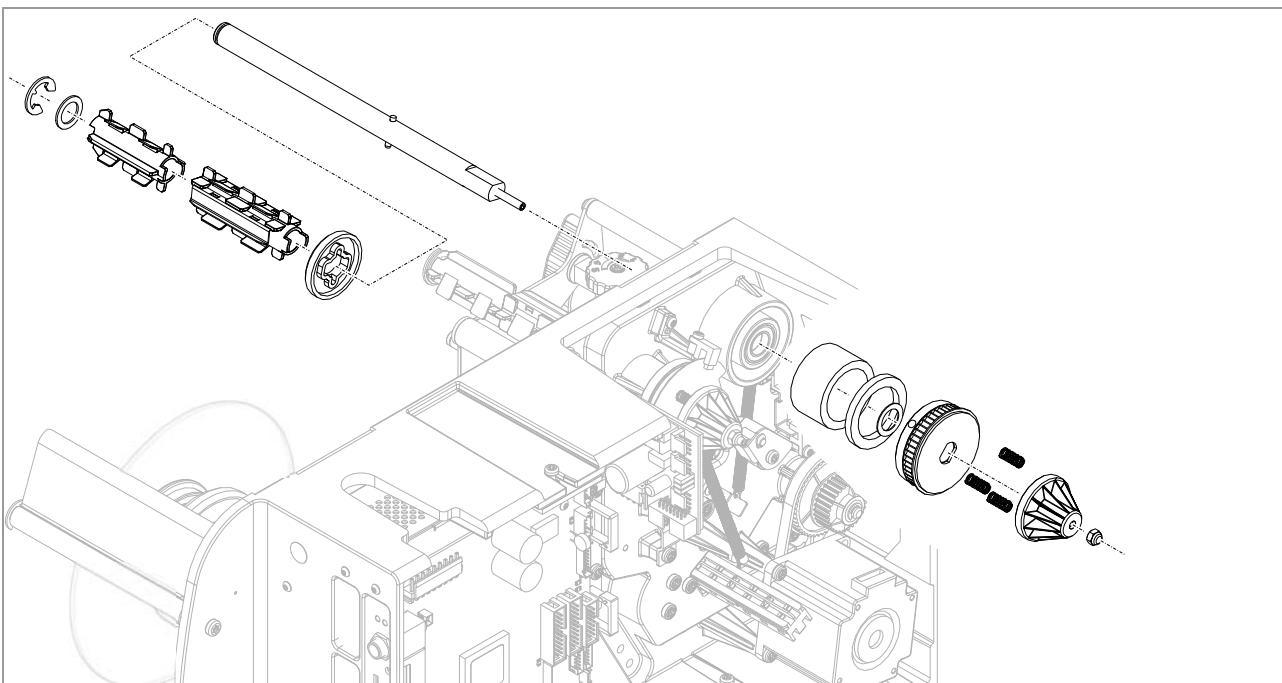
[13] Catches (A) at the bottom side of each housing section.

## XLP 504: RIBBON MANDRELS

### Exploded drawings



[14] Ribbon unwinding mandrel



[15] Ribbon rewinding mandrel

## Replacing the ribbon core adapters

The ribbon core adapters ensure that the ribbon roll holds firmly on the unwind or rewind mandrel. Each ribbon mandrel carries two adapters [16C+D], the inner one [16D] being additionally equipped with a clamp spring. The procedure of exchanging the adapters is the same on both ribbon mandrels.

### Tool

Screwdriver, medium size

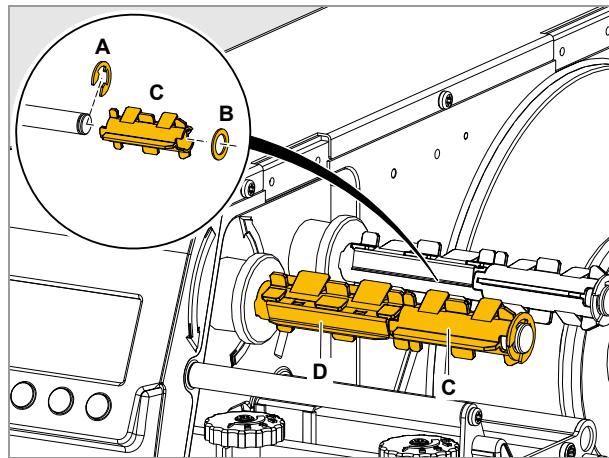
### Removing

1. Remove the lock washer [16A].
2. Remove the shim ring [16B] and the core adapter.

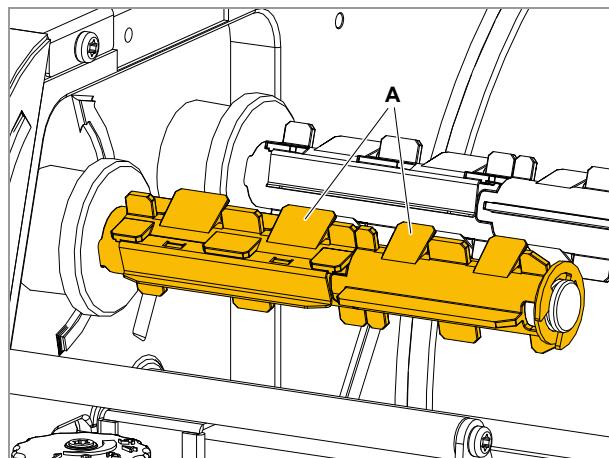
### Installation

Perform the installation in the reverse order to the removal. Note the following:

→ Turn the outer core adapter so that the wings [17A] show in the same direction as those at the inner adapter.



[16] Core adapters (C, D) at the ribbon rewind mandrel.



[17] Mind the position of the core adapters. The wings (A) must show in the same direction at both adapters.

## Ribbon unwinding mandrel

### Replacing

#### Tools

- Torx screwdriver, size 10
- Open-ended spanner, size 8
- Allen key 2.0 mm

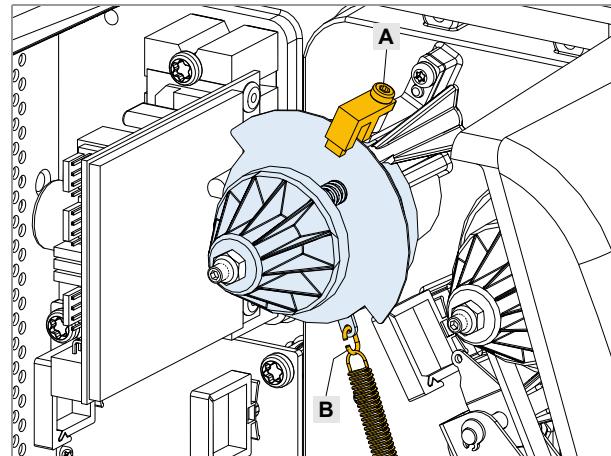
#### Removing

1. Remove the rear hood, see chapter [Rear hood](#) on page 23.
2. Turn out the screw [18A] at the end-of-ribbon sensor and remove the sensor.  
➡ Leave the sensor cable connected!
3. Detach the spring [18B] from the top end.
4. Remove the nut [19A].
5. Remove all parts from the ribbon mandrel. Before removing the brake package, loosen both set screws [19B].
6. Press the ribbon mandrel out of the bearing as shown [20].

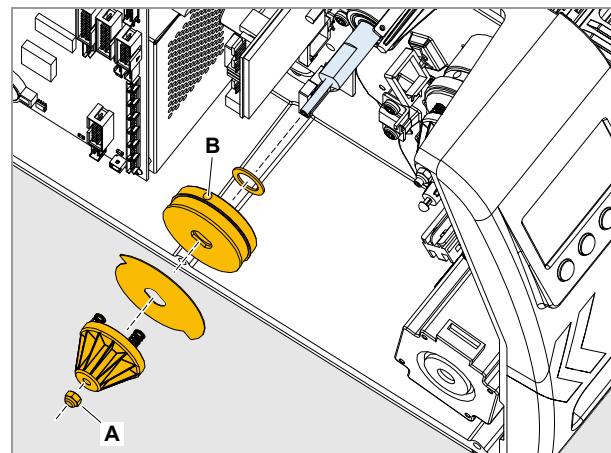
#### Installation

Perform the installation in the reverse order to the removal. Note the following:

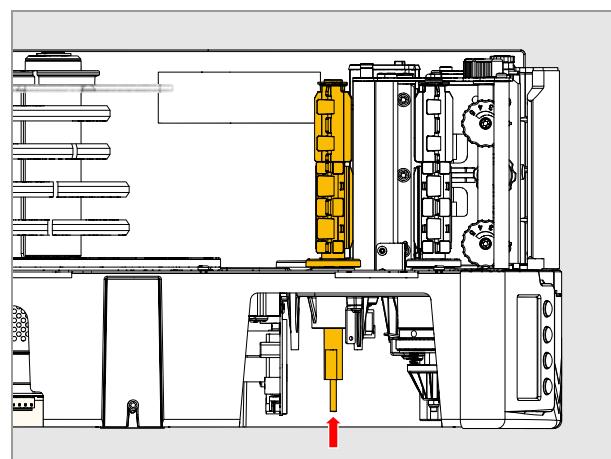
- ➡ Assembly sequence: See figure [19].
- ➡ Place the 3 springs with 3 holes distance each into the holes on the disk [21]. Put some grease on the springs to prevent them from falling out.
- ➡ Make sure that the eyelet at the brake package shows downwards [18].
- ➡ Shim ring on the inside: DIN 988 12x1x18
- ➡ Refasten the retaining spring. The ribbon mandrel must move easily so that the retaining spring can rotate it back to its initial position.
- ➡ When refastening the sensor, make sure that the timing disk engages into the fork without touching it.
- ➡ After assembling, set the assembly braking torque; see [Setting the braking torque](#) on page 31.



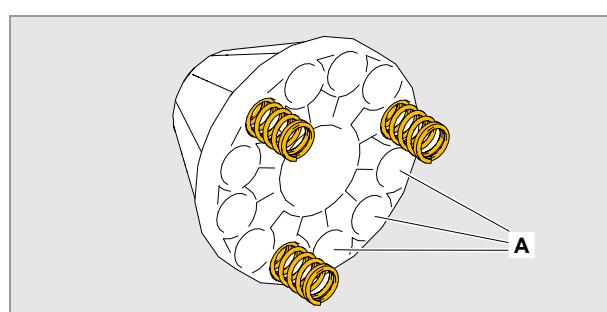
[18] Braking mechanism for ribbon unwinding mandrel.



[19] Removing the brake parts from the unwinding mandrel.



[20] Press the ribbon mandrel out of the bearing.



[21] Insert the springs leaving 3 holes distance each.

### Replacing the ribbon end sensor

Checking the ribbon end sensor: See chapter [Sensors on the CPU board](#) on page 95.

#### Tools

- Torx screwdriver, size 10
- Side cutters

#### Removing

1. Remove screw [22A], take off the sensor [22B].
2. Open cable clamps, cut cable ties. Remove cable from cable clamps.
3. Unplug end of cable from CPU board.

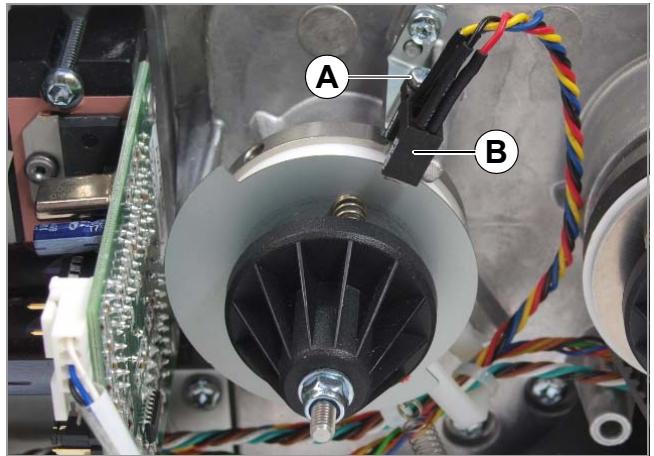
#### Installation

Perform the installation in the reverse order to the removal. Note the following:

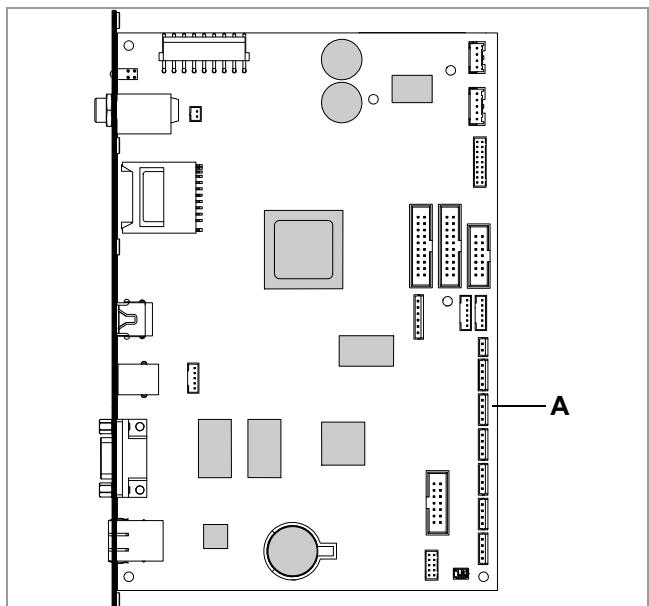
► Connect sensor to plug CN906 [23A] on CPU board.

For a detailed connection diagram, see chapter [Wiring diagrams](#) on page 240.

► Install the cable so that it does not contact any moving parts.



[22] Ribbon end sensor (B).



[23] Connection from Ribbon end sensor to CPU board.

## Ribbon rewinding mandrel

### Replacing

#### Tools

- Torx screwdriver, size 20
- Open-ended spanner, size 8
- Allen key 2.0 mm

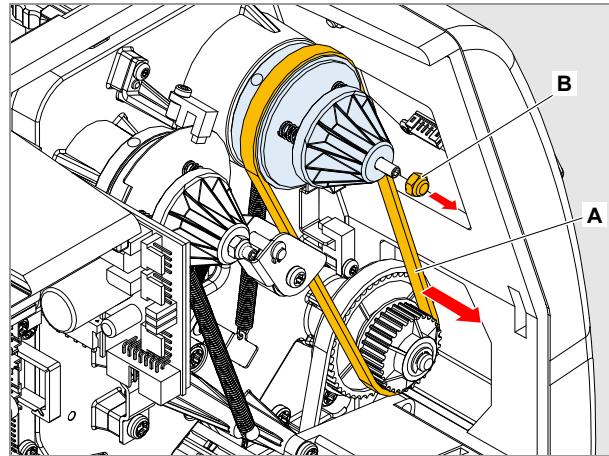
#### Removing

1. Removing the rear hood, see chapter [Rear hood](#) on page 23.
2. Pull the toothed belt off the lower toothed belt pulley and remove it [24A].
3. Remove the nut [24B].
4. Remove all parts from the ribbon mandrel. Before removing the brake package, loosen both set screws [25A].
5. Press the ribbon mandrel out of the bearing as shown [26].

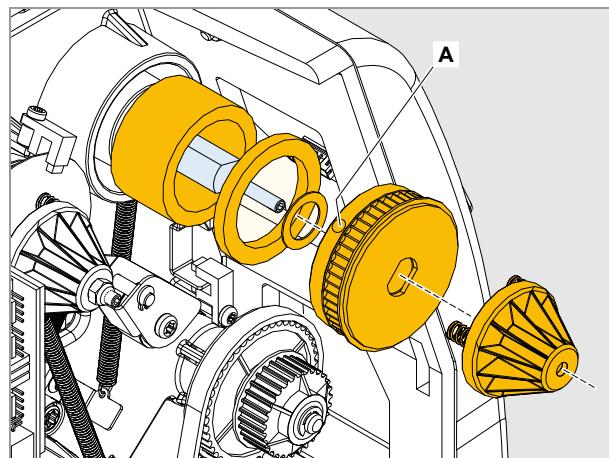
#### Installation

Perform the installation in the reverse order to the removal. Note the following:

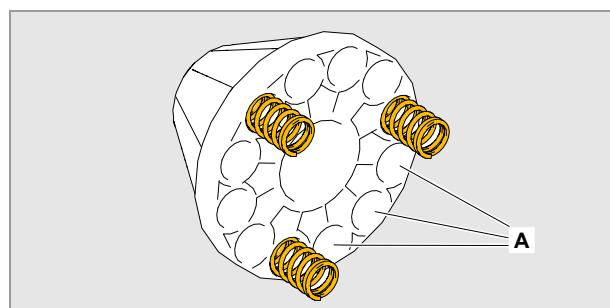
- ➡ Assembly sequence: See figure [25].
- ➡ Shim ring on the inner side: DIN 988 12x0.5x18
- ➡ Place the 3 springs with 3 holes distance each into the holes on the disk [27]. Put some grease on the springs to prevent them from falling out.
- ➡ After assembling, set the assembly braking torque; see [Setting the braking torque](#) on page 31.



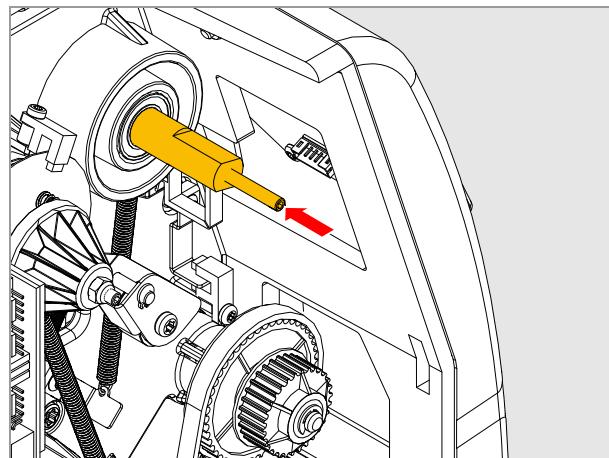
[24] Braking mechanism for ribbon rewinding mandrel.



[25] Friction clutch parts (A) of ribbon rewinding mandrel.



[27] Insert the springs leaving 3 holes distance each.



[26] Press the ribbon mandrel out of the bearing.

## Setting the braking torque

### Tools

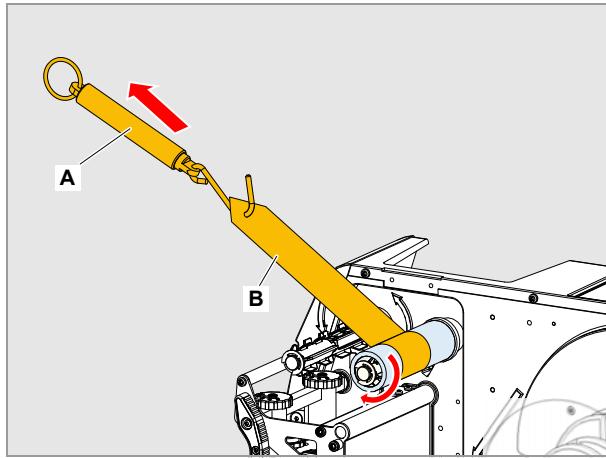
- Open-ended spanner, size 8
- Spring balance 10 N

The following adjustment instructions apply to both ribbon mandrels; the figures display the ribbon unwinding mandrel.

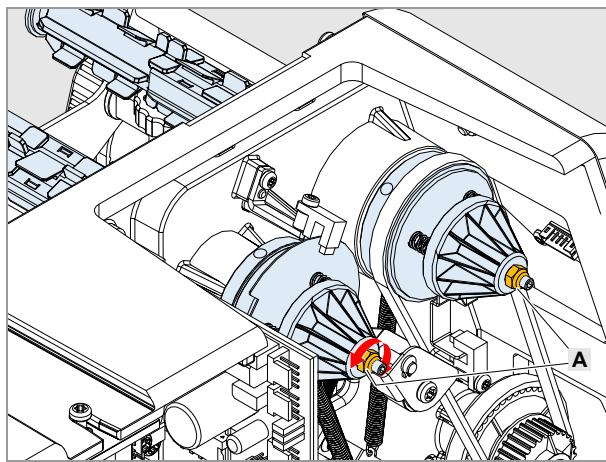
1. Push a cardboard sleeve on the ribbon mandrel.
2. Wind some fabric ribbon around the cardboard sleeve.
3. Fix the end of the fabric ribbon [28A] to the spring balance [28B].
4. Pull constantly at the spring balance until the ribbon mandrel starts to turn [28]. At the same time, read the tractive force from the spring balance.  
☞ While measuring the *ribbon rewinding mandrel*, you must block the print roller (hold it manually).

Ribbon	Setpoint
Rewinding mandrel	7,5-9 N
Unwinding mandrel	4-5 N

5. If the measured value is above or below the set-point, correct the setting as shown in figure [29].
6. Repeat the measurement until the measured value matches the setpoint.



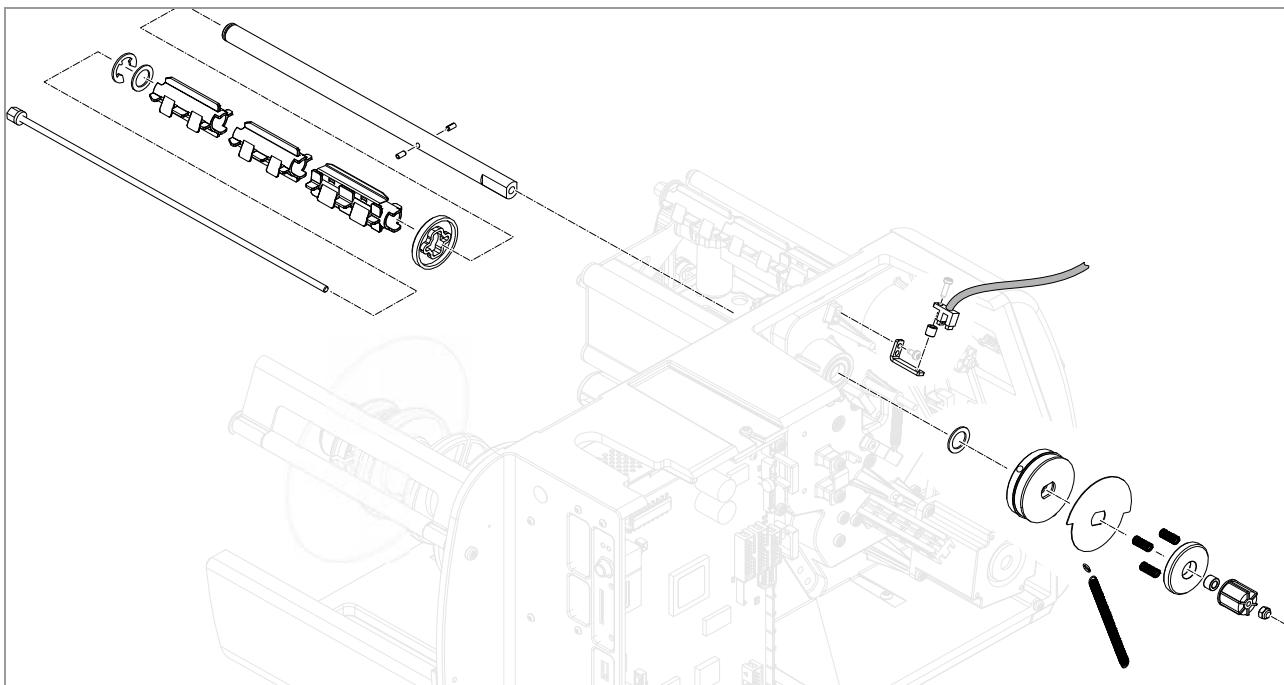
[28] Measuring the tractive force at the ribbon unwind mandrel.



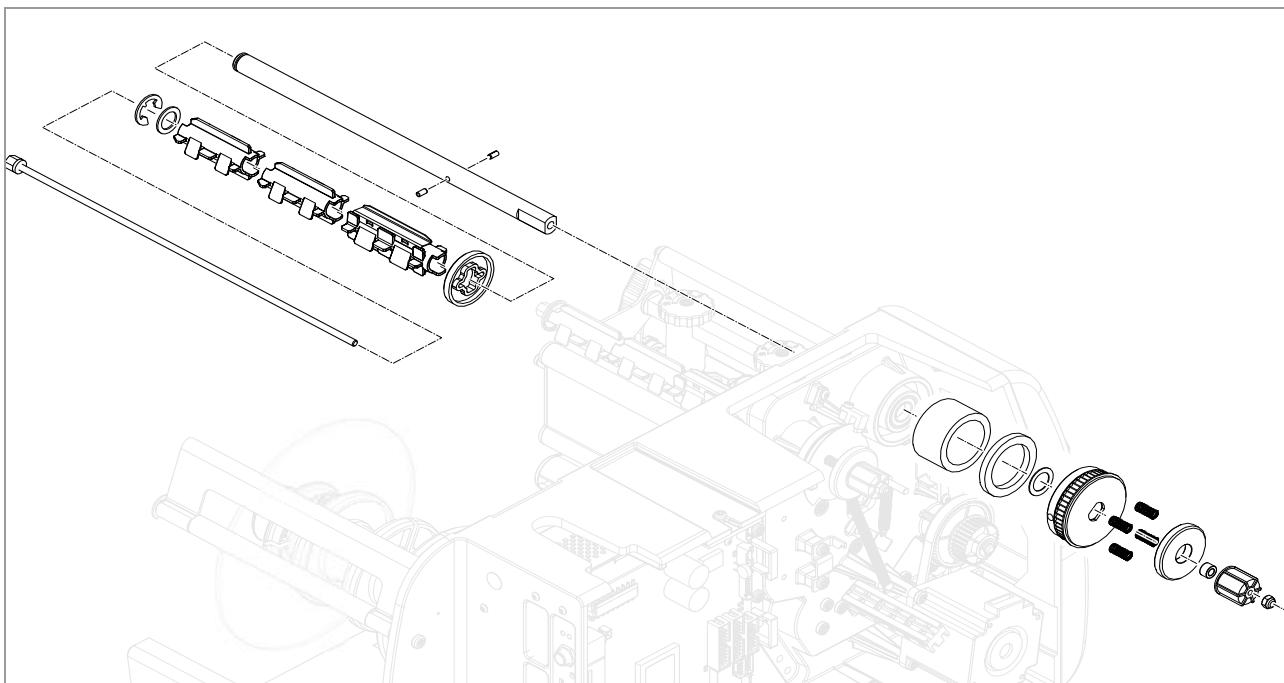
[29] Setting the braking torque by turning the nut (A):  
Tightening = higher brake force  
Loosening = lower brake force

## XLP 506: RIBBON MANDRELS

### Exploded drawings



[30] Ribbon unwinding mandrel



[31] Ribbon rewinding mandrel

## Replacing the ribbon core adapters

The ribbon core adapters ensure that the ribbon roll holds firmly on the unwind or rewind mandrel. Each ribbon mandrel carries two different adapters [16C+D], the inner one [16D] being additionally equipped with a clamp spring. The procedure of exchanging the adapters is the same on both ribbon mandrels.

### Tool

Screwdriver, medium size

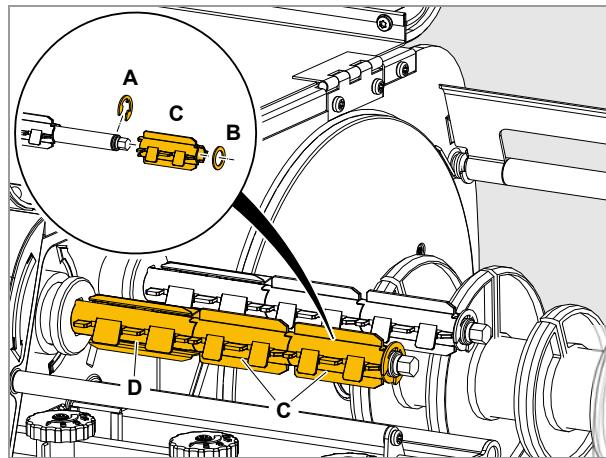
### Removing

1. Remove the lock washer [16A].
2. Remove the shim ring [16B] and the core adapter.

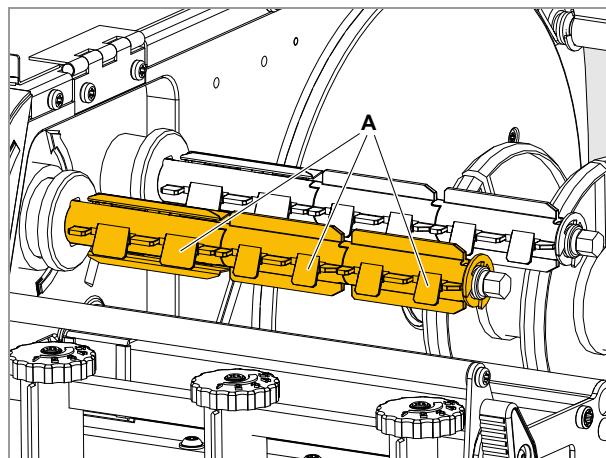
### Installation

Perform the installation in the reverse order to the removal. Note the following:

→ Turn the outer core adapters so that the wings [17A] show in the same direction as those at the inner adapter.



[32] Core adapters (C, D) at the ribbon rewind mandrel.



[33] Mind the position of the core adapters. The wings (A) must show in the same direction at all three adapters.

## Ribbon unwinding mandrel

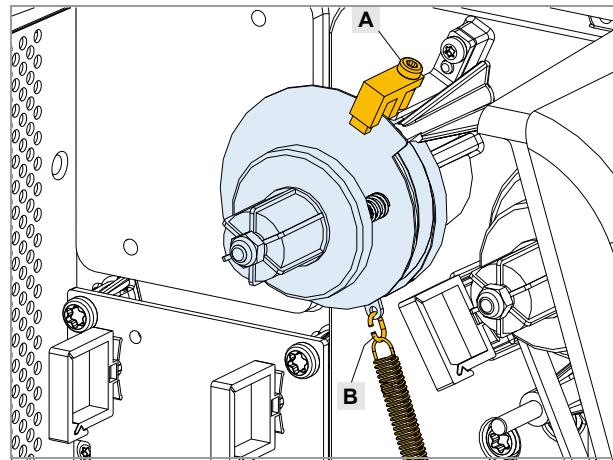
### Replacing

#### Tools

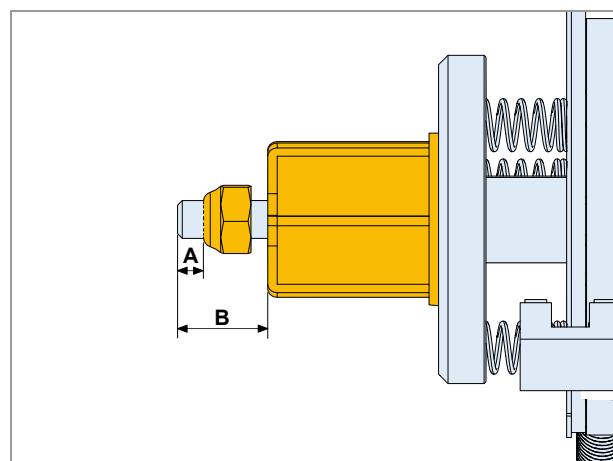
- Torx screwdriver, size 10
- Open-ended spanner, size 8
- Allen key 2.0 mm

#### Removing

1. Remove the rear hood, see chapter **Rear hood** on page 23.
2. Turn out the screw [34A] at the end-of-ribbon sensor and remove the sensor.  
➡ Leave the sensor cable connected!
3. Detach the spring [34B] from the top end.
4. Measure and note the screw-in depth of nut and cap.  
➡ The values determine the setting of the ribbon brake.



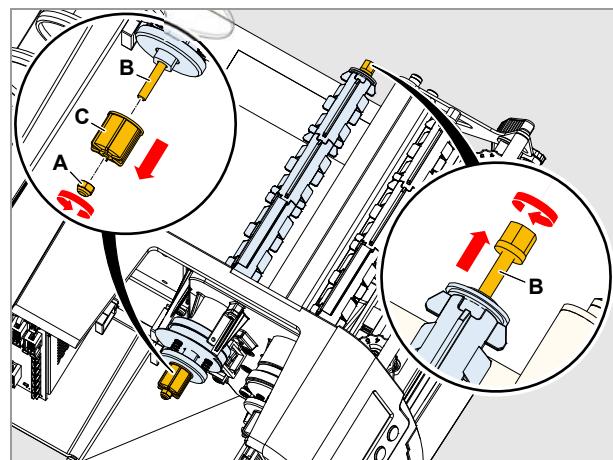
[34] Braking mechanism for ribbon unwinding mandrel.



[35] Measure the screw-in depth of nut (A) and cap (B).

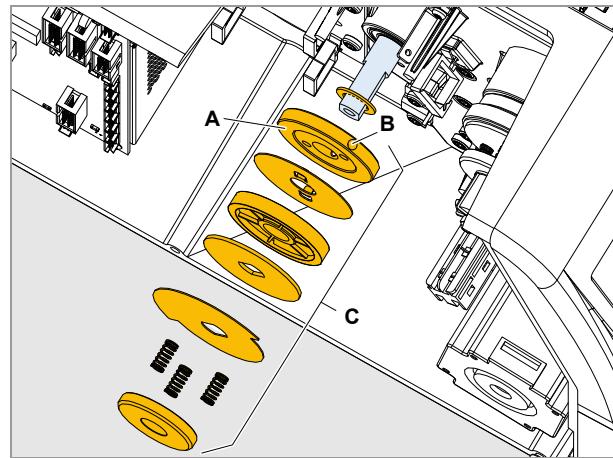
5. Remove the nut [36A].
6. Turn the threaded rod [36B] at the read hex head out of the cap [36C] and pull it out of the ribbon mandrel. Remove the cap.

Continued overleaf.



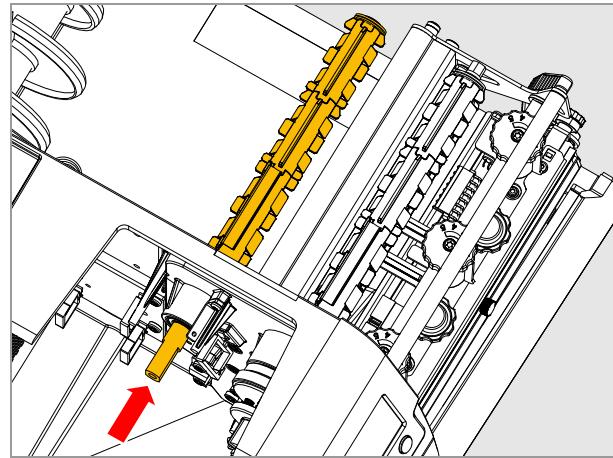
[36] Removing the threaded rod (B).

7. Remove all parts from the ribbon mandrel. Before removing the stop disk [37B], loosen both set screws [37C].



[37] Removing the brake parts (A) from the unwinding mandrel.

8. Press the ribbon mandrel out of the bearing in the direction of the arrow [38].

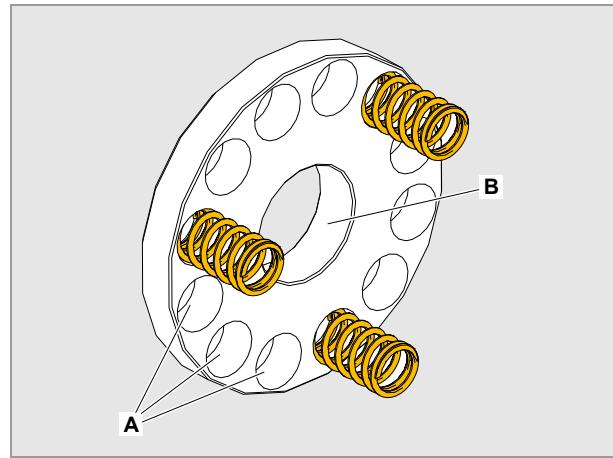


[38] Press the ribbon mandrel out of the bearing.

#### Installation

Perform the installation in the reverse order to the removal. Note the following:

- ➡ Assembly sequence: See figure [37].
- ➡ Place the 3 springs with 3 holes distance each into the holes on the disk [39A]. Put some grease on the springs to prevent them from falling out. Slightly grease the disk at its inner diameter [39B] before mounting it.
- ➡ Shim ring on the inside: DIN 988 12x1x18
- ➡ Refasten the retaining spring. The ribbon mandrel must move easily so that the retaining spring can rotate it back to its initial position.
- ➡ When refastening the sensor, make sure that the timing disk engages into the fork without touching it.
- ➡ After assembling, set nut and cap to the screw-in depth noted before or newly set the braking torque, see chapter **Setting the braking torque** on page 39.



[39] Insert the springs leaving 3 holes distance each.

### Replacing the ribbon end sensor

Checking the ribbon end sensor: See chapter [Sensors on the CPU board](#) on page 95.

#### Tools

- Torx screwdriver, size 10
- Side cutters

#### Removing

1. Remove screw [40A], take off the sensor [40B].
2. Open cable clamps, cut cable ties. Remove cable from cable clamps.
3. Unplug end of cable from CPU board.

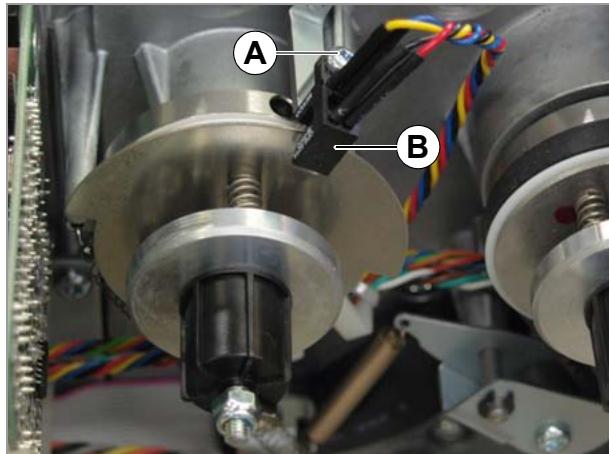
#### Installation

Perform the installation in the reverse order to the removal. Note the following:

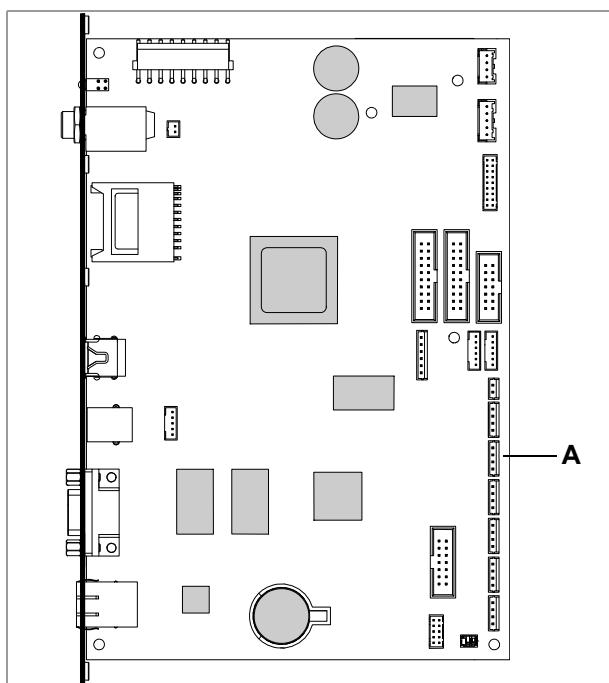
► Connect sensor to plug CN906 [41A] on CPU board.

For a detailed connection diagram, see chapter [Wiring diagrams](#) on page 240.

► Install the cable so that it does not contact any moving parts.



[40] Ribbon end sensor (B).



[41] Connection from Ribbon end sensor to CPU board.

## Ribbon rewinding mandrel

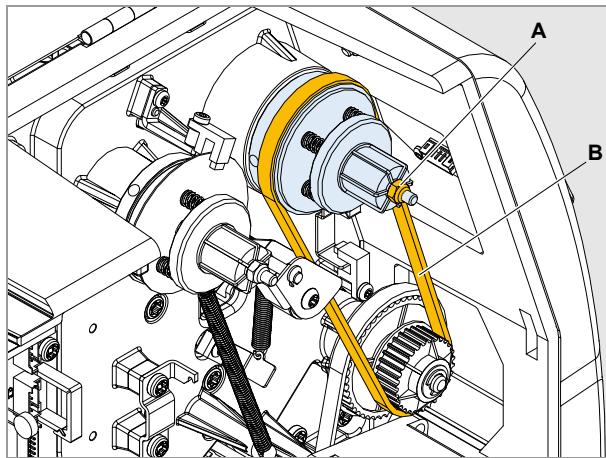
### Replacing

#### Tools

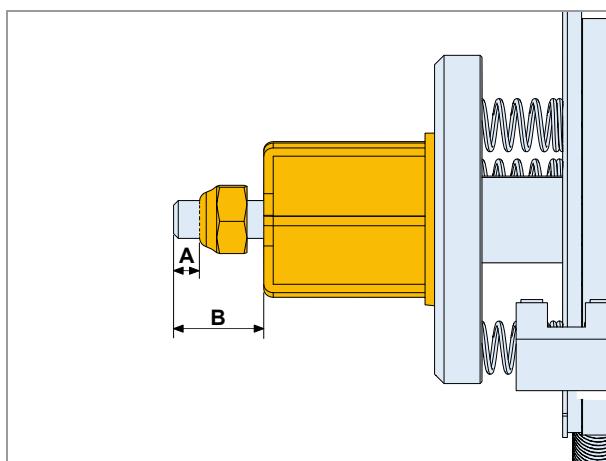
- Torx screwdriver, size 20
- Open-ended spanner, size 8
- Allen key 2.0 mm

#### Removing

1. Removing the rear hood, see chapter **Rear hood** on page 23.
2. Pull the toothed belt off the lower toothed belt pulley and remove it [24A].
3. Measure and note the screw-in depth of nut and cap [43].  
☞ The values determine the setting of the ribbon brake.



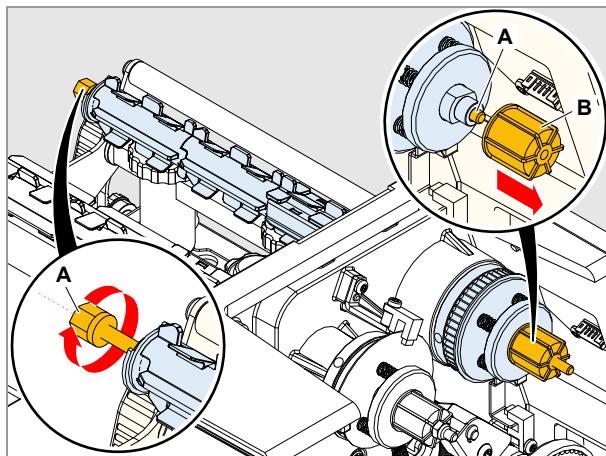
[42] Braking mechanism for ribbon rewinding mandrel.



[43] Measure the screw-in depth of nut (A) and cap (B).

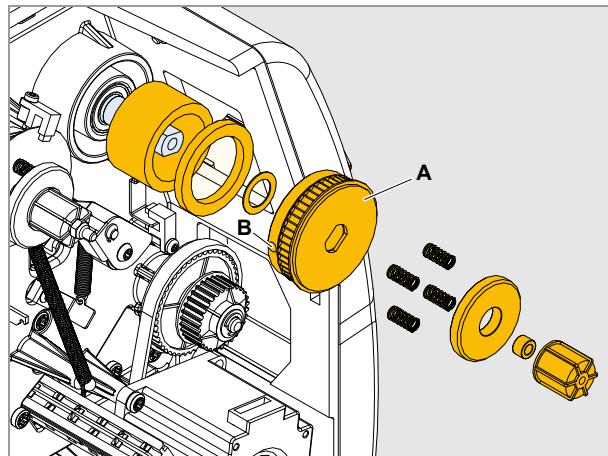
4. Remove the nut [42A].
5. Turn the threaded rod [44A] at the read hex head out of the cap [44B] and pull it out of the ribbon mandrel. Remove the cap.

Continued overleaf.



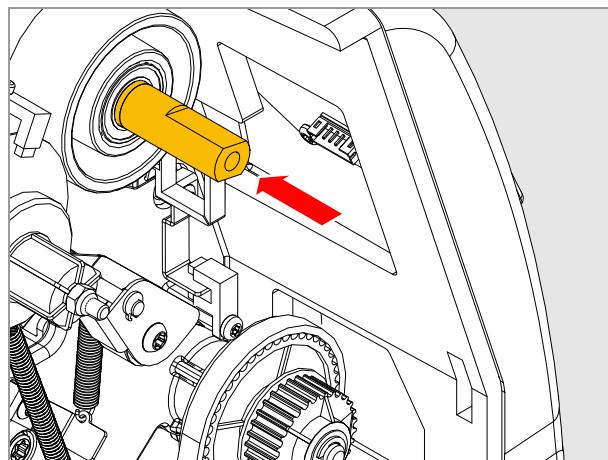
[44] Removing the threaded rod.

6. Remove all parts from the ribbon mandrel. Before removing the brake package, loosen both set screws [45B].



[45] Parts of the braking clutch at the ribbon rewind mandrel.

7. Press the ribbon mandrel out of the bearing as shown [46].

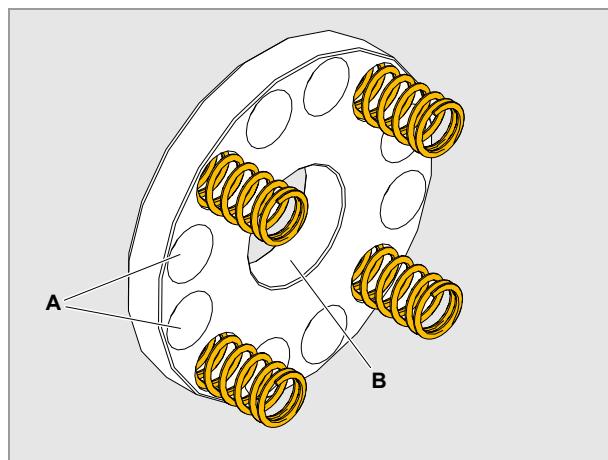


[46] Press the ribbon mandrel out of the bearing.

### Installation

Perform the installation in the reverse order to the removal. Note the following:

- ➡ Assembly sequence: See figure [45].
- ➡ Shim ring on the inner side: DIN 988 12x0.5x18
- ➡ Place the springs with 2 holes distance each into the holes on the disk [47A]. Put some grease on the springs to prevent them from falling out. Slightly grease the disk at its inner diameter [47B] before mounting it.
- ➡ After assembling, set nut and cap to the screw-in depth noted before or newly set the braking torque, see chapter **Setting the braking torque** on page 31.



[47] Insert the springs leaving 2 holes distance each.

## Setting the braking torque

The braking torques of the foil mandrels can be set by turning the red hexagon on each mandrel. Turn clockwise to increase the torque.

The traction exerted on the foil is in proportion to the winding/unwinding torque. To set the braking torque, measure the traction with a spring balance.

Tools:

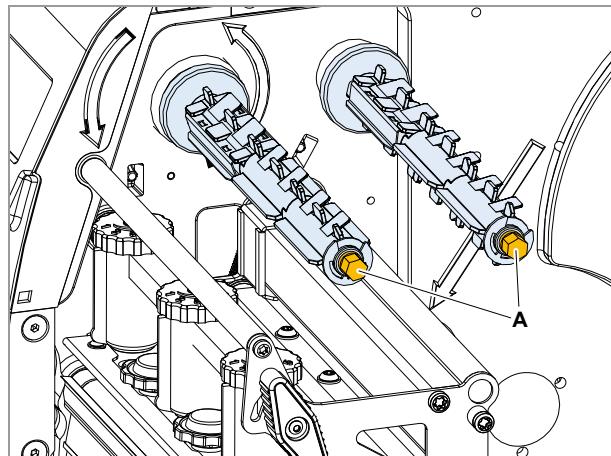
- Spring balance 50 N (Article number 93665-00-0)
- Cardboard core of a ribbon roll

Setting range for the tractive forces on rewind and unwind mandrel:

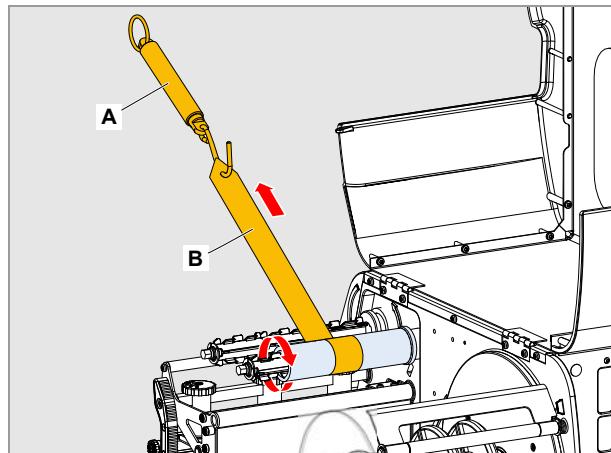
Tractive force rewinder	Tractive force unwinder
8 N	2-4 N

## Measuring the tractive force

1. Push a cardboard sleeve on the ribbon mandrel.
2. Wind some fabric ribbon around the cardboard sleeve.
3. Fix the end of the fabric ribbon [49B] to the spring balance [49A].
4. Pull constantly at the spring balance until the ribbon mandrel starts to turn [49]. At the same time, read the tractive force from the spring balance.  
➡ While measuring the *ribbon rewinding mandrel*, you must block the print roller (hold it manually).



[48] The hexagonal setting caps at the ribbon mandrels (A).



[49] Measuring the tractive force at the unwind mandrel.

## PRINTING UNIT

### Replacing the print head

Detailed instructions on replacing the print head can be found in the user manual, chapter „Maintenance and cleaning“ > “Print head” > “Replacing Print head”.

### Print head pressure shaft

The print head pressure shaft [50A] carries 2 adjustable pressure pads [50B]. If the closing lever [50C] is closed, the pressure pads will press the print head against the print roller.

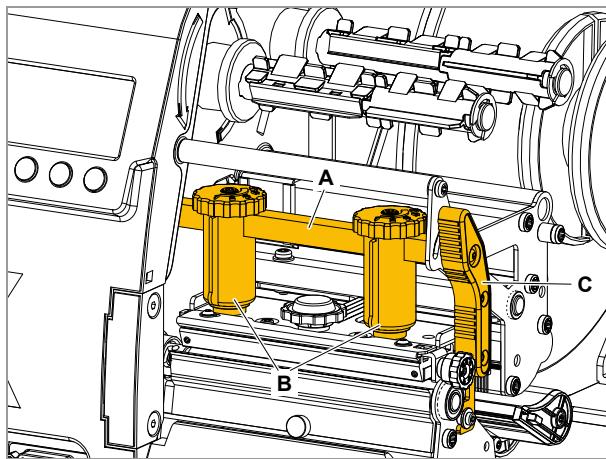
#### Tools

Torx screwdriver, sizes 10 and 20

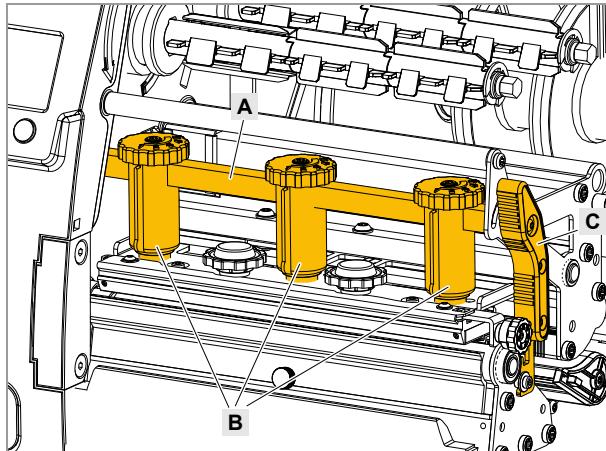
#### Removing

1. Remove the rear hood.

See chapter **Rear hood** on page 23.



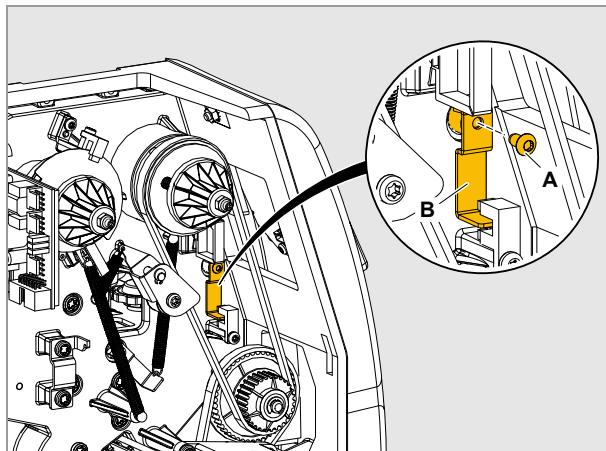
[50] Print head pressure shaft (A) with pressure pads (B) and closing lever (C) at the XLP 504.



[51] Print head pressure shaft (A) with pressure pads (B) and closing lever (C) at the XLP 506.

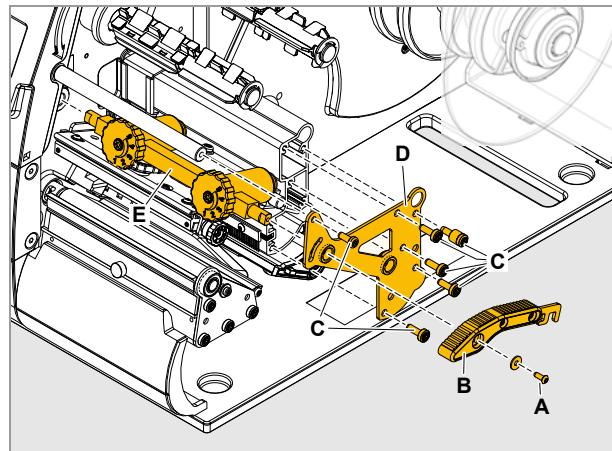
2. Remove fastening bolt [52A] from switch flag. Remove the switch flag [52B].

Continued on next page



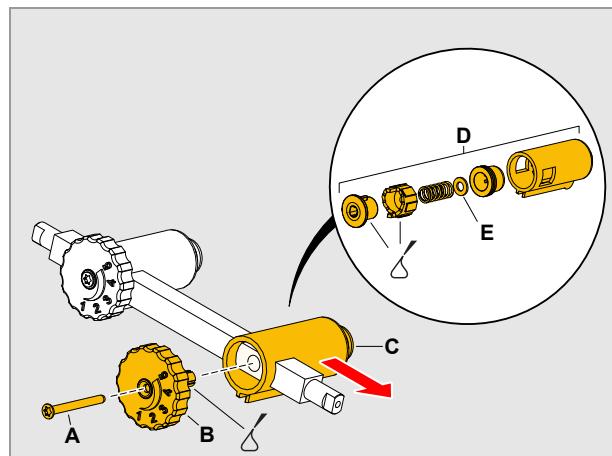
[52] Switch flag (B) on print head pressure shaft.

3. Disassemble the closing lever. To do this, remove screw [53A] and take off the closing lever [53B].
4. Remove the screws [53C] and take off the lateral bearing plate [53D].
5. Pull out the pressure shaft [53E].



[53] Disassembling the pressure shaft (E).

6. Remove the screw [54A] from the cover of the pressure pad. Remove the cover from the pressure pad [54B].
7. Remove the pressure pad from the pressure shaft.
8. Remove the parts [54D] out of the pressure pad housing.



[54] Pressure pad with removed cover.

### Installation

Perform the installation in the reverse order to the removal. Note the following:

- ➡ Assembly sequence: See fig. [54].
- ➡ Lubricate at the shown positions ( ↗ ).
- ➡ Installation of washer DIN 988 5x10x1 [54E] only at the *outer* pressure pad (part no. A4631):
- ➡ Installation of washer DIN 988 5x10x1 (part no. A4631) [54E]:
  - XLP 504: Installation only at the *outer* pressure pad
  - XLP 506: Installation at all pressure pads

## Closing lever sensor

Testing the sensors: See chapter [Sensor test](#) on page 94.

### Tools

- Torx screwdriver, size 10
- Side cutters

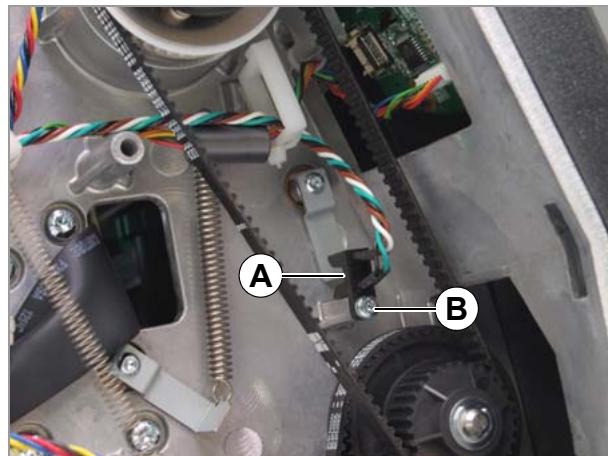
### Removing

1. Remove screw [55B], take off the sensor [55A].
2. Open cable clamps, cut cable ties. Remove cable from cable clamps.
3. Unplug end of cable from CPU board.

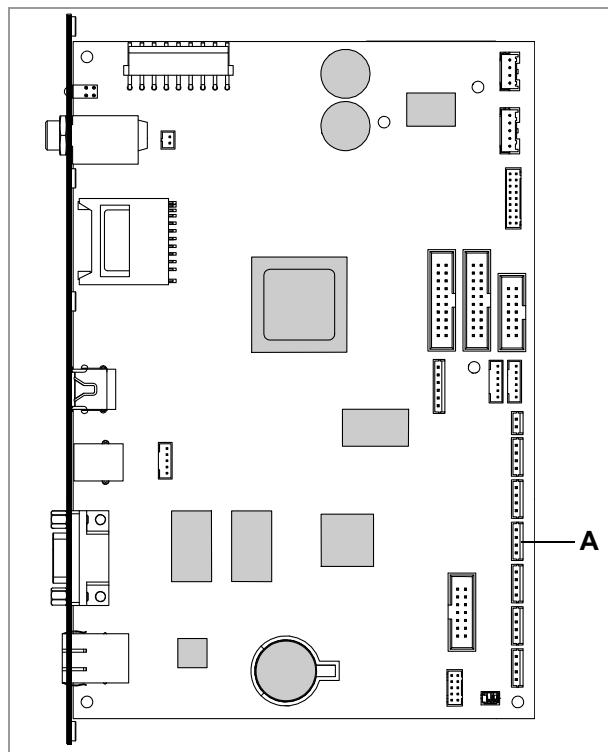
### Installation

Perform the installation in the reverse order to the removal. Note the following:

- Connect the sensor to plug CN 907 [56A] on CPU board.
- Install the cable so that it does not contact any moving parts.



[55] Closing lever sensor (A).



[56] Connection from closing lever sensor to CPU board.

## MATERIAL TRANSPORT

### Adjusting the friction of the material guide

#### Tools

- Torx screwdriver size 10
- Spring balance 10 N

#### Measure the driving force

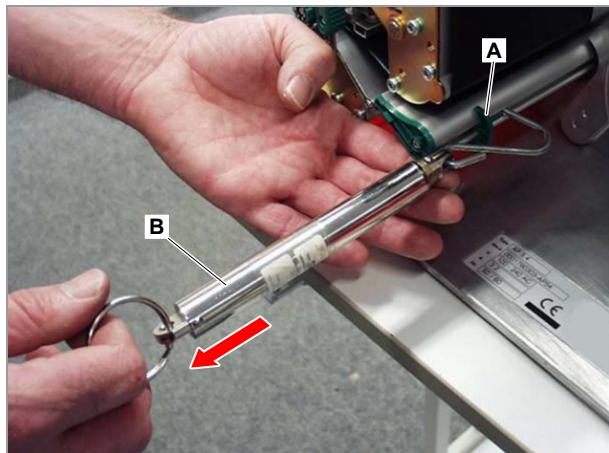
1. Push the material guide [57A] to approximately the centre of the guiding section.
2. Connect the spring balance [57B] to the material guide as shown.
3. Pull the spring scale until the material guide moves. At the same time, read the tensile force (= driving force).

➡ Setpoint:  $8 \pm 2$  N

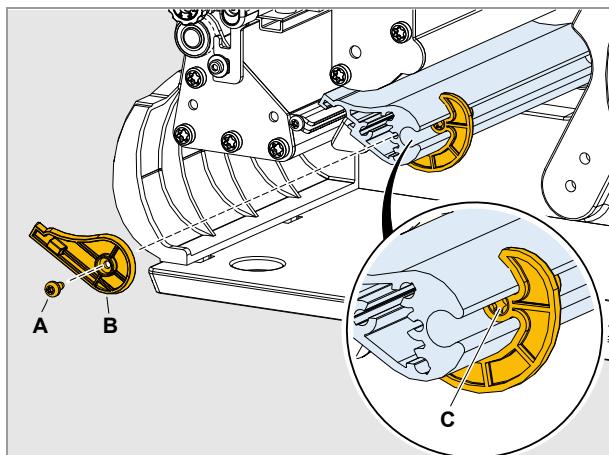
When the measured driving force deviates from the set-point:

#### Adjusting the driving force

1. Unscrew the cover [58B].
2. By rotating the set screw [58C] in the material guide, you can increase or reduce the driving force.
  - *Increase the driving force*: Tighten the set screw (clockwise)
  - *Reduce the driving force*: Loosen the set screw (counter-clockwise).
3. To check the driving force, re-measure.
4. Reassemble the cover.



[57] Measuring the driving force with a spring scale.



[58] Tighten the set screw (C) to increase the driving force.

## Replacing the material unwinder

### Tools

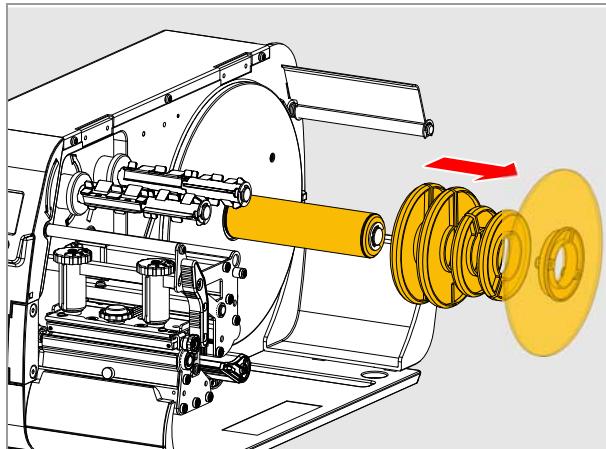
- Screwdriver, large
- Torx screwdriver, size 20

### Auxiliary materials

- “Loctite Cleaner 7063” cleaning agent
- “Loctite 243” glue

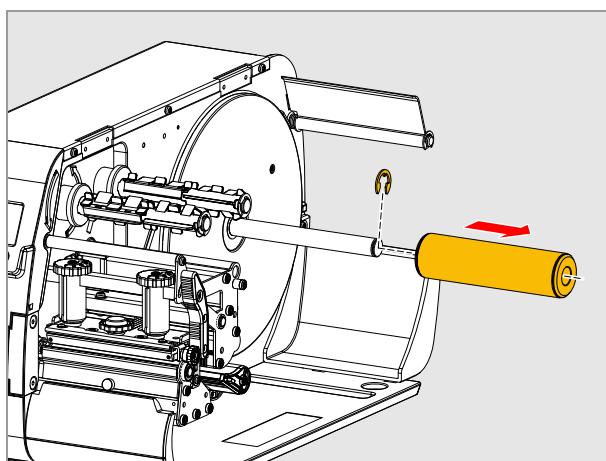
### Removing

1. Remove the guiding disk and adapter rings [59].



[59] Remove adapter rings and guiding disk .

2. Remove the retaining ring. Remove the material unwinder [60].



[60] Unwinder shaft at AP 5.6.

### Remove the unwinder shaft:

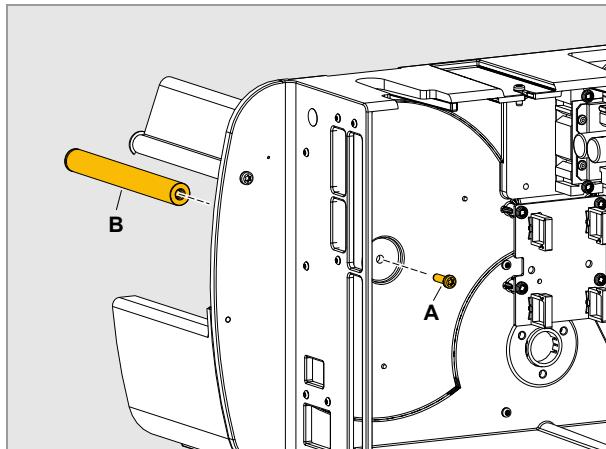
1. Remove the power supply, see chapter [Power supply](#) on page 65.
2. Remove the screw [61A] and take off the shaft [61B].

### Installation

Perform the installation in the reverse order to the removal. Note the following:

#### Install the shaft:

- ➡ Clean the thread hole on the shaft and the screw thread (“Loctite Cleaner 7063” cleaning agent).
- ➡ Apply “Loctite 243” glue to the screw thread. Observe the handling instructions from the manufacturer.
- ➡ Tighten the screw [61A] to a torque of 320 Ncm.



[61] Fastening bolt (A) for unwinder shaft.

## Replacing the feed motor

### Tools

Torx screwdriver, size 20

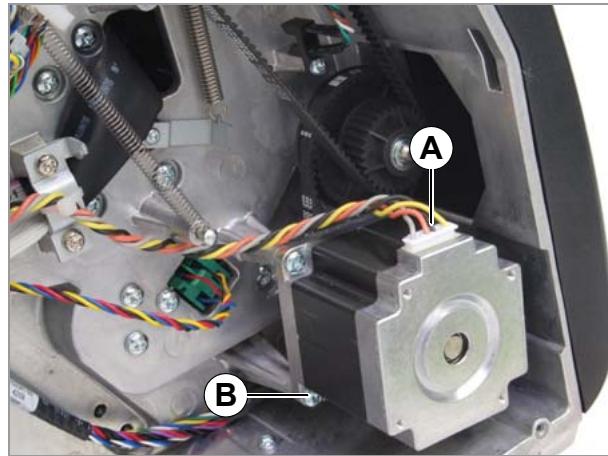
### Removing

1. Remove the rear hood.  
See [Rear hood](#) on page 23.
2. Unplug the cable [62A] from the motor.
3. Remove the three screws [62B]. Remove the motor.

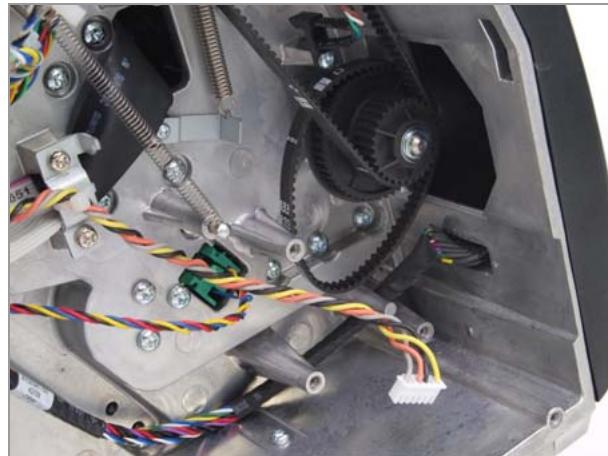
### Installation

Perform the installation in the reverse order to the removal. Note the following:

- Tighten the belt: Press the motor downwards with the screws lightly tightened. Tighten the screws.
- Install the cable so that it does not contact any moving parts.



[62] Motor and drive belt on XLP 504.



[63] Motor removed.

## Label sensor

Check label sensor: See chapter [Sensor test](#) on page 94.

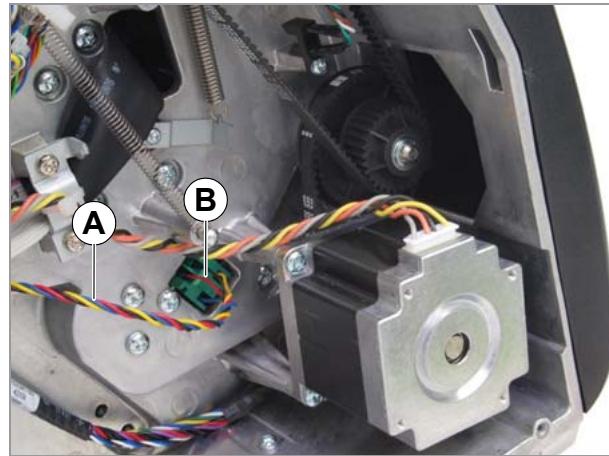
### Removing

1. Remove the rear hood.  
See [Rear hood](#) on page 23.
2. Unplug the sensor cable from CPU board and remove it from the cable holders.  
► If the printer is equipped with the optional reflex sensor, two cables must be unplugged.
3. On the opposite side of the printer, swivel the cover [65B] downwards.
4. Pull out the sensor fork [65A]. While doing this, carefully guide the cable through the opening in the printer separating panel.

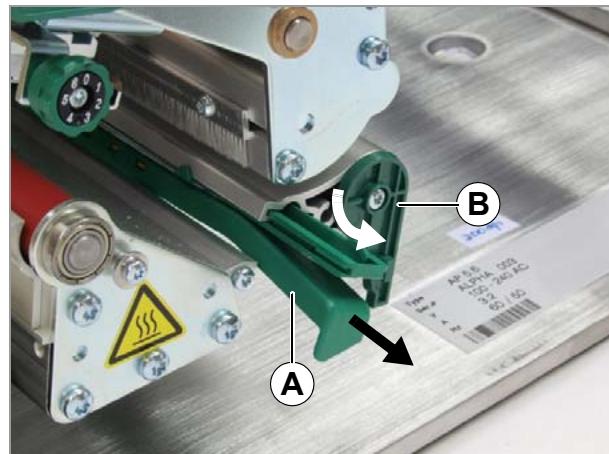
### Installation

Perform the installation in the reverse order to the removal. Note the following:

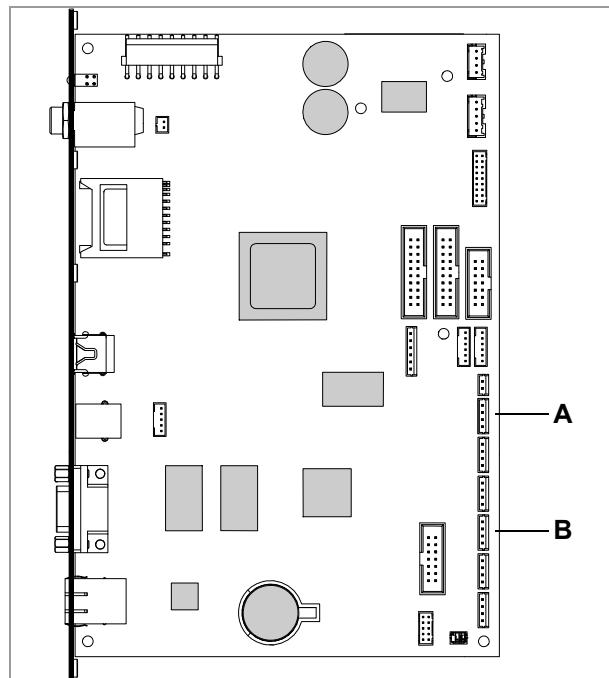
- Connect the label sensor to the CPU board [66A+B].
- Install the cable into the cable holder so that it does not contact any moving parts.



[64] Cable (A) to label sensor fork (B).



[65] Pull out the sensor fork (A).

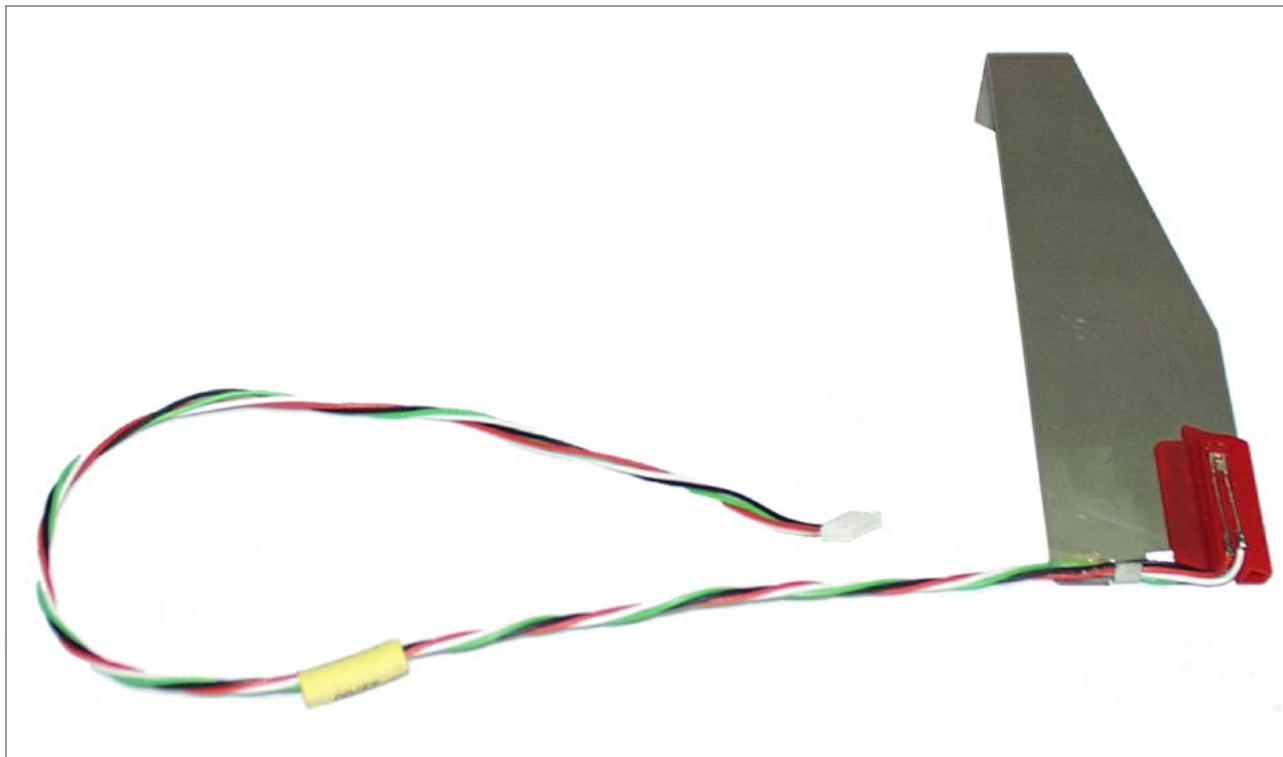


[66] Connection from label sensor to CPU board.

- A Transmission light sensor  
B Reflex light sensor below (optional)

## XLP 504: Label sensor for very short labels

► Only applies to XLP 504 dispenser!



[67] Label sensor for short labels.

Very short labels are labels that are much shorter than the distance of *30 mm* between the print head and punch sensor.

If these short labels were to be printed in Real 1:1 mode, loops could form as the material moves backwards. As a consequence, the printout could move on the label (printing impressions would become imprecise).

In these cases, we recommend installing the label sensor described here. This will improve the impressioning precision on short labels.

### Requirements

- Printer: XLP 504 Dispenser
- Sensor retrofit kit (article no. A6592)

### Tools

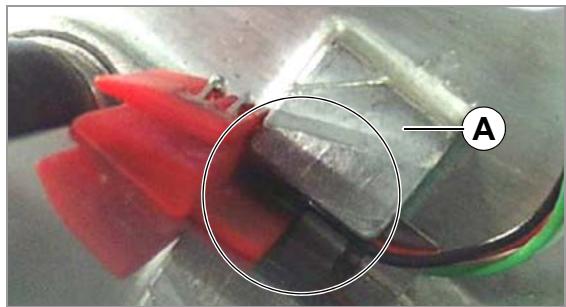
Torx screwdriver, size 20

## Installing



[71] Installation area of sensor (circle).

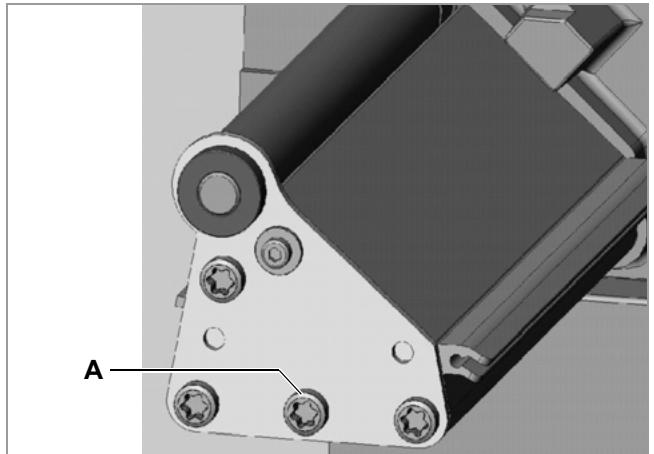
1. Remove the rear hood.
  2. Loosen the screw [68A].
  3. Place the sensor as shown [69A]. Tighten the screw [69B].
- When inserting the sensor, make sure that the cable lies properly along the cast bolt [72A]!



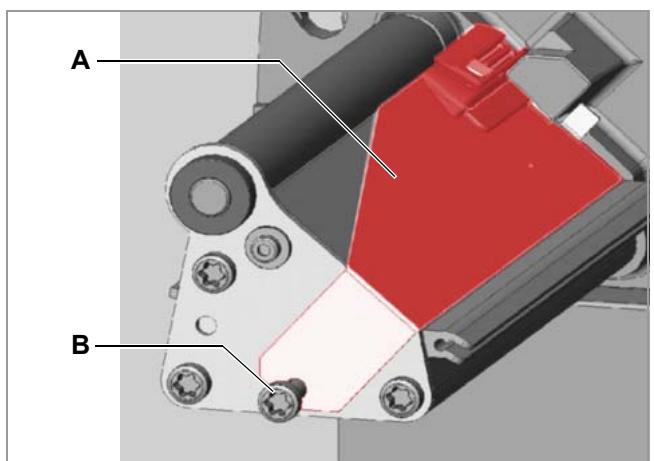
[72] Cable installation (circle) along cast bolt (A).

4. Insert the sensor cable through opening in case enclosure [70A].

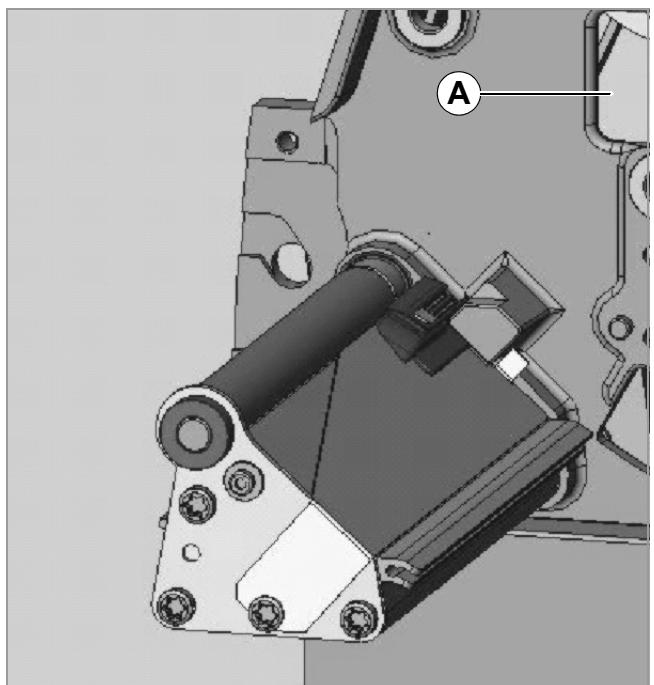
Continued on next page.



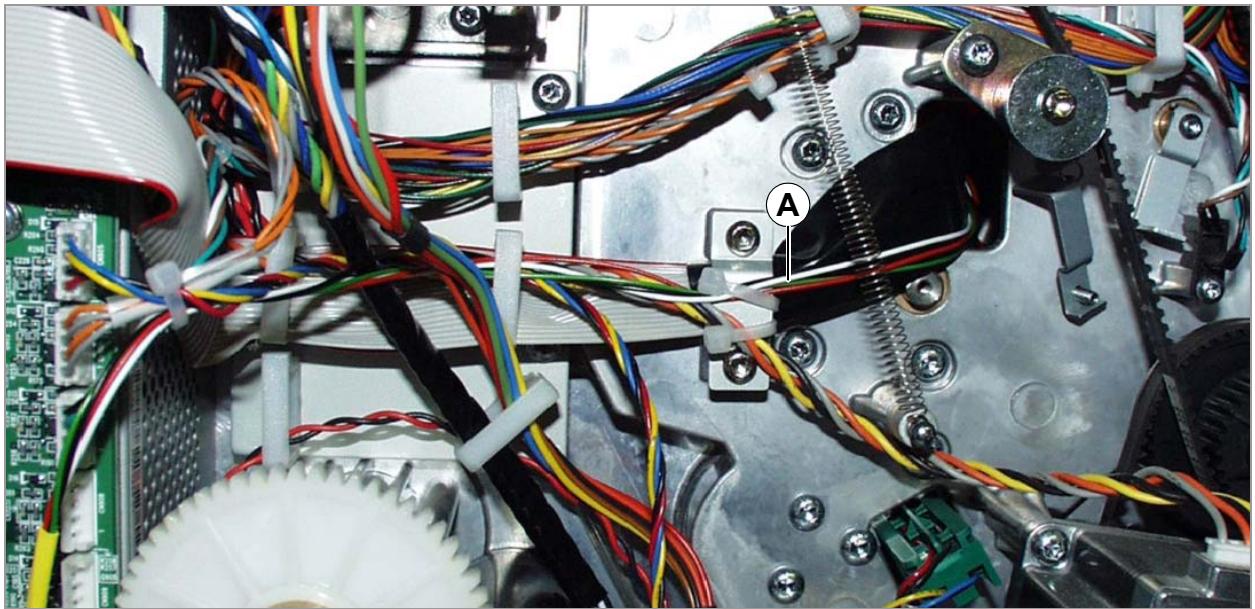
[68] Loosen the screw (A).



[69] Label sensor (A) installed.



[70] Opening (A) in case enclosure.



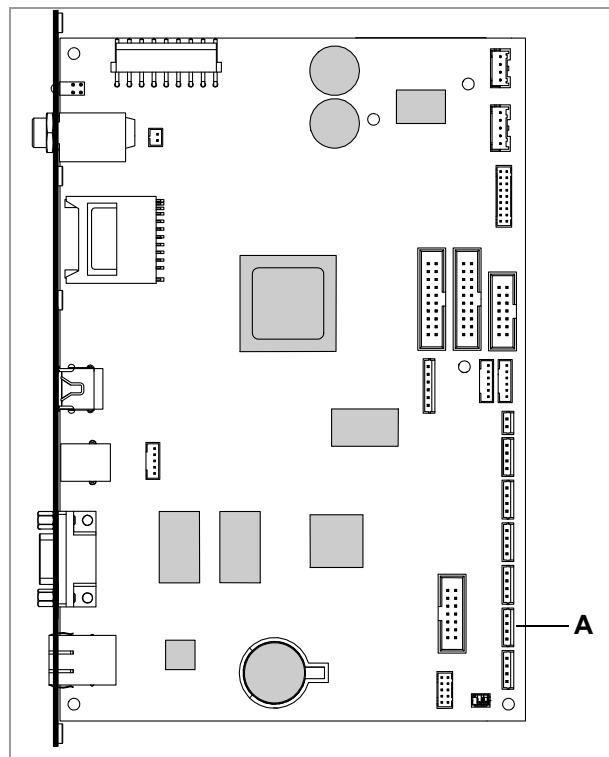
[73] Installation of sensor cable (A).

5. Install the sensor cable as shown [73A].
6. Connect the sensor cable to CN909 on the CPU board [74A].  
→ Fasten the cable with terminals and cable ties so that it does not contact any moving parts.

Activating the sensor:

→ Set Print > Material > Label sens. type to "Short label opt."

Adjusting the sensors: See chapter **Sensor settings** on page 98.



[74] Connection from label sensor to CPU board.

## INTERNAL REWINDER / DISPENSER

### Replacing the pinion

#### Tools

Hex socket screwdriver, 2 mm

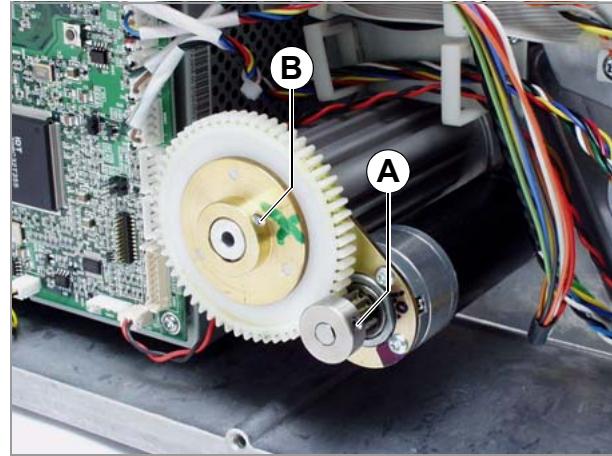
#### Removing

1. Remove the two set screws [75A] from the motor pinion. Remove the pinion.
2. Remove the two set screws [75B] from the plastic pinion. Remove the pinion.

#### Installation

Perform the installation in the reverse order to the removal. Note the following:

- ➡ One of the two set screws must lie against the flat area of the shaft [76A].
- ➡ Lubricate the teeth of the pinion.



[75] Gearbox of Rewinder Motor



[76] Flat area (A) along motor axis.

## Replacing the motor

### Tools

Torx screwdriver, sizes 10 and 20

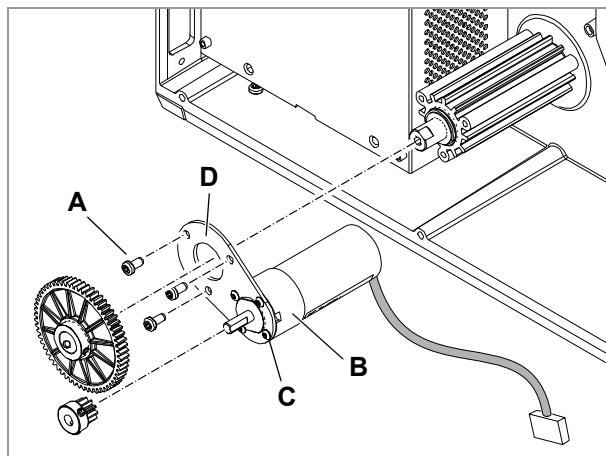
### Removing

1. Remove both pinions, see [Replacing the pinion](#) on page 50.
2. Plug the motor cable onto the power stage board.
3. Remove the three screws [77A]. Remove the motor and bracket.
4. Remove the four screws [77C]. Remove the bracket [77D] from the motor.

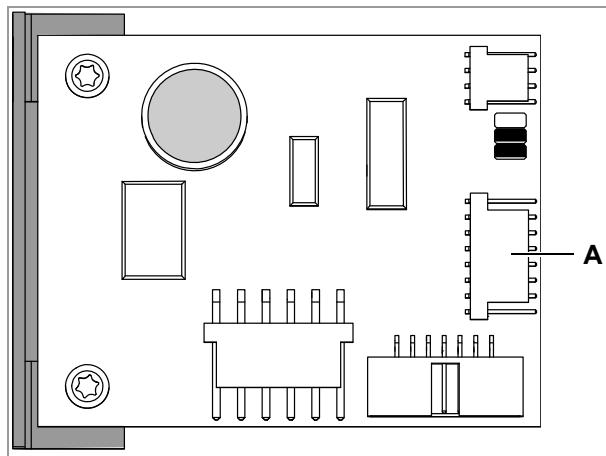
### Installation

Perform the installation in the reverse order to the removal. Note the following:

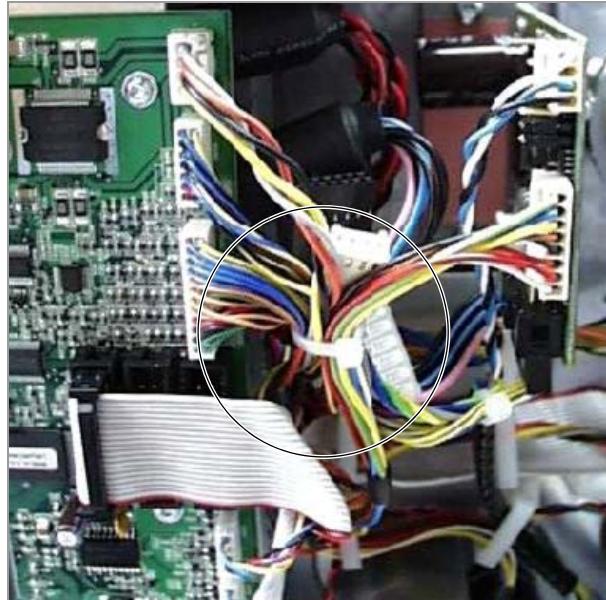
- Connect the motor cable to the shown connector on the BLDC output stage board [78A].
- Fasten the cable in place as shown using a cable tie [79 circle].



[77] Remove the rewinder motor (B).



[78] Connector (A) for rewinder motor on BLDC power stage board.



[79] Gather the cables together using the cable tie (circle).

## Retrofitting the internal rewinder

### Requirements

- XLP 50x basic or peripheral
- Upgrade kit (select from table)

Drucker	XLP 504	Rewinding	Dispensing
XLP 504	basic	N100522	N100526
	peripheral	N100524	N100528
XLP 506	basic	N101127	N101131
	peripheral	N101129	N101133

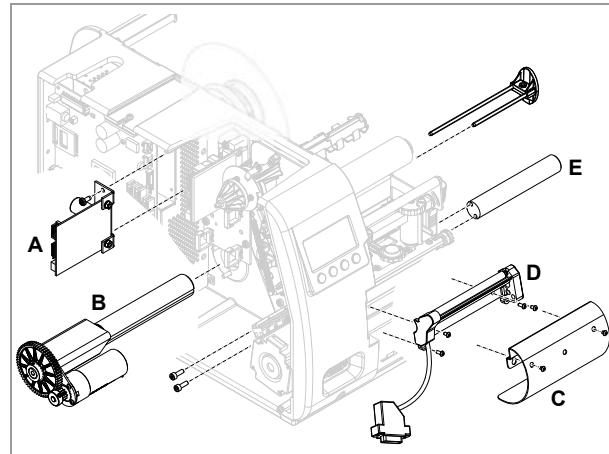
If rewinding or dispensing should both be possible in alternating use, it is appropriate to order the kit for dispensing and, additionally, a *baffle plate* [80E] (article no.: XLP 504: A5552, XLP 506: A101812).

### Tools

- Torx screwdriver, sizes 10 and 20
- Open-ended spanner, size 5
- Hex socket screwdriver, 2.5/3 mm

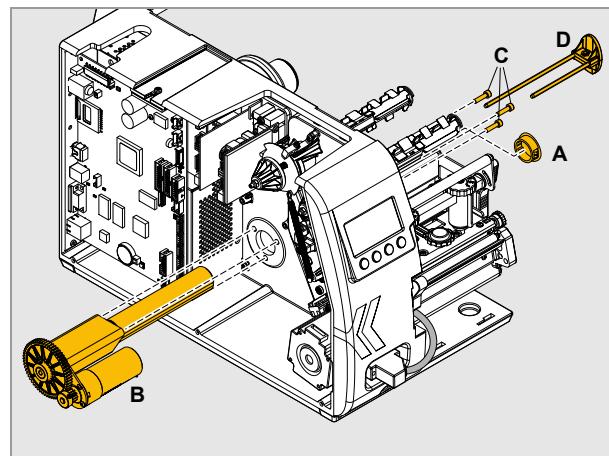
### Installing the rewinder module

1. Remove the rear hood.  
See chapter [Rear hood](#) on page 23.
  2. Remove plastic cap from hole in separating panel [81A].
  3. Push the rewinder modul [81B] through hole in the separating wall.
  4. Align the rewinder module as shown and tighten it there (3x Torx M4x16 [81C]).
  5. Fix the cable using the cable holder in a way that it doesn't contact any moving parts [82].
- The cable only will be connected after installing the BLDC output stage, see [Installing BLDC output stage board into XLP 50x "basic"](#) on page 54.

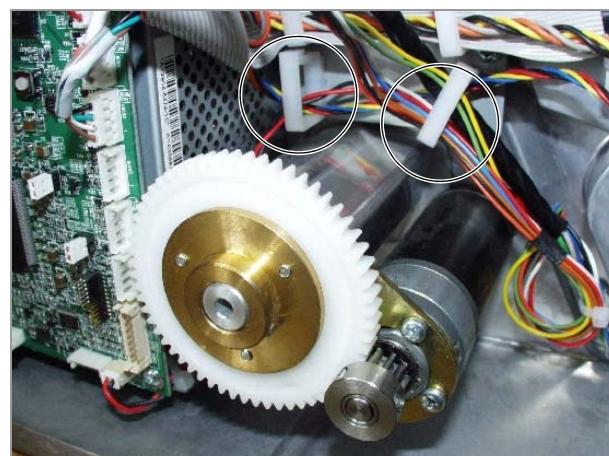


[80] (Main) components of the upgrade kits.

- A BLDC output stage board
- B Rewinder
- C Deflector shaft
- D Dispensing edge (only in the kit for dispensing)
- E Baffleplate (only in the kit for rewinding)



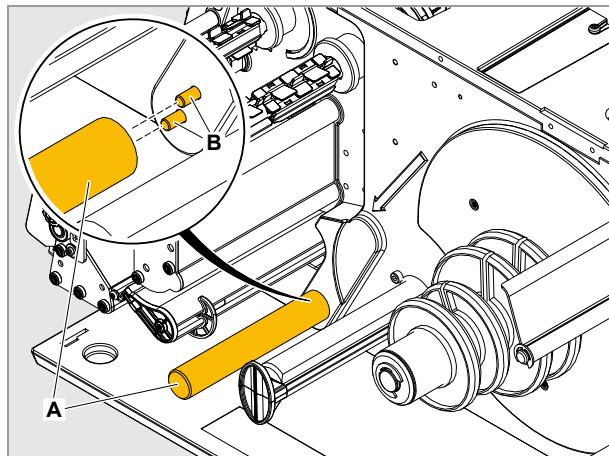
[81] Installing the rewinder module.



[82] Attach the cable to the cable clamps (circles).

### Installing the deflector shaft

→ Fasten the deflector shaft [83A] from the rear side using two screws (2x Torx M4x16 [83B]).

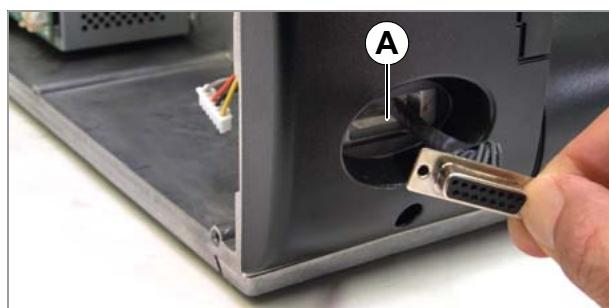


[83] Installing the deflector shaft (A)

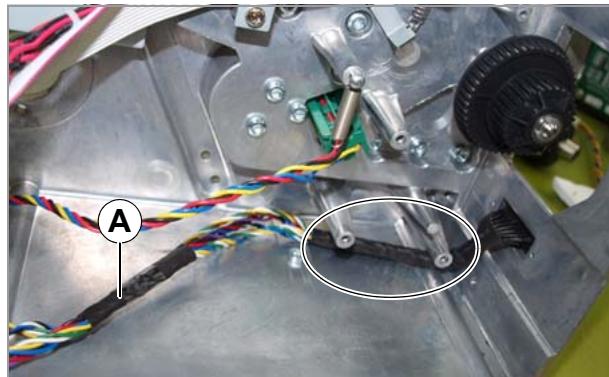
### Installing the cable harness

→ Only XLP 504 "basic" (XLP 504 "peripheral" comes already equipped with the cable harness).

1. Remove the cover from the D-Sub installation opening.
2. Remove the feed motor.  
See [Replacing the feed motor](#) on page 45.
3. Feed the cable harness through the D-Sub installation opening [84A].
4. Fix the D-Sub plug with 2 hex bolts.
5. Install the cable [85A] underneath the motor fastening domes as shown [85 circle].
6. Feed the cable through the cable holder [86 circle].
7. Connect the cable.  
See [cabling diagram, chapter Wiring diagrams](#) on page 240.



[84] Feeding the D-Sub cable harness (A) through the opening.



[85] Cable installation behind motor (motor removed).



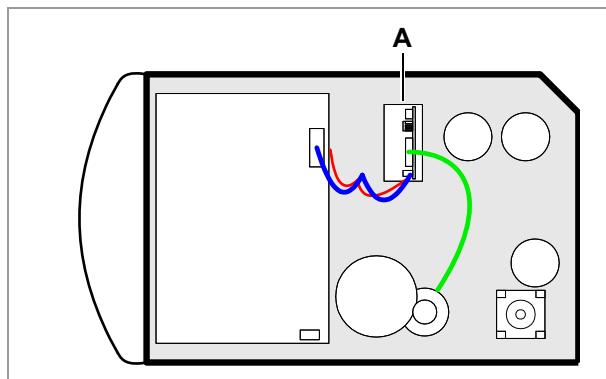
[86] Cable installation.

### Installing BLDC output stage board into XLP 50x "basic"

1. Screw the BLDC output stage board with heat sink to the *right-hand* position (2x Torx DG 40x10).
   
⇒ The solder side of the board is facing right.
2. Connecting the board, see chapter [XLP 504 basic](#) on page 241.
3. Fasten the cables so that they do not contact any moving parts.

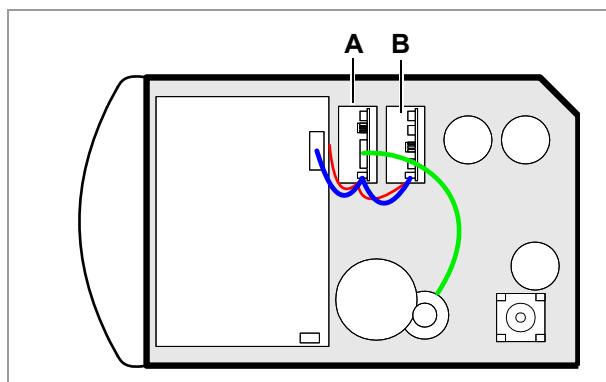
### Installing BLDC output stage board into XLP 50x "peripheral"

1. Screw the BLDC power stage board with heat sink to the *left-hand* position (2x Torx DG 40x10) – left, next to the peripheral power stage board.
   
⇒ The solder side of the board is facing right.
2. Connecting the board, see chapter [XLP 504 peripheral](#) on page 244.
3. Fasten the cables so that they do not contact any moving parts.



[87] Installation for XLP 50x "basic".

A Output stage of BLDC motor



[88] Installation situation for XLP 50x "peripheral".

A Output stage of BLDC motor

B Periphery output stage

## Installing the dispensing edge

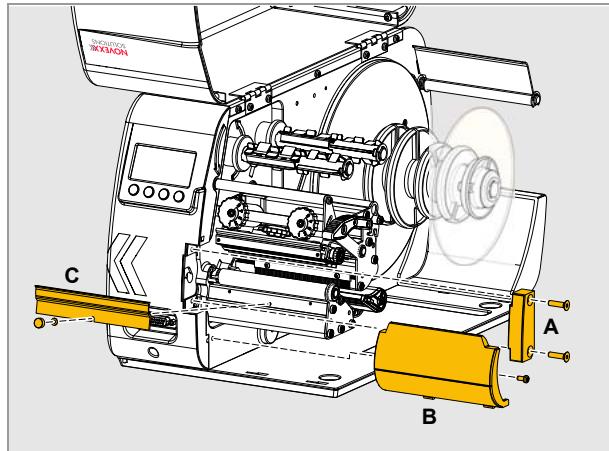
If the XLP 50x is used as dispenser, a dispensing edge has to be installed in addition to the rewinder as follows:

### Tool

Torx screwdriver size 10

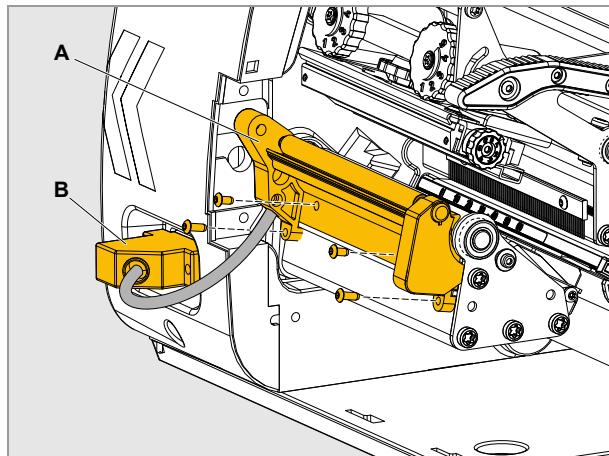
### Procedure:

1. Remove flange cover [89A], front bottom housing section [89B] and the tear-off edge [89C].  
See [Housing components](#) on page 22.



[89] Parts to be removed.

2. Fasten the dispensing edge [90A] using four screws (2x M3x8, 2x M3x6).
3. Connect and tighten the plug [90B] of the dispensing edge sensor.



[90] Installing the dispensing edge.

## Installing the baffle plate

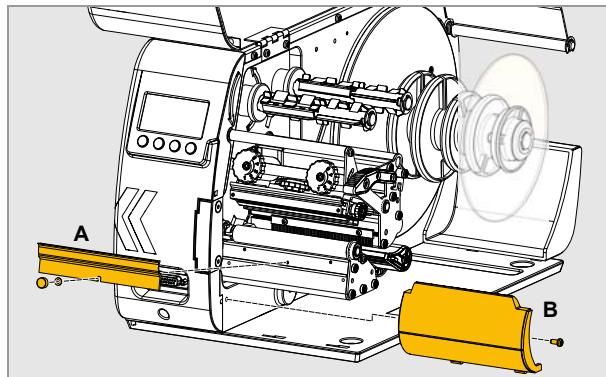
If the XLP 50x is used as dispenser, a dispensing edge has to be installed in addition to the rewinder as follows:

### Tool

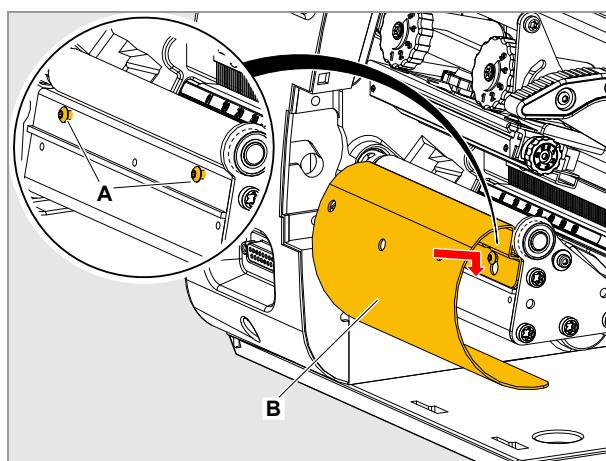
Torx screwdriver size 10

### Procedure:

1. Remove the front bottom housing section [91B] and the tear-off edge [91A].  
See [Housing components](#) on page 22.
2. Lightly turn in the two fastening screws (2x Torx M3x4) for the baffle plate by approx. two turns [92A].
3. Attach the baffle plate with the button holes of the baffle plate to the protruding screws [92B].
4. Tighten the screws through the openings in the baffle plate.



[91] Parts to be removed.



[92] Attaching the baffle plate (B).

## Dispensing edge sensor

The sensor in use is pulsed and thus not sensitive to external light.

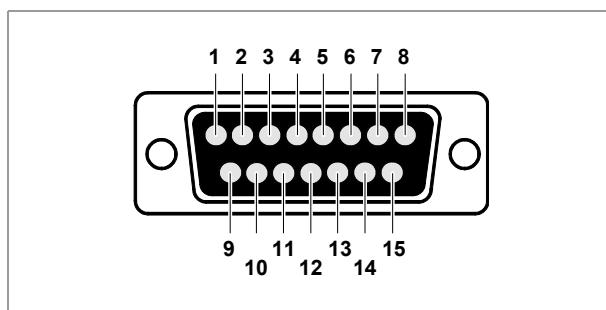
- ➡ The sensor does not have to be adjusted.
  - ➡ It is *not* possible to use a longer dispensing edge.
- Testing the sensors: See chapter [Setting sensors](#) on page 98.

Pin configuration of D-Sub connector [94]:

Pin	Configuration
3	Collector
4	GND
5	VCC +5V



[93] Dispensing edge sensor (A).



[94] Pin configuration for D-Sub connector of dispensing edge sensor.

## Parameter settings

### Switching the dispense function on/off

Prerequisites:

- Only for XLP 50x with internal rewinder and dispensing edge
- Insert label material before activating the rewinder, otherwise an error message will appear!

Switching on:

→ Set Options > Selection > Periph. device to „Dispenser“.

The printer restarts. Afterwards, the following has changed:

- An additional submenu Options > Dispenser appeared, which contains the parameters that are required to set the dispensing process.
- The icon  is visible above key 3. By pressing this key, the rewinder can be stopped and started.

Switching off:

→ Set Options > Selection > Periph. device to „None“.

### Switching the rewind function on/off

Prerequisites:

- Only for XLP 50x with internal rewinder and baffle plate.
- Insert label material before activating the rewinder, otherwise an error message will appear!

Switching on:

→ Set Options > Selection > Periph. device to „Intern. rewinder“.

■■■ Don't confuse with the setting „Rewinder“, which activates the external rewinder (accessory)!

The printer restarts. Afterwards, the following has changed:

- An additional submenu Options > Internal Rewinder appeared, which contains the parameter Rewind direction. By this, the rotation direction of the rewinder can be reversed.
- The icon  is visible above key 3. By pressing this key, the rewinder can be stopped and started.

Switching off:

→ Set Options > Selection > Periph. device to „None“.

**Parameters for authorised service technicians**

The Options > Dispenser and Options > Internal Rewinder menus contain many special parameters for authorised service technicians that are only visible after starting the printer in production mode:

- Current mode
- Min rew. current
- Max rew. current
- Start rew. curr.
- Start cur. len.
- Pullback current
- Back diameter
- Break current
- Break diameter

For details, see chapter [Parameter menu](#) on page 34.

# REPLACING ELECTRONIC COMPONENTS

## Important information

- || CAUTION! - Protect the electronic components against damage from electrostatic discharge.
- Wear protective ESD gear.
- Place the device on an earthed pad before opening it.

→ First remove the rear hood before servicing the electronics.

See chapter [Rear hood](#) on page 23.

For more detailed information on the board connections, see [Service Elektronics](#).

## Control panel board

### Tools

Torx screwdriver, size 9

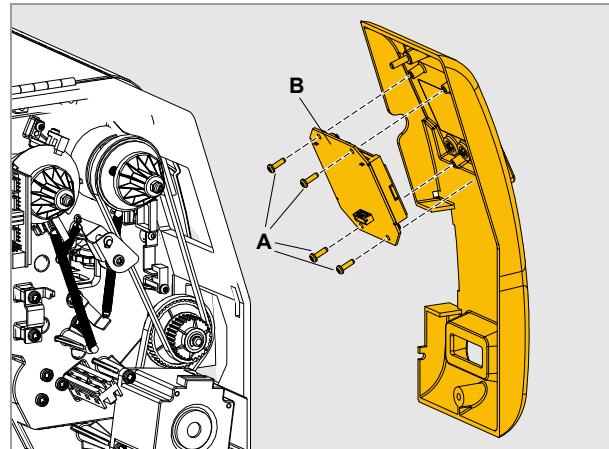
### Removing

1. Remove the front left section of the enclosure. See chapter [Front left housing](#) on page 24.
2. Remove the four bolts [95A], take off the board [95B].

### Installation

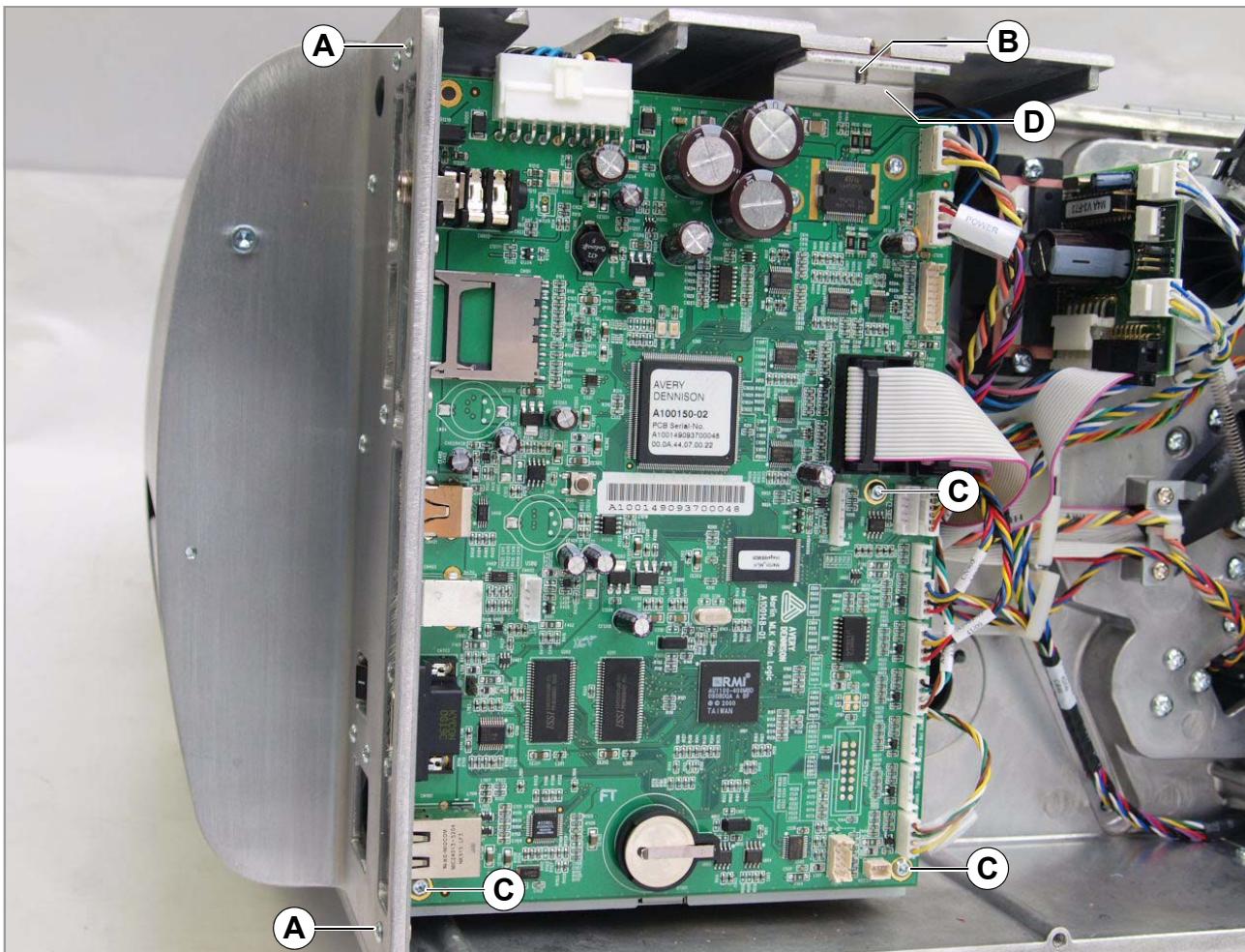
Perform the installation in the reverse order to the removal. Note the following:

► Reconnect the cable before tightening the enclosure section.



[95] Removing the control panel board (B).

## CPU board



[96] CPU board in XLP 504 "peripheral".

## Tools

Torx screwdriver, sizes 10 and 20

## Removing

1. Unplug all cables from the board.
2. Remove the two screws [96A] from the rear side of the printer.
3. Remove the top screw [96B].
4. Remove the three screws [96C]. Remove the CPU board

→ The bracket remains on the [96D] board.

## Installation

→ Connect the board as shown in the cable diagram, see chapter [Wiring diagrams](#) on page 240.

## Output stage of stepper motor

The stepper motor is only installed in XLP 504 “peripheral”.

### Tools

Torx screwdriver, size 20

### Removing

→ Difference: In contrast to the BLDC power stage, the power stage of the stepper motor is equipped with a *black heat sink*.

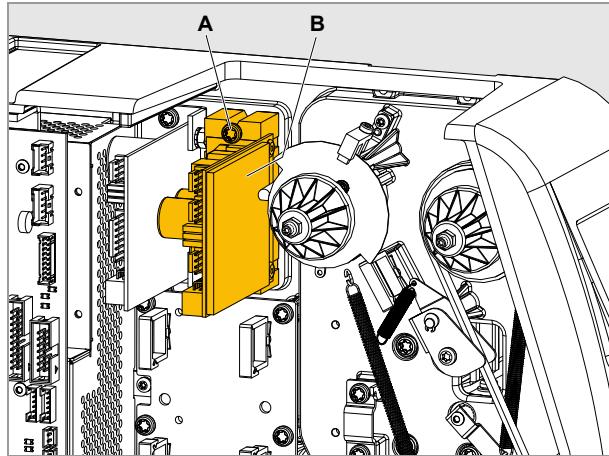
1. Unplug all cables from the board [97B].
2. Remove the two screws [97A] from the heat sink.  
Remove the board.

### Installation

Perform the installation in the reverse order to the removal. Note the following:

- Install the board with the component side facing left [97].
- If your printer contains BLDC and stepper motor power stages (XLP 504 “peripheral dispenser”), the power stage of the stepper motor is installed on the **right!**
- Connect the board as shown in the cable diagram, see chapter [Wiring diagrams](#) on page 240.
- Make sure that the jumpers have been set properly, see cable diagram.

For more information, see chapter [Output stage board M4A for stepper motor](#) on page 74.



[97] Output stage board of the stepper motor (B) in a XLP 504 “peripheral dispenser”.

## Output stage of BLDC motor

The output stage of the BLDC motor is only available in XLP 50x “basic dispenser” and “peripheral dispenser” variants.

### Tools

Torx screwdriver, size 20

### Removing

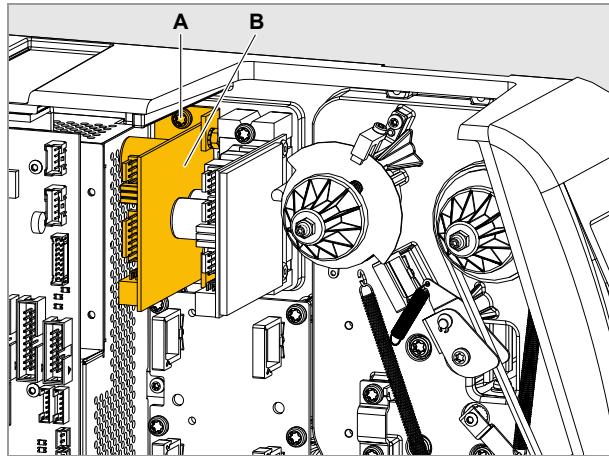
1. Unplug all cables from the board [98A].
2. Remove the two screws [98B] from the bracket. Remove the board.

### Installation

Perform the installation in the reverse order to the removal. Note the following:

- Install the board with the component side facing left [98].
- XLP 50x with *one* power stage: The power stage is installed on the *right!*
- XLP 50x with *two* power stages: The BLDC motor power stage is installed on the *left!*
- Connect the board as shown in the cable diagram, see chapter [Wiring diagrams](#) on page 240.
- Make sure that the jumpers have been set properly, see cable diagram.

For more information, see chapter [Output stage board for BLDC motor](#) on page 78.



[98] Output stage board of the BLDC motor (B) in XLP 504 “peripheral dispenser”.

## I/O board

The I/O board is available optionally.

### Tools

Torx screwdriver, size 10

### Removing

1. Remove the CPU board  
See chapter [CPU board](#) on page 61.
2. Unplug all cables from the board.
3. Remove 2 screws from both the mounting plate [100A] and board [100B] and take off the board.

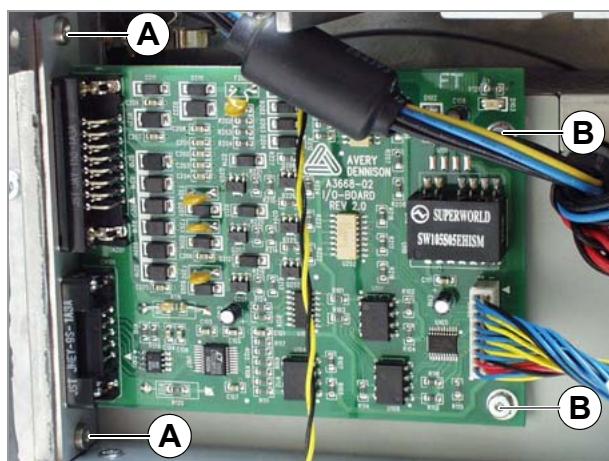
### Installation

Perform the installation in the reverse order to the removal. Note the following:

- Connect the board as shown in the cable diagram, see chapter [Wiring diagrams](#) on page 240.



[99] Position of I/O board (CPU board is removed).



[100] Fastening points of I/O board.

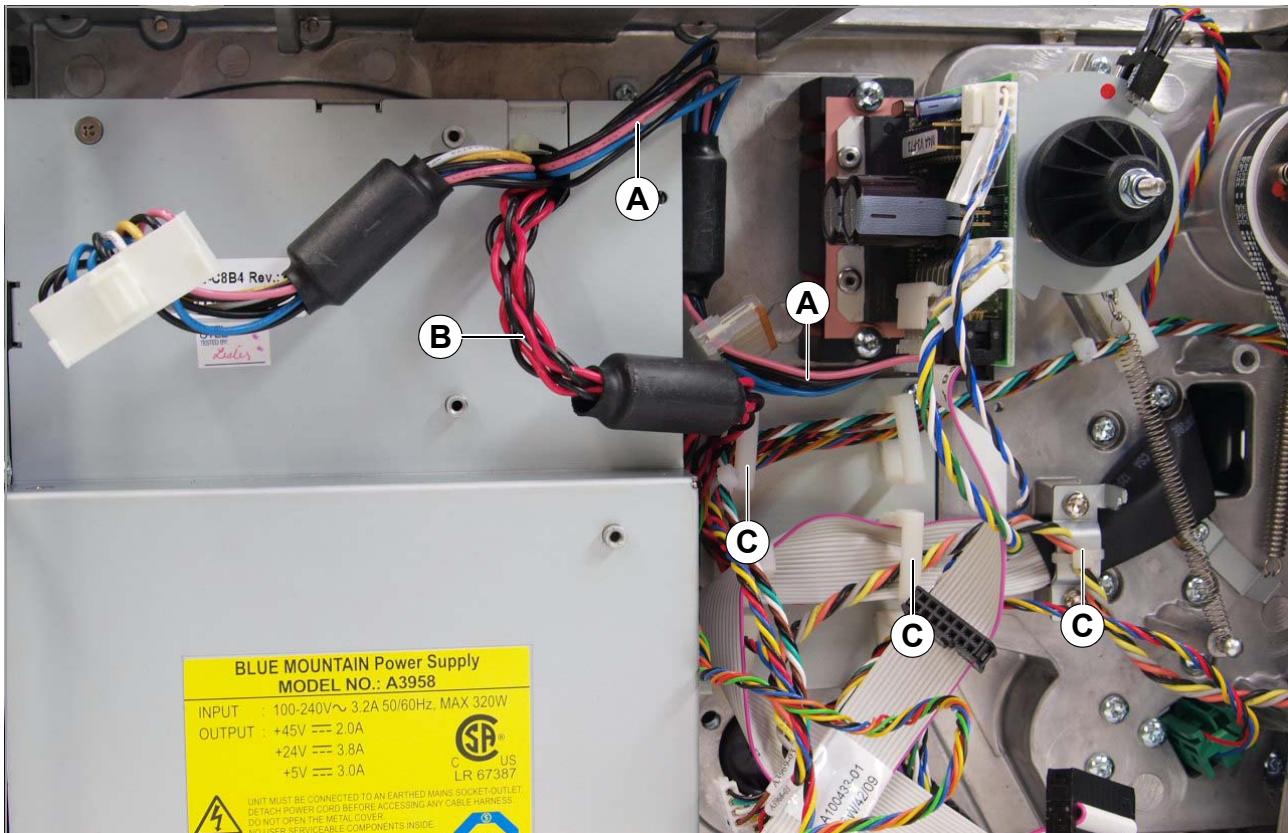
## Power supply

### Tools

Torx screwdriver, sizes 10 and 20

### Preparing to remove

1. Remove the rear hood.  
See [Rear hood](#) on page 23.
2. Remove the CPU board.  
See [CPU board](#) on page 61.
3. *If present:* Remove the I/O board.  
See [I/O board](#) on page 64.
4. *If present:* Remove the pinion from the internal re-winder.  
See [Replacing the pinion](#) on page 50.



[101] XLP 504 with CPU board removed.

### Removing the cable

1. Unplug the cable [101A] from the motor power stage board(s).
2. Remove the cable [101B] from the fastenings [101C].

3. Remove the cable holders [102A]..
4. Unplug the cable [102B] from the print head and feed it through the opening in the printer wall.

#### Removing the power supply

1. Remove the screws [103A] from the rear side of the printer.

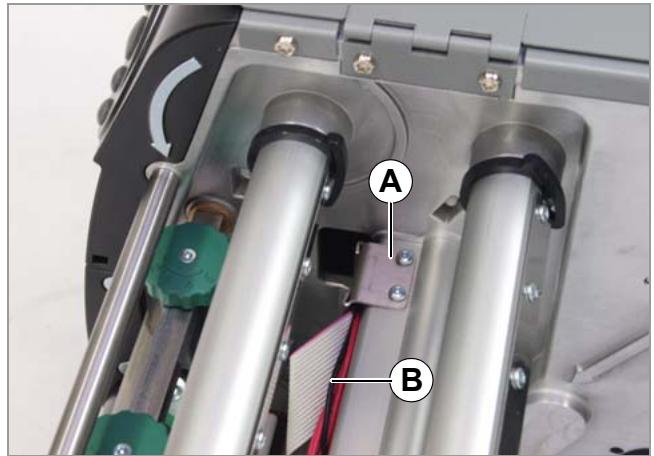
The figure [104] displays the power supply already removed. The power supply is fastened to the separating wall in the printer by the 3 clips [104A].

2. Remove the three fastening screws of the power supply from the separating wall in the printer.
3. Remove the power supply from the printer.

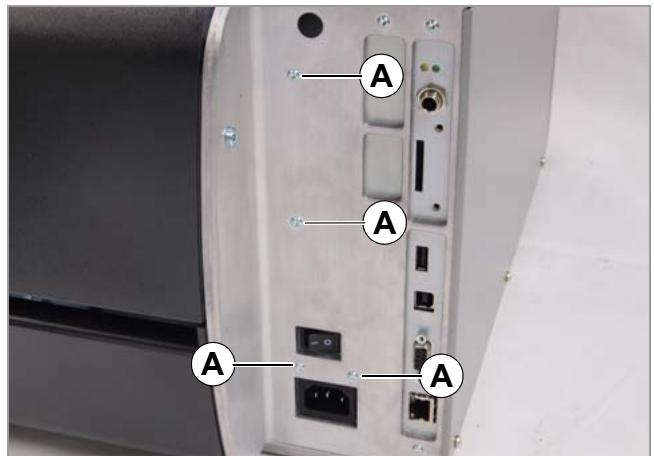
#### Installation

Perform the installation in the reverse order to the removal. Note the following:

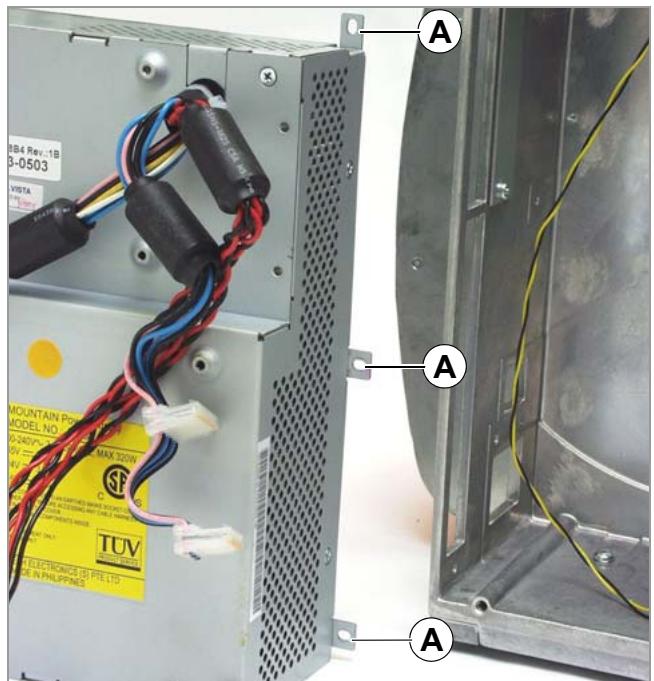
- When installing, make sure that no cables are clamped between the power supply and the separating wall of the printer.
- Connect the power supply as shown in the cable diagram, see chapter [Wiring diagrams](#) on page 240.
- Install the cable so that it does not contact any moving parts.



[102] Cable holder (A) for print head cable.



[103] Fastening screws (A) for power supply.



[104] Fastening clips (A) on power supply.

# Service Electronics

## HANDLING BOARDS

### ESD protection

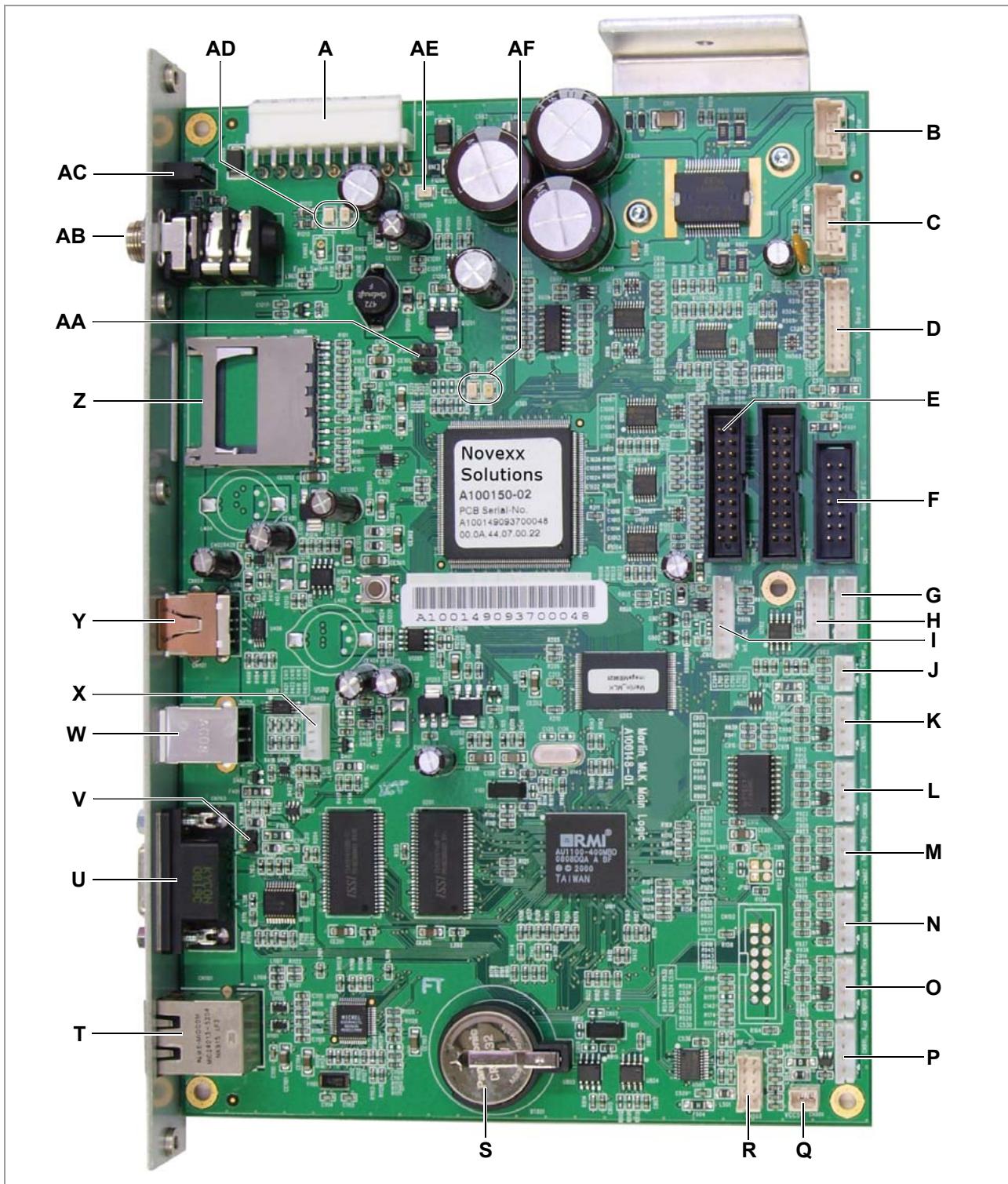
- CAUTION!** - The boards can be destroyed by static discharge!
- Before opening the printer, place it on a grounded surface.
  - Earth your body using an ESD bracelet or other suitable means, before touching a board. If no suitable ESD protection is available, touch an earthed object, e.g. a heating radiator, before touching a board.
  - Only place boards on earthed surfaces.

### Handling

- CAUTION!** - The conducting tracks on the boards are very thin. If a board is bent or warped, the conducting tracks can easily crack.
- Avoid bending or warping boards.
  - Avoid the use of excessive force when removing or inserting boards.

## CPU BOARD

### Connections



[105] CPU board connections (A100150).

Code of components on the board:

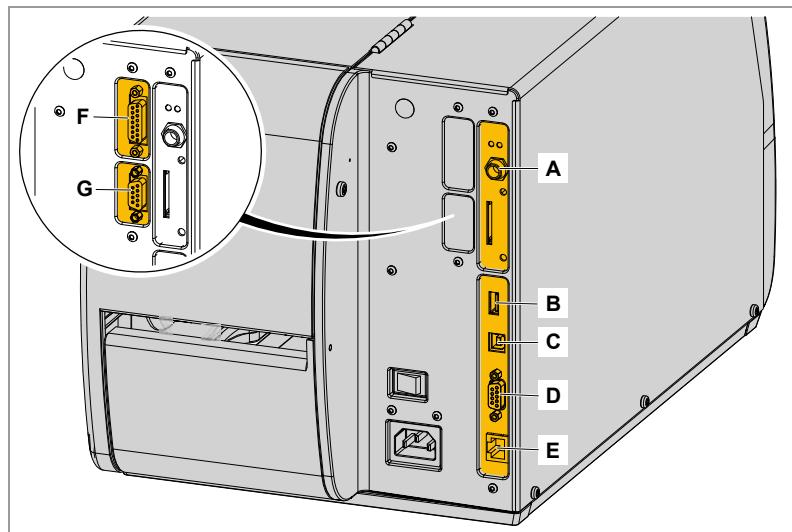
- CNxxxx = Connector
- Dxxxx = LED
- JPxxx = Jumper

List of components on the board:

- A** CN1201: Power supply
- B** CN601: Feed motor
- C** CN1202: D-Sub harness, marking „POWER“
- D** CN501: I/O-board (option)
- E** CN1001: print head
- F** CN602: Motor output stage board(s); Data line
- G** CN702: Operation panel
- H** CN701: External operation panel
- I** CN801: I<sup>2</sup>C bus
- J** CN904: Not applied
- K** CN905: Label sensor (transmissive)
- L** CN906: Ribbon end sensor
- M** CN907: Locking lever sensor
- N** CN908: Label sensor (reflex bottom)
- O** CN909: Label sensor for narrow labels (option)
- P** CN910: D-Sub harness, marking „AUX“
- Q** CN901: 5 V supply voltage
- R** CN503: RFID module (option)
- S** BT801: Battery for realtime-clock, see chapter [Lithium Battery](#) on page 72
- T** CN1101: Ethernet (10/100 Base T), see chapter [Ethernet interface](#) on page 71
- U** CN703: RS 232, see chapter [Serial interface \(RS 232\)](#) on page 71
- V** JP701: Jumper connects 5 V/170 mA supply voltage to pin 9 at the RS 232-connector
- W** CN403: USB (device)
- X** CN402: USB intern (host/device)
- Y** CN401: USB (host)
- Z** CN101: SD-card slot
- AA** JP301/302: Jumper set on JP301 = micromonitor; Jumper set on JP302 = Yamon
- AB** CN902: Foot switch, see [Foot switch connector](#) on page 70
- AC** D1210: Display supply voltage: yellow = 5 V, green = 45 V
- AD** D1202/1203: Display supply voltage: red = 3,3 V, green = 45 V
- AE** D1204: Display supply voltage: yellow = 5 V
- AF** D301/302: Display only for factory-internal use

## Interfaces

### Overview interfaces

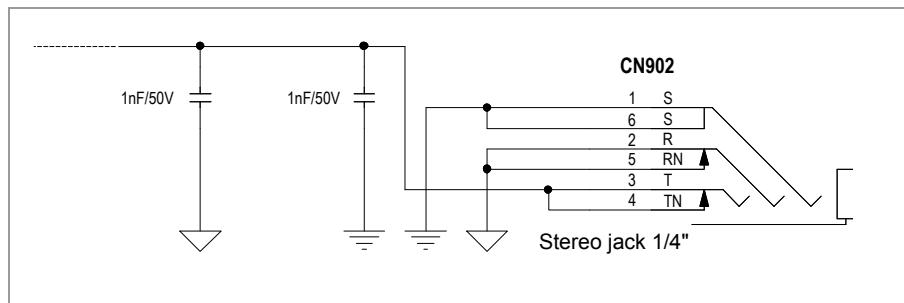


[106] External interfaces at XLP 50x.

- A Foot switch connector
- B USB host connector
- C USB device connector
- D Serial interface (RS 232)
- E Ethernet interface
- F Signal interface (on optional I/O board)
- G Serial interface (RS 232/422/485) (on optional I/O board)

For details about the optional interfaces [106F] and [106G] see chapter [I/O-board](#) on page 80.

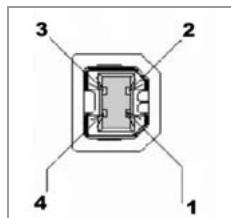
### Foot switch connector



[107] Connection diagram of the 1/4" 3-point jack for foot switch connection.

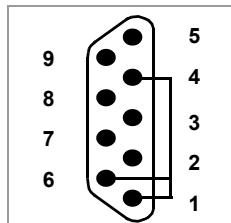
### USB host connector

Pin	Signal
1	V <sub>CC</sub>
2	Data-
3	Data+
4	GND

**USB device connector**

Pin	Signal
1	n. c.
2	Data-
3	Data+
4	GND

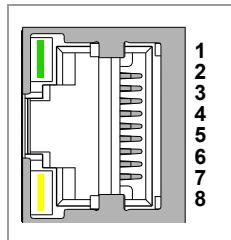
Suitable cable for PC connection: USB cable A/B (article number: A5799)

**Serial interface (RS 232)**

Pin	Signal
1	(CD)
2	RxD
3	TxD
4	(DTR)
5	GND
6	(DSR)
7	RTS
8	CTS
9	(RI)

Pin 9 supplies 5 V/170 mA, if JP701 is set.

Suitable cable for PC connection: D-Sub 9, 1:1, plug/jack (extension cable; article number: A1207)

**Ethernet interface**

Pin	Signal
1	TD+
2	TD-
3	RD+
4	Termination
5	Termination
6	RD-
7	Termination
8	Termination

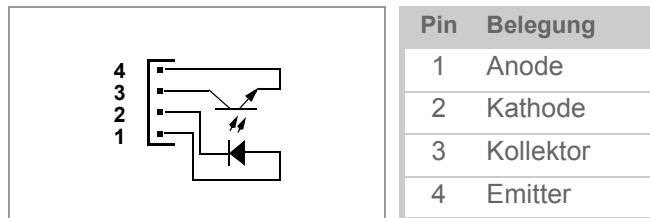
LED	Meaning
Green	<i>Lights:</i> high transmission rate (100 Mbit/s)
Yellow	<i>Lights:</i> printer is connected to network <i>Flashes:</i> network traffic

[Tab. 10] Signal LEDs at Ethernet connector

Setting of the transmission rate by autonegotiation.

## Sensor connections

Schematic diagram for connectors CN905 to CN909 on the CPU board:



## Lithium Battery



### WARNING!

Danger of explosion if battery is incorrectly replaced.

- Replace only with the same or equivalent type recommended by the manufacturer.
- Take care of the correct polarity when replacing the battery.
- Discard used batteries according to the manufacturer's instructions.

### AVERTISSEMENT!

Il y a danger d'explosion s'il y a remplacement incorrect de la batterie.

- Remplacer uniquement avec une batterie du même type ou d'un type recommandé par le constructeur.
- Mettre au rebut les batteries conformément aux instructions du fabricant.

The CPU board used in the XLP 50x is equipped with a realtime clock, which keeps its setting, if the printer is switched off. This is done by a lithium battery on the board.

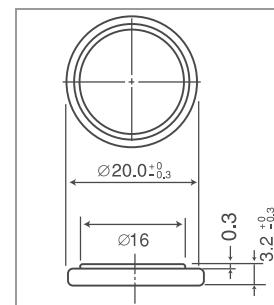
- The battery is *not rechargeable*!
- The battery must be UL-listed!

### Battery type

Panasonic CR2032 or an equivalent battery type.

### Specifications

Characteristic	Value
Nominal voltage	3 V
Nominal capacity	220 mAh
Continous standard load	0.2 A
Operating temperature	-30 bis +60 °C
Max. abnormal charging current	5.0 mA



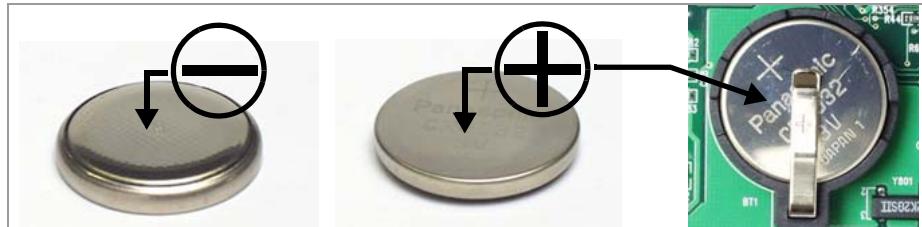
[Tab. 11] Battery type CR2032 - specifications and dimensions.

### Battery replacement

1. Switch off the printer. Disconnect the power cord.
  2. Take off the rear hood.
- Prior to installation of the new battery: wipe the battery and the equipment terminal clean using a dry cloth.
  - Ensure, that dust and other foreign substances will not cause shorting between the poles.

► When handling batteries, wear finger covers or gloves made of rubber, cotton, etc. to protect the battery from dirt.

3. Take used battery out of the socket; insert the new battery.  
► Take care of the correct polarity [108]!

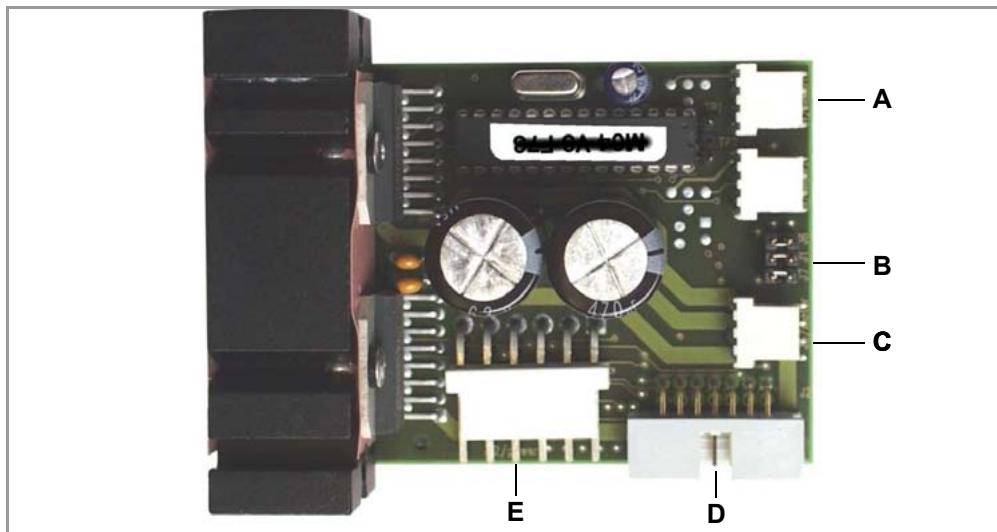


[108] Correct battery polarity.

4. Reassemble the rear hood.
5. Reconnect the printer to the mains and switch it on.
6. Set time and date (System > Hardware Setup > Realtime Clock).

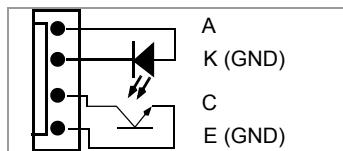
## OUTPUT STAGE BOARD M4A FOR STEPPER MOTOR

### Connections, settings



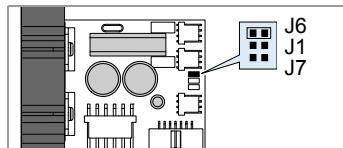
[109] Connections at the output stage board (A2742)

- A** Connection for D-Sub-harness, sensor of the peripheral device (cable marking „SENSOR 1“ (J4))



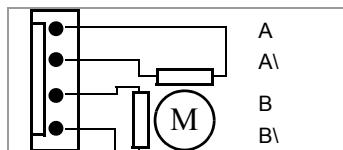
[110] Connection diagram sensor.

- B** Jumper J6/J1/J7. Caution! - Fig. [109] doesn't show the correct jumper setting.



[111] Jumper J6 geschlossen.

- C** Connection for D-Sub-harness, motor of the peripheral device (cable marking „MOTOR“ (J3))



[112] Connection diagram motor.

- D** Connection CPU board (J2)

- E** Connection power supply (J12)

## XLP 504: OUTPUT STAGE BOARD M5A FOR STEPPER MOTOR

### Application notes

- Die Endstufe M5A wird als Endstufe für die Motoren der Optionen LTSA und TCS eingesetzt, die nur für den XLP 504 vorgesehen sind
- Erforderliche Firmware-Version: mindestens 4.48

### Checking the firmware version

→ Call Info > System > Module FW. Vers. > Peripheral driver.

The firmware version of the installed peripheral output stage is displayed.

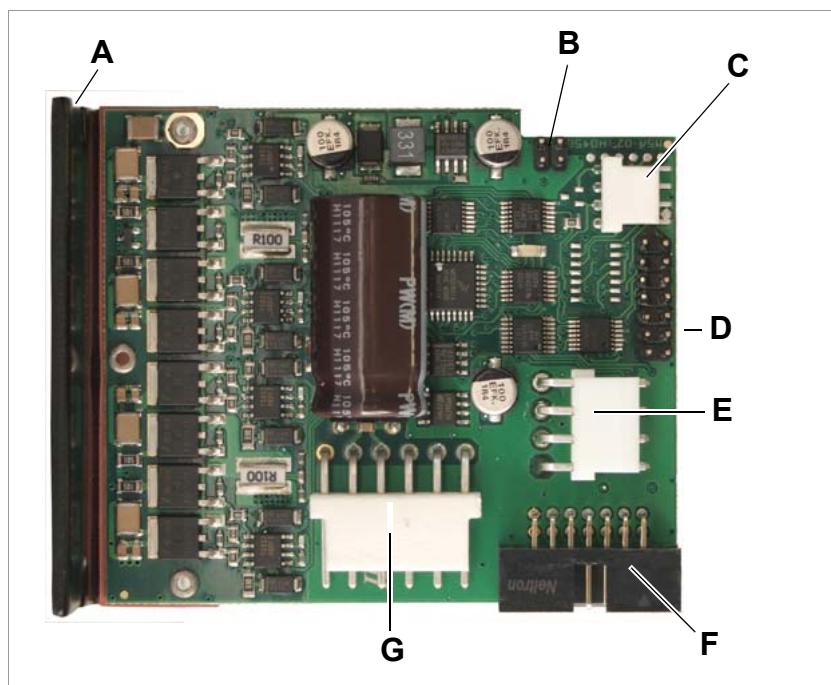
### Updating firmware

Updating the driver firmware is done the same way as with the printer firmware:

See chapter [Firmware](#) on page 229.

The following file is required: *M5A\_xx\_ALL\_downloadfile.S3B* (for firmware version xx).

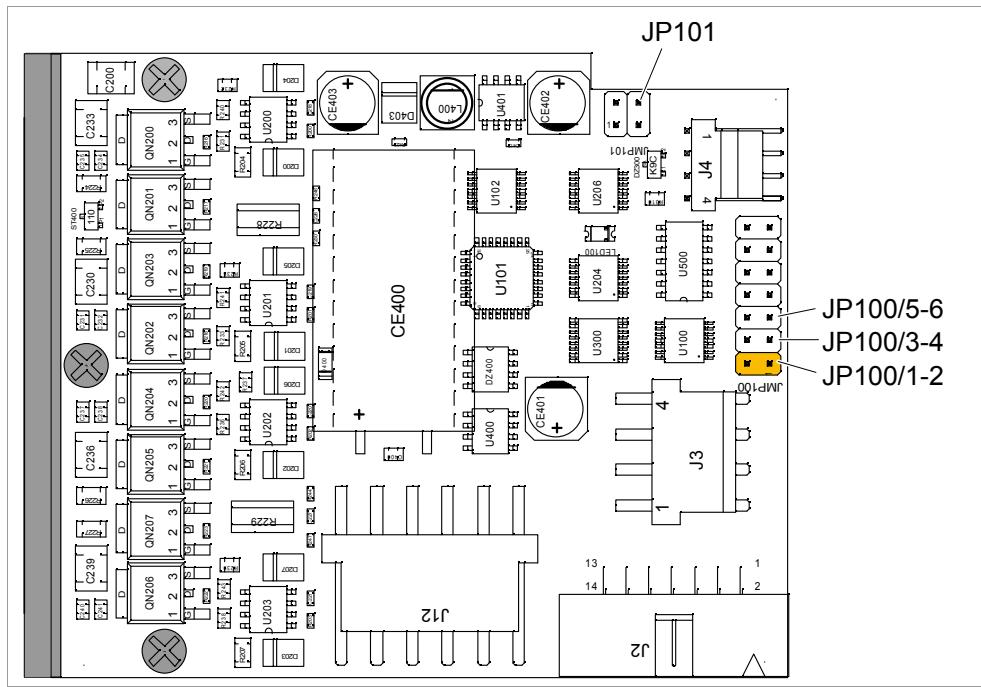
### Connections, settings



[113] Connections of the output stage board M5A (A7579)

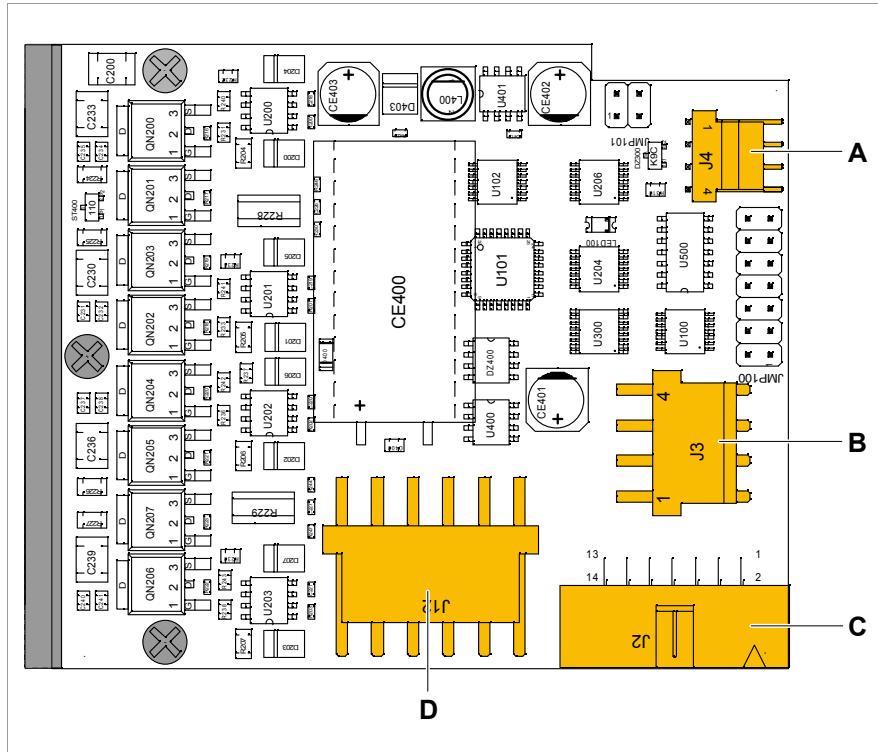
- A** Mounting bracket
- B** Jumper for setting the rotation direction (JP101)
- C** Sensor connection
- D** Jumper for setting the motor type (JP100)
- E** Motor connector
- F** Connector CPU board (data line)
- G** Connector power supply

## Jumper settings



[114] Position of the jumpers JP100 and JP101 on the M5A output stage board (orange = jumper is set).

## Pin assignments



[115] Connections on the M5A output stage board.

Posno.	Description	Pinout
A	Connection for D-Sub-harness, sensor of the peripheral device (cable marking „SENSOR 1“) (J4)	
B	Connection for D-Sub-harness, motor of the peripheral device (cable marking „MOTOR“) (J3)	
C	Connection CPU board (J2)	
D	Connection power supply (J12)	

# OUTPUT STAGE BOARD FOR BLDC MOTOR

## Notes

- BLDC = brushless direct current
- Application: XLP 50x with internal rewinder

## Firmware version

- Printer firmware: at least 3.34
- Firmware output stage driver: at least 6

## Checking the firmware version

→ Call Info > Status Printouts > Service Status.

Section „Peripheraldriver“ on the printout lists all mounted output stage boards with the installed firmware versions.

## Updating firmware

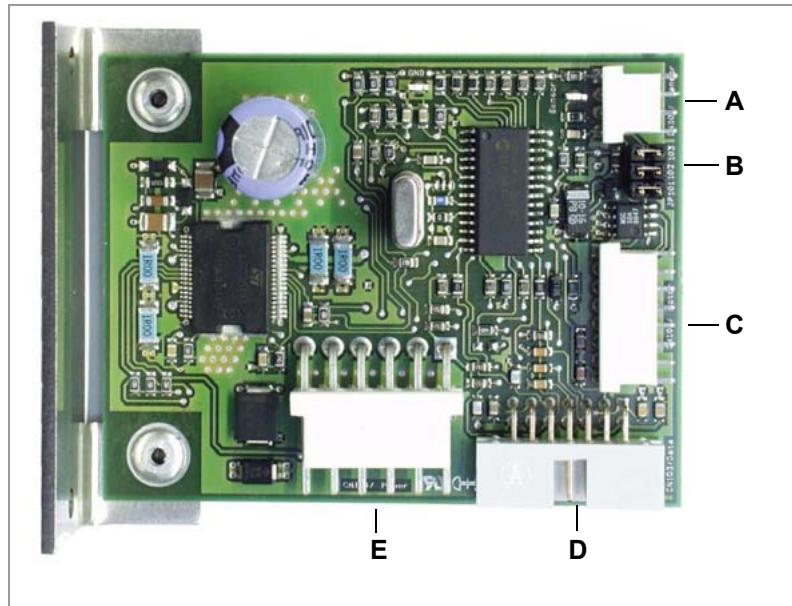
Updating the driver firmware is done the same way as with the printer firmware:

See chapter **Firmware** □ on page 229.

The following files are required: *BLDC\_Vx.BAT* resp. *BLDCAP54Vx.S3B* (for firmware version x).

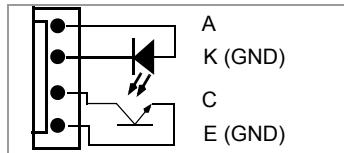
!!! CAUTION! - Don't load the older firmware version 1 onto the new version 2!

## Connections, settings

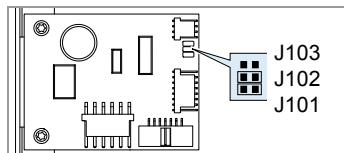


A Connection D-Sub cable harness, sensor of the peripheral device (CN 101)

!!! Only used in XLP 50x „basic dispenser“!



[117] Connection diagram sensor.

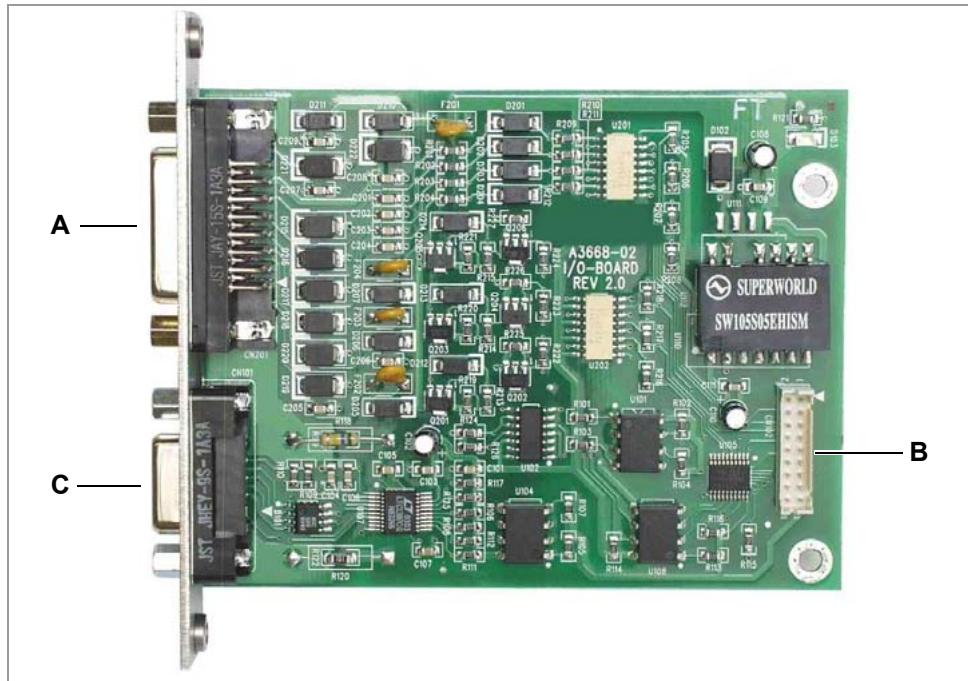
**B** Jumper J101/102/103

[118] Jumpers J101 and J102 connected.

- C** Connection rewinder motor (CN102)
- D** Connection CPU board (CN103)
- E** Connection power supply (CN104)

## I/O-BOARD

### Connections, settings



[119] Connections at the I/O-board (A3926).

- A Signal interface (D-Sub 15; CN201)
- B Connection CPU board (CN102)
- C RS 232/422/485 (D-Sub9; CN101)

### Application

The I/O board may be used for 3 different applications:

- *2nd RS 232 interface:*

The I/O board provides a RS 232 interface, which can be applied additionally to the one on the CPU board. The 2nd interface can e.g. be used to connect a bar code scanner.

- *RS 422/485 interface:*

If there is a long distance between host and printer, RS 485 or RS 422 is sometimes used instead of RS 232. This is often realized in industrial plants, where galvanic isolation is required to avoid ground loops.

- *Signal interface:*

Automatic operation of the printer (especially with applicator) requires the exchange of signals with the system environment. For this purpose, the signal interface provides 4 inputs and 3 outputs. The output signals can also be used to drive signal lamps. Galvanic isolation is provided for robustness.

►►► The two serial interface types cannot be used at the same time.

►►► Signal interface and serial interface can be used at the same time. The signals of both interfaces must then be related to the same supply system (same ground potential).

## Setting the Interface Parameters

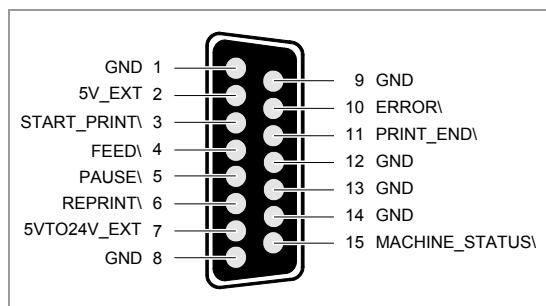
With an I/O board mounted, the following additional menus appear in the printer menu:

- Interface > Serial Port 3 contains all parameters required to configure the serial interface.
- Options > I/O Board contains all parameters required to configure the signal interface

For details see chapter **Parameter Menu** ▶ on page 104.

## Signal interface

### Pin assignment



[120] Pin assignment signal interface

Signal	Description	Condition(s) for activating
5V_EXT	5 V supply voltage for external sensors	
START_PRINT\ Input	Start signal for printing Setable by Options > I/O Board > Start print mode	All of the following conditions: <ul style="list-style-type: none"><li>• Online mode</li><li>• Printjob prevailing</li><li>• No error message</li></ul>
FEED\ Input	Feeding of the label material as long as the signal is kept low Minimum feed length: 1 label Display: „I/O Board feed“	One of the following conditions: <ul style="list-style-type: none"><li>• Offline mode</li><li>• Printer is stopped</li><li>• Pause mode <sup>a</sup></li></ul> Or All of the following conditions: <ul style="list-style-type: none"><li>• Online mode</li><li>• No printjob loaded</li></ul>

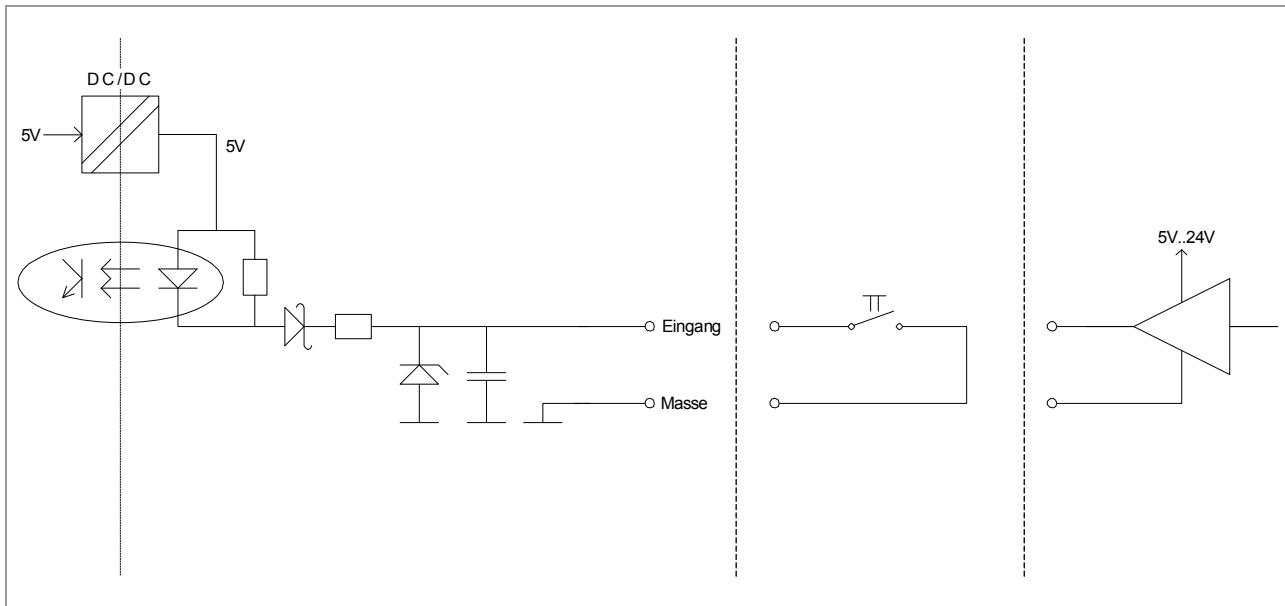
[Tab. 12] Signals at the signal interface

Signal	Description	Condition(s) for activating
PAUSE\ Input	<p>A high-low change switches the printer to the pause mode. Another high-low change switches the printer back into online mode</p> <p>If the parameter Options &gt; I/O Board &gt; Start print mode is set to „Level high activ“ or „Level low active“, activating the pause mode stops the printer after the currently printed label.</p> <p>Display: „I/O Board pause“</p> <p>ERROR\ is activated</p> <p>START_PRINT\ -Signals are discriminated</p>	START_PRINT\ is high
REPRINT\ Input	<p>The printing of the last printed label is repeated as long as REPRINT\ is kept low</p> <p>Minimum number of reprinted labels: 1</p> <p>If REPRINT\ is activated while the printer is in pause mode (PAUSE\), the reprint is executed only when the pause mode is cancelled</p>	<i>All</i> of the following conditions: <ul style="list-style-type: none"> <li>• Online mode</li> <li>• START_PRINT\ = high</li> </ul>
5VTO24V_EXT	5-24 V supply voltage for external sensors	
ERROR\ Output	<p>Low, if the printer is not ready to print</p> <p>High during the initialization of the printer</p>	One of the following conditions: <ul style="list-style-type: none"> <li>• Pause mode</li> <li>• Printing stopped</li> <li>• Offline mode</li> <li>• Material end</li> <li>• No punch detected</li> </ul>
PRINT_END\ Output	Setable by Options > I/O Board > Start print mode	See chapter <b>Parameter Menu</b> ▶ on page 104
MACHINE_STATUS\ Output	Setable by Options > I/O Board > Status output and Options > I/O Board > Status polarity	

[Tab. 12] Signals at the signal interface

a) The pause mode is activated by the PAUSE\ signal.

### Circuit diagrams for signal inputs



[121] I/O board: Input circuitry and possible connections to external electronics.

The input signals are supplied by an internal, galvanically decoupled 5 V source.

► Maximum admissible input voltages: 0 to 24 V

Input signal	Voltage range	Current range
Low	$V_{IL} = 0..1\text{ V}$	$I_{IL} \approx 10..20\text{ mA}$
High	$V_{IH} = 40..24\text{ V}$	$I_{IH} \approx 0..1\text{ mA}$

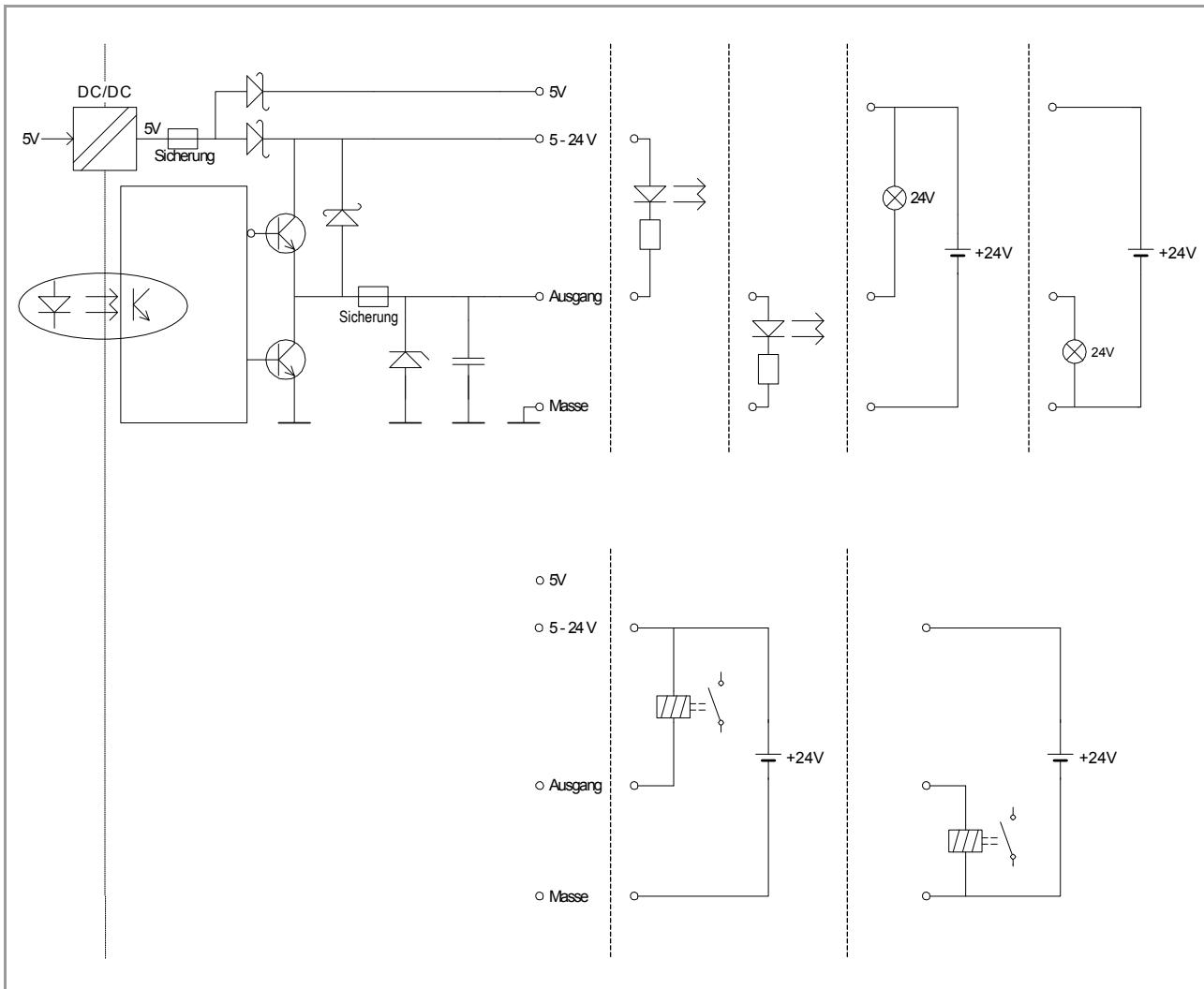
[Tab. 13] Characteristics of the input signals.

#### Special case: Connecting a 24 V start sensor

To be able to operate an industrial common sensor with a supply voltage of up to 24 V, the 24 V have to be provided by an external power supply at pin 7 (5VTO24V\_EXT). Thus, 24 V can be used at pin 2 (5V\_EXT) to supply the sensor.

► Maximum admissible output current at pin 2: 200 mA

Also refer to chapter [Circuit diagrams for signal outputs](#) on page 84, section „External Supply“.

**Circuit diagrams for signal outputs**


[122] I/O board: Output driver and possible connections to external electronics.

The output signals are powered by the internal 5 V source or by an external 5 to 24 V source. The output stages provide an active low transistor and also an active high transistor.

Output signal	Voltage range	Current
Low	$V_{OL} = 0.5..1 \text{ V}$	$I_{OL} \approx 200 \text{ mA}$
High	$V_{5-24V} - V_{OH} = 1.5..2.5 \text{ V}$	$I_{OH} \approx 200 \text{ mA}$

[Tab. 14] Characteristics of the output signals.

*Internal supply:*

Internal supply:  $V_{5-24V} = 4.5 \text{ to } 5 \text{ V at } I \leq 100 \text{ mA}$

► Maximum admissible output current: 100 mA

► External electronics, powered from this source, must not consume more than 0.5 W.

*External supply:*

External supply:  $V_{5-24V} = 5 \text{ to } 24 \text{ V at } I \leq 600 \text{ mA}$

The I/O board outputs may be powered by an external source from 5 V to 24 V (pin 7).

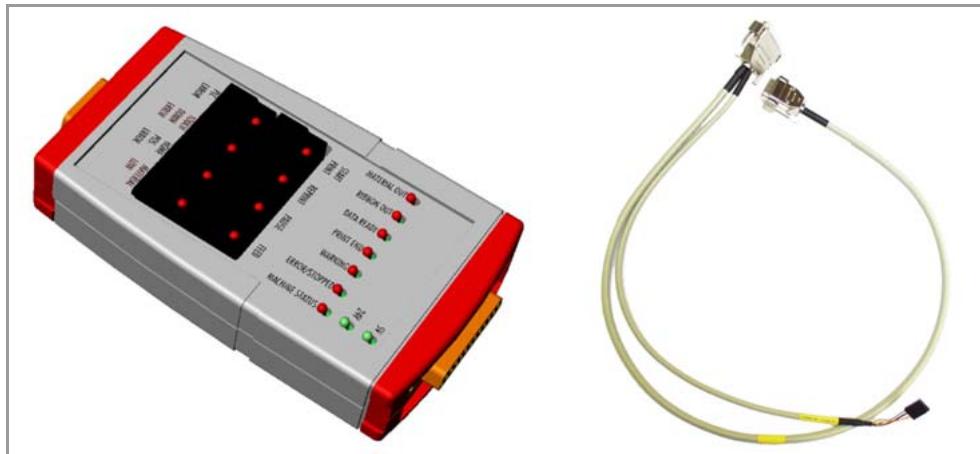
► Maximum admissible output current: 200 mA

### Fuses:

The fuses used on the I/O board are polymeric positive temperature coefficient resistors. If they trip, they don't blow and after cooling down, they work again. They don't need to be replaced.

### Testing the Signal Interface

The USI-testbox was designed for use with the USI interface, the „big brother“ of the I/O board, matching the 64-bit printer family. But it can also be applied to the I/O board, if the following is taken into account:



[123] Left side: The USI testbox (A2739). Right side: Connection cable (A2842). Both parts are required for the application.

Not all of the output signals on the USI board are also available on the I/O board. The pins of not available signals are grounded on the I/O board. The following signal lamps for outputs are therefore always lighting on the testbox:

- RIBBON OUT
- MEDIA OUT
- WARNING

Those inputs are not available on the I/O board:

- PLC ERROR
- TOUCH DOWN SENSOR
- HOME POS. ERROR
- MATERIAL LOW

Application of the testbox:

- Simulating inputs
- Checking outputs
- Monitoring of drive signals sent by the system control
- Aid for setting up the machine

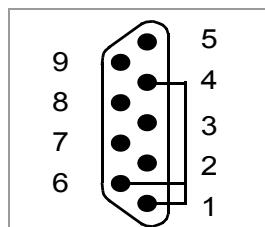
### Notes

The polarity of the testbox is low-active, therefore rules:

- Inputs are pulled low when the push-button is pressed.
- Outputs are low, when the LED lights.

## Serial interfaces

### Pin assignment RS 232



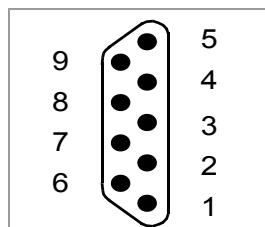
[124] Pinout RS 232

► CAUTION! - Pin assignment „viewed at from PC“! (printer = DCE)

Pin	Signal (Host)	Signal direction from I/O-board
1	DCD	Short with DTR and DSR
2	RxD	Out
3	TxD	In
4	DTR	Short with DCD and DSR
5	GND	Masse
6	DSR	Short with DTR and DCD
7	RTS	In
8	CTS	Out
9	(RI)	Not connected

[Tab. 15] Pin assignment RS 232

### Pin assignment RS 422/485



[125] Pinout RS 422/485

► CAUTION! - Pin assignment „viewed at from PC“! (printer = DCE)

Pin	Signal (Host)	Signal direction from I/O-board
1		Not connected
2	Rx-	Out
3	Tx-	In
4	Term.	Termination (110 Ohm)
5	GND	Ground
6	Term.	Termination (110 Ohm)
7	Tx+	In
8	Rx+	Out
9		Not connected

[Tab. 16] Pin assignment RS 422/485

RS422/485 termination:

At the *last* printer at the RS 422/485 line, connect the following pins (inside of the cable connector):

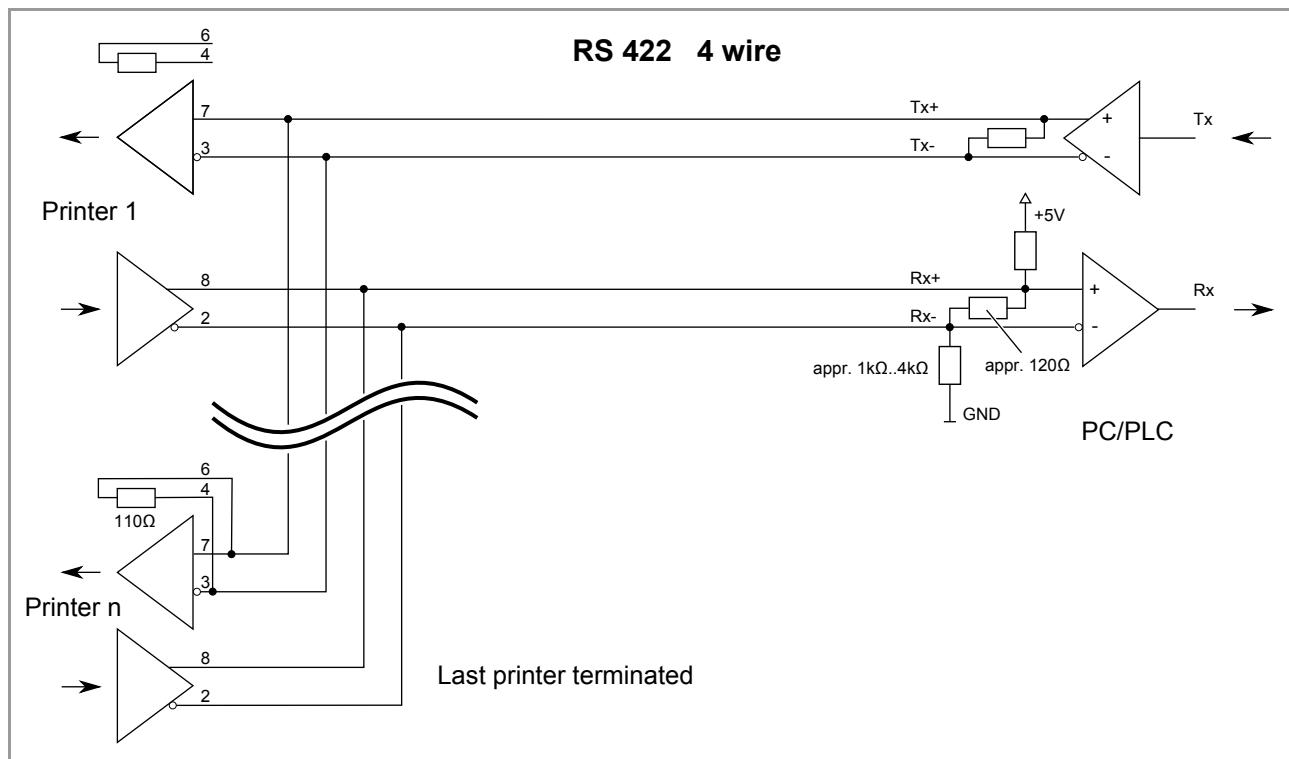
- Pins 3 and 4 (Tx-)
- Pins 6 and 7 (Tx+)

RS485 2-wire connection:

At *each* printer on the bus line, connect the following pins (inside of the cable connector):

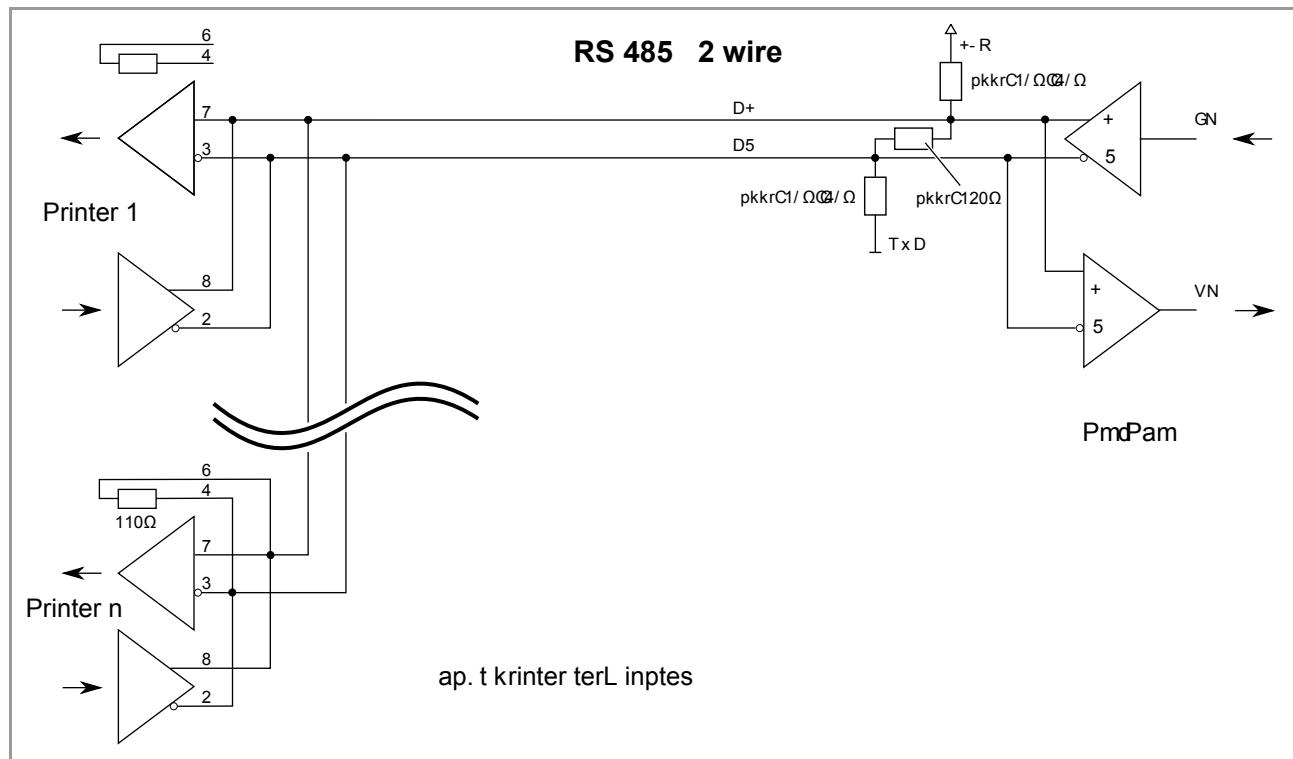
- Pins 2 and 3 (Tx-/Rx-)
- Pins 7 and 8 (Tx+/Rx+)

#### Circuit diagram RS422 interface



[126] Circuit diagram RS422 interface.

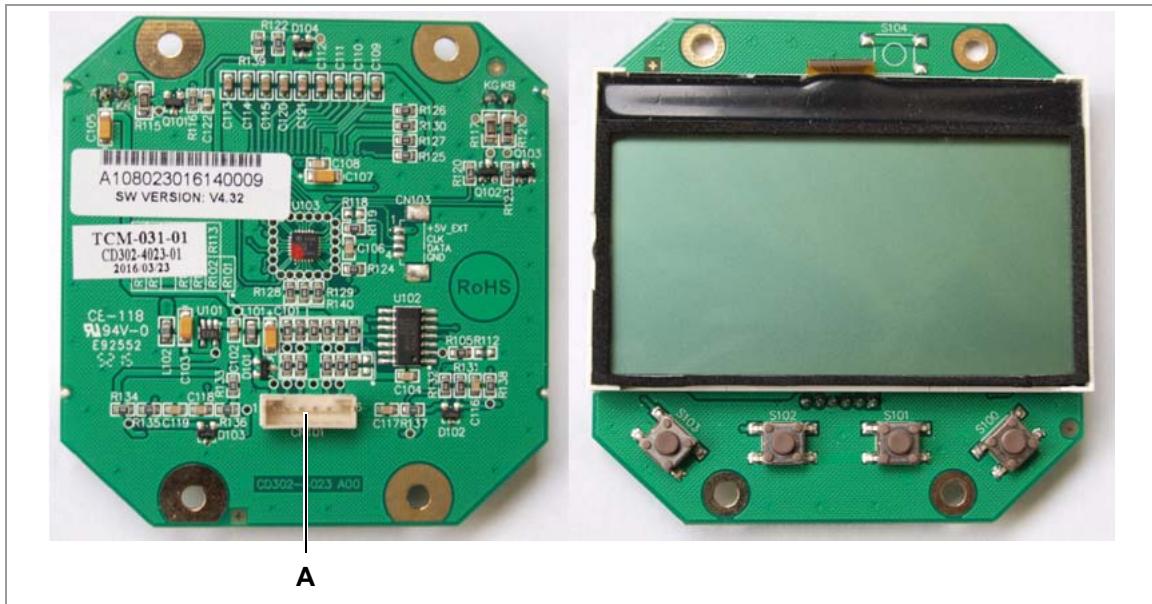
Circuit diagram RS485 interface



[127] Circuit diagram RS485 interface.

## OPERATION PANEL

### Connections



[128] Operation panel board (N100468).

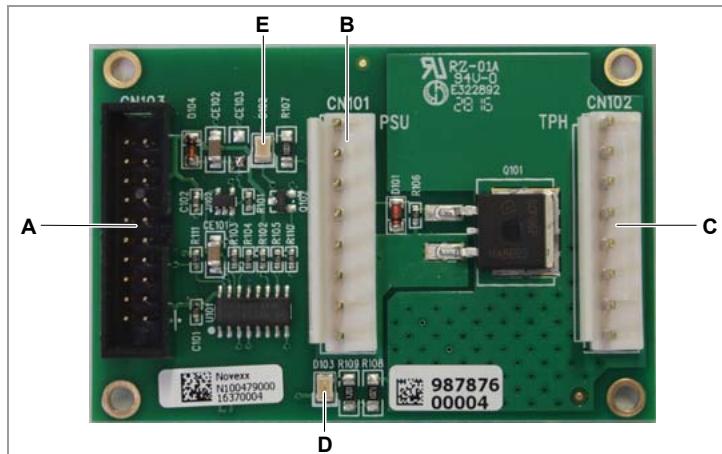
**A** Connection CPU board

## XLP 504: POWER SWITCH FOR 600 DPI PRINT HEAD

### Notes

- Article number: N100479
- Required firmware version for XLP 504 600 dpi: at least 7.71

### Connections / LEDs

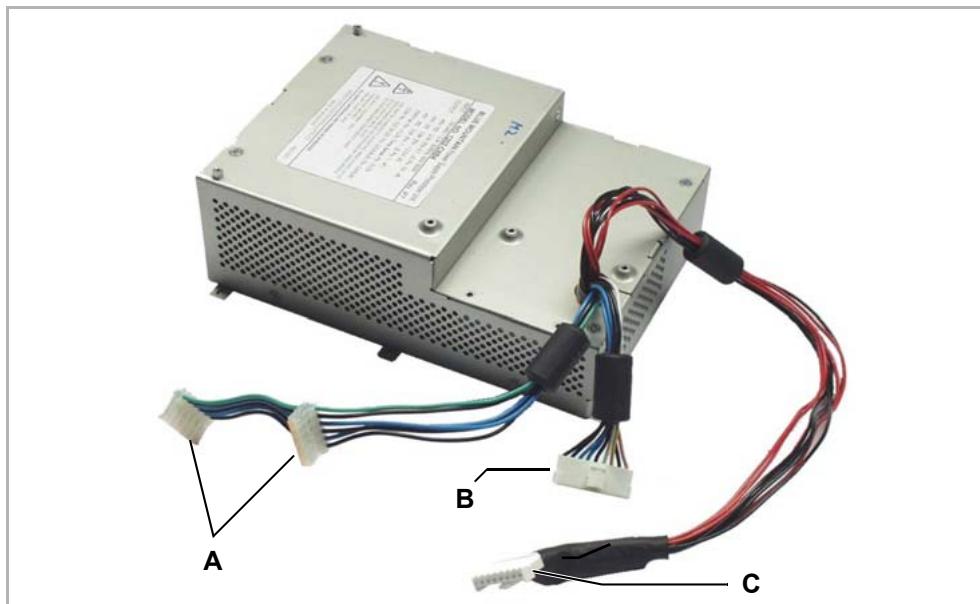


[129] Power switch board for 600 dpi print head.

- A** Connection to CPU board (CN1001, cable N100472)
- B** Connection to power supply (cable harness)
- C** Connection to print head (cable A5639)
- D** LED green: Print head supply voltage on
- E** LED yellow: Print data is being transferred to the print head

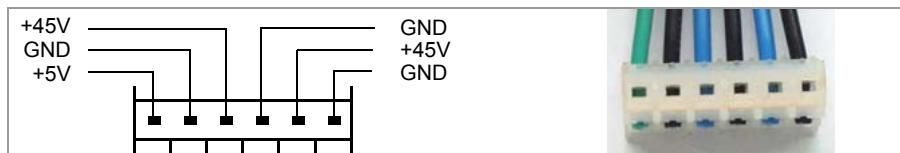
## POWER SUPPLY

### Connections



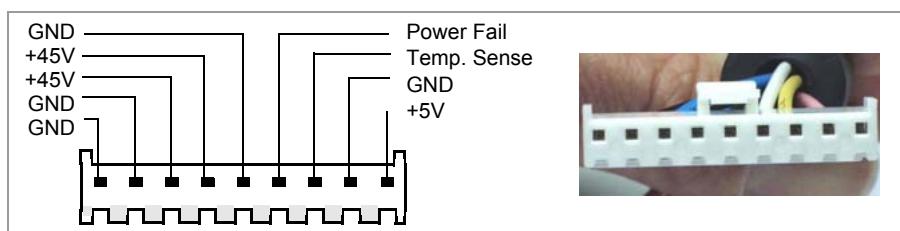
[130] Power supply (A3958).

#### A Connections for output stage boards



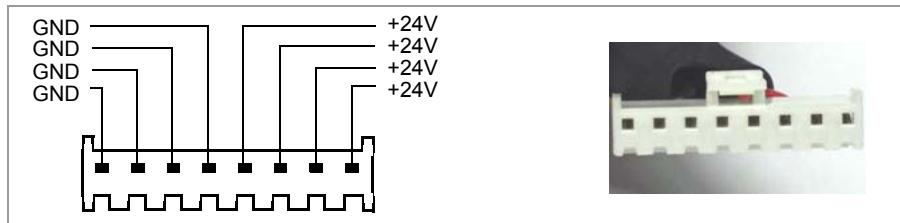
[131] Pin assignment connections for output stage boards.

#### B Connection for CPU board



[132] Pin assignment connection CPU board.

#### C Connection for print head



[133] Pin assignment print head connection.

## Specifications

### Power

- Maximum continuous average output power: 196 W
  - Peak power: 276 W
- Peak must not last longer than 30 ms
- Limitation of peaks per minute: max. 3

### Voltage range

Output	Range	Max.	Min.
+45 V	+5%	+47.25 V	+40.5 V
	-10%		
+24 V	±3%	+24.72 V	+23.28 V
+5 V	±5%	+5.25 V	+4.75 V

[Tab. 17] Output voltage ranges.

- Precondition to be able to measure the output voltages correctly, is, that a minimum output current of 0.3 A is drawn from the 5 V output (minimal load). This is e. g. reached by connecting the CPU board to the power supply.
- At the 24 V and 45 V outputs, *no* minimum output current is required to measure the voltages correctly.

### Current range

Output	Min.	Typical	Peak
+45 V	0 A	2 A	2.8 A
+24 V	0 A	3.8 A	7 A
+5 V	0.3 A	3.0 A	4.0 A

[Tab. 18] Output current ranges.

- The 24 V output provides a continuous current of 6 A for 10 s in typical operation.
- Without a minimum load at the 5 V output, the voltage at 24 V and 45 V supply should not be higher than 28 V and 50 V respectively.

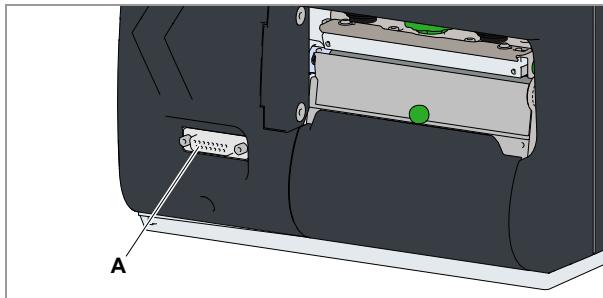
## INTERFACE FOR PERIPHERAL DEVICES

This interface is only available at XLP 50x „peripheral“.

**CAUTION!**

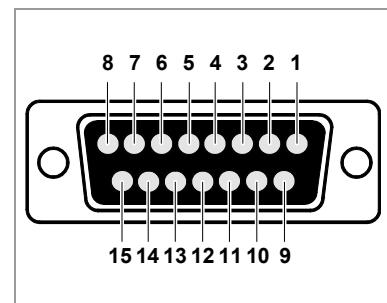
Connecting non-original devices to this interface can damage the printer. In the worst case the printer can start to burn.

→ Only connect original Novexx Solutions peripheral devices to this interface.



[134] D-Sub 15 connection for peripheral devices at an XLP 504 „peripheral“.

Pin	Signal
1	Emitter 2 (GND)
2	Collector 2 (sensor input signal)
3	Collector 1 (sensor input signal)
4	Emitter 1 (GND)
5	+5 V (supply voltage)
6	+45 V (supply voltage)
7	Motor A (motor voltage)
8	Motor /A (motor voltage)
9	LED-Kathode 2 (light sensor)
10	LED-Anode 2 (light sensor)
11	LED-Anode 1 (light sensor)
12	GND (supply voltage)
13	GND (supply voltage)
14	Motor B (motor voltage)
15	Motor /B (motor voltage)

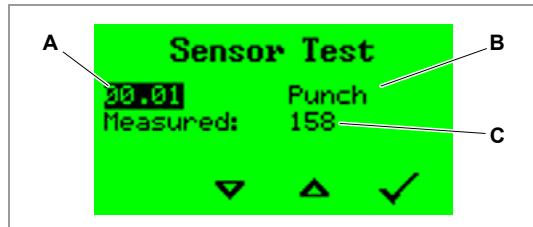


## SENSOR TEST

### General notes

→ Activating the sensor test: call parameter Tools > Test > Sensor test.

By means of the sensor test, you can check the function of each sensor:



[135] Display after calling „Sensor test“.

- A Sensor ID
- B Sensor name
- C Value

### Analog values

- If the value shown on the printer display exceeds the range given in the chart below, the respective sensor is possibly dirty and has to be cleaned (blow the dirt off with compressed air).
- Check the sensor function, e.g. by covering it. If the displayed value doesn't change when the sensor is covered, it is possibly not connected or defective.

General rule for all analog sensor values:

- Full light leads to values  $\leq 10$
- No light leads to values  $\geq 220$
- To sensors which function as a switch applies the following: Values between 10 and 220 mean that the sensor is poorly set, dirty or close to the end of its life.

### Digital values

Some sensors work digitally, what means that they don't provide a value range, but the two values „1“ or „0“.

## Sensors on the CPU board

Sensor #	Sensor name	Connector #	Typical value	Condition
0.01	Punch	CN 905	8-20	No material in light barrier
			30-90	Only backing paper in light barrier
			140-255	Label material in light barrier
0.02	Foil	CN 906	4-8	Light barrier open
			220-255	Light barrier covered
0.03	Lever	CN 907	4-8	Light barrier open
			220-255	Light barrier covered
0.04	Reflex	CN 908	7-30	White material over sensor
			30-180	No material
			180-255	Black material over sensor
0.05	Optn. 1	CN 909	0-255 analogous	Reserved for special functions
			<i>Punch sensor for short labels:</i> <sup>a</sup>	
			8-20	No material in light barrier
			30-90	Only backing paper in light barrier
			140-255	Label material in light barrier
0.06	Optn. 2	CN 910	0-255 analogous	Reserved
0.07	H-Temp	CN 901-903	appr. 100-140	Print head is very hot
			appr. 141-255	Normal print head temperature
0.08	P-Temp	CN 701		Power supply temperature (depends on the PS type)
0.09	H-Supp	CN 901-903	0	No 5 V supply for print head <sup>b</sup>
			1	5 V supply for print head o.k.
0.10	M-Supp	CN 701	0	No motor supply voltage
			1	Motor supply voltage o.k.
0.11	Start	CN 803/804	0	Start signal low (IN1)
			1	Start signal high
0.12	O Foil	calculated value	0	Foil diameter unknown
			appr. 35-80	Foil diameter in mm
0.13	H (°C)	Value calcu- lated out of 0.07	appr. 25-70	Temperature at print head in °C <sup>c</sup>

[Tab. 19] Sensor test conditions for sensors, which are connected to the CPU board.

- a) Special functions.
- b) Occurs e.g., if the print head is connected to the wrong connector on the CPU board (three possibilities).
- c) Below 30°C the measurement is not accurate.

## Sensors on the stepper motor output stage board

Sensor #	Sensor name	Conn. #	Periph.	Typical value	Condition	
4.01	Peri. 1	J4	Dispensing edge sensor	0	Dispensing edge light barrier open	
				255	Dispensing edge light barrier covered	
	Cutter		<=10	<=10	Cutter in end position	
				255	Cutter not in end position	
	External Rewinder		0...255	0...255	Dancer arm position	

[Tab. 20] Sensor test conditions for sensors, which are connected to the output stage board.

## Sensors on the BLDC motor output stage board

► Only valid for XLP 50x „basic dispenser“, what means, that the dispensing edge sensor is connected to the BLDC output stage board.

Sensor #	Sensor name	Connector #	Typical value	Condition
8.01	Rew.S.	J4	0	Dispensing edge light barrier open
			255	Dispensing edge light barrier covered
8.02	O Rew	calculated Value	0	Ø of the backing paper rewinder roll is not known
			ca. 35-120	Ø of the backing paper rewinder roll in millimeters

[Tab. 21] Sensor test conditions for sensors, which are connected to the BLDC motor output stage board.

## Sensors on the I/O board

Sensor #	Sensor name	Connector #	Typical value	Condition
15.01	Start	CN 803/804	0	Start signal activated
			1	Default start signal <sup>a</sup>
15.02	Feed	CN 804	0	Feed signal activated
			1	Default feed signal
15.03	Pause	CN 804	0	Pause signal activated
			101	Dynamic signal, see T and F
15.04	Reprt	CN 804	255	Default pause signal
			0	Reprint signal activated
15.05	T (us)	CN 804	1-254	Periodic time in µs
			255	Periodic time > 254 µs
15.06	T (ms)	CN 804	0	APSF signal periodic time < 1 ms
			1-13	Periodic time in ms
			255	Invalid value

[Tab. 22] Sensor test conditions for sensors, which are connected to the I/O board.

Sensor #	Sensor name	Connector #	Typical value	Condition
15.07	F (Hz)	CN804	0	APSF signal frequency < 76 Hz
			76-254	Frequency in Hz
			255	Frequency more than 254 Hz
15.08	F100Hz	CN804	0	APSF signal frequency < 100 Hz
			1-ca. 140	Frequency in multiples of 100 Hz <sup>b</sup>

[Tab. 22] (Forts.) Sensor test conditions for sensors, which are connected to the I/O board.

- a) Is identical with 0.12
- b) Take care about the maximum frequency rating of the I/O-board!

# Settings

## SENSOR SETTINGS

### Setting sensors

The following cases require the sensor or all sensors to be set newly:

- A sensor was replaced
- The CPU board was replaced
- A punch sensor fork with additional reflex sensor was mounted

Calling the setting dialog:

→ Start the printer in service mode and call parameter Tools > Adjustment > Sensor Adjust. Display:



[136] Sensor setting dialog.

- A Sensor name
- B Sensor read back value
- C Control value of the LED current

### Punch sensor

1. Call the sensor setting dialog.
2. The punch sensor appears first.
3. Remove any material from the label sensor fork.
4. Press the  key. Display:



5. Increase or decrease the control value by pressing the  or  key until the *read back* value is in the range of 8..20 (best at 13..15).
6. Insert some standard material backing paper (labels peeled off) to verify the read back value.  
 ■■■ Glossy side up.  
 ■■■ The backing paper must cover the light barrier.  
 The read back value should match the range of 40..90.
7. Insert some standard self-adhesive material (paper label on backing paper) to verify the read back value.  
 The read back value should match the range of 100..220 and it *must* be more than 50 (best: 100) digits higher than the value measured with bare backing paper.  
 If the value doesn't match this range: modify the control value by pressing the  or  key.
8. Press the  key to save the setting.

8. Press the key to exit the parameter.

With this, the punch sensor is set.

#### Foil sensor

1. Call the sensor setting dialog.
2. Use the arrow keys to toggle to sensor „00.02 Foil“.
3. Press the key. Display:



4. Turn the ribbon unwinding mandrel by hand and watch the read back value.

*Sensor uncovered:* the value should match the range 5..7.

*Sensor covered:* the value should match the range 220..255.

If the value doesn't match this range: modify the control value by pressing the or .

5. Press the key to save the setting.
6. Press the key to exit the parameter.

With this, the ribbon sensor is set.

#### Print head lever sensor

1. Call the sensor setting dialog.
2. Use the arrow keys to toggle to sensor „00.03 Lever“.
3. Press the key. Display:



4. Open and close the pressure lever by hand and watch the read back value.

*Pressure lever open:* the value should match the range 5..7.

*Pressure lever closed:* the value should match the range 220..255.

5. Press the key to save the setting.
6. Press the key to exit the parameter.

By doing so, the print head sensor is set.

#### Reflex sensor

► Setting only for XLP 504 with optional reflex mark label sensor!

1. Call the sensor setting dialog.
2. Use the arrow keys to toggle to sensor „00.04 Reflex“.
3. Press the key. Display:



4. Insert some white paper.

5. Increase or decrease the control value until the read back value matches the range of 8..20 (best: 10).
  6. Remove the white paper to verify the read back value. It should match the range of 50..160.
  7. Insert some black paper to verify the read back value. It should match the range of 190..255.
  8. Press the  key to save the setting.
  9. Press the  key to exit the parameter.
- By doing so, the reflex sensor is set.

#### **XLP 504: Punch sensor for short labels**

► Setting only for XLP 504 dispenser with optional punch sensor for short labels!

For further information about this punch sensor, see chapter **XLP 504: Label sensor for very short labels** on page 47.

1. Call the sensor setting dialog.
2. Use the arrow keys to toggle to sensor „00.05 Short“.
3. Press the  key. Display:



4. Remove any material from the label sensor fork.
  5. Increase or decrease the control value by pressing the Feed or Cut button until the read back value is in the range of 8..20 (best at 13..15).
  6. Insert some standard material backing paper (labels peeled off) to verify the read back value. The read back value should match the range of 30..90.
  7. Insert some standard self-adhesive material (paper label on backing paper) to verify the read back value.  
The read back value should match the range of 100..220 and it *must* be more than 50 (best: 100) digits higher than the value measured with bare backing paper.  
If the value doesn't match this range: modify the control value by pressing the  or  key.
  8. Press the  key to save the setting.
  9. Press the  key to exit the parameter.
- With this, the punch sensor is set.

## Setting the material end sensor

This printer type is equipped with a single light sensor which is designed to detect both, punches and material end. The sensor must be able to detect three different states:

- No material
- Only backing paper
- Backing paper + label face

The parameter Tools > Adjustment > Matend adjust can set the limit between being recognized as „only backing paper“ or as „material end“ [137].

► Before you even think about changing the setting of this parameter, make sure that the sensor is correctly adjusted! (See chapter [Setting sensors](#) on page 98)

Setting the materialend sensor:

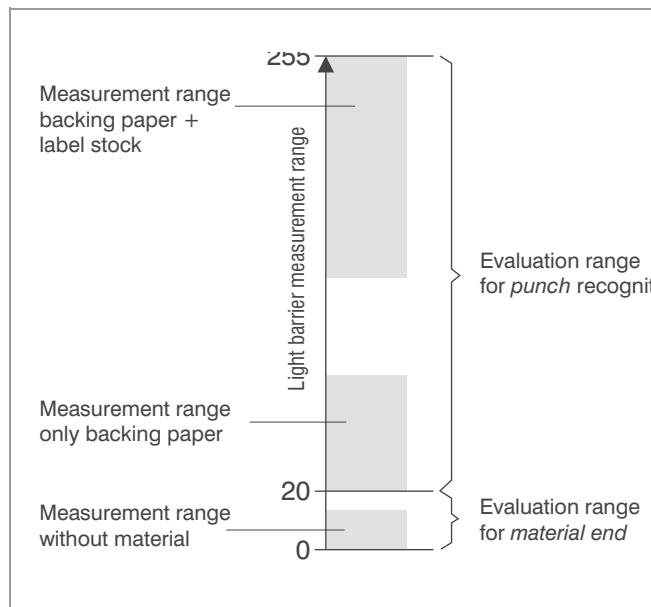
1. Call parameter Tools > Adjustment > Matend adjust:



2. Take the label material out of the sensor fork.
3. Set the value xx to 20 by pressing the **v** or **^** key.

All measured values below the set limit (that is <20), are recognized by the electronics as material end, values lying above are recognized as „only backing paper“.

► To be able to process *transparent label stock*, the parameter has to be set to zero.



[137] The measurement ranges of the combined punch/material end sensor - schematically illustrated.

## ADJUSTING THE IMPRINT POSITION

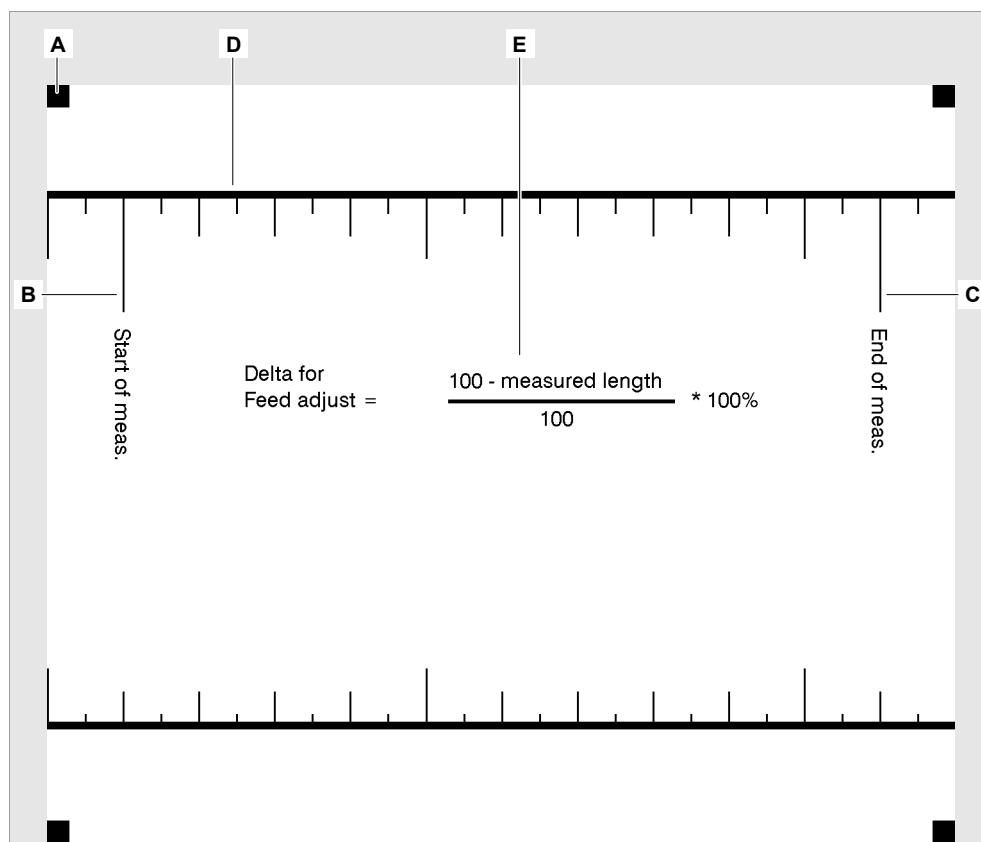
Printing on especially long labels may require under certain circumstances, that the imprint position has to be adjusted. Do this in the following way:

### Prerequisites

- Print > Material > Punch offset = „0 mm“.
- Print > Format > Print direction = „Foot first“.
- Required label material: minimum length 100 mm, best are 200 mm.
- Printer is in service mode.

### Compensating length misalignment

1. Insert recommended label material. Print a feedadjust label (call Tools > Adjustment > Feedadjust label).



[138] Feedadjust label with printed-on measure scale (C) and calculation scheme (D).

2. Measure the distance between the two marks „Start of meas.“ [138B] and „End of meas.“ [138E].

3. Put the measured distance into the calculation scheme:

$$\text{Feedadjust} = \frac{100 - \text{measuredLength}}{100} \cdot 100 \quad \%$$

4. Calculate „Feedadjust“. Put the result into Tools > Adjustment > Feed adjust (the following parameter).
5. Print another feedadjust label. Check, if the black squares [138A] or the first line of the scale are printed exactly on the label edge. If this is not the case, proceed step 6:

6. Measure the distance between the black squares and the label front edge. Put the value into Tools > Adjustment > Punch y calibr.. Repeat steps 5 and 6, until the black squares exactly flush the label front edge.

### Compensating impression misalignment

1. Print a feedadjust label (call Tools > Adjustment > Feedadjust label).
2. Measure the distance between leading label edge and „Start of meas.“ line.
3. Identify the deviation from the target value (10 mm) and type it in under Tools > Adjustment > Punch y calibr.  
► Positive values shift the print image *against* feed direction, negative values shift it *in* feed direction.
4. Print feedadjust label and check it. If necessary, repeat steps 2 and 3.

# Parameter Menu

## OVERVIEW

→ Click on a link in the table to get to the parameter description.

Print		Options	
Print contrast □	Feed speed □	Selection	└ (Break diameter □)
X - Printadjust □	Voltage offset □	└ Periph. device □	Dispenser <sup>a</sup>
Y - Printadjust □	Thin line emphas □	I/O Board <sup>b</sup>	└ Dispense Mode □
Print speed □		└ Start print mode □	└ Dispenseposition □
Delete Job □		└ Reprint signal □	└ Display mode □
Delete Spooler □		└ Feed input □	└ Dispense counter □
Material		└ Pause input □	└ Application mode □
└ Detect label length □		└ Error output □	└ Start source □
└ Foil mode □		└ Error polarity □	└ Start offset □
└ Punch offset □		└ Status output □	└ Start error stop □
└ Materialtype □		└ Status polarity □	└ Product length □
└ Materiallength □		└ End print mode □	└ (Current mode □)
└ Materialwidth □		Cutter <sup>c</sup>	└ (Min rew. current □)
└ Punchmode □		└ Cut mode □	└ (Max rew. current □)
└ Punchlevel □		└ Cut speed □	└ (Start rew. curr. □)
└ Label sens. type □		└ Cut width □	└ (Start cur. len. □)
└ Mat. end detect. □		└ Cut position □	└ (Pullback current □)
└ Foil		└ Double cut □	└ (Back diameter □)
└ Foil length □		└ Rest position □	└ (Break current □)
└ Outer foil diamet. □		Rewinder <sup>d</sup>	└ (Break diameter □)
└ Inner foil diamet. □		└ Rewind direction □	Internal Rewinder <sup>e</sup>
Format		└ (Current mode □)	└ Rewind direction □
└ Bar code multip. □		└ (Min rew. current □)	└ (Current mode □)
└ Tradit. Imaging □		└ (Max rew. current □)	└ (Min rew. current □)
└ UPC plain-copy □		└ (Start rew. curr. □)	└ (Max rew. current □)
└ EAN Readline □		└ (Start cur. len. □)	└ (Start rew. curr. □)
└ EAN sep. lines □		└ (Pullback current □)	└ (Start cur. len. □)
└ Rotated barcodes □		└ (Back diameter □)	└ (Pullback current □)
└ Print direction □		└ (Break current □)	└ (Back diameter □)
		└ Rewinder adjust □	└ (Break current □)
		└ Rewinder Values □	└ (Break diameter □)

[Tab. 23] Parameter menu part 1 (parameters in brackets are only visible with „service mode“ access rights)

- a) Menu is only visible with activated dispense function (Options > Selection > Periph. device = „Dispenser“)
- b) Menu is only visible with installed I/O board
- c) Menu is only visible with activated Cutter („Cutter 2000“)
- d) Menu is only visible with activated (external) rewinder („Rewinder 2000“)
- e) Menu is only visible with activated (internal) rewind function (Options > Selection > Periph. device = „Intern. rewinder“)

System		Printer Language	Print interface
Tear-off edge <sup>a</sup>	Language □	Print Interpret. □	Print interface □
└ Dispenseposition □	Access authoriz. □	EasyPlug Setting	Network
TCS <sup>b</sup>	Factory settings □	└ Character filter □	└ IP Addressassign □
└ Changelabel Mode □	Custom defaults □	└ Character sets □	└ IP address □
└ Changelab Print □	(Run Setup Wizard? □)	└ EasyPlug errors □	└ Net mask □
└ Changelab Length □	Turn-on mode □	└ Spooler mode □	└ Gateway address □
└ Label Eject Mode □	Hardware Setup	└ StandAlone Input □	└ Port address □
LTSA <sup>c</sup>	└ Head resistance □	└ #VW/I Interface □	└ Ethernet speed □
└ Apply mode □	└ Realtime Clock □	└ Printer ID no. □	└ DHCP host name □
└ Stroke length □	└ (Head-sensor dist □)	└ Command sequence □	└ Services
└ Appl. waitpos. □	Memory	ZPL Setting <sup>d</sup>	└ WEB server □
└ Applicator speed □	└ Free store size □	└ Manual calibrate □	└ WEB display refr □
└ Restart delay □	└ Ram disk size □	└ Darkness □	└ (WEB admin passw. □)
Keyboard □	└ Font downl. area □	└ Label top □	└ (WEB supervisor p. □)
External signal □	└ Spooler size □	└ Left Position □	└ (WEB operator p. □)
Start print mode □ <sup>e</sup>	└ Data blocks del. □	└ Error Indication □	└ FTP server □
Print		└ Error Checking □	└ (FTP Password □)
└ Miss. label tol. □		└ Resolution □	└ Time client □
└ Gap detect. mode □		└ Image Save Path □	└ (Time server IP □)
└ Singlestartquant □		└ Label Invert □	└ (Sync. interval □)
└ Reprint function □		Commands	└ Time zone □
└ Foil end warning □		└ Format Prefix □	Serial Port 1
└ Foil warn stop □		└ Control Prefix □	└ Baud rate □
└ Error reprint □		└ Delimiter Char □	└ No. of data bits □
└ Single-job mode □		└ Command ^PR □	└ Parity □
└ Temp. reduction □		└ Command ^MT □	└ Stop bits □
└ Print info mode □		└ Command ^JM □	└ Data synch. □
		└ Command ^MD/~SD □	└ Serial port mode □
			└ Frame error □
			Serial Port 3 <sup>f</sup>
			└ Baud rate □
			└ No. of data bits □
			└ Parity □
			└ Stop bits □
			└ Data synch. □
			└ Serial port mode □
			└ Frame error □

[Tab. 24] Parameter menu part 2 (parameters in brackets are only visible with „service mode“ access rights)

- a) Menu is only visible with activated tear-off edge (Options > Selection > Periph. device = „Tear-off edge“)
- b) Menü erscheint nur mit angebautem und aktiviertem TCS (Optionen > Auswahl > Peripheriegerät = „TCS“)
- c) Menü erscheint nur mit angebautem und aktiviertem LTSA (Optionen > Auswahl > Peripheriegerät = „LTSA“)
- d) Menu is only visible with activated ZPL interpreter (Printer Language > Print Interpret. = „ZPL Emulation“)
- e) Parameter is only visible, if Options > External signal = „Singlestart“ or „Stacker full“
- f) Menu is only visible with installed I/O board

Info		
Drives	Model ID □	└ Memory Data
└ Drive C □	Status Printouts	└ RAM memory size □
└ Drive D □	└ Demo label □	└ Flash mem size □
	└ Printer Status □	└ Storage media □
	└ Memory Status □	└ SD card □ <sup>a</sup>
	└ Font Status □	└ USB thumb drive □ <sup>b</sup>
	└ Flashdata Status □	└ Space for Jobs □
	└ Service Status □	└ Max. Labellength □
	└ (Dottest endless □)	└ Custom defaults □
	└ (Dottest punched □)	└ CPU board data
	└ Reference label □	└ CPU identifier □
	└ Textile Care Sym □	└ PCB Revision □
Statistics		└ FPGA version □
	└ Head run length □	└ MAC Address □
	└ Roll run length □	└ Serial number □
	└ Cuts on knife □ <sup>c</sup>	└ Production date □
	└ Service operations □	└ PCB part number □
	└ Head number □	└ Board part numb. □
	└ Roll number □	└ PowerSupply Data
	└ Cutter number □ <sup>c</sup>	└ PS type □
	└ Total cuts □ <sup>c</sup>	└ PS Temperature □
	└ Tot. mat. length □	└ Display Data
	└ Tot. foil length □	└ Display Version □
	└ Head strobes □	└ Display serialNr □
	└ Operation time □	Measurements
	└ Total Operation □	└ Foil rest length □
System		└ Foil diameter □
	└ Module FW. Vers.	└ Head temperature □
	└ System version □	
	└ System revision □	
	└ System date □	
	└ Bootloader □	
	└ uMon □	
	└ Peripheraldriver □	
	└ Intern. rewinder □	

[Tab. 25] Parameter menu part 3 (parameters in brackets are only visible with „service mode“ access rights)

- a) Parameter is only visible with plugged-in SD card
- b) Parameter is only visible with plugged-in thumb drive
- c) Menu is only visible with activated Cutter („Cutter 2000“)

## ALPHABETICAL PARAMETER LIST

#VW/I Interface	<b>-145</b>	Delete Job	<b>-110</b>	Foil end warning	<b>-141</b>
Access authoriz.	<b>-136</b>	Delete Spooler	<b>-111</b>	Foil length	<b>-114</b>
Appl. waitpos.	<b>-123</b>	Delimiter Char	<b>-149</b>	Foil mode	<b>-111</b>
Application mode	<b>-131</b>	Demo label	<b>-161</b>	Foil rest length	<b>-177</b>
Applicator speed	<b>-123</b>	Detect label length	<b>-111</b>	Foil warn stop	<b>-141</b>
Apply mode	<b>-122</b>	DHCP host name	<b>-151</b>	Font downl. area	<b>-139</b>
Back diameter	<b>-134</b>	Dispense counter	<b>-130</b>	Font Status	<b>-164</b>
Bar code multip.	<b>-114</b>	Dispense Mode	<b>-127</b>	Format Prefix	<b>-148</b>
Baud rate	<b>-154</b>	Dispenseposition	<b>-129</b>	FPGA version	<b>-176</b>
Board part numb.	<b>-177</b>	Display mode	<b>-130</b>	Frame error	<b>-156</b>
Bootloader	<b>-174</b>	Display serialNr	<b>-177</b>	Free store size	<b>-138</b>
Break current	<b>-134</b>	Display Version	<b>-177</b>	FTP Password	<b>-153</b>
Break diameter	<b>-135</b>	Dottest endless	<b>-169</b>	FTP server	<b>-153</b>
Changelab Length	<b>-122</b>	Dottest punched	<b>-169</b>	Gap detect. mode	<b>-140</b>
Changelab Print	<b>-122</b>	Double cut	<b>-126</b>	Gateway address	<b>-150</b>
Changelabel Mode	<b>-122</b>	Drive C	<b>-156</b>	Gen.Support Data	<b>-157</b>
Character filter	<b>-144</b>	Drive D	<b>-156</b>	Head exchange	<b>-159</b>
Character sets	<b>-144</b>	EAN Readline	<b>-115</b>	Head number	<b>-172</b>
Command ^JM	<b>-149</b>	EAN sep. lines	<b>-115</b>	Head resistance	<b>-137</b>
Command ^MT	<b>-149</b>	EasyPl. file log	<b>-157</b>	Head run length	<b>-171</b>
Command ^PR	<b>-149</b>	EasyPlug errors	<b>-145</b>	Head strobes	<b>-173</b>
Command ^MD/~SD	<b>-149</b>	EasyPlug Monitor	<b>-158</b>	Head temperature	<b>-178</b>
Command sequence	<b>-146</b>	End print mode	<b>-121</b>	Head-sensor dist	<b>-138</b>
Control Prefix	<b>-148</b>	EP Monitor Mode	<b>-158</b>	Image Save Path	<b>-148</b>
CPU identifier	<b>-176</b>	Error Checking	<b>-147</b>	Inner foil diamet.	<b>-114</b>
Current mode	<b>-132</b>	Error Indication	<b>-147</b>	Intern. rewinder	<b>-174</b>
Custom defaults	<b>-137</b>	Error output	<b>-120</b>	IP address	<b>-150</b>
Custom defaults	<b>-176</b>	Error polarity	<b>-121</b>	IP Addressassign	<b>-149</b>
Cut mode	<b>-124</b>	Error reprint	<b>-142</b>	Keyboard	<b>-135</b>
Cut position	<b>-126</b>	Ethernet speed	<b>-150</b>	Label Eject Mode	<b>-122</b>
Cut speed	<b>-125</b>	External signal	<b>-135</b>	Label Invert	<b>-148</b>
Cut width	<b>-126</b>	Factory settings	<b>-136</b>	Label sens. type	<b>-113</b>
Cuts on knife	<b>-172</b>	Feed adjust	<b>-160</b>	Label top	<b>-147</b>
Cutter change	<b>-159</b>	Feed input	<b>-119</b>	Language	<b>-135</b>
Cutter number	<b>-172</b>	Feed speed	<b>-117</b>	Left Position	<b>-147</b>
Cutter test	<b>-158</b>	Feedadjust label	<b>-160</b>	Log files delete	<b>-157</b>
Darkness	<b>-147</b>	Flash mem size	<b>-175</b>	MAC Address	<b>-176</b>
Data blocks del.	<b>-139</b>	Flashdata Status	<b>-168</b>	Manual calibrate	<b>-146</b>
Data synch.	<b>-155</b>	Foil diameter	<b>-178</b>	Mat. end detect.	<b>-114</b>

Matend adjust	-160	Punch y calibr.	-161	Start print mode	-119
Matend tolerance	-160	Punchlevel	-113	Start rew. curr.	-133
Materiallength	-112	Punchmode	-112	Start source	-131
Materialtype	-112	Ram disk size	-138	Status output	-121
Materialwidth	-112	RAM memory size	-174	Status polarity	-121
Max rew. current	-133	Realtime Clock	-138	Stop bits	-155
Max. Labellength	-175	Reference label	-170	Storage media	-175
Memory card test	-158	Reprint function	-140	Store Parameters	-156
Memory Status	-163	Reprint signal	-119	Stroke length	-123
Min rew. current	-132	Resolution	-147	Sync. interval	-154
Miss. label tol.	-140	Rest position	-126	System date	-174
Model ID	-161	Restart delay	-123	System revision	-173
Net mask	-150	Rewind direction	-129	System version	-173
No. of data bits	-154	Rewinder adjust	-129	Temp. reduction	-142
Operation time	-173	Rewinder Values	-130	Textile Care Sym	-171
Outer foil diamet.	-114	Roll number	-172	Thin line emphas	-117
Parity	-154	Roll run length	-171	Time client	-153
Pause input	-120	Roller exchange	-159	Time server IP	-153
PCB part number	-177	Rotated barcodes	-116	Time zone	-154
PCB Revision	-176	Run Setup Wizard?	-137	Tot. foil length	-173
Periph. device	-117	SD card	-175	Tot. mat. length	-173
Peripheraldriver	-174	Sensor Adjust	-160	Total cuts	-172
Port address	-150	Sensor Test	-158	Total Operation	-173
Print contrast	-109	Serial number	-176	Tradit. Imaging	-115
Print direction	-116	Serial port mode	-155	Turn-on mode	-137
Print info mode	-142	Serv. data reset	-159	uMon	-174
Print interface	-143	Service done	-159	UPC plain-copy	-115
Print Interpret.	-143	Service operations	-172	USB thumb drive	-175
Print speed	-110	Service Status	-169	Voltage offset	-117
Print test	-158	Single-job mode	-142	WEB admin passw.	-152
Printer ID no.	-146	Singlestartquant	-140	WEB display refr	-152
Printer Status	-162	Space for Jobs	-175	WEB operator p.	-152
Product length	-132	Spooler mode	-145	WEB server	-151
Production date	-176	Spooler size	-139	WEB supervisor p.	-152
PS Temperature	-177	StandAlone Input	-145	X - Printadjust	-110
PS type	-177	Start cur. len.	-134	Y - Printadjust	-110
Pullback current	-134	Start error stop	-131		
Punch offset	-111	Start offset	-131		

## PARAMETER REFERENCE

### Print contrast

Setting range	Default setting	Step width	Easy Plug
[1...105] %	75%	1	#!H, #PC2045

**CAUTION!**

The parameter Print contrast affects directly the life durance of the print head. It counts:  
 „The higher the setting of Print contrast is, the lower is the life durance of the print head“. This counts even more for settings above 100%. Therefore mind:

→ Always choose the lowest possible setting necessary to produce an acceptable print result.

The highest setable print contrast depends on two factors (see tables below):

- Print head resolution
- Print speed

Print speed	Max. print contrast
51 mm/s (2 inch/s)	120%
76 mm/s (3 inch/s)	117%
102 mm/s (4 inch/s)	115%
127 mm/s (5 inch/s)	100%
152 mm/s (6 inch/s)	85%
178 mm/s (7 inch/s)	76%
203 mm/s (8 inch/s)	67%

[Tab. 26] Max. print contrast for print heads with 203 dpi resolution.

Print speed	Max. print contrast
<= 76 mm/s (3 inch/s)	120%
102 mm/s (4 inch/s)	105%
127 mm/s (5 inch/s)	88%
152 mm/s (6 inch/s)	74%

[Tab. 27] Max. print contrast for print heads with 300 dpi resolution.

Printspeed	Max. print contrast
51 mm/s (2 inch/s)	100%
76 mm/s (3 inch/s)	90%
102 mm/s (4 inch/s)	70%
127 mm/s (5 inch/s)	60%
152 mm/s (6 inch/s)	50%

[Tab. 28] Max. print contrast for printheads with 600 dpi resolution.

## X - Printadjust

Setting range	Default setting	Step width	Easy Plug
[ -15...15] mm	0.0 mm	0.1 mm	#PC1020

The zero point of the mask is moved in relation to the edge of the label on the X- axis, i. e. lengthways to the material.

- Maximum offset away from the edge of the label: +15.0 mm
- No offset: 0.0mm
- Maximum offset towards the edge of the label: -15.0 mm

►►► If the setting is changed, while the print job is stopped, the printer recalculates the format using the changed values.

►►► Caution with graphics, which are generated via one of the Easy Plug commands #YI, #YIR or #YIB! If the graphics is shifted beyond the label border as a consequence of changing the parameter "X-Printadjust", the part of the graphics which "juts out" will get lost.

## Y - Printadjust

Setting range	Default setting	Step width	Easy Plug
[ -15...15] mm	0.0 mm	0.1 mm	#PC1021

The zero point of the mask is moved in relation to the edge of the label on the Y-axis, i. e. in the feed direction.

- Maximum offset in feed direction: +15.0 mm
- No offset: 0.0mm
- Maximum offset against feed direction: -15.0 mm

►►► If the setting is changed, while the print job is stopped, the printer recalculates the format using the changed values.

►►► Caution with graphics, which are generated via one of the Easy Plug commands #YI, #YIR or #YIB! If the graphics is shifted beyond the label border as a consequence of changing the parameter "X-Printadjust", the part of the graphics which "juts out" will get lost.

## Print speed

Setting range	Default setting	Step width	Easy Plug
203 dpi: [2..10] Inch/s			
300 dpi: [2..8] Inch/s	4 Inch/s	1 Inch/s	#PC1003, #PR
600 dpi: [2..6] Inch/s			

The print speed (material feed) can be adjusted according to the ribbon and material combination being used in order to optimise the contrast depth and the density of the print image.

## Delete Job

Setting range	Default setting	Step width	Easy Plug
--	--	--	#!CA

Pressing key 4 cancels the active print job.

## Delete Spooler

Setting range	Default setting	Step width	Easy Plug
--	--	--	#ICA

Pressing key 4 deletes all print jobs queued in the spooler.

## Foil mode

Einstellungen	Default setting	Step width	Easy Plug
Thermo transfer			#PC2018, #ER
Thermal printing	Thermo transfer	--	

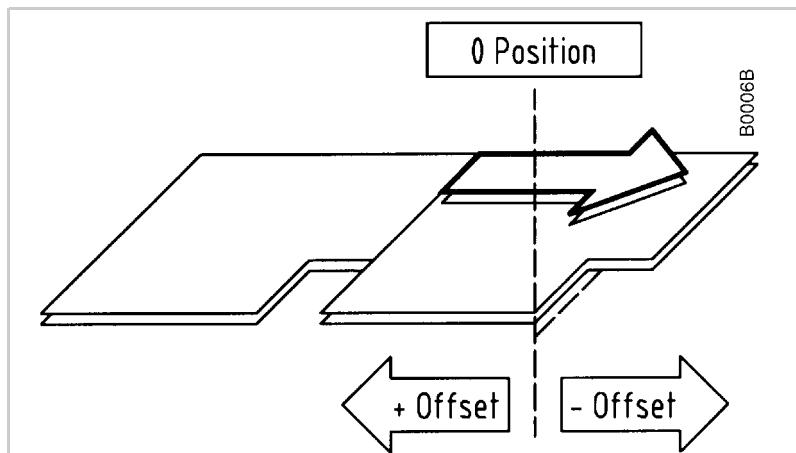
- *Thermo transfer*: Thermo transfer printing (ribbon end sensor is switched on)
- *Thermal printing*: Thermo direct printing (ribbon end sensor is switched off)

## Punch offset

Setting range	Default setting	Step width	Easy Plug
-8...max. label length <sup>a</sup>	0 mm	0.1 mm	#PC1008, #PO

a) The max. label length depends on several factors, e. g. the memory configuration.

The zero position can be determined offset in millimetre steps from the detected gap position [139].



[139]Positive and negative offset in relation to the feed direction (arrow).

- Maximum offset in feed direction: -8 mm
  - Minimum offset against feed direction: +max. label length
- The value is overwritten by the appropriate Easy Plug command when sending label formats.

## Detect label length

► Only works if label material is inserted.

Measures the label length and writes the value to parameter Materiallength. During the measurement, the label material is fed approx. 2 label lengths.

## Materialtype

Settings	Default setting	Step width	Easy Plug
Endless, Punched	Punched	--	#PC1005, #IM

Definition of the used label material. A distinction is made between endless material and gapped material (hole gaps, self-adhesive material with register gaps). The detected gap position corresponds to the start of the label.

- *Endless*: If material is to be used without gaps
- *Punched*: If material is to be used with gaps

► The value is overwritten by the appropriate Easy Plug command when sending label formats.

## Materiallength

Settings	Default setting	Step width	Easy Plug
[5...max. label length <sup>a</sup> ]	100 mm	0.1 mm	#

a) The max. label length depends on several factors, e. g. the memory configuration.

The material length (label length) is the distance between the gaps, measured from the front edge (beginning) of a label to the front edge of the next label.

► The value is overwritten by the appropriate Easy Plug command when sending label formats.

## Materialwidth

Settings	Default setting	Step width	Easy Plug
6,0...max. width <sup>a</sup>	100 mm	0.1 mm	#IM, #PC1007

a) The max. width depends on several factors, e. g. the memory configuration.

Zero position of the left border. If the printer is working in line-printer mode, alterations can be made in millimetre units.

## Punchmode

Settings	Default setting	Step width	Easy Plug
Auto negotiation, Manual	Auto negotiation	--	#PC1022

- *Auto negotiation*: Automatic mode, for material with a contrast zone = gap in the label.

Suitable for all materials with which there is a difference in the transparency between the label and gap of more than 2 values (see Description, sensor check).

The range of the value automatically measured by the gap detection can be defined specifically for the label material. This allows materials with high-contrast proof points within the label to be processed, which would otherwise be measured as 'false' gaps by the system. The corresponding setting value is then equal to, or smaller than, the value measured at the actual gap.

- *Manual*: Manual setting, for material with several varying contrast zones. Settings are made using the parameter Print > Material > Punchlevel.

## Punchlevel

Settings	Default setting	Step width	Easy Plug
0...255	--	1	#PC1023

► Only if Print > Material > Punchmode = „Manual“

The value xxx stands for the current contrast within the photoelectric switch of the material which has just been inserted. This serves to determine a threshold value for the inserted material.

Punch level	
Measured:	xxx
AdjLevel:	yyy

xxx = current measurement at the punch sensor

yyy = set threshold value

Example: Self-adhesive material with black bars lengthways across the label.

Reading:

- Masking paper: 30
- Masking paper + label: 60
- Masking paper + label + black bars: 190
- Recommended setting: 60

A setting value of 60 means that all readings over 60 are ignored, therefore also the reading 190 at the black bar.

## Label sens. type

(Label sensor type)

Settings	Default setting	Step width	Easy Plug
Punched, Reflex, Reflex (upper), Short label opt.	Punched	--	#PC2015, #IM

The optional reflex photoelectric switch for labels with reflecting length markings, or the normal factory-fitted photoelectric switch for labels with transparent or register gaps (self-adhesive labels), must be defined according to the application.

- *Punched*: Transparent photoelectric switch (for gaps)
  - *Reflex*: Reflex photoelectric switch (for black marks on the bottom side)
  - *Reflex (upper)*: n. a.
  - *Short label opt.*: Activates the optional short label sensor
- Appears only in XLP 504 printers which are equipped with the short label sensor.
- In XLP 50x with activated dispenser, the short label sensor is automatically activated.

## Mat. end detect.

(Material end detection)

Settings	Default setting	Step width	Easy Plug
Off, Transparent	Transparent	--	--

The material end detection can be deactivated for processing labels with gaps longer than 15 mm, or if using material with a high fluctuation in light transparency (Status message „5002 material end“ is displayed even though material is present)..

### CAUTION!

Soiling or damaging the print roller.

→ Endless (= not converted) material should not be processed when the material end detection is deactivated (otherwise, printing is continued on the print roller after material end).

- *Off*: No material end detection
- *Transparent*: Material end detection by means of a transmission sensor

## Foil length

Setting range	Default setting	Step width	Easy Plug
[300...500] m	450 m	10 m	#PC1038

Ribbon length of the applied ribbon roll. The ribbon length is marked on the packaging of the new ribbon roll. This setting is important for proper functioning of the ribbon-end warning.

## Outer foil diamet.

(Outer ribbon roll diameter)

Setting range	Default setting	Step width	Easy Plug
[50.0...100.0] mm	79.1 mm	0.1 mm	#PC1039

Outer Ø of the applied ribbon roll. This setting is important for proper functioning of the ribbon-end warning.

## Inner foil diamet.

(Inner ribbon roll diameter)

Setting range	Default setting	Step width	Easy Plug
[28.0...40.0] mm	33.0 mm	0.1 mm	#PC1040

Inner Ø of the applied ribbon roll. This setting is important for proper functioning of the ribbon-end warning.

!!!→ Inner Ø of the ribbon roll = Outer Ø of the ribbon core!

## Bar code multip.

(Bar code height scaling factor)

Setting range	Default setting	Step width	Easy Plug
[1...10]	1	1	#PC1009, #YB

Increases the bar code height defined in the label layout (Easy Plug) by multiplication by a factor of 1 to 10.

## Tradit. Imaging

Setting range	Default setting	Step width	Easy Plug
No, Yes	No	--	

► Only in service mode

Up to firmware version x.31, the barcode height was calculated with the formula:

$$\text{Barcodeheight}_{\text{Print}} = (\text{Barcodeheight}_{\text{Layout}} + 1) \cdot x$$

with  $x = \text{Print} > \text{Format} > \text{Bar code multip.}$

By doing so, the printed barcode height in millimeters was by 1 higher than the value defined in the layout (1 --> 2 mm, 2 --> 3 mm, etc.)<sup>1</sup>.

From firmware version x.31 on, the printed barcode is exactly as high in millimeters, as the value in the layout is (1 --> 1 mm, 2 --> 2 mm, etc.) 1.

- *No*: New height calculation (1 --> 1 mm, 2 --> 2 mm, etc.) is applied.

The plain copy line is printed with OCR-B font.

- *Yes*: Setting for customers with print layouts based on the *old* height calculation scheme.

The plain copy line of the barcodes EAN8, EAN13, UPC-A and UPC-E is printed with the same fonts, which older printer types like TTK or TTX x50 have used.

## UPC plain-copy

Setting range	Default setting	Step width	Easy Plug
In line, Raised	In line	--	#PC1010, #YB

The position of the first and last digit in the plain-copy line - underneath the bar code - can be adjusted as required.

- *Raised*: First and last digit of the UPCA or first digit with the UPCE are raised.
- *In line*: All digits in the decoded line are in line under the code.

## EAN Readline

Setting range	Default setting	Step width	Easy Plug
Standard, <> Signs	Standard	--	#PC1011, #YB

- *Standard*: Readline without "<>" or ">" signs.
- *<> Signs*: Readline enclosed in "<>" signs or terminated by a ">"-Sign (EAN 13).

## EAN sep. lines

Setting range	Default setting	Step width	Easy Plug
With readl. only, Always long	With readl. only	--	

EAN separation lines. Parameter for controlling of EAN or UPC barcodes if they are printed without readline.

- *With readl. only*: The separation bars at the beginning, middle, and the end of the barcode are only long, if the barcode is printed with a readline.
- *Always long*: The separation bars at the beginning, middle, and the end of the barcode are always long, regardless if the barcode is printed with or without readline. The position of the barcode is the same as with the readline option switched on.

1) Assumed that Print > Format > Bar code multip. = „1“

## Rotated barcodes

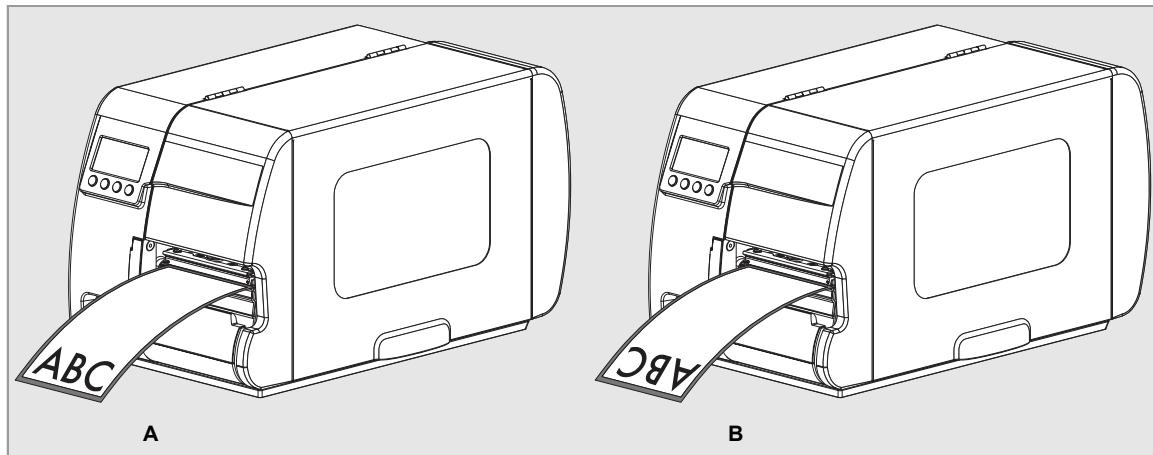
Setting range	Default setting	Step width	Easy Plug
Normal, Optimized	Optimized	--	#PC1013, #YB

Improves readability of rotated (90° and 270°) bar codes.

- *Normal*: „Normal“ printing without special processing of rotated bar codes.
- *Optimized*: The line and gap widths of rotated bar codes are modified to improve readability.

## Print direction

Setting range	Default setting	Step width	Easy Plug
Foot first, Head first	Foot first	--	#PC1027



[140]Orientation of the printout „Foot first“ (A) or „Head first“ (B).

- *Foot first*: Orientation of the printout according to [140A].
- *Head first*: Orientation of the printout according to [140B]. Mind the following:

► Define the „true“ label length (without gap length) in parameter Print > Material > Materiallength length. If the label gap is wider than 5 mm, the parameter System > Druck > Miss. label tol. must be set to a value more than zero.

► The distance between material base line and the first printable dot is 1 mm. To keep this distance while printing „head first“, the material width must be calculated as follows:

$$b_{Mat} = b_{Tr} - 2mm \text{ , with}$$

b<sub>Mat</sub>: Material width

b<sub>Tr</sub>: Backing paper width

## Feed speed

Setting range	Default setting	Step width	Easy Plug
[2.0...6.0] Inch/s	4.0 Inch/s	1 Inch/s	#PC1004, #PR

► Parameter is only visible with *deactivated* dispense function (Options > Selection > Periph. device ≠ „Dispenser“) and with *deactivated* (internal) rewind function (Options > Selection > Periph. device ≠ „Intern. rewinder“)

Setting:

The value for the feed speed should not be set too high for print applications with long calculating units (e. g. consecutive numbering). This can help to avoid alternating between abrupt braking to 0 (zero) and acceleration to print speed.

► When altering the print speed, the feed speed is equal to the print speed. If a different feed speed is required, this must be set again.

## Voltage offset

Setting range	Default setting	Step width	Easy Plug
[0...20] %	0%	1 %	#PC2027

The voltage offset increases the head voltage and therefore the head temperature which e.g. was set by Easy Plug command (HV).

## Thin line emphas

(Thin line emphasis)

Settings	Default setting	Step width	Easy Plug
On, Off	On	--	#PC2066

Print emphasis for thin lines in order to get a better print result.

- *On*: Print emphasis for thin lines is switched on.

Thin lines in the printout, which run crossways to the printing direction, are printed approx. 1.5 times wider. This may have the effect, that small white patches are closed with color (e.g. in the „e“ with very small fonts)

- *Off*: Print emphasis for thin lines is switched off

## Periph. device

Settings	Default setting	Step width	Easy Plug
None, Cutter, Rewinder, Tear-off edge, Dispenser, Intern. rewinder, LTSA, TCS	Tear-off edge	--	PC2031

After installation, options must be selected under "Peripheral device" in order to be assured of the corresponding sensor queries and printer reactions.

CAUTION!

Selecting an incorrect option can lead to malfunctions or damage.

- *None*: No peripheral device is installed.
- *Cutter*: Sets the printer firmware to the cutter option. Selection permits access to the cut parameters.
- *Rewinder*: Sets the printer firmware to the rewinder option. Selection permits access to the rewinder setting parameters.

- *Tear-off edge*: Sets the printer firmware to the tear-off edge option. The punch is fed forward to the tear-off edge.

- *Dispenser*: Activates the dispensing option (requires internal rewind option + dispensing edge).
- *Intern. rewinder*: Activates the internal rewind option (requires internal rewind option + deflection plate).
- *LTSA*: Activates both, the applicator and the dispenser options.
- *TCS*: Activates the cutter-stacker option.

## Start print mode

Settings	Default setting	Step width	Easy Plug
Pulse falling, Pulse rising, Pulse fall/ris, Level low active, Level high activ	Pulse falling	--	#PC3203 <sup>a</sup>
			#PC2043 <sup>b</sup>

- a) Options > I/O Board > Start print mode  
b) System > Print > Start print mode

Defines, how the start signal at the signal input is interpreted. Signal inputs for the start signal are the singlestart input or the respective pin at the I/O board (option).

Precondition: Options > Externes Signal = „Singlestart“ (See [External signal](#) on page 135).

- *Pulse falling*: The printing of a label is triggered by a high-low-change of the start signal. The printing occurs only after the set delay time
- *Pulse rising*: The printing of a label is triggered by a low-high-change of the start signal. The printing occurs only after the set delay time.
- *Pulse fall/ris*: The printing of a label is triggered by a low-high-change as well as by a high-low-change of the start signal. The printing occurs only after the set delay time.
- *Level low active*: Labels are being printed as long as the start signal is held low.
- *Level high activ*: Labels are being printed as long as the start signal is held high.

## Reprint signal

Settings	Default setting	Step width	Easy Plug
Off, On	Off	--	#PC3005

► Only with an I/O board mounted.

The last printed label will be reprinted on the falling edge of the REPRINT signal.

- *Off*: The input signal is disabled.
- *On*: The last printed label will be reprinted on the falling edge of the REPRINT signal.

Preconditions:

- The label to be reprinted, should be printed and dispensed.
- Printer is „Ready“.

► If a REPRINT is triggered while the printer is in “I/O-Board Pause” mode, the reprint will proceed as soon as the printer is switched back in online mode. Precondition: in *level mode* START PRINT must be inactive.

## Feed input

Settings	Default setting	Step width	Easy Plug
Off, On	Off	--	

► Only with an I/O board mounted.

Concerns the input signal FEED at the signal interface.

- *Off*: Signals at the FEED input are ignored.
- *On*: Feeding of one label on the falling signal edge. The display shows „I/O board feed“ during feeding.

Requirements are:

- Offline mode or „stopped mode“ or „I/O pause mode“.
- Online mode and no print job loaded.

## Pause input

Settings	Default setting	Step width	Easy Plug
Off, Pause	Off	--	#PC3012

► Only with an I/O board mounted.

Concerns the input signal PAUSE at the signal interface.

- *Off*: Signals at the PAUSE input are ignored.
- *Pause*: A high-to-low transition switches the printer into the “I/O-Board Pause” mode. The next high-low-transition switches the printer back into the online mode. If parameter Options > I/O Board > Start print mode is set to „Level high active“ or „Level low active“, any activating of the PAUSE signal stops the printing after the current label

Features:

- Printer display shows „I/O-Board pause“
- ERROR is active (only if Options > I/O Board > Error output = „Printererr +Offl“)
- If a print job is available: DATA READY becomes inactive (if Options > I/O Board > Status output = „Print job ready“)
- START PRINT signals are suppressed
- REPRINT requests are processed after switching into online mode

## Error output

Settings	Default setting	Step width	Easy Plug
Printer error, Printererr +Offl	Printer error	--	#PC3207

► Only with an I/O board mounted.

This parameter defines different events, which activate the output signal ERROR.

- *Printer error*: ERROR will be activated in all of the following cases:
  - Material end
  - Ribbon end (only if Print > Material > Foil mode = „Thermo transfer“)
  - No punch recognized (only if Print > Material > Materialtype = „Punched“)
  - Print head pressure lever was opened during the printing of a label.
  - Start print error
  - Other errors, which keep the printer from printing
- During the initialization (powering up) of the printer, the ERROR-signal is instable!
- *Printererr +Offl*: In addition to the above mentioned cases activate the following events the ERROR-signal:
  - The printer is in offline mode
  - The print head pressure lever is open
  - „I/O board pause“ mode
  - Stopped mode (the printing was stopped)

## Error polarity

Settings	Default setting	Step width	Easy Plug
Level high activ, Level low active	Level low active	--	#PC3208

■■■ Only with an I/O board mounted.

Switches the polarity of the ERROR signal

- *Level high activ*: The output is high when it is active, otherwise low.
- *Level low active*: The output is low when it is active, otherwise high.

## Status output

Settings	Default setting	Step width	Easy Plug
Foil end warning, Print job ready	Foil end warning	--	#PC3209

■■■ Only with an I/O board mounted.

This parameter defines different events, which activate the output signal MACHINE STATUS.

- *Foil end warning*: The signal is activated, if the ribbon roll diameter is less than the limit..  
See parameter **Foil end warning** □ on page 141.
- *Print job ready*: The signal is activated, if the printer has finished image processing and is ready to start printing.

The signal is not activated, if:

- the print job is done,
- the print job was stopped,
- the printer was switched to offline mode,
- the printer is in pause mode.

## Status polarity

Settings	Default setting	Step width	Easy Plug
Level high activ, Level low active	Level low active	--	#PC3210

■■■ Only with an I/O board mounted.

Switches the polarity of the MACHINE STATUS signal.

- *Level high activ*: The output is high when it is active, otherwise low.
- *Level low active*: The output is low when it is active, otherwise high.

## End print mode

Settings	Default setting	Step width	Easy Plug
Mode0 inactive, Mode1 low level, Mode2 high level, Mode3 low pulse, Mode4 high pulse	Mode0 inactive	--	#PC3211

■■■ Only with an I/O board mounted.

■■■ Not available in batch mode.

Concerns the output signal PRINT\_END at the I/O board signal interface. Determines the signal response after printing of a label.

- *Mode0 inactive*: No print end signal.
- *Mode1 low level*: Low, if the print module is just printing a label, otherwise high. The output is also deactivated (= low) as long as labels are fed with "Feed Button" or "Feed Signal".
- *Mode2 high level*: High, if the print module is just printing a label, otherwise low. The output is also deactivated (= high) as long as labels are fed with "Feed Button" or "Feed Signal".
- *Mode3 low pulse*: Low for 20 ms after printing and dispensing a label. The output is also activated (= low) after a label is fed with "Feed Button" or "Feed Signal".
- *Mode4 high pulse*: High for 20 ms after printing and dispensing a label. The output is also activated (= high) after a label is fed with "Feed Button" or "Feed Signal".

### Changelabel Mode

Settings	Default setting	Step width	Easy Plug
Easyplug select, Always at jobend	Easyplug select	--	#ER #PC3301

■► Only with installed and activated TCS.

Defines, when a change label is printed.

- *Easyplug select*: Change label is printed only after an Easy Plug command.
- *Always at jobend*: Change label is always printed as the last label of a printjob.

### Changelab Print

Settings	Default setting	Step width	Easy Plug
Empty, With print	With print	--	#PC3302

■► Only with installed and activated TCS.

Defines, if the changelabel is printed or not.

- *Empty*: Changelabel without printing.
- *With print*: Changelabel with printing (= last label of the print job).

### Changelab Length

Settings	Default setting	Step width	Easy Plug
[5..40] mm	10 mm	1 mm	#PC3303

■► Only with installed and activated TCS.

Defines how much longer the changelabel is (that is, how much it protrudes from the stack).

### Label Eject Mode

Settings	Default setting	Step width	Easy Plug
No, Yes, at job end	No	--	#PC3304

■► Only with installed and activated TCS.

### Apply mode

Settings	Default setting	Step width	Easy Plug
After start sig., After print	After start sig.	--	#PC3152

■► Only with installed and activated LTSA.

Defines, if the application process starts with applying („After start sig.“) or with printing („After print“). Requirements: Printjob transferred, printer is switched „Online“ (display „Home“).

- *After start sig.:* The start signal triggers the application of an already printed and dispensed label. After applying the label, the next one is immediately printed and dispensed. Precondition: A printjob is loaded and the printer is in online mode.
- *After print:* The start signal triggers the immediate printing, dispensing and applying of a label. Precondition: A printjob is loaded and the printer is in online mode.

## Stroke length

Settings	Default setting	Step width	Easy Plug
[30..192] mm	190 mm	1 mm	#PC3153

■■■ Only with installed and activated LTSA.

If the applicator foot reaches the stroke length without touching a product, it returns automatically to home position and the printer shows an error message. For applications with short stroke length, the stroke length can be reduced accordingly.

## Appl. waitpos.

(Applicator waiting position)

Settings	Default setting	Step width	Easy Plug
[0..399] mm	0 mm	1 mm	#PC3154

■■■ Only with installed and activated LTSA.

■■■ Only works with the setting Options > LTSA > Apply mode = „After start sig.“.

- Waiting position *not* activated: The applicator foot waits in front of the dispensing edge (home position) for the start signal.
- Waiting position activated: After the label has been dispensed onto it, the applicator foot moves to a waiting position below the home position. Advantage: shorter application time due to the shorter (rest) stroke.

## Applicator speed

Settings	Default setting	Step width	Easy Plug
[80..580] mm/s	350 mm/s	1 mm/s	#PC3155

■■■ Only with installed and activated LTSA.

Setting of the speed, with which the applicator foot approaches the product.

## Restart delay

Settings	Default setting	Step width	Easy Plug
[0..99999] ms	0 ms	1 ms	#PC3158

■■■ Only with installed and activated LTSA.

Sets the delay time after the application, during which no start signals are accepted.

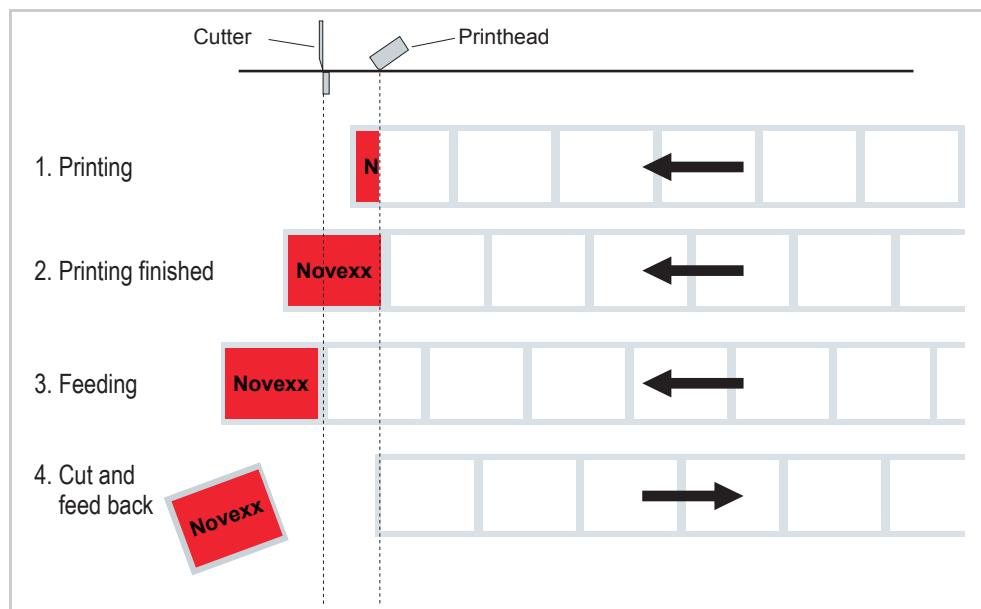
## Cut mode

Settings	Default setting	Step width	Easy Plug
Real 1:1 mode, Batch mode, Normal 1:1 mode	Real 1:1 mode	--	#PC1014

► Only with mounted and activated cutter (Options > Selection > Periph. device = „Cutter“).

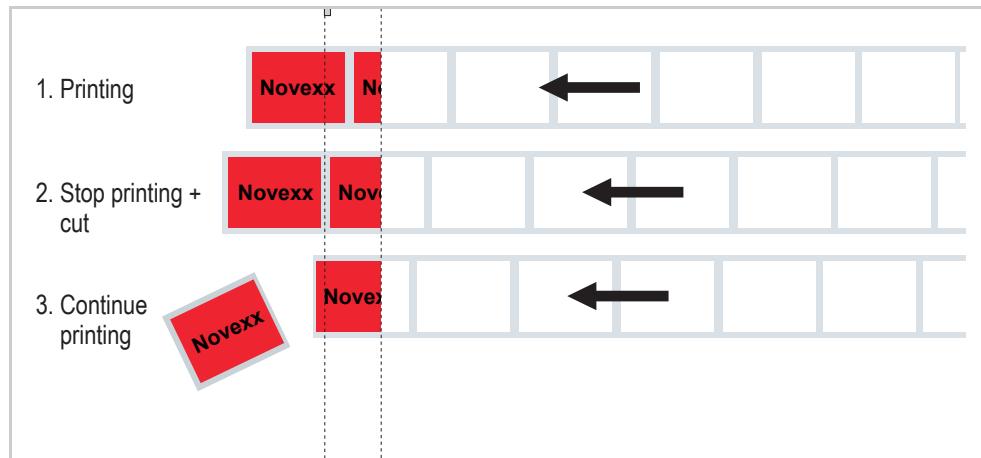
This is where the procedure for the label output and cut is defined.

- *Real 1:1 mode*: The whole surface of the label is printable. The label is pushed forward to the cutter for cutting. After the cut, the beginning of the next label is drawn back under the print head. This reduces the output volume (in relation to a certain time).



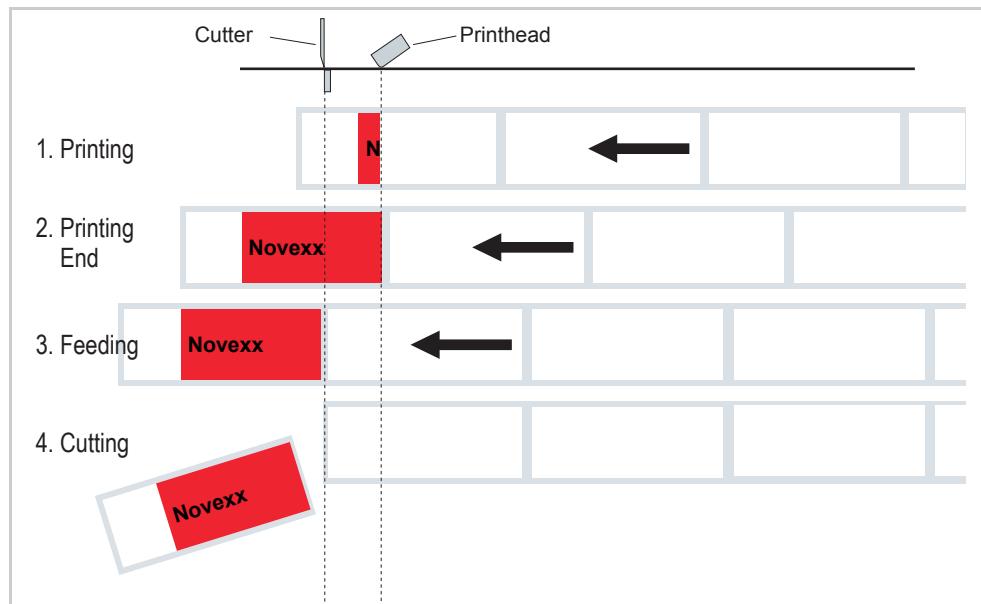
[141]Printing process (schematic) in „Real 1:1 Mode“.

- *Batch mode*: Requirements for the batch mode are:
  - Material length >18 mm
  - Number of cuts for a print job - at least 2 or more



[142]Printing process in Batch mode (schematic).

- **Normal 1:1 mode:** In N1:1 mode, cutting takes place during printing. The zero-line of the printing is shifted 18 mm in y-direction. This offset equals the distance cutter-print head. Caused by this shifting, the first 18 mm of the label are not printable. These measurement corresponds to the distance between print head and cutter. The output volume is at its maximum level. (The offset of the zero-line is caused historically and serves the compatibility of older printer models).



[143]Printing process in Normal 1:1 mode (schematic).

## Cut speed

Setting range	Default setting	Step width	Easy Plug
[2...5]	3	1	#PC1015

► Only with mounted and activated cutter (Options > Selection > Periph. device = „Cutter“).

The cut speed is to be adjusted to the material thickness and strength.

- 2: Extremely slow; for thick and strong material
- 5: Extremely fast; for thin material

## Cut width

Setting range	Default setting	Step width	Easy Plug
[0...MAX_CUT_WIDTH]	MAX_CUT_WIDTH	--	#PC1016, #CW

► Only with mounted and activated cutter (Options > Selection > Periph. device = „Cutter“).

The values for MAX\_CUT\_WIDTH depend on printer type and print head:

Printer	MAX_CUT_WIDTH
XLP 504 with 203 dpi	104
XLP 504 with 300 dpi	105
XLP 506 with 203 dpi	168
XLP 506 with 300 dpi	168

► The values for MAX\_CUT\_WIDTH don't equate to the real cut width (no linear relation between value and cut width). The proper setting value has to be determined by trying.

## Cut position

Setting range	Default setting	Step width	Easy Plug
[-5.0...5.0] mm	0 mm	0.1 mm	#PC1017

► Only with mounted and activated cutter (Options > Selection > Periph. device = „Cutter“).

The cut position is identical to the detected gap position, i. e. with the start of the label. This parameter can be used for fine settings to meet specific customer requirements.

- Maximum offset in feed direction: -5,0 mm
- No offset: 0 mm
- Minimum offset against feed direction: +5,0 mm

## Double cut

Setting range	Default setting	Step width	Easy Plug
[0.0...5.0] mm	0.0 mm	0.1 mm	#PC1018, #ER

► Only with mounted and activated cutter (Options > Selection > Periph. device = „Cutter“).

Joining grids or the gap area between the labels can be removed using a double cut, thereby improving the outline.

The first cut is offset by the distance set from the recognized gap position away in the feed direction, the second cut is made at the gap position.

A possible correction of the cut position ("Cut position" function) is calculated for both cuts and must be taken into consideration.

Normal simple cut: 0,0 mm

► The smallest possible double cut distance of 1.0 mm must be adhered to!

## Rest position

Settings	Default setting	Step width	Easy Plug
at head, at cutter	at head	--	#PC1041

► Only with mounted and activated cutter (Options > Selection > Periph. device = „Cutter“).

To avoid that the label material is wrapped around the print roller after a long idle time, the material rest position can be changed to „at cutter“.

- *at head*: The material rest position in idle times is at the print head
- *at cutter*: The material rest position in idle times is at the cutter to avoid material being wrapped around the print roller

## Dispense Mode

Settings	Default setting	Step width	Easy Plug
Normal 1:1 mode, Batch mode, Real 1:1 mode	Real 1:1 mode	--	#PC1014

Governs the run of the print-dispense procedure.

► Only if Options > Selection > Periph. device = „Dispenser“.

*Normal 1:1 mode*

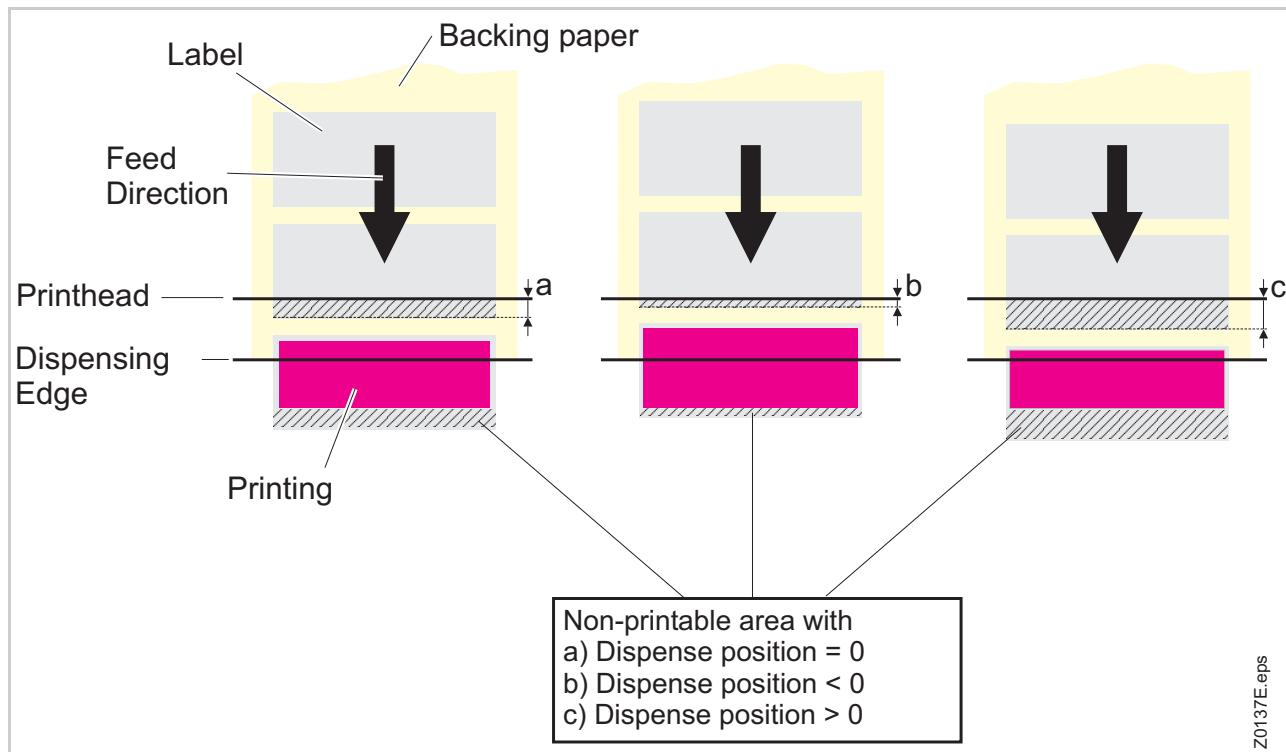
- The printer cannot print on the whole label surface. A stripe at the label beginning stays unprinted. The width of the unprintable stripe is calculated as follows:

*Distance print line to dispensing edge (25 mm) + Dispense position*

See also: Parameter Options > Dispenser > Dispenseposition.

- The label is being dispensed while printing.
- The output volume is at its maximum level.

Find an illustration of the sequence in the description of the „Normal 1:1 mode“ for the cut function (see parameter **Cut mode** on page 124).



[144]The size of the not imprintable area in Normal 1:1 depends of the setting of parameter Options > Dispenser > Dispenseposition eingestellt ist.

*Batch mode*

- The printer can print the whole label surface.
- Dispensing of the label takes place during printing. Printing of the next label is interrupted until the label is completely dispensed.
- The output volume is at its maximum level.

► The Batch mode is optimised for printing and dispensing at high speeds. Due to this, it is not possible to use all features available in modes *Normal 1:1* or *Real 1:1*. Also consider, that printing data must be available on time and in sufficient quantity.

► Print jobs *must not* contain the following field types:

- Counter fields
- Variable fields

Find an illustration of the sequence in the description of the „Batch mode“ for the cut function (see parameter **Cut mode** on page 124).

**Real 1:1 mode**

- The printer can print the whole label surface.
- After dispensing a label, the beginning of the next label is drawn back under the print head.
- The output volume is lower than in *Batch Mode* or *Normal 1:1 Mode*.

Find an illustration of the sequence in the description of the „Real 1:1 Mode“ for the cut function (see parameter **Cut mode** □ on page 124).

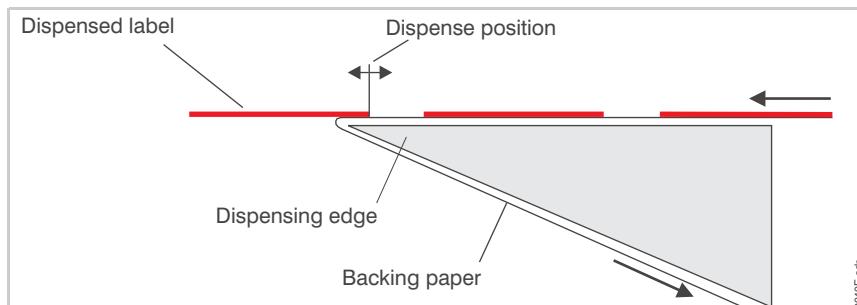
**Dispenseposition**

Setting range	Default setting	Step width	Easy Plug
[-30.0...20.0] mm	-6.0 mm	0.1 mm	#PC1017

■■■ Only if Options > Selection > Periph. device = „Tear-off edge“ or „Dispenser“.

Adjusts the dispense position in („+“) or against („-“) the feed direction. Depending on the set dispense position, the dispensed label sticks to the backing paper with a more or less wide strip [145]. The required width of this strip depends on the further processing.

■■■ Dispenseposition 0 mm means the front edge of the label is flush with the dispensing edge.



[145] Dispense position of the dispensed label..

**Rewind direction**

Settings	Default setting	Step width	Easy Plug
Printing inside, Printing outside	Printing outside	--	#PC1019

■■■ Only with installed and activated „Rewinder 2000“ (Options > Selection > Periph. device = „Rewinder“).

- *Printing inside*: The label face shows *inwards*, when the label stock is wound up.
- *Printing outside*: The label face shows *outwards*, when the label stock is wound up.

**Rewinder adjust**

Setting range	Default setting	Step width	Easy Plug
		--	

■■■ Only with installed and activated „Rewinder 2000“ (Options > Selection > Periph. device = „Rewinder“).

The rewinder setup compensates differences in characteristic or assembly of the light barrier.

A setting instruction for the *external rewinder „Rewinder 2000“* can be found in the „User Manual Rewinder 2000“, topic section „Attachement, Setup“, chapter „Setting up 64-xx / AP 5.4 / AP 7.t“ > „Adjusting the sensor“.

- */loose xxx*: Setup of the loose dancer arm (xxx = actual sensor value).

- *tightened* xxx: Setup of the tightened dancer arm (xxx = actual sensor value).

The setting follows in both cases this scheme:

1. Bring the dancer arm to its loose position.
2. Press key 3.
3. Pull the dancer arm tight.
4. Press key 2.

## Rewinder Values

Setting range	Default setting	Step width	Easy Plug
--	--	--	--

► Only with installed and activated „Rewinder 2000“ (Options > Selection > Periph. device = „Rewinder“).

Shows the values of the position sensor at the rewinder dancer arm in middle/tightened and in loose position.

Rewinder values xxx <---- text -----> yyy
--

- xxx = Sensor value in *loose* position
- text = Sensor type (Opto = light barrier; Hall = hall sensor; ???? = no explicit sensor type)
- yyy = Sensor value in *middle* position

A setting instruction for the *external rewinder „Rewinder 2000“* can be found in the „User Manual Rewinder 2000“, topic section „Attachement, Setup“, chapter „Setting up 64-xx / AP 5.4 / AP 7.t“ > „Adjusting the sensor“.

## Display mode

Settings	Default setting	Step width	Easy Plug
Job rest quant., Dispense counter	--	--	#PC2004

► Only if Options > Selection > Periph. device = „Dispenser“.

Makes the number of already printed labels appear in the display instead of the number of the not yet printed ones.

- *Job rest quant.:* Display of the *not yet* printed labels of a print job.  
► The counter keeps it's value even after switching the printer off.
- *Dispense counter:* Counting of start pulses. Activate the counter by selecting "Dispense counter". The counted number appears on the display after the parameter *Dispense counter* (see below) has been selected.

## Dispense counter

Setting range	Default setting	Step width	Easy Plug
--	--	--	#PC2005

► Only if Options > Selection > Periph. device = „Dispenser“

Dispense counter xxxxxx
----------------------------

xxxxxx = Number of dispensed labels.

There are two ways of setting back the counter:

- Set the parameter Display mode (see above) to "Job rest quant.", then back to "Dispense counter" and confirm by pressing the o. k. key.
- Reduce the displayed number.

## Application mode

Settings	Default setting	Step width	Easy Plug
Safe mode, Immediate mode	Immediate mode	--	#PC2035

■■■ Only if Options > Selection > Periph. device = „Dispenser“.

- *Safe mode*: A start signal is required to draw the next label back under the print head. This setting bears advantages for label material with a strong adhesive, which would not stay attached to the applicator when the backing paper is fed backwards.
- *Immediate mode*: After the just printed label has reached the dispense position, the following label is drawn back under the print head. The dispensed label stays attached to the applicator.

Preconditions:

- With foot switch: Options > Start print mode = „Pulse rising“ or „Pulse falling“
- With I/O board: Options > I/O Board > Start print mode = „Pulse rising“ or „Pulse falling“

## Start source

Settings	Default setting	Step width	Easy Plug
Foot switch, Light barrier	Light barrier	--	#PC2039

■■■ Only if Options > Selection > Periph. device = „Dispenser“.

Choose a signal source for the start signal:

- *Foot switch*: Optional foot switch is used to generate the start signal.
  - *Light barrier*: Photoelectric switch at the dispensing edge which detects the taking off of the dispensed label.
- The setting "Light barrier" is unsuitable for product sensors! Product sensors must be connected to the I/O board!

## Start offset

Setting range	Default setting	Step width	Easy Plug
[15.0...2999.9] mm	15.0 mm	0.1 mm	#PC6004

■■■ Function for operation with product sensor.

Use this parameter to set the distance between product sensor (light barrier) and dispensing edge. The recommended delay time is calculated of the "Start delay" distance and the conveyor speed (= print speed in cases of direct application).

## Start error stop

Settings	Default setting	Step width	Easy Plug
On, Off	On	--	#PC3009

■■■ Function for operation with product sensor.

Determines the reaction of the machine on a product start error. A product start error occurs in the following cases:

- If a further start signal arrives, before the current label is completely printed.
- *Only with I/O board:* If a reprint is requested, before the first label after powering on is printed.
- If a start signal arrives and no printjob is loaded.

If a product start error occurs, the machine stops and displays the appropriate status message.  
 If an I/O board or an USI is installed, the following output signals are activated (set low):

- ERROR\
- MACHINE STATUS\

- *On:* Start errors are worked up (the printer stops!)
- *Off:* Start errors are being ignored

## Product length

Setting range	Default setting	Step width	Easy Plug
[0.0...1999.9] mm	0.0 mm	0.1 mm	#PC6017

■■■ Function for operation with product sensor.

If this function is activated, the printer ignores all start signals until the product has passed the dispensing edge

## Current mode

Settings	Default setting	Step width	Easy Plug
Table values, Absolute values	Table values	--	#PC2501

■■■ Only visible in service mode

■■■ Only if Options > Selection > Periph. device = „Dispenser“ or „Intern. rewinder“

The setting of this parameter influences the impact of the parameters Min rew. current and Max rew. current

- *Table values:* Display of the automatically calculated motor current chart PWM values (in %). On the base of this setting, the printer calculates the motor current values for Min rew. current and Max rew. current out of print speed and material width. The calculated values appear as default 100%
  - *Absolute values:* With this setting, the printer doesn't calculate and doesn't adapt to material width and print speed. The set values for Min rew. current and Max rew. current are given to the output stage without a modification. The values appear as absolute values.
- The setting „Absolute values“ should only be used by especially trained personal!

## Min rew. current

(Minimum rewinder current)

Setting range	Default setting	Step width	Easy Plug
[50...200]%	110%	1%	#PC2504 <sup>a</sup>
[0...750]	110	1	#PC2502 <sup>b</sup>

- a) If Options > Dispenser > Current mode = „Table values“  
 b) If Options > Dispenser > Current mode = „Absolute values“

■■■ Only visible in service mode

■■■ Only if Options > Selection > Periph. device = „Dispenser“ or „Intern. rewinder“

This parameter influences the rewinder current with 25 mm rewinder diameter (min. rewinder diameter).

Problem	Solution
The label web runs too loose around the dispensing edge during printer operation.	Increase the setting
The label roll is wound up too loose.	
The label web runs too tight around the dispensing edge during printer operation.	Decrease the setting
The label roll is wound up too tight.	

[Tab. 29] Cases, in which the setting of the minimal rewinder current has to be corrected.

## Max rew. current

(Maximum rewinder current)

Setting range	Default setting	Step width	Easy Plug
[50...200)%	110%	1%	#PC2505 <sup>a</sup>
[0...750]	250	1	#PC2503 <sup>b</sup>

- a) If Options > Dispenser > Current mode = „Table values“
- b) If Options > Dispenser > Current mode = „Absolute values“

► Only visible in service mode

► Only if Options > Selection > Periph. device = „Dispenser“ oder „Intern. rewinder“

This parameter influences the rewinder current with 120 mm rewinder diameter (max. rewinder diameter).

 The two parameter values Min. rew. current and Max. rew. current are used by the motor output stage to calculate all other current values for diameters lying in between.

Problem	Solution
The label web runs too loose around the dispensing edge during printer operation.	Increase the setting
The label roll is wound up too loose.	
The label web runs too tight around the dispensing edge during printer operation.	Decrease the setting
The label roll is wound up too tight.	

[Tab. 30] Cases, in which the setting of the minimal rewinder current has to be corrected.

## Start rew. curr.

(Start rewinder current)

Setting range	Default setting	Step width	Easy Plug
[0...100)%	0%	1%	#PC2506

► Only visible in service mode

► Only if Options > Selection > Periph. device = „Dispenser“ oder „Intern. rewinder“

Setting of the start-up current superelevation in % or the normal motor current.

## Start cur. len.

(Start current length)

Setting range	Default setting	Step width	Easy Plug
[10...40] mm	30 mm	1 mm	#PC2507

► Only visible in service mode

► Only if Options > Selection > Periph. device = „Dispenser“ oder „Intern. rewinder“

Duration of the start-up current superelevation. To be set is the feed length, during which the increased current is supposed to flow.

## Pullback current

Setting range	Default setting	Step width	Easy Plug
--	--	--	#PC2508

► Only visible in service mode

► Only if Options > Selection > Periph. device = „Dispenser“ oder „Intern. rewinder“

 After a label was dispensed, the label web has to be pulled back under the print head. To reach this, the rewinder is rotated slightly in the opposite direction. The braking torque of the rewinder against this rotation may not be too strong, otherwise this could decrease the impression accuracy. Because of the brake torque depending on the diameter of the wound up label web, it has to be corrected at the beginning (min. diameter) and at the end (max. diameter) of the winding-up process. This is done by the Pullback current (supports the backwards rotation in case of low diameter) and the Break current (amplifies the brake torque in case of high diameter). Additionally can be set: The diameter up to which the Pullback current is throttled down to zero (parameter Back diameter), and the diameter, from which on the brake current starts (parameter Break diameter).

The parameter Pullback current sets the support current for the rewinder at the minimum diameter of 25 mm. When the diameter of the rewound label web reaches the set value (Back diameter), the support current will be throttled down to a minimum.

## Back diameter

(Pullback current diameter)

Setting range	Default setting	Step width	Easy Plug
[0...120] mm	50 mm	1 mm	#PC2509

► Only visible in service mode

► Only if Options > Selection > Periph. device = „Dispenser“ oder „Intern. rewinder“

Setting the Pullback current diameter.

→ If the label web is loose, while it is fed back under the print head, decrease this value in small steps.

→ If the material is tightened too much, increase the value in small steps

See also parameter **Pullback current** □ on page 134.

## Break current

Setting range	Default setting	Step width	Easy Plug
[0...100]	0	1	#PC2510

► Only visible in service mode

► Only if Options > Selection > Periph. device = „Dispenser“ oder „Intern. rewinder“

Sets the brake current.

See also parameter **Pullback current** □ on page 134.

## Break diameter

Setting range	Default setting	Step width	Easy Plug
[0...120]	120	1	#PC2511

► Only visible in service mode

► Only if Options > Selection > Periph. device = „Dispenser“ oder „Intern. rewinder“

Sets the break diameter.

See also parameter **Pullback current** □ on page 134.

## Keyboard

Settings	Default setting	Step width	Easy Plug
German, English, French, Spanish, Danish, Finnish, Swedish, Polish,	English	--	#PC2063

Setting the keyboard layout country version for standalone operation.

## External signal

Settings	Default setting	Step width	Easy Plug
Off, Singlestart, Stacker fail	Off	--	#PC2042

The parameter determines, if and how an incoming signal at the - optional - single start connector will be interpreted.

- *Off*: Signal interpretation disabled.
- *Singlestart*: The signal triggers the printing of a single label. This setting may be used e.g. for printing single labels by means of a foot switch.
- *Stacker full*: The signal triggers the display of a status report and stops the printer. This setting may be used when using a stacker (= stacker full signal).

## Language

Settings	Default setting	Step width	Easy Plug
German, English, French, Spanish, Dutch, Danish, Italian, Polish, Turkish, Russian, Czech, Chinese <sup>a</sup> , Japanese	English	--	#PC2051

a) Not all display texts are translated. Not translated texts are displayed in english.

Setting the display language.

## Access authoriz.

(Access authorization)

Settings	Default setting	Step width	Easy Plug
Off, Power-up code, Operator, Supervisor, Operator auto	Off	--	#PC2053

Limits the access either to all printer functions (Power-up code) or only to the parameter menu (user or supervisor mode). Changed settings become active after the next switch-on.

- *Off*: Password interrogation switched off
- *Power-up code*: Activates the password interrogation directly after switching the printer on. After the input of a valid key code, the printer switches into offline mode. Depending on the entered key code, the printer starts in user, supervisor or production mode.
- *Operator*: Access to reduced parameter menu; contains only parameters which are necessary for daily use of the printer.
- *Supervisor*: As setting „User“, with different valid key codes:

Valid key codes: Supervisor, Service

- *Operator auto*: Printer starts without password interrogation. Only the menu Info is accessible. Regardless when the code is prompted, can three different key codes be typed in (Tab. 31).

Entering a key code: Type the corresponding buttons of the control panel in succession. A valid key code switches the printer into the appropriate mode.

Mode	Key code	Impact
Operator	1-1-3-2	Access is limited to the Info menu
Supervisor	2-2-3-1-2-2	Access to all parameters except service parameters
Service	1-2-3-1-2-2-2	Access to all parameters

[Tab. 31] Permissible key codes.

### CAUTION!

Service mode: Input errors to certain parameters can make the printer inoperable or can damage it.

→ The service code may only be applied by *trained service technicians*.

► Especially service technicians may appreciate the possibility to force code interrogation, even if the parameter Access authoriz. is set to „Off“:

1. Switch printer off.
2. Switch printer on, simultaneously press the keys 3+4 until the input prompt „Enter Access Code!“ shows up.
3. Enter the access code.

## Factory settings

Settings	Default setting	Step width	Easy Plug
No, Custom defaults, Factory defaults	No	--	

All parameters are preset ex works to values specific to each device type. These factory settings can be restored at any time.

► All parameters are then overwritten by the factory settings.

► All data present in the spooler, including data belonging to an interrupted print job, is deleted!

- *No*: No factory setting.

- **Custom defaults:** If custom parameter settings were stored before (see parameter System > Custom defaults), those are restored.  
► „Custom defaults“ only appears, if custom settings have already been stored.
- **Factory defaults:** The parameters are set to factory defaults. After switching on, the query appears, if the setup wizard is supposed to be started (Run Setup Wizard?).

## Custom defaults

Setting range	Default setting	Step width	Easy Plug
Apply current, Delete	Apply current	--	

► Parameter appears only in service mode.

- **Apply current:** Stores the current parameter settings as values for the default setup. Those settings are restored by calling parameter SPECIAL FUNCTION > Factory settings = „Custom defaults“.
- **Delete:** Deletes the stored custom default settings. „Delete“ is only visible, if settings have already been stored.

## Run Setup Wizard?

Setting range	Default setting	Step width	Easy Plug
No, Yes	Yes	--	#PC2081

► Parameter appears only in service mode.

Runs the setup wizard, which queries and sets the most important basic settings.

- **Yes:** A query, if the setup wizard is supposed to be startet, appears after switching-on the printer
- **No:** The setup wizard query is switched off

## Turn-on mode

Settings	Default setting	Step width	Easy Plug
Offline, Online, Standalone	Online	--	#PC2020

Operating mode of the printer after it has been switched on.

- **Online:** Printer starts in online mode (display „Ready“).
- **Offline:** Printer starts in offline mode (display „Home“).
- **Standalone:** Printer starts in standalone mode.

## Head resistance

Setting range	Default setting	Step width	Easy Plug
[960...1300] Ohm	--	1 Ohm	

For optimum print quality, the individual print head resistance of the thermo head employed in the device must be set once with this parameter.

When replacing the print head, the resistance value of the print head (to be read off from the print head) must be entered again.

**CAUTION!**

Entering a false value can damage the print head.

→ Read off the correct value from the print head and set it accordingly.

■■■► The value set here remains when the factory settings are carried out.

## Realtime Clock

Settings	Default setting	Step width	Easy Plug
dd.mm.yyyy hh:mm	--	--	--

Setting the realtime clock (date and time). Those data can be processes using the Easy Plug #YC, #YS or #DM commands.

## Head-sensor dist

Setting range	Default setting	Step width	Easy Plug
[0..400] mm	0 mm	1 mm	#PC2016

(Distance between printline and label sensor)

■■■► Parameter appears only in service mode.

Special function for setting non-standard punch sensors. Such sensors can be applied in special application devices ("Nistan").

The value x is the distance between thermal edge and punch sensor in millimeters.

0 = disabled (the regular punch sensor is used)

■■■► A „non standard sensor“ must be installed and connected instead of the regular punch sensor.

## Free store size

Setting range	Default setting	Step width	Easy Plug
[4096...MAX <sup>a</sup> ] KByte	4096 KByte	256 KByte	#PC2048

a) Maximum size, depends on the memory equipment and usage of the printer

By setting this parameter, a part of the memory is reserved, which the printer firmware can use if necessary (dynamic memory allocation). If this memory area is dimensioned too small, the printer firmware can not work and the error message „8856 Free store size“ shows up.

■■■► The more memory is allocated using this parameter, the less memory is available for print jobs.

■■■► A good advice is to increase the set value step by step, starting with the minimum of 4 MB, until the status message 8856 ("Free store size", what means the memory area is low) does no longer appear during data conversion.

Overview of the set memory areas: see parameter **Memory Status** □ on page 163.

## Ram disk size

Setting range	Default setting	Step width	Easy Plug
[128...MAX <sup>a</sup> ] KBytes	512 KBytes	128 KBytes	#PC2046

a) Maximum size, depends on the memory equipment and usage of the printer

A part of the printer memory can be identified as a RAM disk. The RAM disk can be used in the same way as the Compact Flash Card, e.g. for storage of logos or fonts.

With the parameter Ram disk size, the customer can set the size of the RAM disk to his needs. Be aware, that RAM disk memory is not available for print picture buildup. Use of much RAM disk memory reduces the picture buildup rate of the printer.

■■■► Switching the printer off extinguishes the memory content! Fonts, logos etc., which were loaded on the RAM disk, must be loaded again after switching the printer off.

Overview of the set memory areas: see parameter **Memory Status** □ on page 163.

## Font downl. area

Setting range	Default setting	Step width	Easy Plug
[128...MAX <sup>a)</sup> ] KByte	256 KByte	128 KByte	#PC2047

a) Maximum size, depends on the memory equipment and usage of the printer

If speedo-fonts are supposed to be used, they have first to be copied to a reserved RAM disk area. Use parameter „Font downl. area“ to reserve the RAM disk area in the required size.

The size of the required RAM disk area depends on the size of the font files to be loaded.

■■■ Mind to reserve a big enough RAM disk area!

There are two ways to copy the font files to the RAM disk:

- Copy from external storage medium:

The font files must be placed in a folder named \fonts on the storage medium during system startup. The files must be named fontxxx.spd (xxx = No. from 200 up to 999).

See chapter **Fonts directory** □ on page 133.

- Copy via Easy Plug command #DF

See Easy Plug manual, topic section „Description of Commands“

■■■ Switching the printer off extinguishes the memory content! Fonts, logos etc., which were loaded on the RAM disk, must be loaded again after switching the printer off.

## Spooler size

Setting range	Default setting	Step width	Easy Plug
[16...2048] KByte	64 KByte	16 KByte	#PC1104

The memory capacity of the printer buffer can be set according to the requirements of each customer.

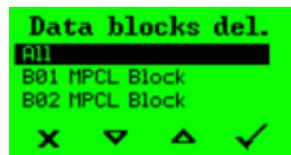
## Data blocks del.

(Delete data blocks)

Settings	Default setting	Step width	Easy Plug
All, Bxx	All	--	

■■■ Only appears, if at least one data block is in the flash memory.

- Bxx: The selected data block number xx is deleted:



„B01“: Block number 01

„MPCL Block“: Name of the data block, is contained in the data block header.

- All: All data blocks in the flash memory are deleted.

**Miss. label tol.**

(Missing label tolerance)

Setting range	Default setting	Step width	Easy Plug
[0...50]	2	1	#PC2029

The maximum search path for gaps which cannot be found can be varied. In cases of difficult gap detection (i. e. minimum variation in the light transparency, gap to label), shortening the search path is to be recommended. Label loss resulting from gaps not being detected can be reduced in this way. Printing does not take place during the search process.

- Example 0 (Zero label length):

A gap must be found after a printed label otherwise an error message is given. This setting is for detecting every missing label.

- Example 5 (Five label lengths):

A gap must be found after a maximum of 5 label lengths otherwise an error message is given.

**Gap detect. mode**

Settings	Default setting	Step width	Easy Plug
Manual, Autom. forward	Autom. forward	--	

After one of the following events, the printer must always search for the punch, that is initialize the label material:

- *Manual*: The operator has to initialize the material the first time always manually by pressing the feed key several times.  
→ After a change of material, the printer has to initialize the rewinder. For this reason, approx. 70 mm label material are fed forward. If the initialization is prevented (e. g. by switching off or resetting the printer), the following status message will appear after switching on next time: „5301 BLDC rewinder Ø“.
- *Autom. forward*: The material initialization is always done automatically, if necessary. There is no backward movement of the material during the initialization.

**Singlestartquant**

Setting range	Default setting	Step width	Easy Plug
[1...10]	1	1	#PC2033

Determines the label quantity, which will be printed after a start signal.

**Reprint function**

Settings	Default setting	Step width	Easy Plug
Off, On	Off	--	#PC2050

- *Off*: Reprinting is not possible.
- *On*: The last printed label can be reprinted by pressing key 4 in online mode (display „Ready“), if the printer is not printing at that moment.

## Foil end warning

Setting range	Default setting	Step width	Easy Plug
[5.0...300.0] mm	25.0 mm	0.1 mm	#PC2083

Setting of a limit length for the remaining ribbon. If the remaining ribbon length falls below the set value, appears a...

- Warning, if System > Print > Foil warn stop = „Off“
  - Error message, if System > Print > Foil warn stop = „On“; Furthermore, the printer stops
- Also refer to parameter **Foil diameter**  on page 178.

## Foil warn stop

Settings	Default setting	Step width	Easy Plug
Off, On	Off	--	#PC2060

- *Off*: Display shows foil warning; printer does *not* stop
- *On*: Display shows status message (see below); printer stops after the current label

Status:	5110
	Foil low

## Error reprint

Settings	Default setting	Step width	Easy Plug
On, Off	On	--	#PC2022

If an error occurs while a label is printed, the last printed label is reprinted. For label layouts containing variable data (for example, count fields), disable the reprint function.

- *On*: Reprint in error cases
- *Off*: No reprint in error cases

## Single-job mode

Settings	Default setting	Step width	Easy Plug
Off, On	Off	--	#PC2023

In single job mode (also stop mode) the printer stops after every job and waits until the operator restarts the print process.

- *Off*: Single job mode is switched off.
- *On*: Single job mode is switched on. The printer always displays "Start next job", before starting a new print job. This requests the user to acknowledge by pressing the Online button.

## Temp. reduction

(Reduction in the print head temperature)

Setting range	Default setting	Step width	Easy Plug
[0...100]%	20%	5%	#PC2026

Reduces the power supply in the event of an increase in the print head temperature, thereby ensuring an evenly good print image.

The following setting alternatives are available:

- 0%: No temperature reduction.
- xx%: Up to xx% temperature reduction with a hot print head.

## Print info mode

Settings	Default setting	Step width	Easy Plug
Par.values right, Par.values left, Compact right, Compact left	Par.values right	--	#PC2049

Structure option for info printouts.

- *Par.values right*: Setting for 100 mm material width. The parameter values are printed on the right side of the parameter names:  
Parameter name: Value
- *Par.values left*: Setting for 100 mm material width. The parameter values are printed on the left side of the parameter names:  
Value: Parameter name
- *Compact right*: Setting for 50 mm material width. The parameter values are printed on the right side of the parameter names:  
Parameter name: Value

- *Compact left*: Setting for 50 mm material width. The parameter values are printed on the left side of the parameter names:  
Value: Parameter name

## Print Interpret.

Settings	Default setting	Step width	Easy Plug
Easyplug, Lineprinter, Hexdump, ZPL Emulation	Easyplug	--	#PC2012

- *Easyplug*: Printjobs written in the Easy Plug command language can be interpreted.
- *Lineprinter*: Lineprinter (or similar to Lineprinter), print-out of the print command
- *Hexdump*: Print-out in hexadecimal format.  
In Lineprinter and Hex Dump, commands are printed out in the form of a list with the character set 12.
  - When setting Lineprinter or Hex Dump, Easy Plug commands which have not yet been processed are deleted!
- *ZPL Emulation*: Printjobs written in the ZPL II®<sup>1</sup> command language („ZPL“) can be interpreted
  - Firmware loading requires changing into EasyPlug first.

## Print interface

Settings	Default setting	Step width	Easy Plug
Serial Com1, TCP/IP SOCKET, LPD server, USB, Serial Com3, Auto negotiation	Auto negotiation	--	#PC1101

This parameter sets the interface, by which the printer will receive data.

- *Serial Com1*: Serial interface Com1.
- *TCP/IP SOCKET*: Print data can be sent to the printer via a TCP/IP socket.
- *LPD server*: Print data can be sent to the printer via the LPR/LPD-protocol
- *USB*: USB interface
- *Serial Com3*: Serial interface Com3.
  - Only with optional I/O board mounted
  - election of the type of serial interface is done with parameter Print interface > Serial Port 3 > Serial port mode.
- *Auto negotiation*: All interfaces are enabled to receive data, but *not simultaneously*.
  - Don't send data to more than one interface at a time.
  - Except are interfaces, which are being used by an option (e.g. OLV)

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1) ZPL II is a registered trademark of ZIH Corp.

## Character filter

Settings	Default setting	Step width	Easy Plug
Chars >= 20Hex, All characters	Chars >= 20Hex	--	#PC2014

- *Chars >= 20Hex*: Filter function is activated. Characters smaller than 20H are filtered out of the data flow.
- *All characters*: Filter function is deactivated. Characters smaller than 20H are treated as normal characters.

## Character sets

Settings	Default setting	Step width	Easy Plug
UTF-8, ISO 8859-2, ANSI (CP 1250), ANSI (CP 1252), IBM, Special, Norway, Spain, Sweden, Italy, Germany, France, United Kingdom, USA		--	#PC2013

Setting the character set.

- *16Bit*: UTF-8 coding
- *8Bit*: Choose between IBM and ANSI character set.
- *7Bit*: Additionally to the IBM and ANSI character sets, some country specific character sets are provided, which have some characters allocated differently (see table below).

! The country specific character sets are only suitable for older 7bit applications!

Decimal	35	36	64	91	92	93	94	96	123	124	125	126	>127
ASCII	#	\$	@	[	\	]	^	'	{		}	~	
UTF-8	#	\$	@	[	\	]	^	'	{		}	~	print
ISO 8859-2	#	\$	@	[	\	]	^	'	{		}	~	print
ANSI (CP 1250)	#	\$	@	[	\	]	^	'	{		}	~	print
ANSI (CP 1252) <sup>a</sup>	#	\$	@	[	\	]	^	'	{		}	~	print
IBM	#	\$	@	[	\	]	^	'	{		}	~	print
Special	f	¢	blank	blank	¼	½	blank	blank	«	•	»	±	blank
Norway	#	\$	@	Æ	¥	Å	^	'	æ	¢	å	~	blank
Spain	#	\$	@	í	Ñ	Ç	^	'	¿	ñ	ç	~	blank
Sweden	#	•	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü	blank
Italy	Š	\$	§	°	ç	é	^	ù	à	ò	è	'	blank
Germany	#	\$	§	Ä	Ö	Ü	^	'	ä	ö	ü	ß	blank
France	£	\$	à	°	ç	§	^	'	é	ù	è	~	blank
United Kingdom	£	\$	@	[	\	]	^	'	{		}	½	blank
USA	#	\$	@	[	\	]	^	'	{		}	~	blank
blank = space, print = printable													

[Tab. 32] Country settings for applications, which base on 7bit ASCII code.

a) Covering ISO 8859-1.

## EasyPlug errors

Setting range	Default setting	Step width	Easy Plug
Tolerant handl., Strict handling	Tolerant handl.	--	

Handling of errors caused by faulty Easy Plug commands.

- *Tolerant handl.:* The label is printed, after the Easy Plug/Bitimage error was acknowledged.
  - *Strict handling:* The Easy Plug command, which caused the error, is displayed after approx. 2 seconds in the lower display line. The displayed text is up to 30 characters long and is scrolled automatically.  
If a single character caused the error, this character is marked with „>> <<„ in the display text, to facilitate the detection.
- By pressing key 4, the display can be toggled between error message and Easy Plug command text

After acknowledging the first occurred Easy Plug error, the printjob and the spooler are deleted (as by #!CA). This prevents the printing of labels with format errors.

## Spooler mode

Settings	Default setting	Step width	Easy Plug
Mult. print jobs, Single print job	Mult. print jobs	--	#PC1102

The operating mode of the spooler determines whether print series are processed individually, or whether the spooler can receive print data when printing several series.

- *Mult. print jobs:* Multiple print series mode (the interface can receive data while the series is being printed)
- *Single print job:* Single print series mode (the interface can only receive data after printing the required number of labels of a single series)

## StandAlone Input

Settings	Default setting	Step width	Easy Plug
None, Serial Com1, Serial Com3, TCP/IP SOCKET	None	--	

Defines an interface for data input in standalone mode.

► Interfaces are only selectable, if installed and not used by another function (e. g. as data interface). If Printer Language > Print interface = „Auto negotiation“, all interfaces besides Com3 are blanked out

- *None:* No data input via interface.
- *Serial Com1:* Com1 is activated for data input in standalone mode.
- *Serial Com3:* Com3 is activated for data input in standalone mode.
- *TCP/IP SOCKET:* Ethernet interface is activated for data input in standalone mode.

## #VW/I Interface

Settings	Default setting	Step width	Easy Plug
Easyplug, Serial Com1, USB, TCP/IP SOCKET, Serial Com3	Easyplug	--	

Defines the output interface belonging to the Easy Plug command #VW/I.

- *Easyplug*: Interface that is defined in INTERFACE PARA >EASYPLUGINTERPR > Print interface as input interface for print data
- *Serial Com1*: Serial interface Com 1.  
► Only available for selection, if the interface is not occupied by another function.
- *USB*: USB interface  
► Only available for selection, if the interface is not occupied by another function.
- *TCP/IP SOCKET*: Ethernet interface  
► Only available for selection, if the interface is not occupied by another function.
- *Serial Com3*: Serial interface Com 3.  
► Only available for selection, if the optional I/O board is installed and if the interface is not occupied by another function.

## Printer ID no.

(Printer identification number)

Setting range	Default setting	Step width	Easy Plug
[0...31]	1	1	#PC1103

Determines the identification number of the printer. In such a way, the printer can be addressed by the Easy Plug command #!An (n=printer ID).

The use of ID numbers is in particular reasonable for data transfer by RS422/485 interface, if several printers are connected by one data line. Each of the connected printers then only incorporates the data mapped to him by #!An command.

## Command sequence

Settings	Default setting	Step width	Easy Plug
#, ~	#	--	#PC5004

- „#“ is used as start sign for Easy Plug command sequences.
- „~“ is used as start sign for Easy Plug command sequences.

## Manual calibrate

Settings	Default setting	Step width	Easy Plug
Yes	--	--	--

For endless material, the label length information is sent in the printjob. For punched material, the label length has to be detected by activating this function.

- *Yes*: Label length calculation for punched material.  
► Activate this function, if label material has changed.  
► Calibration should be done after changing material, when there are no printjobs loaded in the printer.  
► Shortcut (in offline mode, display „Home“): press the keys 3+4 simultaneously to activate the calibration.

## Darkness

Setting range	Default setting	Step width	Easy Plug
[0...30]	15	1	--

Print contrast for ZPL printjobs. This setting is modified by printjobs which contain print contrast information. The print contrast set by Print > Print contrast is not influenced by this setting

## Label top

Setting range	Default setting	Step width	Easy Plug
[-240...240] Dots	0	1	--

Label top offset (y-offset) in dots. Equals the parameter Print > Y - Printadjust, which will be ignored, when ZPL printjobs are printed

## Left Position

Setting range	Default setting	Step width	Easy Plug
[-9999...9999]	0	1	--

Left position offset (x-offset) in dots. Equals the parameter Print > X-Druckversatz, which will be ignored, when ZPL printjobs are printed

## Error Indication

Settings	Default setting	Step width	Easy Plug
Low, High, Off	Off	--	--

Selects the way, in which the printer responds in the event of error occurring during printing.

Error level	Setting		
	Off	Low	High
0	Ignore	Ignore	Ignore
1	Ignore	Ignore	Display-Anzeige
2	Ignore	Prompt user for action	Prompt user for action

## Error Checking

Settings	Default setting	Step width	Easy Plug
Yes, No	Yes	--	--

Enables or disables error checking, when the printer is handling print fields.

- Yes: Error checking is enabled
- No: Error checking is disabled

## Resolution

Settings	Default setting	Step width	Easy Plug
200 Dpi, 300 Dpi	300 Dpi	--	--

Print resolution in dpi. A 200 Dpi graphic printjob can be printed with a 300 Dpi print head.

## Image Save Path

Settings	Default setting	Step width	Easy Plug
Drive C:, Internal RAM	Internal RAM	--	--

Selects the memory to be used by the `^IS` and `^IL` commands.

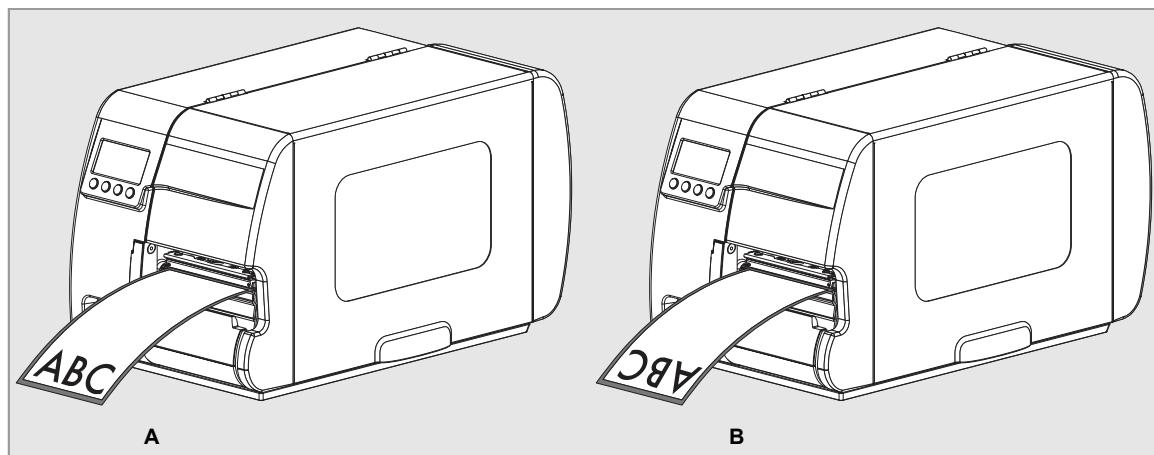
► Interpreter Version: 1.10 or higher.

- *Drive C:: Memory*, to which „Drive C.“ points; as a standard, this is an external storage medium (SD card)
- *Internal RAM*: Internal printer memory (RAM)

## Label Invert

Settings	Default setting	Step width	Easy Plug
Disable, Enable	Disable	--	--

Rotates the printout by 180°. Equals the parameter Print > Format > Print direction, which will be ignored, when ZPL printjobs are printed



[146]Orientation of the printout: Setting „Disable“ (A) or „Enable“ (B).

- *Disable*: The label is printed with „normal“ orientation [146A].
- *Enable*: The label printout is rotated by 180° [146B].

## Format Prefix

Setting	Default setting	Step width	Easy Plug
xxH	5EH <sup>a</sup>	--	--

a) 0x5E = „Caret“

Indicates the start of a ZPL format instruction.

## Control Prefix

Setting	Default setting	Step width	Easy Plug
xxH	7EH <sup>a</sup>	--	--

a) 0x7E = „Tilde“

Indicates the start of a ZPL control instruction.

## Delimiter Char

Setting	Default setting	Step width	Easy Plug
xxH	2CH <sup>a</sup>	--	--

a) 0x2C = „Comma“

Used as a parameter place marker in ZPL format instructions.

## Command ^PR

Settings	Default setting	Step width	Easy Plug
Disable, Enable	Enable	--	--

- *Disable*: The print rate sent in the ZPL printjob is ignored.
- *Enable*: The print rate is not ignored.

## Command ^MT

Settings	Default setting	Step width	Easy Plug
Disable, Enable	Enable	--	--

- *Disable*: The material type sent in the ZPL printjob is ignored (thermo-transfer or thermo-direct).
- *Enable*: The material type is not ignored.

## Command ^JM

Settings	Default setting	Step width	Easy Plug
Disable, Enable	Enable	--	--

► Interpreter version: 1.32 or higher

The ^JM command changes the printer resolution:

- ^JMA sets the resolution to the default value = print head resolution.
- ^JMB sets the resolution to 200 dpi, if the actual resolution is 300 dpi. If the actual resolution is 200 dpi, this command is ignored.
- *Disable*: The resolution setting sent in the ZPL printjob is ignored.
- *Enable*: The resolution setting is not ignored.

## Command ^MD/~/SD

Settings	Default setting	Step width	Easy Plug
Disable, Enable	Enable	--	--

The ZPL commands ^MD and ~SD (set print head darkness value) are processed optionally.

- *Enable*: ^MD- and ~SD are processed
- *Disable*: ^MD- and ~SD are ignored

## IP Addressassign

Settings	Default setting	Step width	Easy Plug
Fixed IP address, DHCP	Fixed IP address	--	#PC1501

- *Fixed IP address*: This setting activates the parameters "Net mask" and "Gateway address" (see below).

- **DHCP:** IP address is assigned automatically. The assigned IP address is displayed for a moment on the printer display, while the printer is starting.
- A change of this parameter setting forces a printer restart.

## IP address

Setting range	Default setting	Step width	Easy Plug
[0...255] <sup>a</sup>	192.168.0.99	--	#PC1502

a) for each xxx-value in xxx.xxx.xxx.xxx

Depending on the setting of parameter Print interface > IP Addressassign, appears one of the following:

- an unchangeable info field (setting „DHCP“) or
- an input field (setting „Fixed IP address“) for the IP address

## Net mask

Setting range	Default setting	Step width	Easy Plug
[0...255] <sup>a</sup>	255.255.255.0	--	#PC1503

a) for each xxx-value in xxx.xxx.xxx.xxx

Depending on the setting of parameter Print interface > IP Addressassign, appears one of the following:

- an unchangeable info field (setting „DHCP“) or
- an input field (setting „Fixed IP address“) for the IP address

Depending on the set IP address appears a default value.

■■■ EsWe recommend to use the default value!

## Gateway address

Setting range	Default setting	Step width	Easy Plug
[0...255] <sup>a</sup>	0.0.0.0	--	#PC1504

a) for each xxx-value in xxx.xxx.xxx.xxx

000.000.000.000 = no gateway is used

## Port address

Setting range	Default setting	Step width	Easy Plug
[1024...65535]	9100	--	#PC1505

## Ethernet speed

Settings	Default setting	Step width	Easy Plug
Auto negotiation, 10M half duplex, 10M full duplex, 100M half duplex,100M full duplex	Auto negotiation	--	#PC1506

- **Auto negotiation:** The communication speed is selected automatically.
- **10M half duplex:** The communication speed is set to 10 MBit/s half duplex.
- **10M full duplex:** The communication speed is set to 10 MBit/s full duplex.
- **100M half duplex:** The communication speed is set to 100 MBit/s half duplex.
- **100M full duplex:** The communication speed is set to 100 MBit/s full duplex.

## DHCP host name

Setting range	Default setting	Step width	Easy Plug
--	--	--	#PC1513

Host name of the printer. Default setting: „Device name“ + the last 3 figures of the MAC address

## WEB server

Settings	Default setting	Step width	Easy Plug
On, Off	Off	--	#PC1509

The web server may be used to

- read out or change parameter settings of the printer with a web browser
  - operate the printer via a web browser
- The web server is not multi-session capable, what means that only one user at a time can be logged in.

Requirements for use of the web server function:

- Printer is connected to a network
- A valid IP address is assigned to the printer (by the network administrator or by a DHCP server)
- Parameter Print interface > Network > Services > WEB server = „On“

Starting the web server:

1. Write down the printers IP address (appears at the bottom line of the start screen, or: Print interface > Network > IP address).
2. Start the web browser.
3. Type into the address field:
  - http://[IP address without leading zeros]
  - Example: IP address = 144.093.029.031
  - Input: http://144.93.29.31
4. Click „Login“.
5. Type in user name (admin) and password (admin).

If the login was successful, you will find the following menu items at the left window margin:

Menu item	Function
Home	Jumps to the home page.
Logout	Interrupts the connection to the printer.
Parameter	Opens the parameter menu. By clicking on submenus and parameters, those can be opened and the parameter settings be changed.  Some parameters force the printer to reset, if their setting is modified by means of the operation panel. If the parameters are changed via the web server, this doesn't happen automatically. Therefore, the modifications only become effective after the next printer restart. A restart can be triggered remote in the „Display view“.
Display view	Opens the display operation panel. Enables remote operation of the printer.
Download	Opens another browser window with the URL of the FTP server. For more information read the description of Print interface > Network > Services > FTP Server
Help	Help texts

[Tab. 33] Functions of the web server.

- *On*: Switches the web server on.
- *Off*: Switches the web server off.

## WEB display refr

(Web server display refresh)

Setting range	Default setting	Step width	Easy Plug
[0...20] s	5 s	1 s	#PC1510

► Only appears, if Print interface > Network > Services > WEB server = „On“.

Automatic updating of the web browser display. The setting determines the time in seconds between two updates.

► Setting 0 = „no automatic updating“.

## WEB admin passw.

(Web server administrator password)

Setting range	Default setting	Step width	Easy Plug
--	admin	--	#PC1511

► Only in service mode.

Modifying the password for web server access as admin.

► The user name is also „admin“.

► If the user logs in as admin to the web server, he/she has access to all parameters, which are not marked with the footmark „only in service mode“

## WEB supervisor p.

(Web server supervisor password)

Setting range	Default setting	Step width	Easy Plug
--	supervisor	--	#PC1512

► Only in service mode.

Modifying the password for web server access as supervisor.

► The user name is also „supervisor“.

► If the user logs in as supervisor to the web server, he/she has access to all parameters.

## WEB operator p.

(Web server operator password)

Setting range	Default setting	Step width	Easy Plug
--	operator	--	#PC1532

► Only in service mode.

Modifying the password for web server access as operator.

► The user name is also „operator“.

► If the user logs in as operator to the web server, he/she has access to a selection of parameters, which are necessary for settings during labelling operation.

## FTP server

Settings	Default setting	Step width	Easy Plug
On, Off	Off	--	#PC1507

The File Transfer Protocol (FTP) server (RFC959) allows access to the internal RAM disk of the printer and, if available, to the memory card. The FTP server is capable of multisession mode, without evaluating the user name when logging in. The password must match the set password (see below).

- *On*: Switches the FTP server on.
- *Off*: Switches the FTP server off.

## FTP Password

Setting range	Default setting	Step width	Easy Plug
--	novexx	--	#PC1508

► Parameter only appears in service mode.

Input of the FTP server password by means of a connected keyboard or the printers operation panel.

## Time client

Settings	Default setting	Step width	Easy Plug
Off, On	Off	--	#PC1529

Loads the current time from a time server.

- *Off*: The time client is switched off.
- *On*: The time client is switched on. The time is loaded with the frequency set under Sync. interval from a time server with the IP address Time server IP

If there is no valid time server response within 2 s after system start, an error message appears:

Status num:	9040
No Time Server	



With the time client service, the current date and time can be obtained from a time server using RFC868 time protocol on UDP port 37. For this purpose, a time server IP address needs to be given. Date and time are initially requested at start up an optional in a setable update interval during operation time. It is also stored in the internal real time clock. There is no time offset or daylight saving hour, so the server time must exactly match the local time of the printer.

## Time server IP

Setting range	Default setting	Step width	Easy Plug
[0...255] <sup>a</sup>	130.133.1.10	--	#PC1530

a) für jeden xxx-Wert in xxx.xxx.xxx.xxx

► Parameter only appears in service mode.

► Only appears if Print interface > Network > Services > Time client = „On“.

IP address of the time server.

## Sync. interval

Setting range	Default setting	Step width	Easy Plug
[0...9999] s	3600 s	1 s	--

► Parameter only appears in service mode.

► Only appears if Print interface > Network > Services > Time client = „On“.

Determines the frequency for time requests.

## Time zone

Setting range	Default setting	Step width	Easy Plug
[-12:00...+12:00]	00:00	00:30	#PC1533

Correction of the time received by the time server by a value expressed in hours (hh) and minutes (mm).

► Only appears if Print interface > Network > Services > Time client = „On“.

## Baud rate

Setting range	Default setting	Step width	Easy Plug
2400 Baud, 4800 Baud, 9600 Baud, 19200 Baud, 38400 Baud,	115200 Baud <sup>a</sup>	--	#PC1201 <sup>a</sup>
115200 Baud	9600 Baud <sup>b</sup>	--	#PC1351 <sup>b</sup>

a) Print interface > Serial Port 1 > Baud rate

b) Print interface > Serial Port 3 > Baud rate (only with I/O board)

Speed of data transfer using the serial interface.

## No. of data bits

Settings	Default setting	Step width	Easy Plug
[7..8]	8	1	#PC1202 <sup>a</sup>
8	8	--	#PC1353 <sup>b</sup>

a) Print interface > Serial Port 1 > Baud rate

b) Print interface > Serial Port 3 > Baud rate (only with I/O board)

## Parity

Setting range	Default setting	Step width	Easy Plug
Odd, Even, None, Always zero	None	--	#PC1203 <sup>a</sup>
Even, None	None	--	#PC1354 <sup>b</sup>

a) Print interface > Serial Port 1 > Baud rate

b) Print interface > Serial Port 3 > Baud rate (only with I/O board)

Defines the parity check of serial transmitted data.

The parity bit is for checking data transmission. If the check shows an error, a corresponding message is displayed. The setting must be identical at the sender and the receiver. Normally transmission is set without a parity bit.

- *Odd*: A parity bit is added so that there is an odd number of 1 Bits.
- *Even*: A parity bit is added so that there is an even number of 1 Bits.
- *None*: Sending and receiving without check bit.

- *Always zero:* Check bit is always 0 (zero). Sending and receiving without parity check.

## Stop bits

Settings	Default setting	Step width	Easy Plug
[1..2]	1	--	#PC1204 <sup>a</sup>
2	2	--	#PC1355 <sup>b</sup>

- a) Print interface > Serial Port 1 > Baud rate  
b) Print interface > Serial Port 3 > Baud rate (only with I/O board)

## Data synch.

Setting range	Default setting	Step width	Easy Plug
RTS/CTS, XON/XOFF, None	RTS/CTS	--	#PC1205 <sup>a</sup> #PC1356 <sup>b</sup>

- a) Print interface > Serial Port 1 > Baud rate  
b) Print interface > Serial Port 3 > Baud rate (only with I/O board)

### Data synchronisation at the serial interface

- *RTS/CTS:* Data synchronisation through hardware
- *XON/XOFF:* Data synchronisation through software
- *None:* Handshake signals are ignored

## Serial port mode

Settings	Default setting	Step width	Easy Plug
RS232, RS422, RS485	RS232	--	#PC1206 <sup>a</sup> #PC1357 <sup>b</sup>

- a) Print interface > Serial Port 1 > Baud rate  
b) Print interface > Serial Port 3 > Baud rate (only with I/O board)

- *RS232:* Sets the serial interface to RS 232.

Data synchronisation may be done by hardware (RTS/CTS) or by software (XON/XOFF). Maximum cable length is 15 m.

- *RS422:* Sets the serial interface to RS 422.

RS 422 is a 4 wire point to point connection, suitable for only one device. Receiver and driver of the printer are always enabled. Data synchronization is only possible by software (XON/XOFF). Maximum cable length is 1 km with twisted telecommunication cable.

- *RS485:* Sets the serial interface to RS 485.

RS 485 is a 2 or 4 wire bus system for up to 30 devices. The printer's receiver is always enabled, the printer's driver is only enabled, if the printer sends data to the host. Data synchronization is only possible by software (XON/XOFF). Maximum cable length is 1 km with twisted telecommunication cable.

## Frame error

Settings	Default setting	Step width	Easy Plug
Display, Ignore	Display	--	#PC1207 <sup>a</sup> #PC1358 <sup>b</sup>

- a) Print interface > Serial Port 1 > Baud rate  
 b) Print interface > Serial Port 3 > Baud rate (only with I/O board)

- *Display*: An error message is displayed, if a framing error is detected while the printer is receiving serial data.
- *Ignore*: Framing errors will be ignored, no error messages are displayed.

## Drive C

Settings	Default setting	Step width	Easy Plug
None, SD card, <N.N.>	SD card	--	#PC1600

Assigns the drive letter C with a connection for external data carrier.

- *None*: C is not assigned
- *SD card*: Assigns drive letter C to the SD card slot.
- *USB thumb drive*: Assigns drive letter C to the connector for USB thumb drive.

## Drive D

Settings	Default setting	Step width	Easy Plug
None, SD card, <N.N.>	<N.N.>	--	#PC1601

Verknüpft den Laufwerkbuchstaben D mit einem Anschluss für externe Datenträger.

- *None*: D is not assigned
- *SD card*: Assigns drive letter D to the SD card slot.
- *USB thumb drive*: Assigns drive letter D to the connector for USB thumb drive.

## Store Parameters

Settings	Default setting	Step width	Easy Plug
Without adj. par, With adjust para	Without adj. par	--	--

Parameter settings are saved in a text file on memory card (directory FORMATS\). Considered are also parameters which belong to options, which are not activated.

- *Without adj. par*: Parameters, which contain device specific settings, are *not* saved.  
 (Default file name: SETUP.FOR).
- Application example: Transfer of printer settings to another printer (device specific settings as print head resistance or sensor settings should not be overwritten).
- *With adjust para*: Parameters, which contain device specific settings, are *also* saved. The relevant parameter names are marked with a \* in the text file.  
 (Default file name: SETUPALL.FOR).
- Application example: Service

## Gen.Support Data

(Generate support data)

Generates the folder „SupportData“ on the selected memory medium and stores the following diagnosis files therein:

- Setup.for (for details see Tools > Diagnostic > Store Parameters)
- SetupAll.for (for details see Tools > Diagnostic > Store Parameters)
- Diagnose.log

Each of the file names is completed by the printer type and the serial number of the CPU board. The file content is english, regardless of the language setting at the printer.

Those data are very helpful for the technical support for fault diagnosis purposes.

## EasyPl. file log

(Easy Plug file log)

Settings	Default setting	Step width	Easy Plug
Off, All data, Interpreter data	Off	--	#PC5005

■■■ Only visible, if a memory card is inserted.

■■■ Activating this parameter may slow down the label rate. Therefore disable the function after error analysis.

■■■ Activating this parameter may cause error messages, which may be difficult to understand. Therefore disable the function after error analysis. If an error occurs, disable the function and restart the printer.

- *Off*: The file log function is switched off.
- *All data*: All received data, including immediate commands, are written into the log file.
- *Interpreter data*: All data is written into the log file, which the Easy Plug interpreter reads out of the reception spooler. Immediate commands are *not* included.

## Log files delete

(Logdatei löschen)

Settings	Default setting	Step width	Easy Plug
No, Yes	No	--	--

■■■ Only visible, if a memory card is inserted.

- *No*: No function.
- *Yes*: Deletes all log files on the inserted memory card, which fulfil the following conditions:
  - Filename matches the scheme „EPxxxxxx.log“  
xxxxx = number from 1 to 999999, preceding digits filled with „0“. Example: „EP000001.log“.
  - Location: folder \LOGFILES on memory card  
Those conditions are matched by logfiles, which are automatically generated by Tools > Diagnostic > EasyPl. file log.

## EasyPlug Monitor

Settings	Default setting	Step width	Easy Plug
Off, Serial Com1	Off	--	#PC5113

► Parameter only appears in service mode.

The parameter activates the logging of received Easy Plug data. Data is transmitted to the serial interface (Com1).

- *Off*: The monitor function is disabled.

- *Serial Com1*: The Easy Plug monitor data is transmitted to the serial interface (Com1).

► Activating this parameter may slow down the label rate. Therefore disable the function after error analysis.

► To keep the influence of the monitoring function on the data rate as low as possible, the baud rate should be set to 115,000!

## EP Monitor Mode

Settings	Default setting	Step width	Easy Plug
Interpreter data, All data	Interpreter data	--	#PC5125

► Parameter only appears in service mode.

► Activating this parameter may slow down the label rate. Therefore disable the function after error analysis.

- *Interpreter data*: All received Easy Plug data, apart from immediate commands, are transmitted.

- *All data*: All received Easy Plug data, including immediate commands, are transmitted.

## Sensor Test



Instructions for the sensor test can be found in chapter [Sensor test](#) on page 94.

## Cutter test

Makes it possible to test the cutter function without having to set the parameter Options > Selection > Periph. device to „cutter“.

Triggers a cut, if a cutter is installed. Without a cutter nothing will happen.

## Memory card test

Pressing the online button starts a test routine for the Compact Flash Card memory. The following display shows up after successful testing:

Memory card test  
Card Test O.K.

If the memory card is defective or not available, a corresponding error report shows up.

For test purposes, the printer creates a file named TESTXXXX.TXT in the root directory of the card. An already existing file with this name will be overwritten.

## Print test

General printtest, prints line by line the set printer type and the firmware version. Material settings (Material type, length, width) are considered.

## Service done

Settings	Default setting	Step width	Easy Plug
No, Yes	No	--	--

► Parameter only appears in service mode.

Increases the counter level of the "Service operations" counter on the "Service Status" printout by one

See parameter **Service Status** on page 169.

- Yes: Increases the counter "Service operations" by one
- No: Doesn't increase the counter

## Head exchange

Settings	Default setting	Step width	Easy Plug
No, Yes	No	--	--

► Parameter only appears in service mode.

Increases the counter „Head number“ on the info printout „Service Status“ by one

See parameter **Service Status** on page 169.

- Yes: Increases the counter "Head number" by one
- No: Doesn't increase the counter

## Roller exchange

Setting range	Default setting	Step width	Easy Plug
No, Yes	No	--	--

► Parameter only appears in service mode.

Increases the counter „Roll number“ on the info printout „Service Status“ by one

See parameter **Service Status** on page 169.

- Yes: Increases the counter "Roll number" by one
- No: Doesn't increase the counter

## Cutter change

Setting range	Default setting	Step width	Easy Plug
No, Yes	No	--	--

► Parameter only appears in service mode and with activated cutter.

Increases the counter „Cutter number“ on the info printout „Service Status“ by one.

See also parameter **Service Status** on page 169.

- Yes: Increases the counter "Cutter number" by one
- No: Doesn't increase the counter

## Serv. data reset

Setting range	Default setting	Step width	Easy Plug
No, Yes	No	--	--

► Parameter only appears in service mode.

Sets all counters on the info printout „Service Status“ to zero.

See also parameter **Service Status**  on page 169.

## Sensor Adjust

■■■ Parameter only appears in service mode.

For detailed instructions sensor adjustment, please refer to chapter **Sensor settings**  on page 98.

## Matend adjust

■■■ Parameter only appears in service mode.

A setting instruction for the material end sensor can be found in chapter **Setting the material end sensor**  on page 101.

## Matend tolerance

(Material end tolerance)

Setting range	Default setting	Step width	Easy Plug
[20...300] mm	35 mm	1 mm	#PC5101

■■■ Parameter only appears in service mode.

This is relevant for label stock with very long punches. To avoid those punches being recognized as material end by mistake, can here the distance be set, after which the gap over the light sensor is interpreted as material end.

**CAUTION!**

Risk of damaging the print roller.

→ Don't choose a too high material end tolerance, because by doing so, you will lose the protection of the print roller against being printed on.

## Feedadjust label

■■■ Parameter only appears in service mode.

Prints a scale, which enables to calculate the feed adjust value (see next parameter).

For application instructions, refer to chapter **Adjusting the imprint position**  on page 102.

## Feed adjust

Setting range	Default setting	Step width	Easy Plug
[-10.0...10.0]% [Foil]	0.0	0.1	#PC5102 <sup>a</sup>
[-10.0...10.0]% [Direct]			#PC5105 <sup>b</sup>

a) Print > Material > Foil mode = „Thermo transfer“

b) Print > Material > Foil mode = „Thermal printing“

■■■ Parameter only appears in service mode.

Corrects the material feed length. Such a correction can be necessary when printing on very long labels, to compensate slippage-related feeding inaccuracy.

For application instructions, refer to chapter **Adjusting the imprint position**  on page 102.

## Punch y calibr.

Setting range	Default setting	Step width	Easy Plug
[ -3.0...3.0] mm	0.0 mm	0.1 mm	#PC5104

► Parameter only appears in service mode.

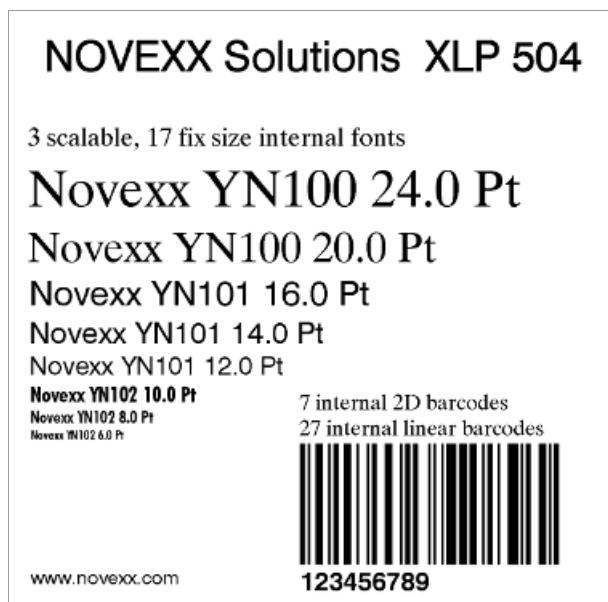
Compensating the variation of distance between punch sensor and thermal bar of the print head.

## Model ID

Displays printer type and print head resolution.

## Demo label

Prints a demonstration label in format 100 mm x 100 mm that is especially sized for the demo foil and demo material, which is supplied temporarily.



[147] Printout „Demo label“.

## Printer Status

A protocol can be printed to get an overview of customer-specific parameter settings [148].

A material width of 100 mm is necessary to print the reports. The status print-out is approx. 200 mm long.

Which parameters are listed, depends on the printer type and configuration.

Printer Status		Printer Status		Printer Status		Printer Status	
Printer type	: XLP 504 3	> Selection		Reprint function	: Off	Interface	
Printhead type	: KPA 300 E	Periph. device	: Intern Rewind	Foil end warning	: 20.0 mm	Print interface	: USB
System version	: V7.70	> I/O Board		Foil warn stop	: Off	> Network	
	Aug 22 20	Start print mode	: Pulse falling	Error reprint	: On	IP Address assign	: DHCP
Print		Reprint signal	: Off	Single-job mode	: On	IP address	: 10.220.1.179
Print contrast	: 50 %	Feed input	: Off	Temp. reduction	: 20 %	Net mask	: 255.255.254.0
X - Printadjust	: 0.0 mm	Pause input	: Off	Print info mode	: Par.values right	Gateway address	: 10.220.0.1
Y - Printadjust	: 0.0 mm	Error output	: Printer error	Printer Language		Port address	: 9100
Print speed	: 4 Inch/s	Error polarity	: Level low active	Print Interpret.	: ZPL Emulation	Ethernet speed	: Auto negotiation
Feed speed	: 4 Inch/s	Status output	: Low ribbon wa	> EasyPlug Setting		DHCP host name	: XLP504_300dpi_071
Voltage offset	: 0 %	Status polarity	: Level low active	Character filter	: Chars >= 20Hex	> Services	
Thin line emphas	: On	End print mode	: Mode0 Inactiv	Character sets	: Germany	WEB server	: On
> Material		> Internal Rewinder		EasyPlug errors	: Strict handling	WEB display refr	: 5 s
Foil mode	: Thermo tr.	Rewind direction	: Printing outsi	Spooler mode	: Mult. print jobs	FTP server	: On
Punch offset	: 0.0 mm	System		Standalone Input	: None	Time client	: Off
Materialtype	: Punched	Language	: English	#VW/I Interface	: Easyplug	Time server IP	: 130.133.001.010
Materiallength	: 98.0 mm	Access authoriz.	: Off	Printer ID no.	: 1	Time zone	: +0:00
Materialwidth	: 104.0 mm	Turn-on mode	: Online	Command sequence	: '#'	> Serial Port 1	
Punchmode	: Automatic	> Hardware Setup		> ZPL Setting		Baud rate	: 115200 Baud
Punchlevel	: 128	Head resistance	: 1202 Ohm	Darkness	: 15	No. of data bits	: 8
Label sens. type	: Punched	Head-sensor dist	: 0 mm	Label Top	: 0 Dots	Parity	: None
Mat. end detect.	: Transpare	> Memory		Left Position	: 0 Dots	Stop bits	: 1 Bit
> Format		Free store size	: 4096 KBytes	Error Indication	: OFF	Data synch.	: RTS/CTS
Bar code multip.	: * 1	Ram disk size	: 512 KBytes	Error Checking	: YES	Serial port mode	: RS232
Tradit. Imaging	: No	Font downl. area	: 256 KBytes	Resolution	: 300 DPI	Frame error	: Display
UPC plain-copy	: In line	Spooler size	: 64 KBytes	Image Save Path	: Internal RAM	> Serial Port 3	
EAN Readline	: Standard	> Print		Label Invert	: Disable	Baud rate	: 9600 Baud
EAN sep. lines	: With readl	Miss. label tol.	: 2	> > Commands		No. of data bits	: 8
Rotated barcodes	: Optimized	Gap detect. mode	: Autom. forwar	Format Prefix	: SEH	Parity	: None
Print direction	: Foot first	Singlestartquant	: 1	Control Prefix	: 7EH	Stop bits	: Automatic
Options				Delimiter Char	: 2CH	Data synch.	: RTS/CTS
Keyboard	: English			Command ^PR	: Enable	Serial port mode	: RS232
External signal	: Off			Command ^MT	: Enable	Frame error	: Display
				Command ^JM	: Enable		
				Command ^MD/-SD	: Enable		

[148]Printout „Printer Status“.

## Memory Status

Prints an overview over:

- Internal Memory Configuration [149A]
  - Files that are stored on the internal memory (RAM disc) [149B]
  - Files that are stored on an external memory medium [149C] (if any)
- The entries differ depending on printer type and configuration.

<b>MEMORY STATUS</b>	
C	Space for spooler : 64 KB
	Space for RAM disc : 508 KB
	Font downl. area : 256 KB
	Free store size : 4096 KB
A	Logos on RAM disc
	Graphics on RAM disc
	Easyplug formats on Memory Card (C:)
	A_Testetikett_01.for 334 Bytes
	C_Testetikett_03.for 334 Bytes
	D_Testetikett_04.for 334 Bytes
	E_Testetikett_05.for 334 Bytes
	F_Testetikett_06.for 334 Bytes
	G_Testetikett_07.for 334 Bytes
	H_Testetikett_08.for 334 Bytes
	I_Testetikett_09.for 334 Bytes
	B_Testetikett_02.for 329 Bytes
	novexx.for 170 Bytes
	SETUP XLP 504 300 Dpi A100149001500004.FOR 24396 Bytes
	Logos on Memory Card (C:)
	Graphics on Memory Card (C:)

[149] Printout „Memory Status“.

## Font Status

Print samples of all installed characters, bar codes and line samples (several pages):

- Page „Font / Line Library“ shows a list of the internal fonts [150] and line styles [151].
- The pages titled „Barcode Library“ show print samples of the internal bar codes [152].

Internal fonts:

→ Use the font numbers listed in the first column [150] together with an Easy Plug command for text output (e. g. #YT), to print using the appropriate font.

Easy Plug commands: Refer to the Easy Plug Manual, topic section “Command description”.

<b>FONT / LINE LIBRARY</b>		
Font No.	High	Font Sample
98	0.67	0123456789ABCDEFHIJKLMNOPQRSTUVWXYZ
99	0.75	0123456789ABCDEFHIJKLMNOPQRSTUVWXYZ
100	0.83	0123456789ABCDEFHIJKLMNOPQRSTUVWXYZ
101	1.33	0123456789ABCDEFHIJKLMNOPQRSTUVWXYZ
102	1.50	0123456789ABCDEFHIJKLMNOPQRSTUVWXYZ
103	2.00	0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ
104	2.92	<b>0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ</b>
105	1.50	0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ
106	2.00	<b>0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ</b>
107	2.92	<b>0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ</b>
108	3.25	<b>0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ</b>
109	5.16	<b>0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ</b>
110	2.75	<b>0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ</b>
111	1.41	0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ
112	1.92	0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ
113	1.92	0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ
114	2.33	0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ
115	2.33	<b>0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ</b>
116	2.38	<b>0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ</b>
100	40 P	0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ
101	40 P	0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ
102	40 P	<b>0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ</b>

[150] Printout „Font Status“: List of the internal fonts in section „Font / Line Library“. The fonts with the numbers 98 and 99 are only available in printers with 600 dpi resolution.

## Internal Line Styles:

→ Use the line style number (first column [151]) with one of the Easy Plug commands #YL or #YR to print lines in the matching style.

Easy Plug commands: Refer to the Easy Plug Manual, topic section "Command description".

Additionally, the following line styles are available:

- 13: Checked pattern with 3 dot edge length
- 14: Checked pattern with 1 mm edge length
- 15: Checked pattern with 5 mm edge length

► The line width has to be defined as a multiple of the edge length of the checked pattern!

<b>FONT / LINE LIBRARY</b>	
Line Style	Line Sample
Typ 0	solid line
Typ 1	dash-dot line
Typ 2	dash-dot-dot line
Typ 3	long dotted line
Typ 4	medium dotted line
Typ 5	short dotted line
Typ 6	dash-dot-dot-dot line
Typ 7	dash-dot-dot-dot-dot line
Typ 8	long dashed line
Typ 9	medium dashed line
Typ 10	short dashed line
Typ 11	long dotted-dashed line
Typ 12	medium dotted-dashed line

[151] Printout „Font Status“: List of the internal line styles in section „Font / Line Library“.

## Internal bar codes:

The pages titled „Barcode Library“ show print samples of the internal bar codes [152], [153].

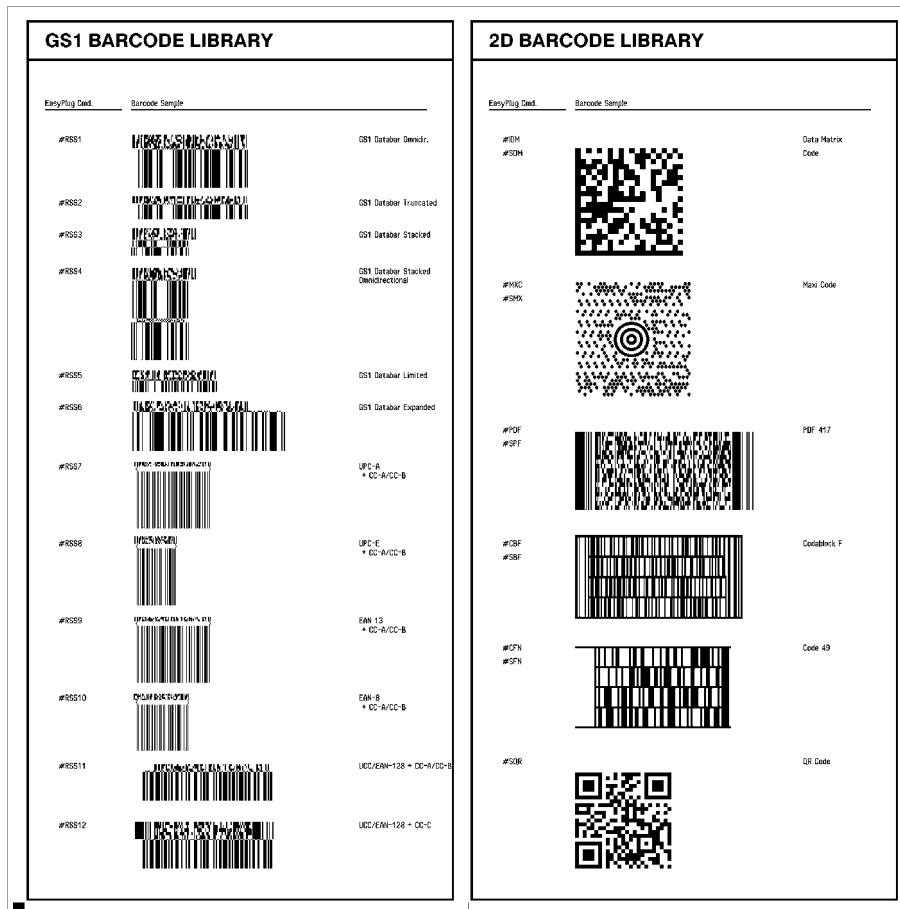
BARCODE LIBRARY		
Barcode No.	Barcode Sample	
0		EAN 8 1234 5670
1		EAN 13 1 234567 890128
2		UPCA 1 23456 78901 2
3		CODE 93 * 1 2 3 4 5 6 7 8 9 0 *
4		CODE 2/5 Interleave 1234567890
5		CODE 2/5 Matrix 1 2 3 4 5 6 7 8 9 0
6		CODE 2/5 5 Striche 1 2 3 4 5 6 7 8 9 0
7		CODE 39 * 1 2 3 4 5 6 7 8 9 0 *
8		CODABAR a 1 2 3 4 5 a
9		UPCE 1 234567 0
10		ADD ON 2 12
11		ADD ON 5 1 2 3 4 5
12		ITF 1 2 3 4 5 6 7 8 9 0
13		CODE 128 1234567890
14		MSI 1 2 3 4 5 6 7 8 9 0
15		EAN 128/GS1-12 (02)40041822504710
16		CODE 39 (3:1) * 1 2 3 4 5 6 7 8 9 0 *
17		Frachtpostzentrum 99 21348.075.016.40.1 Deutsche Post AG Frankpost 56.310.243.031.3
18		POSTCODE (Lettercode) 12 321 652 10 0134 0098
19		POSTCODE (Identcode) CODE 128 UPSI 12 321 652 10 0134 0098
20		CODE 39 (2:5:1) * 1 2 3 4 5 6 7 8 9 0 *
21		CODE 2/5 Matrix Ratio (1:2:5) 1 2 3 4 5 6 7 8 9 0
22		CODE 2/5 Matrix Ratio (1:3) 1 2 3 4 5 6 7 8 9 0
23		CODE 39 Extended * 1 2 3 4 5 6 7 8 9 0 *
24		CODE 128 A 1234567890
25		CODE 128 B 1234567890
26		CODE 128 C 1234567890
27		CODE 128 Pharmacy 0000000000000000

[152] Print sample „Font Status“, section „Barcode Library“.

- *Onedimensional bar codes* are printed with the Easy Plug command #YB, see manual Easy Plug, topic section „Command description“.
- *Two-dimensional bar codes* are printed by means of special Easy Plug commands (Tab. 34).
- *GS1 DataBar* (formerly RSS) and *Composite Component* (CC) bar codes are printed by means of the Easy Plug command #RSS. The bar code is determined by the number in the first column of the subsequent table. This number is added to the command as a parameter.

Easy Plug command	Bar code
#IDM	Data Matrix Code
#MXC	Maxi Code
#PDF	PDF 417
#CBF	Codabar F
#CFN	Code 49
#SQR	QR Matrix Code

[Tab. 34] Internal two-dimensional bar codes.



[153] Print sample „Font Status“, section „Barcode Library“: Listing of RSS-Codes and 2-dim. bar codes.

## Flashdata Status

Prints a list of all fonts stored in the flash memory. This can be e. g. customized fonts or diagnostic data.

For detailed information about *diagnosis data* refer to chapter [Reading out diagnostic data](#) on page 225.

<b>FLASH DATA BLOCKS</b>		
Total flash for data blocks	:	1856 KByte
Flash data block partition size	:	16 KByte
Number of flash data blocks	:	3
Remaining flash for data blocks	:	1344
<hr/> <b>Block 0 Diagnostics information 128 KByte</b> <hr/>		
Diagnose record 1 - created at 2016.06.16 08:20:02		
Diagnose record 2 - created at 2016.06.17 09:04:34		
Diagnose record 3 - created at 2016.06.21 10:46:24		
<hr/> <b>Block 1 Custom fonts (Scaleable) 128 KByte</b> <hr/>		
EP. Cmd	Height	Font Sample
VN400	40p	0123456789ABC
<hr/> <b>Block 2 Custom fonts (Scaleable) 128 KByte</b> <hr/>		
EP. Cmd	Height	Font Sample
VN401	40p	0123456789ABC
VN402	40p	0123456789ABC
VN403	40p	0123456789ABC
<hr/> <b>Block 3 Custom fonts (Scaleable) 128 KByte</b> <hr/>		
EP. Cmd	Height	Font Sample
VN404	40p	0123456789ABC
VN405	40p	0123456789ABC

[154] Printout „Flashdata status“.

## Service Status

Print the Service status report to read about operation time, no. of services, no. of exchanged parts and other matters of service interest (one page).

Use the parameter Tools > Service > Serv. data reset, to set all the counters to zero, which are listed on the printout.

Service Status	
<b>Info</b>	
Model ID	: XLP 504 300 Dpi
<b>&gt; Statistics</b>	
Head run length	: 1675 m
Roll run length	: 1731 m
Serv. operations	: 1
Head number	: 0
Roll number	: 0
Tot. mat. length	: 1731 m
Tot. foil length	: 293 m
Head strobes	: 19240259
Operation time	: 0 hours 2 min
Total Operation	: 39 hours 31 min
<b>&gt; System</b>	
<b>&gt; &gt; Module FW. Vers.</b>	
System version	: V7.70
System revision	: 10422
System date	: Aug 22 2016
Bootloader	: V3.90
uMon	: V2.0 30Apr2015
Peripheraldriver	: V 3 - T 3
Intern. rewinder	: V 17 - T 36
<b>&gt; &gt; Memory Data</b>	
RAM memory size	: 64 MB
Flash mem size	: 4 MB AMD
Storage media	: RAM,SD
SD card	: 7.50GB/8GB (c:)
Space for Jobs	: 45.2 MB
Max. Labellength	: 620 mm
Custom defaults	: No
<b>&gt; &gt; CPU Board Data</b>	
CPU identifier	: 2-4
PCB Revision	: REV00
FPGA version	: 1217
MAC Address	: 00.0A.44.07.17.E5
Serial number	: A100149091300004
Production date	: 02.04.2009
PCB part number	: A100148
Board part numb.	: A100150
<b>&gt; &gt; PowerSupply Data</b>	
PS type	: Blue Mountain
PS Temperature	: 36 °C
<b>&gt; &gt; Display Data</b>	
Display Version	: V4.36
Display serialNr	: A108023016140009
<b>&gt; Measurements</b>	
Foil diameter	: 38.3 mm
Head temperature	: 28 °C

[155]Printout „Service Status“.

## Dottest endless

(Dottest for application with endless label stock)

This function prints a pattern which enables trained personnel to check the adjustment as well as the function of the print head.

Test pattern:

The „Dottest endless“ or „Dottest punched“ prints a pattern consisting of 33 rows filled with vertical lines on the upper label area. All lines have a constant distance of 4 dot. With every new row, the line pattern is shifted one dot. The resulting line-pattern repeats every four rows. The test pattern shows missing dots clearly as white vertical lines running through the pattern.

The lower label area is filled with testpatterns, which are kept close to those used by the print head manufacturer. The patterns are useful for printout comparison.

The bars underneath the test pattern allow the adjustment of the different zero lines.

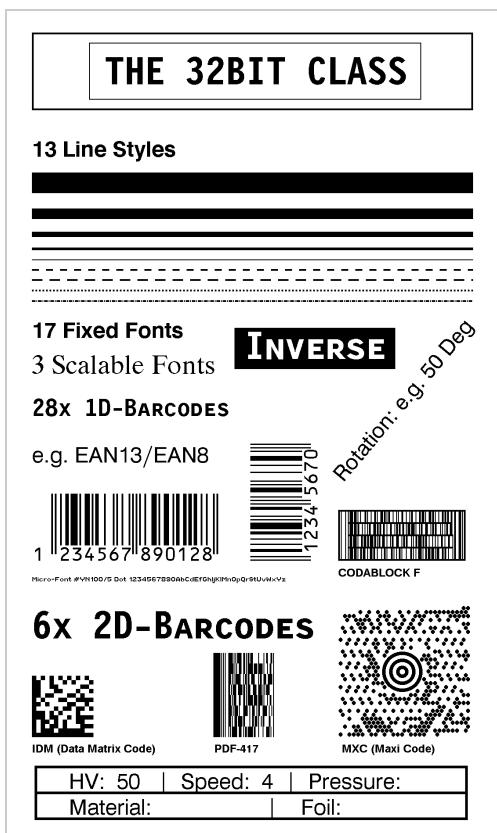
## Dottest punched

Dottest for application with punched material.

See **Dottest endless** □ on page 169.

## Reference label

Prints a label with some examples of barcodes, fonts, logos. The table at the bottom end of the label contains the settings or print contrast and print speed, with which the label was printed. The empty fields can be filled with the applied print head pressure and the applied ribbon and label material (for purpose of comparison).



## [156]Reference label printout.

## Textile Care Sym

Prints the content of the internal care symbol fonts:

Textile Care Sym											
Fontnr.: 200											
.	-	.	0	1	2	3	4	5	6		
7	8	9	A	B	C	D	E	F	G		
H	I	J	K	L	M	N	O	P	Q		
R	S	T	U	V	W	X	Y	Z	a		
b	c	d	e	f	g	h	i	j	k		
l	m	n	o	p	q	r	s	t	u		
v	w	x	y	z	€						
Textile Care Sym											
,	-	.	0	1	2	3	4				
5	6	7	8	9	A	B	C				
F	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
D	E	F	G	H	I	J	K	L	M	N	O
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
L	M	N	O	P	Q	R	S				
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
T	U	V	W	X	Y	Z	a				
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
b	c	d	e	f	g	h	i	j	k	l	m
(F)	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
j	k	l	m	n	o	p	q				
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
r	s	t	u	v	w	x	y				
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
z	€										

[157]Content of the internal care symbol fonts 200 and 202.

## Head run length

No setting option - Only display



Easy Plug

#!PG30018

Shows the total "covered distance" of the print head. The counter is reset with each calling of the parameter Tools > Service > Head exchange.

## Roll run length

(Run length of the feed roller)

No setting option - Only display



Easy Plug

#!PG30019

Shows the total "covered distance" of the print roller. The counter is reset with each calling of the parameter Tools > Service > Roller exchange.

## Cuts on knife

No setting option - Only display	Easy Plug
	#!PG30020

► Only with mounted and activated cutter.

Shows the number of cuts done by one knife. The counter is reset with each calling of the parameter Tools > Service > Cutter change.

## Total cuts

No setting option - Only display	Easy Plug
	#!PG30023

► Only with mounted and activated cutter.

Shows the total number of cuts done by one knife; other than than parameter Cuts on knife, it is not reset with cutter changes.

## Service operations

No setting option - Only display	Easy Plug
	#!PG30014

Shows the number of service operations. The counter is increased by calling the parameter Tools > Service > Service done.

## Head number

No setting option - Only display	Easy Plug
	#!PG30015

Shows the number of print head changes. The counter is increased by calling the parameter Tools > Service > Head exchange.

## Roll number

No setting option - Only display	Easy Plug
	#!PG30016

Shows the number of exchanged print rollers. The counter is increased by calling the parameter Tools > Service > Roller exchange.

## Cutter number

No setting option - Only display	Easy Plug
	

► Only with mounted and activated cutter.

Shows the number of exchanged cutters. The counter is increased by calling the parameter Tools > Service > Cutter change.

## Tot. mat. length

No setting option - Only display	Easy Plug
	#!PG30021

Shows the total "covered distance" of the feed roller. Other than the counter Roll run length, this counter is not reset after a roller exchange.

## Tot. foil length

No setting option - Only display	Easy Plug
	#!PG30022

Shows the total "covered distance" of the ribbon roller.

## Head strobes

No setting option - Only display	Easy Plug
	#!PG30025

Shows the counted head strobes, which are a measure for the service life of the print head. A strobe is counted for each line in which at least one dot is printed.

## Operation time

No setting option - Only display	Easy Plug
	#!PG30028

Shows the elapsed time since the last switch-on of the machine.

## Total Operation

No setting option - Only display	Easy Plug
	#!PG30082

Shows the total operation time that is the sum of all operation times.

## System version

No setting option - Only display	Easy Plug
	#!PG30004

Shows the firmware version number.

## System revision

No setting option - Only display	Easy Plug
	#!PG30070

Shows a consecutive revision number.

► Only for factory-internal use.

## System date

No setting option - Only display	Easy Plug
	#!PG30082

Shows the date, at which the firmware was generated.

## Bootloader

No setting option - Only display	Easy Plug
	#!PG30061

Shows the bootloader version number.

## uMon

No setting option - Only display	Easy Plug
	#!PG30062

Shows the micro monitor version number.

## Peripheral driver

No setting option - Only display	Easy Plug
	#!PG30052

► Only with mounted (optional) peripheral output stage board.

Applied PIC version on the output stage board driving the peripheral motor.

## Intern. rewinder

(Internal rewinder)

No setting option - Only display	Easy Plug
	#!PG30057

► „XLP 504 peripheral with internal rewinder“ only.

Shows the applied PIC version on the internal rewinder motor output stage board.

## RAM memory size

No setting option - Only display	Easy Plug
	#!PG30007

Shows the available RAM memory size.

## Flash mem size

No setting option - Only display	Easy Plug
	#!PG30008

Shows the available Flash memory size. The abbreviation which is displayed behind the memory size indicates the manufacturer of the applied Flash-RAM.

Abbreviation	Manufacturer
MX	Macronix
AMD	AMD
FUJ	Fuji

[Tab. 35] The displayed abbreviations indicate the manufacturer of the Flash-RAM.

## Storage media

No setting option - Only display	Easy Plug
	#!PG30081

Shows the available storage media: RAM, SD card, USB thumb drive (if any)

## SD card

No setting option - Only display	Easy Plug
	#!PG30064

Shows the free memory and the total memory of the plugged-in SD card.

Representation: „XXX GB / YYYY GB“ with XXX = free memory and YYYY = total memory.

## USB thumb drive

No setting option - Only display	Easy Plug
	#!PG30065

Shows the free memory and the total memory of the connected USB thumb drive.

Representation: „XXX GB / YYYY GB“ with XXX = free memory and YYYY = total memory.

## Space for Jobs

No setting option - Only display	Easy Plug
	#!PG30010

Shows the memory size, which is available for print jobs.

## Max. Labellength

No setting option - Only display	Easy Plug
	#!PG30011

Shows the maximum printable label length, which results from the memory allocation.

## Custom defaults

No setting option - Only display	Easy Plug
	#!PG30013

There are customer specific parameter settings available that can be used for factory reset purpose. See parameter System > Factory settings.

## CPU identifier

No setting option - Only display	Easy Plug
	#!PG30034

Shows the designation of the applied processor.

## PCB Revision

No setting option - Only display	Easy Plug
	#!PG30036

Shows the layout revision and part number of the CPU board.

## FPGA version

No setting option - Only display	Easy Plug
	#!PG30037

Shows the FPGA version.

## MAC Address

No setting option - Only display	Easy Plug
	#!PG30039

Shows the MAC Address, an unchanging board address, which is programmed by the board manufacturer.

## Serial number

No setting option - Only display	Easy Plug
	#!PG30040

Shows the serial number that is programmed by the board manufacturer.

## Production date

No setting option - Only display	Easy Plug
	#!PG30041

Shows the production date that is programmed by the board manufacturer.

## PCB part number

No setting option - Only display	Easy Plug
	#!PG30042

Shows the part number of the board without components.

## Board part num.

No setting option - Only display	Easy Plug
	#!PG30043

Shows the part number of the board with components.

## PS type

No setting option - Only display	Easy Plug
	#!PG30029

Shows the power supply type.

## PS Temperature

No setting option - Only display	Easy Plug
	#!PG30072

Shows the current power supply temperature in °C. If for any reason the function is not supported, „??? °C“ is displayed.

## Display Version

No setting option - Only display	Easy Plug
	#!PG30059

Shows the version number of the operation panel.

## Display serialNr

No setting option - Only display	Easy Plug
	#!PG30068

Shows the serial number of the operation panel.

## Foil rest length

Keine Einstellmöglichkeit - Nur Anzeige	Easy Plug
	#!PG30087

Shows the calculated remaining ribbon length in meter.

The parameter System > Print > Foil end warning can be used to set a critical length for the remaining ribbon. If the ribbon rest length equals this value, a message appears on the printer display (see **Foil end warning**  on page 141).

## Foil diameter

No setting option - Only display	Easy Plug
	#!PG30026

Shows the calculated foil diameter: A measurement routine calculates the actual ribbon roll diameter with an exactness of 7.5%.

The parameter System > Print > Foil end warning can be used to set a critical foil roll diameter. If the foil roll diameter equals this value, a message appears on the printer display (see [Foil end warning](#) on page 141).

## Head temperature

No setting option - Only display	Easy Plug
	#!PG30071

Shows the current print head temperature in °C

# Malfunctions

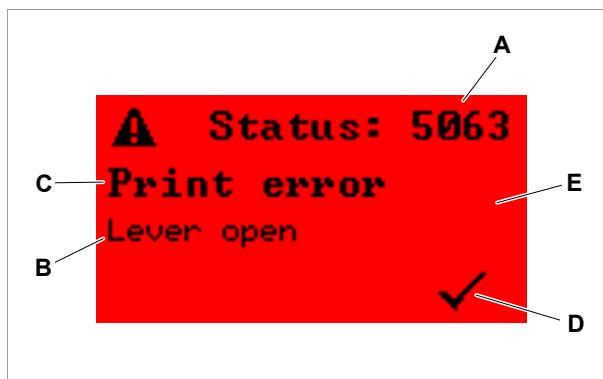
## STATUS REPORTS

### General information about status reports

#### Display of status reports

During operation, tests are continually carried out to determine whether a malfunction has occurred. If a malfunction is detected, the corresponding status report appears on the display.

The status report shown on the display is assembled as follows:



[158] Appearance of status reports

- A Status number
- B Status text
- C Category
- D Check mark (marks the acknowledgement key)
- E Background color (red = error, yellow = warning)

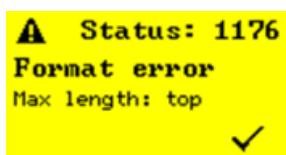
The status number [158A] is the key to an error description that can be found in chapter [Reference of status reports](#) on page 181. The example shows the message with status number [5063 Lever open](#) on page 201.

The status can also be queried over the serial interface (see Easy Plug command #!Xn).

#### Warnings

Background color = yellow

Warnings inform the operator about the occurrence of a certain event at the printer. The message is only displayed for a short time. The printer continues operating without intervention from the user.



[159] Example of a warning

#### Error messages

Background color = red

Error messages have to be acknowledged by the operator, because the incident endangers the normal operation. The message is displayed until the cause of the disturbance is eliminated and the message is acknowledged by pressing key 4.

Locking error messages are messages that are caused by serious errors. This state can be cancelled by a restart (press the keys 1+2+3) or by switching the printer off.

### General software errors

Errors in the firmware can never be completely ruled out. Such errors are described in the error directory as "General software errors". They can only be corrected by the manufacturer.

→ Switch the printer off and, after 30 seconds, on again. If the fault repeatedly occurs, please contact our technical service.

### Easy Plug errors

Errors in the Easy Plug code can be detected much easier with firmware version x.33 or higher. This requires the following setting:

Printer Language > EasyPlug Setting > EasyPlug errors = „Strict handling“

The Easy Plug command, which caused the error, is displayed after approx. 2 seconds in the lower display line. The displayed text is up to 30 characters long and is scrolled automatically.

If a single character caused the error, this character is marked with „>> <<“ in the display text, to facilitate the detection.

By pressing the cut button, the display can be toggled between error message and Easy Plug command text.

### Unspecific errors

Some errors can have more than one cause. To be able to find the specific reason for such an error, it is important that it can be reproduced.

→ Send the following items of information as complete as possible to the manufacturer – preferably as files:

- Layout and/or printjob, which makes the status message appear
- Parameter configuration of the printer, when the error occurs
- Log file of the printjob until the error occurs

→ Use parameter Tools > Diagnostic > Store Parameters, to save the current parameter configuration.

→ Use parameter Tools > Diagnostic > EasyPlug Monitor, to send the received Easy Plug data to a serial interface. Alternatively, with some printer types, log files of the printjob can be saved on memory card (Tools > Diagnostic > EasyPl. file log).

Our Technical Support will try hard to find a solution by reproducing the situation which caused the error.

### Not listed status reports

Some status reports are not shown in the list of status reports. They provide developers of the printer firmware and trained service personnel with information about special conditions, particularly with regards to the printer firmware.

If your printer displays status reports which are not included in the following list, please refer to the authorised service office. Make a note of the status number and the circumstances in which the message occurred.

## Reference of status reports

### **1000 No new command**

General software error, read chapter [General software errors](#) on page 180.

### **1001 Parameter table**

General software error, read chapter [General software errors](#) on page 180.

### **1002 Comm. sorting**

General software error, read chapter [General software errors](#) on page 180.

### **1003 Too many slashes**

General software error, read chapter [General software errors](#) on page 180.

### **1004 Slash w/o param.**

General software error, read chapter [General software errors](#) on page 180.

### **1005 2 same commands**

General software error, read chapter [General software errors](#) on page 180.

### **1006 Letter incorrect**

General software error, read chapter [General software errors](#) on page 180.

### **1007 Command incorr.**

Unknown command.

→ Check Easy Plug sequence.

### **1008 Subcomm. incorr.**

Unknown letter in a subcommand.

→ Check Easy Plug sequence.

### **1009 Param. tab inc.**

General software error, read chapter C.

### **1010 #ER x #Q !**

One or more illegal commands between #ER and #Q.

→ Check transmitted Easy Plug sequence.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

### **1011 #ER missing**

One or more format commands without leading #ER (self-acknowledging)

→ None. The command is still carried out.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

### **1012 #IM x #Q !**

One or more illegal commands between #IM and #Q.

→ Check Easy Plug sequence.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1013 Comm. flag inc.**

General software error, read chapter [General software errors](#) on page 180.

**1014 Uninit integer**

General software error, read chapter [General software errors](#) on page 180.

**1015 Uninit float**

General software error, read chapter [General software errors](#) on page 180.

**1016 Uninit string**

General software error, read chapter [General software errors](#) on page 180.

**1017 Uninit descr**

General software error, read chapter [General software errors](#) on page 180.

**1018 Too many descr**

General software error, read chapter [General software errors](#) on page 180.

**1019 Uninit BCD para.**

General software error, read chapter [General software errors](#) on page 180.

**1020 Too much image**

General software error, read chapter [General software errors](#) on page 180.

**1021 Uninit image par**

General software error, read chapter [General software errors](#) on page 180.

**1022 Too many files**

General software error, read chapter [General software errors](#) on page 180.

**1023 Uninit File Para**

General software error, read chapter [General software errors](#) on page 180.

**1024 Com. too long**

General software error, read chapter [General software errors](#) on page 180.

**1025 Com twice there**

General software error, read chapter [General software errors](#) on page 180.

**1026 Comm. w/o. flag**

General software error, read chapter [General software errors](#) on page 180.

**1027 Uninit parameter**

Parameter could not be initialised.

→ Acknowledge by pressing key 4.

**1028 Parameter uninit**

General software error, read chapter [General software errors](#) on page 180.

**1029 Param. incorr.**

Incorrect parameter in the Easy Plug command.

→ Check Easy Plug sequence.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1030 Command incorr.**

Error during the command interpretation.

→ Check Easy Plug sequence.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1031 Too many slashes**

Too many parameters between two slashes.

→ Check Easy Plug sequence.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1032 Incorrect char.**

Parameter contains an invalid character.

→ Check Easy Plug sequence.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1033 Uninit flash par**

General software error, read chapter [General software errors](#) on page 180.

**1034 Uninit restrict**

General software error, read chapter [General software errors](#) on page 180.

**1035 Uninit combi**

General software error, read chapter [General software errors](#) on page 180.

**1036 Wrong combi para**

General software error, read chapter [General software errors](#) on page 180.

**1037 Software error**

General software error, read chapter [General software errors](#) on page 180.

**1038 Software error**

General software error, read chapter [General software errors](#) on page 180.

**1089 Seek Fkt. Error**

General software error, read chapter [General software errors](#) on page 180.

**1090 Incomplete Job**

The actual print job was not terminated by the #Q command. In other words, after a start command #ER for a label format follows another #ER command without the first format being terminated by #Q.

→ Confirm by pressing key 4.

→ Terminate the print job with a #Q command.

**1091 Wrong var field**

An error occurred while interpreting the text string of a variable data field. The error could e.g. be caused by a #YT or a #YB command (Easy Plug). Self-acknowledging error.

→ Check the text strings of variable data fields.

**1092 Rename file**

General software error, read chapter [General software errors](#) on page 180.

**1093 Delete file**

File cannot be deleted.

→ Check whether the file name is written correctly; check whether the file is write-protected.

**1094 More than 3 figs**

General software error, read chapter [General software errors](#) on page 180.

**1097 Out of memory**

General software error, read chapter [General software errors](#) on page 180.

**1099 File end**

General software error, read chapter [General software errors](#) on page 180.

**1101 Wrong time/date**

Easy Plug command #RTC (set realtime clock): invalid date or wrong date/time format.

→ Check command #RTC in the current printjob.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1102 Counter offset**

Applies to all Easy Plug commands with counter function, e. g. #YT: A non-valid digit was used in the offset.

→ Check all commands with counter function in the current printjob.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1110 Opening Bracket**

General software error, read chapter [General software errors](#) on page 180.

**1111 Closing Bracket**

General software error, read chapter [General software errors](#) on page 180.

**1112 Para: No Value**

General software error, read chapter [General software errors](#) on page 180.

**1113 No Default Value**

General software error, read chapter [General software errors](#) on page 180.

**1114 < than boundary>**

A sent Easy Plug command contains a value which exceeds the admissible range at the bottom limit. The faulty value is replaced automatically by a default value matching the limits.

Example: #YT109/-1/. The value -1 has been assigned to the parameter d. Admissible for d are the values 0, 1, 2, 3. Therefore, -1 exceeds the value range at the bottom limit.

- Check the Easy Plug command on admissible values and correct them if necessary.
- Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1115 > than Boundary**

A sent Easy Plug command contains a value which exceeds the admissible range at the top limit. The faulty value is replaced automatically by a default value matching the limits.

Example: #YT109/5/. The value 5 has been assigned to the parameter d. Admissible for d are the values 0, 1, 2, 3. Therefore, 5 exceeds the value range at the top limit.

- Check the Easy Plug command on admissible values and correct them if necessary.
- Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1120 Incorr. logo no.**

Logo no. is invalid because it is outside of the address field. (self-acknowledging)

- Check whether the logo no. has been given as being smaller than 0 (zero) or larger than 255.

#### **1121 Logo exists**

Logo already exists.

- Change the designation of the logo; repeat saving.

#### **1122 Creating logo**

General software error, read chapter [General software errors](#) on page 180.

#### **1123 Rename logo**

General software error, read chapter [General software errors](#) on page 180.

#### **1124 Logo file**

General software error, read chapter [General software errors](#) on page 180.

#### **1125 Delete error**

General software error, read chapter [General software errors](#) on page 180.

#### **1126 File creation**

Faulty Easy Plug code. A file could not be created. The error may e.g. be caused by a faulty filename or by too less printer memory.

- Check all used filenames for length, applied characters, etc. Change the name if faulty.
- Check the printer for enough memory.
- Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1127 File format**

A file name doesn't match the (DOS-) filename convention.

- Check all used filenames for length, applied characters, etc. Change the name if faulty.

#### **1128 File exists**

Faulty Easy Plug code. A file is ought to be loaded into the printer memory via #DF command. The command was used without adding the parameter "O" for "Overwrite", but a file already exists under the given name.

- Rename one of both files or set the parameter "O".
- Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1130 Float overflow**

Number of figures is too high for a floating comma variable.

→ Reduce the number of figures.

**1131 Logo cache full**

A logo or several logos was/were sent which is/are too huge for the logo buffer.

→ Reduce the logo size.

**1140 Line too long**

Error during conversion from EPT into BIN: permitted line length exceeded.

→ Reduce line length.

**1141 Para. incorr. BI**

Error during processing of a Bit Image parameter.

→ Acknowledge by pressing the on-line button.

**1150 Integer overflow**

Too many figures for an integer variable.

→ Reduce the number of figures.

**1160 String too long**

A string parameter exceeds the maximum string length of 256 characters (1024 characters in 2-dimensional bar codes respectively).

→ Reduce the number of characters in the string.

**1170 X Pos > width**

Faulty Easy Plug code. X position exceeds permitted maximum value.

Result: The previously set print offset is retained.

→ Reduce value for X position.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1171 X Pos < zero**

Faulty Easy Plug code. Value for X position < zero.

Result: The previously set print offset is retained.

→ Check value for X position for signs.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1172 Y Pos > length**

Faulty Easy Plug code. Y position exceeds the label length.

Result: The previously set print offset is retained.

→ Reduce value for Y position.

→ Select a longer label.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1173 Y Pos < zero**

Faulty Easy Plug code. Value for Y position < zero.

Result: The previously set print offset is retained.

- Check value for Y position for signs.
- Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1174 Max width: right**

Maximum label width, right, reached. Elements such as character, line or logo do not fit into the physical print format (self-acknowledging)

Result: Only elements which completely fit into the print format are printed.

- Alter value for width or position of elements.
- Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1175 Max width: left**

Faulty Easy Plug code. Maximum label width, left, reached. Elements such as character, line or logo do not fit into the physical print format (self-acknowledging)

Result: Only elements which completely fit into the print format are printed.

- Alter value for width or position of elements.
- Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1176 Max length: top**

Faulty Easy Plug code. Maximum label length, top, reached.

→ Correct label layout: Position the drawing elements in a way that they fit on the label or modify the label length.

- Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1177 Max length: bot.**

Faulty Easy Plug code. Maximum label length, bottom, reached.

→ Correct label layout: Position the drawing elements in a way that they fit on the label.

- Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1178 x Dots < zero**

Bit Image:

- Switch the printer off and after 30 seconds on again.

#### **1200 GetRLE reset st**

(number of bytes) \* (number of lines) does not correspond to the file length.

- Switch the printer off and after 30 seconds on again.

#### **1201 GetRLE error st**

GetRLE byte has error status.

- Switch the printer off and after 30 seconds on again.

#### **1210 itoa Short Strin**

General software error, read chapter [General software errors](#) on page 180.

#### **1240 New FS>E**

General software error, read chapter [General software errors](#) on page 180.

#### **1241 New Read Pointer**

Faulty memory assignment for print jobs.

→ Please read the notes in chapter [Unspecific errors](#) on page 180.

#### **1242 New FE in job**

Faulty memory assignment for print jobs.

→ Please read the notes in chapter [Unspecific errors](#) on page 180.

#### **1243 New delete order**

Faulty memory assignment for print jobs.

→ Please read the notes in chapter [Unspecific errors](#) on page 180.

#### **1244 New wrong pos.**

Faulty memory assignment for print jobs.

→ Please read the notes in chapter [Unspecific errors](#) on page 180.

#### **1245 New no space**

Faulty memory assignment for print jobs.

→ Please read the notes in chapter [Unspecific errors](#) on page 180.

#### **1246 New HP no space**

Faulty memory assignment for print jobs.

→ Please read the notes in chapter [Unspecific errors](#) on page 180.

#### **1247 Out of memory**

Faulty memory assignment for print jobs.

→ Please read the notes in chapter [Unspecific errors](#) on page 180.

#### **1260 TimeDate string**

General software error, read chapter [General software errors](#) on page 180.

#### **1270 #-comm. invalid**

General software error, read chapter [General software errors](#) on page 180.

#### **1272 Wrong #!..**

Faulty Easy Plug code. Faulty use of the immediate command "#!A..". The specified parameter value exceeds the admissible value range (0 to 31).

→ Specify an admissible parameter value.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1273 Wrong #!C..**

Faulty Easy Plug code. Faulty use of the immediate command "#!C..". The specified parameter value exceeds the admissible value range (A, F).

→ Specify an admissible parameter value.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1276 #!P wrong number**

Faulty Easy Plug code. Faulty use of the immediate command "#!P..". The specified parameter value exceeds the admissible value range (0 to 31).

→ Specify an admissible parameter value.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1277 Wrong #!S..**

Faulty Easy Plug code. Faulty use of the immediate command "#!S..". The specified parameter value exceeds the admissible value range (P, R).

- Specify an admissible parameter value.
- Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1278 Wrong #!X..**

Faulty Easy Plug code. Faulty use of the immediate command "#!X..". The specified parameter value exceeds the admissible value range (S, B, P).

- Specify an admissible parameter value.
- Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1279 #!X wrong number**

Faulty Easy Plug code. Faulty use of the immediate command "#!X..". The specified parameter value exceeds the admissible value range.

- Specify an admissible parameter value.
- Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1282 Spooler FB > L**

General software error, read chapter [General software errors](#) on page 180.

**1285 #!-comm. incorr.**

Faulty Easy Plug code. Faulty use of the immediate command "#!...!". The specified letter is unknown.

- Specify an admissible letter.
- Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1290 Label limit**

Faulty Easy Plug code. Value for x or y position exceeds the label limit.

- Reduce the value for the x or y position.
- Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1291 Draw field**

Faulty Easy Plug code. Function call, drawing object, unsuccessful.

- Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1300 Invalid Command**

General software error, read chapter [General software errors](#) on page 180.

**1301 Table full**

General software error, read chapter [General software errors](#) on page 180.

**1310 Wrong Field ID**

The error can have several causes.

- Please read the notes in chapter [Unspecific errors](#) on page 180.

**1320 No Default Value**

Faulty Easy Plug code.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1321 Bar Code Object**

Faulty Easy Plug code regarding the declaration of a bar code.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1322 Logo Object**

Faulty Easy Plug code regarding the declaration of a logo.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1323 Line Object**

Faulty Easy Plug code regarding the declaration of a line.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1324 Rectangle Object**

Faulty Easy Plug code regarding the declaration of a rectangle.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1325 Truedoc Object**

The error can have several causes.

→ Please read the notes in chapter [Unspecific errors](#) on page 180.

#### **1326 Fix Field Creati**

Faulty Easy Plug code regarding the declaration of a field.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1327 Update Field Cre**

Faulty Easy Plug code regarding the declaration of a field.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1328 Var Field Creati**

Faulty Easy Plug code regarding the declaration of a field.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1329 Count Field Crea**

Faulty Easy Plug code regarding the declaration of a counting field.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

#### **1330 Create clk. field**

General software error, read chapter [General software errors](#) on page 180.

#### **1331 Field type inv.**

Invalid field type

→ Acknowledge by pressing key 4.

#### **1332 Field length inc.**

General software error, read chapter [General software errors](#) on page 180.

**1333 Logo not there**

Selected logo does not exist.

→ Check file name / existence of the logo.

**1334 #YV Data incorr.**

Illegal entries for a #YV field (variables data field).

→ Acknowledge by pressing key 4.

→ Correct data.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1335 #YV Field cont.**

Content of the #YV field (variables data field) could not be pasted.

→ Acknowledge by pressing key 4.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1336 #YV no. incorr.**

#YV field (variables data field) with the given no. not found.

→ Acknowledge by pressing key 4.

→ Check the number of the #YV field.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1390 Web width zero**

The printer was set to printing several label rows (Easy Plug command #ER, n > 1); but the label width was by fault set to zero (b = 0).

→ Correct the #ER command regarding the setting of parameter b.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1391 Web > Width**

The printer was set to printing several label rows (Easy Plug command #ER, n > 1); but both or one of the parameters n and b are set in a way that n \* b (label row width \* no. of rows) exceeds the material width.

→ Correct the #ER command regarding the setting of parameters n and b.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

**1392 Job memory full**

The error can have several causes.

→ Please read the notes in chapter [Unspecific errors](#) on page 180.

**1393 Job struct creat**

The error can have several causes.

→ Please read the notes in chapter [Unspecific errors](#) on page 180.

**1394 Wrong Canceling**

General software error, read chapter [General software errors](#) on page 180.

**1395 Label too wide**

A printjob contains an #IM-command which sets the label width to a measure exceeding the maximum print width. The maximum print width depends on the printer type.

Refer to chapter „Technical specifications“ for the maximum label width.

→ Reduce the label width set by the #IM-command in the concerned print job, until the label width matches the maximum print width.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

### **1396 Label too long**

Label length setting exceeds the maximum label length. The maximum label length depends on the memory configuration of the printer.

The info-printout „Memory Status“ shows among other data the maximum label length. Read more about info-printouts in chapter „Parameters“.

→ Reduce the label width setting.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

### **1397 Label too short**

The label length defined in the #IM command is smaller than the minimum admissible length. The label length is set to the minimum value.

→ Correct the length value in the label layout definition.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

### **1398 Label too small**

The label width defined in the #IM command is smaller than the minimum admissible width. The label width is set to the minimum value.

→ Correct the width value in the label layout definition.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

### **1404 UTF8 data wrong**

Character code > 0xffff

→ Check/change the character code.

### **1470 X-Offset**

The x-position of a layout element (graphics, text, ...) is beyond the label margin. The element is shifted automatically to the first admissible position at the correct side of the margin.

→ Check the x-positions of the layout elements and change them, if necessary.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

### **1471 Y-Offset**

The y-position of a layout element (graphics, text, ...) is beyond the label margin. The element is shifted automatically to the first admissible position at the correct side of the margin.

→ Check the y-positions of the layout elements and change them, if necessary.

→ Please read the notes in chapter [Easy Plug errors](#) on page 180.

### **1501 Unknown ZPL Cmd**

Error level1

An uninterpretable command was encountered.

→ Check, if the printjob was proceeded correctly. If yes, ignore the message, if no, modify the print-job.

**1502 ZPL command tab.**

Error level1

General software error, read chapter **General software errors**  on page 180.

**1503 Filename Too Long**

Error level1

Filename is too long.

→ Rename the file with a shorter name.

**1504 Param > Max**

Error level1

Parameter exceeds the maximum value defined

→ Shorten the parameter.

**1505 Param < Min**

Error level1

Parameter is shorter than the admissible minimum value allowed.

→ Modify the parameter.

**1506 No Previous**

Error level1

Graphics command is to set current row data to previous row data, but previous row data doesn't exist.

**1507 Not enough data**

Error level1

Data for graphics command is not enough.

→ Check and modify graphics data.

**1508 String Too Long**

Error level1

String characters exceeds the maximum number of characters which the particular string parameter can take.

→ Check and modify the command.

**1509 Wrong Byte Cnts**

Error level1

The row size or total size parameters is not valid (equals 0). Occurs when download graphic or download font commands in process.

→ Check and modify the command.

**1510 Wrong Param**

Error level1

Control characters are not allowed for discrete parameter (single letter parameter).

→ Check and modify the command.

**1511 Bar Parm Error**

Error level1

Parameters to a barcode command is wrong or does not conform with specs.

→ Modify the bar code command.

**1512 Code128 Mode Err**

Error level1

Code128 barcode command specifying mode type other than 'AUTO'.

→ Modify the bar code command.

**1513 Wrong Mode**

Error level2

Coda block barcode command specifying mode type other than 'F'.

→ Modify the bar code command.

**1514 ^BX Parm Err.**

Error level2

Data Matrix bar code command specified an escape sequence character. This is not supported in this printer.

→ Modify the bar code command.

**1515 Conv to ECC200**

Error level1

Data Matrix barcode command specified non ECC200 level. Program is attempting to convert to ECC200.

→ Modify the bar code command.

**1516 Bad Drive: x**

Error level2

The selected drive letter („x“) is not valid. (We support only 'R' and 'B').

→ Select a valid drive letter.

**1517 Mask String: x**

Error level2

The mask string used in ^SF command is not supported.

→ Modify the print job.

**1518 Bad Format: x**

Error level2

The graphic format selected is not supported by ZPL II Emulation (Compressed binary and PNG format).

→ Convert graphic into a supported format.

**1519 Cmd Init Error**

Error level1

→ Read chapter **General software errors** □ on page 180.

**1520 Unsupported Cmd**

Error level1

Non critical commands that is not supported by this printer.

→ Check and modify the commands in the printjob.

**1521 Unsupported: x**

Error level2

Critical commands that is not supported by this printer.

→ Check and modify the commands in the printjob.

**1522 Bad Char Set x**

Error level2

The character set selected by ^CI command is not supported.

→ Replace the character set by a supported set.

**1523 Cmd Parm Error**

Error level1

Error encountered while parsing command parameter.

→ Check and modify the commands in the printjob.

**1524 d/mm not chg x**

Error level2

Command attempting to lower print density assuming a 200 dpi printer.

→ Check and modify the commands in the printjob.

**1526 Can't Off CV**

Error level1

Command attempting to turn off barcode validations.

→ Check and modify the commands in the printjob.

**1527 Offset illegal**

Error level2

RTC command specified a clock offset not supported by this printer (possibly a negative offset).

→ Correct the command.

**1528 Language illegal**

Error level2

Language specified by RTC command is not English or German.

→ Correct the command.

**1529 Invalid Prn Mode**

Error level1

Print modes other than cutter mode are selected (Tear-off, Rewind or Peel-off modes in ^MM command).

→ Correct the command.

**1530 Inc free str mem**

Error level2

Not enough free store memory.

→ Increase the value set in System > Memory > Free store size (at least 2048 Kbytes).

**1531 Inc RAM disc**

Error level2

Not enough RAM disc.

→ Increase the value set in System > Memory > Ram disk size (at least 2048 Kbytes).

**1532 No Fixfont**

Error level2

No fixfonts in Flash.

→ Load fixfont.

**1533 No Speedo Font**

Error level2

No Speedo font in Flash.

→ Load speedo font.

**1534 ^XA missing**

Error level1

Command should be placed inside of ^XA...^XZ pair.

→ Modify the printjob.

**1535 ^XZ missing**

Error level1

Command should be placed outside of ^XA...^XZ pair.

→ Modify the printjob.

**1561 Wrong Font Format**

Format error in a Fixfont file.

→ Check font file.

**2000 Double var name**

Attempt to define a variable with an already existing name.

→ Choose another name for the variable.

**2002 Var. data length**

The maximum allowed length of a variable was exceeded.

→ Correct the variable length.

**2003 Expr. bracket**

The number of open and close brackets in the expression is not equal.

→ Check the brackets in the expression and correct their number.

**2004 Exp. quotemark**

The number of quotemarks in the expression is not a multiple of two.

→ Check the quotemarks in the expression and correct their number.

**2005 Exp. comma pos.**

Unexpected comma in the expression.

→ Check the syntax of the expression regarding commas.

**2006 Exp.functionname**

A wrong function name is used in the expression.

→ Check, if the function names used in the expression are spelled correctly and if the functions exist. Change the function name.

**2007 Exp.fct.paratype**

A wrong parameter type in an expression was detected.

Example: SubStr("Text",o,"A") would provoke this message, because "A" is not a number.

→ Check the expressions. Correct the wrong expression.

**2008 Exp.fct.paraCnt**

Wrong number of function parameters in the expression.

→ Check the expressions. Correct the wrong expression.

**2009 Exp. name wrong**

A not defined variable name is used in an expression.

→ Check the variable names. Correct the spelling if necessary or define a new variable.

**2010 Fct. para value**

The error is caused by the Easy Plug function chr(). The argument, which was assigned to the function, exceeds the admissible value range 0...255.

→ Change the argument (details see Easy Plug manual)

**2111 Invalid Date**

Invalid date specification in a string.

Example: Function call DayOfYear(„31“, „6“, „2005“) would produce this error message (because the date did not exist).

→ Correct the date specification.

See Easy Plug Manual, topic section "Description of commands", chapter "Easy Plug variables".

**3000/3003/3006/3012/3015 Com x Overrun**

Receive error at the RS232 interface COMx (x = [1...5]).

→ Acknowledge by pressing key 4.

**3001/3004/3007/3013/3016 Com x Parity**

Receive error at the RS232 interface COMx (x = [1...5]).

→ Acknowledge by pressing key 4.

→ Check parameter setting at printer and host.

**3002/3005/3008/3015/3017 Com x Frame**

Receive error at the RS232 interface COMx (x = [1...5]).

- Acknowledge by pressing key 4.
- Check parameter setting at printer and host.

**3010 Spooler Overflow**

Fault which is caused by a faulty handshake at an interface. The consequence is an overflowing data buffer at the printer, because the host doesn't stop to send data to the printer.

- Acknowledge by pressing key 4.
- Check the connections of the data line, especially the signal wires belonging to the handshake.
- Check the interface settings, especially the handshake settings.

**3011 Send buffer full**

The send buffer is full. This error may happen, if the printer status was requested several times (#!Xn), but the status reply was not read out.

- Make sure that the status reply is read out.

**5000 Bus device**

One of the devices connected to the I2C bus (e.g. output stage boards) does not respond. This message appears mostly first in a sequence of two or three status messages, which help to isolate the error source.

- Acknowledge by pressing key 4.
- Switch printer off and back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

**EXAMPLE:**

The parameter Options > Selection > Periph. device is set to "Cutter" without an output stage board for a cutter being installed. The following status messages appear one after another:

Status:	5000
Bus device	

Generally tells, that something went wrong with I2C bus communication

- Acknowledge the status message.

Status:	5005
Messer	

Either no output stage board is prepared to drive a cutter, or the I2C bus data cable is not connected to the output stage board (this message appears only in one of those two cases, alternative status messages see tab. 36)

- Acknowledge the status message.

Status:	5020
I2C Timeout 4	

Time limit exceeded without getting an answer from device no. 4 (4 = Cutter, see tab. 38) (alternative status messages see tab. 37)

- Acknowledge the status message

One of the following status messages may follow second:

Status	Missing output stage for the following device:
5005 Knife-fault	Cutter motor
5006 Head-fault	Print head liftmotor
5008 Ribbon end	Ribbon motor

[Tab. 36] Those status messages indicate, that the device is not connected to the I2C bus.

Third may follow one of the status messages listed below:

Status
5020 I2C Timeout xx
5021 I2C Conf. xx
5022 I2C Busy xx
5023 I2C LAB xx
5024 I2C BER xx
5025 I2C Polling xx

[Tab. 37] Status messages, which help to further locate the I2C bus error.

xx = Device ID of the concerned device (see tab. 38).

Nr	Device
0	CPU
4	Peripheral motor
8	Rewinder (internal)
15	I/O board
16	EEPROM
17	Realtime-clock

[Tab. 38] Assignment of device IDs as used in status messages related to the I2C bus.

### 5001 No gap found

No gap found or several blank labels fed.

- Acknowledge by pressing key 4.
- Check the print mask for gap definition (material length).
- Check whether the correct material has been inserted.
- Check that the photoelectric switch is clean.
- Check material feed and position of photoelectric switch.

### 5002 Material end

Material end. Material no longer in the gap LS.

1. Press key 4 in order to acknowledge the status report.
2. Insert material and check the position of the photoelectric switch, correct if necessary.
3. Press key 4. Processing of the job continues, gap is reinitialised.

### 5003 Lever open

The print head pressure lever was opened, during:

- the feeding of material or
- printing.

The error message is automatically acknowledged with the closing of the print head pressure lever.

→ Close the cover or print head lever respectively.

#### **5004 Rewinder mat. tear**

Label material at the backing paper rewinder is torn off.

(XLP 504 with rewinder) The backing paper sleeve was too large during material initialization; the backing paper web could not be tightened.

→ Acknowledge the status message.

→ Secure label material to the rewinder.

#### **5005 Knife-fault**

Faults at the cutter („Cutter 2000“ or „TCS“). The blade cannot move back into its home position.

→ Check, what prevents the blade from moving into its home position.

#### **5006 Head-fault**

Print head lifting malfunction (head sensor).

→ Check whether dirt is preventing the head contact lever from moving freely, if necessary clean.

→ If not successful, call Service.

#### **5008 Ribbon end**

When using direct thermal printing:

→ Check whether the parameter Print > Material > Foil mode. is set to "Thermal printing".

When using thermal transfer printing: The ribbon roll is exhausted.

→ Insert a new ribbon roll.

#### **5020 I2C Timeout xx**

Timeout error during communication via the I2C bus with the device xx (see tab. 38).

→ Switch printer off and then back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

#### **5021 I2C Conf. xx**

Confirmation error during communication via the I2C bus with the device xx (see tab. 38).

→ Switch printer off and then back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

#### **5022 I2C Busy xx**

Error during communication via the I2C bus with the device xx (see tab. 38). Device always reports that it is busy.

→ Switch printer off and then back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

#### **5023 I2C LAB xx**

Error during communication via the I2C bus with the device xx (see tab. 38).

→ Switch printer off and then back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

#### **5024 I2C BER xx**

Error during communication via the I2C bus with the device xx (see tab. 38).

→ Switch printer off and then back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

**5025 I2C Polling xx**

Polling error during communication via the I2C bus with the device xx (see tab. 38).

→ Switch printer off and then back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

**5026 Motorprotect CPU**

The motor driver board (output stage board) is overheated or defective.

→ Switch printer off and then back on again after 30 sec.

If the error message continues to appear:

→ Replace the motordriver board.

**5028 P.supplyoverheat**

The temperature inside of the power supply exceeded the admissible range.

→ Let the power supply cool down for some minutes.

**5029 I2C checksum xx**

During I2C communication with device xx occurred a checksum error.

xx = I2C device number (see tab. 38).

→ Switch printer off and then back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

**5059 Stacker fail**

At least one of the following incidents occurred at the optional cutter-stacker (TCS):

The stacker is full.

→ Clear the stacker.

The protection cover is open.

→ Close the cover.

There is no label material in the material inlet of the stacker.

→ Insert material or clear the material jam, if any.

**5061 Dispenser motor**

The output stage board for the dispenser motor is not present or defective.

→ Press key 4 to acknowledge.

→ Check the output stage board for the dispenser motor and eventually exchange it.

**5062 Disp. lift motor**

The output stage board for the dispenser lift motor is not present or defective.

→ Press key 4 to acknowledge.

→ Check the output stage board for the dispenser lift motor and eventually exchange it.

**5063 Lever open**

The print head lever is not closed. Opening the lever causes the immediate deletion of all potentially queued status messages (e. g. ribbon end) and display of the "Lever open" message. Closing the lever automatically acknowledges the status message.

→ Close the print head lever.

**5064 Rewinder full**

Happens with dispenser version printers: Shows up, when the diameter of the rewinded backing paper roll has become too large.

- Clear the rewinding mandrel.
- Press key 4 to acknowledge.

**5100 Printengine lock**

Printengine error (occurs only at devices with Gen. 3 electronics).

- Acknowledge by pressing key 4.
- Switch device off and on again.

If the message continues to appear:

- Contact service technician.

**5101 Headadjust error**

Error during the running of the "Head Alignment" service function.

- Acknowledge by pressing key 4.
- Contact service technician.

**5110 Foil low**

The diameter of the foil roll fell below the set warning diameter (see System > Print > Foil end warning).

The message is caused by a foil warning in addition with the following setting: System > Print > Foil warn stop. = „On“

- Acknowledge by pressing key 4.

**5200 Home position**

The applicator did not reach its home position within the given time frame.

- May the applicator move unhindered? – remove any obstacles.

**5201 Touch down**

The applicator did not reach its touch down position within the given time frame.

- Check if any product to be labeled was present at all, respectively if the applicator hit the product.
- Check, if the sensor cable(s) is/are connected properly
- Check, if the sensor(s) is/are soiled.
- Check, if the sensor(s) is/are defective.

**5203 Touch down sens.**

Der (die) Touchdown-Sensor(en) wurde(n) bereits vor dem Applizievorgang betätigt.

- May the applicator move unhindered? – remove any obstacles.
- Check, if the sensor cable(s) is/are connected properly
- Check, if the sensor(s) is/are soiled.
- Check, if the sensor(s) is/are defective.

**5222 V x for int. rewinder required**

The installed firmware version of the BLDC output stage doesn't match the installed printer firmware.

Firmware version of the BLDC output stage is *too low*:

- Acknowledge the status message; update firmware to the indicated version.

Firmware version of the BLDC output stage is *too high*:

→ The status message will get automatically acknowledged after a few seconds; the firmware version doesn't have to be changed (because it's backward compatible).

#### **5223 V x for int. peripheral driver required**

The installed firmware version of the output stage for peripheral devices doesn't match the installed printer firmware.

Firmware version of the output stage for peripheral devices is *too low*:

→ Acknowledge the status message; update firmware to the indicated version.

Firmware version of the output stage for peripheral devices is *too high*:

→ The status message will get automatically acknowledged after a few seconds; the firmware version doesn't have to be changed (because it's backward compatible).

#### **5300 BLDC EEPROM err.**

General EEPROM read/write error on the BLDC driver board (XLP 504 with internal rewinder).

→ Switch printer off and then on again after 30 seconds. If the status message continues to appear, change the BLDC board.

#### **5301 BLDC rewinder Ø**

The stored rewinder diameter exceeds the admissible range (XLP 504 with internal rewinder).

→ Acknowledge the status message.

→ Switch to offline mode and feed the label web for approx. 200 mm. This re-initializes the rewinder diameter.

→ If the printer is switched off and on again without prior initialization, the status message will be displayed again.

#### **5500 Unknown**

General software error, read chapter [General software errors](#) on page 180.

#### **5501 General**

General software error, read chapter [General software errors](#) on page 180.

#### **5590 Odd hex string**

A character string was sent to the transponder (Easy Plug command #RFS) and was ought to be interpreted hexadecimal (use #RFS with parameter "B"). For this, the character string must consist of an equal number of characters. This was not the case, what triggered this error message.

→ Send an equal number of characters.

#### **5600 Job without #Q**

The print job misses the declaration of the print amount (Easy Plug command #Q).

→ Insert a #Q command with the print amount.

#### **5601 Job memory full**

The job memory for Easy Plug printjobs is full.

→ Reduce the reserved memory for one or more of the following memory areas:

- Free store size (System > Memory > Free store size)
- RAM disk size (System > Memory > Ram disk size)
- Font download size (System > Memory > Font downl. area)

→ If there are already some printjobs in the printer queue: wait until those are processed.

#### **6000 Param. incorrect**

Novram check sum error.

→ Check the setting of the print head resistance (parameter System >Hardware Setup > Head resistance) , before you press key 4 – possibly the value is faulty.

→ Confirm error by pressing key 4. All parameters are set back to the factory settings.

#### **6001 Nov. prog. err.**

Error during allocation of main memory.

→ Switch printer off and then back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

#### **6002 New prog. vers.**

Occurs after firmware update. The printer hereby reports that new firmware is available.

→ Confirm by pressing key 4. All parameters are set back to the factory settings.

#### **6003 Memory error**

Error during partitioning of the main memory.

→ Switch printer off and back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

#### **6005 Fixfont data**

Defective fixfonts.

→ Load the firmware new.

Refer to chapter [Updating firmware](#) on page 230.

#### **6006 Speedofont data**

Defective speedo fonts.

→ Load the firmware new.

Refer to chapter [Updating firmware](#) on page 230.

#### **6007 Print ctrl. stop**

The print control doesn't start, what means that the printer doesn't finish the initialization phase after switching it on.

→ Read in the service manual, what to do:

Refer to chapter [Updating firmware](#) on page 230.

#### **6008 ZPL Fixfont data**

Defective fixfonts.

→ Load the firmware new.

Refer to chapter [Updating firmware](#) on page 230.

#### **6009 ZPL Speedo data**

Defective speedo fonts.

→ Load the firmware new.

Refer to chapter [Updating firmware](#) on page 230.

**6010 Printengine soft**

General software error, read chapter [General software errors](#) on page 180.

**6030 Param. checksum**

Wrong parameter checksum.

→ None. The message is merely informativ.

**6031 New Parameters**

By loading a new firmware version, some new parameters have been added to the parameter menu.

→ None. The message is merely informativ.

**6101 No sensor found**

Error during the running of the "Sensor Test" service function.

→ Acknowledge by pressing key 4.

→ Contact service technician.

**6200 Filesystem regis**

General software error, read chapter [General software errors](#) on page 180.

**6201 File sys. format**

Error during formatting of the RAM disk or the memory card.

**6202 Drive open**

Accessing the memory card failed.

→ Format the memory card using the PC card drive. Try again to write onto the card.

→ Try another memory card.

**6203 Filesystem close**

Accessing the memory card failed.

→ Format the memory card using the PC card drive. Try again to write onto the card.

→ Try another memory card.

**6204 Disk directory**

Work directory cannot be opened.

→ Acknowledge by pressing key 4.

→ Check designation existence of the work directory.

**6205 Write disk**

Error during writing on RAM disk or memory card.

→ Acknowledge by pressing key 4.

**6206 Read disk**

Error during reading from RAM disk or memory card.

→ Acknowledge by pressing key 4.

**6207 No file card**

No memory card found.

- Acknowledge by pressing key 4.
- Check, if a memory card is inserted.
- If the memory card was inserted after switching on the printer: switch the printer off and on again.

#### **6208 Drive xx full**

Writing on drive xx failed, because there is not enough free space.

- Acknowledge by pressing key 4.
- Free space on the drive.

#### **6300 Out of memory**

Not enough free memory available, to load additional print jobs. The job buffer is completely filled with print jobs.

- Delete spooler using the parameter SPECIAL FUNCTION > Delete spooler.

#### **6301 Incomplete job**

The Easy Plug interpreter failed interpreting a certain print job to the end. The print job has possibly not been terminated by a #Q-command.

- Check, if the print job is properly terminated with #Q.

#### **6310 Centr. Timeout**

The Easy Plug command #!Xn triggers a status acknowledgement via centronics Interface. But the PC doesn't pick up the supplied data.

- Check the data line connecting printer and PC.

#### **6311 Centr. Timeout**

The Easy Plug command #!Xn triggers a status acknowledgement via centronics Interface. But the PC doesn't pick up the supplied data.

- Check the data line connecting printer and PC.

#### **8001 Shared Memory**

General software error, read chapter [General software errors](#) on page 180.

#### **8002 Stream Buffer**

General software error, read chapter [General software errors](#) on page 180.

#### **8103 TrueDoc Font**

Error: font with the number given is not contained in the system.

- Check font no., if necessary select another font.

#### **8104 Speedo alloc**

Fault while initializing the speedo fonts.

- Load firmware new.

Refer to chapter [Updating firmware](#) on page 230.

#### **8105 Load TrueType**

Damaged font file.

- Reload font file, if necessary select another font.

**8106 Fonttype wrong**

General software error, read chapter [General software errors](#) on page 180.

**8107 Character set**

General software error, read chapter [General software errors](#) on page 180.

**8108 Symbol set**

General software error, read chapter [General software errors](#) on page 180.

**8109 TT-specifications**

General software error, read chapter [General software errors](#) on page 180.

**8110 Unknown char.**

Character is not included in the character set (character set does not support all characters).

→ Select another character / character set.

**8111 Stream type**

General software error, read chapter [General software errors](#) on page 180.

**8112 Font not supp.**

The applied Truetype font is not supported by the system. Text, which uses this font, is ignored.

→ Use another Truetype font.

**8200 Fixfont number**

Incorrect fix font no.

→ Check fix font no., alter if necessary.

**8201 Font downl. full**

The font download buffer is full.

→ Allocate more memory for the download buffer using the parameter System > Memory > Font downl. area.

→ Rename some speedo-fonts on the CompactFlash-Card, you actually don't use. All speedo-fonts named fontxxx.spd (xxx = font no.) are being loaded into the font download buffer while system startup.

For Details refer to the manual „Cards“, subject section „Using cards“, paragraph „memory card“.

**8202 Font deleted**

Attempt to access a font, which is no longer available on memory card or on RAM disk (font was deleted or renamed).

→ Check the label layout. Load the not available font or use another, available, font.

**8300 Bar code corr.**

Error: a bar code correction factor greater than +/- 25% has been selected.

→ Reduce correction factor.

**8301 Bar code data**

Incorrect bar code data. The bar code data is not permitted for the selected bar code type.

→ Use data permitted for the bar code type.

**8302 Barcode checksum**

Error during calculation of the bar code check sum.

→ Check transmitted data.

→ If the error continues to occur please contact the manufacturer. Send the transmitted Easy Plug data.

**8303 Bar code sample**

Error during calculation of the bar code sample.

→ Check whether the transmitted data is permitted for the bar code type; if necessary alter the data.

**8304 Bar c. plain-copy**

Error during integration of the plain-copy line in the bar code sample.

→ Check whether the transmitted data is permitted for the bar code type; if necessary alter the data.

**8305 Bar code print**

Error during calculation of the bar code print image.

→ Acknowledge by pressing key 4.

→ Check whether the transmitted data is permitted for the bar code type; if necessary alter the data.

**8306 Plain-copy len.**

Illegal: bar code plain-copy line has more than 300 characters.

→ Reduce line length.

**8307 Readline dist.**

General software error, read chapter [General software errors](#) on page 180.

**8308 Bar code ratio**

Illegal bar code ratio.

→ Select another ratio.

**8309 Module range**

Maximum range of the bar code module exceeded.

→ Reduce module range.

**8310 Bar code element**

Bar code element exceeds the maximum permitted size of 253 dots (21 mm).

→ Reduce size of the bar code element.

**8311 Barcode table**

General software error, read chapter [General software errors](#) on page 180.

**8400 PDF417 ECC**

Bar code PDF417: incorrect ECC level (Error Correction Level).

→ Alter ECC level.

**8401 PDF417 Lines**

Bar code PDF417: illegal number of lines.

→ Alter number of lines.

**8402 PDF417 Columns**

Bar code PDF417: illegal number of columns.

→ Alter number of columns.

**8403 PDF417 Style**

Bar code PDF417: incorrect style.

→ Alter style.

**8404 PDF417 Command**

Bar code PDF417: incorrect command.

→ Acknowledge by pressing the on-line button.

→ Check and alter commands.

**8405 PDF417 Size**

Bar code PDF417: incorrect size.

→ Alter size.

**8406 PDF417 Details**

Bar code PDF417: incorrect details.

→ Alter details.

**8407 PDF417 Coding**

Bar code PDF417: coding error.

→ Acknowledge by pressing key 4.

**8500 Code 25Int len.**

Bar code Code 25 Interleaved: input line too long.

→ Shorten input line.

**8501 Postcode length**

Bar code postcode: illegal data length.

→ Check length of the transmitted data and set it to the permitted length.

**8600 EAN Length**

Bar code EAN: illegal data length.

→ Check length of the transmitted data and set it to the permitted length.

**8601 UPCE Numbers sys.**

Error: First data character of the transmitted data is not 0 or 1.

→ Alter first data character to 0 or 1.

**8705 IDM rows/columns**

The input data does not match the given matrix or the number of rows/columns is invalid.

→ Change the number of rows/columns or the input data.

**8760 EAN128 field len**

The number of data after a data identifier does not correspond to the definition for this data identifier.

→ Change the number of data.

**8761 EAN128 Data type**

The data type (alphanumeric, numeric) after a data identifier does not correspond to the definition for this data identifier.

→ Change the data type.

**8762 EAN128 Ident.**

Invalid data identifier.

→ Change the data identifier.

**8800 Maxicode Mode**

Maxicode: faulty mode

→ Change mode.

**8801 Maxicode Sys no**

Maxicode: incorrect system no.

→ Correct system no.

**8802 Maxicode Zipcode**

Maxicode: incorrect zipcode.

→ Correct zipcode.

**8803 Maxicode Class**

Maxicode: faulty class code.

→ Correct class code.

**8804 Maxi. Sec. mess.**

Maxicode: secondary message has an illegal length.

→ Correct length of secondary message.

**8805 Maxicode Country**

Maxicode: faulty country code.

→ Correct country code.

**8830 Cod49 Datalength**

The user data string is too long. Not all characters can be coded in the bar code. The bar code is not printed.

→ Shorten the data string.

**8031 Cod49 wrong data**

The data string contains wrong characters. The bar code is not printed.

→ Correct the content of the data string.

**8850 Unknown filetype**

Graphic files with the extention declared in the Easy Plug command #YG are not supported.

→ Transform the graphics file into another file format or use another graphic in a supported format. Check, if the spelling of the file extension is correct.

#### **8851 Graphic open**

The graphics file declared in the Easy Plug #YG command cannot be found on the compactflash card. Possible reasons are:

- Path and/or designation of the graphics file stored on the compactflash card doesn't match the path and/or designation declared by the #YG command.
  - The file is not available on the compactflash card.
- Check if the spelling of the graphics file is the same both in the #YG command and on the compactflash card.

#### **8852 Graphic header**

A graphics file declared by a Easy Plug #YG command should be proceeded. The file header doesn't match the file.

→ The graphics file is possibly faulty. Check the file and replace it if necessary.

#### **8853 Graphic palette**

A graphics file declared by a Easy Plug #YG command should be proceeded. Error reading the graphics palette.

→ The graphics file is possibly faulty. Check the file and replace it if necessary.

#### **8854 Graphic read**

A graphics file declared by a Easy Plug #YG command should be proceeded. Error reading the file.

→ The graphics file is possibly faulty. Check the file and replace it if necessary.

#### **8856 Free store size**

By setting parameter System > Memory > Free store size, a part of the memory is reserved, which the printer firmware can use if necessary (dynamic memory allocation). If this memory area is dimensioned too small, the printer firmware can not work and this error message shows up. One cause may for example be, that data are supposed to be loaded, whose size exceeds the reserved memory (e. g. graphics).

→ Enlarging the reserved memory partition, that is increasing the value of System > Memory > Free store size.

#### **8857 Wrong mem config**

Wrong memory configuration

Too much memory requested by parameters. The following parameters request more or less memory:

- System > Memory > Ram disk size
- System > Memory > Font downl. area
- System > Memory > Free store size
- The fault occurs, if the sum of requested memory space exceeds the amount of available memory.

After error confirmation, the relevant parameters are set back to their default values. Furthermore, a restart is triggered.

→ Change the settings of the relevant parameters.

**8900 Codablock columns**

Bar code Codablock: illegal number of columns.

→ Correct number of columns.

**8901 Codablock rows**

Bar code Codablock: illegal number of rows.

→ Correct number of rows.

**8902 Codablock softw.**

General software error, read chapter [General software errors](#) on page 180

**8903 Codablock infogr**

Bar code Codablock: info not in line.

→

**8950 Logo open**

Failure when attempting to read a logo, which has previously been copied on RAM disk or on memory card (thus using Easy Plug command #DK).

→ Repeat loading the logo via #DK command.

→ In cases of continuous occurrence of this error, please contact the technical support.

**8951 File format**

General software error, read chapter [General software errors](#) on page 180.

**8952 Not installed**

General software error, read chapter [General software errors](#) on page 180.

**9000 Wrong errornum**

General software error, read chapter [General software errors](#) on page 180.

**9001 Software Error**

General software error, read chapter [General software errors](#) on page 180.

**9005 No print head**

Print head could not be detected. Possible causes:

- Print head cable not connected
- Wrong print head type
- Defective print head cable
- Defective CPU board
- Print head cable plugged into wrong connector on the CPU board

→ Check print head cable, print head and CPU board and replace defective parts.

**9007 Bad MAC Address**

This error message is displayed, if an invalid MAC address is programmed to the CPU board. Valid means, the MAC address matches the range *00.0a.44.xx.xx.xx*, which is reserved for NOVEXX Solutions.

In this case, the network will not be initialised. To enable work with the network, a valid MAC address must be programmed on the board. This can only be done by an authorized service technician or by the manufacturer.

- Acknowledge the status message by pressing key 4. The printer will be starting, but cannot be used with a network.
- Contact the technical support for a new programming of the board's MAC address.
- If a new programming is not possible, exchange the CPU board.

### **9008 Powerfail signal**

"Powerfail" is a signal at the power supply, which is normally activated for a short time, after the printer has been switched off. It triggers the storing of parameter settings and counter values, using the leftover of supply voltage.

The powerfail signal is already active after switching the printer on. The following causes are possible:

- Defektive power supply
- Defektive data cable
- Defektive board

- Switch the printer off and on again. If the error occurs repeatedly:
- Check the hardware (see above).

After acknowledging the message (pressing key 4), the printer works normal. But be aware that the powerfail signal is deactivated, what means, that no parameter settings and counter values are stored, when the printer is switched off.

### **9009 Temporary MAC**

Temporary MAC address.

This error message is displayed, if the MAC address has the value *00.0a.44.00.00.00*. This MAC address is used only during production.

- Acknowledge the status message by pressing key 4. The printer will be starting and the network can be used.
- Contact the technical support for a new programming of the board's MAC address.
- If a new programming is not possible, exchange the CPU board.

### **9011 Load firmware for x**

At least one external device has no valid (e.g. an incomplete) application program loaded. This is the reason, why the device remains in the bootloading status and signalizes this status message. „x“ can be one of the following module names:

- Feed driver
- Peripheraldriver
- Intern. rewinder

- Load a valid application program.

### **9013 Head voltage**

Faulty 5 V print head supply voltage. Possible causes are:

- Print head was connected to the wrong connector on the CPU board.
- Short circuit, possibly is the print head defective.

- Check if the print head is connected to the correct connector on the CPU board. Change the connector, if necessary.

→ Replace the print head

#### **9014 Motor voltage**

Faulty 45 V motor supply voltage. A possible cause is a short circuit, that is the print head is defective.

- Print head was connected to the wrong connector on the CPU board.
- Short circuit, possibly is the print head defective.

→ Check if the print head is connected to the correct connector on the CPU board. Change the connector, if necessary.

→ Replace the print head

#### **9015 Network init.**

Error during the network initialization.

→ Contact your network administrator.

#### **9016 DHCP Failed**

DHCP failed. This may happen, if parameter Print interface > Network > IP Address assign is set to *DHCP*, but no IP-address can be drawn.

→ Contact your network administrator.

#### **9017 RTC read failed**

Error, while trying to read the realtime clock (RTC). Happens, if an Easy Plug command to read out the RTC is sent, but no RTC is built in.

→ Check, if the printer is supplied with a RTC. To do so, print a status printout (Info > Status Printouts > Printer Status).

You find the actual date on the printout, below the header „Systemversion“, if a RTC is installed.

→ Check, if the error occurs repeatedly or sometimes.

→ If it occurs repeatedly: Replace the CPU board.

If the error occurs sometimes, please refer to chapter [General software errors](#) on page 180.

#### **9018 #!CA wrong Pos.**

The #!CA command is placed at an inadmissible position – the Easy Plug interpreter can not proceed the command at this position (e. g. during the loading of files onto a memory card).

→ Call the #!CA command at an admissible position.

#### **9022 No network link**

This message can only occur, if the Ethernet address assign is set to DHCP. The cause is nearly always a badly connected network connector.

→ Check, if the network connector is plugged in properly.

#### **9023 Filename: Functionname() Line: xxx**

This status message indicates a software error. The error source is located in the source file “Filename” in function “Functionname()” in line xxx.

→ Switch device off and on again.

If the error occurs repeatedly:

→ Contact the manufacturer.

When doing so, it is important to be able to reproduce the error. Gather the following informations before calling the technical support of the manufacturer:

- Displayed information about the error source
- Label layout, logfiles, etc. as described in chapter [Unspecific errors](#) on page 180

**9024 Not possible !**

Detecting the material length (a function, which is normally used with MLI) is not possible, because a printjob is currently processed.

→ Retry as soon as the printjob is processed.

**9030 Log file:CF full**

An attempt to store data on the memory card was not successful, because of a full card.

→ Clear some storage space on the memory card, or

→ Insert an empty memory card.

**9031 Log file: nnnn**

File access error. nnnn = error code of the operating system.

→ Repeat the operation, which led to this message. If it comes to this message repeatedly, send a message to the Technical Support, including the error code.

**9032 EP file log stop**

Internal error during Easy Plug file logging (Tools > Diagnostic > EasyPl. file log).

→ Repeat operation. If the error occurs repeatedly: switch off the file logging.

Use parameter Tools > Diagnostic > EasyPl. file log only for error analysis purposes. Using the parameter in continous operation can cause error messages, which are hard to understand.

**9034 Use min 16MB RAM**

The printer has not enough RAM. The applied firmware version needs at least 16 MB RAM for faultless operation.

→ Extend the printers RAM.

**9035 No printpr. stop**

This status message may appear during the loading of new firmware onto the H8 (64 Bit) or onto boards, which are connected to the H8 (e.g. Applikator Interface).

→ Switch the printer off and on again and retry the firmware loading.

**9039 Ribbon mode chg.**

The ribbon mode was changed between two consecutive printjobs via Easy Plug command (from thermal transfer to thermo or vice-versa).

→ Check the ribbon mode setting and, if necessary, change the setting (Print > Material > Foil mode).

**9040 No Time Server**

Comes up one times at startup, if Print interface > Network > Services > Time client is set to "On" and there is no response from the set time server.

→ Check the time server availability respectively the time server settings.

**9100 Invalid format**

Occurs during a download. The sent data is faulty, e. g. regarding an

- invalid data format
- invalid check sum
- invalid address

- invalid record type

→ Switch printer off and on again. Check the download data.

#### **9101 Invalid Header**

Occurs during a download. The sent files have a format error in the header.

→ Switch printer off and on again. Check the download data.

#### **9102 Inv. Board Rev.**

Occurs during a firmware download. The sent firmware does not match the version of the CPU board.

→ Switch printer off and on again. Check the download data.

#### **9103 Inval. firmware**

Occurs during a firmware download. The sent firmware does not match the installed CPU board.

→ Switch printer off and on again. Check the firmware file.

#### **9104 Inv. Data Size**

Occurs during a download. The size of the sent data doesn't match the file size indicated in the header.

→ Switch printer off and on again. Check the download data.

#### **9107 Flash Overflow**

Occurs during a download. The flash memory on the CPU board is full. No more data can be loaded.

→ Switch printer off and on again.

#### **9108 Flash Ovf. Diag.**

Occurs during a download. The flash memory on the CPU board has not enough free memory space left for diagnose data.

→ Delete data blocks in the flash memory or reduce max. size of the diagnose data.

#### **9109 Flash Ovf. Params.**

Occurs during a download. The flash memory on the CPU board has not enough free memory space left to store the current parameter settings.

After a restart, the parameters are set to "Factory setting".

→ Delete data blocks in the flash memory.

#### **9110 Flash Write Err.**

Occurs during a download. The flash memory can't be accessed for writing.

→ Switch printer off and on again.

#### **9111 PIC Update Fail.**

Occurs during a firmware update or a PIC-controlled device, if the update failed.

→ Switch printer off and on again.

#### **9112 PIC missing**

Occurs during a firmware update of a PIC-controlled device, if no such device was found.

→ Check the configuration.

The status message is cancelled automatically. The download continues.

#### **9113 RFID Update Fail.**

Occurs during a firmware update of a RFID module, if the update failed.

→ Switch printer off and on again.

#### **9114 RFID missing**

Occurs during a firmware update of a RFID module, if no such device was found.

→ Check the configuration.

The status message is cancelled automatically. The download continues.

#### **9115 AWID missing**

Occurs during a firmware update of an AWID RFID module, if a RFID module of another manufacturer was found.

→ Check the configuration.

The status message is cancelled automatically. The download continues.

#### **9116 Ser. Disp. Missing**

Occurs during a firmware update of a serial operation panel, if no such device was found.

→ Check the configuration.

The status message is cancelled automatically. The download continues.

#### **9117 Device Unknown**

Occurs during a firmware update, if the device information in the header is missing.

→ Switch printer off and on again. Check the configuration.

#### **9118 H8 Update Fail.**

The update of a H8 device failed.

→ Switch printer off and on again.

#### **9119 H8 missing**

Occurs during a firmware update of a H8 device, if no such device was found.

→ Check the configuration.

The status message is cancelled automatically. The download continues.

#### **9122 Checksum error**

Checksum error while loading a firmware file. The checksum of the loaded data doesn't match the calculated checksum.

→ Repeat the download.

→ If the error continues to occur, the file is probably damaged or corrupted. Check/ exchange the firmware file.

#### **9123 Memory unavailable**

Error while loading a firmware file. There is not enough free memory available.

→ Restart machine and repeat the download.

→ If the error continues to occur: Reduce the memory which is assigned by the following parameters:

- System > Memory > Ram disk size

- System > Memory > Font downl. area
- System > Memory > Free store size

## FAULT LOCATION

### Notes about fault location

Status reports should be printed to check the mechanical and electronic function capabilities – provided that no obvious no defectives are evident.

### Data transmission

Problem	Possible cause	Solution
No or damaged data	Faulty data cable	Check, if the right data cable is applied
	Wrong interface selected	Check, if parameter Interface > Print interface is set correctly
	Setting of transmission parameters incorrect	Check, if the transmission parameters for the selected interface are set correctly (Menu Interface)
	Faulty pin assignment of the data cable	Change or replace data cable. The pin assignment of the interfaces can be found in chapter <a href="#">Connections</a> on page 68.
	Incorrect handshake signals	Check parameter setting (only for serial interface)
	Selection	Select standard character set
	CPU board defective	Check and if necessary replace CPU board
	Permitted cable length exceeded	Do not exceed cable length

[Tab. 39] Possible faults caused by data transmission

### Display

Problem	Possible cause	Solution
Display dark	Plug connector loose	Check and if necessary plug in again
	Display defective	Check and if necessary replace display
	CPU board defective	Check and if necessary replace mainboard
Button function faulty	Plug connector loose	Check and if necessary plug in again
	Buttons defective	Check and if necessary replace buttons or display board
	CPU board defective	Check and if necessary replace mainboard

[Tab. 40] Possible faults at the display

### Gap detection

Problem	Possible cause	Solution
Gap detection not possible	Photoelectric switch defective	Check with Tools > Test > Sensor Test, if necessary replace the photoelectric switch
	Photoelectric switches set incorrectly	Use parameter Print > Material > Punch level to change the threshold value of the photoelectric switch
	False photoelectric switch selected	Select "Punched" or "Reflex" using the parameter Print > Material > Label sens. type

[Tab. 41] Possible faults caused by the gap detection

Problem	Possible cause	Solution
Print position shifted in or against print direction	Gap position not recognised consistently due to gap contour	Correct photoelectric switch zero line using parameter Print > Material > Punch offset

[Tab. 41] Possible faults caused by the gap detection

## Material transport

Problem	Possible cause	Solution
Material guide (green part) loosens	Friction is set to low	Modify the setting. Instruction see chapter <a href="#">Adjusting the friction of the material guide</a> on page 43
No feed function	Stepper motor plug loose	Check and if necessary plug in
	Stepper motor defective	Check and if necessary replace motor
	CPU board defective	Check and if necessary replace mainboard
	Feed button defective	Check and if necessary replace display board
Jolted print image	Material unwinder blocked	Check and if necessary loosen
Material shifts	Material guide set incorrectly	Check and if necessary set

[Tab. 42] Possible faults caused by material transport

## Ribbon, ribbon guide

Problem	Possible cause	Solution
Unfounded ribbon end message	Ribbon unwind mandrel is not turned	Fix core to mandrel (spring plate), shift spring plate if the thread has stripped.
	Photoelectric switch defective	Check and if necessary replace (see also parameter Tools > Test > Sensor Test)
Ribbon produces folds	Ribbon guiding plate at the print head adjusted incorrectly	Check and readjust positioning of the guiding plate
Ribbon is not being rolled up	Ribbon core slips through	Fix core to mandrel (spring plate), shift spring plate if the thread has stripped.
	Toothed belt defective	Check and if necessary replace the belt
Ribbon tears during printing process	Print head temperature is too high	Check setting of print contrast (press Prog. button in on-line mode or parameter Print > Print contrast) and if necessary correct.

[Tab. 43] Possible faults caused by the ribbon guiding

## Print roller

Problem	Possible cause	Solution
Wear	High running performance	Replace roller
	Print head pressure too high	Check and if necessary correct
	Material deposits	Clean the roller
Ink residue	Ribbon prints directly on feed roller	Clean and prevent direct printing on roller

[Tab. 44] Possible faults caused by the Print roller

Problem	Possible cause	Solution
Deformation	Printing directly on roller	Use sufficient wide material/foil
	High running performance	Replace roller
	Power setting too high for print head	Check print contrast setting (press Prog. button in on-line mode or parameter Print > Print contrast) and if necessary correct.
	Damage by operator	Replace roller and draw attention to proper care

[Tab. 44] Possible faults caused by the Print roller

## Position of the print image

Problem	Possible cause	Solution
Print position shifted in or against print direction	Incorrect parameter setting	Check parameter Print > Y - Printadjust or Easy Plug command (#Jx), if necessary correct
	Gap position is recognised incorrectly due to gap contour	Correct sensor zero line with parameter Print > Material > Punch offset
	Material unrolling blocked or too sluggish	Check and if necessary correct
	Material guide set too narrowly	Check and if necessary set
	Pressure rollers positioned incorrectly or not at all	Check and if necessary set
Print shifted at right angles to document	Material guide not set correctly	Check and if necessary set

[Tab. 45] Unsatisfactory print position and the possible reasons.

## Print quality

Problem	Possible cause	Solution
Print faded	Print head dirty or defective	Clean or replace thermal bar. ► Clean print head regularly to ensure optimal print head condition. It is recommended this is done when replacing the roll of foil using cleaning paper (article number 5030).
	Print head setting incorrect	Check settings (e.g. print contrast, print head resistance) and alter if necessary
	Ribbon and material not aligned	Check ribbon type and material type, if nec. alter
	Ribbon possibly superimposed	Insert new ribbon
Poor or uneven print	Print roller damaged or soiled	Check and if necessary clean or replace roller

[Tab. 46] Unsatisfactory print quality and the possible reasons

Problem	Possible cause	Solution
Feed in order but no print image	Print head setting too low	Check setting print contrast (press Prog. button in on-line mode or parameter Print > Print contrast) and if nec. correct.
	Ribbon inserted incorrectly (colour side)	Check and if necessary correct
	Print head not fixed to bracket	Fix thumb screw
	Print head defective	Check print head and if necessary replace it
	Print head cable not or incorrectly plugged in	Check and if necessary plug in again
	CPU board defective	Check and if necessary replace mainboard

[Tab. 46] Unsatisfactory print quality and the possible reasons

## External memory media

Problem	Possible cause	Solution
External memory medium is not recognised	Contacts dirty	Check and if necessary replace
	Memory medium is defective	Check and if necessary replace
	Memory medium type is not approved	Check and if necessary replace

[Tab. 47] Possible problems with plug-in cards

## Cut function, cutter

Problem	Possible cause	Solution
No cutter function	Connector loose	Plug in connector firmly.
	Cutter function not activated	Select and activate "Cutter" setting for parameter Options > Selection > Periph. device
	Photoelectric switch defective	Check and if necessary replace switch
	Stepper motor or output stage board defective	Check and if necessary replace
Material is only partially cut or not cut at all	Setting of cutter position	Check photoelectric switch or position of oscillator disc and if necessary correct
	Cutter blunt or dirty	Check and if necessary clean or replace
	Material problem	Only use approved materials
Cut next to recognised gap	Gap detection	Check setting for parameter Options > Cutter > Cut position and if necessary correct the setting
Cut offset to impression	Cutter position incorrect	Check and if necessary set
Material moves above or under cutter	Unwinding too sluggish, roll weighs too much	Check and if necessary correct
Cutter cuts twice	Double cut programmed	Check setting of cut function (Parameter Options > Cutter > Double cut)

[Tab. 48] Problems possibly caused by a cutter (if mounted).

## FAULT CORRECTION

### Start with deactivated motion control

It may happen that the printer doesn't start up properly, but shows a never ending sequence of status messages. Possible causes are:

- Defective component of motion control
- Setup file that doesn't match the printer

*Example:* A setup file for the dispenser version of a printer was loaded into a standard printer. Hereupon, the motion control keeps on looking for components (motors, sensors), that are not available, without ever finding any.

*Cure:*

Start the printer without motion control. To do so, proceed as follows:

1. Switch on the printer and keep the keys 1 + 3 + 4 pressed, until the printer type is displayed.  
Display:

```
Status num: 6007
Print error
Print ctrl. stop
```

2. Acknowledge the status message.

The printer is ready now, but without motion control.

3. Correct the faulty parameter setting (e. g. change printer type from dispenser to standard).
4. If not done automatically: Restart the printer.

### Parameter Clear

Some error scenarios require to delete the machine specific settings in the parameter menu. Afterwards, the printer starts with those parameter values that are stored as factory settings.

*Procedure:*

1. Start the printer in bootloader mode. To do so, keep keys 1 + 4 pressed while switching the printer on. Display:

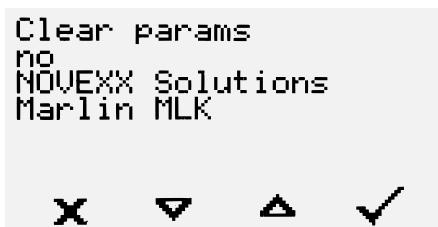
```
BootLoader V3.90
 115KB, 8N1
 NOVEXX Solutions
 Marlin MLK
```

2. Press key . Display:

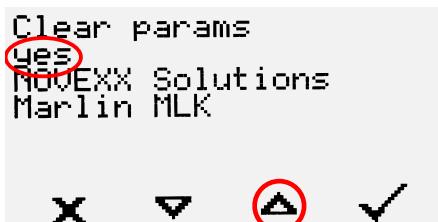
```
LOADER FUNCTIONS
Clear params
NOVEXX Solutions
Marlin MLK
```



3. Press key ✓. Display:



4. Press key △, to toggle the display text to „yes“:



5. Press key ✓.

# READING OUT DIAGNOSTIC DATA

## General notes

For diagnosis purpose, the printer offers the possibility to generate diagnosis data and to store it in the internal flash memory. This way, the last device internal communication can be captured and analysed (comparable to the black box in an airplane). The function is very helpful to detect the cause of malfunctions.

DD = diagnosis dump

■■■ The flash memory can keep 2-3 DDs stored. If additional DDs are stored, older ones will drop out of memory.

■■■ DDs stay in the flash memory, even if the printer is switched off.

## Storing diagnosis data

### Automatically

DDs are stored *automatically*, if the printer got in an undefined state. This happened for example, if...

- printing suddenly stops.
- the status message „unmanaged interrupt“ appears on the display.
- the printer suddenly doesn't react on keystrokes any more.

### Manually

DDs can be stored manually at any time during normal operation:

→ Press all 4 keys on the operation panel simultaneously.

### Generating a log file

To be able to have a look at the diagnosis data for fault analysis, the data has to be stored into a text file (log file)

There are two ways of storing the log file:

- Reading out via the serial interface and storing it on the host PC, see chapter [Reading out via serial interface](#) on page 226.
- Storing on memory medium, see chapter [Storing on memory card](#) on page 228.

■■■ Alternatively, the log file can be read out using another than the serial interface or using the debug interface, see Easy Plug manual, #!XM command.

## Reading out via serial interface

### Prerequisites

Terminal program, e. g. „Hyperterminal“ (is delivered with Windows operating systems).

### Procedure

1. Connect the printing device to a PC, using the serial interface. Set the transfer parameters to 115 kB, n, 8, 1 (default setting).
2. Start Hyperterminal.

The window „Connection Description“ [160] opens.



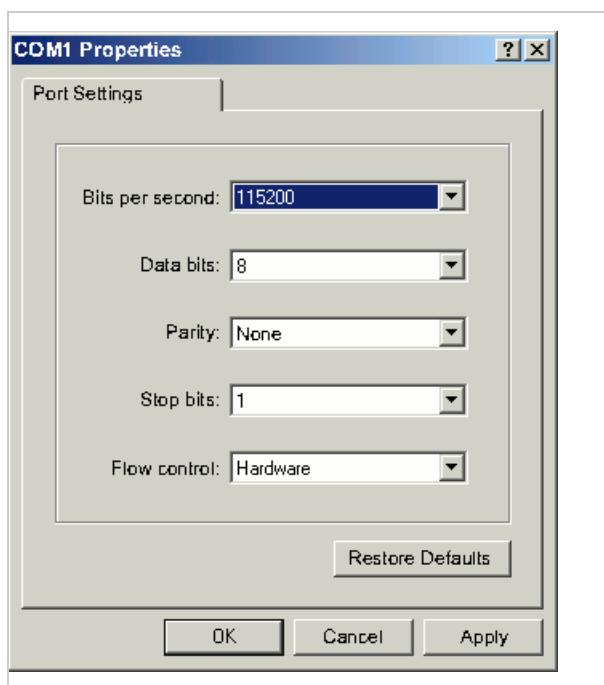
[160] Enter a name (A) for the new connection.

3. Name the new connection [160A]. Click OK.

The window „Connect“ opens.

4. Select the serial port of the PC and click OK.

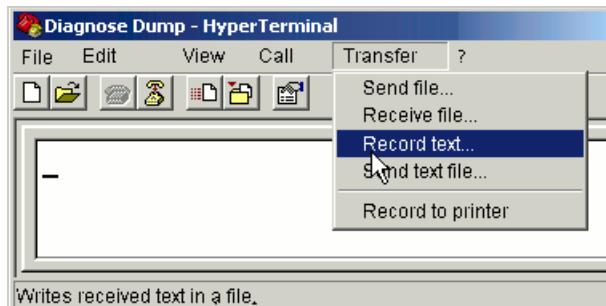
The window „COM1 Properties“ [161] opens (if COM1 was selected).



[161] Set the transfer parameters.

5. Set the transfer parameters to 115 kB, n, 8, 1 and click OK.

The Hyperterminal main window opens.



[162] Hyperterminal main window.

6. Open the menu „Transfer“ and click „Record Text“ [162]. An input window opens.

Enter the file name for the record file and click „Start“.

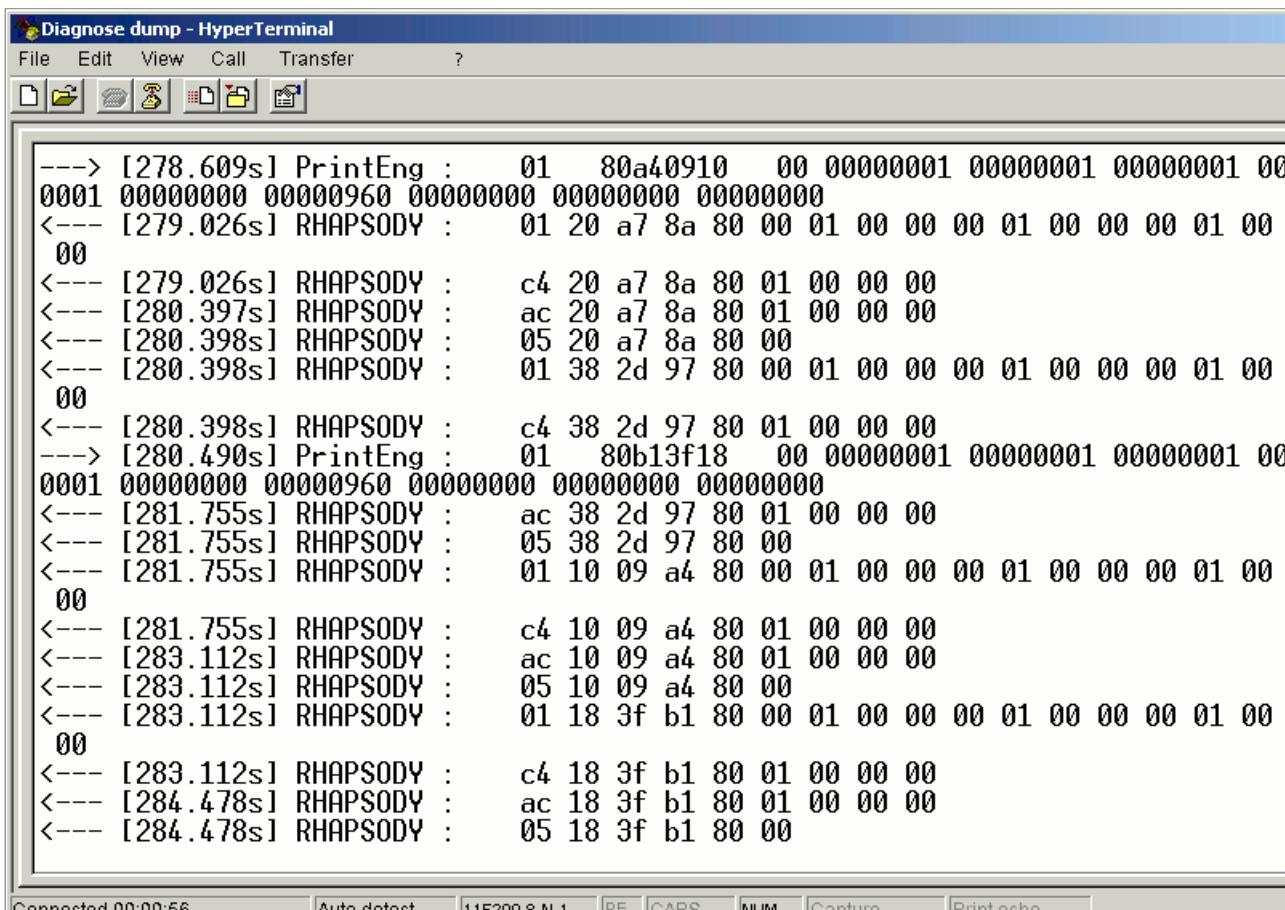
7. At the printer operation panel press all four buttons simultaneously.

This starts data being read out of the printing device and being displayed in the Hyperterminal main window. At the same time, the data are saved in the record file.

8. To stop the transmission, click „Cancel“ in the menu „Transfer > Record text...“.

Generating further record files:

→ Close Hyperterminal and start new.



```

--> [278.609s] PrintEng : 01 80a40910 00 00000001 00000001 00000001 00
0001 00000000 00000960 00000000 00000000 00000000
<--- [279.026s] RHAPSODY : 01 20 a7 8a 80 00 01 00 00 00 01 00 00 00 01 00
00
<--- [279.026s] RHAPSODY : c4 20 a7 8a 80 01 00 00 00
<--- [280.397s] RHAPSODY : ac 20 a7 8a 80 01 00 00 00
<--- [280.398s] RHAPSODY : 05 20 a7 8a 80 00
<--- [280.398s] RHAPSODY : 01 38 2d 97 80 00 01 00 00 00 01 00 00 00 01 00
00
<--- [280.398s] RHAPSODY : c4 38 2d 97 80 01 00 00 00
--> [280.490s] PrintEng : 01 80b13f18 00 00000001 00000001 00000001 00
0001 00000000 00000960 00000000 00000000 00000000
<--- [281.755s] RHAPSODY : ac 38 2d 97 80 01 00 00 00
<--- [281.755s] RHAPSODY : 05 38 2d 97 80 00
<--- [281.755s] RHAPSODY : 01 10 09 a4 80 00 01 00 00 00 01 00 00 00 01 00
00
<--- [281.755s] RHAPSODY : c4 10 09 a4 80 01 00 00 00
<--- [283.112s] RHAPSODY : ac 10 09 a4 80 01 00 00 00
<--- [283.112s] RHAPSODY : 05 10 09 a4 80 00
<--- [283.112s] RHAPSODY : 01 18 3f b1 80 00 01 00 00 00 01 00 00 00 01 00
00
<--- [283.112s] RHAPSODY : c4 18 3f b1 80 01 00 00 00
<--- [284.478s] RHAPSODY : ac 18 3f b1 80 01 00 00 00
<--- [284.478s] RHAPSODY : 05 18 3f b1 80 00

```

[163] Read out data.

→ Send the generated files with a description of the circumstances in which the error occurred per email to the technical support at NOVEXX Solutions.

## Storing on memory card

### Prerequisites

Memory medium is connected to the printer.

### Carrying out

1. Call Tools >Diagnostic > Gen.Support Data.
2. Selecting a memory medium.

Only connected memory media show up for selection:

- SD = SD card
- USB = USB thumb drive

3. Press key 4 to save the diagnostic data.

The diagnostic data is stored in folder \SupportData under the file name:

Diagnose XLP 504 300 Dpi A100149091300004.log with:

- XLP 504 300 Dpi: Printer type and print head resolution
- A100149091300004: Serial number of the CPU board; equals the string in Info > System >CPU board data > Serial number.

# Firmware

## NOTES ABOUT FIRMWARE

### Please note

**CAUTION!**

Executing or applying the update procedure incorrectly can set the device into a critical condition, which can only be rectified by trained technicians.

- Firmware should therefore only be updated by experienced operators or service technicians.
- Update firmware only, if
  - a newly provided function is badly needed
  - the printer doesn't work properly
- Never switch off the printer during a firmware update.

### Detecting the firmware version in the printer

To be able to decide, if a firmware update is possible or necessary at all, it has first to be noted, which firmware version is currently in the printer. There are three ways to find that out:

- *Display after switching-on*: After switching on the printer, the installed firmware version is displayed for a few seconds
- *Parameter menu*: Info > System > Module FW. Vers. > System version
- *Status printout*: Info > Status Printouts > Printer Status (section „System version“)

## UPDATING FIRMWARE

### Notes about the update procedure

There are two methods of loading the firmware into the printer:

- From an external *memory medium* (recommended method); Advantages: fast, secure, independent of the operating system of the host computer
  - See chapter [Update from a memory medium](#) on page 230.
- Using a *data interface*
  - See chapter [Update via data interface](#) on page 231.

### Update from a memory medium

#### In standalone mode

Prerequisite:

Drive letter C: must be assigned to the storage medium (that is, Print interface > Drives > Drive C must be set to that storage medium on which the file with the printjob is stored, that is „SD card“ or „USB thumb drive“).

→ Due to the higher data transfer speed, it is recommended to use a SD card.

Procedure:

1. Download the firmware from [www.novexx.com](http://www.novexx.com) (section „Service“ > „Firmware“).
2. If not already done, create a folder \Formats on the memory medium.
3. Copy the firmware file (e. g. 32\_MLK\_Vx.xx.s3b) into folder \Formats.
4. Switch the printer off.
5. Connect the memory medium to the printer.
6. Switch the printer on.
7. Press the keys 2+4 to toggle into standalone mode.
8. Select the firmware file.
9. Press key 4. Confirm the yes/no query.

The firmware is now loaded automatically.

Afterwards follows an automatic reset.

Further information about *standalone mode* can be found in the user manual, chapter „Special Applications“ > „Standalone Operation“.

#### Starting the update automatically

1. Copy the firmware file (e. g. 32\_MLK\_Vx.xx.s3b) into the root directory of the memory medium.
2. Rename the firmware file to „autostrt.for“.
3. Switch the printer off.
4. Connect the memory medium to the printer.
5. Switch the printer on.

The firmware is now loaded automatically.

Afterwards follows an automatic reset.

## Update via data interface

Prerequisites:

- The data interfaces of host computer and printer must be connected with a suitable data cable
- The data interface must be set accordingly in the printer's parameter menu
- Firmware file is stored on the host computer.

### Serial interface

1. Open a command prompt window on the host computer.
2. Go to the folder were the firmware file is located.
3. `copy /b xxxxxx.s3b com1`  
    ■■■► Replace "xxxxxx.s3b" with the name of the current firmware file.

### USB/Ethernet interfaces

Prerequisite: A „Generic printer“ must be installed on the host computer, with the required port assigned to it (see chapter [Installing a generic printer under Windows 7](#) on page 247).

1. Open a command prompt window on the host computer.
2. Go to the folder were the firmware file is located.
3. `copy xxxxxx.s3b \\Computername\Sharename`  
    ■■■► Replace "xxxxxx.s3b" with the name of the current firmware file.  
    ■■■► ComputerName = can be found under Windows 7 as follows:
  1. Click START.
  2. Type „System Information“ into the search field. A window opens.
  3. In the right part of the window, seek the entry „System Name“. The string right of it is the ComputerName.

■■■► ShareName = represents the share name for a printer connected to a specific port, such as the USB port or the TCP/IP port. Find the ShareName - under Windows 7 - as follows:

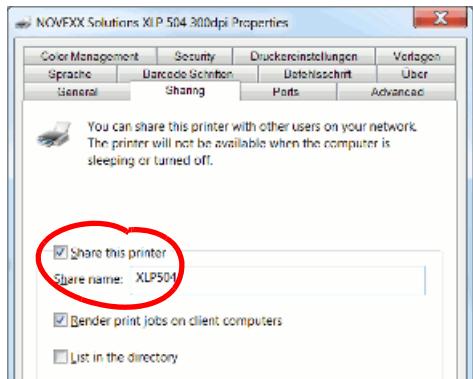
1. Open START > „Devices and Printers“.
2. Right click on the symbol of the generic printer, then left click on „Printer Properties“.
3. Open the „Sharing“ tab [164].
4. Enter a „Share name“.
5. Click OK.

The firmware is now loaded automatically.

Afterwards follows an automatic reset.

■■■► Some tips about transfer via a USB or Ethernet interface:

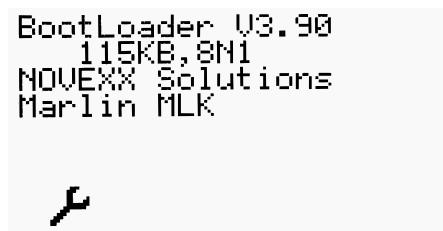
- The procedure described does not work with Windows 98, Windows ME or Windows NT 4.0.
- The Share name must match MS-DOS conventions (max. 8 characters length, no special characters or spaces)



[164] Entering a share name under Windows 7.

## Update by bootloader

If no valid or no firmware at all is available on the printer, the following message shows up on the printer display immediately after the printer has been switched on:



(V3.90 = Bootloader version)

In this case the firmware must be reloaded using the bootloader.

This condition may be caused, for example, by switching off the printer while firmware is being loaded or due to a similar fault.

Procedure:

1. Switch the printer off.
2. Connect printer and host computer using the serial interface.  
→ Settings: 115000 Baud, 8 bits, no check bit, 1 stop bit
3. Switch the printer on while press and hold down the keys 1+4. The bootloader prompt appears (see display text above).
4. Load the firmware file as described in chapter [Update via data interface](#) on page 231.

# Appendix

## SETUP FILE FOR XLP 504

```

#!A1
#G Machine Setup for XLP 504 300 Dpi Version: V7.75
#G Serial number : A100149091300004
#G MAC Address : 00.0A.44.07.17.E5
#G Creation date : 14.05.2018 13:10

#G-----
#G Print
#G-----
#PC2045/75          #G Print contrast : 75 %
#PC1020/0.0          #G *X - Printadjust : 0.0 mm
#PC1021/0.0          #G *Y - Printadjust : 0.0 mm
#PC1003/4.0          #G Print speed : 4 Inch/s
#PC1004/4.0          #G Feed speed : 4 Inch/s
#PC2027/0            #G Voltage offset : 0 %
#PC2066/1            #G Thin line emphas : On
#G-----
#G Print ► Material
#G-----
#PC2018/0            #G Foil mode : Thermo transfer
#PC1008/0.0          #G Punch offset : 0.0 mm
#PC1005/1            #G Material type : Punched
#PC1006/101.0         #G Material length : 101.0 mm
#PC1007/105.0         #G Material width : 105.0 mm
#PC1022/0            #G Punch mode : Automatic
#PC1023/128           #G Punch level : 128
#PC2015/0            #G Label sens. type : Punched
#PC2030/1            #G Mat. end detect. : Transparent
#G-----
#G Print ► Material ► Foil
#G-----
#PC1038/500.0         #G Foil length : 500.0 m
#PC1039/100.0         #G Outer foil diamet: 100.0 mm
#PC1040/33.0          #G Inner foil diamet: 33.0 mm
#G-----
#G Print ► Format
#G-----
#PC1009/1            #G Bar code multip. : * 1
#PC1029/0            #G Tradit. Imaging : No
#PC1010/0            #G UPC plain-copy : In line
#PC1011/0            #G EAN Readline : Standard
#PC1012/0            #G EAN sep. lines : With readl. only
#PC1013/1            #G Rotated barcodes : Optimized
#PC1027/0            #G Print direction : Foot first
#G-----
#G Options
#G-----
#PC2063/1            #G Keyboard : English
#PC2042/0            #G External signal : Off
#PC2043/0            #G Start print mode : Pulse falling
#G-----
#G Options ► Selection
#G-----
#G Options ► Selection ► Periph. device
#G-----
#PC2031/0            #G Periph. device : None
#PC1019/1            #G Rewind direction : Printing outside
#PC1019/1            #G Rewind direction : Printing outside

```

```

#G-----
#G Options ► I/O Board
#G-----
#PC3203/0          #G Start print mode : Pulse falling
#PC3204/0          #G Reprint signal   : Off
#PC3205/0          #G Feed input      : Off
#PC3206/0          #G Pause input      : Off
#PC3207/0          #G Error output     : Printer error
#PC3208/0          #G Error polarity   : Level low active
#PC3209/1          #G Status output    : Low ribbon warn.
#PC3210/0          #G Status polarity   : Level low active
#PC3211/0          #G End print mode   : Mode0 inactive
#G-----
#G Options ► Cutter
#G-----
#PC1014/0          #G Cut mode        : Real 1:1 mode
#PC1015/3          #G Cut speed       : 3
#PC1016/105         #G Cut width        : 105
#PC1017/0.0         #G Cut position     : 0.0 mm
#PC1018/0.0         #G Double cut       : 0.0 mm
#PC1041/1          #G Rest position    : at head
#G-----
#G Options ► Rewinder
#G-----
#PC1019/1          #G Rewind direction : Printing outside
#PC5123/31306       #G *Rewinder adjust : 31306
#G-----
#G Options ► Tear-off edge
#G-----
#PC1017/0.0         #G Dispenseposition : 0.0 mm
#G-----
#G Options ► Dispenser
#G-----
#PC1014/0          #G Dispense Mode    : Real 1:1 mode
#PC1017/0.0         #G Dispenseposition : 0.0 mm
#PC2004/0          #G Display mode     : Labelnr/jobquant
#PC2005/620         #G *Dispense counter : 620
#PC2035/0          #G Application mode : Safe mode
#PC2039/1          #G Start source     : Foot switch
#PC6004/15.0        #G Start offset      : 15.0 mm
#PC6014/0          #G Start error stop : Off
#PC6017/0.0         #G Product length   : 0.0 mm
#PC2501/0          #G Current mode     : Table values
#PC2504/110         #G Min rew. current : 110 %
#PC2505/110         #G Max rew. current : 110 %
#PC2502/100         #G Min rew. current : 100
#PC2503/250         #G Max rew. current : 250
#PC2506/0          #G Start rew. curr. : 0 %
#PC2507/30          #G Start cur. len.  : 30 mm
#PC2508/94          #G Pullback current : 94
#PC2509/50          #G Back diameter    : 50 mm
#PC2510/0          #G Break current    : 0
#PC2511/120         #G Break diameter   : 120 mm
#G-----
#G Options ► Internal Rewinder
#G-----
#PC1019/1          #G Rewind direction : Printing outside
#PC2501/0          #G Current mode     : Table values
#PC2504/110         #G Min rew. current : 110 %
#PC2505/110         #G Max rew. current : 110 %
#PC2502/100         #G Min rew. current : 100
#PC2503/250         #G Max rew. current : 250
#PC2506/0          #G Start rew. curr. : 0 %
#PC2507/30          #G Start cur. len.  : 30 mm
#PC2508/94          #G Pullback current : 94
#PC2509/50          #G Back diameter    : 50 mm
#PC2510/0          #G Break current    : 0
#PC2511/120         #G Break diameter   : 120 mm

```

```

#G-----
#G Options ► TCS
#G-----
#PC3301/0          #G Changelabel Mode : Easyplug select
#PC3303/10         #G Changelab Length : + 10 mm
#PC3302/1          #G Changelab Print : With print
#PC3304/0          #G Label Eject Mode : No
#G-----
#G Options ► LTSA
#G-----
#PC3152/0          #G Apply mode      : After start sig.
#PC3153/190        #G Stroke length   : 190 mm
#PC3154/0          #G Appl. waitpos. : 0 mm
#PC3155/350.0      #G Applicator speed : 350 mm/s
#PC3158/0          #G Restart delay   : 0 ms
#G-----
#G System
#G-----
#PC2051/1          #G Language       : English
#PC2053/0          #G Access authoriz. : Off
#PC2081/0          #G Run Setup Wizard? : No
#PC2020/1          #G Turn-on mode    : Online
#G-----
#G System ► Hardware Setup
#G-----
#PC5001/1          #G *Printer type   : XLP 5
#PC5002/1          #G *Printhead type : KPA 300 DPI
#PC2024/641        #G *Head resistance : 641 Ohm / 8 Dot
#PC2025/1202       #G *Head resistance : 1202 Ohm / 12 Dot
#PC2080/1530       #G *Head resistance : 1530 Ohm / 24 Dot
#PC2016/0          #G Head-sensor dist : 0 mm
#G-----
#G System ► Memory
#G-----
#PC2048/4096       #G Free store size : 4096 KBytes
#PC2046/512        #G Ram disk size   : 512 KBytes
#PC2047/256        #G Font downl. area : 256 KBytes
#PC1104/64         #G Spooler size    : 64 KBytes
#PC5129/0          #G Flash Res. Area : 0 KBytes
#G-----
#G System ► Print
#G-----
#PC2029/2          #G Miss. label tol. : 2
#PC2067/1          #G Gap detect. mode : Autom. forward
#PC2068/5          #G Foil stretching  : Feedback: 5 mm
#PC2033/1          #G Singlestartquant : 1
#PC2050/0          #G Reprint function : Off
#PC2083/5.0        #G Foil end warning : 5.0 m
#PC2003/34.3       #G Foil end warning : 34.3 mm
#PC2060/0          #G Foil warn stop  : Off
#PC2022/1          #G Error reprint   : On
#PC2023/0          #G Single-job mode : Off
#PC2026/20         #G Temp. reduction : 20 %
#PC2049/0          #G Print info mode : Par.values right
#G-----
#G Printer Language
#G-----
#PC2012/0          #G Print Interpret. : Easyplug
#G-----
#G Printer Language ► EasyPlug Setting
#G-----
#PC2014/1          #G Character filter : All characters
#PC2013/3          #G Character sets   : Germany
#PC2071/1          #G EasyPlug errors  : Strict handling
#PC1102/0          #G Spooler mode    : Mult. print jobs
#PC1550/0          #G StandAlone Input : None
#PC5310/0          #G ##VW/I Interface : Easyplug
#PC1103/1          #G *Printer ID no. : 1
#PC5004/0          #G Command sequence : '#'

```

```

#G-----
#G Printer Language ► ZPL Setting
#G-----
#PC4002/15          #G Darkness      : 15
#PC4006/0           #G Label Top    : 0 Dots
#PC4007/3           #G Left Position : 3 Dots
#PC4010/0           #G Error Indication : OFF
#PC4011/0           #G Error Checking  : YES
#PC4009/0           #G Resolution     : 300 DPI
#PC4013/0           #G Image Save Path : Internal RAM
#PC4017/0           #G Label Invert   : Disable
#G-----
#G Printer Language ► ZPL Setting ► Commands
#G-----
#PC4004/94          #G Format Prefix : 5EH
#PC4003/126         #G Control Prefix : 7EH
#PC4005/44          #G Delimiter Char : 2CH
#PC4014/1           #G Command ^PR   : Enable
#PC4015/1           #G Command ^MT   : Enable
#PC4016/1           #G Command ^JM   : Enable
#PC4018/1           #G Command ^MD/~SD : Enable
#G-----
#G Interface
#G-----
#PC1101/2           #G Print interface : TCP/IP SOCKET
#G-----
#G Interface ► Network
#G-----
#PC1501/0           #G IP Address assign : DHCP
#PC1502/010.220.001.099 #G *IP address   : 010.220.001.099
#G readonly ID=30001 #G IP address     : 10.220.1.134
#PC1503/255.255.255.000 #G *Net mask     : 255.255.255.000
#G readonly ID=30002 #G Net mask       : 255.255.254.0
#PC1504/000.000.000.000 #G *Gateway address : 000.000.000.000
#G readonly ID=30003 #G Gateway address : 10.220.0.1
#PC1505/9100        #G Port address   : 9100
#PC1506/0           #G Ethernet speed : Auto negotiation
#PC1513/XLP504_300dpi_0717E5#G#G DHCP host name : XLP504_300dpi_0717E5
#G-----
#G Interface ► Network ► Services
#G-----
#PC1509/1           #G WEB server     : On
#PC1510/5           #G WEB display refr : 5 s
#PC1511/admin#G     #G WEB admin passw. : admin
#PC1512/supervisor#G #G WEB supervisor p. : supervisor
#PC1532/operator#G  #G WEB operator p. : operator
#PC1507/1           #G FTP server     : On
#PC1508/novexx#G    #G FTP Password   : novexx
#PC1529/0           #G Time client     : Off
#PC1530/-2105212662 #G Time server IP  : 130.133.001.010
#PC1531/3600        #G Sync. interval : 3600 s
#PC1533/0.0          #G Time zone      : +0:00
#G-----
#G Interface ► Serial Port 1
#G-----
#PC1201/8           #G Baud rate     : 115200 Baud
#PC1202/8           #G No. of data bits : 8
#PC1203/2           #G Parity        : None
#PC1204/1           #G Stop bits     : 1 Bit
#PC1205/0           #G Data synch.   : RTS/CTS
#PC1206/0           #G Serial port mode : RS232
#PC1207/1           #G Frame error   : Display
#G-----
#G Interface ► Serial Port 2
#G-----
#PC1302/8           #G Baud rate     : 115200 Baud
#PC1303/8           #G No. of data bits : 8
#PC1304/2           #G Parity        : None
#PC1305/1           #G Stop bits     : 1 Bit

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#PC1306/0          #G Data synch.      : RTS/CTS
#PC1307/0          #G Serial port mode : RS232
#PC1308/1          #G Frame error       : Display
#G-----
#G Interface ► Serial Port 3
#G-----
#PC1351/2          #G Baud rate        : 9600 Baud
#PC1353/8          #G No. of data bits : 8
#PC1354/1          #G Parity           : None
#PC1355/2          #G Stop bits         : Automatic
#PC1356/0          #G Data synch.      : RTS/CTS
#PC1357/0          #G Serial port mode : RS232
#PC1358/1          #G Frame error       : Display
#G-----
#G Interface ► Serial Port 4
#G-----
#PC1361/2          #G Baud rate        : 9600 Baud
#PC1363/8          #G No. of data bits : 8
#PC1364/1          #G Parity           : None
#PC1365/2          #G Stop bits         : 2 Bit
#PC1366/0          #G Data synch.      : RTS/CTS
#PC1368/1          #G Frame error       : Display
#G-----
#G Interface ► Drives
#G-----
#PC1600/4          #G Drive C          : USB thumb drive
#PC1601/3          #G Drive D          : SD card
#G-----
#G Tools
#G-----
#G Tools ► Diagnostic
#G-----
#PC5005/0          #G EasyPl. file log : Off
#PC5113/0          #G EasyPlug Monitor : Off
#PC5125/0          #G EP Monitor Mode : Interpreter data
#PC5111/0          #G Spec parameter 1 : 0
#PC5112/0          #G Spec parameter 2 : 0
#G-----
#G Tools ► Test
#G-----
#G Tools ► Service
#G-----
#G Tools ► Adjustment
#G-----
#PC1024/20         #G Matend          : 20
#PC5101/35         #G Matend tolerance : 35 mm
#PC5102/0.0        #G Feed adjust     : 0.0 % [ribbon]
#PC5105/0.0        #G Feed adjust     : 0.0 % [direct]
#PC5116/152        #G *Punch adjust   : 152
#PC5117/112        #G *Reflex adjust  : 112
#PC5119/128        #G *Foil adjust    : 128
#PC5120/128        #G *Head sens adjust: 128
#PC5121/128        #G *Optn.1          : 128
#PC5122/128        #G *Optn.2 adjust   : 128
#PC5104/0.0        #G *Punch y calibr.: 0.0 mm
#G-----
#G Info
#G-----
#G readonly ID=30076      #G Model ID        : XLP 504 300 Dpi
#G readonly ID=30086      #G PnP Hardware ID : NovexxXLP504_300dpiBEB8
#G readonly ID=30077      #G Printer-Model  : XLP 50
#G readonly ID=30078      #G Printhead      : 4
#G readonly ID=30079      #G Printhead dpi  : 300
#G readonly ID=30080      #G Printhead Dot/mm: 11.811000

```

```

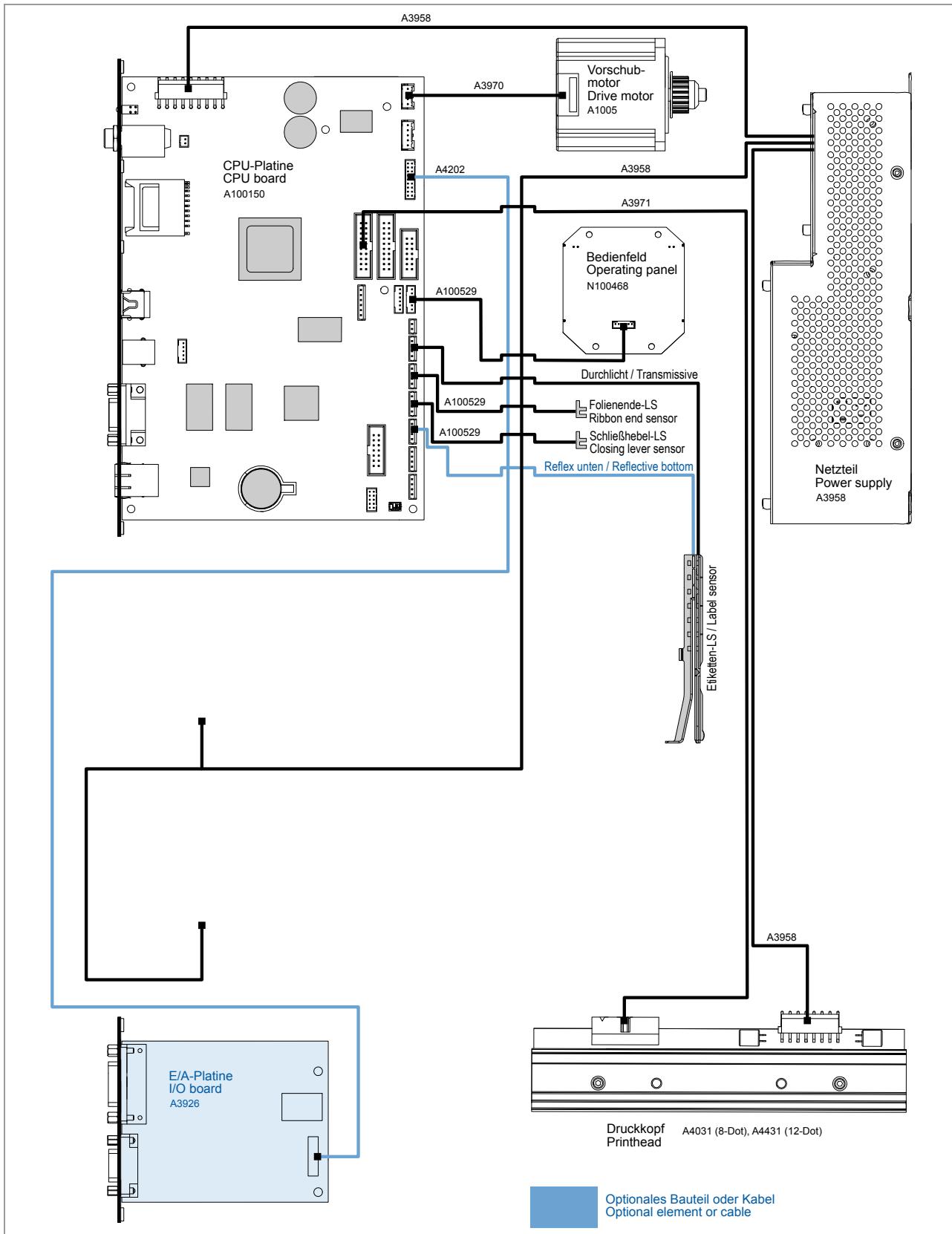
#G-----
#G Info ► Status Printouts
#G-----
#G-----
#G Info ► Statistics
#G-----
#G readonly ID=30018      #G Head run length : 1714 m
#G readonly ID=30019      #G Roll run length : 1770 m
#G readonly ID=30014      #G Serv. operations : 1
#G readonly ID=30015      #G Head number     : 0
#G readonly ID=30016      #G Roll number    : 0
#G readonly ID=30021      #G Tot. mat. length : 1770 m
#G readonly ID=30022      #G Tot. foil length : 331 m
#G readonly ID=30025      #G Head strobes   : 19612376
#G readonly ID=30028      #G Operation time  : 0 hours 4 min
#G readonly ID=30082      #G Total Operation : 60 hours 7 min
#G-----
#G Info ► System
#G-----
#G-----
#G Info ► System ► Module FW. Vers.
#G-----
#G readonly ID=30004      #G System version  : V7.75
#G readonly ID=30067      #G System revision : 13631
#G readonly ID=30070      #G System date    : Apr 26 2018
#G readonly ID=30061      #G Bootloader     : V3.90
#G readonly ID=30062      #G uMon           : V2.0 30Apr2015
#G readonly ID=30052      #G Peripheraldriver : V 3 - T 3
#G readonly ID=30057      #G Intern. rewinder : V 8 - T 36
#G-----
#G Info ► System ► Memory Data
#G-----
#G readonly ID=30007      #G RAM memory size : 64 MB
#G readonly ID=30008      #G Flash mem size  : 4 MB AMD
#G readonly ID=30081      #G Storage media   : RAM,USB
#G readonly ID=30065      #G USB thumb drive : 0.97GB/1GB (c:)
#G readonly ID=30010      #G Space for Jobs  : 45.9 MB
#G readonly ID=30011      #G Max. Labellength: 11471 mm
#G readonly ID=30013      #G Custom defaults : No
#G-----
#G Info ► System ► CPU Board Data
#G-----
#G readonly ID=30034      #G CPU identifier  : 2-4
#G readonly ID=30036      #G PCB Revision   : REV00
#G readonly ID=30037      #G FPGA version   : D0321217
#G readonly ID=30039      #G MAC Address    : 00.0A.44.07.17.E5
#G readonly ID=30040      #G Serial number  : A100149091300004
#G readonly ID=30041      #G Production date : 02.04.2009
#G readonly ID=30042      #G PCB part number: A100148
#G readonly ID=30043      #G Board part numb.: A100150
#G readonly ID=30044      #G Manufacturer   : Multitech Sys
#G readonly ID=30045      #G Work place     : FCT Dolphin
#G readonly ID=30046      #G Company name   : Avery Dennison
#G-----
#G Info ► System ► PowerSupply Data
#G-----
#G readonly ID=30029      #G PS type        : Blue Mountain
#G readonly ID=30072      #G PS Temperature : 36 °C
#G-----
#G Info ► System ► Display Data
#G-----
#G readonly ID=30059      #G Display Version : V4.36
#G readonly ID=30068      #G Display serialNr: A108023016140009
#G-----
#G Info ► Measurements
#G-----
#G readonly ID=30087      #G Foil rest length: 140 m
#G readonly ID=30026      #G Foil diameter   : 60.0 mm
#G readonly ID=30071      #G Head temperature : 27 °C

```

```
#G-----
#G Debug
#G-----
#PC5127/0          #G Debug interface   : Off
#PC5128/-1872945986 #G Debug IP address  : 144.093.028.190
#PC5124/0          #G Debug mask       : 0
#PC5404/0          #G Fields           : Off
#PC5400/0          #G Label generation : Off
#PC5401/0          #G Print handling   : Off
#PC5402/0          #G Variables        : Off
#PC5403/0          #G Pctrl communica. : Off
#PC5407/0          #G RFID-Task       : Off
#PC5406/0          #G RFID-Reader     : Off
#PC5131/0          #G BitimageFileDump : Off
#PC5405/0          #G Debug Shell      : Off
#PC5409/0          #G Text Seg.Observ. : Off
#G-----
#G Setup Wizard
#G-----
#PC2081/0          #G Run Setup Wizard?: No
#PC2051/1          #G Language         : English
#PC1101/2          #G Print interface  : TCP/IP SOCKET
#PC2082/0          #G Setup Network?  : No
#PC1501/0          #G IP Addressassign : DHCP
#PC1201/8          #G Baud rate       : 115200 Baud
#PC1202/8          #G No. of data bits: 8
#PC1203/2          #G Parity           : None
#PC1205/0          #G Data synch.     : RTS/CTS
#PC1207/1          #G Frame error     : Display
#G-----
#G Execute system restart ( 229 parameters )
#G-----
#PC999999/-1#G
```

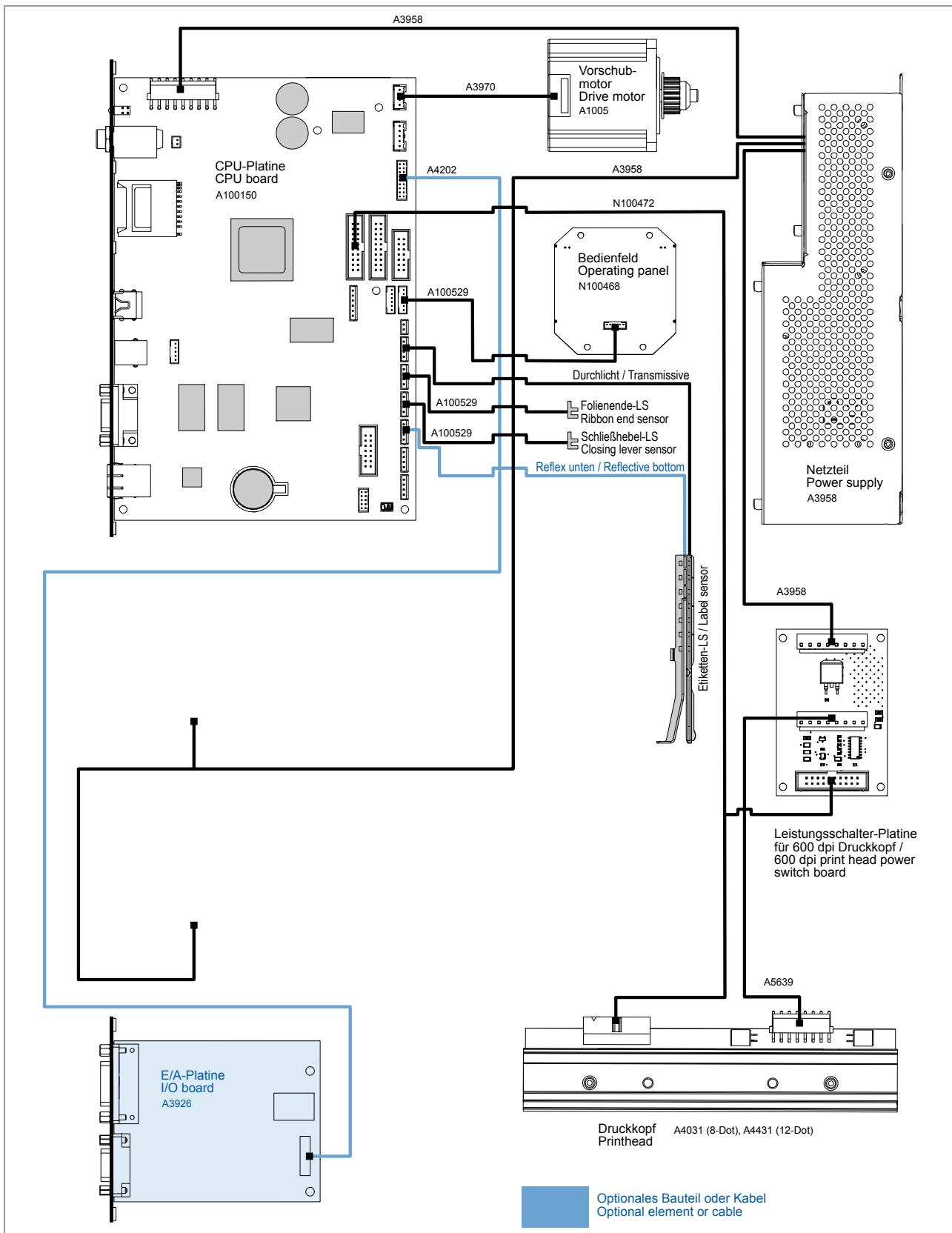
## WIRING DIAGRAMS

See next pages.

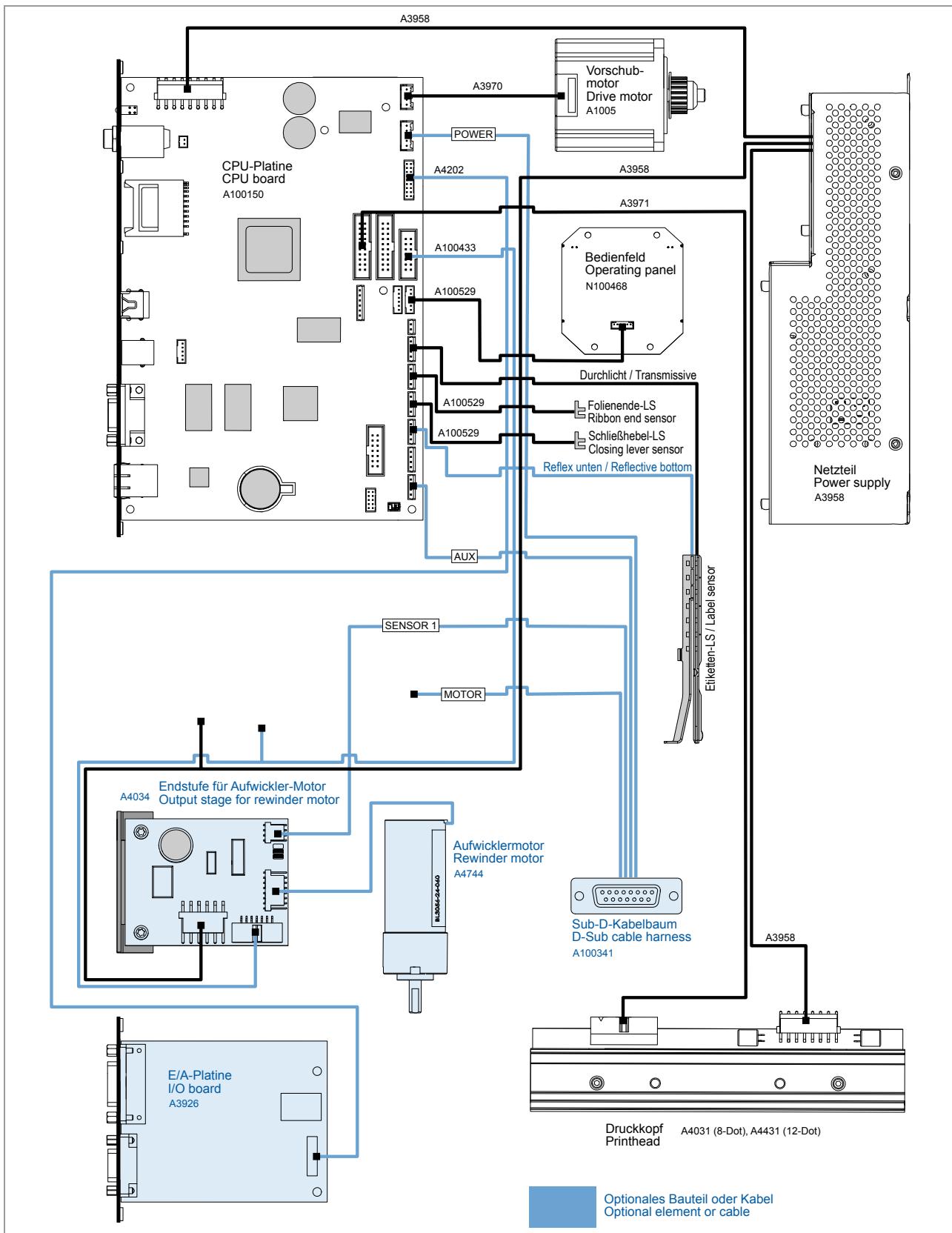
**XLP 504 basic**

[165] Wiring of XLP 504 basic.

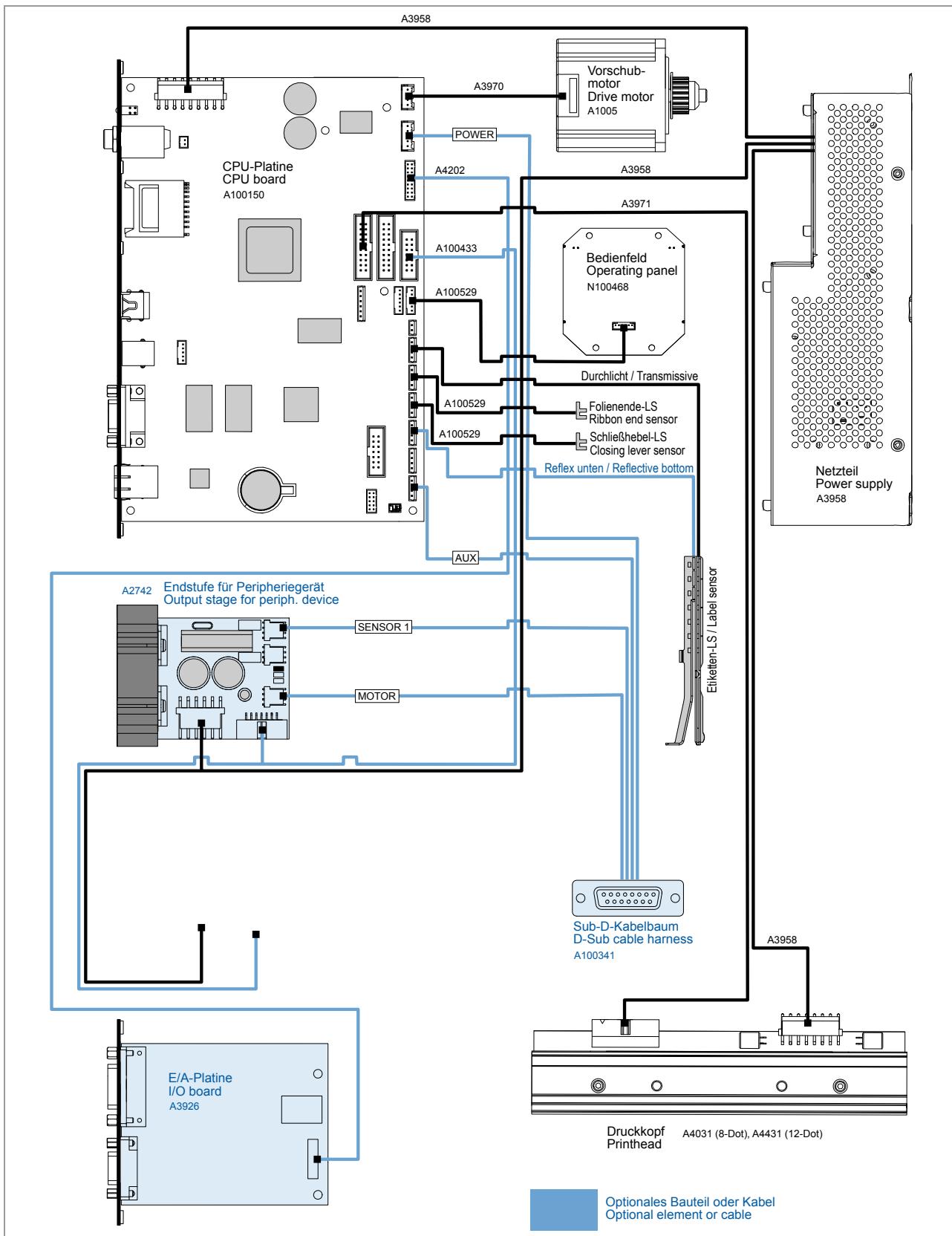
## XLP 504 basic 600 dpi



[166] Wiring of XLP 504 basic 600 dpi.

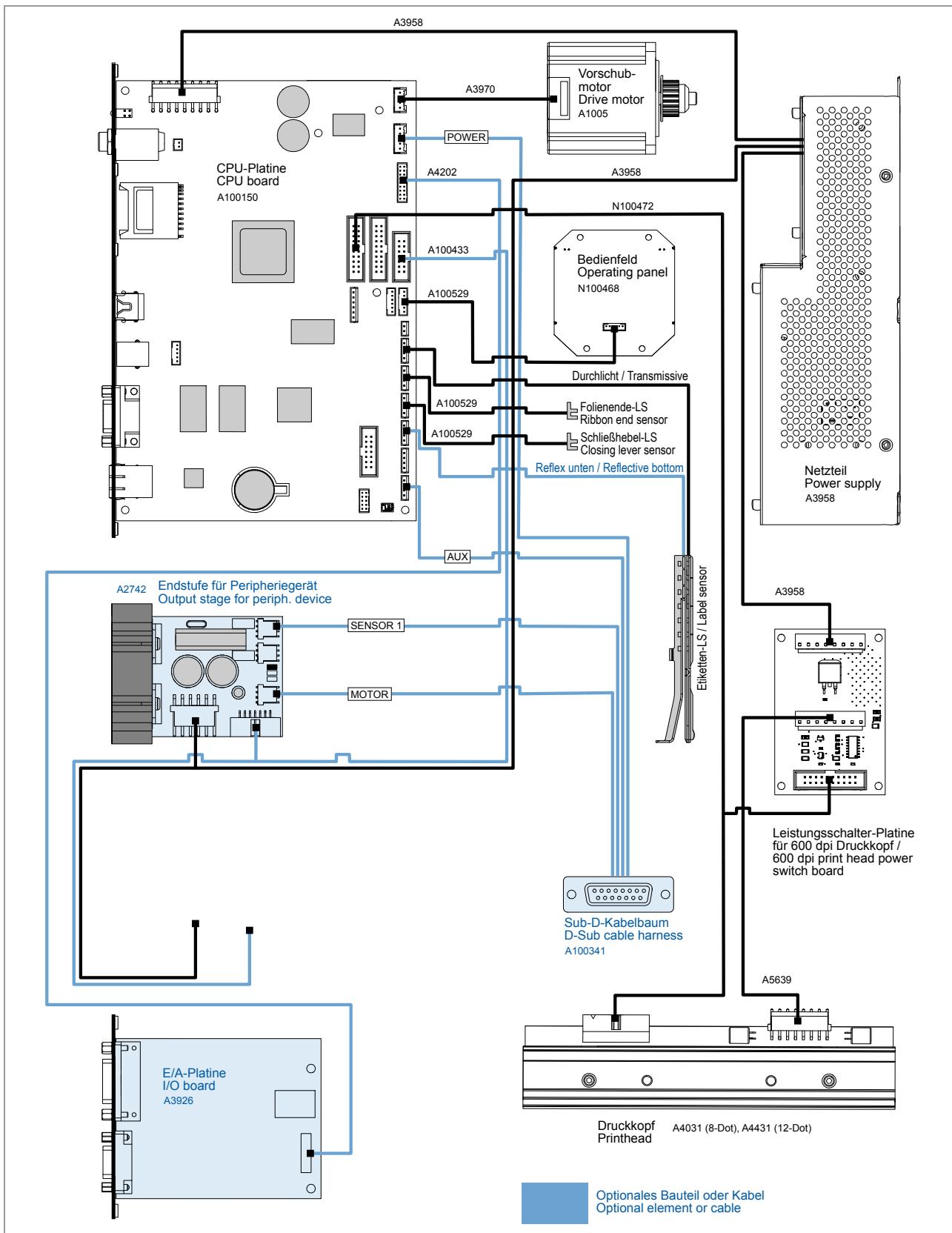
**XLP 50x basic dispenser**


[167] Wiring of XLP 50x basic dispenser.

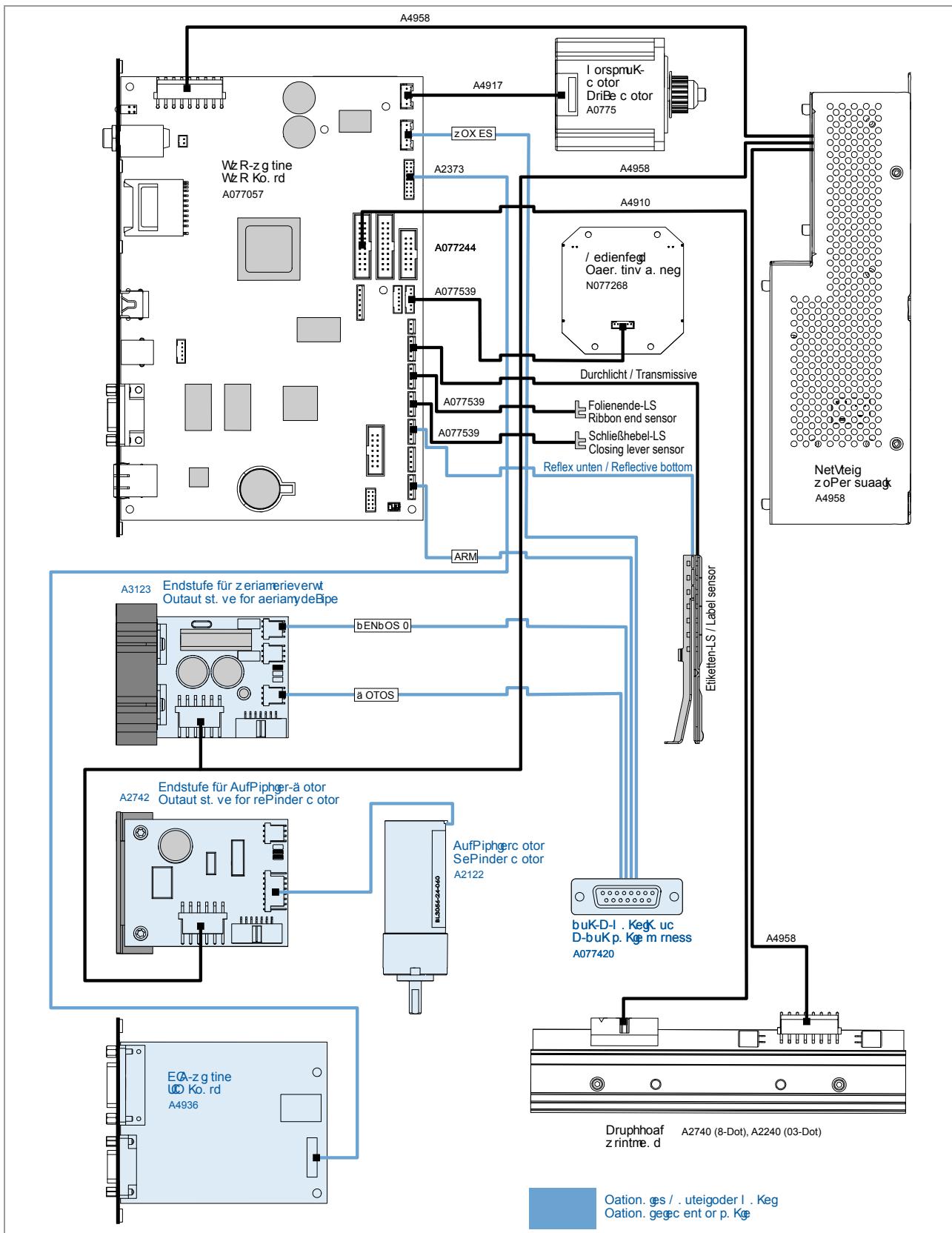
**XLP 504 peripheral**

[168] Wiring of XLP 504 peripheral.

## XLP 504 peripheral 600 dpi



[169] Wiring of XLP 504 peripheral 600 dpi.

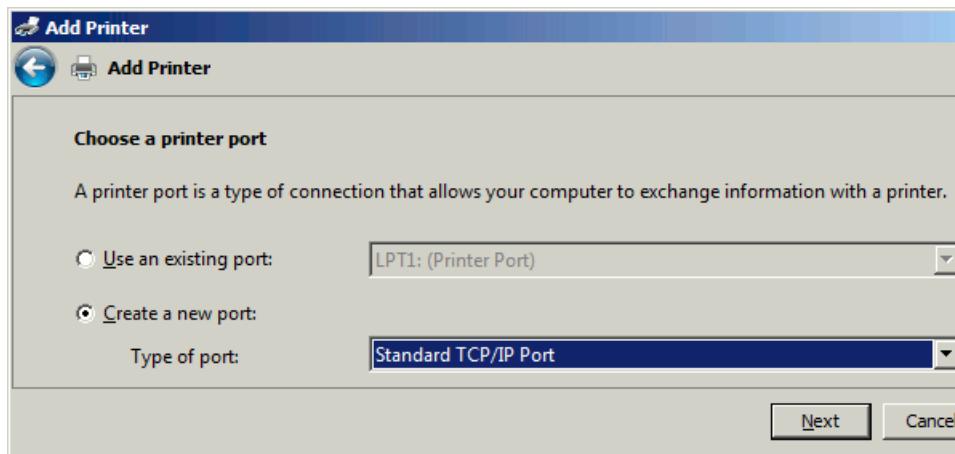
**XLP 50x peripheral dispenser**


[170] Wiring of XLP 50x peripheral dispenser.

## INSTALLING A GENERIC PRINTER UNDER WINDOWS 7

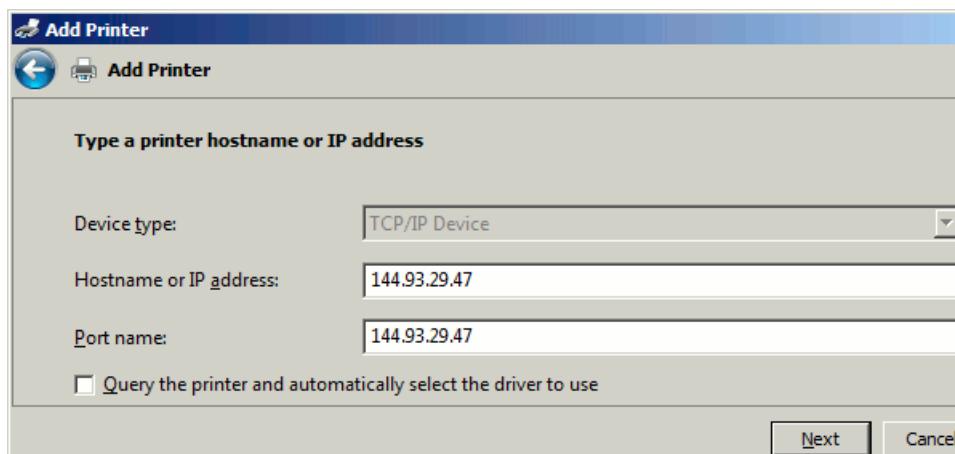
A firmware update via data line requires a „Generic printer“ to be installed on the host computer running under Windows 7. Follow this installation instruction:

1. Click START > DEVICES AND PRINTERS > ADD PRINTER.
2. Click ADD A LOCAL PRINTER.
3. In the dialog „Choose a printer port“ select STANDARD TCP/IP PORT (alternativley USB PORT, if a USB line is connected) [171]. Click NEXT.



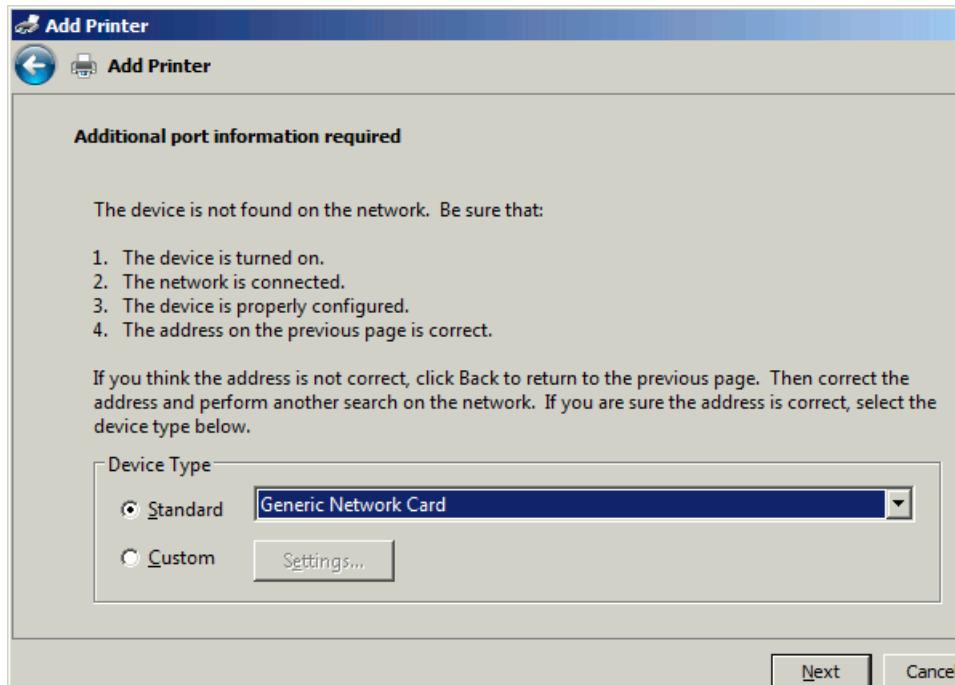
[171] Choose a printer port.

4. Enter the IP address of the machine into the field HOSTNAME OR IP ADDRESS [172]. Click NEXT.  
 ■■■ IP address see Interface > Network > IP address  
 ■■■ The checkbox „Query the printer [...]“ must not be activated.



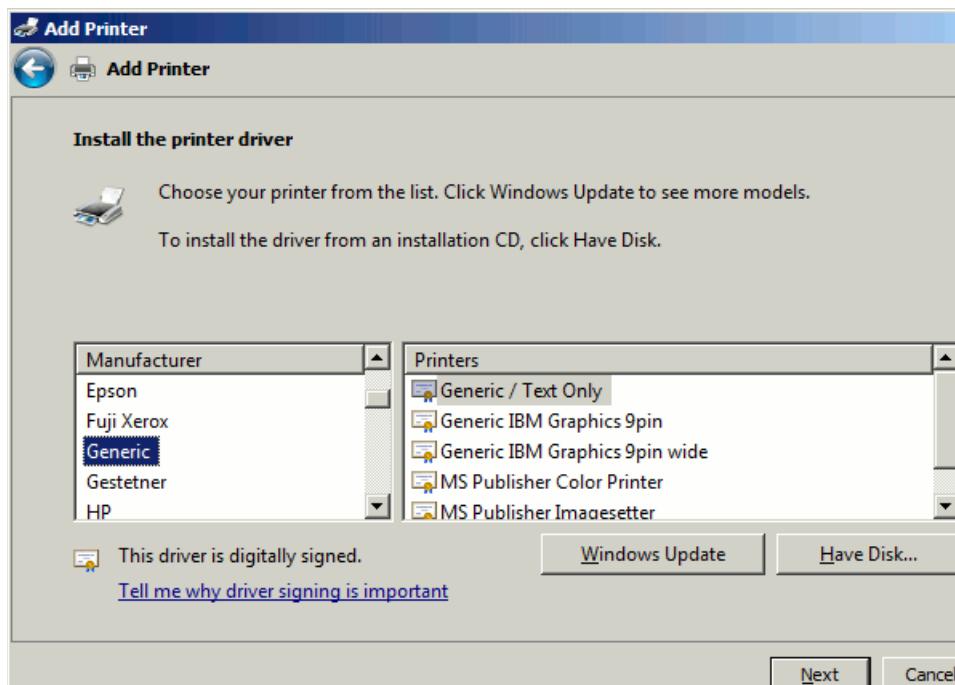
[172] Assigning an IP address.

5. Under „Device Type“ choose STANDARD and GENERIC NETWORK CARD [173]. Click NEXT.



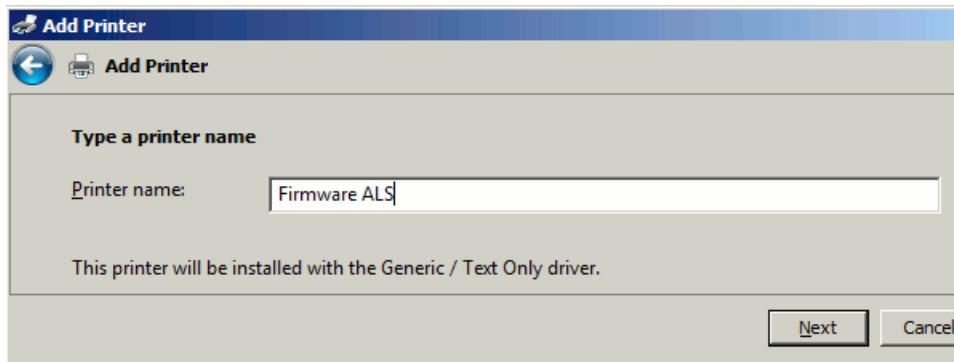
[173] Entering information about the device type.

6. Enter GENERIC as manufacturer and GENERIC/TEXT ONLY as printer [174]. Click NEXT.



[174] Choose a printer driver.

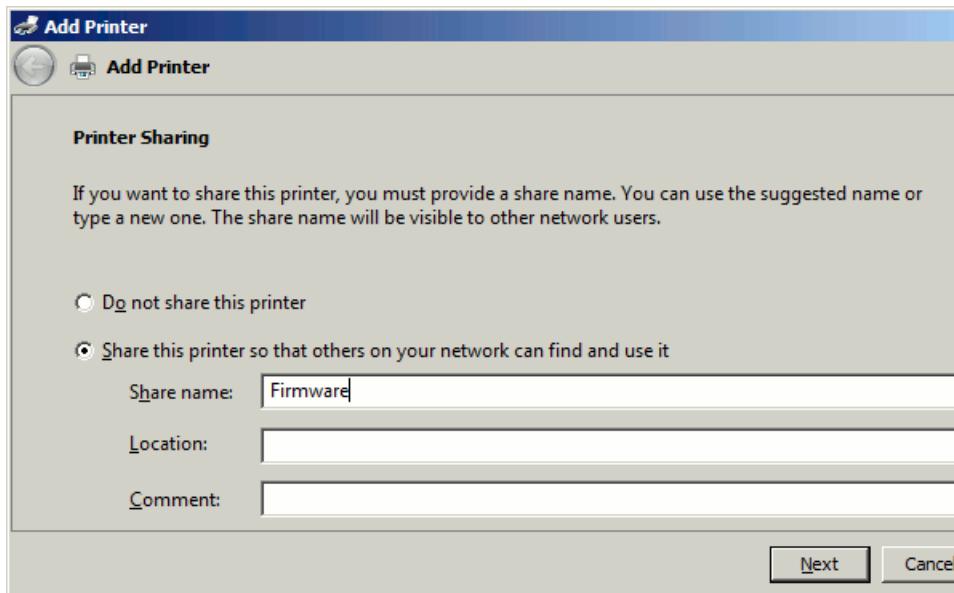
7. Enter a printer name [175]. Click NEXT.



[175] Enter a name for the printer.

8. Enter a share name [176]. Click NEXT.

► The Share name must match MS-DOS conventions (max. 8 characters length, no special characters or spaces)



[176] Defining a share name.

Done. The printer can be addressed now by means of the share name.





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